Annual Monitoring Report: 2021-2022

Former Landfill Site – Harrietsfield, Nova Scotia

Nova Scotia Lands Inc.

60639002

July 2022

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July 20, 2022

Project #
60639002

Subject: Annual Monitoring Report: 2021-2022 – Former Landfill Site – Harrietsfield, Nova Scotia

Dear Mr. Burke:

AECOM Canada Ltd. (AECOM) is pleased to present this Annual Monitoring Report associated with the Former Landfill Site - Harrietsfield, located in Harrietsfield, Nova Scotia to Nova Scotia Lands Inc. (NSLI).

If you have any questions about the information presented within this report, please do not hesitate to contact me directly.

Sincerely,
AECOM Canada Ltd.



Derek Heath
Project Manager
derek.heath@aecom.com

Encl.

cc:

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1. Introduction

Nova Scotia Lands Inc. (NSLI) retained AECOM Canada Ltd. (AECOM) in September 2018 to assist with the development of effective solutions to the closure of the Former Harrietsfield Landfill site located at 1275 Old Sambro Road (PID: 41056102), Harrietsfield, Nova Scotia (NS) (hereafter referred to as "the Site"). The Site was a former Construction and Debris (C&D) Waste Disposal Facility and is currently under the care of Nova Scotia Environment and Climate Change (NSECC). The location of the Site is provided on **Figure 1 (Appendix A)** and details of the Site are provided on **Figure 2 (Appendix A)**.

On June 22, 2020, Nova Scotia Environment (NSE) provided an Industrial Approval to NSLI under the Municipal - Solid Waste Activity for a Construction and Demolition Debris Disposal Facility (NSE Approval No. 2020-2664911-00). As mentioned in the above noted NSE Approval document, supporting documents include:

- Specifications Issued for Tender for Harrietsfield C&D Landfill: Cap Replacement and Site Closure, Harrietsfield, NS; and
- Groundwater and Surface Water Monitoring Plan for the Former Harrietsfield Landfill Site (AECOM, June 16, 2020).

As stated in the above noted Specification document, contractor remediation work to be completed at the Site is generally comprised of existing hazardous materials abatement, deconstruction of site structures and offsite recycling and/or disposal to a Nova Scotia Environment approved facility, buried C&D waste excavation with onsite and offsite disposal to an Nova Scotia Environment approved facility, existing landfill cap removal, landfill berm construction, waste placement and compaction, landfill cap construction, groundwater interceptor trench construction, surface water management system construction, and associated works.

Under this contractor work program, AECOM acted as the owners engineer and provided the on-site environmental services required under the above noted Groundwater and Surface Water Monitoring Plan and NSE Approval No. 2020-2664911-00. It should be noted that contractor preparation for remedial activities commenced at the Site on August 24, 2020 and work was completed October 2021.

The scope of work for this annual report is provided in Section 15 of the NSE Approval No. 2020-2664911-00 document. As requested in this NSE approval document, a summary and interpretation of any instances of non-compliance that occurred and corrective action taken that took place within the time span the Annual Report (2021-2022) is presented in **Section 5** of this report. The time span that this Annual Report (2021-2022) covers is: 2 August 2021 to 1 May 2022.

2. Background

The former RDM Recycling C&D Facility landfill is located at Civic No. 1275 Old Sambro Road in Harrietsfield, NS, approximately 20 km South of Halifax, NS. The only entrance to the Site is from the Old Sambro Road. Vehicle access to the Site is currently restricted using a locked gate. The Site is approximately 66 hectares (ha) in size, of which 22 ha was used for Site activities with the most recent operator having used approximately 10 ha of the 22 ha for Site operations. NSLI has secured ownership the Site through the province. The Site is bound to the north and east by residential properties, to the south by Sheas Lake, and to the west by undeveloped woodland. The area is serviced by a mixture of private dug and drilled wells for potable water.

Site features include the following: landfill containment cell; paved sorting area; drainage control ditches; sedimentation ponds; and access roads. The Site did contain five (5) former building structures that were removed from site during the Fall 2020. Areas throughout the subject property area (beyond the landfill containment cell area) contained fill material with debris that was either added to the existing landfill cell (C&D Waste Material) or disposed offsite to a Nova Scotia Environment approved facility. On-site debris material identified on-site mainly consisted of concrete, brick, metal, wood, and asphalt shingles.

There is a significant history with this Site between the Site operators, the province, and the surrounding property owners dating back over 20 years (since 2000), when RDM initially sought approval for a C&D waste facility. There have been numerous orders and actions on behalf of the province, and numerous defences and successful appeals to the orders on behalf of the former owners of the property.

Two (2) previous intrusive field investigations have been completed at the Site by EarthTech (2002) and Conestoga-Rovers and Associates (2011), which included borehole drilling, monitoring well installation, water level measurement, aquifer test analysis, along with water quality sampling and analysis.

A 2015 Annual Monitoring Report was completed by GHD (2016), which included the assessment of 2015 and historical monitoring data for groundwater flow, leachate composition, groundwater quality, and surface water quality in the vicinity of the Site. The results of these investigations provide a background assessment of hydrogeological conditions on-site and in the immediate area surrounding the former landfill Site.

In early 2019, AECOM completed a report for the Site to further assess field, geochemical and hydrogeological conditions and to provide closure options for the Site: “Summary Letter on Site Assessment and Closure Option Development for the Former Harrietsfield Landfill Site, Harrietsfield, Nova Scotia (March 2019)”.

Upon completion of the 2019 report, the province chose the closure option, which included capping the existing landfill Site. Overall, this option involves leaving the landfill waste cell in place (no footprint expansion), covering the landfill cell with a better performing cap, controlling the groundwater surrounding the cell, mitigating groundwater intrusion into the landfill cell, and removing the landfill leachate. As provided in the AECOM Tender documentation (provided as part of the Municipal Approval Application), associated remaining waste material and contaminated soils on-site (outside of the landfill cell area) were to be either removed and disposed of at an approved facility or added to the upper portions of the landfill cell (completed) before new landfill cap construction (in progress). The Site was then to be graded and contoured post waste and contaminated soil removal (completed).

This closure option required the removal of leachate liquid from the existing landfill cell prior to the new cap construction. Leachate from the landfill cell was to be treated and disposed to environment based on a provincial approval for pilot-scale and full-scale treatment (Wastewater Treatment Facility Industrial Approval (No. 2011-075771-04)). The location of the existing leachate treatment area is shown on **Figure 2 (Appendix A)**. On-site leachate wastewater treatment was initiated in late June 2020.

On-Site construction activities to initiate the above noted site closure commenced on August 24, 2020. The on-Site leachate wastewater treatment contractor was also used to treat on-site excavation water that potentially contacted any impacted soil material (contact water) during remedial activities. All soil excavation remedial activities were completed in January 2021. The construction of the landfill cell cap was completed in October 2021.

2.1 Reference Documents

This report uses information from multiple reference documents. Reference documents provided below are referenced within this report for the purpose of pointing the reader to expanded descriptions and histories:

- Soil Remediation Report; and
- Operation Post Closure Plan (OPCP).

A complete list of documents used to generate this report is provided in **Section 7**.

2.2 Geology, Topography and Drainage

2.2.1 Pre-existing Conditions

The overburden material near the Site is the clayey to sandy till of the Lawrencetown Till, which is reported to occur as both ground moraines (1 to 2 metres (m) thick) and drumlins (2 to 30 m thick) (Finck et al, 1992). The Site is underlain by fine to coarse grained Harrietsfield Muscovite-Biotite Monzogranite and fracture orientation is not provided on geological mapping for the area (White, Macdonald and Horne, 2014). Horne, et al, (1992) suggest that aerial photos of the area (areas with the limited overburden coverage) suggest that there are several regionally significant joint patterns within the South Mountain Batholith and three of these joint sets trend northwest/ southeast and the other two trend northeast/ southwest.

As per the above noted GHD report (2016), three (3) residential wells are located within 500 m of the site. Domestic well data available from NSE indicates there are numerous drilled wells in the Harrietsfield area typically installed to total depths that range from 31 m below ground surface (bgs) to 100 m bgs. Dug wells exist at older residential properties.

Groundwater in the granite bedrock occurs in fractures at depths ranging from 4 m bgs to 88.4 m bgs. Static groundwater depths measured in these wells range from 1.8 m bgs to 7.3 m bgs. Well yield is variable with estimates ranging from 0.1 litres per minute (L/min) to 182 L/min. The transmissivity estimates for the granite aquifer as derived from the pumping tests range from 0.4 meters squared per day (m^2/day) to 5.8 m^2/day. There is no existing information with respect to regional groundwater flow directions in the area. Groundwater flow directions may be influenced by local physiographic features such as streams, lakes and topography but the fact that groundwater occurs in fractured granite suggests fracture orientation could control, or strongly influence local and/or regional groundwater flow directions in the bedrock.

The Phase II Report (CRA, 2011) included a discussion of hydraulic conductivity, hydraulic gradients and groundwater velocity. Based on the groundwater elevation data shown and the average hydraulic conductivity the horizontal groundwater velocity in the till and bedrock south of the disposal cell and the asphalt pad area are as follows:

Table 1: Groundwater Properties

Area/Media	Horizontal Hydraulic Gradient (m/m)	Hydraulic Conductivity (cm/sec)	Groundwater Velocity (m/year)
Disposal Cell/Till	0.1	2.2×10^{-6}	0.5
Disposal Cell/Bedrock	0.1	2.0×10^{-5}	6
Asphalt Pad Area/Till	0.06	2.2×10^{-6}	0.3
Asphalt Pad Area/Bedrock	0.06	2.0×10^{-5}	4

The results of the pumping tests conducted at PW19-01 (AECOM, July 2019) in the overburden aquifer (silty gravelly till) provide the following results:

- **Hydraulic Conductivity** = (4.2 x 10-8 – 1.0 x 10-6) m/s; and
- **Storativity** ~ 0.060 m/m.

Regional topography in the Harrietsfield area appears to be largely bedrock controlled and generally slopes downward from north to south. Glacial deposits of Lawrencetown Till and Granite Till are present, along with areas of thin soil cover and exposed granite bedrock. Bedrock exposure ranges from 10 to 90 percent within a 5-kilometre radius of Site. Slopes are classified as undulating. Steep slopes and level areas exist within the terrain; however, most slopes vary between 15 and 30 percent gradient.

The Site elevation range, based on a recent topographic survey (Allnorth, 2019), ranges from a high of 114 m relative to mean sea level (m MSL) in the northeastern portion of the site to 70 m MSL at Sheas Lake in the south. At the active Site area, the topography ranges from 90 m MSL to 105 m MSL and is considered to be hummocky with various cut and fill areas.

Regional drainage, like topography, is from a north to south direction. Normally drainage occurs through pre-glaciated valleys or in surface features created by faulting in the underlying bedrock. There are numerous lake and stream systems present in the area. Some of these include Spruce Hill Lake, Narrow Lake, Cranberry Lakes, Sheas Lake, French Lake, Silver Lake, Run Lake, Bennett Lake, Moody Lake, First Lake, Second Lake, and Grover Lake. The ultimate receiving environment for this water is the Atlantic Ocean. Biophysical mapping describes the development area as well-drained (i.e., 80 percent) with the remaining area described as imperfectly drained (i.e., 20 percent). Based on geophysical mapping, surficial flow in the surrounding area appears to occur from Narrow Lake along the boundary of the Site to Sheas Lake and eventually to Moody Lake. There are no streams within the confines of Site, only man-made ditches and pond areas. Only moderate amounts of intermittent surficial flow are expected about the Site due to extensive vegetation cover.

2.3 Sampling Locations

2.3.1 Groundwater

Monitoring wells that end with the letter “S” indicate a shallow monitoring well installed in overburden material and the well screen extends to the top of bedrock surface. Monitoring wells that end with the letter “M” or “D” represent wells that have screens that are isolated within the bedrock horizon.

Historical monitoring wells that were installed by others as part of previous environmental site investigation include: MW1-S, MW1-D, MW2-S, MW2-M, MW2-D, MW3, MW5-S, MW5-D, MW6-S, MW6-D, MW7-S, MW7-D, MW8-S and MW8-D. In 2018, all of these previously installed monitoring wells were refurbished by placing a bentonite

surface seal around each well to prevent surface water from entering the wells. A historical monitoring well MW4, which was intended as an upgradient monitoring well location, was discontinued to be used as part of the monitoring well network as this well provided irregular analytical data that was not similar to other upgradient monitoring wells.

A description of the groundwater monitoring network with respect to the different Site areas relative to potentially/ known impacted source areas is provided in in **Table 2** below.

Table 2: Groundwater Monitoring Network Details

Monitoring Well (MW) ID	Shallow (Overburden) or Deep (Bedrock) MW	Background MW	Landfill Cell Area	Former Buried Debris Areas (BDAs)	Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs)
MW1-S	Shallow	No	**Downgradient**	Cross-Gradient	Cross-Gradient
MW1-D	Deep	No	**Downgradient**	Cross-Gradient	Cross-Gradient
MW2-S	Shallow	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW2-M	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW2-D	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW3	Shallow	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
MW5-S	Shallow	No	Upgradient	**Downgradient**	Cross-Gradient
MW5-D	Deep	No	Upgradient	**Downgradient**	Cross-Gradient
MW6-S	Shallow	No	**Downgradient**	Cross-Gradient	Cross-Gradient
MW6-D	Deep	No	**Downgradient**	Cross-Gradient	Cross-Gradient
MW7-S	Shallow	No	Cross-Gradient	**Downgradient**	**Downgradient**
MW7-D	Deep	No	Cross-Gradient	**Downgradient**	**Downgradient**
MW8-S	Shallow	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW8-D	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW19-03D *	Deep	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
MW19-09S	Shallow	No	Upgradient	Cross-Gradient	**Downgradient**
MW19-10S	Shallow	No	Upgradient	**Downgradient**	Cross-Gradient
MW19-11M	Deep	No	**Downgradient**	**Downgradient**	Cross-Gradient
MW19-11D	Deep	No	**Downgradient**	**Downgradient**	Cross-Gradient
MW19-12S	Shallow	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW19-12D	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW19-13S	Shallow	No	Cross-Gradient	**Downgradient**	**Downgradient**
MW19-13D	Deep	No	Cross-Gradient	**Downgradient**	**Downgradient**
MW20-14S	Shallow	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW20-14D	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW20-15S	Shallow	No	Cross-Gradient	**Downgradient**	Cross-Gradient
MW20-15D	Deep	No	Cross-Gradient	**Downgradient**	Cross-Gradient

Monitoring Well (MW) ID	Shallow (Overburden) or Deep (Bedrock) MW	Background MW	Landfill Cell Area	Former Buried Debris Areas (BDAs)	Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs)
MW20-16 **	Deep	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
MW20-17S	Shallow	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
MW20-17D	Deep	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
PW19-01 ***	Shallow	No	Upgradient	Cross-Gradient	**Downgradient**

Notes:
* - Nested pair monitoring well associated with MW3
** - Bedrock at ground surface
*** - 102 mm diameter monitoring well constructed for hydraulic conductivity pump testing associated with the groundwater interceptor trench design
Green monitoring Well IDs represent background monitoring well locations

Monitoring wells starting with MW19 or MW20 were installed as part of recent environmental investigations completed by AECOM and monitoring well logs associated with these wells are provided in **Appendix B**. Monitoring wells that were included in the groundwater monitoring program are shown on **Figure 3 (Appendix A)**.

It should be noted that monitoring wells MW19-13S and MW19-13D were specifically installed to monitor potential groundwater impacts associated with treated water discharged to one of the two furthest down-gradient sedimentation ponds west of the landfill area. Treated leachate water was discharged to the western most sedimentation pond (isolated from the other ponds) during the months of August and September 2020.

2.3.2 Surface Water

Historical surface water locations sampled as part of previous environmental site investigations include: SW1, SW2, SW3 and SW4. Surface water samples labelled as SW1 and SW4 that were collected within 2018 and 2019 are not included in the overall data set as these samples were not collected in the same location as the historical surface water sample set.

A description of the surface water monitoring locations with respect to the different Site areas relative to potentially/ known impacted source areas is provided in in **Table 3** below.

Table 3: Surface Water Monitoring Location Details

Surface Water (SW) Sample Location ID	SW Source: Sheas Lake or Land-based Drainage	Background SW Location	Landfill Cell Area	Former Buried Debris Areas (BDAs)	Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs)
SW1	Sheas Lake	**Yes**	**Upgradient**	**Upgradient**	**Upgradient**
SW2	Sheas Lake	No	Upgradient	**Downgradient**	**Downgradient**
SW3	Sheas Lake	No	**Downgradient**	**Downgradient**	**Downgradient**
SW4	Sheas Lake	No	**Downgradient**	**Downgradient**	**Downgradient**
Diffuser *	Sheas Lake	No	Cross-Gradient	Cross-Gradient	**Downgradient**
SW-13	Land-based drainage	No	Upgradient	**Downgradient**	Cross-Gradient
SW-14 **	Land-based drainage	No	Cross-Gradient	**Downgradient**	Cross-Gradient
SW19-20	Land-based drainage	No	**Downgradient**	**Downgradient**	Cross-Gradient

Notes:
* - Treated Contact Water discharged to Diffuser location between Mid-October 2020 to Early December 2020.
** - Typically, dry and only contains water during and shortly after heavy rain events
The SW1 surface water sample location represents the background surface water conditions
Grey – not sampled during 2021-2022 Annual Report time period.

As shown in the **Table 3**, there are seven (7) surface water sample location included as part of the surface water monitoring program and these sample locations are shown on **Figure 2 (Appendix A)**.

It should be noted that the diffusor was removed Shea's Lake on September 16, 2021, and the point was no longer sampled after November 2, 2021, as construction was completed in October 2021. SW-14 location was not sampled during the 2021-2022 annual report time period as it was found dry – this location is typically dry and only contains water during and shortly after heavy rain events.

2.4 Applicable Criteria

The 2013 Nova Scotia Environment (NSE) Contaminated Site Regulations are the applicable criteria for the Site. Site characteristics are as follows: residential/ parkland land use, potable water supply and coarse-grained soils. The following guidelines are used for the evaluation of Metals, General Chemistry and Petroleum Hydrocarbons (PHCs) parameters in the following sampling media:

Groundwater Guidelines:

- Health Canada Guidelines for Canadian Drinking Water Quality. 2020; and
- Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface freshwater body at a greater distance than 10m, Section 5, Table 3, July 6, 2013.

Surface Water Guidelines:

- Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for Surface Water (fresh water); Table 3, July 6, 2013.

As further discussed in **Section 3.1**, established site-specific background groundwater and surface water data have been incorporated into this report. The above noted background data and discharge criteria are provided for reference purposes.

3. Methodology

3.1 Sample Collection and Analyses

3.1.1 Groundwater

Newly installed wells were developed by purging groundwater in order to clear the wells of fine sediment. Prior to groundwater sampling, static groundwater level measurements were collected from the well after allowing the water levels in the monitoring wells to stabilize. A Solinst™ Interface Probe was used to monitor for the presence of light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL), depth to water, and total depth. All groundwater samples were collected from a monitoring well dedicated Waterra tubing and foot valve sampling system. Groundwater samples were collected upon purging three (3) well volumes of groundwater to remove standing water and to draw a representative sample from the formation. If the monitoring well went dry during purging, it was allowed to recharge sufficiently before immediately collecting a groundwater sample.

A representative groundwater sample from each well was placed in laboratory supplied sampling bottles and submitted to the analytical laboratory for chemical analysis within a chilled container. The groundwater samples collected from the monitoring wells were analyzed for metals (including mercury), general chemistry (including TSS, phenols, DOC and COD) and petroleum hydrocarbons. Each metal groundwater sample was field filtered using a single use 0.45-micron filter. Field duplicates were collected during each sampling event. After sample collection, field parameters (pH, conductivity and temperature) were collected from each well with a YSI-650MDS multi meter.

The laboratory results for groundwater samples analyzed for metals, general chemistry and petroleum hydrocarbons are presented in analytical summary tables provided in **Appendix C** and the supporting laboratory certificates of analysis are provided in **Appendix D**. The groundwater results provided in **Appendix C** represent the analytical data that was collected by AECOM between November 2018 and May 2022. The groundwater analytical summary tables illustrate individual analytical parameter exceedances with respect to the above noted criteria along with showing background level exceedances and providing which values were considered to be outliers. It should be noted that background concentrations were revised in this report, as NSE recently provided the historical digital data (2001-2015) and additional recent analytical groundwater data were added to the database. Background concentrations were based on the entire 2001 to June 2020 analytical data set that was collected from available data associated with the upgradient MW3, MW19-03D, MW20-16, MW20-17S and MW20-17D sample locations with outliers removed from this data set. Further details on the removal of outliers are provided in **Appendix E**.

Time series plots of groundwater sample locations that had enough analytical data (four sampling events or more) to establish trends is provided in **Appendix F**.

A Mann-Kendall evaluation of groundwater sample locations that had enough analytical data to establish trends (between 2015 and May 2022) is provided in **Appendix G** along with supporting narrative.

3.1.2 Surface Water

Surface water samples were collected from each station using the direct-dip technique. The direct dip technique is a discrete sampling technique conducted by placing the sample container directly under the water surface. It has the advantage of using the laboratory-provided sample container as the collection device, alleviating any concerns that improper contact materials were used during sample collection. This technique also alleviates the need for sample equipment decontamination and is appropriate for sampling all types of water bodies when shallow (less than 0.5 metres) or surface layer water samples are needed. For sample bottles that contained preservative, a

larger preservative free bottle was used to transfer the sample into the preservative containing bottles by pouring the water into them. This helped to prevent preservative from being lost during sample collection.

Surface water samples were placed in laboratory supplied sampling bottles and submitted to the analytical laboratory for chemical analysis within a chilled container. The surface water samples collected were analyzed for metals (including mercury), general chemistry (including TSS, phenols, DOC and COD) and petroleum hydrocarbons. Field duplicates were collected during each sampling event. Field parameters (pH, conductivity and temperature) were collected from each surface water station with a YSI-650MDS multi meter.

The laboratory results for surface water samples analyzed for metals, general chemistry and petroleum hydrocarbons are summarized analytical summary tables provided in **Appendix C**. The surface water results provided in **Appendix C** represent the analytical data that was collected by AECOM between November 8, 2018, and ~April, 2022. These surface water analytical summary tables illustrate individual analytical parameter exceedances with respect to the above noted criteria along with showing background level exceedances and providing which values were considered to be outliers. It should be noted that background concentrations were revised in the previous October 2021 report, as NSE recently provided the historical digital data (2003-2015) and additional recent analytical surface water data were added to the database. Background concentrations were based on the entire 2003 to August 24, 2020, analytical data set that was collected from the SW1 sample location with outliers removed from this data set. Further details on the removal of outliers are provided in **Appendix E**.

Time series plots of surface water sample locations that had enough analytical data to establish trends (four sampling events or more) is provided in **Appendix F**.

3.2 Laboratory Facilities

Analytical data associated with this Annual Report contains data from prior to the reporting requirements of this report (June 2020 to July 27, 2021) to provide the entire set groundwater and surface water analytical data collected by AECOM between November 2018 and April 2022.

3.2.1 AGAT Laboratories

Between November 2018 and June 2020, groundwater and surface water samples collected as part of this program were submitted to AGAT Laboratories, located in Dartmouth, Nova Scotia, for chemical analysis. AGAT labs is accredited to ISO/IEC 17025 standards by the Standards Council of Canada (SCC).

3.2.2 Bureau Veritas Laboratories

After June 2020, groundwater and surface water samples collected as part of this program were submitted to Bureau Veritas Laboratories (BV Labs), formally known as Maxxam Analytics (Maxxam), located in Bedford, Nova Scotia, for chemical analyses. BV Labs is accredited to ISO/IEC 17025 standards by the Standards Council of Canada (SCC).

3.3 Quality Assurance and Quality Control

AECOM's quality assurance (QA) / quality control (QC) program associated with the NSE approval activities followed standard QA/QC procedures in accordance with AECOM standard operating procedures (SOPs) to minimize any cross-contamination between soil and/or groundwater samples. Clean nitrile gloves were used throughout the investigation program to eliminate cross-contamination between sampling points.

All field and supervisory personnel were instructed in proper sampling handling, documentation, and chain-of-custody (COC) procedures before beginning field activities. The field sampler was personally responsible for the care and custody of samples until transferred to the laboratory. A COC record was provided to the analytical laboratory at the time of sample submission. When transferring the possession of samples, the individuals relinquishing and receiving the samples completed the appropriate laboratory forms with the required signature, date and note the time on the record.

AECOM field personnel followed strict sample collecting handling practices, including changing disposable gloves for each sample collected and decontamination of field sampling equipment between samples, to ensure the integrity of sample collection. All samples were collected in pre-cleaned laboratory supplied containers with the appropriate preservatives provided within the sample containers and all samples were submitted for individual analysis within the laboratory prescribed hold times. Samples were packaged in coolers with sufficient packing material to ensure safe shipment of glass containers and ice was placed in coolers to maintain sample temperatures. All samples were kept at or below a temperature of 10°C once sampled until submission to the laboratory.

AGAT and BV Labs also undertake internal duplicate analyses for QA/QC purposes using laboratory duplicates, process blanks, process recovery and matrix spike analyses.

3.4 Containment Cell Leachate Measurements

AECOM field staff collected monthly manual leachate measurements using an interface probe between June 2020 and May 2022. In addition, AECOM also installed a Solnist Data logger within the sump, which measured leachate elevation data on a continuous basis.

3.5 Containment Cell Leachate Removal and Treatment

An initial leachate removal event from the landfill cell was completed between March 17, 2022, and March 31, 2022, with a total volume of 667,159 litres pumped from the cell and trucked off-site to an approved disposal facility. This leachate removal work was completed by GFL Environmental (formally “Terrapure”) under a separate contract.

4. Results

4.1 Groundwater

Sheen and free product thickness were not evident in any of the monitoring wells sampled during the monitoring events. Petroleum hydrocarbon odours were also not evident at any monitoring well locations.

Groundwater elevation data is provided in **Tables H1 to H4 (Appendix H)**. Groundwater field parameters (pH, conductivity and temperature) were collected from each well with a YSI-650MDS multi meter and this data is presented within **Tables H1** to **H4 (Appendix H)**.

Based on groundwater elevation data associated with the three (3) quarterly sampling events completed between September 2021 and March 2022, surficial (overburden) groundwater flow generally follows the overall topography across the Site and deeper groundwater flow through bedrock also follows a similar flow pattern. **Figure 4 (Appendix A)** provides the Groundwater Contour Maps for shallow (overburden) while **Figure 5** illustrates deep (bedrock) monitoring wells (as per **Table 2**) for the three (3) quarterly sampling events completed between September 2021 and March 2022.

4.1.1 Trend Analysis and Analytical Data Summary

A full depiction of the groundwater trend analysis (upward, downward, no change) is provided in **Table I1 (Appendix I)** with focus on metals (arsenic, boron, cadmium, cobalt, chromium, iron, lead, manganese, uranium), general chemistry (alkalinity, calcium, chloride, conductivity, hardness, pH, sulphate, total organic carbon (TOC), total dissolved solids (TDS) petroleum hydrocarbon (benzene, toluene, ethyl benzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) and phenol parameters as listed in Table 3 of NSE Approval No. 2020-2664911-00. **Table I1 (Appendix I)** describes changes in trend since 2015 and any changes in direction since 2020.

The section below provides groundwater upward trends summary tables that focus on upward trend changes that occurred since 2020 with respect to potentially/ known impacted source areas at the Site along with background monitoring well locations (presented first). Each presented source areas summary table focuses on the respective downgradient monitoring wells as provided in **Table 2** in **Section 2**. In cases where the trend analysis is determined to be stable (no change) or downward then a Mann-Kendall analysis was conducted on groundwater analytical data available since 2015. A Mann- Kendall analysis of all historical groundwater data (2001 to June 2020) was previously provided in the Baseline Groundwater Monitoring Summary Report, Former Landfill Site, Harrietsfield Nova Scotia (AECOM, November 18, 2020).

The groundwater analytical summary tables in **Appendix C** provide data comparison to applicable guidelines and background levels for groundwater samples collected on-site since 2018. As presented in these groundwater analytical summary tables, phenol, benzene, toluene, ethyl benzene and xylenes in groundwater did not exceed the applicable guidelines; and therefore, these parameters were not included in the groundwater trend analysis discussion.

4.1.1.1 Background Sample Location Upward Trends

Groundwater analytical parameters at background monitoring well locations that illustrated upward trends that occurred since 2020, including additional Mann Kendall analysis, are shown in **Table 4** below.

Table 4: Groundwater - Background Monitoring Well Locations Upward Trends

Monitoring Well ID	Arsenic	Calcium (Mann-Kendall) *	Conductivity (Mann-Kendall) *	Hardness (Mann-Kendall) *
MW3	-	-	up	-
MW19-03D	up	-	-	-
MW20-17D	-	up	-	up

Notes:
* - Based on additional Mann-Kendall analysis conducted on analytical data collected since 2015 (See Appendix G)

- Conductivity levels at MW3 appear to be within a stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- Sample location MW19-03D (deep nested pair to MW3) illustrated an upward trend with respect to arsenic concentrations.
- Calcium and hardness levels at MW20-17D appear to be within a stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020 for both parameters.

Background sample locations MW20-17S and MW20-16 provided no upward trends since 2020 and no other metals, general chemistry or petroleum hydrocarbon groundwater parameters presented in Table I1 (Appendix I) presented upward trends since 2020.

4.1.1.2 Background Sample Location Analytical Exceedances

Background sample location metal analytical exceedances are presented in **Table 5** below. Each monitoring well metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 5: Groundwater - Background Sample Location Metal Analytical Exceedances

			MW3	MW19-03D	MW20-16	MW20-17D
Aluminum	**Max. Conc.**	**(Date)**	290 (12-2020)	152 (02-2019)	55 (03-2022)	-
	NS-PSS[2]	**50**	1 of 10	1 of 11	1 of 8	
Manganese	**Max. Conc.**	**(Date)**	-	-	-	370 (03-2022)
	CDWQ[1]	**120**				4 of 8
Uranium	**Max. Conc.**	**(Date)**	-	30.5 (02-2019)	-	-
	CDWQ[1]	**20**		6 of 11		

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
1 Canadian Drinking Water Guidelines (CDWG, 2020)
2 NSE Tier II PSS for groundwater discharge to a surface freshwater body at a greater distance than 10m (2013)

- In December 2020 the MW20-17S sample location reported a modified TPH of 1.6 mg/L (fuel/lube resemblance), which exceeds the NSE-PSS guideline of 0.1 mg/L (lube resemblance).

No other metals, general chemistry (including chloride) or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on Appendix C. All reported pH levels were within background levels.

4.1.1.3 Landfill Cell Area (LCA) Upwards Trends

Groundwater analytical parameters at monitoring well locations positioned downgradient of the Landfill Cell Area (LCA) that illustrated upward trends that occurred since 2020, including additional Mann Kendall analysis, are shown in **Table 6** below.

Table 6: Groundwater - Landfill Cell Area (LCA) Upward Trends

Monitoring Well ID	Alkalinity	Cadmium (Mann-Kendall) *	Calcium	Conductivity	Hardness	Iron (Mann-Kendall) *	Manganese	Manganese (Mann-Kendall) *	pH	pH (Mann-Kendall) *	Total Dissolved Solids	Total Organic Carbon (Mann-Kendall) *	Uranium
MW1-S	up**	-	up**	up	up**	up	up	-	up**	-	up	up	up**
MW1-D	-	-	-	-	-	-	-	-	-	up	-	-	-
MW6-S	-	-	-	-	-	-	-	-	-	up	-	-	-
MW6-D	-	up	-	-	-	-	-	up	-	up	-	-	-
MW19-11M	-	-	-	-	-	-	-	-	-	up	-	-	-
MW19-11D	-	-	-	-	-	-	-	-	-	up	-	-	-

Notes:
* - Based on additional Mann-Kendall analysis conducted on analytical data collected since 2015 (See Appendix G)
** - denotes an upward trend in both Pre-2015 analytical data and Post-2020 analytical data

- Alkalinity, calcium, hardness, pH, and uranium concentrations at sample location MW1-S appear to be upward trending during pre-2015 sampling events and is also up during post-2020 sampling events. Conductivity, manganese and TDS concentrations at sample location MW1-S appear to be upward trending during post-2020 sampling events. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for iron and TOC.
- At sample location MW1-D, pH concentrations appear to be stable or no trend during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW6-S, pH concentrations appear to be upward trending during pre-2015 sampling events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- Manganese, pH and cadmium levels at MW6-D appear to either trend downward or show no trend during pre-2015 sampling events and post-2020 analytical data appears to be within a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for calcium and manganese.

Sample locations MW19-11M and MW19-11D provided no upward trends since 2020; however, additional Mann-Kendall analysis suggests an upward trend in pH post-2020 for both wells.

4.1.1.4 Landfill Cell Area (LCA) Analytical Exceedances

LCA sample location metal analytical exceedances are presented in **Table 7** below. Each monitoring well metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set. The late May 2020/ early June 2020 sampling event represents baseline conditions before leachate pumping/ treatment occurred at the landfill cell area.

Table 7: Groundwater - Landfill Cell Area (LCA) Metal Analytical Exceedances

			MW1-S	MW1-D	MW6-S	MW6-D
Aluminum	**Max. Conc.**	**(Date)**	2000 (12-2020)	-	132 (11-2018)	80 (12-2020)
	NS-PSS[2]	**50**	3 of 8		9 of 9	7 of 10
Arsenic	**Max. Conc.**	**(Date)**	**-**	-	-	49 (09-2020)
	CDWQ[1]	**10**				10 of 10
Boron	**Max. Conc.**	**(Date)**	5090 (11-2018)	7160 (11-2018)	-	14100 (05-2020)
	CDWQ[1]	**5000**	1 of 8	8 of 10		10 of 10
	NS-PSS[2]	**12000**	-	-		7 of 10
Cadmium	**Max. Conc.**	**(Date)**	0.23 (11-2018)	3.0 (10-2021)	-	1.91 (05-2020)
	NS-PSS[2]	**0.1**	1 of 8	10 of 10		1 of 10
Iron	**Max. Conc.**	**(Date)**	-	3960 (11-2018)	-	14000 (10-2021) *
	NS-PSS[2]	**3000**		1 of 10		9 of 10
Manganese	**Max. Conc.**	**(Date)**	15000 (10-2021)	8900 (12-2020)	3600 (12-2021)	23000 (10-2021) *
	CDWQ[1]	**120**	8 of 8	10 of 10	9 of 9	10 of 10
	NS-PSS[2]	**8200**	-	3 of 10	-	10 of 10
Uranium	**Max. Conc.**	**(Date)**	450 (06-2021)	980 (09-2020)	30 (12-2021)	280 (06-2021)
	CDWQ[1]	**20**	8 of 8	10 of 10	1 of 9	10 of 10

			MW19-11M	MW19-11D
Aluminum	**Max. Conc.**	**(Date)**	459 (07-2019)	58 (09-2020)
	NS-PSS[2]	**50**	5 of 9	1 of 9
Arsenic	**Max. Conc.**	**(Date)**	31 (09-2020)	40 (06-2020)
	CDWQ[1]	**10**	2 of 9	6 of 9
Boron	**Max. Conc.**	**(Date)**	7600 (09-2020)	7720 (06-2020)
	CDWQ[1]	**5000**	1 of 9	7 of 9
Cadmium	**Max. Conc.**	**(Date)**	0.41 (10-2021)	0.37 (02-2019)
	NS-PSS[2]	**0.1**	7 of 9	5 of 9
Copper	**Max. Conc.**	**(Date)**	-	30 (12-2020)
	NS-PSS[2]	**20**		1 of 9
Iron	**Max. Conc.**	**(Date)**	15000 (09-2000)	14900 (06-2020)
	NS-PSS[2]	**3000**	4 of 9	8 of 9
Manganese	**Max. Conc.**	**(Date)**	26000 (09 2020)	29000 (09-2020)
	CDWQ[1]	**120**	9 of 9	9 of 9
	NS-PSS[2]	**8200**	9 of 9	9 of 9

			MW19-11M	MW19-11D
Uranium	**Max. Conc.**	**(Date)**	560 (09-2020)	597 (06-2020)
	CDWQ[1]	**20**	9 of 9	9 of 9

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
Green Max. Conc. represents a single parameter exceedance occurrence before on-site construction
1 Canadian Drinking Water Guidelines (CDWG, 2020)
2 NSE Tier II PSS for groundwater discharge to a surface freshwater body at a greater distance than 10m (2013)

- MW1-S above noted peak value aluminum and uranium concentrations are considered to be elevated; however, the above peak value manganese concentrations are considered to be similar concentrations before on-site leachate treatment/ construction.
- MW1-D above noted metals concentrations are considered to be similar to before on-site leachate treatment/ construction and post on-site leachate treatment/ construction concentrations.
- MW6-S metals concentrations are considered to be similar to before on-site leachate treatment/ construction and post on-site leachate treatment/ construction.
- MW6-D above noted metals concentrations are considered to be similar to before on-site leachate treatment/ construction and post on-site leachate treatment/ construction.
- MW19-11M above noted peak value metals concentrations are considered to be similar before on-site leachate treatment/ construction and post on-site leachate treatment/ construction concentrations except for above noted peak values for arsenic, boron, iron, manganese and uranium noted above for the September 2020 sampling event.
- MW19-11D above noted peak value metals concentrations are considered to be similar before on-site leachate treatment/ construction and post on-site leachate treatment/ construction concentrations except for the above noted copper concentration the December 2020 sampling event.

These were the only groundwater petroleum hydrocarbon exceedances reported within the LPTA and SPs area. No other metals, general chemistry (including chloride) or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**. All reported pH levels were within background levels.

4.1.1.5 Former Buried Debris Areas (BDAs) Upward Trends

Groundwater analytical parameters at monitoring well locations positioned downgradient of the Former BDAs that illustrated upward trends that occurred since 2020, including additional Mann Kendall analysis, are shown in **Table 8** below.

Table 8: Groundwater - Former Buried Debris Areas (BDAs) Upward Trends

Monitoring Well ID	Arsenic	Alkalinity	Alkalinity (Mann-Kendall) *	Aluminum (Mann-Kendall) *	Boron (Mann-Kendall) *	Cadmium (Mann-Kendall) *	Calcium (Mann-Kendall) *	Chloride (Mann-Kendall) *	Conductivity (Mann-Kendall) *	Hardness	Hardness (Mann-Kendall) *	Iron (Mann-Kendall) *	Manganese Mann-Kendall) *	pH	pH (Mann-Kendall) *	Sulphate (Mann-Kendall) *	Total Dissolved Solids (Mann-Kendall) *	Total Organic Carbon (Mann-Kendall) *	Uranium	Uranium (Mann-Kendall) *
MW2-S	-	-	up	-	-	-	-	up	-	-	-	-	-	-	-	-	-	up	-	-
MW2-M	-	-	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-	up**	-
MW2-D	-	-	-	-	up	-	-	-	-	-	-	-	-	-	up	-	-	-	-	-

Monitoring Well ID	Arsenic	Alkalinity	Alkalinity (Mann-Kendall) *	Aluminum (Mann-Kendall) *	Boron (Mann-Kendall) *	Cadmium (Mann-Kendall) *	Calcium (Mann-Kendall) *	Chloride (Mann-Kendall) *	Conductivity (Mann-Kendall) *	Hardness	Hardness (Mann-Kendall) *	Iron (Mann-Kendall) *	Manganese Mann-Kendall) *	pH	pH (Mann-Kendall) *	Sulphate (Mann-Kendall) *	Total Dissolved Solids (Mann-Kendall) *	Total Organic Carbon (Mann-Kendall) *	Uranium	Uranium (Mann-Kendall) *
MW5-S	up	-	up	-	-	-	up	up	up	up	-	-	-	-	up	-	up	-	-	up
MW5-D	-	-	-	-	-	-	up	up	up	-	up	-	-	-	up	-	-	-	-	-
MW7-S	-	-	up	-	-	-	-	-	-	-	-	-	-	-	up	-	-	up	-	-
MW7-D	up**	-	-	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-	-
MW8-S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-
MW8-D	-	-	up	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-	up
MW19-11M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-	-
MW19-11D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	up	-	-	-	-	-
MW19-12D	-	-	-	-	-	-	-	up	-	-	-	-	-	-	-	-	-	-	-	-
MW19-12S	-	up***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW19-13S	-	-	up	up	-	up	-	-	-	-	-	up	up	-	-	-	-	-	-	-
MW19-13D	-	-	-	-	-	up	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW19-15D	-	-	up	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
* - Based on additional Mann-Kendall analysis conducted on analytical data collected since 2015 (See Appendix G)
** - denotes an upward trend in both Pre-2015 analytical data and Post-2020 analytical data
*** - based on limited data (four data sets)

- At sample location MW2-S, chloride concentrations appear to be downward trending during pre-2015 sampling events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Alkalinity concentrations appear to be stable or no trend condition during pre-2015 post-2020 sampling events data presents as a stable however, additional Mann-Kendall analysis suggests an upward trend post-2020. Also, at sample location MW2-S, TOC concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW2-M, pH concentrations appear to be stable or no trend condition during pre-2015 sampling events while post-2020 sampling event data presents as an upward trend. Uranium locations present an upward trend during both pre-2015 and post-2020 sampling events.
- At sample location MW2-D, boron concentrations appear to be upward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020. pH concentrations appear to be stable or no trend condition during both pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW5-S, calcium, chloride, conductivity, pH, TDS and uranium concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of

post-2020 for alkalinity. Arsenic and hardness concentrations showed as stable or no trend condition during pre-2015 sampling events; however, it is now showing as an upward trend post-2020.

- At sample location MW5-D, calcium, chloride, conductivity, hardness and pH concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW7-S, pH concentrations appear to be upward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity. TOC concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW7-D, pre-2015 and post-2020 sampling event arsenic analytical data present as an upward trend. pH concentrations appear to be upward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW8-S, sulphate concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW8-D, pre-2015 sampling event uranium analytical data present as an upward trend, and post-2020 sampling event uranium presents as a downward trend; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity. pH concentrations appear to be downward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- Sample locations MW19-11M and MW19-11D provided no upward trends since 2020; however, additional Mann-Kendall analysis suggests an upward trend in pH post-2020 for both wells.
- At sample location MW19-12D, chloride concentrations appear to be stable or no trend during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW19-12S, alkalinity concentrations post-2020 appear to trend upward. However, it should be noted that this trend analysis is based on limited data (four data sets).
- At sample location MW19-13S, aluminum, cadmium, iron and manganese concentrations post-2020 appear to trend upward based on additional Mann-Kendall analysis. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity.
- At sample location MW19-13D, cadmium concentrations post-2020 appear to trend upward based on additional Mann-Kendall analysis.
- At sample location MW19-15D, post-2020 sampling event alkalinity analytical data present as an upward trend.

Sample locations MW19-10S, MW20-14S, MW20-14D and MW20-15S provided no upward trends since 2020 and no other metals, general chemistry or petroleum hydrocarbon groundwater parameters presented in **Table I1 (Appendix I)** presented upward trends since 2020.

4.1.1.6 Former Buried Debris Areas (BDAs) Analytical Exceedances

Former BDA sample location metal analytical exceedances are presented in Table 9 below. Each monitoring well metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 9: Groundwater - Former Buried Debris Areas (BDAs) Metal Analytical Exceedances

			MW2-S	MW2-M	MW2-D	MW19-10S
Manganese	**Max. Conc.**	**(Date)**	137 (06-2020)	-	-	683 (07-2019)
	CDWQ[1]	**120**	1 of 8			1 of 4
Uranium	**Max. Conc.**	**(Date)**	-	35 (09-2020)	250 (09-2020)	-
	CDWQ[1]	**20**		5 of 9	10 of 10	

			MW5-S	MW5-D	MW7-S	MW7-D
Aluminum	**Max. Conc.**	**(Date)**	155 (11-2018)	52 (11-2018)	3520 (11-2018)	106 (11-2018)
	NS-PSS[2]	**50**	1 of 9	2 of 9	6 of 8	9 of 10
Arsenic	**Max. Conc.**	**(Date)**	-	11 (12-2021)*	-	-
	CDWQ[1]	**10**		3 of 9		
Cadmium	**Max. Conc.**	**(Date)**	0.65 (11-2018)	0.62 (11-2018)	-	4.63 (05-2020)
	NS-PSS[2]	**0.1**	7 of 9	3 of 9		10 of 10
Manganese	**Max. Conc.**	**(Date)**	2100 (12-2020)	140 (12-2021)	412 (11-2018)	5100 (10-2021)
	CDWQ[1]	**120**	4 of 9	2 of 9	2 of 8	10 of 10
Uranium	**Max. Conc.**	**(Date)**	120 (09-2020)	460 (09-2020)	-	47 (09-2020)
	CDWQ[1]	**20**	1 of 9	5 of 9		4 of 10

			MW8-S	MW8-D	MW19-11M	MW19-11D
Aluminum	**Max. Conc.**	**(Date)**	-	-	459 (07-2019)	58 (09-2020)
	NS-PSS[2]	**50**			7 of 9	1 of 9
Arsenic	**Max. Conc.**	**(Date)**	-	-	31 (09-2020)	40 (06-2020)
	CDWQ[1]	**10**			2 of 9	6 of 9
Boron	**Max. Conc.**	**(Date)**	-	-	7600 (09-2020)	7720 (06-2020)
	CDWQ[1]	**5000**			1 of 9	7 of 9
Cadmium	**Max. Conc.**	**(Date)**	0.276 (06-2020)	-	0.41 (10-2021)	0.37 (02-2019)
	NS-PSS[2]	**0.1**	3 of 9		7 of 9	5 of 9
Copper	**Max. Conc.**	**(Date)**	-	-	-	30 (12-2020)
	NS-PSS[2]	**20**				1 of 9
Iron	**Max. Conc.**	**(Date)**	-	-	15000 (09-2000)	14900 (06-2020)
	NS-PSS[2]	**3000**			4 of 9	8 of 9
Manganese	**Max. Conc.**	**(Date)**	150 (03-2021)	140 (12-2020)	26000 (09 2020)	29000 (09-2020)
	CDWQ[1]	**120**	1 of 9	1 of 10	9 of 9	9 of 9
	NS-PSS[2]	**8200**	-	-	9 of 9	9 of 9
Uranium	**Max. Conc.**	**(Date)**	200 (03-2021)	520 (06-2021)	560 (09-2020)	597 (06-2020)
	CDWQ[1]	**20**	8 of 9	9 of 10	9 of 9	9 of 9

			MW19-12S	MW19-12D	MW19-13S	MW19-13D
Aluminum	**Max. Conc.**	**(Date)**	-	-	540 (12-2021)	-
	NS-PSS[2]	**50**			9 of 9	
Cadmium	**Max. Conc.**	**(Date)**	-	0.197 (07-2019)	0.27 (10-2021)	0.17 (12-2021)
	NS-PSS[2]	**0.1**		7 of 11	8 of 9	8 of 11
Copper	**Max. Conc.**	**(Date)**	-	-	-	21 (12-2020)
	NS-PSS[2]	**20**				1 of 11
Manganese	**Max. Conc.**	**(Date)**	652 (07-2019)	207 (06-2020)	1200 (10-2021)	197 (11-2019)
	CDWQ[1]	**120**	1 of 4	3 of 11	7 of 9	4 of 11
Uranium	**Max. Conc.**	**(Date)**	-	21 (12-2020)	-	-
	CDWQ[1]	**20**		1 of 11		

			MW20-14S	MW20-14D	MW20-15S	MW20-15D
Aluminum	**Max. Conc.**	**(Date)**	120 (03-2021)	-	-	-
	NS-PSS[2]	**50**	2 of 7			
Cadmium	**Max. Conc.**	**(Date)**	-	0.354 (05-2020)	-	0.25 (10-2021)
	NS-PSS[2]	**0.1**		8 of 8		4 of 8
Manganese	**Max. Conc.**	**(Date)**	460 (12-2020)	127 (05-2020)	1290 (05-2020)	285 (05-2020)
	CDWQ[1]	**120**	6 of 7	1 of 8	2 of 5	2 of 8
Uranium	**Max. Conc.**	**(Date)**	-	-	-	310 (3-2022) *
	CDWQ[1]	**20**				8 of 8

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
Green Max. Conc. represents a single parameter exceedance occurrence before on-site construction
* denotes that an identical concentration at an earlier date
1 Canadian Drinking Water Guidelines (CDWG, 2020)
2 NSE Tier II PSS for groundwater discharge to a surface freshwater body at a greater distance than 10m (2013)

- MW2-M - During on-site leachate treatment/ construction, uranium concentrations appear to be diminishing compared to historical trend data.
- MW2-D - During on-site leachate treatment/ construction, uranium concentrations appear to similar to be historical trend data.
- MW5-S - Aluminum concentrations peak value/ elevated level only occurs during pre- leachate treatment/ construction activities. Cadmium concentrations are similar during pre and post leachate treatment/ construction activities. A peak value manganese concentration occurred during the December 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data. A peak value uranium concentration occurred during the December 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were below applicable guidelines.
- MW5-D - Aluminum concentrations peak value during the June 2021 sampling event is similar to concentrations observed in November 2018 (during pre leachate treatment/ construction). Cadmium concentrations elevated value during the June 2021 sampling event is lower than the during pre leachate treatment/ construction concentrations observed in November 2018. During on-site leachate treatment/ construction, manganese concentrations appear to similar to historical trend data with the exception of a peak value occurring during the June 2021) sampling event. A peak value uranium concentration occurred during the December 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data.

- MW7-S – The above noted aluminum exceedances are not considered to be a concern based on pre leachate treatment/ construction concentrations. Manganese exceedances do not occur during on-site leachate treatment/ construction period.
- MW7-D – During on-site leachate treatment/ construction, aluminium and cadmium concentrations appear to similar to pre on-site leachate treatment/ construction trend data. Manganese concentrations are elevated during construction activities (Sept 2020 to June 2020). A peak value uranium concentration occurred during the September 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data.
- MW8-S - During on-site leachate treatment/ construction, cadmium concentrations appear to be lower when compared to historical trend data. A peak value manganese concentration occurred during the March 2021 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data. Slightly elevated uranium concentration occurred during the December 2020 and March 2021 sampling events; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data.
- MW8-D - The above noted manganese peak value occurred in December 2020; however, other pre and post leachate treatment/ construction manganese levels were below applicable guidelines. During on-site leachate treatment/ construction, uranium concentrations appear to similar to pre on-site leachate treatment/ construction trend data; however, the uranium peak value occurs at the June 2021 sampling event.
- MW19-11M above noted peak value metals concentrations are considered to be similar before on-site leachate treatment/ construction and post on-site leachate treatment/ construction concentrations except for above noted peak values for arsenic, boron, iron, manganese and uranium noted above for the September 2020 sampling event.
- MW19-11D above noted peak value metals concentrations are considered to be similar pre on-site leachate treatment/ construction and post on-site leachate treatment/ construction concentrations except for the above noted copper concentration for the December 2020 sampling event.
- MW19-12D - During on-site leachate treatment/ construction, cadmium concentrations appear to be similar to or diminishing compared to historical trend data. Manganese concentrations exceed applicable guidelines during pre on-site leachate treatment/ construction but do not during on-site construction activity.
- MW19-13S - During the construction period (September 2020 to June 2021), aluminium, cadmium, manganese concentrations are marginally elevated when compared to pre on-site leachate treatment/ construction concentrations.
- MW19-13D - Cadmium and copper concentrations are slightly elevated at the December 2020 sampling event; however, other pre and post leachate treatment/ construction cadmium and copper levels were similar to historical trend data. Manganese concentrations were elevated during pre on-site leachate treatment/ construction but do not during on-site construction activity.
- MW20-14S - A peak value aluminum concentration occurred during the March 2021 sampling event; however, levels returned to below guideline conditions in the June 2021 sampling event. Manganese concentrations were slightly elevated during on-site construction activities when compared to historical concentrations.
- MW20-14D - During on-site leachate treatment/ construction, cadmium concentrations appear to be similar to or diminishing compared to historical trend data.
- MW20-15S - During on-site leachate treatment/ construction, manganese concentrations appear to be diminishing compared to historical trend data.
- MW20-15D Cadmium concentrations appear to similar to or diminishing compared to historical trend data. During on-site leachate treatment/ construction, manganese concentrations appear to be diminishing compared to historical trend data. A peak value uranium concentration occurred during the December 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data. First exceedance in aluminum noted in December 2021.

During November 2019, the MW19-13D sample location reported a modified TPH of 0.5 mg/L (lube resemblance), which exceeds the NSE-PSS guideline of 0.1 mg/L (lube resemblance). During December 2020, the MW5-D

sample location reported a modified TPH of 0.14 mg/L (lube resemblance), which exceeds the NSE-PSS guideline of 0.1 mg/L (lube resemblance). These were the only groundwater petroleum hydrocarbon exceedances reported within the former BDA.

No other metals, general chemistry (including chloride) or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**. All reported pH levels were within background levels.

4.1.1.7 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Upward Trends

Groundwater analytical parameters at monitoring well locations positioned downgradient of the Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) that illustrated upward trends that occurred since 2020 are shown in **Table 10** below.

Table 10: Groundwater - Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Upward Trends

Monitoring Well ID	Alkalinity (Mann-Kendall) *	Aluminum (Mann-Kendall) *	Arsenic	Cadmium (Mann-Kendall) *	Cadmium (Mann-Kendall) *	Iron (Mann-Kendall) *	Manganese Mann-Kendall) *	pH (Mann-Kendall) *	Total Organic Carbon (Mann-Kendall) *	Uranium (Mann-Kendall) *
MW7-S	up	-	-	-	-	-	-	up	up	-
MW7-D	-	-	up**	-	-	-	-	up	-	-
MW19-09S	-	-	-	-	-	-	-	-	-	up
MW19-13S	up	up	-	-	up	up	up	-	-	
MW19-13D	-	-	-	up	-	-		-	-	-
PW19-01	up		-	-		up		-	-	-

Notes:
* - Based on additional Mann-Kendall analysis conducted on analytical data collected since 2015 (See Appendix G)
** - denotes an upward trend in both Pre-2015 analytical data and Post-2020 analytical data

- At sample location MW7-S, pH concentrations appear to be upward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity. TOC concentrations appear to be stable or no trend condition during pre-2015 and post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW7-D, pre-2015 and post-2020 sampling event arsenic analytical data present as an upward trend. pH concentrations appear to be upward trending during pre-2015 sample events while post-2020 sampling event data presents as a stable or no trend condition; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location MW19-09S, uranium concentrations appear to be stable or no trend condition during post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020 this parameter.
- At sample location MW19-13S, aluminum, cadmium, iron and manganese concentrations post-2020 appear to trend upward based on additional Mann-Kendall analysis. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity.

- At sample location MW19-13D, cadmium concentrations appear to be stable or no trend condition during post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020.
- At sample location PW19-01, iron concentrations appear to be stable or no trend condition during post-2020 sampling events; however, additional Mann-Kendall analysis suggests an upward trend post-2020. Additional Mann-Kendall analysis suggests an upward trend of post-2020 for alkalinity.

Other metals, general chemistry or petroleum hydrocarbon groundwater parameters presented in **Table I1 (Appendix I)** presented no upward trends since 2020.

4.1.1.8 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Analytical Exceedances

LTPA and SPs sample location metal analytical exceedances are presented in **Table 11** below. Each monitoring well metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 11: Groundwater - Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Metal Analytical Exceedances

			MW7-S	MW7-D	MW19-09S
Aluminum	**Max. Conc.**	**(Date)**	3520 (11-2018)	106 (11-2018)	1700 (03-2021)
	NS-PSS[2]	**50**	6 of 8	9 of 10	1 of 11
Arsenic	**Max. Conc.**	**(Date)**	-	-	-
	CDWQ[1]	**10**			
Cadmium	**Max. Conc.**	**(Date)**	-	4.63 (05-2020)	-
	NS-PSS[2]	**0.1**		10 of 10	
Manganese	**Max. Conc.**	**(Date)**	412 (11-2018)	5100 (10-2021)	140 (03-2021)
	CDWQ[1]	**120**	2 of 8	10 of 10	1 of 11
Uranium	**Max. Conc.**	**(Date)**	-	47 (09-2020)	-
	CDWQ[1]	**20**		4 of 10	

			MW19-13S	MW19-13D	PW19-01
Aluminum	**Max. Conc.**	**(Date)**	540 (12-2021)	-	-
	NS-PSS[2]	**50**	9 of 9		
Arsenic	**Max. Conc.**	**(Date)**	-	-	11 (06-2021)
	CDWQ[1]	**10**			1 of 11
Cadmium	**Max. Conc.**	**(Date)**	0.27 (10-2021)	0.17 (12-2021)	-
	NS-PSS[2]	**0.1**	8 of 9	8 of 11	
Copper	**Max. Conc.**	**(Date)**	-	21 (12-2020)	-
	NS-PSS[2]	**20**		1 of 11	
Manganese	**Max. Conc.**	**(Date)**	1200 (05-2021)	197 (11-2019)	3100 (06-2021)
	CDWQ[1]	**120**	7 of 9	4 of 11	8 of 11
Uranium	**Max. Conc.**	**(Date)**	-	-	21 (09-2020)
	CDWQ[1]	**20**			1 of 11

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
1 Canadian Drinking Water Guidelines (CDWG, 2020)
2 NSE Tier II PSS for groundwater discharge to a surface freshwater body at a greater distance than 10m (2013)

- MW7-S – The above noted aluminum exceedances not considered to be a concern based on pre leachate treatment/ construction concentrations. Manganese exceedances do not occur during on-site leachate treatment/ construction period.
- MW7-D – During on-site leachate treatment/ construction, aluminium and cadmium concentrations appear to similar to pre on-site leachate treatment/ construction trend data. Manganese concentrations are elevated during construction activities (September 2020 to June 2020). A peak value uranium concentration occurred during the September 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data.
- MW19-09S - A peak value aluminum concentration occurred during the March 2021 sampling event; however, levels returned to below guideline conditions in the June 2021 sampling event. An elevated manganese concentration occurred during the March 2021 that was less than peak value that occurred during the July 2019 sampling event; however, manganese levels returned to historical levels in the June 2021 sampling event.
- MW19-13S - During the construction period (September 2020 to June 2021), aluminium, cadmium, manganese concentrations are marginally elevated when compared to pre on-site leachate treatment/ construction concentrations.
- MW19-13D - Cadmium and copper concentrations are slightly elevated at the December 2020 sampling event; however, other pre and post leachate treatment/ construction cadmium and copper levels were similar to historical trend data. Manganese concentrations were elevated during pre on-site leachate treatment/ construction but do not during on-site construction activity.
- PW19-01 - A peak value uranium concentration occurred during the September 2020 sampling event; however, other pre and post leachate treatment/ construction manganese levels were similar to historical trend data. Elevated manganese concentrations occur during the September 2020, December 2020 and June 2021 sampling events. During on-site leachate treatment/ construction, arsenic concentrations appear to similar to pre on-site leachate treatment/ construction trend data; however, the arsenic peak value occurs at the June 2021 sampling event.

During the November 2019 sampling event (pre on-site treatment), the MW19-13D sample location reported a modified TPH of 0.5 mg/L (lube resemblance), which exceeds the NSE-PSS guideline of 0.1 mg/L (lube resemblance). The December 2020 and the October 2021 sampling events, the PW19-01D sample location reported a modified TPH concentrations of 1.9 mg/L (lube resemblance) and 0.29 mg/L (lube resemblance), respectively, which both exceed the NSE-PSS guideline of 0.1 mg/L (lube resemblance). It should be noted that both of the above noted PW19-01 samples contained sediment and thus these results are considered to be biased high as the extraction may be pulling analytes from both the water and any sediment present in the sample. These were the only groundwater petroleum hydrocarbon exceedances reported within the LPTA and SPs area.

No other metals, general chemistry (including chloride) or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**. All reported pH levels were within background levels.

4.2 Surface Water

Sheen and free product thickness were not evident in any of the surface water sampling locations during the monitoring events. Petroleum hydrocarbon odours were also not evident at any sampling locations.

Surface water field parameters (pH, conductivity, temperature, and total dissolved solids (TDS)) were collected from each surface water station with a YSI-650MDS multi meter. Conductivity and pH field data is presented within **Table H4 (Appendix H)**.

4.2.1 Trend Analysis and Analytical Data Summary

A full depiction of the surface water trend analysis (upward, downward, no change) is provided in **Table I2 (Appendix I)** with focus on metals (aluminum, arsenic, boron, cadmium, cobalt, chromium, iron, lead, manganese, uranium), general chemistry (alkalinity, calcium, chloride, conductivity, hardness, pH, sulphate, total organic carbon (TOC), total dissolved solids (TDS), total suspended solids (TSS), petroleum hydrocarbon (benzene, toluene, ethyl benzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) and phenol parameters as listed in Table 3 of NSE Approval No. 2020-2664911-00. **Table I2 (Appendix I)** describes changes in trend since 2015 and any changes in direction since 2020.

The below section provides surface water upward trends summary tables that focus on upward trend changes that occurred since 2020 with respect to potentially/ known impacted source areas at the Site along with the background sample location (SW1) which is presented first. Each presented source areas summary table focuses on the respective downgradient surface water sample locations, as provided in **Table 3** in **Section 2**. It should be noted that SW14 did not have sufficient sample set data to complete the trends analysis process, as the minimum number of sample sets required is four (4) sample sets (USEPA, 2006).

The surface water analytical summary tables in **Appendix C** provide data comparison to applicable guidelines and background levels for groundwater samples collected on-site since 2018. As presented in these surface water analytical summary tables, phenol, benzene, toluene, ethyl benzene, xylenes BOD_5 and COD in groundwater did not exceed the applicable guidelines; and therefore, these parameters were not included in the groundwater trend analysis discussion.

4.2.1.1 Background Surface Water Trends

There are no surface water analytical parameters at the background surface water location (SW1) that illustrated upward trends that occurred since 2020.

4.2.1.2 Background Surface Water Analytical Exceedances

Background surface water sample location metal analytical exceedances are presented in **Table 12** below. Each surface water metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 12: Surface Water - Background Surface Water Locations Metal Analytical Exceedances

			SW1
Aluminum	**Max. Conc.**	**(Date)**	940 (8/11/2021)
	NS-EQS[1]	**5**	36 of 36
Cadmium	**Max. Conc.**	**(Date)**	0.97 (12/14/2020)
	NS-EQS[1]	**0.01**	29 of 36
Iron	**Max. Conc.**	**(Date)**	970 (9/8/2021)
	NS-EQS[1]	**300**	36 of 36
Lead	**Max. Conc.**	**(Date)**	1.4 (11/20/2020)
	NS-EQS[1]	**1**	13 of 36

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
1 NSE Tier I EQS for surface water (fresh water) (2013).

No other metals, general chemistry or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**.

4.2.1.3 Landfill Cell Area (LCA) Trends

There are no surface water analytical parameters at surface water locations (SW3, SW4, SW19-20) positioned downgradient of the Landfill Cell Area (LCA) that illustrated upward trends that occurred since 2020.

Surface water locations SW3 and SW4 both show a downwards trend in total suspended solids (TSS) post-2020.

4.2.1.4 Landfill Cell Area (LCA) Analytical Exceedances

LCA surface water sample location metal analytical exceedances are presented in **Table 13** below. Each surface water metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 13: Surface Water - Landfill Cell Area (LCA) Metal Analytical Exceedances

			SW3	SW4	SW19-20
Aluminum	**Max. Conc.**	**(Date)**	1,600 (11/20/2020)	1,300 (11/30/2020)*	9,200 (12/28/2020)
	NS-EQS[1]	**5**	38 of 38	36 of 36	27 of 27
Arsenic	**Max. Conc.**	**(Date)**	-	-	6.4 (9/23/2020)
	NS-EQS[1]	**5**			3 of 27
Cadmium	**Max. Conc.**	**(Date)**	0.037 (11/20/2020)	0.04 (5/19/2021)	0.15 (11/30/2020)
	NS-EQS[1]	**0.01**	34 of 38	30 of 36	25 of 27
Copper	**Max. Conc.**	**(Date)**	2.1 (9/24/2020)	-	21 (11/2/2021)
	NS-EQS[1]	**2**	1 of 38		16 of 27
Iron	**Max. Conc.**	**(Date)**	1,600 (11/20/2020)	1,300 (6/30/2021)	9,300 (9/23/2020)
	NS-EQS[1]	**300**	38 of 38	36 of 36	27 of 27
Lead	**Max. Conc.**	**(Date)**	2.0 (11/20/2020)	2.5 (6/30/2021)	12 (11/30/2020)
	NS-EQS[1]	**1**	15 of 38	15 of 36	6 of 27
Manganese	**Max. Conc.**	**(Date)**	-	-	7500 (9/23/2021)
	NS-EQS[1]	**820**			16 of 27
Selenium	**Max. Conc.**	**(Date)**	-	-	2 (6/1/2020)
	NS-EQS[1]	**1**			1 of 27
Vanadium	**Max. Conc.**	**(Date)**	-	-	14 (12/28/2020)
	NS-EQS[1]	**6**			3 of 27
Zinc	**Max. Conc.**	**(Date)**	-	-	51 (11/30/2020)
	NS-EQS[1]	**30**			3 of 27

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
* denotes that an identical concentration at an earlier date
1 NSE Tier I EQS for surface water (fresh water) (2013).

- For SW3 and SW4 aluminum, cadmium iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point; however, concentrations for these parameters appear to be similar (but slightly greater) to the upgradient background

concentrations observed at SW1 within the same time periods. The above noted copper exceedance at SW3 is a one-time occurrence and marginally exceeds the applicable guideline.

- At SW19-20, aluminum, arsenic, cadmium, copper, iron, lead, manganese, vanadium and zinc concentration exceedances appear to mainly be elevated between September 2020 to December 2020 with the exception of manganese that reports its highest concentration on the last sampling event in late July 2021. The above noted selenium exceedance at SW19-20 occurs in early June 2020 before on-site construction commences.
- On December 28, 2021, the SW4 sample location reported a modified TPH of 0.11 mg/L (lube resemblance), which exceeds the NSE-EQS guideline of 0.1 mg/L (lube resemblance). This was the only surface water petroleum hydrocarbon exceedance reported within the LCA.

No other metals, general chemistry or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**.

4.2.1.5 Former Buried Debris Areas (BDAs) Trends

There are no surface water analytical parameters at surface water locations (SW2, SW3, SW4, SW13, SW19-20) positioned downgradient of the Former BDAs that illustrated upward trends that occurred since 2020,

Surface water locations SW3 and SW4 both show a downwards trend in total suspended solids (TSS) post-2020.

4.2.1.6 Former Buried Debris Areas (BDAs) Analytical Exceedances

Former BDA surface water sample location metal analytical exceedances are presented in **Table 14** below. Each surface water metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred **(DD-MM-YYYY)** along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 14: Surface Water - Former Buried Debris Areas (BDAs) Metal Analytical Exceedances

			SW2	SW3	SW4
Aluminum	**Max. Conc.**	**(Date)**	1,300 (11/30/2020)	1,600 (11/20/2020)	1,300 (11/30/2020)*
	NS-EQS[1]	**5**	39 of 39	38 of 38	36 of 36
Cadmium	**Max. Conc.**	**(Date)**	0.034 (10/6/2020)	0.037 (11/20/2020)	0.04 (5/19/2021)
	NS-EQS[1]	**0.01**	34 of 39	34 of 38	30 of 36
Copper	**Max. Conc.**	**(Date)**	-	2.1 (9/24/2020)	-
	NS-EQS[1]	**2**		1 of 38	
Iron	**Max. Conc.**	**(Date)**	1,000 (10/6/2021)*	1,600 (11/20/2020)	1,300 (6/30/2021)
	NS-EQS[1]	**300**	39 of 39	38 of 38	36 of 36
Lead	**Max. Conc.**	**(Date)**	1.4 (11/5/2020)	2.0 (11/20/2020)	2.5 (6/30/2021)
	NS-EQS[1]	**1**	20 of 39	15 of 38	15 of 36

			SW13	SW14	SW19-20
Aluminum	**Max. Conc.**	**(Date)**	1100 (9/23/2021)	2,440 (11/8/2018)	9,200 (12/28/2020)
	NS-EQS[1]	**5**	33 of 33	3 of 3	27 of 27
Arsenic	**Max. Conc.**	**(Date)**	-	-	6.4 (9/23/2020)
	NS-EQS[1]	**5**			3 of 27
Cadmium	**Max. Conc.**	**(Date)**	0.16 (6/14/2021)	0.1 (11/8/2018)	0.15 (11/30/2020)
	NS-EQS[1]	**0.01**	32 of 33	3 of 3	25 of 27

			SW13	SW14	SW19-20
Cobalt	**Max. Conc.**	**(Date)**	15 (7/27/2021)	-	-
	NS-EQS[1]	**10**	2 of 33		
Copper	**Max. Conc.**	**(Date)**	12 (6/1/2020)	12 (11/8/2018)	21 (11/2/2021)
	NS-EQS[1]	**2**	16 of 33	3 of 3	16 of 27
Iron	**Max. Conc.**	**(Date)**	9800 (7/27/2021)	3,320 (11/8/2018)	9,300 (9/23/2020)
	NS-EQS[1]	**300**	33 of 33	2 of 3	27 of 27
Lead	**Max. Conc.**	**(Date)**	12.4 (6/1/2020)	9.4 (11/8/2018)	12 (11/30/2020)
	NS-EQS[1]	**1**	21 of 33	2 of 3	6 of 27
Manganese	**Max. Conc.**	**(Date)**	6200 (7/14/2021)	-	7500 (9/23/2021)
	NS-EQS[1]	**820**	5 of 33		16 of 27
Selenium	**Max. Conc.**	**(Date)**	-	-	2 (6/1/2020)
	NS-EQS[1]	**1**			1 of 27
Vanadium	**Max. Conc.**	**(Date)**	-	-	14 (12/28/2020)
	NS-EQS[1]	**6**			3 of 27
Zinc	**Max. Conc.**	**(Date)**	39 (6/1/2020)	73 (11/8/2018)	51 (11/30/2020)
	NS-EQS[1]	**30**	2 of 33	2 of 3	3 of 27

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
* denotes that an identical concentration at an earlier date
1 NSE Tier I EQS for surface water (fresh water) (2013).

- For the SW2, SW3 and SW4 sample locations, aluminum, cadmium iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point; however, concentrations for these parameters appear to be similar (but slightly greater) to the upgradient background concentrations observed at SW1 within the same time periods. The above noted copper exceedance at SW3 is a one-time occurrence and marginally exceeds the applicable guideline.
- The SW13 sample location is located at a road ditch along the Old Sambro Road. Aluminum concentrations appear to remain relatively isolated from other parameters that appear move in tandem. The two zinc surface water exceedances exist before the commencement of on-site construction. Cadmium, copper, iron, lead and manganese concentration all appear to elevate after the June 3, 2021, sampling event and continue to the last July 27, 2021, sampling. It is believed that these elevated concentrations are attributed to earthwork modifications that were implemented adjacent to the upper eastern edges of the asphalt pad area between the June 3, 2021, and June 14, 2021, sampling events. It should be noted however that the peak values for copper, lead and zinc concentration occurred on June 1, 2020, which is in close time proximity to the period that these elevated parameters occurred (a year before).
- SW14 is a surface water sample location that is normally dry and water samples are only available during rain events or shortly after the rain event. All peak concentrations for the above noted aluminum, cadmium, copper, iron, lead and zinc occurred on November 8, 2018 (prior to on-site construction). The latest sampling event (March 23, 2021), that occurred during on-site construction period, reported aluminum, cadmium, copper, iron, lead and zinc concentrations that were significantly lower.
- At SW19-20, aluminum, arsenic, cadmium, copper, iron, lead, manganese, vanadium and zinc concentration exceedances appear to mainly elevate between September 2020 to December 2020 with the exception of manganese that reports its highest concentration on the last sampling event in late July 2021. The above noted selenium exceedance at SW19-20 occurs in early June 2020 before on-site construction commences.

No other metals, general chemistry or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**.

4.2.1.7 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Trends

There are no surface water analytical parameters at surface water locations (SW2, SW3, SW4, Diffuser) positioned downgradient of the Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) that illustrated upward trends that occurred since 2020.

Surface water locations SW3 and SW4 both show a downwards trend in total suspended solids (TSS) post-2020.

4.2.1.8 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Analytical Exceedances

LTPA and SPs surface water sample location metal analytical exceedances are presented in **Table 15** below. Each surface water metal parameter with an associated exceedance provides a peak value (maximum concentration) and the date it occurred (MM-YYYY) along with the number of samples collected in the set since 2018 and number of exceedances within this sample set.

Table 15: Surface Water - Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) Metal Analytical Exceedances

			SW2	SW3	SW4
Aluminum	**Max. Conc.**	**(Date)**	1,300 (11/30/2020)	1,600 (11/20/2020)	1,300 (11/30/2020)*
	NS-EQS[1]	**5**	39 of 39	38 of 38	36 of 36
Cadmium	**Max. Conc.**	**(Date)**	0.034 (10/6/2020)	0.037 (11/20/2020)	0.04 (5/19/2021)
	NS-EQS[1]	**0.01**	34 of 39	34 of 38	30 of 36
Copper	**Max. Conc.**	**(Date)**	-	2.1 (9/24/2020)	-
	NS-EQS[1]	**2**		1 of 38	
Iron	**Max. Conc.**	**(Date)**	1,000 (10/6/2021)*	1,600 (11/20/2020)	1,300 (6/30/2021)
	NS-EQS[1]	**300**	39 of 39	38 of 38	36 of 36
Lead	**Max. Conc.**	**(Date)**	1.4 (11/5/2020)	2.0 (11/20/2020)	2.5 (6/30/2021)
	NS-EQS[1]	**1**	20 of 39	15 of 38	15 of 36

			Diffuser
Aluminum	**Max. Conc.**	**(Date)**	1,400 (11/5/2020)
	NS-EQS[1]	**5**	30 of 30
Cadmium	**Max. Conc.**	**(Date)**	0.03 (11/20/2020)*
	NS-EQS[1]	**0.01**	24 of 30
Copper	**Max. Conc.**	**(Date)**	3.8 (4/21/2021)
	NS-EQS[1]	**2**	1 of 30
Iron	**Max. Conc.**	**(Date)**	1,100 (11/5/2020)
	NS-EQS[1]	**300**	30 of 30
Lead	**Max. Conc.**	**(Date)**	2.5 (10/19/2021)
	NS-EQS[1]	**1**	14 of 30
Zinc	**Max. Conc.**	**(Date)**	170 (4/21/2021)
	NS-EQS[1]	**30**	1 of 30

Notes:
Max. Conc. = Maximum Concentration (Units: ug/L)
* denotes that an identical concentration at an earlier date
1 NSE Tier I EQS for surface water (fresh water) (2013).

- For the SW2, SW3, SW4 and Diffuser sample locations, aluminum, cadmium iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point; however, concentrations for these parameters appear to be similar (but slightly greater) to the upgradient background concentrations observed at SW1 within the same time periods. The above noted copper exceedance at SW3 is a one-time occurrence and marginally exceeds the applicable guideline. The above noted copper and zinc exceedance at the Diffuser sample location is also a one-time occurrence and both seem to be an anomaly compared to the rest of the metals data associated with this sample point.

No other metals, general chemistry or petroleum hydrocarbon exceedances have been identified based on the analytical data presented on **Appendix C**.

4.3 Quality Assurance / Quality Control

AECOM collected field QA/QC samples to determine the precision of analytical results and to assess for laboratory or sampling inconsistencies. **Table 16** below shows the blind field duplicate samples that were submitted for groundwater laboratory analyses.

Table 16: Groundwater Field Duplicate Sample Submission

Field Duplicate Sample ID	Date of Sampling Event	Corresponding Sample ID	Laboratory Analyses
GROUNDWATER			
DUP	2018-11-22	MW5-S	Metals, General Chemistry
DUP A	2019-07-10	MW19-12D	
DUP 1	2019-11-19	MW19-13D	PHC Metals General Chemistry
DUP 1	2020-04-01	MW19-03D	
DUP 1	2020-05-28	MW19-09S	
DUP 2	2020-05-28	PW19-01	
DUP 3	2020-06-01	MW2-D	
DUP 4	2020-06-01	MW19-12D	
DUP 1	2020-09-15	MW6-D	
DUP 2	2020-09-15	MW-2M	
DUP 3	2020-09-17	MW19-12D	
DUP 1	2020-12-16	MW-5D	
DUP 2	2020-12-16	MW20-16	
DUP 3	2020-12-16	MW19-12D	
DUP 1	2021-03-25	MW5-D	
DUP 2	2021-03-25	PW19-01	
DUP 3	2021-03-25	MW19-09S	
DUP 1	2021-06-09	PW19-01	
DUP 2	2021-06-09	MW20-16	
DUP 3	2021-06-09	MW19-3D	
DUP 1	2021-10-05	MW20-17D	
DUP 2	2021-10-05	MW-2D	
DUP 3	2021-10-05	MW20-16	
DUP 1	2021-12-13	MW20-15D	
DUP 2	2021-12-13	MW20-16	
DUP 3	2021-12-13	MW8-D	
DUP 1	2022-03-28	MW19-13D	
DUP 2	2022-03-28	MW6-D	
DUP 3	2022-03-30	MW3	

Appendix J contains a detailed groundwater QA/QC review that was used to assess the quality of the analytical data gathered during this program.

Table 17 below shows the blind field duplicate samples that were submitted for groundwater laboratory analyses.

Table 17: Surface Water Field Duplicate Sample Submission

Field Duplicate Sample ID	Date of Sampling Event	Corresponding Sample ID	Laboratory Analyses
DUP A	2020-09-24	SW1	PHC Metals General Chemistry
DUP 1	2020-10-06	Diffuser	
DUP 1	2020-10-23	SW1	
DUP 1	2020-11-05	Diffuser	
DUP 1	2020-11-20	SW13	
DUP 1	2020-11-30	SW1	
DUP 1	2020-12-14	SW1	
DUP 1	2020-12-28	SW1	
DUP 4	2021-03-25	SW1	
DUP 1	2021-04-08	SW13	
DUP 1	2021-04-21	SW13	
DUP 1	2021-05-05	SW13	
DUP 1	2021-05-19	SW13	
DUP 1	2021-06-03	SW2	
DUP 1	2021-06-14	SW13	
DUP 1	2021-06-30	SW13	
DUP 1	2021-07-14	SW13	
DUP 1	2021-07-27	SW13	
DUP 1	2021-08-11	SW13	
DUP 1	2021-09-08	SW13	
DUP 1	2021-09-23	SW1	
DUP 1	2021-10-06	SW1	
DUP 1	2021-10-19	Diffuser	
DUP 1	2021-11-02	SW1	
DUP 1	2021-11-21	SW1	
DUP 1	2021-12-01	SW1	
DUP 1	2021-12-15	SW4	
DUP 1	2022-03-24	SW1	
DUP 1	2022-04-06	SW1	
DUP 1	2022-04-19	SW3	

Appendix J contains a detailed surface water QA/QC review that was used to assess the quality of the analytical data gathered during this program.

4.4 Containment Cell Leachate Measurements

A summary of Containment Cell leachate elevation and thickness measurements are provided in **Table 18** below. This data is also available during certain ranges.

Table 18: Cell Leachate Elevation and Leachate Thickness

Date	TOC Elevation	Bottom of Cell (mbtoc)	Leachate Depth (m)	Leachate Elevation (mbtoc)	Thickness of Leachate (m)
6/15/2020	97.00	7.88	3.45	93.55	4.43
7/9/2020	97.00	7.88	3.72	93.28	4.16
8/11/2020	97.00	7.88	7.88	89.12	0.00
9/15/2020	97.00	7.88	7.88	89.12	0.00
10/16/2020	97.00	7.88	7.24	89.76	0.64
11/07/2020	97.00	7.88	7.88	89.12	0.00
12/2/2020	98.09	8.97	6.02	92.07	2.95
1/13/2021	98.09	8.97	5.34	92.75	3.63
2/12/2021	98.09	8.97	5.28	92.81	3.69
3/7/2021	98.09	8.97	5.26	92.83	3.71
4/6/2021	98.09	8.97	5.31	92.78	3.66
5/12/2021	98.09	8.97	5.33	92.76	3.64
6/13/2021	98.09	8.97	5.41	92.68	3.56
7/15/2021	98.09	8.97	5.42	92.67	3.55
8/09/2021	98.09	8.97	5.40	92.69	3.57
9/01/2021	98.09	8.97	5.62	92.47	3.35
10/15/2021	98.09	8.97	5.86	92.23	3.11
11/17/2021	98.09	8.97	6.04	92.05	2.93
12/15/2021	98.09	8.97	6.15	91.94	2.82
1/19/2022	98.09	8.97	6.17	91.92	2.80
2/25/2022	98.09	8.97	6.20	91.89	2.77
3/07/2022	98.09	8.97	6.21	91.88	2.76
4/07/2022	98.09	8.97	7.77	90.32	1.20

Notes:
* - Measurement to the new pipe height (pipe was extended 1.09m).

5. Summary of Non-Compliance Occurrences

AECOM recognizes that there have been instances on non-compliance with this approval, in particular to Section 8 of the NSE Approval Document, in relation to surface water monitoring (total suspended solids (TSS).

A summary of these instances, as well as the corrective actions taken, are provided below. Greater detail is provided in memo reports, which are provided in **Appendix K**.

April 9, 2021 – Erosion and Sediment Control

- Nova Scotia Environment (NSE) issued an Inspection Report as well as an Environmental Directive to Nova Scotia Lands Inc. (Client) regarding suspected silt or sediment leaving the former RDM Recycling Limited property (site) located at 1275 Old Sambro Road (it should be noted that there was no on-site construction activity during the month of March 2021)
- The report and directive were issued as a result of construction activities and heavy rains experienced near the end of March 2021, which are suspected of contributing to a sediment release from the site.
- As per the Environmental Directive issued by NSE (March 31, 2021). As a result of this directive, an updated Erosion and Sediment Control Plan (ESCP) was submitted to NSE as a Memo (AECOM, April 9, 2021).

May 4, 2021 – Erosion and Sediment Control (update)

- This NSE report and directive (April 20, 2021) were issued as a follow-up to an Erosion and Sediment Control Plan (ESCP) Memo (AECOM, April 9, 2021).

May 20, 2021 – Erosion and Sediment Control (update)

- This NSE report and directive (May 6, 2021) were issued as a follow-up to an Erosion and Sediment Control Plan (ESCP) Memo (AECOM, May 4, 2021).

May 25, 2021 – NSE Report and Directive

- NSE confirming all NSLI / AECOM recommendations have been implemented as per the submitted Erosion and Sediment Control document. Confirmation of the final capping is the last requirement (Report due the end of August 2021).

It should be noted that NSE granted NSLI / AECOM a time extension associated with the final capping of the landfill.

August 24, 2021 – Directive and Compliance Update

- The NSE update formalized the receipt of the AECOM construction timeline update and approved its change. NSE accepted that the project would not be completed by the end of August as scheduled, rather its construction would be completed by September 30, 2021.

September 24, 2021 – Directive and Compliance Update

- The NSE issued a warning to AECOM for “the successive inability to meet” the compliance and completion dates previously set. A new Directive Compliance date of October 25, 2021, was issued.

October 04, 2021 – Non-Compliance Order

- It has been determined that due to scheduling constraints with the chosen contractor an extension to Directive Process 14460721 is required. A Warning report was issued for the immanent non-compliance (October 1, 2021) along with a new directive with a Comply by Date of October 25, 2021

October 22, 2021 – Cap Replacement and Site Closure Erosion and Sediment Control (Update)

- AECOM provided a notice to NSE that confirms that the landfill cell final capping has been completed at the subject site. AECOM provided a “Confirmation of final capping” as an attachment

6. Review of the Groundwater/ Surface Water Monitoring Program and Recommendations

6.1 Groundwater Review

6.1.1 Landfill Cell Area (LCA)

A post 2020 upward trend was identified at the following locations for the below noted analytical parameters:

- MW1-S – alkalinity, calcium, conductivity, hardness, manganese, pH, TDS, and uranium

Post 2015 Mann-Kendall upward trends were identified at the following locations for the below noted analytical parameters:

- MW1-S – iron and TOC.
- MW1-D – pH;
- MW6-S – pH;
- MW6-D – cadmium, manganese, and pH;
- MW19-11M – pH; and
- MW19-11D – pH.

However, the validity/value of these Mann-Kendall upward trends is unclear based on closer inspection of analytical specific to the post 2020 on-site activity objectives as all of the above parameters appear to be stable to no trend within the post 2020-time frame.

With respect to metals exceedances identified within the LCA during post 2020 on-site activity, MW1-S peak values aluminum (December 2020) and uranium (June 2021) concentrations are considered to be elevated for this sampling location.

The above noted LCA upward trend and above noted exceedances are an indication or link between the integrity of the landfill cap and the effect on the downgradient groundwater. As a proper landfill cap has now been installed on the landfill cell, it can be seen that the impacts in groundwater, identified downgradient of the landfill cell appear to be improving since the installation of the landfill cap in October 2021. It should be noted that the groundwater elevation at monitoring well MW1-S recovers very slowly with respect to other LCA monitoring wells and therefore elevated concentrations at this location may be a factor of higher sediment content in collected samples.

6.1.2 Former Buried Debris Areas (BDAs)

Post 2020 upward trends were identified at the following locations for the below noted analytical parameters:

- MW2-M – pH and uranium;
- MW5-S – arsenic and hardness;
- MW7-D – arsenic; and
- MW19-12S – alkalinity.

Post 2015 Mann-Kendall upward trends were identified at the following locations for the below noted analytical parameters:

- MW2-S – alkalinity, chloride and TOC;
- MW2-D – boron and pH;

- MW5-S – alkalinity, calcium, chloride, conductivity, hardness pH, TDS, and uranium;
- MW5-D – calcium, chloride, conductivity, hardness, and pH;
- MW7-S – alkalinity, pH and TOC;
- MW7-D – pH;
- MW8-S – sulphate;
- MW8-D – alkalinity, pH and uranium;
- MW19-11M – alkalinity,
- MW19-11D – alkalinity,
- MW19-12D – chloride;
- MW19-13S – alkalinity, aluminum, cadmium, iron, and manganese;
- MW19-13D – cadmium; and
- MW19-15D – alkalinity.

The validity/value of these Mann-Kendall upward trends is unclear based on closer inspection of analytical specific to the post 2020 on-site activity objectives as all of the above parameters appear to be stable to no trend within the post 2020-time frame.

The following monitoring well sample locations were identified to have metals exceedances identified within the Former BDA during post 2020 on-site activity:

- MW5-D - During on-site leachate treatment/ construction, manganese concentrations appear to similar to historical trend data with the exception of a peak value occurring during the June 2021 and December 2021) sampling event.
- MW7-D – Manganese concentrations are elevated during construction activities (Sept 2020 to June 2020), with the exception of a peak value occurring during the October 2021 sampling event.
- MW8-D - During on-site leachate treatment/ construction, uranium concentrations appear to similar to pre on-site leachate treatment/ construction trend data; however, the uranium peak value occurs at the June 2021 sampling event.
- MW19-13S - During the construction period (September 2020 to June 2021), aluminium, cadmium, manganese concentrations are marginally elevated when compared to pre on-site leachate treatment/ construction concentrations, with the highest peak values occurring in December 2021 (aluminum) and October 2021 (cadmium and manganese).

As the majority of the above noted Former BDA upward trends and above noted exceedances are considered to be related to completed on-site construction activity, it is likely that the erosion and sediment controls in place (full vegetation growth and full landfill liner installation) have improved the groundwater chemistry within these areas.

Although uranium in groundwater concentrations appear to be increasing at monitoring well MW2-M, concentrations are below pre-2015 concentrations. Arsenic concentrations identified at monitoring wells MW5-D and MW7D are considered to be well below background levels. At monitoring well MW2-M, pH concentrations are below background levels. At monitoring well MW5-S, hardness concentrations are below background levels. Chemistry data trend analysis for monitoring well MW18-12S is based on sparse data (four data sets) and therefore interpretation of this data is considered to be limited.

6.1.3 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs)

Post 2020 upward trends were identified at the following location for the below noted analytical parameter:

- MW7-D – arsenic

Post 2015 Mann-Kendall upward trends were identified at the following locations for the below noted analytical parameters:

- MW7-S – alkalinity, pH and TOC;
- MW7-D – pH;
- MW19-09S –uranium;
- MW19-13S – alkalinity, aluminum, cadmium, iron, and manganese;
- MW19-13D – cadmium; and
- PW19-01 – alkalinity and iron.

The following monitoring well sample locations were identified to have metals exceedances identified within the Former BDA during post 2020 on-site activity:

- MW7-D –Manganese concentrations are elevated during construction activities (Sept 2020 to June 2020); however, the highest concentration is noted in October 2021.
- MW19-13S - During the construction period (September 2020 to June 2021), aluminium, cadmium, manganese concentrations are marginally elevated when compared to pre on-site leachate treatment/ construction concentrations. Elevated concentrations in aluminum and cadmium are seen into December 2021 and October 2021 respectively.
- PW19-01 - Elevated manganese concentrations occur during the September 2020, December 2020 and June 2021 sampling events. During on-site leachate treatment/ construction, arsenic concentrations appear to similar to pre on-site leachate treatment/ construction trend data; however, the arsenic peak value occurs at the June 2021 sampling event.

As the majority of the above noted LTPA and SPs upward trends and above noted exceedances are considered to be related to completed on-site construction activity, it is likely that the erosion and sediment controls in place (full vegetation growth and full landfill liner installation) have improved the groundwater chemistry. Arsenic concentrations identified at monitoring well MW7D are considered to be well below background levels.

Overall, the sporadic, marginally detectable petroleum hydrocarbon in groundwater exceedances identified to date during the on-site construction period are not considered to be an environmental or human health concern.

6.2 Surface Water Review

Based on the results presented within 2021-2022 Annual Report, surface water trend data are considered to be stable for all surface water samples included in the monitoring program. Therefore, the bi-weekly surface water monitoring program will be reduced to a quarterly surface water monitoring program, as per the NSE Approval Document (NSE Approval No. 2020-2664911-00).

6.2.1 Landfill Cell Area (LCA)

There are no surface water analytical parameters at surface water locations (SW3, SW4, SW19-20) positioned downgradient of the Landfill Cell Area (LCA) that illustrated upward trends that occurred since 2020.
The following sample locations were identified to have metals exceedances identified within the Former BDA during post 2020 on-site activity:

- For SW3 and SW4 aluminum, cadmium, iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point, with the exception of cadmium, iron and lead for SW4 showing its highest concentrations in May-June 2021. However, concentrations for these parameters appear to be similar (but slightly greater in some instances) to the

upgradient background concentrations observed at SW1 within the same time periods. It should be noted that TSS levels appear have noticeably reduced upon the completion of the landfill cap.
- At SW19-20, aluminum, arsenic, cadmium, copper, iron, lead, manganese, selenium, vanadium and zinc concentration exceedances appear to mainly be elevated between Sept 2020 to December 2020.

As there are no upward trends noted in the Landfill Cell Area (LCA) surface water locations, and the majority of the above noted exceedances are related to the on-site construction activity, it is likely that the erosion and sediment controls in place (full vegetation growth and full landfill liner installation) have improved the surface water chemistry.

6.2.2 Former Buried Debris Areas (BDAs)

There are no surface water analytical parameters at surface water locations (SW2, SW3, SW4, SW13, SW19-20) positioned downgradient of the Former BDAs that illustrated upward trends that occurred since 2020.
The following monitoring well sample locations were identified to have metals exceedances identified within the Former BDA during post 2020 on-site activity:

- At SW2 aluminum in surface water concentrations appeared to be slightly elevated above background levels during late October 2020 to December 2021.
- For the SW2, SW3 and SW4 sample locations, aluminum, cadmium, iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point; however, concentrations for these parameters appear to be similar (but slightly greater in some instances) to the upgradient background concentrations observed at SW1 within the same time periods. The above noted copper exceedance at SW3 is a one-time occurrence (September 24, 2020) and marginally exceeds the applicable guideline.
- The SW13 sample location is located at a road ditch along the Old Sambro Road. Elevated metals and general chemistry parameters identified at this sample location between June and October 2021 reduced significantly after these dates and returned to levels at or below pre-construction levels.
- SW14 is a surface water sample location that is normally dry and water samples are only available during rain events or shortly after the rain event. All peak concentrations for the above noted aluminum, cadmium, copper, iron, lead and zinc occurred on November 8, 2018 (prior to on-site construction). The latest sampling event (March 23, 2021), that occurred during on-site construction period, reported aluminum, cadmium, copper, iron, lead and zinc concentrations that were significantly lower.
- At SW19-20, aluminum, arsenic, cadmium, copper, iron, lead, manganese, vanadium and zinc concentration exceedances appear to be mainly be elevated between Sept 2020 to December 2020.

As there are no upward trends noted in the former BDA surface water locations, and the majority of the above noted exceedances are related to the on-site construction activity, it is likely that the erosion and sediment controls in place (full vegetation growth and full landfill liner installation) have improved the surface water chemistry.

6.2.3 Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs)

There are no surface water analytical parameters at surface water locations (SW2, SW3, SW4, Diffuser) positioned downgradient of the Leachate Treatment Pad Area (LTPA) and Sedimentation Ponds (SPs) that illustrated upward trends that occurred since 2020.

The following monitoring well sample locations were identified to have metals exceedances identified within the Former BDA during post 2020 on-site activity:

- At SW2 aluminum in surface water concentrations appeared to be slightly elevated above background levels during late October 2020 to early May 2021.

- For the SW2, SW3, SW4 and Diffuser sample locations, aluminum, cadmium, iron and lead trends track similarly between Sept 2020 to December 2020 with concentrations slightly rising in within this period and returning back after this point, with the exception of SW4 which shows its highest concentration to date for cadmium in May 2021, and iron and lead in June 2021, and at SW2 with iron showing its highest concentration in October 2021. However, concentrations for these parameters appear to be similar (but slightly greater in some instances) to the upgradient background concentrations observed at SW1 within the same time periods. The above noted copper exceedance at SW3 is a one-time occurrence (September 24, 2020) and marginally exceeds the applicable guideline. The above noted copper and zinc exceedance at the Diffuser sample location is also a one-time occurrence and both seem to be an anomaly compared to the rest of the metals data associated with this sample point.

As there are no upward trends noted in the LTPA and SP surface water locations, and the majority of the noted exceedances are related to the on-site construction activity, it is likely that the erosion and sediment controls in place (full vegetation growth and full landfill liner installation) have improved the surface water chemistry.

Overall, the sporadic, marginally detectable petroleum hydrocarbon in surface water exceedances identified to date during the on-site construction period are not considered to be an environmental or human health concern.

6.3 Recommendations

Based on the results and review of this Annual Report, AECOM provides the following recommendations for the groundwater and surface water monitoring programs:

Groundwater Monitoring Program

Continue to complete quarterly groundwater monitoring programs as per the NSE Approval Document (NSE Approval No. 2020-2664911-00). The following are additional recommendations are provided for select wells:

- MW1-S – Implement a different sampling method to at this well location (i.e., low flow sampling) as this well is considered to have very a slow recovery rate with marginal water existing above the bedrock horizon. As a result, groundwater samples typically have higher silt content as sampling is completed from the base of the well due to the slow recovery. May need to consider decommissioning this well and reinstalling at a different location if the above noted sampling method does not effectively reduce silt from collected samples at this location.
- MW19-10S – this monitoring well location should be decommissioned as the groundwater level is not typically present above the bedrock horizon at this overburden well location.
- MW4 - this monitoring well location should be decommissioned as it is not being used as part of the current sampling program due to historical anomalous groundwater characteristics (well installed within a spring/ seep area).
- MW19-11M and MW8-S/D should be resurveyed due to recently completed repairs that effected top of casing well elevations at these three sample locations.

Surface Water Monitoring Program

The following are additional recommendations are provided for select surface water sample locations:

- Remove SW14 from the surface water sampling program as this sample location only produces enough water to sample during or immediately after heavy rain events.
- Add an additional surface water sampling point to the sampling program at the newly constructed outfall. Which is located immediately upgradient of Sheas Lake (west of monitoring wells MW19-13S/D) .

7. References

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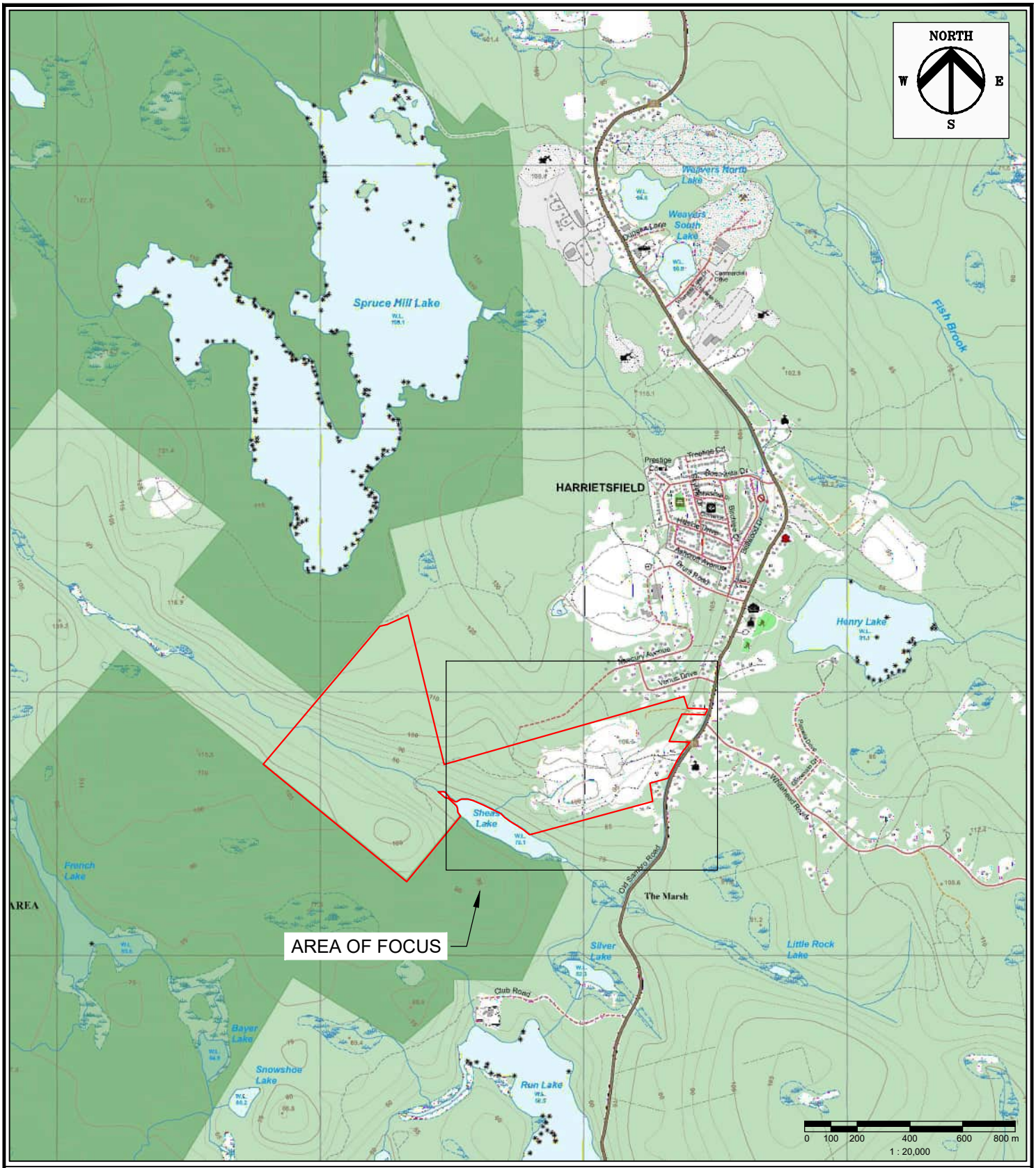
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Appendix A. Figures



REFERENCE:
REPRODUCED WITH THE PERMISSION OF SERVICE NOVA SCOTIA & MUNICIPAL RELATIONS

This drawing has been prepared for the use of AECOM's client and may not be used, reproduced or relied upon by third parties, except as agreed by AECOM and its client, as required by law or for use by governmental reviewing agencies. AECOM accepts no responsibility, and denies any party that modifies this drawing without AECOM's express written consent.

AECOM

CLIENT NAME:	PROJECT LOCATION:
NOVA SCOTA LANDS INC.	HARRIETSFIELD, NOVA SCOTIA

GENERAL SITE LOCATION

PROJECT NAME: ANNUAL MONITORING REPORT (2020/2021)
FORMER LANDFILL SITE HARRIETSFIELD, NOVA SCOTIA
PROJECT NO.: 60639002

DRAWN BY: IL	SCALE: AS SHOWN	FIGURE No. 1
CHECKED: DH	DATE: May, 2022	REVISION 1

C:\Users\McAdamN\OneDrive - AECOM\Desktop\Ivan Projects\60639002_FIG_01_SiteLocation_REVISED.dwg Layout:Fig1 Plotted: May 30, 2022 @ 12:17pm by McAdamN

AECOM

FIGURE: 2

SURFACE WATER SAMPLE LOCATION MAP

PROPERTY LIMITS

SECONDARY STOCKPILE AUGUST 2021 (AREA G)

EXISTING LEACHATE TREATMENT AREA

EXISTING ASPHALT PAD

EXISTING LANDFILL AREA

EXISTING LANDFILL SUMP

SEDIMENTATION PONDS

SHEAS LAKE

HIGHWAY 306 (OLD SAMBRO ROAD)

SW1 SW2 SW3 SW4 DIFFUSER SW13 SW14 SW19-20

A EXPANSION, B, C, D, E, F, G, H, I, J, J EXPANSION, K, K EXPANSION, L, M, N, O

LEGEND:

- PROPERTY BOUNDARY
- EXISTING TREELINE
- EXISTING SITE ACCESS ROAD
- EXISTING DITCH
- EXISTING CULVERT
- SURFACE WATER SAMPLING LOCATION
- EXTENT OF BUILDING DEBRIS AREA OFF SITE DISPOSAL
- EXTENT OF BUILDING DEBRIS AREA ON SITE DISPOSAL - (PROCESSED AND NOT PROCESSED MATERIALS)

NOTES:

1. COORDINATE SYSTEM CODE: ANHFX-MTM5-NAD83
2. COORDINATE SYSTEM NAME: NAD83 CSRS 2010 - NOVA SCOTIA MTM ZONE 5
3. DEPICTED SITE FEATURES ARE BASED ON AUGUST 2020 SURVEY INFORMATION
4. DIFFUSER WAS REMOVED ON SEPTEMBER 16, 2021 AND THIS AREA WAS NO LONGER SAMPLED AFTER NOV. 2 2021

0 15 30 60 90 120 m
1 : 3000

ANNUAL MONITORING REPORT (2021/2022)
Former Landfill Site Harrietsfield, Nova Scotia Lands Inc.
Harrietsfield, Nova Scotia
Project No.: 60639002 Date: July 2022

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AECOM

FIGURE: 3

GROUNDWATER SAMPLE
LOCATION MAP

PROPERTY LIMITS

MW19-03D MW3-2

MW20-17D MW20-17S

MW20-16

MW5-D MW5-S

MW19-10S

SECONDARY STOCKPILE
AUGUST 2021 (AREA G)

EXISTING
ASPHALT PAD

MW19-12D MW19-12S

HIGHWAY 306
(OLD SAMBRO ROAD)

EXISTING LEACHATE
TREATMENT AREA

MW19-09S PW19-01

EXPANSION

MW8-D MW8-S

MW2-S MW2-M MW2-D

EXISTING
LANDFILL
AREA

MW20-15D MW20-15S

MW20-14S

MW20-14D

MW19-11D

MW19-11M

SEDIMENTATION
PONDS

MW7-D MW7-S

EXISTING LANDFILL SUMP

MW6-S MW6-D

MW1-S MW1-D

MW19-13D MW19-13S

SHEAS LAKE

LEGEND:

- PROPERTY BOUNDARY
- EXISTING TREELINE
- EXISTING SITE ACCESS ROAD
- EXISTING DITCH
- EXISTING CULVERT
- MONITORING WELL LOCATION
- EXTENT OF BUILDING DEBRIS AREA OFF SITE DISPOSAL
- EXTENT OF BUILDING DEBRIS AREA ON SITE DISPOSAL - (PROCESSED AND NOT PROCESSED MATERIALS)

NOTES:

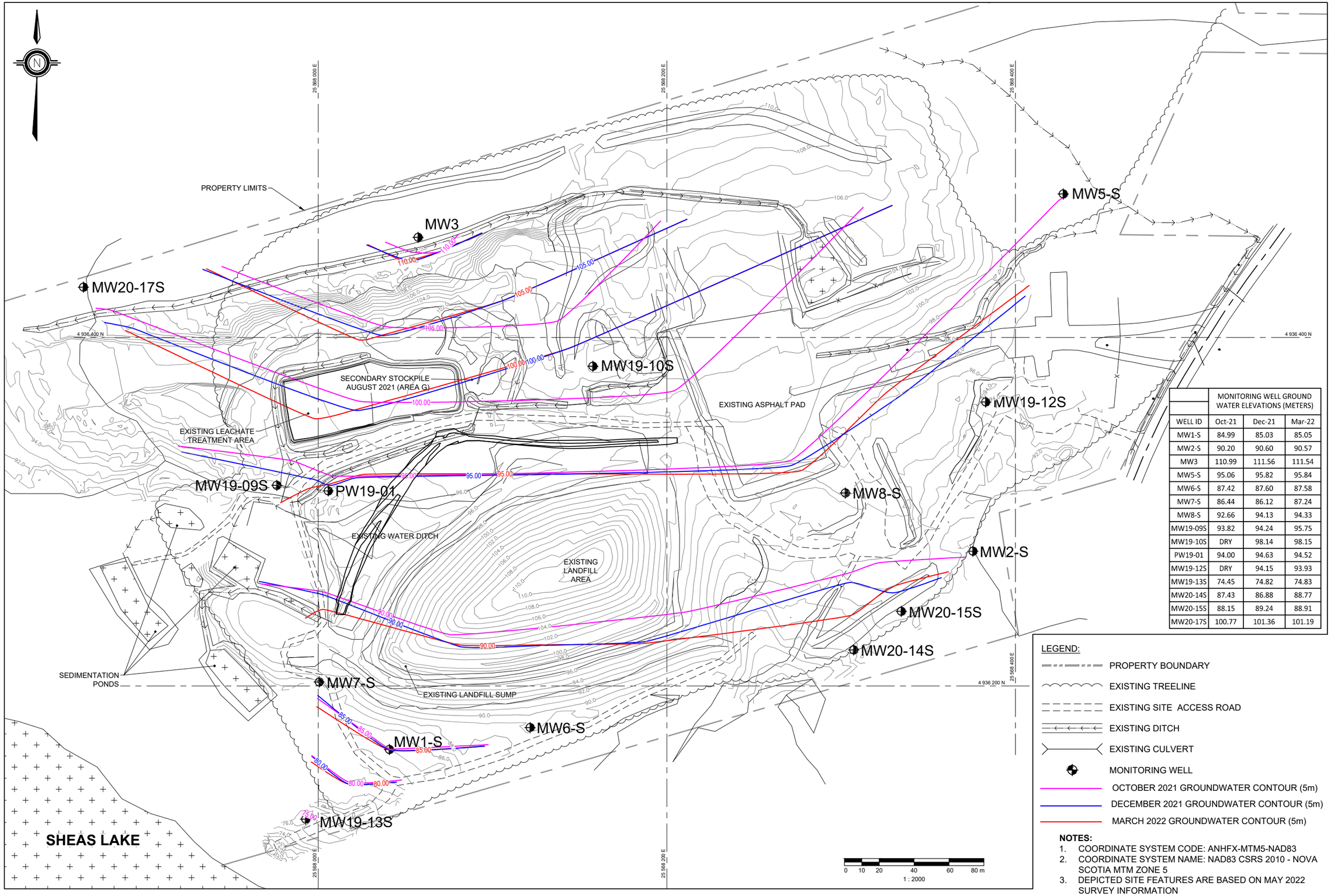
1. COORDINATE SYSTEM CODE: ANHFX-MTM5-NAD83
2. COORDINATE SYSTEM NAME: NAD83 CSRS 2010 - NOVA SCOTIA MTM ZONE 5
3. DEPICTED SITE FEATURES ARE BASED ON MARCH 2021 SURVEY INFORMATION

0 15 30 60 90 120 m
1 : 3000

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ANNUAL MONITORING REPORT (2021/2022)
Former Landfill Site Harrietsfield, Nova Scotia Lands Inc.
Harrietsfield, Nova Scotia
Project No.: 60639002 Date: July 2022

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	MONITORING WELL GROUND WATER ELEVATIONS (METERS)		
WELL ID	Oct-21	Dec-21	Mar-22
MW1-S	84.99	85.03	85.05
MW2-S	90.20	90.60	90.57
MW3	110.99	111.56	111.54
MW5-S	95.06	95.82	95.84
MW6-S	87.42	87.60	87.58
MW7-S	86.44	86.12	87.24
MW8-S	92.66	94.13	94.33
MW19-09S	93.82	94.24	95.75
MW19-10S	DRY	98.14	98.15
PW19-01	94.00	94.63	94.52
MW19-12S	DRY	94.15	93.93
MW19-13S	74.45	74.82	74.83
MW20-14S	87.43	86.88	88.77
MW20-15S	88.15	89.24	88.91
MW20-17S	100.77	101.36	101.19

LEGEND:

- PROPERTY BOUNDARY
- EXISTING TREELINE
- EXISTING SITE ACCESS ROAD
- EXISTING DITCH
- EXISTING CULVERT
- MONITORING WELL
- OCTOBER 2021 GROUNDWATER CONTOUR (5m)
- DECEMBER 2021 GROUNDWATER CONTOUR (5m)
- MARCH 2022 GROUNDWATER CONTOUR (5m)

NOTES:

1. COORDINATE SYSTEM CODE: ANHFX-MTM5-NAD83
2. COORDINATE SYSTEM NAME: NAD83 CSRS 2010 - NOVA SCOTIA MTM ZONE 5
3. DEPICTED SITE FEATURES ARE BASED ON MAY 2022 SURVEY INFORMATION

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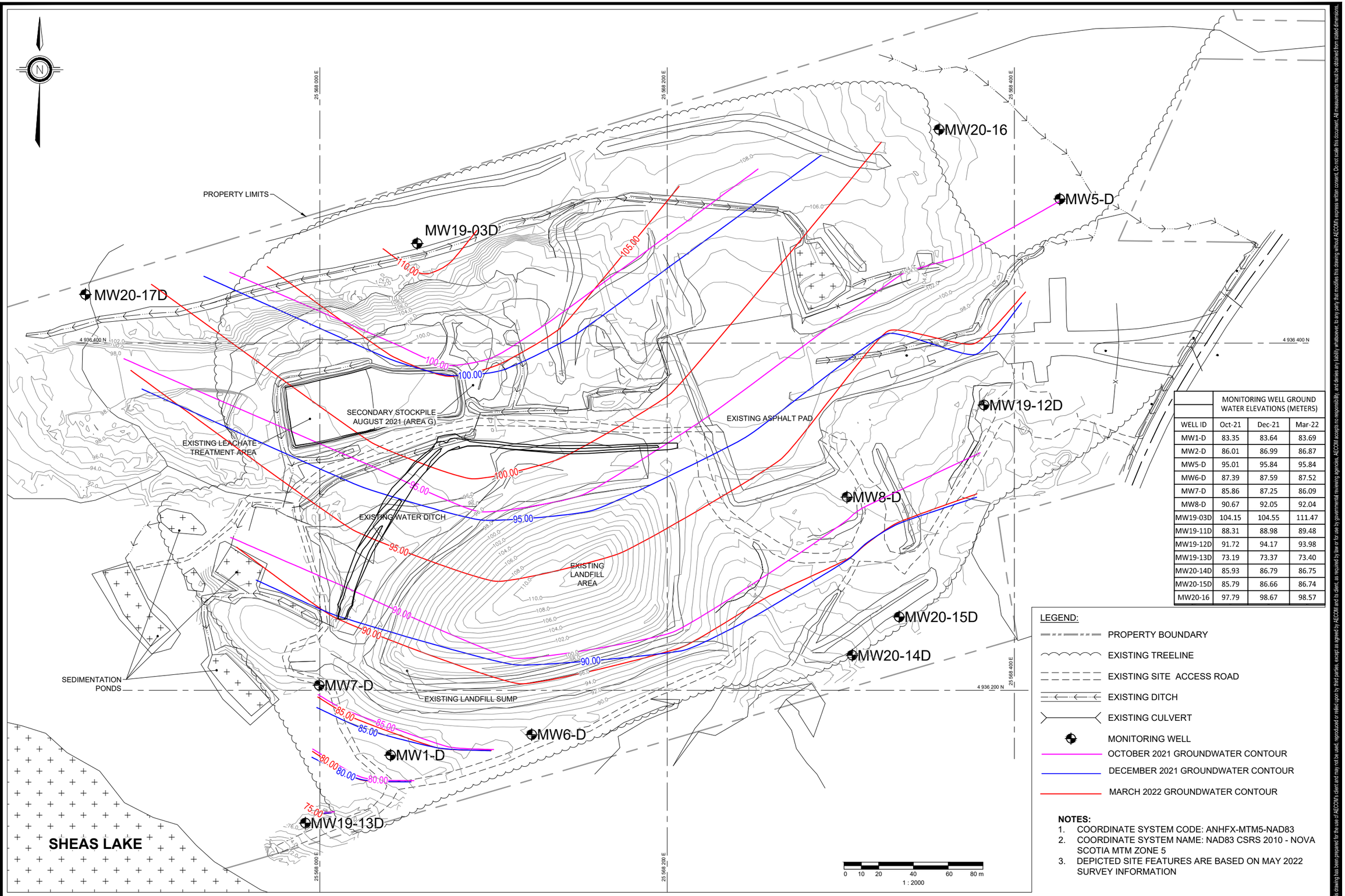
AECOM

FIGURE: 4

GROUNDWATER CONTOUR MAP
SHALLOW MONITORING WELLS
(OCTOBER 2021, DECEMBER 2021, MARCH 2022)

ANNUAL MONITORING REPORT (2020/2021)
Former Landfill Site Harrietsfield, Nova Scotia Lands Inc.
Harrietsfield, Nova Scotia
Project No.: 60639002 Date: May 2022

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	MONITORING WELL GROUND WATER ELEVATIONS (METERS)		
WELL ID	Oct-21	Dec-21	Mar-22
MW1-D	83.35	83.64	83.69
MW2-D	86.01	86.99	86.87
MW5-D	95.01	95.84	95.84
MW6-D	87.39	87.59	87.52
MW7-D	85.86	87.25	86.09
MW8-D	90.67	92.05	92.04
MW19-03D	104.15	104.55	111.47
MW19-11D	88.31	88.98	89.48
MW19-12D	91.72	94.17	93.98
MW19-13D	73.19	73.37	73.40
MW20-14D	85.93	86.79	86.75
MW20-15D	85.79	86.66	86.74
MW20-16	97.79	98.67	98.57

LEGEND:

- PROPERTY BOUNDARY
- EXISTING TREELINE
- EXISTING SITE ACCESS ROAD
- EXISTING DITCH
- EXISTING CULVERT
- MONITORING WELL
- OCTOBER 2021 GROUNDWATER CONTOUR
- DECEMBER 2021 GROUNDWATER CONTOUR
- MARCH 2022 GROUNDWATER CONTOUR

NOTES:

1. COORDINATE SYSTEM CODE: ANHFX-MTM5-NAD83
2. COORDINATE SYSTEM NAME: NAD83 CSRS 2010 - NOVA SCOTIA MTM ZONE 5
3. DEPICTED SITE FEATURES ARE BASED ON MAY 2022 SURVEY INFORMATION

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FIGURE: 5

GROUNDWATER CONTOUR MAP
DEEP MONITORING WELLS
(OCTOBER 2021, DECEMBER 2021, MARCH 2022)

ANNUAL MONITORING REPORT (2021/2022)
Former Landfill Site Harrietsfield, Nova Scotia Lands Inc.
Harrietsfield, Nova Scotia
Project No.: 60639002 Date: June 2022

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Appendix B. Monitoring Well Logs

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-03D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,457.4 E 25,568,056.1		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 113.51

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		SILT - Brown sandy silt with some cobble				SPT blows: 12-10-5-4 Recovery: 75%	
						SPT blows: 20-6-4-4 Recovery: 75%	113
1		NO RECOVERY					
		SILT - Brown silt with some clay, some cobble				SPT blows: 14-4-5-5 Recovery: 75%	112
2		SILT - Brown clayey silt				SPT blows: 7-7-9-10 Recovery: 100%	
		NO RECOVERY					111
3		CLAY - Brown silty clay with some cobble				SPT blows: 8-8-9-12 Recovery: 100%	
						SPT blows: 49-15-17-15 Recovery: 100%	110
4		NO RECOVERY					
		CLAY - Brown silty clay with grey stone, wet				SPT blows: 9-11-16-13 Recovery: 20%	109
5		NO RECOVERY				Recovery: 50%	
							108
6		CLAY - Wet brown silty clay				SPT blows: 4-8-13-13 Recovery: 60%	
		NO RECOVERY					107
7							
							106
8		CLAY - Brown sandy clay, some cobble				SPT blows: 8-12-22-25 Recovery: 30%	
8.5							

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 15.54 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 2/4/2019
PROJECT MANAGER: Derek Heath	Page 1 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-03D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,457.4 E 25,568,056.1		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 113.51

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
8.5		NO YIELD				SPT blows: 22-17-17-23 Recovery: 0%	
9		NO RECOVERY					104
10							103
		CLAY - Brown silty clay, some cobble, some sand				SPT blows: 13-25-50	
11		GRANITE				RQD: 105%	102
12							101
13							100
14						RQD: 98%	99
15						RQD: 98%	98
		End of borehole at 15.54 m below ground surface (bgs) Monitoring well installed upon completion of borehole					
16							97
17.1							

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 15.54 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 2/4/2019
PROJECT MANAGER: Derek Heath	Page 2 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-09S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,315.1 E 25,567,976.2		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 95.75

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		CLAY - Brown, sandy clay, some gravel				SPT blows: 5-9-3-1 Recovery: 90%	
		SILT - Brown silt, trace sand				SPT blows: 6-15-15-12 Recovery: 90%	95
1		- very moist - grey-white boulder encountered				SPT blows: 16-23-38-21 Recovery: 90%	
						SPT blows: 8-12-16-23 Recovery: 90%	94
2						SPT blows: 14-40-35-33 Recovery: 90%	
							93
3						SPT blows: 16-13-17-31 Recovery: 90%	
						SPT blows: 18-22-26-32 Recovery: 90%	92
4							
		NO RECOVERY					91
5							
							90
6		SILT - Brown silt, trace sand - Bedrock encountered at 6.40 m bgs				SPT blows:15-38-50 Recovery: 90%	
		End of borehole at 6.4 m below ground surface (bgs) Monitoring well installed upon completion of borehole					89
7							
							88
8							
8.5							

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LOGGED BY: Janice Shea	COMPLETION DEPTH: 6.40 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 1/30/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-10S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,383.5 E 25,568,157.6		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 102.7

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		SILT - Brown sandy silt with some black organics				SPT blows: 5-4-3-1 Recovery: 80%	
		ORGANICS - Black organics				SPT blows: 7-5-7-7 Recovery: 80%	102
1		SILT - Brown sandy silt - trace gravel				SPT blows: 6-9-11-13 Recovery: 80%	
							101
2						SPT blows: 10-11-10-12 Recovery: 80%	
						SPT blows: 16-10-14-13 Recovery: 80%	
		TILL - Brown silty till with some gravel					100
3						Pulled up garbage with auger SPT blows:7-13-13-12 Recovery: 80%	
						SPT blows: 10-30-36-50 Recovery: 70%	99
4		GRAVEL - Moist, sandy gravel till					
		End of borehole at 4.15 m below ground surface (bgs) Monitoring well installed upon completion of borehole					98
5							
							97
6							
							96
7							
							95
8							
8.5							

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 4.15 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 1/31/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-11D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,205.3 E 25,568,220.3		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 90.16

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		CLAY - Moist, brown silty clay				SPT blows: 6-2-1-7 Recovery: 75% RQD: 52%	90
		GRANITE					
1						RQD: 65%	89
2							88
3		- highly fractured				RQD: 30%	87
4							86
						RQD: 75%	
5							85
6						RQD: 93%	84
7							83
						RQD: 68%	
8		- Silty seam					82
8.5		End of borehole at 8.2 m bgs Monitoring well installed upon completion of borehole					

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 8.23 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 1/30/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-11M**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,206.6 E 25,568,220.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 90.49

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		CLAY - Brown, sandy clay				SPT blows: 5-13-9-10 Recovery: 75% RQD: 75%	90
1		GRANITE - Refusal encountered at 0.6 m below ground surface (bgs)				RQD: 85%	89
2							88
3						RQD: 88%	87
4		- possible seam, water-bearing fracture					86
5		End of borehole at 4.57 m bgs Monitoring well installed upon completion of borehole					85
6							84
7							83
8							
8.5							

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 4.57 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 1/30/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-12D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,364.3 E 25,568,382.5		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 95.579

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		Brown silt, trace sand Small boulder / crushed rock from 0.3-0.6 m				SPT blows: 1-1-15-10 60% recovery	
		Brown silt with gravel, dry				SPT blows: 14-11-15-15 50% recovery	95
1							
		White / grey boulders and cobbles				SPT blows: 11-20-50/4" 30% recovery	
2							94
							93
3		Bedrock below 3 m below gound surface					
							92
4							
							91
5							
							90
6							
							89
7		End of borehole at 7 m bgs Monitoring well installed upon completion of borehole					
							88
8							
8.5							

AECOM

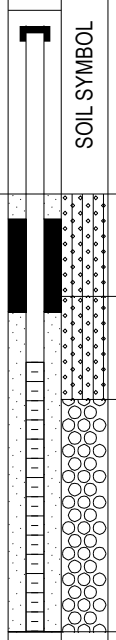
LOGGED BY: Janice Shea	COMPLETION DEPTH: 7.00 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 6/27/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-12S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,362.9 E 25,568,382.9		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 95.684

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND



DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0	Brown silt, trace sand Small boulder / crushed rock from 0.3-0.6 m				SPT blows: 1-1-15-10 60% recovery	
1	Brown silt with gravel, dry				SPT blows: 14-11-15-15 50% recovery	95
2	White / grey boulders and cobbles				SPT blows: 11-20-50/4" 30% recovery	94
2.6	End of borehole Monitoring well installed upon borehole completion Bedrock below 2.6 m bgs					93
3						
4						92
5						91
6						90
7						89
8						88
8.5						

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 2.60 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 6/27/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **PW19-01**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,311.9 E 25,568,005.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 95.98

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		Cobbles with some boulders					95
1							94
2							93
3							92
4		- Sand could range from 3.1- 4.3 m due to boulders / cobbles. Could not measure due to interference.					91
5							90
6		End of borehole at 6.1 m Production well installed upon completion of the borehole Bedrock below 6.1 m					89
7							88
8							
8.5							

AECOM

LOGGED BY: Janice Shea	COMPLETION DEPTH: 6.10 m
REVIEWED BY: Alex Duguay	COMPLETION DATE: 6/27/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-03-08.GPJ UMA_COC.GDT PRINT: 10/11/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-13D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,123.3 E 25,567,991.5		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 76.156

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		Brown Sandy Silt - some clay - trace cobbles					76
1							75
2							74
3							73
4		Bedrock at 4.30 mBGS					72
5							71
6							70
7							69
8		- End of borehole at 7.93 mBGS					68
8.5							

AECOM

LOGGED BY: Derek Heath	COMPLETION DEPTH: 7.93 m
REVIEWED BY: Cody Sipkema	COMPLETION DATE: 11/14/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 12/20/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW19-13S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,123.6 E 25,567,992.8		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 76.469

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		Brown Sandy Silt - some clay - trace cobbles					76
1							75
2							74
3		Bedrock at 3.35 mBGS					73
		- End of borehole at 3.66 mBGS					
4							72
5							71
6							70
7							69
8							68
8.5							

AECOM

LOGGED BY: Derek Heath	COMPLETION DEPTH: 3.66 m
REVIEWED BY: Cody Sipkema	COMPLETION DATE: 11/14/2019
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 12/20/19 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-14D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,220.2 E 25,568,306.6		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 89.898

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand trace gravel					
				1		SPT blows: 0-0-1-5 49% recovery	
1							89
				2		SPT blows: 5-8-11-12 90% recovery	
				3		SPT blows: 13 71% recovery 45% recovery	
2		- Granite bedrock					88
		- Red brown silt seam					
		- Granite bedrock					
		- Red brown silt seam					
		- Granite bedrock		4			
3							87
						34% recovery	
4				5			86
				6		92% recovery	
5						100% recovery	85
				7			
6							84
						72% recovery	
7				8			83
8						92% recovery	82
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 9.20 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 4/30/2020
PROJECT MANAGER: Derek Heath	Page 1 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-14D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,220.2 E 25,568,306.6		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 89.898

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
8.5				9			81
9		- End of borehole at 9.20 metres below the ground surface - Monitoring well installed upon completion of borehole					
10							80
11							79
12							78
13							77
14							76
15							75
16							74
17.1							73

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 9.20 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 4/30/2020
PROJECT MANAGER: Derek Heath	Page 2 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-14S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,220.7 E 25,568,307.2		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 90.008

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand trace gravel					
				1		SPT blows: 0-0-1-5 49% recovery	
1							89
				2		SPT blows: 5-8-11-12 90% recovery	
				3		SPT blows: 13 71% recovery 45% recovery	
2		- Granite bedrock					88
		- Red brown silt seam					
		- Granite bedrock					
		- Red brown silt seam					
		- Granite bedrock		4			
3							87
						34% recovery	
4				5			86
						92% recovery	
		- End of borehole at 4.72 metres below the ground surface - Monitoring well installed upon completion of borehole					
5							85
6							84
7							83
8							82
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 4.72 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 5/1/2020
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-15D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,242.2 E 25,568,333.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 92.436

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand trace gravel some cobbles		1		SPT blows: 0, 3, 9, 12 26% recovery	92
1		- Augered cobbles 1.19 - 1.52 m		2		SPT blows: 11, 22, 29, 50 38% recovery	91
2		- Granite bedrock		3		SPT blows: 35, 37, 40, 50 89% recovery 74% recovery	90
3				4		57% recovery	89
4		- Mud seam 3.35 to 3.66 m		5			88
5				6		78% recovery	87
6						60% recovery	86
7				7			85
8						63% recovery	84
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 9.30 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 2/5/2020
PROJECT MANAGER: Derek Heath	Page 1 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-15D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,242.2 E 25,568,333.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 92.436

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
8.5				8			
9		- End of borehole at 9.30 metres below ground surface - Monitoring well installed upon completion of borehole					83
10							82
11							81
12							80
13							79
14							78
15							77
16							76
17.1							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 9.30 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 2/5/2020
PROJECT MANAGER: Derek Heath	Page 2 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-15S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,242.8 E 25,568,334.5		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 92.425

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand trace gravel some cobbles		1		SPT blows: 0, 3, 9, 12 26% recovery	92
1		- Augered cobbles 1.19 - 1.52 m		2		SPT blows: 11, 22, 29, 50 38% recovery	91
2		- Granite bedrock		3		SPT blows: 35, 37, 40, 50 89% recovery	90
3				4		74% recovery	89
4		- Mud seam 3.35 to 3.66 m				57% recovery	88
5		- End of borehole at 4.88 metres below ground surface - Monitoring well installed upon completion of borehole					87
6							86
7							85
8							84
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 4.88 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 1/5/2020
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-16**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,523.1 E 25,568,356.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 103.162

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Granite bedrock		1		Recovery: 69%	103
1							102
				2		Recovery: 100%	
2							101
						Recovery: 92%	
3				3			100
4						Recovery: 100%	99
				4			
5							98
						Recovery: 100%	
6				5			97
7						Recovery: 100%	96
				6			
8							95
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 11.58 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 5/2/2020
PROJECT MANAGER: Derek Heath	Page 1 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-16**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,523.1 E 25,568,356.7		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 103.162

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
8.5						Recovery: 100%	
9				7			94
10						Recovery: 92%	93
11				8			92
11.58		- End of borehole at 11.58 metres below ground surface - Monitoring well installed upon completion of borehole					
12							91
13							90
14							89
15							88
16							87
17.1							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 11.58 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 5/2/2020
PROJECT MANAGER: Derek Heath	Page 2 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-17D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,428.0 E 25,567,865.0		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 102.294

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand, cobbles, small boulders					102
1							101
2							100
3							99
4							98
5							97
6							96
7							95
8							94
8.5							

AECOM

LOGGED BY: David Bugden | COMPLETION DEPTH: 12.50 m

REVIEWED BY: Janice Shea | COMPLETION DATE: 5/3/2020

PROJECT MANAGER: Derek Heath |

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-17D**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,428.0 E 25,567,865.0		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 102.294

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
8.5		- Granite bedrock					93.8
9							93
10							92
11							91
12							90
12.5		- End of borehole at 12.50 metres below ground surface - Monitoring well installed upon completion of borehole					89.8
13							89
14							88
15							87
16							86
17.1							84.9

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 12.50 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 5/3/2020
PROJECT MANAGER: Derek Heath	Page 2 of 2

ENVIRONMENTAL 60585499_HARRIETSFIELD_NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

PROJECT: Former Landfill Site, Harrietsfield, NS	CLIENT: Nova Scotia Lands Inc.	TESTHOLE NO: **MW20-17S**
LOCATION: 1275 Old Sambro Road, Harrietsfield, NS UTM3 N 4,936,428.9 E 25,567,865.2		PROJECT NO.: 60585499
CONTRACTOR: Logan Drilling Group	METHOD: Drilling	ELEVATION (m): 102.189

SAMPLE TYPE: GRAB | SHELBY TUBE | SPLIT SPOON | BULK | NO RECOVERY | CORE

BACKFILL TYPE: BENTONITE | GRAVEL | SLOUGH | GROUT | CUTTINGS | SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE #	⊗ Vapour Concentration ⊗ (ppm) 100 1000 10000	COMMENTS	ELEVATION (m)
0		- Brown silty sand, cobbles, small boulders					102
1							101
2							100
3							99
4							98
5							97
6							96
7							95
8		- End of borehole at 7.92 metres below ground surface - Monitoring well installed upon completion of borehole					94
8.5							

AECOM

LOGGED BY: David Bugden	COMPLETION DEPTH: 7.92 m
REVIEWED BY: Janice Shea	COMPLETION DATE: 5/3/2020
PROJECT MANAGER: Derek Heath	Page 1 of 1

ENVIRONMENTAL 60585499_HARRIETSFIELD, NS LOGS_2019-10-11.GPJ UMA_COC.GDT PRINT: 8/7/20 By:younatan.mohammadi@aecom.com

Appendix C. Analytical Summary Tables

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D
			Sample Date	2/11/2019	4/1/2020	4/1/2020	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021	6/9/2021	10/5/2021
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW19-03D_20190211	20X589937-1062421	20X589937-1062425	20X606071-1154904	MW19-03D_20200917	MW19-03D_20201216	MW19-03D_20210325	DUP3_20210609	MW19-03D_20210609	MW19-03D_20211005
			Lab Sample ID	9894253	1062421	1062425	1154904	NRG098	OLM111	PEB980	PUQ387	PUQ384	QWF776
			Lab Job Number	19X436534	20X589937	20X589937	20X606071	C0O4512	C0X8319	C179966	C1F9831	C1F9831	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Aluminum		**50**	<5 - 30	ug/l	152	11	9	12	9.9	14	8.7	8.3	8.3	14
Antimony	6	200	< 2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	-	4	3	< 2	3	4	3.8	4.1	4.2	4.7
Barium	2000	10000	<5 - 24	ug/l	11	17	17	15	11	13	12	9.1	9.3	6
Beryllium		53	<2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10
Bismuth			<2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	53	49	35	31	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.1	< 0.017	< 0.017	0.031	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Calcium			7 - 3.72	ug/l	15200	24000	24300	24400	23000	23000	22000	22000	22000	22000
Chromium	50		<1 -3	ug/l	2	2	< 1	3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 1	< 1	< 1	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	< 2	< 2	< 2	< 2	< 0.50	3.3	< 0.50	< 0.50	< 0.50	1.9
Iron		**3000**	<50 - 62	ug/l	91	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	2000	3700	3600	2600	3100	3200	3000	3200	3200	3300
Manganese	120	**8200**	<2 - 54	ug/l	21	43	38	42	14	3.9	29	15	14	< 2.0
Mercury	1	0.26	<0.026	ug/l	< 0.026	< 0.026	< 0.026	< 0.026	-	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	94	10	10	18	4.7	6.2	5.7	4.8	4.9	6
Nickel		250	<2	ug/l	< 2	< 2	< 2	3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	50	40	30	< 20	< 100	< 100	< 100	< 100	< 100	130
Potassium			400 - 3100	ug/l	1500	1700	1500	1200	1100	1100	1200	1000	1000	1100
Selenium	50	10	<1	ug/l	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	28700	18100	18300	20600	16000	16000	16000	17000	17000	16000
Strontium	7000	210000	39 - 121	ug/l	67	100	91	87	89	85	82	81	83	78
Thallium		8	<0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	4	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	30.5	21.8	23.3	26.7	22	21	19	17	17	15
Vanadium		60	<2	ug/l	3	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5	< 5	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.3

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location		MW19-03D	MW19-03D	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S
			Sample Date		12/13/2021	3/30/2022	7/10/2019	4/1/2020	5/28/2020	5/28/2020	9/15/2020	12/16/2020	3/25/2021	3/25/2021	6/9/2021
			Background		Background	Background									
			Sample ID		MW19-03D_20211213	MW19-03D_20220330	19X490884-338553	20X589937-1062422	20X606404-1156933	20X606404-1156941	MW19-09S_20200915	MW19-09S_20201216	DUP3_20210325	MW19-09S_20210325	MW19-09S_20210609
			Lab Sample ID		RJM391	SGA982	338553	1062422	1156933	1156941	NQU658	OLM142	PEB972	PEB978	PUQ380
			Lab Job Number		C1Z2957	C285511	19X490884	20X589937	20X606404	20X606404	C0O2716	C0X8319	C179966	C179966	C1F9831
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	6.5	7.4	8	26	11	12	7.6	7	**420**	**1700**	13
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	4.3	5	3	3	< 2	< 2	2.1	1.3	1.7	2.4	1.5
Barium	2000	10000	<5 - 24	ug/l	6.7	7.7	15	15	14	14	12	27	22	56	14
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	< 50	< 50	30	31	24	23	< 50	< 50	< 50	< 50	< 50
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	< 0.010	< 0.010	< 0.017	0.022	0.02	0.025	< 0.010	< 0.010	< 0.010	0.024	0.016
Calcium			7 - 3.72	ug/l	22000	22000	37100	30400	27300	25400	23000	44000	29000	36000	26000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1	1	3	3	5.4	3.1	< 1.0	3.2	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 1	< 1	< 1	< 1	< 0.40	0.86	0.43	1.8	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	< 0.50	7.4	< 2	< 2	< 2	< 2	< 0.50	< 0.50	1.8	4.1	2.9
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	53	< 50	< 50	< 50	390	1700	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	2.6	< 0.50
Magnesium			1000-6300	ug/l	3200	3200	4000	4400	3700	3700	3000	7100	4000	5400	3700
Manganese	120	**8200**	<2 - 54	ug/l	12	12	237	21	7	5	14	4.7	21	140	2.6
Mercury	1	0.26	<0.026	ug/l	-	-	< 0.026	< 0.026	< 0.026	< 0.026	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	5.2	5.6	20	12	12	11	9	6.1	6.7	3.5	6.4
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2	4	2	< 2	3.1	3	< 2.0	3.1	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 20	< 20	20	< 20	< 100	< 100	< 100	190	< 100
Potassium			400 - 3100	ug/l	1000	1000	2800	2400	2200	2100	2000	2300	2000	2400	1800
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	16000	16000	26000	18000	17900	16800	14000	18000	14000	16000	15000
Strontium	7000	210000	39 - 121	ug/l	81	78	73	78	82	81	67	120	82	100	75
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	18	37	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	18	17	0.7	4.5	4.1	4.3	4	6.2	5.3	6.1	4.7
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	3.7	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	< 5.0	< 5	< 5	< 5	< 5	< 5.0	< 5.0	5.5	10	11

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW19-09S	MW19-09S	MW19-09S	MW19-10S	MW19-10S	MW19-10S	MW19-10S	MW19-11D	MW19-11D	MW19-11D
			Sample Date	10/5/2021	12/13/2021	3/29/2022	7/10/2019	6/1/2020	12/16/2020	3/29/2022	2/11/2019	6/1/2020	9/15/2020
			Background										
			Sample ID	MW19-09S_20211005	MW19-09S_20211213	MW19-09S_20220329	19X490884-338565	20X608058-1165168	MW19-10S_20201216	MW19-10S_20220329	MW19-11D_20190211	20X608058-1165165	MW19-11D_20200915
			Lab Sample ID	QWF777	RJM392	SFM286	338565	1165168	OLM143	SFM287	9894251	1165165	NQU665
			Lab Job Number	C1T0922	C1Z2957	C282980	19X490884	20X608058	C0X8319	C282980	19X436534	20X608058	C0O2716
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Aluminum		50	<5 - 30	ug/l	12	8.8	7.6	< 5	< 5	< 5.0	< 5.0	8	30	58
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0	< 2	< 2	< 10
Arsenic	10	50	<2 - 6	ug/l	1.8	1.4	1.2	< 2	< 2	< 1.0	< 1.0	-	40	< 10
Barium	2000	10000	<5 - 24	ug/l	16	16	16	36	39	31	25	61	69	120
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 0.10	< 2	< 2	< 1.0	< 0.10	< 2	< 2	< 10
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2	< 2	< 20
Boron	5000	12000	9.8 - 53	ug/l	< 50	< 50	53	385	334	340	210	6350	7720	6100
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.012	< 0.010	< 0.010	0.05	0.077	0.028	0.034	0.37	0.165	0.24
Calcium			7 - 3.72	ug/l	28000	28000	30000	64000	67800	74000	45000	467000	523000	500000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	1	3	< 1.0	< 1.0	22	40	< 10
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	2	< 1	< 0.40	< 0.40	17	20	14
Copper	2000	20	<2 - 5.1	ug/l	2.1	< 0.50	2.8	< 2	< 2	2.3	2.1	12	8	< 5.0
Iron		3000	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	14900	9300
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50	< 0.5	0.6	< 5.0
Magnesium			1000-6300	ug/l	4000	3900	4400	10700	13700	12000	7700	91900	108000	94000
Manganese	120	8200	<2 - 54	ug/l	3.7	< 2.0	< 2.0	683	98	8.5	< 2.0	20000	22400	29000
Mercury	1	0.26	<0.026	ug/l	-	-	-	< 0.026	< 0.026	-	-	< 0.026	< 0.026	-
Molybdenum		730	<2 - 18	ug/l	7.5	6.1	5.8	2	< 2	< 2.0	< 2.0	3	3	< 20
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	4	7	2.1	< 2.0	21	46	< 20
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 20	< 20	< 100	< 100	< 20	< 20	< 1000
Potassium			400 - 3100	ug/l	2100	1900	1800	3100	2400	3200	2100	16500	19600	14000
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 1	2	< 0.50	< 0.50	3	4	< 5.0
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.1	< 0.1	< 1.0
Sodium			8000 - 34000	ug/l	16000	15000	15000	24800	25100	21000	14000	97500	105000	85000
Strontium	7000	210000	39 - 121	ug/l	77	78	86	251	263	230	170	1780	2760	1600
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	0.3	0.2	< 1.0
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2	< 2	< 20
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2	2	< 20
Uranium	20	3000	2.5 - 30.5	ug/l	4.8	5.1	5.9	5.4	6.1	8.8	4	437	597	420
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2	4	< 20
Zinc		300	<5 - 9.2	ug/l	13	< 5.0	< 5.0	< 5	6	< 5.0	5	17	12	< 50

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11M	MW19-11M	MW19-11M	MW19-11M
			Sample Date	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	7/10/2019	6/1/2020	9/15/2020	12/16/2020
			Background										
			Sample ID	MW19-11D_20201216	MW19-11D_20210323	MW19-11D_20210607	MW19-11D_20211005	MW19-11D_20211213	MW19-11D_20220328	19X490884-338567	20X608058-1165164	MW19-11M_20200915	MW19-11M_20201216
			Lab Sample ID	OLM145	PDR023	PUI335	QWF780	RJM394	SFM289	338567	1165164	NQU664	OLM144
			Lab Job Number	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	19X490884	20X608058	C0O2716	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Aluminum		50	<5 - 30	ug/l	< 50	< 50	< 50	34	25	31	459	57	54	55
Antimony	6	200	< 2	ug/l	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 2	< 2	< 10	< 10
Arsenic	10	50	<2 - 6	ug/l	< 10	22	19	20	27	27	14	6	31	< 10
Barium	2000	10000	<5 - 24	ug/l	76	76	68	67	55	46	70	53	110	57
Beryllium		53	<2	ug/l	< 10	< 10	< 10	0.16	0.12	0.12	< 2	< 2	< 10	< 10
Bismuth			<2	ug/l	< 20	< 20	< 20	< 2.0	< 2.0	< 2.0	< 2	< 2	< 20	< 20
Boron	5000	12000	9.8 - 53	ug/l	6100	6700	5300	5500	4300	3800	4890	4190	7600	4400
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.25	< 0.10	0.18	0.061	0.037	0.017	0.124	0.318	< 0.10	0.24
Calcium			7 - 3.72	ug/l	470000	560000	480000	460000	400000	360000	365000	348000	600000	350000
Chromium	50		<1 -3	ug/l	< 10	< 10	< 10	< 1.0	< 1.0	1.1	14	19	< 10	< 10
Cobalt		100	<1	ug/l	12	16	13	12	11	10	15	12	16	8.4
Copper	2000	20	<2 - 5.1	ug/l	30	9	16	1.5	0.67	0.95	< 2	4	< 5.0	< 5.0
Iron		3000	<50 - 62	ug/l	4400	14000	12000	12000	13000	13000	10900	4800	15000	730
Lead	5	10	<0.5 - 1.5	ug/l	< 5.0	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 5.0	< 5.0
Magnesium			1000-6300	ug/l	85000	100000	83000	74000	60000	54000	62700	64200	100000	68000
Manganese	120	8200	<2 - 54	ug/l	22000	24000	21000	20000	18000	16000	18700	21400	26000	22000
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	< 0.026	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	< 20	< 20	< 20	2.4	2.2	2.4	2	< 2	< 20	< 20
Nickel		250	<2	ug/l	< 20	< 20	< 20	7.4	6.1	5.7	12	26	< 20	< 20
Phosphorus			< 100 - 200	ug/l	< 1000	< 1000	< 1000	< 100	< 100	< 100	50	< 20	< 1000	< 1000
Potassium			400 - 3100	ug/l	14000	17000	15000	15000	15000	13000	10000	8500	19000	9700
Selenium	50	10	<1	ug/l	< 5.0	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	2	4	< 5.0	< 5.0
Silver		1	<0.1	ug/l	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 1.0	< 1.0
Sodium			8000 - 34000	ug/l	82000	96000	81000	73000	60000	54000	75600	62500	96000	63000
Strontium	7000	210000	39 - 121	ug/l	1900	2400	2000	1800	1600	1500	1290	1150	2400	1100
Thallium		8	<0.1	ug/l	< 1.0	< 1.0	< 1.0	0.3	0.24	0.17	0.3	0.2	< 1.0	< 1.0
Tin			<2	ug/l	< 20	< 20	< 20	< 2.0	< 2.0	< 2.0	< 2	< 2	< 20	< 20
Titanium			<2	ug/l	< 20	< 20	< 20	< 2.0	< 2.0	2.5	4	< 2	< 20	< 20
Uranium	20	3000	2.5 - 30.5	ug/l	450	550	410	380	300	260	227	272	560	290
Vanadium		60	<2	ug/l	< 20	< 20	< 20	< 2.0	< 2.0	< 2.0	< 2	< 2	< 20	< 20
Zinc		300	<5 - 9.2	ug/l	< 50	< 50	< 50	8.8	6.4	5.7	6	9	< 50	< 50

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location		MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D
			Sample Date		3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	7/10/2019	7/10/2019	6/1/2020	6/1/2020	9/17/2020	9/17/2020
			Background												
			Sample ID		MW19-11M_20210323	MW19-11M_20210607	MW19-11M_20211005	MW19-11M_20211213	MW19-11M_20220328	19X490884-338569	19X490884-338570	20X608058-1165158	20X608058-1165163	DUP 3_20200917	MW19-12D_20200917
			Lab Sample ID		PDR022	PUI334	QWF779	RJM393	SFM288	338569	338570	1165158	1165163	NRG096	NRG093
			Lab Job Number		C177930	C1F8315	C1T0922	C1Z2957	C282980	19X490884	19X490884	20X608058	20X608058	C0O4512	C0O4512
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	32	**53**	34	**52**	**100**	< 5	< 5	< 5	< 5	< 5.0	< 5.0
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 2	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	< 1.0	< 1.0	1.2	1.8	2.1	< 2	2	< 2	< 2	2.1	2.1
Barium	2000	10000	<5 - 24	ug/l	56	57	75	56	40	27	13	9	9	8.1	8.4
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 2	< 2	< 2	< 2	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	3300	2800	3800	1400	1200	164	146	106	100	95	93
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.26**	**0.18**	**0.41**	**0.21**	0.078	**0.122**	**0.197**	**0.101**	0.087	**0.16**	**0.16**
Calcium			7 - 3.72	ug/l	340000	260000	340000	160000	150000	60600	49100	42100	44300	40000	39000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	1	2	2	< 1.0	< 1.0
Cobalt		100	<1	ug/l	7.4	4.5	10	3.7	3.8	< 1	< 1	< 1	< 1	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	3.9	3.9	1.7	3	1.6	2	< 2	< 2	< 2	1.2	1
Iron		**3000**	<50 - 62	ug/l	920	450	**4100**	940	2600	360	381	337	420	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	59000	42000	57000	23000	20000	5900	8200	7300	7100	8000	8000
Manganese	120	**8200**	<2 - 54	ug/l	**19000**	**14000**	**20000**	**8500**	**8300**	193	109	131	207	8.2	7.7
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	< 0.026	< 0.026	< 0.026	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	2	< 2.0	16	< 2	< 2	< 2	< 2	< 2.0	< 2.0
Nickel		250	<2	ug/l	4.9	3.7	6	2.8	2.2	5	4	4	4	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	110	< 100	< 20	< 20	< 20	< 20	< 100	< 100
Potassium			400 - 3100	ug/l	8600	8300	11000	7700	6100	3100	1900	900	1000	1000	1000
Selenium	50	10	<1	ug/l	< 0.50	0.66	< 0.50	< 0.50	< 0.50	< 1	< 1	< 1	< 1	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	54000	43000	55000	22000	19000	9800	12800	8300	8400	9000	9100
Strontium	7000	210000	39 - 121	ug/l	1100	900	1100	480	460	192	146	109	110	100	100
Thallium		8	<0.1	ug/l	0.18	0.16	0.27	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	3.1	< 2.0	< 2.0	4.3	< 2	< 2	< 2	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	260	170	230	85	63	8.2	19.1	14.3	11.8	11	10
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	15	8.2	10	7.3	17	20	20	17	19	19

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location		MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12S	MW19-12S	MW19-12S
			Sample Date		12/16/2020	12/16/2020	3/23/2021	6/7/2021	10/6/2021	12/13/2021	3/29/2022	7/10/2019	12/16/2020	12/13/2021
			Background											
			Sample ID		DUP3_20201216	MW19-12D_20201216	MW19-12D_20210323	MW19-12D_20210607	MW19-12D_20211006	MW19-12D_20211213	MW19-12D_20220329	19X490884-338568	MW19-12S_20201216	MW19-12S_20211213
			Lab Sample ID		OLM172	OLM159	PDR026	PUI336	QWS509	RJM500	SFM295	338568	OLM146	RJM396
			Lab Job Number		C0X8319	C0X8319	C177930	C1F8315	C1T3325	C1Z2957	C282980	19X490884	C0X8319	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Aluminum		**50**	<5 - 30	ug/l	< 5.0	< 5.0	< 5.0	17	6.3	< 5.0	5.6	8	12	7.5
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	2.5	2.3	2	< 1.0	1.1	2.7	1.6	< 2	< 1.0	< 1.0
Barium	2000	10000	<5 - 24	ug/l	10	11	9.7	9.6	11	16	20	39	41	56
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 2	< 1.0	< 0.10
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	99	97	90	82	78	92	82	220	94	190
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.11**	0.1	0.099	**0.13**	**0.14**	**0.15**	0.076	0.05	0.027	0.06
Calcium			7 - 3.72	ug/l	48000	47000	48000	43000	42000	57000	55000	61300	78000	67000
Chromium	50		<1 -3	ug/l	11	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	0.42	0.58	< 0.40	< 0.40	2	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	0.93	0.69	0.72	0.82	2.1	2.4	1.5	2	7.6	7.8
Iron		**3000**	<50 - 62	ug/l	400	540	220	63	72	160	480	133	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	9000	9100	9100	8600	8300	10000	8900	5300	5200	8200
Manganese	120	**8200**	<2 - 54	ug/l	44	64	100	59	71	7.5	34	652	< 2.0	2.7
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	-	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2	< 2.0
Nickel		250	<2	ug/l	5.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	6	< 2.0	2.1
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 20	< 100	< 100
Potassium			400 - 3100	ug/l	1100	1100	1100	1200	1200	1700	2000	5900	3600	7100
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	9500	9600	10000	10000	11000	11000	9900	13600	8100	8500
Strontium	7000	210000	39 - 121	ug/l	120	110	110	110	110	150	160	220	240	180
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	21	19	20	11	10	22	16	5.8	3.2	2.4
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	15	12	13	18	19	19	13	< 5	8	38

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW19-12S	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D
			Sample Date	3/29/2022	11/19/2019	11/19/2019	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background										
			Sample ID	MW19-12S_20220329	19X546170-731457	19X546170-731459	20X589937-1062424	20X606404-1156944	MW19-13D_20200915	MW19-13D_20201216	MW19-13D_20210323	MW19-13D_20210608	MW19-13D_20211005
			Lab Sample ID	SFM294	731457	731459	1062424	1156944	NQU662	OLM161	PDR028	PUI338	QWF783
			Lab Job Number	C282980	19X546170	19X546170	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Aluminum		**50**	<5 - 30	ug/l	33	24	6	16	< 5	30	40	21	29	20
Antimony	6	200	< 2	ug/l	< 1.0	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	1	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	1	< 1.0
Barium	2000	10000	<5 - 24	ug/l	56	7	20	53	40	56	59	56	60	57
Beryllium		53	<2	ug/l	< 0.10	< 2	< 2	< 2	< 2	1.3	1.6	1.4	1.3	1.3
Bismuth			<2	ug/l	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	82	76	151	271	235	240	240	220	200	240
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.048	< 0.017	0.038	**0.127**	0.089	**0.14**	**0.15**	**0.13**	**0.12**	**0.15**
Calcium			7 - 3.72	ug/l	70000	8300	14200	19400	16400	15000	15000	15000	16000	16000
Chromium	50		<1 -3	ug/l	< 1.0	< 1	1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 1	2	2	2	1.4	0.74	0.58	0.63	0.65
Copper	2000	**20**	<2 - 5.1	ug/l	11	5	13	12	4	15	**21**	15	16	9.9
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	7800	1700	2900	4400	3700	3900	4200	4400	4500	4400
Manganese	120	**8200**	<2 - 54	ug/l	3.1	45	197	174	175	110	87	70	58	81
Mercury	1	0.26	<0.026	ug/l	-	< 0.026	< 0.026	< 0.026	< 0.026	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	8	3	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	2.2	< 2	15	7	10	4.4	3.6	2.7	2.7	2.5
Phosphorus			< 100 - 200	ug/l	< 100	40	< 20	20	< 20	< 100	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	6700	5800	4800	2400	1700	1500	1300	1200	1200	1300
Selenium	50	10	<1	ug/l	< 0.50	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.1	0.2	0.2	< 0.1	< 0.10	0.24	0.83	0.89	0.71
Sodium			8000 - 34000	ug/l	7100	35300	21000	17600	15100	13000	13000	14000	14000	14000
Strontium	7000	210000	39 - 121	ug/l	190	49	97	101	109	87	89	88	98	90
Thallium		8	<0.1	ug/l	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	2.9	9.9	2.9	2.9	2.2	2.3	2.6	2.3	2.2	2.4
Vanadium		60	<2	ug/l	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	37	< 5	16	14	9	15	12	12	12	14

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location		MW19-13D	MW19-13D	MW19-13D	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S
			Sample Date		12/13/2021	3/28/2022	3/28/2022	11/19/2019	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background											
			Sample ID		MW19-13D_20211213	DUP1_20220328	MW19-13D_20220328	19X546170-731456	20X589937-1062423	20X606404-1156943	MW19-13S_20201216	MW19-13S_20210323	MW19-13S_20210608	MW19-13S_20211005
			Lab Sample ID		RJM502	SFM277	SFM297	731456	1062423	1156943	OLM160	PDR027	PUI337	QWF782
			Lab Job Number		C1Z2957	C282980	C282980	19X546170	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Aluminum		**50**	<5 - 30	ug/l	18	44	38	**154**	**326**	**128**	**370**	**470**	**490**	**480**
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	< 1.0	1.1	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Barium	2000	10000	<5 - 24	ug/l	57	57	56	26	23	20	37	25	32	40
Beryllium		53	<2	ug/l	1.1	1.4	1.4	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	0.49
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	230	210	210	142	437	341	300	260	270	330
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.17**	**0.14**	**0.14**	**0.127**	0.098	**0.115**	**0.2**	**0.15**	**0.21**	**0.27**
Calcium			7 - 3.72	ug/l	16000	15000	15000	12500	15500	12700	28000	13000	13000	12000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	5.1	0.58	0.64	9	2	3	2.7	1.5	1.4	1.3
Copper	2000	**20**	<2 - 5.1	ug/l	7.5	9.8	9	6	< 2	< 2	1.1	1	1.2	3.3
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	127	< 50	52	70	< 50	92	93
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	4400	4500	4500	5000	6000	4800	11000	5500	4900	4700
Manganese	120	**8200**	<2 - 54	ug/l	150	49	48	221	89	119	500	250	210	1200
Mercury	1	0.26	<0.026	ug/l	-	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	3.1	< 2.0	< 2.0	6	< 2	4	2.9	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 20	< 20	< 20	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	1400	1100	1200	900	800	700	1100	910	960	1300
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	**1.1**	**1.2**	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	14000	14000	14000	12800	12800	9900	13000	10000	10000	11000
Strontium	7000	210000	39 - 121	ug/l	93	89	89	59	38	41	73	40	39	41
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	2.5	2.4	2.3	0.5	0.4	0.3	0.29	0.15	0.19	0.21
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	13	22	14	9	< 5	< 5	< 5.0	< 5.0	8.1	9.3

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW19-13S	MW19-13S	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D
			Sample Date	12/13/2021	3/28/2022	11/7/2018	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021
			Background											
			Sample ID	MW19-13S_20211213	MW19-13S_20220328	MW1-D_20181107	20X589937-1062415	20X606404-1156950	MW1-D_20200915	MW1-D_20201216	MW1-D_20210323	MW1-D_20210608	MW1-D_20211005	MW1-D_20211213
			Lab Sample ID	RJM501	SFM296	9698371	1062415	1156950	NQU661	OLM106	PDR006	PUI324	QWF765	RJM313
			Lab Job Number	C1Z2957	C282980	18X408633	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Aluminum		**50**	<5 - 30	ug/l	**540**	**460**	9	14	< 5	< 50	< 50	5.2	6.9	16	< 50
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 2	< 2	< 2	< 10	< 10	< 1.0	< 1.0	< 1.0	< 10
Arsenic	10	**50**	<2 - 6	ug/l	< 1.0	< 1.0	6	6	< 2	< 10	< 10	1.5	2.1	4.6	< 10
Barium	2000	10000	<5 - 24	ug/l	32	21	27	31	23	35	31	20	24	33	33
Beryllium		53	<2	ug/l	0.37	0.2	< 2	< 2	< 2	< 10	< 10	< 1.0	< 1.0	0.15	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 2.0	< 2.0	< 2.0	< 20
Boron	5000	**12000**	9.8 - 53	ug/l	250	240	7160	6340	6190	6600	6200	4700	5300	6000	5100
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.24**	**0.13**	**0.62**	**2.3**	**1.11**	**2.2**	**1.4**	**1**	**1.1**	**3**	**1.7**
Calcium			7 - 3.72	ug/l	12000	12000	342000	427000	377000	390000	380000	310000	330000	380000	360000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	20	17	28	< 10	< 10	< 1.0	< 1.0	< 1.0	< 10
Cobalt		100	<1	ug/l	2	3	10	12	12	11	12	8.4	8.5	9.4	11
Copper	2000	**20**	<2 - 5.1	ug/l	1.3	1.8	2	3	15	8.3	< 5.0	5.6	5.6	3.9	< 5.0
Iron		**3000**	<50 - 62	ug/l	140	920	**3960**	1950	< 50	< 500	1500	520	350	220	2100
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	0.8	1.3	< 0.5	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	< 5.0
Magnesium			1000-6300	ug/l	4600	4400	116000	126000	124000	110000	120000	100000	100000	110000	100000
Manganese	120	**8200**	<2 - 54	ug/l	1100	600	5670	**8420**	7520	8100	**8900**	7100	7100	7900	**8800**
Mercury	1	0.26	<0.026	ug/l	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 2.0	< 2.0	< 2.0	< 20
Nickel		250	<2	ug/l	< 2.0	2	31	33	48	27	27	21	21	25	27
Phosphorus			< 100 - 200	ug/l	< 100	< 100	70	40	< 20	< 1000	< 1000	< 100	< 100	< 100	< 1000
Potassium			400 - 3100	ug/l	970	780	3100	3200	2300	4200	3500	2200	2700	3600	3400
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	3	2	2	< 5.0	< 5.0	< 0.50	< 0.50	< 0.50	< 5.0
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 1.0
Sodium			8000 - 34000	ug/l	9500	8900	125000	108000	120000	100000	100000	85000	92000	97000	88000
Strontium	7000	210000	39 - 121	ug/l	38	32	703	839	800	910	920	690	720	890	860
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 1.0	< 1.0	< 0.10	< 0.10	0.1	< 1.0
Tin			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 2.0	< 2.0	< 2.0	< 20
Titanium			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 2.0	< 2.0	< 2.0	< 20
Uranium	20	3000	2.5 - 30.5	ug/l	0.27	0.19	680	935	899	980	950	710	740	870	780
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 2.0	< 2.0	< 2.0	< 20
Zinc		300	<5 - 9.2	ug/l	5.3	5.6	16	143	53	74	99	31	34	110	130

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location		MW1-D	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW20-14D	MW20-14D
			Sample Date		3/28/2022	11/8/2018	4/1/2020	5/28/2020	12/16/2020	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020	9/15/2020
			Background												
			Sample ID		MW1-D_20220328	MW1-S_20181108	20X589937-1062401	20X606404-1156945	MW1-S_20201216	MW1-S_20210608	MW1-S_20211005	MW1-S_20211213	MW1-S_20220328	20X606071-1154898	MW20-14D_20200915
			Lab Sample ID		SFM273	9698370	1062401	1156945	OLM105	PUI323	QWF764	RJM311	SFM272	1154898	NQU666
			Lab Job Number		C282980	18X408633	20X589937	20X606404	C0X8319	C1F8315	C1T0922	C1Z2957	C282980	20X606071	C0O2716
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit											
Aluminum		**50**	<5 - 30	ug/l	5.6	19	**232**	5	**2000**	39	20	< 50	**1500**	< 5	12
Antimony	6	200	< 2	ug/l	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 2	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	3.9	< 2	< 2	< 2	1.3	1.2	2.2	< 10	2.9	< 2	< 1.0
Barium	2000	10000	<5 - 24	ug/l	25	41	23	17	25	48	73	46	58	24	27
Beryllium		53	<2	ug/l	0.11	< 2	< 2	< 2	< 1.0	< 1.0	< 0.10	< 1.0	0.15	< 2	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 20	< 2.0	< 2	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	4800	5090	2030	1810	1400	3000	4500	3300	3100	254	370
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**1.1**	**0.23**	0.06	0.037	0.05	0.059	0.066	< 0.10	0.05	**0.354**	**0.27**
Calcium			7 - 3.72	ug/l	330000	266000	171000	158000	160000	400000	510000	330000	300000	71000	100000
Chromium	50		<1 -3	ug/l	< 1.0	12	4	12	< 1.0	< 1.0	1.2	< 10	2.6	4	< 1.0
Cobalt		100	<1	ug/l	9.1	4	2	1	1.1	2.5	3.5	< 4.0	4	1	0.5
Copper	2000	**20**	<2 - 5.1	ug/l	1.3	3	< 2	2	3.1	1.2	3	< 5.0	3.6	3	0.66
Iron		**3000**	<50 - 62	ug/l	2200	56	1020	< 50	1400	1300	260	1600	2500	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	0.51	< 0.5	< 0.5	< 0.5	1.2	< 0.50	< 0.50	< 5.0	2.5	< 0.5	< 0.50
Magnesium			1000-6300	ug/l	98000	78800	35000	28000	26000	72000	94000	65000	55000	26300	32000
Manganese	120	**8200**	<2 - 54	ug/l	8000	2700	1260	206	490	3700	**15000**	**11000**	**9600**	127	100
Mercury	1	0.26	<0.026	ug/l	-	< 0.026	< 0.026	< 0.026	-	-	-	-	-	< 0.026	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	2.5	< 20	< 2.0	< 2	< 2.0
Nickel		250	<2	ug/l	21	21	7	16	5.2	9.3	12	< 20	9.5	13	3.4
Phosphorus			< 100 - 200	ug/l	< 100	< 20	< 20	< 20	< 100	< 100	< 100	< 1000	140	< 20	< 100
Potassium			400 - 3100	ug/l	2600	4900	4200	3600	3900	7700	12000	7900	8400	1400	1900
Selenium	50	10	<1	ug/l	< 0.50	2	< 1	2	< 0.50	0.52	0.61	< 5.0	< 0.50	< 1	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 1.0	< 0.10	< 0.1	< 0.10
Sodium			8000 - 34000	ug/l	78000	116000	40700	35800	33000	76000	82000	71000	58000	29500	30000
Strontium	7000	210000	39 - 121	ug/l	790	732	626	537	590	1600	2100	1300	1200	299	380
Thallium		8	<0.1	ug/l	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 1.0	< 0.10	< 0.1	< 0.10
Tin			<2	ug/l	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 20	< 2.0	< 2	< 2.0
Titanium			<2	ug/l	< 2.0	< 2	8	< 2	39	2.1	< 2.0	< 20	56	< 2	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	630	290	164	151	130	450	380	250	210	1.8	4
Vanadium		60	<2	ug/l	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 20	3.3	< 2	< 2.0
Zinc		300	<5 - 9.2	ug/l	78	8	< 5	< 5	6	12	5.8	< 50	19	34	29

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14S	MW20-14S	MW20-14S	MW20-14S
			Sample Date	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020	12/16/2020	3/23/2021	6/8/2021
			Background										
			Sample ID	MW20-14D_20201216	MW20-14D_20210323	MW20-14D_20210608	MW20-14D_20211005	MW20-14D_20211213	MW20-14D_20220328	20X606071-1154897	MW20-14S_20201216	MW20-14S_20210323	MW20-14S_20210608
			Lab Sample ID	OLM163	PDR030	PUI340	QWF785	RJM504	SFM299	1154897	OLM162	PDR029	PUI339
			Lab Job Number	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	20X606071	C0X8319	C177930	C1F8315
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Aluminum		**50**	<5 - 30	ug/l	5.6	7.7	6.8	6.7	7.1	7.2	< 5	14	**120**	17
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0
Barium	2000	10000	<5 - 24	ug/l	24	20	15	15	16	14	27	49	34	37
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 1.0	0.24	0.29	0.26	< 2	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	340	280	240	280	290	230	214	210	220	220
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.29**	**0.26**	**0.24**	**0.26**	**0.25**	**0.14**	0.04	0.066	0.048	0.049
Calcium			7 - 3.72	ug/l	100000	89000	76000	69000	70000	61000	63300	66000	81000	63000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	0.68	0.61	< 0.40	< 0.40	< 0.40	< 0.40	2	2.7	1.6	1.6
Copper	2000	**20**	<2 - 5.1	ug/l	< 0.50	2.3	0.79	2.2	1.1	0.59	< 2	1.2	1.5	1.2
Iron		**3000**	<50 - 62	ug/l	210	57	< 50	< 50	< 50	56	< 50	180	62	450
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	33000	29000	26000	24000	25000	21000	17100	17000	20000	16000
Manganese	120	**8200**	<2 - 54	ug/l	110	72	47	18	22	27	123	460	150	230
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	< 0.026	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	4.1	3.5	2.5	2.6	2.5	2.1	9	6.4	3.1	5.3
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 20	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	1900	1700	1500	1700	1700	1500	1700	2100	2100	2200
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	33000	30000	28000	29000	30000	24000	18200	17000	19000	18000
Strontium	7000	210000	39 - 121	ug/l	380	320	280	260	280	240	194	220	250	210
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	2.4	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	2.7	2.1	1.6	1.5	1.5	1.4	0.3	0.2	0.28	0.17
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	31	30	29	34	30	73	< 5	< 5.0	< 5.0	6.2

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-14S	MW20-14S	MW20-14S	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D
			Sample Date	10/5/2021	12/13/2021	3/28/2022	5/27/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021
			Background										
			Sample ID	MW20-14S_20211005	MW20-14S_20211213	MW20-14S_20220328	20X606071-1154900	MW20-15D_20200915	MW20-15D_20201216	MW20-15D_20210323	MW20-15D_20210608	MW20-15D_20211005	DUP1_20211213
			Lab Sample ID	QWF784	RJM503	SFM298	1154900	NQU667	OLM165	PDR032	PUI342	QWF787	RJM529
			Lab Job Number	C1T0922	C1Z2957	C282980	20X606071	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Aluminum		**50**	<5 - 30	ug/l	45	25	**97**	< 5	< 5.0	5.8	< 5.0	< 5.0	< 5.0	**110**
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	< 1.0	1.1	< 1.0	< 2	< 1.0	1.3	1.5	1.5	1.1	1.5
Barium	2000	10000	<5 - 24	ug/l	35	27	21	56	60	55	52	49	50	48
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 0.10	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	200	73	< 50	64	74	67	64	58	76	58
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.061	0.043	0.029	**0.124**	**0.12**	0.085	0.08	**0.11**	**0.25**	0.097
Calcium			7 - 3.72	ug/l	44000	24000	15000	198000	170000	190000	190000	180000	160000	160000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	0.65	2.7	2	3	0.78	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	3.9	1.3	2.6	4	0.61	1.7	0.97	1.1	2	0.78
Iron		**3000**	<50 - 62	ug/l	< 50	440	550	< 50	180	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	12000	6900	4600	48000	40000	43000	43000	45000	40000	38000
Manganese	120	**8200**	<2 - 54	ug/l	79	280	190	285	150	29	38	83	110	15
Mercury	1	0.26	<0.026	ug/l	-	-	-	< 0.026	-	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2.0	3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	4.7	6.2	4.8	18	3.6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 20	< 100	< 100	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	2200	1400	1400	1600	2400	2300	2100	2000	2200	2200
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	15000	9600	7500	49500	42000	43000	41000	44000	49000	45000
Strontium	7000	210000	39 - 121	ug/l	160	100	74	343	310	330	330	320	300	290
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	3.1	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	< 0.10	< 0.10	< 0.10	257	240	310	250	210	240	260
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	< 5.0	< 5.0	14	7.3	8.5	9	9.4	13	7.3

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-15D	MW20-15D	MW20-15S	MW20-15S	MW20-15S	MW20-15S	MW20-15S	MW20-16	MW20-16	MW20-16	MW20-16
			Sample Date	12/13/2021	3/29/2022	5/27/2020	12/16/2020	6/8/2021	12/13/2021	3/28/2022	5/27/2020	9/17/2020	12/16/2020	12/16/2020
			Background								Background	Background	Background	Background
			Sample ID	MW20-15D_20211213	MW20-15D_20220329	20X606071-1154899	MW20-15S_20201216	MW20-15S_20210608	MW20-15S_20211213	MW20-15S_20220328	20X606071-1154901	MW20-16_20200917	DUP2_20201216	MW20-16_20201216
			Lab Sample ID	RJM506	SFM301	1154899	OLM164	PUI341	RJM505	SFM300	1154901	NRG097	OLM171	OLM166
			Lab Job Number	C1Z2957	C282980	20X606071	C0X8319	C1F8315	C1Z2957	C282980	20X606071	C0O4512	C0X8319	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Aluminum		50	<5 - 30	ug/l	< 5.0	< 5.0	< 5	8.4	18	13	< 5.0	20	12	35	45
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	1.3	1.7	< 2	1.3	< 1.0	< 1.0	< 1.0	5	7.7	6.2	6.7
Barium	2000	10000	<5 - 24	ug/l	48	45	71	50	44	33	33	6	14	11	12
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 2	< 1.0	< 1.0	< 0.10	< 0.10	< 2	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	65	53	143	170	130	200	150	20	< 50	< 50	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.057	0.039	0.086	0.027	0.016	0.038	0.024	0.055	0.032	0.032	0.036
Calcium			7 - 3.72	ug/l	160000	170000	109000	100000	110000	71000	74000	27400	31000	29000	29000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	10	< 1.0	< 1.0	< 1.0	< 1.0	3	< 1.0	< 1.0	9.6
Cobalt		100	<1	ug/l	< 0.40	< 0.40	5	0.91	< 0.40	< 0.40	< 0.40	< 1	< 0.40	< 0.40	< 0.40
Copper	2000	20	<2 - 5.1	ug/l	0.9	0.76	3	1.6	4.3	5.6	15	4	1.9	2.5	2.9
Iron		3000	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	69
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	38000	39000	23300	22000	24000	15000	16000	4000	5600	5300	5100
Manganese	120	8200	<2 - 54	ug/l	14	2.1	1290	290	30	51	33	22	54	37	39
Mercury	1	0.26	<0.026	ug/l	-	-	< 0.026	-	-	-	-	< 0.026	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	8	3	< 2.0	< 2.0	58	4	6.7	4.6	4.7
Nickel		250	<2	ug/l	< 2.0	< 2.0	129	62	21	30	18	2	< 2.0	< 2.0	3.8
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 20	< 100	< 100	< 100	< 100	< 20	< 100	100	< 100
Potassium			400 - 3100	ug/l	2200	2000	2300	2200	2000	1900	1600	1000	1100	1100	1100
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	45000	40000	35900	36000	38000	39000	35000	8000	11000	10000	11000
Strontium	7000	210000	39 - 121	ug/l	290	290	203	190	180	130	140	70	86	80	81
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	2
Uranium	20	3000	2.5 - 30.5	ug/l	260	310	5.5	4.8	5	2.5	2.9	18.5	15	13	13
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	6.9	7.6	45	64	39	75	59	< 5	< 5.0	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-17D	MW20-17D	MW20-17D
			Sample Date	3/25/2021	6/9/2021	6/9/2021	10/6/2021	10/6/2021	12/13/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW20-16_20210325	DUP2_20210609	MW20-16_20210609	DUP3_20211006	MW20-16_20211006	DUP2_20211213	MW20-16_20211213	MW20-16_20220330	20X606071-1154903	MW20-17D_20200917	MW20-17D_20201216
			Lab Sample ID	PEB977	PUQ386	PUQ381	QWS510	QWS507	RJM530	RJM507	SGA984	1154903	NRG101	OLM168
			Lab Job Number	C179966	C1F9831	C1F9831	C1T3325	C1T3325	C1Z2957	C1Z2957	C285511	20X606071	C0O4512	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit												
Aluminum		50	<5 - 30	ug/l	10	21	24	14	18	17	17	55	27	8.1	12
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	6.8	6.1	6	7.6	7.4	6.8	6.9	7.1	5	5.2	3
Barium	2000	10000	<5 - 24	ug/l	9	9.8	10	12	12	10	9.9	8	< 5	6.8	9.5
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 1.0	0.24	0.23	0.19	0.22	0.15	< 2	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	23	< 50	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.016	0.027	0.025	0.032	0.034	0.025	0.023	0.015	< 0.017	< 0.010	< 0.010
Calcium			7 - 3.72	ug/l	31000	28000	28000	31000	31000	29000	28000	28000	7000	9600	21000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 0.40	< 0.40
Copper	2000	20	<2 - 5.1	ug/l	1.5	1.9	1.7	2.6	1.2	2.7	1.6	2.4	< 2	< 0.50	< 0.50
Iron		3000	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	63	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	5600	5300	5100	5800	5700	5300	5300	5500	1000	1300	2900
Manganese	120	8200	<2 - 54	ug/l	2.9	13	12	23	23	28	23	4.1	23	24	64
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	-	-	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	5.5	4.7	4.7	6.6	6.4	5.4	5.6	5.1	7	5.6	2.1
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 20	100	< 100
Potassium			400 - 3100	ug/l	1000	990	1000	1200	1300	1100	1100	1000	400	550	440
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	11000	11000	10000	12000	12000	11000	11000	20000	39600	35000	15000
Strontium	7000	210000	39 - 121	ug/l	82	74	74	88	87	75	76	76	39	52	87
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	17	14	14	18	19	15	15	16	9.7	13	11
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2.3	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	5.1	5.5	5.1	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17S	MW20-17S	MW20-17S	MW20-17S
			Sample Date	3/25/2021	6/8/2021	10/5/2021	10/5/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW20-17D_20210325	MW20-17D_20210608	DUP1_20211005	MW20-17D_20211005	MW20-17D_20211213	MW20-17D_20220330	20X606071-1154902	MW20-17S_20200917	MW20-17S_20201216	MW20-17S_20210325
			Lab Sample ID	PEB969	PUI344	QWF770	QWF789	RJM509	SGA978	1154902	NRG100	OLM167	PEB973
			Lab Job Number	C179966	C1F8315	C1T0922	C1T0922	C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Aluminum		**50**	<5 - 30	ug/l	< 5.0	5.1	8.1	6.2	< 5.0	5.6	22	39	12	9.2
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	2.9	2.3	2.5	2.5	2.7	4.4	2	2.9	2.5	1.5
Barium	2000	10000	<5 - 24	ug/l	11	13	10	9.3	14	14	13	21	21	21
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	16	< 50	< 50	< 50
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.019	< 0.010	< 0.010	< 0.010
Calcium			7 - 3.72	ug/l	23000	24000	24000	24000	25000	23000	20900	25000	25000	25000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 0.40	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	< 0.50	< 0.50	1.7	< 0.50	< 0.50	< 0.50	< 2	1.1	< 0.50	7
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	230	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	3200	3500	3500	3500	3800	3500	2300	3300	3200	3000
Manganese	120	**8200**	<2 - 54	ug/l	260	210	24	19	180	370	50	50	38	2
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	< 0.026	-	-	-
Molybdenum		730	<2 - 18	ug/l	2.1	< 2.0	< 2.0	< 2.0	2.1	2	9	3.5	4.6	< 2.0
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 20	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	690	720	790	700	640	1000	800	1300	1400	1200
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	14000	12000	11000	11000	12000	12000	19500	9700	9800	9400
Strontium	7000	210000	39 - 121	ug/l	81	81	81	81	83	80	62	78	80	64
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	13	10	10	10	14	8.9	2.5	3.3	3.2	1.8
Vanadium		60	<2	ug/l	< 2.0	2.1	3	3	2.7	< 2.0	< 2	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5.0	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D
			Sample Date	6/8/2021	10/5/2021	12/13/2021	3/30/2022	11/8/2018	6/1/2020	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021
			Background	Background	Background	Background	Background							
			Sample ID	MW20-17S_20210608	MW20-17S_20211005	MW20-17S_20211213	MW20-17S_20220330	MW2-D_20181108	20X608058-1165149	20X608058-1165159	MW-2D_20200915	MW2-D_20201216	MW2-D_20210323	MW2-D_20210608
			Lab Sample ID	PUI343	QWF788	RJM508	SGA980	9698374	1165149	1165159	NQU698	OLM109	PDR009	PUI327
			Lab Job Number	C1F8315	C1T0922	C1Z2957	C285511	18X408633	20X608058	20X608058	C0O2716	C0X8319	C177930	C1F8315
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Aluminum		50	<5 - 30	ug/l	17	35	10	< 5.0	< 5	< 5	5	< 5.0	< 5.0	< 5.0	< 5.0
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	1.4	1.3	< 1.0	1.5	2	2	3	2.4	2.2	2.2	2
Barium	2000	10000	<5 - 24	ug/l	14	17	14	13	21	16	16	13	13	14	13
Beryllium		53	<2	ug/l	< 1.0	< 0.10	< 0.10	< 0.10	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	< 50	< 50	< 50	< 50	76	47	46	< 50	52	< 50	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.09	0.067	0.064	0.059	0.053	0.051	0.044
Calcium			7 - 3.72	ug/l	21000	20000	23000	21000	63000	75800	79700	79000	72000	70000	68000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	4	4	4	< 1.0	2.5	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 1	< 1	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2000	20	<2 - 5.1	ug/l	0.56	2.8	< 0.50	0.66	< 2	< 2	< 2	< 0.50	0.86	0.73	< 0.50
Iron		3000	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	2800	2800	3100	2800	17200	21400	21400	21000	19000	19000	18000
Manganese	120	8200	<2 - 54	ug/l	45	120	65	55	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	2.5	5.3	3.5	6.4	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	5	4	< 2.0	< 2.0	2.2	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	50	< 20	< 20	100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	850	970	1100	860	1200	1000	1100	1200	1200	1200	1100
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	15000	16000	12000	12000	22500	28100	30300	27000	26000	26000	24000
Strontium	7000	210000	39 - 121	ug/l	57	55	60	51	200	198	197	190	180	170	170
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	1.4	0.82	1.3	0.38	133	244	230	250	240	220	200
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	5.1	< 5.0	< 5.0	< 5	5	5	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW2-D	MW2-D	MW2-D	MW2-D	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M
			Sample Date	10/5/2021	10/5/2021	12/13/2021	3/29/2022	11/8/2018	6/1/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background												
			Sample ID	DUP2_20211005	MW2-D_20211005	MW2-D_20211213	MW2-D_20220329	MW2-M_20181108	20X608058-1165161	DUP2_20200915	MW-2M_20200915	MW2-M_20201216	MW2-M_20210323	MW2-M_20210608	MW2-M_20211005
			Lab Sample ID	QWF771	QWF768	RJM315	SFM276	9698373	1165161	NQU696	NQU697	OLM108	PDR008	PUI326	QWF767
			Lab Job Number	C1T0922	C1T0922	C1Z2957	C282980	18X408633	20X608058	C0O2716	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	6.9	7.7	< 5.0	5.2	< 5	8	< 5.0	< 5.0	5.4	27	< 5.0	25
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	2.1	2.2	2.1	2.2	< 2	< 2	1.8	1.7	1.4	1.2	1.3	1.6
Barium	2000	10000	<5 - 24	ug/l	13	13	13	13	20	15	14	14	17	15	13	14
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.14
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	51	55	57	51	134	102	100	96	110	88	98	110
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.052	0.052	0.062	0.044	< 0.09	0.097	0.087	0.085	0.07	0.068	0.071	0.073
Calcium			7 - 3.72	ug/l	66000	68000	65000	63000	42600	52100	51000	52000	46000	41000	44000	46000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	4	3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	0.57	2.1	1.7	1.3	< 2	< 2	< 0.50	< 0.50	0.55	0.87	0.57	1
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	18000	18000	17000	17000	14200	18300	18000	17000	16000	14000	15000	15000
Manganese	120	**8200**	<2 - 54	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	4	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	< 0.026	< 0.026	-	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	40	< 20	< 100	< 100	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	1200	1200	1100	1100	1300	900	1100	1000	1100	930	1100	1000
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	25000	25000	24000	24000	21600	24000	21000	21000	19000	17000	17000	19000
Strontium	7000	210000	39 - 121	ug/l	170	170	160	160	180	165	160	160	140	130	140	130
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4
Uranium	20	3000	2.5 - 30.5	ug/l	200	200	200	190	15.8	33.4	34	35	21	12	16	17
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	7.4	5.5	< 5.0	< 5	6	< 5.0	< 5.0	< 5.0	< 5.0	5.4	5.4

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW2-M	MW2-M	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW3	MW3
			Sample Date	12/13/2021	3/29/2022	11/8/2018	6/1/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/29/2022	11/8/2018	4/1/2020
			Background											Background	Background
			Sample ID	MW2-M_20211213	MW2-M_20220329	MW2-S_20181108	20X608058-1165160	MW2-S_20201216	MW2-S_20210323	MW2-S_20210608	MW2-S_20211005	MW2-S_20211213	MW2-S_20220329	MW3_20181108	20X589937-1062416
			Lab Sample ID	RJM314	SFM275	9698372	1165160	OLM107	PDR007	PUI325	QWF766	RJM312	SFM274	9698375	1062416
			Lab Job Number	C1Z2957	C282980	18X408633	20X608058	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	18X408633	20X589937
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	7.9	< 5.0	6	14	< 5.0	27	< 5.0	47	< 5.0	8.2	< 5	48
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2
Arsenic	10	**50**	<2 - 6	ug/l	1.7	1.7	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	6
Barium	2000	10000	<5 - 24	ug/l	14	13	40	39	36	42	50	61	54	45	19	31
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 2	< 2	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 2	< 2
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Boron	5000	**12000**	9.8 - 53	ug/l	110	94	232	122	82	84	140	160	110	81	23	30
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.086	0.065	< 0.09	0.048	0.031	0.02	0.021	0.029	0.022	0.014	< 0.09	< 0.017
Calcium			7 - 3.72	ug/l	47000	46000	74300	54900	72000	61000	73000	74000	70000	63000	29600	36200
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	4	2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	2
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 1	1	1.1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 1
Copper	2000	**20**	<2 - 5.1	ug/l	1.6	3.6	3	7	2.1	2	1.3	4.9	2.1	1.9	< 2	< 2
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	59	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5
Magnesium			1000-6300	ug/l	15000	15000	7100	5900	5900	6500	8300	9500	8900	6900	4700	6300
Manganese	120	**8200**	<2 - 54	ug/l	< 2.0	< 2.0	3	137	88	2.7	< 2.0	11	4.3	4.2	5	88
Mercury	1	0.26	<0.026	ug/l	-	-	< 0.026	< 0.026	-	-	-	-	-	-	< 0.026	< 0.026
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	7
Nickel		250	<2	ug/l	< 2.0	< 2.0	2	5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Phosphorus			< 100 - 200	ug/l	< 100	< 100	20	< 20	< 100	< 100	< 100	< 100	< 100	< 100	< 20	< 20
Potassium			400 - 3100	ug/l	1100	1000	2900	1800	2000	1900	2600	2800	2300	2100	1500	2000
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1
Sodium			8000 - 34000	ug/l	20000	19000	12800	15000	18000	31000	12000	12000	14000	11000	11300	13900
Strontium	7000	210000	39 - 121	ug/l	140	140	252	213	260	220	280	290	270	250	115	121
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1
Tin			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Titanium			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Uranium	20	3000	2.5 - 30.5	ug/l	24	27	2.7	0.9	0.77	1	0.88	0.62	0.69	0.56	9.3	18.8
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Zinc		300	<5 - 9.2	ug/l	7.4	5	6	< 5	6.2	< 5.0	7.4	9.6	7.5	76	< 5	< 5

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW5-D	MW5-D	MW5-D	MW5-D
			Sample Date	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021	10/5/2021	12/13/2021	3/30/2022	3/30/2022	11/8/2018	5/27/2020	9/17/2020	12/16/2020
			Background	Background	Background	Background	Background	Background	Background	Background	Background					
			Sample ID	20X606071-1154681	MW3_20200917	MW3_20201216	MW-3_20210325	MW3_20210609	MW3_20211005	MW3_20211213	DUP3_20220330	MW3_20220330	MW5-D_20181108	20X606071-1154896	MW-5D_20200917	DUP1_20201216
			Lab Sample ID	1154681	NRG099	OLM110	PEB979	PUQ383	QWF769	RJM316	SGA979	SGA983	9698378	1154896	NRG095	OLM170
			Lab Job Number	20X606071	C0O4512	C0X8319	C179966	C1F9831	C1T0922	C1Z2957	C285511	C285511	18X408633	20X606071	C0O4512	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit														
Aluminum		50	<5 - 30	ug/l	5	< 5.0	290	< 5.0	13	15	28	6.6	9.4	52	< 5	< 5.0	24
Antimony	6	200	< 2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	3	2.7	2.6	2.8	2.5	2.7	2.5	3.6	3.1	8	11	5.5	11
Barium	2000	10000	<5 - 24	ug/l	22	19	27	20	21	21	21	20	19	8	5	25	6
Beryllium		53	<2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 2	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	27	16	62	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.021	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.62	0.037	0.043	0.054
Calcium			7 - 3.72	ug/l	31200	30000	30000	29000	29000	31000	30000	30000	29000	23600	26400	130000	28000
Chromium	50		<1 -3	ug/l	3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	3	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 1	< 0.40	< 0.40
Copper	2000	20	<2 - 5.1	ug/l	< 2	< 0.50	3.9	< 0.50	1.1	1.8	1	< 0.50	1.5	< 2	< 2	2.7	0.65
Iron		3000	<50 - 62	ug/l	< 50	< 50	230	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.5	< 0.50	0.58	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	4000	5200	5300	4700	5000	5200	5200	5100	5000	4500	3800	17000	5100
Manganese	120	8200	<2 - 54	ug/l	9	33	38	7.7	< 2.0	3.1	12	< 2.0	< 2.0	115	< 2	87	8.4
Mercury	1	0.26	<0.026	ug/l	< 0.026	-	-	-	-	-	-	-	-	< 0.026	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	6	2.9	2.3	2.1	< 2.0	< 2.0	2.3	2.2	< 2.0	6	9	6.4	6.2
Nickel		250	<2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 20	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	50	< 20	< 100	< 100
Potassium			400 - 3100	ug/l	1200	1500	1500	1400	1300	1500	1500	1400	1400	1000	800	2200	1100
Selenium	50	10	<1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	9100	11000	12000	11000	12000	12000	12000	11000	11000	9900	9300	43000	11000
Strontium	7000	210000	39 - 121	ug/l	104	110	110	110	110	110	110	110	110	79	74	310	84
Thallium		8	<0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	< 2	< 2.0	6.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	10.2	11	10	10	9.2	9.3	10	9.9	9.8	14.5	30.2	460	21
Vanadium		60	<2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	5.8	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S
			Sample Date	12/16/2020	3/25/2021	3/25/2021	6/8/2021	10/6/2021	12/13/2021	3/30/2022	11/22/2018	11/22/2018	5/27/2020	9/17/2020	12/16/2020
			Background												
			Sample ID	MW5-D_20201216	DUP1_20210325	MW-5D_20210325	MW5-D_20210608	MW5-D_20211006	MW5-D_20211213	MW-5D_20220330	DUP_20181122	MW5-S_20181122	20X606071-1154895	MW-5S_20200917	MW5-S_20201216
			Lab Sample ID	OLM113	PEB970	PEB974	PUI329	QWS514	RJM318	SGA985	9731473	9731403	1154895	NRG094	OLM112
			Lab Job Number	C0X8319	C179966	C179966	C1F8315	C1T3325	C1Z2957	C285511	18X412740	18X412740	20X606071	C0O4512	C0X8319
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**												
Aluminum		**50**	<5 - 30	ug/l	18	< 5.0	< 5.0	**51**	30	8.9	5.1	**145**	**155**	< 5	< 5.0	12
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	11	10	10	7	10	11	10	5	4	4	2.2	3.4
Barium	2000	10000	<5 - 24	ug/l	6.6	5.7	5.5	8.8	7.4	7.3	5.1	11	11	8	29	9.3
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	0.13	< 0.10	< 0.10	< 2	< 2	< 2	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	22	24	16	210	< 50
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.054	0.042	0.045	**0.14**	0.078	**0.16**	0.049	**0.75**	**0.65**	**0.415**	0.097	**0.54**
Calcium			7 - 3.72	ug/l	28000	29000	28000	26000	28000	28000	27000	24600	22900	23600	150000	23000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3	3	4	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	1	1	< 1	0.53	1.5
Copper	2000	**20**	<2 - 5.1	ug/l	2.7	< 0.50	< 0.50	0.84	1.9	< 0.50	0.54	2	< 2	< 2	1.1	0.55
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	61	< 50	< 50	< 50	98	89	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	5100	5000	5000	5100	5200	5300	5300	4600	4400	3500	20000	4500
Manganese	120	**8200**	<2 - 54	ug/l	7.8	7.9	7.2	130	9.8	140	21	532	438	94	190	2100
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	-	< 0.026	< 0.026	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	6.4	5.8	5.9	4.5	4.4	5.3	5.9	3	3	2	< 2.0	4.9
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	2.9	< 2.0
Phosphorus			< 100 - 200	ug/l	120	< 100	< 100	< 100	< 100	< 100	< 100	30	20	< 20	< 100	< 100
Potassium			400 - 3100	ug/l	1000	1000	1000	940	1100	1100	1000	900	800	700	2800	840
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1	< 1	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	11000	11000	11000	10000	11000	11000	11000	9400	9000	7100	86000	9800
Strontium	7000	210000	39 - 121	ug/l	85	84	82	75	83	82	81	74	70	63	320	65
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	21	24	23	13	18	19	25	9.8	9.5	7.1	120	9.2
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	< 5.0	< 5.0	7.7	6.3	5.1	< 5.0	7	5	< 5	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D
			Sample Date	3/25/2021	6/8/2021	10/6/2021	12/13/2021	3/30/2022	11/7/2018	4/1/2020	5/28/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021
			Background												
			Sample ID	MW-5S_20210325	MW5-S_20210608	MW5-S_20211006	MW5-S_20211213	MW-5S_20220330	MW6-D_20181107	20X589937-1062418	20X606404-1156949	DUP1_20200915	MW6-D_20200915	MW6-D_20201216	MW6-D_20210323
			Lab Sample ID	PEB975	PUI328	QWS513	RJM317	SGA981	9698354	1062418	1156949	NQU695	NQU663	OLM137	PDR014
			Lab Job Number	C179966	C1F8315	C1T3325	C1Z2957	C285511	18X408633	20X589937	20X606404	C0O2716	C0O2716	C0X8319	C177930
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	14	28	13	13	7.1	40	33	12	**61**	**67**	**80**	**58**
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 10	< 10	< 10	< 10
Arsenic	10	**50**	<2 - 6	ug/l	3.5	3.9	4.8	4.6	6.9	40	34	30	**53**	49	47	44
Barium	2000	10000	<5 - 24	ug/l	7.5	8.6	9.9	9	7.4	60	35	45	87	89	81	84
Beryllium		53	<2	ug/l	< 1.0	< 1.0	0.27	0.25	0.17	< 2	< 2	< 2	< 10	< 10	< 10	< 10
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 20	< 20
Boron	5000	**12000**	9.8 - 53	ug/l	< 50	< 50	< 50	< 50	< 50	**13700**	**13200**	**14100**	**14000**	**14000**	12000	**13000**
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	**0.11**	**0.38**	**0.34**	**0.22**	0.1	< 0.09	< 0.017	**1.91**	< 0.10	< 0.10	< 0.10	< 0.10
Calcium			7 - 3.72	ug/l	22000	22000	24000	24000	25000	499000	384000	495000	460000	460000	460000	490000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	26	16	39	< 10	< 10	< 10	< 10
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	18	12	23	21	20	22	20
Copper	2000	**20**	<2 - 5.1	ug/l	0.67	< 0.50	1.9	1.8	0.59	< 2	< 2	12	< 5.0	< 5.0	< 5.0	< 5.0
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	**13500**	**13000**	123	**15000**	**14000**	**14000**	**13000**
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 5.0	< 5.0	< 5.0	< 5.0
Magnesium			1000-6300	ug/l	4400	4600	4700	4600	4900	132000	131000	144000	140000	130000	130000	130000
Manganese	120	**8200**	<2 - 54	ug/l	56	520	110	120	58	**19400**	**13100**	**22100**	**24000**	**22000**	**23000**	**22000**
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	3	3.3	2.6	3.6	2	< 2	3	< 20	< 20	< 20	< 20
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	23	17	53	52	27	26	26
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	110	90	< 20	< 1000	< 1000	< 1000	< 1000
Potassium			400 - 3100	ug/l	670	790	970	830	840	20900	9900	21500	17000	17000	16000	17000
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	5	2	3	< 5.0	< 5.0	< 5.0	< 5.0
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 1.0	< 1.0	< 1.0	< 1.0
Sodium			8000 - 34000	ug/l	8400	9100	9300	9100	10000	212000	196000	203000	200000	190000	180000	190000
Strontium	7000	210000	39 - 121	ug/l	58	60	66	65	71	2180	1950	2290	2000	1900	2000	2300
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	0.3	< 1.0	< 1.0	< 1.0	< 1.0
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 20	< 20	< 20	< 20
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2	< 2	< 20	< 20	< 20	< 20
Uranium	20	3000	2.5 - 30.5	ug/l	8.8	5.6	9.1	9.9	20	207	222	272	270	260	270	270
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3	3	3	< 20	< 20	< 20	< 20
Zinc		300	<5 - 9.2	ug/l	< 5.0	6.4	6.7	5.3	< 5.0	13	8	19	< 50	< 50	< 50	< 50

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S
			Sample Date	6/7/2021	10/5/2021	12/13/2021	3/28/2022	3/28/2022	11/8/2018	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021
			Background												
			Sample ID	MW6-D_20210607	MW6-D_20211005	MW6-D_20211213	DUP2_20220328	MW6-D_20220328	MW6-S_20181108	20X589937-1062417	20X606404-1156948	MW6-S_20201216	MW6-S_20210323	MW6-S_20210607	MW6-S_20211005
			Lab Sample ID	PUI331	QWF773	RJM320	SFM285	SFM279	9698379	1062417	1156948	OLM114	PDR013	PUI330	QWF772
			Lab Job Number	C1F8315	C1T0922	C1Z2957	C282980	C282980	18X408633	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	**68**	**75**	**65**	**65**	**65**	**130**	**132**	**61**	**63**	**77**	**80**	**89**
Antimony	6	200	< 2	ug/l	< 10	< 10	< 10	< 10	< 10	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	44	48	39	38	38	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Barium	2000	10000	<5 - 24	ug/l	82	89	76	60	60	21	21	17	23	16	21	25
Beryllium		53	<2	ug/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 0.10
Bismuth			<2	ug/l	< 20	< 20	< 20	< 20	< 20	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	**13000**	**13000**	12000	11000	11000	1420	772	778	1000	360	540	540
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.09	0.041	0.034	0.038	0.014	0.024	0.018
Calcium			7 - 3.72	ug/l	490000	500000	460000	400000	410000	67500	77200	51300	70000	59000	64000	72000
Chromium	50		<1 -3	ug/l	< 10	< 10	< 10	< 10	< 10	4	4	4	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	20	21	19	19	19	< 1	< 1	< 1	0.45	< 0.40	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3	3	2	2.5	2.2	1.7	4.3
Iron		**3000**	<50 - 62	ug/l	**13000**	**14000**	**11000**	**13000**	**13000**	62	54	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	130000	140000	120000	110000	110000	11600	11500	7300	12000	7200	7800	6900
Manganese	120	**8200**	<2 - 54	ug/l	**23000**	**23000**	**22000**	**21000**	**21000**	2030	1450	1500	820	130	130	210
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 20	< 20	< 20	< 20	< 20	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	24	26	25	24	24	3	2	4	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	< 1000	< 1000	< 1000	< 1000	< 1000	< 20	< 20	< 20	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	17000	18000	16000	14000	14000	1200	1100	800	1300	690	910	1200
Selenium	50	10	<1	ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1	1	1	< 0.50	< 0.50	< 0.50	0.52
Silver		**1**	<0.1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	190000	200000	180000	160000	170000	27600	20700	18000	21000	12000	14000	15000
Strontium	7000	210000	39 - 121	ug/l	2200	2300	2100	1800	1800	194	195	183	220	160	180	210
Thallium		8	<0.1	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 20	< 20	< 20	< 20	< 20	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 20	< 20	< 20	< 20	< 20	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	280	270	250	210	210	1	2.5	1	7.2	1.1	0.94	1.1
Vanadium		60	<2	ug/l	< 20	< 20	< 20	< 20	< 20	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 50	< 50	< 50	< 50	< 50	< 5	< 5	< 5	< 5.0	< 5.0	5.1	5.9

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW6-S	MW6-S	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D
			Sample Date	12/13/2021	3/28/2022	11/7/2018	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022
			Background												
			Sample ID	MW6-S_20211213	MW6-S_20220328	MW7-D_20181107	20X589937-1062420	20X606404-1156946	MW7-D_20200915	MW7-D_20201216	MW7-D_20210323	MW7D_20210609	MW7-D_20211005	MW7-D_20211213	MW7-D_20220328
			Lab Sample ID	RJM319	SFM278	9698358	1062420	1156946	NQU660	OLM138	PDR016	PUQ379	QWF775	RJM388	SFM282
			Lab Job Number	C1Z2957	C282980	18X408633	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F9831	C1T0922	C1Z2957	C282980
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Aluminum		**50**	<5 - 30	ug/l	**69**	**82**	**106**	**99**	42	**72**	**85**	**88**	**89**	**86**	**96**	**93**
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	2.6	< 1.0	< 2	6	3	3.6	2.1	1.2	1.9	2.2	3.4	3.6
Barium	2000	10000	<5 - 24	ug/l	49	18	23	17	15	30	27	27	27	35	26	19
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	0.27	0.25	0.23
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	2600	380	1050	1090	1150	2200	1400	1000	1300	1700	1100	690
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.087	0.032	**0.37**	**0.219**	**4.63**	**0.76**	**0.45**	**0.37**	**0.25**	**0.25**	**0.16**	**0.12**
Calcium			7 - 3.72	ug/l	150000	72000	106000	121000	102000	160000	130000	130000	140000	160000	120000	98000
Chromium	50		<1 -3	ug/l	1.2	< 1.0	6	5	7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	3.3	< 0.40	4	5	7	9.5	5.4	4.4	5.5	6.1	4.8	4.4
Copper	2000	**20**	<2 - 5.1	ug/l	2.3	2.5	5	< 2	6	2.7	2.7	2.9	2	2.3	1.5	1.3
Iron		**3000**	<50 - 62	ug/l	53	< 50	325	1040	137	530	450	220	740	660	1100	1000
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	2.5	3	2.2	3.5	2	1.9	1.6	2.2	1.5	1.4
Magnesium			1000-6300	ug/l	31000	9200	10200	17000	18100	31000	19000	17000	22000	24000	17000	13000
Manganese	120	**8200**	<2 - 54	ug/l	3600	460	2800	2630	2700	4100	3900	4100	4600	5100	4200	3700
Mercury	1	0.26	<0.026	ug/l	-	-	< 0.026	< 0.026	< 0.026	-	-	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	4.3	< 2.0	5	4	11	7.3	3.9	3	4.4	4.5	3.1	2.2
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 20	< 20	< 20	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	3300	820	3400	2100	2200	3200	2700	2400	2700	3500	2900	2300
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	2	1	2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	48000	13000	14100	21300	22400	36000	23000	20000	26000	29000	21000	16000
Strontium	7000	210000	39 - 121	ug/l	540	200	285	250	278	410	370	340	390	420	320	270
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	0.1	0.1	0.1	0.18	0.15	0.11	0.12	0.17	0.15	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	30	2.1	3.1	19.8	29	47	18	14	23	22	11	9
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	< 5.0	55	33	53	91	52	32	34	41	25	23

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW8-D	MW8-D	MW8-D	MW8-D
			Sample Date	11/7/2018	4/1/2020	5/28/2020	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022	11/7/2018	6/1/2020	9/17/2020	12/16/2020
			Background												
			Sample ID	MW7-S_20181107	20X589937-1062419	20X606404-1156947	MW7-S_20210323	MW7S_20210609	MW7-S_20211005	MW7-S_20211213	MW7-S_20220328	MW8-D_20181107	20X608058-1165167	MW-8D_20200917	MW8-D_20201216
			Lab Sample ID	9698357	1062419	1156947	PDR015	PUQ378	QWF774	RJM387	SFM281	9698360	1165167	NRG092	OLM140
			Lab Job Number	18X408633	20X589937	20X606404	C177930	C1F9831	C1T0922	C1Z2957	C282980	18X408633	20X608058	C0O4512	C0X8319
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**													
Aluminum		**50**	<5 - 30	ug/l	3520	104	55	600	35	280	51	20	13	< 5	14	16
Antimony	6	200	< 2	ug/l	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9	10	7.5	4.8
Barium	2000	10000	<5 - 24	ug/l	19	11	12	19	22	26	17	13	19	13	7.8	27
Beryllium		53	<2	ug/l	< 2	< 2	< 2	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 2	< 2	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	201	142	172	< 50	100	120	65	< 50	76	51	< 50	91
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	< 0.09	< 0.017	0.018	0.016	0.016	0.011	0.01	< 0.010	< 0.09	0.025	0.043	0.034
Calcium			7 - 3.72	ug/l	82800	99500	87700	64000	83000	86000	68000	48000	119000	71800	26000	140000
Chromium	50		<1 -3	ug/l	5	3	2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	2	< 1.0	< 1.0
Cobalt		100	<1	ug/l	1	< 1	< 1	< 0.40	0.47	< 0.40	< 0.40	< 0.40	< 1	< 1	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	10	3	3	2.8	2.9	5.1	2.8	1.6	< 2	< 2	7.5	0.72
Iron		**3000**	<50 - 62	ug/l	1460	< 50	< 50	470	82	170	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	3	< 0.5	< 0.5	0.87	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	2500	3000	2700	4600	4300	4800	4600	4700	16400	9400	5000	19000
Manganese	120	**8200**	<2 - 54	ug/l	412	6	198	21	94	17	2.6	2.2	90	40	9.5	140
Mercury	1	0.26	<0.026	ug/l	< 0.026	< 0.026	< 0.026	-	-	-	-	-	< 0.026	< 0.026	-	-
Molybdenum		730	<2 - 18	ug/l	3	< 2	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	8	9	4.9	4.2
Nickel		250	<2	ug/l	2	< 2	6	< 2.0	120	< 2.0	< 2.0	< 2.0	3	5	< 2.0	< 2.0
Phosphorus			< 100 - 200	ug/l	90	< 20	< 20	< 100	< 100	< 100	< 100	< 100	70	30	< 100	< 100
Potassium			400 - 3100	ug/l	4100	4100	4600	3000	7500	6000	3200	2100	2200	1500	960	2500
Selenium	50	10	<1	ug/l	< 1	< 1	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	6000	7100	7900	14000	26000	17000	9400	6800	45000	32300	9700	48000
Strontium	7000	210000	39 - 121	ug/l	238	223	284	180	240	260	190	130	270	187	75	340
Thallium		8	<0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Titanium			<2	ug/l	30	< 2	< 2	18	< 2.0	7.6	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	2.2	2.4	0.6	0.74	0.74	0.9	0.75	0.78	330	392	16	340
Vanadium		60	<2	ug/l	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	6	< 5	< 5	< 5.0	13	6	< 5.0	< 5.0	< 5	< 5	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S
			Sample Date	3/23/2021	6/7/2021	10/6/2021	12/13/2021	12/13/2021	3/29/2022	11/7/2018	6/1/2020	9/17/2020	12/16/2020	3/23/2021	6/7/2021
			Background												
			Sample ID	MW8-D_20210323	MW8-D_20210607	MW8-D_20211006	DUP3_20211213	MW8-D_20211213	MW8-D_20220329	MW8-S_20181107	20X608058-1165166	MW-8S_20200917	MW8-S_20201216	MW8-S_20210323	MW8-S_20210607
			Lab Sample ID	PDR018	PUI333	QWS512	RJM531	RJM390	SFM284	9698359	1165166	NRG091	OLM139	PDR017	PUI332
			Lab Job Number	C177930	C1F8315	C1T3325	C1Z2957	C1Z2957	C282980	18X408633	20X608058	C0O4512	C0X8319	C177930	C1F8315
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit											
Aluminum		**50**	<5 - 30	ug/l	< 5.0	5.9	< 5.0	< 5.0	< 5.0	< 5.0	5	9	12	< 5.0	< 5.0	< 5.0
Antimony	6	200	< 2	ug/l	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	**50**	<2 - 6	ug/l	7	7.5	7.9	7.4	7.4	8.7	4	4	4.5	2.5	1.8	2.2
Barium	2000	10000	<5 - 24	ug/l	16	12	11	10	10	7.2	33	26	8.7	27	35	29
Beryllium		53	<2	ug/l	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	**12000**	9.8 - 53	ug/l	59	< 50	< 50	52	60	< 50	260	171	< 50	210	130	130
Cadmium	7	**0.1**	<0.017 - 0.055	ug/l	0.04	0.025	0.034	0.021	0.024	0.028	< 0.09	**0.276**	0.1	**0.16**	**0.17**	0.067
Calcium			7 - 3.72	ug/l	92000	92000	83000	73000	75000	61000	235000	202000	24000	160000	210000	200000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5	5	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	< 1	< 0.40	0.41	< 0.40	< 0.40
Copper	2000	**20**	<2 - 5.1	ug/l	1.2	< 0.50	1.9	0.67	< 0.50	0.61	5	4	< 0.50	1.1	1.7	2.2
Iron		**3000**	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	14000	13000	12000	11000	11000	9300	32600	26400	4400	21000	28000	27000
Manganese	120	**8200**	<2 - 54	ug/l	37	23	15	29	29	11	9	107	37	100	150	12
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	-	< 0.026	< 0.026	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	7.8	7.9	8.3	7.7	7.8	8.8	3	2	3.2	< 2.0	< 2.0	< 2.0
Nickel		250	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	10	16	< 2.0	2.8	3	3.5
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100	< 100	100	20	< 20	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	2000	1800	1800	1700	1700	1500	4600	2700	900	2700	3000	3000
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1	1	< 0.50	< 0.50	< 0.50	< 0.50
Silver		**1**	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	33000	29000	26000	26000	26000	22000	150000	138000	9200	79000	100000	93000
Strontium	7000	210000	39 - 121	ug/l	220	230	210	180	180	150	436	379	67	330	430	380
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	0.1	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	420	520	510	370	380	370	117	170	9.5	180	200	170
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	2	< 2.0	2.6	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	5.5	< 5.0	6.3	< 5.0	< 5.0	< 5.0	< 5	8	< 5.0	< 5.0	< 5.0	5.9

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	MW8-S	MW8-S	MW8-S	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01
			Sample Date	10/6/2021	12/13/2021	3/29/2022	7/3/2019	7/3/2019	5/28/2020	5/28/2020	9/15/2020	12/16/2020	3/25/2021	3/25/2021	6/9/2021
			Background												
			Sample ID	MW8-S_20211006	MW8-S_20211213	MW8-S_20220329	19X489473-330793	19X489473-330794	20X606404-1156940	20X606404-1156942	PW19-01_20200915	PW19-01_20201216	DUP2_20210325	PW19-01_20210325	DUP1_20210609
			Lab Sample ID	QWS511	RJM389	SFM283	330793	330794	1156940	1156942	NQU659	OLM141	PEB971	PEB976	PUQ385
			Lab Job Number	C1T3325	C1Z2957	C282980	19X489473	19X489473	20X606404	20X606404	C0O2716	C0X8319	C179966	C179966	C1F9831
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit											
Aluminum		50	<5 - 30	ug/l	< 5.0	< 5.0	< 5.0	18	< 5	15	12	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	2.1	2.9	2.3	< 2	< 2	< 2	< 2	3.1	2	1.1	1.2	11
Barium	2000	10000	<5 - 24	ug/l	18	20	25	46	53	15	16	100	76	58	58	74
Beryllium		53	<2	ug/l	< 0.10	< 0.10	< 0.10	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	130	140	130	67	72	17	18	66	54	< 50	< 50	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	0.082	0.032	0.034	< 0.09	< 0.09	< 0.017	< 0.017	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Calcium			7 - 3.72	ug/l	120000	130000	210000	80000	94100	26000	25600	88000	91000	83000	83000	110000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	1	2	2	2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	< 0.40	< 0.40	< 0.40	< 1	< 1	< 1	< 1	1.1	0.48	0.42	0.41	1.2
Copper	2000	20	<2 - 5.1	ug/l	2.4	3.6	3.3	< 2	< 2	< 2	< 2	< 0.50	< 0.50	0.71	0.55	< 0.50
Iron		3000	<50 - 62	ug/l	< 50	< 50	< 50	< 50	< 50	74	71	76	130	< 50	< 50	1100
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	15000	19000	29000	9800	11500	2500	2500	11000	12000	11000	11000	16000
Manganese	120	8200	<2 - 54	ug/l	120	9.3	22	150	149	71	51	550	440	97	97	3200
Mercury	1	0.26	<0.026	ug/l	-	-	-	-	-	< 0.026	< 0.026	-	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	14	5.1	2	< 2	6	8	2.9	< 2.0	< 2.0	< 2.0	2
Nickel		250	<2	ug/l	2.5	5.8	6.2	5	5	2	2	9.2	4.8	4.5	4.2	3.6
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 20	< 20	50	40	< 100	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	2300	2800	3100	2300	2400	1300	1500	2300	2000	1500	1500	1700
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	0.2	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	43000	93000	110000	14000	16100	14200	13000	15000	17000	11000	11000	13000
Strontium	7000	210000	39 - 121	ug/l	220	240	430	200	217	77	75	260	240	200	210	270
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	3.5	< 2.0	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	62	92	140	8	10.8	4.1	3.3	21	13	9	9.1	7.3
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2	< 2	2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	5.8	< 5.0	5.3	< 5	< 5	< 5	< 5	< 5.0	< 5.0	5	5.6	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C1
Metals in Groundwater Analytical Results

			Sample Location	PW19-01	PW19-01	PW19-01	PW19-01
			Sample Date	6/9/2021	10/5/2021	12/13/2021	3/29/2022
			Background				
			Sample ID	PW19-01_20210609	PW19-01_20211005	PW19-01_20211213	PW19-01_20220329
			Lab Sample ID	PUQ382	QWF781	RJM395	SFM290
			Lab Job Number	C1F9831	C1T0922	C1Z2957	C282980
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit				
Aluminum		50	<5 - 30	ug/l	< 5.0	7.2	< 5.0	5.8
Antimony	6	200	< 2	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	10	50	<2 - 6	ug/l	11	4.7	5.3	6.9
Barium	2000	10000	<5 - 24	ug/l	72	68	54	60
Beryllium		53	<2	ug/l	< 1.0	< 0.10	< 0.10	< 0.10
Bismuth			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0
Boron	5000	12000	9.8 - 53	ug/l	52	66	54	< 50
Cadmium	7	0.1	<0.017 - 0.055	ug/l	< 0.010	< 0.010	< 0.010	< 0.010
Calcium			7 - 3.72	ug/l	110000	94000	82000	90000
Chromium	50		<1 -3	ug/l	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt		100	<1	ug/l	1.2	1.2	0.41	0.91
Copper	2000	20	<2 - 5.1	ug/l	< 0.50	1.9	0.66	< 0.50
Iron		3000	<50 - 62	ug/l	1100	150	1000	860
Lead	5	10	<0.5 - 1.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium			1000-6300	ug/l	16000	13000	11000	13000
Manganese	120	8200	<2 - 54	ug/l	3100	2600	1700	1700
Mercury	1	0.26	<0.026	ug/l	-	-	-	-
Molybdenum		730	<2 - 18	ug/l	< 2.0	2.8	3.1	< 2.0
Nickel		250	<2	ug/l	3.7	5.3	< 2.0	2.8
Phosphorus			< 100 - 200	ug/l	< 100	< 100	< 100	< 100
Potassium			400 - 3100	ug/l	1700	2000	1700	1600
Selenium	50	10	<1	ug/l	< 0.50	< 0.50	< 0.50	< 0.50
Silver		1	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10
Sodium			8000 - 34000	ug/l	13000	14000	13000	12000
Strontium	7000	210000	39 - 121	ug/l	270	230	220	230
Thallium		8	<0.1	ug/l	< 0.10	< 0.10	< 0.10	< 0.10
Tin			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0
Titanium			<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0
Uranium	20	3000	2.5 - 30.5	ug/l	7.4	8.5	7.5	8.9
Vanadium		60	<2	ug/l	< 2.0	< 2.0	< 2.0	< 2.0
Zinc		300	<5 - 9.2	ug/l	< 5.0	5.8	< 5.0	< 5.0

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: ug/l=microgram per litre

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D
			Sample Date	2/11/2019	4/1/2020	4/1/2020	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021	6/9/2021
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW19-03D_20190211	20X589937-1062421	20X589937-1062425	20X606071-1154904	MW19-03D_20200917	MW19-03D_20201216	MW19-03D_20210325	DUP3_20210609	MW19-03D_20210609
			Lab Sample ID	9894253	1062421	1062425	1154904	NRG098	OLM111	PEB980	PUQ387	PUQ384
			Lab Job Number	19X436534	20X589937	20X589937	20X606071	C0O4512	C0X8319	C179966	C1F9831	C1F9831
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	89	98	99	90	98	99	96	94	94
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 10	< 10	1.4	< 1.0	1.2	1.1	1.3
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	< 5	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	89	98	99	90	100	100	98	96	95
Ammonia-N			<0.05 - 0.09	mg/l	0.41	< 0.03	< 0.03	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	2.47	2.30	2.28	2.02	2.31	2.35	2.28	2.20	2.19
Cation Sum			2.07 - 3.23	meq/l	2.26	2.34	2.35	2.36	2.12	2.16	2.08	2.12	2.10
Chemical Oxygen Demand			< 3- 216	mg/l	-	-	-	< 3	< 20	< 20	< 20	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	8	6	6	5	6.0	9.1	8.3	6.5	6.8
Color				tcu	-	< 5	121	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	-	-	< 0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Electrical Conductivity			209 - 297	umhos/cm	220	219	221	226	220	210	190	210	200
Fluoride	1.5		<0.12 - 0.45	mg/l	0.27	0.45	0.44	0.38	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	46.2	75.2	75.5	71.6	71	72	68	69	68
Ion Balance			-0.26 - 14.8	%	4.4	0.8	1.5	7.7	4.29	4.21	4.59	1.85	2.10
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.39	-0.30	-0.24	-0.27	0.191	-0.173	0.0830	0.0700	0.122
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.71	-0.62	-0.56	-0.59	-0.0600	-0.424	-0.168	-0.181	-0.129
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.09	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.09	0.06	0.06	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	0.06	0.06	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.04	< 0.01	< 0.01	0.02	0.043	0.062	0.068	0.070	0.067
pH, Lab			6.2 - 8.4	ph units	8.08	7.92	7.97	7.98	8.19	7.82	8.10	8.10	8.16
Phenol			< 0.004 - 0.005	mg/l	-	< 0.004	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	6.0	6.9	7.4	7.6	8.1	8.7	8.5	8.2	8.3
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.47	8.22	8.21	8.25	8.00	7.99	8.02	8.03	8.04
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.79	8.54	8.53	8.57	8.25	8.24	8.27	8.28	8.29
Sulphate			4 - 22	mg/l	22	8	6	4	6.8	4.5	4.6	4.9	4.6
Total Dissolved Solids (Lab)			105 - 178	mg/l	132	121	119	112	120	130	120	120	120
Total Organic Carbon (TOC)			<100	mg/l	2.2	5.1	5.2	< 0.5	< 5.0	< 0.50	< 5.0	< 0.50	< 0.50
Total Suspended Solids			1480 - 39100	mg/l	-	-	-	1480	67	27	610	48	24
Turbidity			0.8 - 37800	ntu	2600	237	3.3	789	42	10	15	9.3	2.4

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-03D	MW19-03D	MW19-03D	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S
			Sample Date	10/5/2021	12/13/2021	3/30/2022	7/10/2019	4/1/2020	5/28/2020	5/28/2020	9/15/2020	12/16/2020
			Background	Background	Background	Background						
			Sample ID	MW19-03D_20211005	MW19-03D_20211213	MW19-03D_20220330	19X490884-338553	20X589937-1062422	20X606404-1156933	20X606404-1156941	MW19-09S_20200915	MW19-09S_20201216
			Lab Sample ID	QWF776	RJM391	SGA982	338553	1062422	1156933	1156941	NQU658	OLM142
			Lab Job Number	C1T0922	C1Z2957	C285511	19X490884	20X589937	20X606404	20X606404	C0O2716	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	95	97	96	109	99	91	92	94	140
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	1.1	1.2	< 10	< 10	< 10	< 10	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	< 5	< 5	< 5	< 5	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	96	98	97	109	99	91	92	95	140
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	0.16	< 0.03	< 0.03	< 0.03	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	2.24	2.27	2.25	2.56	2.25	2.18	2.20	2.21	3.89
Cation Sum			2.07 - 3.23	meq/l	2.14	2.11	2.05	3.41	2.73	2.51	2.36	2.04	3.64
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	< 20	-	-	< 3	4	24	50
Chloride ion		15000	3 - 12	mg/l	8.5	6.9	7.3	7	5	6	6	5.3	8.7
Color				tcu	< 5.0	< 5.0	< 5.0	< 5	12	16	27	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	< 0.50	< 0.50	< 0.50	-	-	< 0.5	0.8	< 0.50	0.67
Electrical Conductivity			209 - 297	umhos/cm	210	200	210	250	218	232	233	200	350
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	0.51	0.33	0.28	0.30	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	70	69	67	109	94.0	83.4	78.7	69	140
Ion Balance			-0.26 - 14.8	%	2.28	3.65	4.65	14.1	9.6	7.0	3.6	4.00	3.32
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.0930	0.0460	0.0860	0.04	-0.12	-0.25	-0.24	-0.0470	0.168
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.344	-0.205	-0.164	-0.28	-0.44	-0.57	-0.56	-0.298	-0.0810
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05	< 0.05	0.073	0.090
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.05	0.06	< 0.05	< 0.05	0.073	0.090
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.05	0.06	< 0.05	< 0.05	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.077	0.082	0.081	0.02	< 0.01	0.02	0.02	0.017	0.011
pH, Lab			6.2 - 8.4	ph units	7.93	8.06	8.12	8.04	8.00	7.95	7.99	7.98	7.76
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	-	< 0.004	< 0.004	< 0.004	0.0011	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	7.9	7.8	11	9.0	7.5	8.4	9.2	9.9	12
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.02	8.01	8.04	8.00	8.12	8.20	8.23	8.02	7.59
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.27	8.27	8.29	8.32	8.44	8.52	8.55	8.27	7.84
Sulphate			4 - 22	mg/l	4.0	5.1	4.6	9	6	9	9	7.8	37
Total Dissolved Solids (Lab)			105 - 178	mg/l	120	120	120	152	126	121	118	120	220
Total Organic Carbon (TOC)			<100	mg/l	< 0.50	0.85	0.61	1.4	5.5	0.5	< 0.5	< 50	< 50
Total Suspended Solids			1480 - 39100	mg/l	18	6.0	34	-	-	1470	3390	4500	6800
Turbidity			0.8 - 37800	ntu	5.2	4.7	20	515	2770	3440	7020	1000	1000

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-10S	MW19-10S	MW19-10S
			Sample Date	3/25/2021	3/25/2021	6/9/2021	10/5/2021	12/13/2021	3/29/2022	7/10/2019	6/1/2020	12/16/2020
			Background									
			Sample ID	DUP3_20210325	MW19-09S_20210325	MW19-09S_20210609	MW19-09S_20211005	MW19-09S_20211213	MW19-09S_20220329	19X490884-338565	20X608058-1165168	MW19-10S_20201216
			Lab Sample ID	PEB972	PEB978	PUQ380	QWF777	RJM392	SFM286	338565	1165168	OLM143
			Lab Job Number	C179966	C179966	C1F9831	C1T0922	C1Z2957	C282980	19X490884	20X608058	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	160	140	97	140	100	100	89	66	110
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	1.2	< 1.0	1.7	1.4	1.3	< 10	< 10	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	-	< 5	< 5	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	160	140	98	140	100	100	89	66	110
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.051	< 0.03	< 0.03	< 0.050
Anion Sum			1.90-2.92	meq/l	4.02	3.68	2.33	3.73	2.51	2.51	5.17	4.29	6.35
Cation Sum			2.07 - 3.23	meq/l	2.46	3.02	2.32	2.46	2.44	2.53	5.26	5.67	5.70
Chemical Oxygen Demand			< 3- 216	mg/l	21	33	39	26	63	22	-	8	86
Chloride ion		15000	3 - 12	mg/l	8.1	8.1	6.1	8.5	7.3	6.9	13	12	18
Color				tcu	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	0.78	0.70	0.75	0.58	< 0.50	0.90	-	3.9	1.5
Electrical Conductivity			209 - 297	umhos/cm	350	340	210	370	220	250	512	460	550
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	-	0.14	< 0.12	-
Hardness (as CaCO3)			21.6 - 116	mg/l	88	110	80	86	86	92	204	226	230
Ion Balance			-0.26 - 14.8	%	24.1	9.85	0.220	20.5	1.41	0.400	0.9	13.8	5.39
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.0100	0.275	0.0560	0.311	0.250	0.257	-0.95	-1.22	-0.372
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.240	0.0250	-0.195	0.0600	-0.00100	0.00600	-1.27	-1.54	-0.620
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.069	0.066	< 0.050	< 0.050	< 0.050	< 0.050	0.66	0.48	0.78
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.069	0.066	< 0.050	< 0.050	< 0.050	< 0.050	0.66	0.48	0.78
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.014	0.014	0.022	0.019	0.015	0.013	0.02	0.03	< 0.010
pH, Lab			6.2 - 8.4	ph units	7.74	7.96	8.01	8.09	8.15	8.14	6.93	6.76	7.16
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	< 0.004	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	10	10	8.8	12	9.5	8.3	11.4	14.4	14
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.73	7.69	7.95	7.78	7.90	7.89	7.88	7.98	7.53
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.98	7.94	8.21	8.03	8.16	8.14	8.20	8.30	7.78
Sulphate			4 - 22	mg/l	31	31	9.2	29	11	13	143	125	170
Total Dissolved Solids (Lab)			105 - 178	mg/l	190	200	130	190	140	140	316	288	380
Total Organic Carbon (TOC)			<100	mg/l	< 50	< 50	< 5.0	< 5.0	< 5.0	< 50	2.1	3.9	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	1600	3000	5800	5200	47000	14000	-	11500	9600
Turbidity			0.8 - 37800	ntu	>1000	>1000	1000	870	1000	1000	4640	6080	1000

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-10S	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D
			Sample Date	3/29/2022	2/11/2019	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021
			Background									
			Sample ID	MW19-10S_20220329	MW19-11D_20190211	20X608058-1165165	MW19-11D_20200915	MW19-11D_20201216	MW19-11D_20210323	MW19-11D_20210607	MW19-11D_20211005	MW19-11D_20211213
			Lab Sample ID	SFM287	9894251	1165165	NQU665	OLM145	PDR023	PUI335	QWF780	RJM394
			Lab Job Number	C282980	19X436534	20X608058	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	77	1080	1060	1000	870	890	880	910	890
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 10	< 10	< 1.0	1.2	< 1.0	1.4	3.1	1.6
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	< 5	< 5	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	78	1080	1060	1000	870	890	880	910	900
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	8.26	10.3	9.3	8.7	8.6	11	9.1	9.4
Anion Sum			1.90-2.92	meq/l	3.68	39.0	37.3	36.7	32.2	31.5	30.6	31.0	28.0
Cation Sum			2.07 - 3.23	meq/l	3.57	36.9	42.2	38.0	35.4	42.1	36.0	33.6	28.8
Chemical Oxygen Demand			< 3- 216	mg/l	29	-	98	180	120	110	100	110	94
Chloride ion		15000	3 - 12	mg/l	11	41	40	42	42	39	36	38	29
Color				tcu	< 5.0	-	39	32	21	24	21	24	20
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.5	-	48.0	33	28	27	23	24	23
Electrical Conductivity			209 - 297	umhos/cm	380	2770	2960	2900	2600	2500	2500	2500	2100
Fluoride	1.5		<0.12 - 0.45	mg/l	-	0.34	< 0.12	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	150	1540	1750	1600	1500	1800	1500	1400	1200
Ion Balance			-0.26 - 14.8	%	1.52	2.8	6.1	1.69	4.78	14.5	8.07	4.01	1.45
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.787	1.00	1.01	1.01	1.12	1.08	1.22	1.54	1.21
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.04	0.68	0.69	0.769	0.880	0.840	0.976	1.29	0.964
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	1.1	1.48	< 0.05	< 0.050	1.7	0.26	0.12	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	1.1	1.48	< 0.05	< 0.050	1.8	0.27	0.14	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.05	< 0.05	0.012	0.047	0.014	0.012	< 0.010	0.058
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.010	0.02	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	7.06	7.02	6.99	6.97	7.15	7.04	7.23	7.55	7.27
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	-	< 0.004	< 0.0010	< 0.0010	< 0.0010	0.0011	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	11	6.4	8.8	4.4	7.5	7.8	7.5	7.4	6.9
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.85	6.02	5.98	5.96	6.03	5.95	6.01	6.01	6.07
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.10	6.34	6.30	6.20	6.27	6.20	6.25	6.26	6.31
Sulphate			4 - 22	mg/l	84	775	721	750	650	610	580	560	440
Total Dissolved Solids (Lab)			105 - 178	mg/l	230	2170	2200	2100	1900	2000	1900	1800	1600
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	25.4	48.7	65	29	27	30	27	26
Total Suspended Solids			1480 - 39100	mg/l	7300	-	313	160	210	68	190	380	120
Turbidity			0.8 - 37800	ntu	1000	57.6	289	300	130	110	120	150	140

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-11D	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M
			Sample Date	3/28/2022	7/10/2019	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021
			Background									
			Sample ID	MW19-11D_20220328	19X490884-338567	20X608058-1165164	MW19-11M_20200915	MW19-11M_20201216	MW19-11M_20210323	MW19-11M_20210607	MW19-11M_20211005	MW19-11M_20211213
			Lab Sample ID	SFM289	338567	1165164	NQU664	OLM144	PDR022	PUI334	QWF779	RJM393
			Lab Job Number	C282980	19X490884	20X608058	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	900	664	695	1100	680	580	530	650	400
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.0	< 10	< 10	1.2	< 1.0	< 1.0	1.2	1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	< 5	< 5	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	900	664	695	1100	680	580	540	650	400
Ammonia-N			<0.05 - 0.09	mg/l	7.0	3.20	3.84	12	5.4	4.1	3.0	5.4	2.0
Anion Sum			1.90-2.92	meq/l	27.3	23.9	24.8	40.8	24.7	19.5	17.6	19.8	10.3
Cation Sum			2.07 - 3.23	meq/l	26.3	28.3	26.8	44.7	26.6	24.7	18.8	24.8	11.3
Chemical Oxygen Demand			< 3- 216	mg/l	74	-	73	160	170	97	94	100	73
Chloride ion		15000	3 - 12	mg/l	28	26	27	48	33	25	23	26	11
Color				tcu	20	36	37	29	18	16	18	22	23
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	19	-	32.8	32	23	18	17	21	12
Electrical Conductivity			209 - 297	umhos/cm	2200	1810	2070	3200	2100	1500	1500	1700	850
Fluoride	1.5		<0.12 - 0.45	mg/l	-	0.23	0.78	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	1100	1170	1130	1900	1200	1100	830	1100	500
Ion Balance			-0.26 - 14.8	%	1.87	8.4	3.8	4.63	3.69	11.8	3.36	11.3	4.52
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.980	0.75	0.68	1.21	0.915	0.819	0.978	0.992	0.715
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.735	0.43	0.36	0.971	0.671	0.574	0.733	0.747	0.468
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.05	< 0.05	< 0.050	3.1	1.7	0.39	< 0.050	0.49
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	0.08	0.10	< 0.050	3.2	1.7	0.40	< 0.050	0.53
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	0.08	0.10	< 0.010	0.051	0.025	0.012	< 0.010	0.046
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	0.01	< 0.01	< 0.010	< 0.010	< 0.010	0.022	< 0.010	0.050
pH, Lab			6.2 - 8.4	ph units	7.07	7.07	7.00	7.06	7.14	7.10	7.39	7.22	7.39
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	-	< 0.004	0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	7.4	3.8	5.9	5.7	5.6	4.7	5.7	5.0	5.0
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.09	6.32	6.32	5.85	6.23	6.28	6.41	6.23	6.68
pH, Saturation (at 4 C)			8.35 - 9.09	none	6.34	6.64	6.64	6.09	6.47	6.53	6.65	6.48	6.92
Sulphate			4 - 22	mg/l	400	474	489	820	480	340	300	290	98
Total Dissolved Solids (Lab)			105 - 178	mg/l	1500	1450	1450	2400	1500	1200	1000	1200	580
Total Organic Carbon (TOC)			<100	mg/l	23	48.6	32.9	35	44	33	19	27	26
Total Suspended Solids			1480 - 39100	mg/l	620	-	1660	150	1100	230	450	1400	340
Turbidity			0.8 - 37800	ntu	130	1080	170	210	1000	150	1000	280	630

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-11M	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D
			Sample Date	3/28/2022	7/10/2019	7/10/2019	6/1/2020	6/1/2020	9/17/2020	9/17/2020	12/16/2020	12/16/2020	3/23/2021
			Background										
			Sample ID	MW19-11M_20220328	19X490884-338569	19X490884-338570	20X608058-1165158	20X608058-1165163	DUP 3_20200917	MW19-12D_20200917	DUP3_20201216	MW19-12D_20201216	MW19-12D_20210323
			Lab Sample ID	SFM288	338569	338570	1165158	1165163	NRG096	NRG093	OLM172	OLM159	PDR026
			Lab Job Number	C282980	19X490884	19X490884	20X608058	20X608058	C0O4512	C0O4512	C0X8319	C0X8319	C177930
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	410	133	129	99	99	100	90	120	130	110
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 10	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	< 5	< 5	< 5	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	410	133	129	99	99	100	90	120	130	110
Ammonia-N			<0.05 - 0.09	mg/l	1.4	< 0.03	< 0.03	< 0.03	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	10.4	3.80	3.70	2.89	2.91	3.26	3.05	3.73	3.93	3.55
Cation Sum			2.07 - 3.23	meq/l	10.4	4.04	3.75	3.10	3.21	3.04	3.01	3.56	3.55	3.60
Chemical Oxygen Demand			< 3- 216	mg/l	240	-	-	6	< 3	24	< 20	< 20	23	< 20
Chloride ion		15000	3 - 12	mg/l	11	7	7	7	7	6.1	6.3	11	11	13
Color				tcu	16	< 5	< 5	37	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	15	-	-	3.2	2.5	0.72	0.61	< 0.50	0.55	0.70
Electrical Conductivity			209 - 297	umhos/cm	940	364	357	303	304	310	310	360	350	330
Fluoride	1.5		<0.12 - 0.45	mg/l	-	0.24	0.17	0.14	0.14	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	460	176	156	135	140	130	130	160	150	160
Ion Balance			-0.26 - 14.8	%	0.140	3.1	0.7	3.6	4.9	3.49	0.660	2.33	5.08	0.700
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.467	-0.42	-0.55	-0.87	-0.85	-0.548	-0.610	-0.323	-0.289	-0.640
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.220	-0.74	-0.87	-1.19	-1.17	-0.798	-0.860	-0.573	-0.538	-0.890
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.30	0.08	0.07	0.06	0.07	0.13	0.13	0.14	0.13	0.095
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.31	0.08	0.07	0.06	0.07	0.13	0.13	0.15	0.13	0.095
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.016	< 0.05	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	0.011	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.011	0.02	0.02	0.02	0.01	0.024	0.025	0.011	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	7.16	7.29	7.27	7.12	7.12	7.24	7.23	7.29	7.31	7.04
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	-	-	< 0.004	< 0.004	-	-	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	4.5	8.7	8.9	9.6	10.2	12	12	12	13	12
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.70	7.71	7.82	7.99	7.97	7.79	7.84	7.62	7.60	7.68
pH, Saturation (at 4 C)			8.35 - 9.09	none	6.94	8.03	8.14	8.31	8.29	8.04	8.09	7.87	7.85	7.93
Sulphate			4 - 22	mg/l	94	45	44	34	35	52	51	44	47	49
Total Dissolved Solids (Lab)			105 - 178	mg/l	560	212	201	160	163	190	180	210	220	210
Total Organic Carbon (TOC)			<100	mg/l	55	1.8	1.2	3.3	2.5	< 5.0	< 5.0	1.0	< 5.0	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	3000	-	-	1040	1000	400	560	300	170	80
Turbidity			0.8 - 37800	ntu	1000	919	789	2520	2680	360	210	370	390	220

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12S	MW19-12S	MW19-12S	MW19-12S	MW19-13D
			Sample Date	6/7/2021	10/6/2021	12/13/2021	3/29/2022	7/10/2019	12/16/2020	12/13/2021	3/29/2022	11/19/2019
			Background									
			Sample ID	MW19-12D_20210607	MW19-12D_20211006	MW19-12D_20211213	MW19-12D_20220329	19X490884-338568	MW19-12S_20201216	MW19-12S_20211213	MW19-12S_20220329	19X546170-731457
			Lab Sample ID	PUI336	QWS509	RJM500	SFM295	338568	OLM146	RJM396	SFM294	731457
			Lab Job Number	C1F8315	C1T3325	C1Z2957	C282980	19X490884	C0X8319	C1Z2957	C282980	19X546170
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	110	100	140	150	136	130	180	200	80
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	1.3	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	< 5	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	110	100	140	150	136	140	190	200	80
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	0.03	< 0.050	< 0.050	< 0.050	0.15
Anion Sum			1.90-2.92	meq/l	3.60	3.39	4.39	4.16	3.85	4.71	4.59	4.84	2.92
Cation Sum			2.07 - 3.23	meq/l	3.33	3.30	4.21	3.99	4.27	4.75	4.55	4.61	2.25
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	< 20	< 20	-	110	63	86	-
Chloride ion		15000	3 - 12	mg/l	13	14	13	12	7	18	7.9	6.3	16
Color				tcu	< 5.0	< 5.0	< 5.0	10	< 5	9.2	21	20	8
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	0.79	< 0.50	1.3	1.7	-	3.8	5.2	5.8	-
Electrical Conductivity			209 - 297	umhos/cm	340	330	390	400	372	460	410	450	264
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	0.21	-	-	-	0.45
Hardness (as CaCO3)			21.6 - 116	mg/l	140	140	180	170	175	220	200	210	27.7
Ion Balance			-0.26 - 14.8	%	3.90	1.35	2.09	2.09	5.2	0.420	0.440	2.43	12.9
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.602	-0.607	-0.0850	-0.193	-0.32	0.164	0.548	0.367	-1.02
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.852	-0.857	-0.334	-0.443	-0.64	-0.0850	0.299	0.117	-1.34
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.28	0.50	0.56	0.39	< 0.05	0.34	0.14	0.42	0.19
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.28	0.50	0.56	0.39	< 0.05	0.34	0.14	0.42	0.19
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	0.02	0.013	0.025	0.022	0.05
pH, Lab			6.2 - 8.4	ph units	7.13	7.14	7.41	7.30	7.38	7.56	7.86	7.63	7.76
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	11	11	11	8.3	7.8	8.5	9.0	7.9	9.1
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.73	7.75	7.49	7.49	7.70	7.39	7.31	7.26	8.78
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.98	8.00	7.74	7.74	8.02	7.64	7.56	7.51	9.10
Sulphate			4 - 22	mg/l	53	44	53	43	45	72	31	29	41
Total Dissolved Solids (Lab)			105 - 178	mg/l	210	200	250	230	221	280	250	260	157
Total Organic Carbon (TOC)			<100	mg/l	1.4	1.0	2.5	1.8	2.8	< 50	7.6	10	2.6
Total Suspended Solids			1480 - 39100	mg/l	1000	120	210	1000	-	2200	780	1400	-
Turbidity			0.8 - 37800	ntu	500	250	85	140	2460	1000	520	940	27700

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D
			Sample Date	11/19/2019	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021
			Background									
			Sample ID	19X546170-731459	20X589937-1062424	20X606404-1156944	MW19-13D_20200915	MW19-13D_20201216	MW19-13D_20210323	MW19-13D_20210608	MW19-13D_20211005	MW19-13D_20211213
			Lab Sample ID	731459	1062424	1156944	NQU662	OLM161	PDR028	PUI338	QWF783	RJM502
			Lab Job Number	19X546170	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	46	29	24	20	30	18	23	28	24
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	< 5	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	46	29	24	20	30	18	23	28	24
Ammonia-N			<0.05 - 0.09	mg/l	0.10	< 0.03	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	2.58	1.74	1.91	1.89	2.20	1.86	2.00	2.07	1.92
Cation Sum			2.07 - 3.23	meq/l	2.00	2.17	1.83	1.67	1.72	1.76	1.82	1.83	1.80
Chemical Oxygen Demand			< 3- 216	mg/l	-	-	10	< 20	21	< 20	< 20	31	30
Chloride ion		15000	3 - 12	mg/l	16	8	10	9.0	13	11	9.9	13	9.9
Color				tcu	6	< 5	12	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	-	1.1	0.56	0.54	0.83	0.81	0.81	0.88
Electrical Conductivity			209 - 297	umhos/cm	252	214	217	200	210	190	210	220	190
Fluoride	1.5		<0.12 - 0.45	mg/l	0.22	< 0.12	0.25	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	47.4	66.6	56.2	54	55	56	60	59	57
Ion Balance			-0.26 - 14.8	%	12.8	10.9	2.2	6.18	12.2	2.76	4.71	6.15	3.23
Langelier Index (at 20 C)			-0.62 - 0.08	none	-1.68	-1.98	-1.92	-2.45	-1.90	-2.61	-2.31	-1.77	-2.12
Langelier Index (at 4 C)			-0.94 - -0.24	none	-2.00	-2.30	-2.24	-2.70	-2.15	-2.86	-2.56	-2.02	-2.37
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.67	< 0.05	0.06	0.062	0.10	0.051	0.084	0.055	0.077
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.67	< 0.05	0.06	0.062	0.10	0.051	0.084	0.055	0.077
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.02	0.01	0.04	0.033	0.023	0.043	0.044	0.024	0.029
pH, Lab			6.2 - 8.4	ph units	7.11	6.86	7.08	6.43	6.81	6.32	6.48	6.93	6.67
Phenol			< 0.004 - 0.005	mg/l	-	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	15.4	17.8	17.7	17	21	17	16	19	18
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.79	8.84	9.00	8.88	8.71	8.92	8.78	8.70	8.79
pH, Saturation (at 4 C)			8.35 - 9.09	none	9.11	9.16	9.32	9.13	8.96	9.17	9.03	8.95	9.04
Sulphate			4 - 22	mg/l	56	45	55	59	59	57	60	55	56
Total Dissolved Solids (Lab)			105 - 178	mg/l	146	114	117	130	150	130	140	140	130
Total Organic Carbon (TOC)			<100	mg/l	1.1	3.4	0.8	< 5.0	< 5.0	< 5.0	0.75	< 5.0	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	-	-	2680	1200	610	930	900	2600	15000
Turbidity			0.8 - 37800	ntu	9830	6420	3260	360	64	140	96	960	280

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-13D	MW19-13D	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S
			Sample Date	3/28/2022	3/28/2022	11/19/2019	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background									
			Sample ID	DUP1_20220328	MW19-13D_20220328	19X546170-731456	20X589937-1062423	20X606404-1156943	MW19-13S_20201216	MW19-13S_20210323	MW19-13S_20210608	MW19-13S_20211005
			Lab Sample ID	SFM277	SFM297	731456	1062423	1156943	OLM160	PDR027	PUI337	QWF782
			Lab Job Number	C282980	C282980	19X546170	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	22	21	< 5	< 5	5	8.6	6.0	6.2	8.2
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	< 5	< 5	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	22	21	< 5	< 5	5	8.6	6.0	6.2	8.2
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	0.06	< 0.03	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	1.87	1.84	1.71	1.05	1.56	3.70	1.74	1.75	1.65
Cation Sum			2.07 - 3.23	meq/l	1.75	1.76	1.65	1.89	1.50	2.87	1.59	1.50	1.50
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	-	-	30	60	35	< 20	33
Chloride ion		15000	3 - 12	mg/l	10	10	18	7	9	18	13	10	13
Color				tcu	< 5.0	< 5.0	12	21	14	7.2	6.0	< 5.0	9.9
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	0.84	0.94	-	-	2.7	5.0	3.9	2.9	3.7
Electrical Conductivity			209 - 297	umhos/cm	210	210	211	173	186	330	180	180	180
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	< 0.12	< 0.12	< 0.12	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	57	57	51.8	63.4	51.5	110	56	52	50
Ion Balance			-0.26 - 14.8	%	3.31	2.22	1.9	28.4	2.0	12.6	4.50	7.69	4.76
Langelier Index (at 20 C)			-0.62 - 0.08	none	-2.40	-2.01	-3.81	-4.02	-3.89	-2.89	-3.88	-3.85	-3.58
Langelier Index (at 4 C)			-0.94 - -0.24	none	-2.65	-2.26	-4.13	-4.34	-4.21	-3.14	-4.13	-4.10	-3.83
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.079	0.076	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.079	0.076	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.041	0.043	0.02	< 0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	6.43	6.84	5.99	5.67	5.89	6.12	5.56	5.61	5.76
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	-	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	17	17	4.3	3.8	7.0	5.9	6.0	7.0	8.7
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.83	8.85	9.80	9.69	9.78	9.01	9.44	9.46	9.34
pH, Saturation (at 4 C)			8.35 - 9.09	none	9.08	9.10	10.1	10.0	10.1	9.26	9.69	9.71	9.59
Sulphate			4 - 22	mg/l	54	54	58	41	58	140	60	64	54
Total Dissolved Solids (Lab)			105 - 178	mg/l	130	130	108	84	98	230	110	110	110
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	< 5.0	7.8	11.1	4.3	9.0	< 50	4.9	8.3
Total Suspended Solids			1480 - 39100	mg/l	270	380	-	-	44000	9800	3400	2700	5900
Turbidity			0.8 - 37800	ntu	260	260	3620	6060	11700	1000	>1000	220	360

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW19-13S	MW19-13S	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D
			Sample Date	12/13/2021	3/28/2022	11/7/2018	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background										
			Sample ID	MW19-13S_20211213	MW19-13S_20220328	MW1-D_20181107	20X589937-1062415	20X606404-1156950	MW1-D_20200915	MW1-D_20201216	MW1-D_20210323	MW1-D_20210608	MW1-D_20211005
			Lab Sample ID	RJM501	SFM296	9698371	1062415	1156950	NQU661	OLM106	PDR006	PUI324	QWF765
			Lab Job Number	C1Z2957	C282980	18X408633	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	7.8	9.2	694	910	777	950	780	650	720	760
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	< 5	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	7.8	9.2	694	910	777	950	780	650	720	760
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.03	0.07	0.07	0.45	0.36	0.17	0.22	0.23
Anion Sum			1.90-2.92	meq/l	1.54	1.46	26.0	33.7	32.3	35.3	30.8	25.9	28.0	29.1
Cation Sum			2.07 - 3.23	meq/l	1.42	1.40	32.5	36.8	34.6	33.2	33.4	27.5	29.3	32.3
Chemical Oxygen Demand			< 3- 216	mg/l	180	89	-	-	58	85	77	66	68	72
Chloride ion		15000	3 - 12	mg/l	12	9.7	32	29	38	38	41	35	33	38
Color				tcu	6.4	14	< 5	6	10	14	11	8.5	7.4	16
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	4.3	4.8	-	-	37.0	20	20	18	16	18
Electrical Conductivity			209 - 297	umhos/cm	160	170	2110	2430	2420	2700	2400	2100	2200	2400
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	0.35	0.49	0.37	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	49	48	1330	1590	1450	1400	1400	1200	1300	1400
Ion Balance			-0.26 - 14.8	%	4.05	2.10	11.1	4.5	3.4	3.06	4.18	2.92	2.28	5.14
Langelier Index (at 20 C)			-0.62 - 0.08	none	-3.80	-3.27	0.60	0.74	0.95	0.912	0.833	0.553	0.804	0.899
Langelier Index (at 4 C)			-0.94 - -0.24	none	-4.06	-3.52	0.28	0.42	0.63	0.668	0.589	0.308	0.560	0.655
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.050	0.59	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	< 0.050	0.74	0.12	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	0.15	0.12	< 0.05	< 0.010	0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	< 0.010	< 0.01	< 0.01	0.02	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	5.57	6.03	6.93	6.87	7.20	6.98	6.99	6.86	7.04	7.06
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	-	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	6.6	5.2	7.9	8.7	8.9	8.6	10	9.0	9.1	10
pH, Saturation (at 20 C)			8.03 - 8.77	none	9.38	9.30	6.33	6.13	6.25	6.07	6.16	6.30	6.24	6.16
pH, Saturation (at 4 C)			8.35 - 9.09	none	9.63	9.55	6.65	6.45	6.57	6.32	6.40	6.55	6.48	6.40
Sulphate			4 - 22	mg/l	50	48	535	705	753	730	670	570	610	620
Total Dissolved Solids (Lab)			105 - 178	mg/l	100	96	1580	1960	1890	2000	1800	1500	1600	1700
Total Organic Carbon (TOC)			<100	mg/l	55	20	14.3	< 0.5	34.4	20	21	18	18	19
Total Suspended Solids			1480 - 39100	mg/l	110000	7800	-	-	423	170	83	120	88	47
Turbidity			0.8 - 37800	ntu	1000	1000	986	272	332	58	25	33	58	19

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW1-D	MW1-D	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW1-S
			Sample Date	12/13/2021	3/28/2022	11/8/2018	4/1/2020	5/28/2020	12/16/2020	6/8/2021	10/5/2021	12/13/2021	3/28/2022
			Background										
			Sample ID	MW1-D_20211213	MW1-D_20220328	MW1-S_20181108	20X589937-1062401	20X606404-1156945	MW1-S_20201216	MW1-S_20210608	MW1-S_20211005	MW1-S_20211213	MW1-S_20220328
			Lab Sample ID	RJM313	SFM273	9698370	1062401	1156945	OLM105	PUI323	QWF764	RJM311	SFM272
			Lab Job Number	C1Z2957	C282980	18X408633	20X589937	20X606404	C0X8319	C1F8315	C1T0922	C1Z2957	C282980
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	840	780	545	351	336	400	580	700	540	740
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.3	< 1.0	< 10	< 10	< 10	1.3	2.1	2.2	4.1	4.2
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	< 5	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	840	790	545	351	336	400	580	700	540	740
Ammonia-N			<0.05 - 0.09	mg/l	0.50	0.20	0.04	< 0.03	< 0.03	0.052	0.25	2.1	2.0	2.1
Anion Sum			1.90-2.92	meq/l	30.6	28.1	19.7	11.1	11.6	13.0	22.3	26.4	19.9	22.8
Cation Sum			2.07 - 3.23	meq/l	30.3	28.0	25.0	13.4	11.9	11.5	29.6	37.3	25.2	22.6
Chemical Oxygen Demand			< 3- 216	mg/l	70	70	-	-	38	110	82	170	150	240
Chloride ion		15000	3 - 12	mg/l	32	31	27	8	10	22	31	43	29	26
Color				tcu	11	11	46	36	42	27	28	67	45	30
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	20	18	-	-	15.5	18	27	36	30	21
Electrical Conductivity			209 - 297	umhos/cm	2400	2200	1690	949	1040	980	2300	2700	2000	1800
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	0.12	< 0.12	< 0.12	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	1300	1200	989	571	510	500	1300	1700	1100	980
Ion Balance			-0.26 - 14.8	%	0.590	0.110	11.9	9.2	1.1	6.05	14.1	17.1	11.9	0.370
Langelier Index (at 20 C)			-0.62 - 0.08	none	1.08	0.749	0.62	0.63	0.78	0.829	1.35	1.45	1.57	1.55
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.839	0.504	0.30	0.31	0.46	0.582	1.10	1.21	1.33	1.31
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.050	0.08	0.07	0.10	0.076	0.10	0.083	0.092	0.31
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	< 0.050	0.14	0.07	0.10	0.076	0.10	0.083	0.092	0.31
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	0.06	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	< 0.010	< 0.01	< 0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	7.23	6.95	7.15	7.52	7.72	7.54	7.57	7.53	7.90	7.78
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	-	0.005	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	10	9.0	8.0	6.2	8.5	7.7	11	13	10	8.3
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.15	6.20	6.53	6.89	6.94	6.71	6.23	6.08	6.33	6.23
pH, Saturation (at 4 C)			8.35 - 9.09	none	6.39	6.45	6.85	7.21	7.26	6.96	6.47	6.32	6.57	6.48
Sulphate			4 - 22	mg/l	620	550	386	187	220	210	470	540	390	340
Total Dissolved Solids (Lab)			105 - 178	mg/l	1700	1600	1210	659	658	700	1400	1700	1200	1300
Total Organic Carbon (TOC)			<100	mg/l	21	18	14.2	< 0.5	16.9	29	32	44	78	29
Total Suspended Solids			1480 - 39100	mg/l	140	150	-	-	18500	6300	3900	950	8200	10000
Turbidity			0.8 - 37800	ntu	42	100	1220	3220	6940	1000	160	640	1000	1000

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14S
			Sample Date	5/27/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020
			Background									
			Sample ID	20X606071-1154898	MW20-14D_20200915	MW20-14D_20201216	MW20-14D_20210323	MW20-14D_20210608	MW20-14D_20211005	MW20-14D_20211213	MW20-14D_20220328	20X606071-1154897
			Lab Sample ID	1154898	NQU666	OLM163	PDR030	PUI340	QWF785	RJM504	SFM299	1154897
			Lab Job Number	20X606071	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	20X606071
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	70	110	96	76	81	90	86	93	84
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	-	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	70	110	96	76	81	90	86	93	84
Ammonia-N			<0.05 - 0.09	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.03
Anion Sum			1.90-2.92	meq/l	7.31	9.72	8.26	8.80	6.78	7.40	7.18	6.32	5.37
Cation Sum			2.07 - 3.23	meq/l	7.03	9.14	9.23	8.21	7.15	6.72	6.88	5.88	5.41
Chemical Oxygen Demand			< 3- 216	mg/l	7	< 20	< 20	< 20	< 20	< 20	< 20	< 20	6
Chloride ion		15000	3 - 12	mg/l	6	7.0	11	9.3	10	13	9.4	10	6
Color				tcu	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.0	< 5
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	2.6	2.2	2.1	2.2	1.9	1.9	2.0	2.0	1.7
Electrical Conductivity			209 - 297	umhos/cm	665	870	860	760	640	720	650	630	528
Fluoride	1.5		<0.12 - 0.45	mg/l	< 0.12	-	-	-	-	-	-	-	< 0.12
Hardness (as CaCO3)			21.6 - 116	mg/l	286	390	390	340	300	270	280	240	228
Ion Balance			-0.26 - 14.8	%	2.0	3.08	5.55	3.47	2.66	4.82	2.13	3.61	0.3
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.93	-0.484	-0.522	-0.858	-0.753	-0.596	-0.636	-0.538	-0.51
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.25	-0.732	-0.770	-1.11	-1.00	-0.844	-0.884	-0.787	-0.83
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	0.095	0.087	0.087	0.55	0.34	0.41	0.49	0.08
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.05	0.095	0.098	0.087	0.55	0.34	0.41	0.49	0.08
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	< 0.010	0.011	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.02	0.014	< 0.010	0.030	0.023	0.011	0.025	< 0.010	0.03
pH, Lab			6.2 - 8.4	ph units	7.03	6.96	6.97	6.79	6.91	7.07	7.04	7.15	7.40
Phenol			< 0.004 - 0.005	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.004
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	9.1	10	12	11	10	12	12	11	7.2
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.96	7.44	7.49	7.65	7.67	7.66	7.68	7.69	7.91
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.28	7.69	7.74	7.90	7.91	7.91	7.93	7.93	8.23
Sulphate			4 - 22	mg/l	276	350	290	340	230	250	250	200	169
Total Dissolved Solids (Lab)			105 - 178	mg/l	452	600	540	550	440	460	450	390	326
Total Organic Carbon (TOC)			<100	mg/l	3.0	< 5.0	2.5	< 5.0	2.2	1.8	2.0	2.2	2.5
Total Suspended Solids			1480 - 39100	mg/l	450	200	190	130	94	41	46	140	1950
Turbidity			0.8 - 37800	ntu	838	43	65	12	16	18	37	77	5320

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-15D	MW20-15D	MW20-15D
			Sample Date	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020	9/15/2020	12/16/2020
			Background									
			Sample ID	MW20-14S_20201216	MW20-14S_20210323	MW20-14S_20210608	MW20-14S_20211005	MW20-14S_20211213	MW20-14S_20220328	20X606071-1154900	MW20-15D_20200915	MW20-15D_20201216
			Lab Sample ID	OLM162	PDR029	PUI339	QWF784	RJM503	SFM298	1154900	NQU667	OLM165
			Lab Job Number	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	20X606071	C0O2716	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	92	110	94	91	70	42	314	330	350
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	-	< 5	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	92	110	94	91	70	42	314	330	360
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.03	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	5.23	7.38	5.50	4.52	3.12	1.53	15.3	14.4	14.4
Cation Sum			2.07 - 3.23	meq/l	5.49	6.54	5.34	3.89	2.22	1.52	16.0	13.8	14.8
Chemical Oxygen Demand			< 3- 216	mg/l	50	73	22	45	74	77	3	< 20	28
Chloride ion		15000	3 - 12	mg/l	9.3	11	11	10	8.0	8.0	24	33	33
Color				tcu	6.2	< 5.0	< 5.0	< 5.0	< 5.0	8.3	44	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	3.3	2.7	3.9	2.6	2.2	4.0	4.9	2.5	2.0
Electrical Conductivity			209 - 297	umhos/cm	450	660	530	460	290	160	1330	1200	1300
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	-	0.23	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	230	280	220	160	87	57	692	590	650
Ion Balance			-0.26 - 14.8	%	2.43	6.03	1.48	7.49	16.9	0.330	2.3	2.24	1.40
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.709	-0.541	-0.882	-0.652	-1.28	-1.85	0.67	0.611	0.695
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.958	-0.790	-1.13	-0.902	-1.53	-2.10	0.35	0.364	0.449
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.20	0.11	0.99	1.1	2.0	1.5	< 0.05	< 0.050	0.16
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.20	0.11	0.99	1.1	2.0	1.5	< 0.05	< 0.050	0.16
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.013	0.016	0.020	0.015	< 0.010	0.013	0.03	< 0.010	0.031
pH, Lab			6.2 - 8.4	ph units	6.93	6.98	6.78	7.15	6.88	6.69	7.56	7.39	7.40
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.004	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	8.9	6.9	7.7	9.7	9.2	7.2	25.6	24	27
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.64	7.52	7.66	7.81	8.16	8.53	6.89	6.77	6.71
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.89	7.77	7.91	8.06	8.41	8.78	7.21	7.02	6.95
Sulphate			4 - 22	mg/l	150	240	160	110	65	17	401	330	310
Total Dissolved Solids (Lab)			105 - 178	mg/l	330	440	340	270	180	94	911	840	860
Total Organic Carbon (TOC)			<100	mg/l	< 50	< 50	5.7	< 5.0	5.6	9.0	4.8	< 5.0	3.2
Total Suspended Solids			1480 - 39100	mg/l	2600	560	1600	2400	2300	3000	317	340	590
Turbidity			0.8 - 37800	ntu	1000	790	1000	1000	1000	1000	119	390	160

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15S	MW20-15S	MW20-15S
			Sample Date	3/23/2021	6/8/2021	10/5/2021	12/13/2021	12/13/2021	3/29/2022	5/27/2020	12/16/2020	6/8/2021
			Background									
			Sample ID	MW20-15D_20210323	MW20-15D_20210608	MW20-15D_20211005	DUP1_20211213	MW20-15D_20211213	MW20-15D_20220329	20X606071-1154899	MW20-15S_20201216	MW20-15S_20210608
			Lab Sample ID	PDR032	PUI342	QWF787	RJM529	RJM506	SFM301	1154899	OLM164	PUI341
			Lab Job Number	C177930	C1F8315	C1T0922	C1Z2957	C1Z2957	C282980	20X606071	C0X8319	C1F8315
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	380	360	330	370	360	350	284	290	320
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.0	1.1	< 1.0	2.2	1.6	2.0	< 10	1.1	1.6
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	-	< 5	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	380	360	330	370	360	350	284	290	320
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.03	< 0.050	0.056
Anion Sum			1.90-2.92	meq/l	15.6	15.4	13.4	13.6	13.4	13.6	9.05	8.55	9.34
Cation Sum			2.07 - 3.23	meq/l	14.7	14.7	13.6	13.0	13.0	13.3	9.03	8.70	8.96
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	< 20	< 20	< 20	< 20	4	52	20
Chloride ion		15000	3 - 12	mg/l	27	25	38	24	22	23	5	8.6	7.2
Color				tcu	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	2.3	2.2	2.4	2.2	2.2	2.2	3.0	1.9	1.7
Electrical Conductivity			209 - 297	umhos/cm	1300	1300	1200	1100	1100	1200	831	780	820
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	-	< 0.12	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	640	640	570	550	550	580	368	350	360
Ion Balance			-0.26 - 14.8	%	2.97	2.12	0.590	2.07	1.51	1.08	0.1	0.870	2.08
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.778	0.795	0.566	1.06	0.897	1.03	0.50	0.618	0.787
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.531	0.549	0.320	0.809	0.650	0.780	0.18	0.370	0.539
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	0.096	0.072	< 0.05	0.12	0.11
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	0.096	0.072	< 0.05	0.13	0.11
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	0.011	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.033	0.037	0.032	0.028	0.031	0.035	0.02	0.013	0.015
pH, Lab			6.2 - 8.4	ph units	7.46	7.51	7.36	7.81	7.67	7.79	7.67	7.60	7.74
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.004	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	26	25	25	27	26	25	19.6	24	25
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.69	6.72	6.79	6.76	6.77	6.76	7.17	6.98	6.95
pH, Saturation (at 4 C)			8.35 - 9.09	none	6.93	6.96	7.04	7.01	7.02	7.01	7.49	7.23	7.20
Sulphate			4 - 22	mg/l	350	360	270	270	270	290	155	120	130
Total Dissolved Solids (Lab)			105 - 178	mg/l	900	900	790	780	780	790	502	490	530
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	2.6	2.7	2.3	2.5	2.3	3.1	< 50	2.0
Total Suspended Solids			1480 - 39100	mg/l	110	45	110	59	55	21	14100	12000	800
Turbidity			0.8 - 37800	ntu	44	23	34	36	38	12	14500	1000	360

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-15S	MW20-15S	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16
			Sample Date	12/13/2021	3/28/2022	5/27/2020	9/17/2020	12/16/2020	12/16/2020	3/25/2021	6/9/2021	6/9/2021	10/6/2021
			Background			Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW20-15S_20211213	MW20-15S_20220328	20X606071-1154901	MW20-16_20200917	DUP2_20201216	MW20-16_20201216	MW20-16_20210325	DUP2_20210609	MW20-16_20210609	DUP3_20211006
			Lab Sample ID	RJM505	SFM300	1154901	NRG097	OLM171	OLM166	PEB977	PUQ386	PUQ381	QWS510
			Lab Job Number	C1Z2957	C282980	20X606071	C0O4512	C0X8319	C0X8319	C179966	C1F9831	C1F9831	C1T3325
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	230	200	87	98	91	92	96	91	95	96
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.1	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	-	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	230	200	87	98	92	92	96	91	95	96
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	0.080	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	7.00	6.10	2.11	2.57	2.59	2.62	2.61	2.40	2.49	2.70
Cation Sum			2.07 - 3.23	meq/l	6.54	6.62	2.07	2.51	2.34	2.37	2.51	2.31	2.30	2.58
Chemical Oxygen Demand			< 3- 216	mg/l	21	< 20	< 3	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	6.3	7.3	8	15	22	22	18	15	15	22
Color				tcu	< 5.0	< 5.0	< 5	5.4	6.7	7.4	< 5.0	5.4	< 5.0	6.9
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.7	1.4	0.8	0.92	1.5	1.5	0.97	1.5	1.6	1.0
Electrical Conductivity			209 - 297	umhos/cm	600	580	229	260	250	250	240	230	240	260
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	0.31	-	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	240	250	84.9	99	93	94	100	91	91	100
Ion Balance			-0.26 - 14.8	%	3.40	4.09	0.9	1.18	5.07	5.01	1.95	1.91	3.97	2.27
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.477	0.359	-0.62	-0.320	-0.502	-0.532	-0.410	-0.632	-0.610	-0.377
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.229	0.110	-0.94	-0.571	-0.753	-0.782	-0.661	-0.883	-0.861	-0.627
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.31	0.31	< 0.05	0.080	0.088	0.083	0.12	0.076	0.081	0.084
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.31	0.31	< 0.05	0.080	0.098	0.094	0.12	0.076	0.081	0.084
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.05	< 0.010	0.011	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	< 0.010	0.03	0.056	0.055	0.052	0.054	0.057	0.058	0.065
pH, Lab			6.2 - 8.4	ph units	7.70	7.63	7.59	7.57	7.44	7.40	7.48	7.33	7.33	7.51
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.004	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	23	20	11.1	14	12	12	12	12	12	13
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.23	7.28	8.21	7.89	7.94	7.94	7.89	7.96	7.94	7.89
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.47	7.52	8.53	8.14	8.20	8.19	8.14	8.21	8.19	8.14
Sulphate			4 - 22	mg/l	100	94	7	8.6	6.4	7.5	7.9	7.3	7.5	6.9
Total Dissolved Solids (Lab)			105 - 178	mg/l	400	370	108	150	140	140	150	130	140	150
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	< 5.0	1.9	< 5.0	1.8	1.8	< 50	1.8	1.9	1.4
Total Suspended Solids			1480 - 39100	mg/l	1600	510	1640	140	180	140	200	100	210	150
Turbidity			0.8 - 37800	ntu	720	340	1410	67	58	120	140	31	120	46

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-16	MW20-16	MW20-16	MW20-16	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D
			Sample Date	10/6/2021	12/13/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/5/2021
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW20-16_20211006	DUP2_20211213	MW20-16_20211213	MW20-16_20220330	20X606071-1154903	MW20-17D_20200917	MW20-17D_20201216	MW20-17D_20210325	MW20-17D_20210608	DUP1_20211005
			Lab Sample ID	QWS507	RJM530	RJM507	SGA984	1154903	NRG101	OLM168	PEB969	PUI344	QWF770
			Lab Job Number	C1T3325	C1Z2957	C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T0922
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	97	93	94	95	95	92	85	93	87	88
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 10	2.2	< 1.0	< 1.0	1.2	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	98	94	94	96	95	94	86	94	88	89
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	0.12	0.24	0.17	0.16	0.14	0.078
Anion Sum			1.90-2.92	meq/l	2.70	2.47	2.49	2.49	2.07	2.24	2.17	2.26	2.15	2.16
Cation Sum			2.07 - 3.23	meq/l	2.58	2.39	2.35	2.76	2.18	2.15	1.97	2.05	2.00	2.01
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	57	50	< 20	126	57	35	31	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	21	15	15	15	3	5.9	11	8.7	7.8	9.1
Color				tcu	5.1	6.1	7.7	< 5.0	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	0.94	1.9	1.7	1.1	1.2	0.68	0.51	1.4	0.71	< 0.50
Electrical Conductivity			209 - 297	umhos/cm	260	220	220	240	219	210	200	200	190	200
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	< 0.12	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	100	95	92	94	21.6	29	65	71	74	74
Ion Balance			-0.26 - 14.8	%	2.27	1.65	2.89	5.14	2.6	2.05	4.83	4.87	3.61	3.60
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.345	-0.234	-0.245	-0.158	-0.52	-0.0180	-0.0170	-0.238	0.121	-0.141
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.596	-0.485	-0.495	-0.408	-0.84	-0.268	-0.268	-0.489	-0.131	-0.392
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.071	0.066	0.064	0.076	< 0.05	< 0.050	0.093	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.071	0.066	0.064	0.076	< 0.05	< 0.050	0.11	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.010	0.013	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.057	0.057	0.057	0.056	0.04	0.047	0.040	0.018	0.035	0.016
pH, Lab			6.2 - 8.4	ph units	7.54	7.69	7.69	7.77	8.25	8.40	8.08	7.78	8.16	7.89
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.004	< 0.0010	< 0.0010	0.0022	< 0.0010	0.0016
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	13	12	12	11	8.6	9.6	9.3	9.3	9.4	9.4
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.88	7.93	7.94	7.93	8.77	8.41	8.10	8.02	8.04	8.03
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.13	8.18	8.19	8.18	9.09	8.66	8.35	8.27	8.29	8.28
Sulphate			4 - 22	mg/l	6.7	8.5	8.0	7.0	4	9.0	6.8	6.4	7.9	5.8
Total Dissolved Solids (Lab)			105 - 178	mg/l	150	140	140	150	112	130	120	120	120	120
Total Organic Carbon (TOC)			<100	mg/l	1.4	< 5.0	< 5.0	1.2	6.1	< 500	< 5.0	< 50	< 5.0	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	98	140	470	130	4400	4600	9900	980	3200	1000
Turbidity			0.8 - 37800	ntu	45	140	96	150	37800	1000	1000	>1000	150	280

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-17D	MW20-17D	MW20-17D	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW20-17S
			Sample Date	10/5/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/5/2021
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID	MW20-17D_20211005	MW20-17D_20211213	MW20-17D_20220330	20X606071-1154902	MW20-17S_20200917	MW20-17S_20201216	MW20-17S_20210325	MW20-17S_20210608	MW20-17S_20211005
			Lab Sample ID	QWF789	RJM509	SGA978	1154902	NRG100	OLM167	PEB973	PUI343	QWF788
			Lab Job Number	C1T0922	C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T0922
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit								
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	91	92	95	78	89	100	91	83	85
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	1.1	< 1.0	< 10	1.4	< 1.0	< 1.0	1.7	1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	92	93	96	78	90	100	92	85	86
Ammonia-N			<0.05 - 0.09	mg/l	0.054	< 0.050	0.068	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	2.22	2.19	2.26	1.90	2.18	2.52	2.27	2.13	2.12
Cation Sum			2.07 - 3.23	meq/l	2.00	2.12	1.99	2.11	1.97	1.98	1.91	1.93	1.97
Chemical Oxygen Demand			< 3- 216	mg/l	26	31	25	4	68	81	42	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	8.9	6.9	7.9	6	6.6	11	9.5	8.5	9.8
Color				tcu	< 5.0	< 5.0	< 5.0	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	0.54	0.60	0.88	< 0.5	0.58	1.7	0.62	2.2	< 0.50
Electrical Conductivity			209 - 297	umhos/cm	200	190	210	209	200	240	200	190	200
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	< 0.12	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	74	78	72	61.7	76	76	74	63	63
Ion Balance			-0.26 - 14.8	%	5.21	1.62	6.35	5.1	5.06	12.0	8.61	4.93	3.67
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.0240	0.104	-0.0220	-0.27	0.202	-0.0640	-0.0560	0.226	-0.00600
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.275	-0.147	-0.273	-0.59	-0.0480	-0.315	-0.306	-0.0250	-0.257
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.055	0.070	< 0.050	0.06	< 0.050	< 0.050	0.055	0.073	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.055	0.070	< 0.050	0.06	< 0.050	< 0.050	0.055	0.073	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.05	0.011	0.040	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.015	0.020	< 0.010	0.02	0.015	0.017	0.023	0.022	0.013
pH, Lab			6.2 - 8.4	ph units	7.99	8.09	7.99	8.11	8.21	7.89	7.94	8.35	8.10
Phenol			< 0.004 - 0.005	mg/l	0.0012	0.0021	0.015	< 0.004	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	9.2	9.0	9.9	8.0	10	9.2	9.0	8.8	9.4
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.02	7.99	8.01	8.38	8.01	7.95	8.00	8.12	8.11
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.27	8.24	8.26	8.70	8.26	8.20	8.25	8.37	8.36
Sulphate			4 - 22	mg/l	5.8	6.5	5.5	8	8.8	9.0	7.4	9.2	5.6
Total Dissolved Solids (Lab)			105 - 178	mg/l	120	120	120	105	120	130	120	120	120
Total Organic Carbon (TOC)			<100	mg/l	< 0.50	< 5.0	< 5.0	< 0.5	< 500	< 50	< 50	< 5.0	< 0.50
Total Suspended Solids			1480 - 39100	mg/l	510	1200	2900	6130	11000	3400	1700	3000	2500
Turbidity			0.8 - 37800	ntu	420	610	570	11100	1000	1000	880	1000	600

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

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Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW20-17S	MW20-17S	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D
			Sample Date	12/13/2021	3/30/2022	11/8/2018	6/1/2020	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background	Background	Background								
			Sample ID	MW20-17S_20211213	MW20-17S_20220330	MW2-D_20181108	20X608058-1165149	20X608058-1165159	MW-2D_20200915	MW2-D_20201216	MW2-D_20210323	MW2-D_20210608	DUP2_20211005
			Lab Sample ID	RJM508	SGA980	9698374	1165149	1165159	NQU698	OLM109	PDR009	PUI327	QWF771
			Lab Job Number	C1Z2957	C285511	18X408633	20X608058	20X608058	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	84	80	188	203	203	230	250	200	210	250
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.0	1.1	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	< 5	< 5	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	85	81	188	203	203	230	250	200	210	250
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	0.04	< 0.03	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.057
Anion Sum			1.90-2.92	meq/l	2.08	2.00	5.24	6.30	5.90	6.70	7.08	5.84	6.26	7.06
Cation Sum			2.07 - 3.23	meq/l	1.92	1.81	5.57	6.79	7.09	6.90	6.37	6.16	5.93	5.90
Chemical Oxygen Demand			< 3- 216	mg/l	21	37	-	< 3	9	< 20	< 20	< 20	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	7.5	8.5	17	30	24	28	30	25	25	28
Color				tcu	< 5.0	< 5.0	7	11	20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	< 0.50	0.79	-	4.8	4.2	1.3	1.1	1.3	1.9	1.5
Electrical Conductivity			209 - 297	umhos/cm	180	180	525	601	589	610	600	520	580	620
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	< 0.12	0.17	0.15	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	70	63	228	277	287	290	260	250	240	240
Ion Balance			-0.26 - 14.8	%	4.00	4.99	3.1	3.8	9.1	1.47	5.28	2.67	2.71	8.95
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.0450	0.0530	-0.02	-0.18	0.13	0.269	0.248	0.0230	0.129	0.326
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.205	-0.197	-0.34	-0.50	-0.19	0.0210	-0.00100	-0.226	-0.121	0.0770
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.052	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.052	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.011	< 0.010	0.03	0.04	0.04	0.049	0.047	0.050	0.092	0.056
pH, Lab			6.2 - 8.4	ph units	8.11	8.18	7.54	7.27	7.56	7.45	7.44	7.31	7.41	7.55
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	-	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	9.4	8.1	14.1	12.1	12.3	12	14	13	12	12
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.07	8.13	7.56	7.45	7.43	7.19	7.19	7.29	7.28	7.23
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.32	8.38	7.88	7.77	7.75	7.43	7.44	7.54	7.53	7.47
Sulphate			4 - 22	mg/l	8.2	6.3	48	67	56	65	63	58	65	64
Total Dissolved Solids (Lab)			105 - 178	mg/l	120	110	282	345	334	370	370	330	340	360
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	< 5.0	0.7	5.2	4.6	< 5.0	2.8	< 5.0	2.4	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	840	5100	-	136	206	100	140	78	1000	670
Turbidity			0.8 - 37800	ntu	120	1000	46.8	132	89.8	130	72	67	46	420

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW2-D	MW2-D	MW2-D	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M
			Sample Date	10/5/2021	12/13/2021	3/29/2022	11/8/2018	6/1/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background											
			Sample ID	MW2-D_20211005	MW2-D_20211213	MW2-D_20220329	MW2-M_20181108	20X608058-1165161	DUP2_20200915	MW-2M_20200915	MW2-M_20201216	MW2-M_20210323	MW2-M_20210608	MW2-M_20211005
			Lab Sample ID	QWF768	RJM315	SFM276	9698373	1165161	NQU696	NQU697	OLM108	PDR008	PUI326	QWF767
			Lab Job Number	C1T0922	C1Z2957	C282980	18X408633	20X608058	C0O2716	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	220	200	190	118	120	150	150	130	110	130	130
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 1.0	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	< 5	< 5	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	230	200	190	118	120	150	150	130	110	130	130
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	0.04	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	6.80	5.86	5.65	4.30	4.31	4.94	4.96	4.61	4.14	4.42	4.45
Cation Sum			2.07 - 3.23	meq/l	6.04	5.71	5.58	4.27	5.17	4.96	4.94	4.41	3.96	4.21	4.39
Chemical Oxygen Demand			< 3- 216	mg/l	34	52	< 20	-	13	< 20	< 20	23	< 20	< 20	< 20
Chloride ion		15000	3 - 12	mg/l	34	22	22	11	13	12	12	16	12	11	13
Color				tcu	< 5.0	< 5.0	< 5.0	< 5	7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.5	1.3	1.6	-	2.4	1.0	0.95	1.2	1.3	1.3	0.93
Electrical Conductivity			209 - 297	umhos/cm	620	540	550	411	419	460	460	430	390	420	410
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	< 0.12	0.13	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	250	230	230	165	205	200	200	180	160	170	180
Ion Balance			-0.26 - 14.8	%	5.92	1.30	0.620	0.4	9.1	0.200	0.200	2.22	2.22	2.43	0.680
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.343	0.266	0.209	-0.71	-0.56	-0.342	-0.301	-0.463	-0.730	-0.545	-0.434
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.0940	0.0170	-0.0400	-1.03	-0.88	-0.591	-0.550	-0.713	-0.979	-0.794	-0.683
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	0.051	0.052	0.09	0.09	0.082	0.090	0.33	0.085	0.079	0.095
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	0.051	0.052	0.09	0.09	0.082	0.090	0.33	0.085	0.079	0.095
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.055	0.052	0.047	0.02	0.04	0.044	0.045	0.047	0.044	0.049	0.050
pH, Lab			6.2 - 8.4	ph units	7.59	7.58	7.55	7.21	7.27	7.20	7.23	7.19	7.01	7.11	7.21
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	-	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	12	13	13	11.6	11.2	11	11	13	12	11	12
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.25	7.31	7.34	7.92	7.83	7.54	7.53	7.65	7.74	7.66	7.65
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.50	7.56	7.59	8.24	8.15	7.79	7.78	7.90	7.99	7.91	7.90
Sulphate			4 - 22	mg/l	64	60	58	78	74	80	79	77	74	74	75
Total Dissolved Solids (Lab)			105 - 178	mg/l	360	320	310	240	255	280	280	270	240	250	260
Total Organic Carbon (TOC)			<100	mg/l	1.8	2.5	< 5.0	< 0.5	2.9	< 5.0	< 5.0	1.7	< 5.0	1.1	0.79
Total Suspended Solids			1480 - 39100	mg/l	110	150	440	-	80	180	170	710	710	890	270
Turbidity			0.8 - 37800	ntu	260	26	240	235	158	75	97	140	140	60	19

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW2-M	MW2-M	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW3
			Sample Date	12/13/2021	3/29/2022	11/8/2018	6/1/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/29/2022	11/8/2018
			Background											Background
			Sample ID	MW2-M_20211213	MW2-M_20220329	MW2-S_20181108	20X608058-1165160	MW2-S_20201216	MW2-S_20210323	MW2-S_20210608	MW2-S_20211005	MW2-S_20211213	MW2-S_20220329	MW3_20181108
			Lab Sample ID	RJM314	SFM275	9698372	1165160	OLM107	PDR007	PUI325	QWF766	RJM312	SFM274	9698375
			Lab Job Number	C1Z2957	C282980	18X408633	20X608058	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	18X408633
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	130	130	153	133	160	130	200	200	200	170	101
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	< 5	< 5	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	130	130	153	133	160	130	200	200	200	170	101
Ammonia-N			<0.05 - 0.09	mg/l	0.15	< 0.050	0.05	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.04
Anion Sum			1.90-2.92	meq/l	4.46	4.34	4.52	3.66	5.00	4.21	5.52	5.05	4.86	4.32	2.40
Cation Sum			2.07 - 3.23	meq/l	4.51	4.40	4.93	3.93	4.89	4.97	4.92	5.08	4.92	4.27	2.40
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	-	13	40	94	< 20	27	23	84	-
Chloride ion		15000	3 - 12	mg/l	12	13	5	5	16	12	13	10	7.7	9.1	7
Color				tcu	< 5.0	< 5.0	8	41	9.5	< 5.0	< 5.0	6.5	< 5.0	< 5.0	6
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.1	1.3	-	5.3	4.9	2.8	3.9	2.8	2.4	3.2	-
Electrical Conductivity			209 - 297	umhos/cm	430	420	415	369	470	400	510	480	460	430	240
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	< 0.12	0.15	-	-	-	-	-	-	0.15
Hardness (as CaCO3)			21.6 - 116	mg/l	180	180	215	161	200	180	220	220	210	190	93.3
Ion Balance			-0.26 - 14.8	%	0.560	0.690	4.4	3.6	1.11	8.28	5.75	0.300	0.610	0.580	0.1
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.170	-0.141	0	-0.39	-0.0460	-0.307	-0.0460	-0.0880	0.355	-0.0660	0.08
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.419	-0.390	-0.32	-0.71	-0.296	-0.556	-0.295	-0.337	0.106	-0.316	-0.24
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.091	0.10	0.06	0.05	0.076	0.11	< 0.050	0.063	0.090	0.071	< 0.05
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.091	0.10	0.06	0.05	0.076	0.11	< 0.050	0.063	0.090	0.071	< 0.05
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.051	0.047	0.01	0.02	< 0.010	< 0.010	0.023	0.036	0.030	0.026	< 0.01
pH, Lab			6.2 - 8.4	ph units	7.45	7.49	7.57	7.36	7.32	7.21	7.21	7.15	7.62	7.29	8.20
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	-	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	12	12	9.6	9.6	17	6.9	9.7	8.7	8.4	8.0	9.7
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.62	7.63	7.57	7.75	7.36	7.52	7.25	7.24	7.26	7.36	8.12
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.87	7.88	7.89	8.07	7.61	7.77	7.50	7.49	7.51	7.61	8.44
Sulphate			4 - 22	mg/l	70	65	63	41	67	64	55	37	31	28	9
Total Dissolved Solids (Lab)			105 - 178	mg/l	260	250	257	204	290	260	290	270	260	230	124
Total Organic Carbon (TOC)			<100	mg/l	1.6	< 5.0	3.7	6.0	5.5	< 50	< 5.0	< 5.0	< 5.0	< 50	1.6
Total Suspended Solids			1480 - 39100	mg/l	240	210	-	3020	1400	5800	3500	4300	3700	29000	-
Turbidity			0.8 - 37800	ntu	26	110	251	3700	900	>1000	1000	440	620	1000	1460

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW5-D
			Sample Date	4/1/2020	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021	10/5/2021	12/13/2021	3/30/2022	3/30/2022	11/8/2018
			Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	
			Sample ID	20X589937-1062416	20X606071-1154681	MW3_20200917	MW3_20201216	MW-3_20210325	MW3_20210609	MW3_20211005	MW3_20211213	DUP3_20220330	MW3_20220330	MW5-D_20181108
			Lab Sample ID	1062416	1154681	NRG099	OLM110	PEB979	PUQ383	QWF769	RJM316	SGA979	SGA983	9698378
			Lab Job Number	20X589937	20X606071	C0O4512	C0X8319	C179966	C1F9831	C1T0922	C1Z2957	C285511	C285511	18X408633
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	103	109	100	100	97	96	98	100	96	95	81
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	1.7	< 1.0	1.2	1.5	< 1.0	1.5	1.5	1.6	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	-	-	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	103	109	100	100	98	97	99	100	97	97	81
Ammonia-N			<0.05 - 0.09	mg/l	< 0.03	0.07	< 0.050	0.061	< 0.050	0.052	0.061	< 0.050	< 0.050	< 0.050	0.05
Anion Sum			1.90-2.92	meq/l	2.64	2.53	2.50	2.65	2.47	2.41	2.49	2.54	2.41	2.41	2.00
Cation Sum			2.07 - 3.23	meq/l	2.99	2.32	2.44	2.51	2.38	2.41	2.52	2.49	2.42	2.39	2.02
Chemical Oxygen Demand			< 3- 216	mg/l	-	216	31	43	< 20	30	< 20	< 20	51	39	-
Chloride ion		15000	3 - 12	mg/l	7	7	7.4	11	10	8.7	11	8.6	9.4	9.4	8
Color				tcu	< 5	90	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	16
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	< 0.5	< 0.50	0.99	0.55	3.1	1.3	0.59	1.2	1.1	-
Electrical Conductivity			209 - 297	umhos/cm	235	244	240	240	230	240	240	240	240	240	196
Fluoride	1.5		<0.12 - 0.45	mg/l	0.19	0.18	-	-	-	-	-	-	-	-	0.32
Hardness (as CaCO3)			21.6 - 116	mg/l	116	94.4	96	97	93	93	98	98	95	94	77.5
Ion Balance			-0.26 - 14.8	%	6.3	4.3	1.21	2.71	1.86	0	0.600	0.990	0.210	0.420	0.6
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.09	-0.06	0.371	-0.0460	0.224	0.303	-0.0400	0.319	0.320	0.330	-1.06
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.41	-0.38	0.121	-0.296	-0.0260	0.0520	-0.291	0.0680	0.0700	0.0800	-1.38
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	0.07	< 0.050	0.055	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.07
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.07	0.07	< 0.050	0.055	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.07
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.07	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.01	0.02	0.015	0.017	0.014	0.079	0.020	0.016	0.016	0.015	0.04
pH, Lab			6.2 - 8.4	ph units	7.94	8.01	8.25	7.83	8.13	8.22	7.84	8.19	8.22	8.24	7.25
Phenol			< 0.004 - 0.005	mg/l	0.005	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	9.1	9.7	10	12	11	11	13	11	10	10	12.9
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.03	8.07	7.88	7.87	7.91	7.92	7.88	7.87	7.91	7.91	8.31
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.35	8.39	8.13	8.12	8.16	8.17	8.14	8.12	8.16	8.16	8.63
Sulphate			4 - 22	mg/l	18	7	11	13	10	10	9.4	9.8	9.5	10	7
Total Dissolved Solids (Lab)			105 - 178	mg/l	146	125	140	150	140	140	140	140	140	130	103
Total Organic Carbon (TOC)			<100	mg/l	13.7	0.6	< 50	< 50	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	3.9
Total Suspended Solids			1480 - 39100	mg/l	-	39100	5900	41000	5700	7900	3600	47000	8200	7800	-
Turbidity			0.8 - 37800	ntu	73400	77600	1000	1000	>1000	1000	1000	1000	1000	1000	37.4

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-S
			Sample Date	5/27/2020	9/17/2020	12/16/2020	12/16/2020	3/25/2021	3/25/2021	6/8/2021	10/6/2021	12/13/2021	3/30/2022	11/22/2018
			Background											
			Sample ID	20X606071-1154896	MW-5D_20200917	DUP1_20201216	MW5-D_20201216	DUP1_20210325	MW-5D_20210325	MW5-D_20210608	MW5-D_20211006	MW5-D_20211213	MW-5D_20220330	DUP_20181122
			Lab Sample ID	1154896	NRG095	OLM170	OLM113	PEB970	PEB974	PUI329	QWS514	RJM318	SGA985	9731473
			Lab Job Number	20X606071	C0O4512	C0X8319	C0X8319	C179966	C179966	C1F8315	C1T3325	C1Z2957	C285511	18X412740
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	89	130	93	100	93	93	85	89	88	93	75
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	-	-	-	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	89	130	93	100	93	93	86	89	88	93	75
Ammonia-N			<0.05 - 0.09	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.081	< 0.050	< 0.050	< 0.050	< 0.050	0.03
Anion Sum			1.90-2.92	meq/l	2.03	7.20	2.48	2.61	2.47	2.47	2.23	2.35	2.35	2.40	1.84
Cation Sum			2.07 - 3.23	meq/l	2.06	9.72	2.31	2.30	2.32	2.33	2.16	2.30	2.33	2.26	2.08
Chemical Oxygen Demand			< 3- 216	mg/l	< 3	50	< 20	< 20	< 20	< 20	< 20	< 20	68	< 20	-
Chloride ion		15000	3 - 12	mg/l	6	97	16	16	16	16	12	15	15	14	6
Color				tcu	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.4	< 0.50	0.84	0.84	0.69	0.71	1.0	0.89	1.0	1.1	-
Electrical Conductivity			209 - 297	umhos/cm	226	750	230	230	230	230	220	220	230	220	194
Fluoride	1.5		<0.12 - 0.45	mg/l	0.45	-	-	-	-	-	-	-	-	-	0.21
Hardness (as CaCO3)			21.6 - 116	mg/l	81.6	390	91	90	92	92	85	91	91	89	80.4
Ion Balance			-0.26 - 14.8	%	0.6	14.9	3.55	6.31	3.13	2.92	1.59	1.08	0.430	3.00	6.2
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.87	0.676	-0.544	-0.570	-0.660	-0.655	-0.596	-0.777	-0.295	-0.291	-1.43
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.19	0.428	-0.795	-0.820	-0.910	-0.905	-0.847	-1.03	-0.546	-0.541	-1.75
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	< 0.050	0.067	0.059	0.072	0.063	< 0.050	< 0.050	< 0.050	0.067	< 0.05
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.05	< 0.050	0.067	0.059	0.072	0.063	< 0.050	< 0.050	< 0.050	0.067	< 0.05
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	0.037	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.06	0.067	0.072	0.067	0.064	0.065	0.055	0.041	0.077	0.065	0.02
pH, Lab			6.2 - 8.4	ph units	7.35	7.93	7.40	7.35	7.28	7.29	7.42	7.19	7.68	7.67	6.89
Phenol			< 0.004 - 0.005	mg/l	< 0.004	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	12.2	13	14	16	14	14	13	14	14	12	12.5
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.22	7.26	7.94	7.92	7.94	7.94	8.02	7.97	7.97	7.96	8.32
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.54	7.50	8.20	8.17	8.19	8.19	8.27	8.22	8.22	8.21	8.64
Sulphate			4 - 22	mg/l	4	93	6.8	6.9	7.4	7.2	8.6	6.4	7.8	6.5	8
Total Dissolved Solids (Lab)			105 - 178	mg/l	104	470	140	140	140	140	130	130	140	130	99
Total Organic Carbon (TOC)			<100	mg/l	1.9	< 5.0	1.2	1.2	< 5.0	< 5.0	1.6	2.2	< 5.0	1.3	2.6
Total Suspended Solids			1480 - 39100	mg/l	203	91	130	170	330	140	300	270	300	170	-
Turbidity			0.8 - 37800	ntu	149	9.8	50	74	61	58	110	140	75	110	< 0.1

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW6-D
			Sample Date	11/22/2018	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/6/2021	12/13/2021	3/30/2022	11/7/2018
			Background										
			Sample ID	MW5-S_20181122	20X606071-1154895	MW-5S_20200917	MW5-S_20201216	MW-5S_20210325	MW5-S_20210608	MW5-S_20211006	MW5-S_20211213	MW-5S_20220330	MW6-D_20181107
			Lab Sample ID	9731403	1154895	NRG094	OLM112	PEB975	PUI328	QWS513	RJM317	SGA981	9698354
			Lab Job Number	18X412740	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T3325	C1Z2957	C285511	18X408633
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	71	70	160	77	80	77	76	83	87	1260
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	-	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	71	70	160	77	80	77	76	83	87	1260
Ammonia-N			<0.05 - 0.09	mg/l	0.31	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	17.8
Anion Sum			1.90-2.92	meq/l	1.78	1.67	13.4	2.12	2.13	2.06	2.06	2.12	2.27	47.2
Cation Sum			2.07 - 3.23	meq/l	1.98	1.80	13.0	1.96	1.86	1.91	2.01	2.00	2.13	48.0
Chemical Oxygen Demand			< 3- 216	mg/l	-	5	29	35	< 20	< 20	< 20	< 20	< 20	-
Chloride ion		15000	3 - 12	mg/l	7	5	210	13	12	11	13	9.8	14	100
Color				tcu	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	69
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	1.9	1.4	1.1	1.1	0.99	1.0	1.4	0.88	-
Electrical Conductivity			209 - 297	umhos/cm	191	190	1400	200	190	200	200	200	220	3280
Fluoride	1.5		<0.12 - 0.45	mg/l	0.28	0.28	-	-	-	-	-	-	-	< 2.4
Hardness (as CaCO3)			21.6 - 116	mg/l	75.3	73.3	460	76	74	75	79	79	84	1790
Ion Balance			-0.26 - 14.8	%	5.1	3.8	1.74	3.92	6.77	3.78	1.23	2.91	3.18	0.8
Langelier Index (at 20 C)			-0.62 - 0.08	none	-1.47	-1.46	0.641	-0.853	-1.10	-1.04	-1.05	-0.722	-0.445	0.95
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.79	-1.78	0.394	-1.10	-1.35	-1.29	-1.30	-0.973	-0.696	0.63
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	< 0.05	< 0.050	0.057	0.085	0.094	< 0.050	< 0.050	0.059	< 1.0
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.05	< 0.05	< 0.050	0.057	0.085	0.094	< 0.050	< 0.050	0.059	< 1.0
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 1.0
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.02	0.02	0.013	0.021	0.023	0.037	0.035	0.034	0.041	< 0.01
pH, Lab			6.2 - 8.4	ph units	6.90	6.90	7.78	7.26	7.00	7.07	7.04	7.33	7.57	6.88
Phenol			< 0.004 - 0.005	mg/l	-	< 0.004	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	11.0	11.9	14	14	12	12	13	13	12	10.1
pH, Saturation (at 20 C)			8.03 - 8.77	none	8.37	8.36	7.14	8.11	8.10	8.12	8.09	8.05	8.01	5.93
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.69	8.68	7.38	8.36	8.35	8.37	8.34	8.30	8.27	6.25
Sulphate			4 - 22	mg/l	8	6	210	10	8.3	9.1	7.6	8.6	6.8	923
Total Dissolved Solids (Lab)			105 - 178	mg/l	96	88	790	120	120	120	120	120	130	2700
Total Organic Carbon (TOC)			<100	mg/l	5.1	2.3	< 5.0	< 5.0	< 5.0	2.2	2.1	2.0	1.6	51.3
Total Suspended Solids			1480 - 39100	mg/l	-	154	110	280	77	150	40	28	57	-
Turbidity			0.8 - 37800	ntu	< 0.1	54.7	27	290	42	97	63	28	50	157

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D
			Sample Date	4/1/2020	5/28/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	3/28/2022
			Background											
			Sample ID	20X589937-1062418	20X606404-1156949	DUP1_20200915	MW6-D_20200915	MW6-D_20201216	MW6-D_20210323	MW6-D_20210607	MW6-D_20211005	MW6-D_20211213	DUP2_20220328	MW6-D_20220328
			Lab Sample ID	1062418	1156949	NQU695	NQU663	OLM137	PDR014	PUI331	QWF773	RJM320	SFM285	SFM279
			Lab Job Number	20X589937	20X606404	C0O2716	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	C282980
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	1400	1270	1400	1400	1100	1000	1000	1100	1300	1300	1300
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	1.4	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	-	-	-	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	1400	1270	1400	1400	1100	1000	1000	1100	1300	1300	1300
Ammonia-N			<0.05 - 0.09	mg/l	26.1	25.0	21	22	24	25	25	27	25	20	21
Anion Sum			1.90-2.92	meq/l	47.4	47.2	47.6	46.5	42.4	38.6	39.3	41.0	44.4	42.1	41.6
Cation Sum			2.07 - 3.23	meq/l	41.5	48.5	45.8	44.2	44.4	46.2	46.8	48.2	43.6	38.7	39.0
Chemical Oxygen Demand			< 3- 216	mg/l	-	351	240	230	230	240	240	220	< 20	200	200
Chloride ion		15000	3 - 12	mg/l	72	85	99	98	94	96	93	97	89	81	80
Color				tcu	51	60	45	45	38	48	40	47	45	42	40
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	73.9	59	61	65	62	58	58	58	55	55
Electrical Conductivity			209 - 297	umhos/cm	3390	3560	3500	3500	3400	3500	3500	3600	3300	3200	3200
Fluoride	1.5		<0.12 - 0.45	mg/l	0.65	0.74	-	-	-	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	1500	1830	1700	1700	1700	1800	1800	1800	1700	1500	1500
Ion Balance			-0.26 - 14.8	%	6.6	1.4	1.84	2.51	2.24	9.04	8.69	8.05	0.880	4.20	3.23
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.73	0.95	1.00	0.918	0.989	0.875	0.813	1.23	1.14	0.855	0.882
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.41	0.63	0.762	0.676	0.746	0.632	0.570	0.986	0.896	0.613	0.639
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.19	0.18	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.19	0.18	< 0.010	< 0.010	0.011	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.01	0.01	0.032	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	6.73	6.88	6.87	6.80	6.96	6.86	6.78	7.15	7.04	6.80	6.83
Phenol			< 0.004 - 0.005	mg/l	< 0.004	0.200	0.0020	0.0017	0.0010	0.0014	0.0016	0.0016	0.0016	0.0013	0.0014
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	10.5	10.9	6.3	5.7	13	13	12	12	12	11	11
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.00	5.93	5.87	5.88	5.97	5.99	5.97	5.93	5.90	5.95	5.94
pH, Saturation (at 4 C)			8.35 - 9.09	none	6.32	6.25	6.11	6.13	6.22	6.23	6.22	6.17	6.14	6.19	6.19
Sulphate			4 - 22	mg/l	832	932	760	760	860	760	780	760	740	650	640
Total Dissolved Solids (Lab)			105 - 178	mg/l	2530	2700	2600	2600	2500	2400	2400	2500	2500	2300	2300
Total Organic Carbon (TOC)			<100	mg/l	< 0.5	71.1	64	63	68	66	61	65	65	57	60
Total Suspended Solids			1480 - 39100	mg/l	-	68	54	58	160	41	47	64	94	38	48
Turbidity			0.8 - 37800	ntu	187	210	160	170	140	170	130	170	140	140	130

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW7-D
			Sample Date	11/8/2018	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	11/7/2018
			Background										
			Sample ID	MW6-S_20181108	20X589937-1062417	20X606404-1156948	MW6-S_20201216	MW6-S_20210323	MW6-S_20210607	MW6-S_20211005	MW6-S_20211213	MW6-S_20220328	MW7-D_20181107
			Lab Sample ID	9698379	1062417	1156948	OLM114	PDR013	PUI330	QWF772	RJM319	SFM278	9698358
			Lab Job Number	18X408633	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	18X408633
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	92	102	91	90	99	110	130	280	160	109
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	< 5	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	92	102	91	91	99	110	130	280	160	109
Ammonia-N			<0.05 - 0.09	mg/l	0.04	< 0.03	1.57	0.31	0.35	< 0.050	< 0.050	3.9	0.071	0.21
Anion Sum			1.90-2.92	meq/l	4.71	3.89	4.19	3.93	4.14	4.31	4.85	9.74	4.82	5.04
Cation Sum			2.07 - 3.23	meq/l	5.65	5.80	4.14	5.45	4.11	4.48	4.85	12.6	4.97	6.98
Chemical Oxygen Demand			< 3- 216	mg/l	-	-	49	62	57	46	52	220	46	-
Chloride ion		15000	3 - 12	mg/l	10	5	7	13	12	13	16	26	12	7
Color				tcu	26	10	24	12	12	9.2	20	17	10	27
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	-	15.3	16	13	13	19	23	15	-
Electrical Conductivity			209 - 297	umhos/cm	512	434	431	380	390	420	470	880	470	535
Fluoride	1.5		<0.12 - 0.45	mg/l	< 0.12	< 0.12	< 0.12	-	-	-	-	-	-	< 0.12
Hardness (as CaCO3)			21.6 - 116	mg/l	216	240	158	230	180	190	210	510	220	307
Ion Balance			-0.26 - 14.8	%	9.1	19.7	0.6	16.2	0.360	1.93	0	12.7	1.53	16.1
Langelier Index (at 20 C)			-0.62 - 0.08	none	-1.10	-0.98	-0.67	-0.600	-0.794	-0.685	-0.302	0.223	-0.334	-0.73
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.42	-1.30	-0.99	-0.849	-1.04	-0.934	-0.551	-0.0240	-0.583	-1.05
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	1.51	0.94	0.67	0.45	0.38	0.17	0.13	0.066	0.053	0.28
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	1.51	0.94	0.67	0.45	0.38	0.17	0.13	0.066	0.053	0.28
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.01	< 0.01	< 0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01
pH, Lab			6.2 - 8.4	ph units	6.74	6.75	7.29	7.01	6.84	6.87	7.13	7.08	7.00	6.85
Phenol			< 0.004 - 0.005	mg/l	-	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	2.8	2.8	3.6	3.2	3.4	4.0	3.8	4.7	3.3	4.2
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.84	7.73	7.96	7.61	7.63	7.56	7.43	6.86	7.34	7.58
pH, Saturation (at 4 C)			8.35 - 9.09	none	8.16	8.05	8.28	7.86	7.88	7.81	7.68	7.10	7.59	7.90
Sulphate			4 - 22	mg/l	119	79	102	83	86	83	83	160	58	127
Total Dissolved Solids (Lab)			105 - 178	mg/l	301	262	248	260	240	250	280	600	270	338
Total Organic Carbon (TOC)			<100	mg/l	16.3	19.3	15.9	20	14	15	21	30	16	20.6
Total Suspended Solids			1480 - 39100	mg/l	-	-	90	140	61	70	51	67	21	-
Turbidity			0.8 - 37800	ntu	31.4	35.2	17.5	49	20	27	22	11	8.7	162

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-S
			Sample Date	4/1/2020	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022	11/7/2018
			Background										
			Sample ID	20X589937-1062420	20X606404-1156946	MW7-D_20200915	MW7-D_20201216	MW7-D_20210323	MW7D_20210609	MW7-D_20211005	MW7-D_20211213	MW7-D_20220328	MW7-S_20181107
			Lab Sample ID	1062420	1156946	NQU660	OLM138	PDR016	PUQ379	QWF775	RJM388	SFM282	9698357
			Lab Job Number	20X589937	20X606404	C0O2716	C0X8319	C177930	C1F9831	C1T0922	C1Z2957	C282980	18X408633
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	170	163	300	190	170	220	230	200	190	188
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	-	-	-	-	-	-	-	< 5
Alkalinity, Total (As CaCO3)			78-120	mg/l	170	163	300	190	170	220	230	200	190	188
Ammonia-N			<0.05 - 0.09	mg/l	0.44	0.36	0.70	0.65	0.65	0.66	0.90	0.81	0.73	0.51
Anion Sum			1.90-2.92	meq/l	7.75	7.78	12.7	10.1	8.83	10.3	11.0	8.01	6.85	4.61
Cation Sum			2.07 - 3.23	meq/l	8.60	7.75	12.4	9.36	8.83	10.2	11.3	8.59	6.83	5.21
Chemical Oxygen Demand			< 3- 216	mg/l	-	52	66	64	64	58	62	61	32	-
Chloride ion		15000	3 - 12	mg/l	11	12	16	18	15	14	19	14	12	5
Color				tcu	48	31	20	20	19	16	27	26	25	42
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	19.4	19	20	18	18	19	21	16	-
Electrical Conductivity			209 - 297	umhos/cm	718	738	1100	850	790	900	1000	740	680	401
Fluoride	1.5		<0.12 - 0.45	mg/l	< 0.12	0.17	-	-	-	-	-	-	-	< 0.12
Hardness (as CaCO3)			21.6 - 116	mg/l	372	329	540	410	390	450	490	370	300	217
Ion Balance			-0.26 - 14.8	%	5.2	0.2	0.960	3.75	0	0.530	1.48	3.49	0.150	6.1
Langelier Index (at 20 C)			-0.62 - 0.08	none	-0.85	-0.51	-0.0850	-0.308	-0.383	-0.396	-0.161	-0.100	-0.281	0.21
Langelier Index (at 4 C)			-0.94 - -0.24	none	-1.17	-0.83	-0.332	-0.556	-0.631	-0.643	-0.409	-0.348	-0.530	-0.11
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	< 0.05	0.056	0.082	0.29	0.073	< 0.050	< 0.050	0.057	< 0.05
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.06	< 0.05	0.056	0.082	0.31	0.073	< 0.050	< 0.050	0.057	< 0.05
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.06	< 0.05	< 0.010	< 0.010	0.013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.01	0.01	< 0.010	< 0.010	< 0.010	0.011	< 0.010	< 0.010	< 0.010	< 0.01
pH, Lab			6.2 - 8.4	ph units	6.49	6.92	6.74	6.78	6.74	6.61	6.77	6.97	6.90	7.65
Phenol			< 0.004 - 0.005	mg/l	< 0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	3.8	4.3	5.5	5.2	4.9	4.9	5.7	6.0	5.2	7.5
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.34	7.43	6.83	7.09	7.13	7.00	6.93	7.07	7.18	7.44
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.66	7.75	7.08	7.34	7.38	7.25	7.18	7.32	7.43	7.76
Sulphate			4 - 22	mg/l	194	201	300	280	240	270	280	170	130	34
Total Dissolved Solids (Lab)			105 - 178	mg/l	473	459	740	600	540	620	660	480	400	253
Total Organic Carbon (TOC)			<100	mg/l	27.7	21.0	19	20	19	19	21	21	17	17.2
Total Suspended Solids			1480 - 39100	mg/l	-	110	18	52	60	140	28	89	22	-
Turbidity			0.8 - 37800	ntu	61.1	110	13	19	26	15	9.9	22	14	549

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW8-D	MW8-D	MW8-D
			Sample Date	4/1/2020	5/28/2020	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022	11/7/2018	6/1/2020	9/17/2020
			Background										
			Sample ID	20X589937-1062419	20X606404-1156947	MW7-S_20210323	MW7S_20210609	MW7-S_20211005	MW7-S_20211213	MW7-S_20220328	MW8-D_20181107	20X608058-1165167	MW-8D_20200917
			Lab Sample ID	1062419	1156947	PDR015	PUQ378	QWF774	RJM387	SFM281	9698360	1165167	NRG092
			Lab Job Number	20X589937	20X606404	C177930	C1F9831	C1T0922	C1Z2957	C282980	18X408633	20X608058	C0O4512
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	237	116	180	230	240	190	140	136	125	90
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 10	< 10	< 1.0	< 1.0	< 1.0	1.0	< 1.0	< 10	< 10	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	< 5	< 5	-	-	-	-	-	< 5	< 5	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	237	116	180	230	240	190	140	136	125	90
Ammonia-N			<0.05 - 0.09	mg/l	< 0.03	< 0.03	< 0.050	0.054	0.057	< 0.050	< 0.050	0.04	< 0.03	< 0.050
Anion Sum			1.90-2.92	meq/l	5.99	2.86	4.13	5.72	5.62	4.33	3.18	8.57	6.68	2.27
Cation Sum			2.07 - 3.23	meq/l	5.65	5.08	4.25	5.84	5.58	4.27	3.15	9.31	5.80	2.16
Chemical Oxygen Demand			< 3- 216	mg/l	-	26	120	39	40	120	100	-	7	< 20
Chloride ion		15000	3 - 12	mg/l	5	2	7.7	15	7.3	5.0	5.3	119	79	10
Color				tcu	41	30	10	10	17	11	6.3	21	< 5	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	-	18.1	5.1	12	8.6	6.1	3.5	-	1.8	1.0
Electrical Conductivity			209 - 297	umhos/cm	512	521	380	530	530	370	310	904	716	220
Fluoride	1.5		<0.12 - 0.45	mg/l	< 0.12	< 0.12	-	-	-	-	-	0.54	0.74	-
Hardness (as CaCO3)			21.6 - 116	mg/l	261	230	180	230	230	190	140	365	218	86
Ion Balance			-0.26 - 14.8	%	2.9	28.0	1.43	1.04	0.360	0.700	0.470	4.1	7.0	2.48
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.04	-0.59	0.213	0.248	0.181	0.466	0.256	0.56	0.20	-0.821
Langelier Index (at 4 C)			-0.94 - -0.24	none	-0.28	-0.91	-0.0370	-0.00100	-0.0680	0.216	0.00500	0.24	-0.12	-1.07
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.05	0.08	0.092	1.6	0.15	0.16	0.18	< 0.05	< 0.05	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.07	0.08	0.092	1.7	0.15	0.16	0.18	< 0.05	< 0.05	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.07	< 0.05	< 0.010	0.039	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.01	0.01	< 0.010	0.025	< 0.010	< 0.010	< 0.010	0.04	0.06	0.049
pH, Lab			6.2 - 8.4	ph units	7.30	7.02	7.56	7.39	7.29	7.74	7.79	8.01	7.89	7.17
Phenol			< 0.004 - 0.005	mg/l	0.004	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	< 0.004	-
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	6.8	7.3	8.4	7.5	10	7.1	6.1	11.3	13.6	13
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.26	7.61	7.35	7.14	7.11	7.28	7.53	7.45	7.69	7.99
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.58	7.93	7.60	7.39	7.36	7.53	7.79	7.77	8.01	8.24
Sulphate			4 - 22	mg/l	53	23	18	28	28	14	6.5	120	94	9.1
Total Dissolved Solids (Lab)			105 - 178	mg/l	314	198	230	320	310	230	170	503	363	130
Total Organic Carbon (TOC)			<100	mg/l	16.7	55.1	< 50	56	37	57	24	2.7	1.6	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	-	10300	5600	8300	5100	4200	2200	-	58	140
Turbidity			0.8 - 37800	ntu	4080	4470	>1000	1000	1000	1000	1000	37.9	45.1	60

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-S	MW8-S	MW8-S	MW8-S
			Sample Date	12/16/2020	3/23/2021	6/7/2021	10/6/2021	12/13/2021	12/13/2021	3/29/2022	11/7/2018	6/1/2020	9/17/2020	12/16/2020
			Background											
			Sample ID	MW8-D_20201216	MW8-D_20210323	MW8-D_20210607	MW8-D_20211006	DUP3_20211213	MW8-D_20211213	MW8-D_20220329	MW8-S_20181107	20X608058-1165166	MW-8S_20200917	MW8-S_20201216
			Lab Sample ID	OLM140	PDR018	PUI333	QWS512	RJM531	RJM390	SFM284	9698359	1165166	NRG091	OLM139
			Lab Job Number	C0X8319	C177930	C1F8315	C1T3325	C1Z2957	C1Z2957	C282980	18X408633	20X608058	C0O4512	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	120	140	130	130	130	130	130	256	200	83	190
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	< 1.0	1.1	< 1.0	1.1	1.0	1.1	< 10	< 10	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	-	-	< 5	< 5	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	120	140	130	130	130	130	130	256	200	83	190
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.04	< 0.03	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	5.27	10.3	7.05	6.19	5.16	5.05	4.91	18.5	15.9	2.15	15.3
Cation Sum			2.07 - 3.23	meq/l	10.9	7.21	7.01	6.30	5.69	5.83	4.77	21.1	18.3	1.99	13.0
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	13	24	21
Chloride ion		15000	3 - 12	mg/l	53	140	81	64	40	40	39	143	169	9.4	160
Color				tcu	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11	7	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	< 0.50	1.5	0.75	0.51	0.65	0.65	0.68	-	4.2	0.99	1.7
Electrical Conductivity			209 - 297	umhos/cm	540	970	720	630	480	480	490	1820	1590	210	1400
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	-	-	0.13	0.19	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	440	290	290	260	230	230	190	721	613	79	470
Ion Balance			-0.26 - 14.8	%	34.7	17.8	0.280	0.880	4.88	7.17	1.45	6.6	7.2	3.86	7.92
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.511	0.436	0.600	0.352	0.514	0.486	0.415	1.07	0.79	-0.787	0.628
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.263	0.188	0.351	0.103	0.265	0.237	0.166	0.75	0.47	-1.04	0.382
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.05	0.06	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.11	0.06	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.06	< 0.05	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.079	0.048	0.073	0.074	0.084	0.082	0.078	0.01	0.02	0.032	0.013
pH, Lab			6.2 - 8.4	ph units	7.72	7.80	7.97	7.77	7.95	7.93	7.94	7.98	7.87	7.27	7.68
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	< 0.004	-	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	15	13	13	13	13	13	13	12.8	13.0	13	15
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.21	7.36	7.37	7.42	7.43	7.44	7.53	6.91	7.08	8.05	7.06
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.46	7.61	7.62	7.66	7.68	7.69	7.78	7.23	7.40	8.30	7.30
Sulphate			4 - 22	mg/l	64	170	100	88	64	64	59	447	342	11	330
Total Dissolved Solids (Lab)			105 - 178	mg/l	420	550	410	360	310	310	280	1170	1000	120	880
Total Organic Carbon (TOC)			<100	mg/l	0.72	< 5.0	0.75	0.93	0.64	0.68	0.56	2.3	7.3	< 5.0	2.8
Total Suspended Solids			1480 - 39100	mg/l	100	44	50	7.8	170	170	11	-	40	130	84
Turbidity			0.8 - 37800	ntu	5.6	26	6.1	3.2	3.5	3.5	3.8	319	43.7	120	28

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01
			Sample Date	3/23/2021	6/7/2021	10/6/2021	12/13/2021	3/29/2022	7/3/2019	7/3/2019	5/28/2020	5/28/2020	9/15/2020
			Background										
			Sample ID	MW8-S_20210323	MW8-S_20210607	MW8-S_20211006	MW8-S_20211213	MW8-S_20220329	19X489473-330793	19X489473-330794	20X606404-1156940	20X606404-1156942	PW19-01_20200915
			Lab Sample ID	PDR017	PUI332	QWS511	RJM389	SFM283	330793	330794	1156940	1156942	NQU659
			Lab Job Number	C177930	C1F8315	C1T3325	C1Z2957	C282980	19X489473	19X489473	20X606404	20X606404	C0O2716
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	170	180	150	220	250	194	206	81	80	210
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	< 1.0	1.3	< 1.0	1.3	1.7	< 10	< 10	< 10	< 10	1.6
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	< 5	< 5	< 5	< 5	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	170	190	150	220	250	194	206	81	80	210
Ammonia-N			<0.05 - 0.09	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.03	0.03	< 0.03	< 0.03	< 0.050
Anion Sum			1.90-2.92	meq/l	17.2	16.5	10.5	12.5	18.4	5.23	5.61	1.90	1.88	5.92
Cation Sum			2.07 - 3.23	meq/l	17.4	16.4	9.03	12.3	17.9	5.48	6.42	2.16	2.09	6.02
Chemical Oxygen Demand			< 3- 216	mg/l	< 20	< 20	< 20	< 20	< 20	-	-	13	9	31
Chloride ion		15000	3 - 12	mg/l	220	190	120	86	170	11	10	7	7	6.9
Color				tcu	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	17	26	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	2.4	2.0	1.3	2.2	2.5	-	-	1.2	< 0.5	1.2
Electrical Conductivity			209 - 297	umhos/cm	1600	1600	1000	1100	1800	504	533	201	199	520
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	0.14	< 0.12	0.33	0.33	-
Hardness (as CaCO3)			21.6 - 116	mg/l	650	610	350	410	640	240	282	75.2	74.2	260
Ion Balance			-0.26 - 14.8	%	0.460	0.300	7.62	0.770	1.41	2.3	6.7	6.4	5.4	0.840
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.793	0.910	0.557	0.750	1.00	0.42	0.61	-0.29	-0.27	0.750
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.547	0.664	0.310	0.503	0.759	0.10	0.29	-0.61	-0.59	0.501
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	< 0.050	0.053	< 0.050	0.36	0.30	< 0.05	< 0.05	< 0.05	< 0.05	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	< 0.050	0.053	< 0.050	0.36	0.30	< 0.05	< 0.05	< 0.05	< 0.05	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	0.012	0.018	0.018	0.030	< 0.010	< 0.01	< 0.01	0.02	0.02	0.019
pH, Lab			6.2 - 8.4	ph units	7.78	7.89	7.80	7.80	7.85	7.86	7.96	7.98	8.01	7.92
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	0.008	< 0.004	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	13	13	14	14	12	13.2	13.5	6.2	5.9	12
pH, Saturation (at 20 C)			8.03 - 8.77	none	6.99	6.98	7.24	7.05	6.85	7.44	7.35	8.27	8.28	7.17
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.23	7.23	7.49	7.29	7.09	7.76	7.67	8.59	8.60	7.42
Sulphate			4 - 22	mg/l	360	360	200	260	420	50	58	4	4	75
Total Dissolved Solids (Lab)			105 - 178	mg/l	1000	1000	600	750	1100	284	316	104	102	340
Total Organic Carbon (TOC)			<100	mg/l	< 5.0	2.5	1.2	11	< 5.0	9.5	8.3	0.9	0.7	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	17	47	5.2	33	66	-	-	27300	51600	3100
Turbidity			0.8 - 37800	ntu	21	15	0.97	13	40	58.8	77.5	34800	67400	640

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE Results exceeds CDWG

VALUE Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C2
General Chemistry in Groundwater Analytical Results

			Sample Location	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01
			Sample Date	12/16/2020	3/25/2021	3/25/2021	6/9/2021	6/9/2021	10/5/2021	12/13/2021	3/29/2022
			Background								
			Sample ID	PW19-01_20201216	DUP2_20210325	PW19-01_20210325	DUP1_20210609	PW19-01_20210609	PW19-01_20211005	PW19-01_20211213	PW19-01_20220329
			Lab Sample ID	OLM141	PEB971	PEB976	PUQ385	PUQ382	QWF781	RJM395	SFM290
			Lab Job Number	C0X8319	C179966	C179966	C1F9831	C1F9831	C1T0922	C1Z2957	C282980
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**							
Alkalinity, Bicarbonate (as CaCO3)			78-119	mg/l	250	230	220	380	370	380	340	280
Alkalinity, Carbonate (as CaCO3)			< 10	mg/l	1.5	< 1.0	1.5	2.3	2.2	3.0	2.2	2.3
Alkalinity, hydroxide (as CaCO3)			< 5	mg/l	-	-	-	-	-	-	-	-
Alkalinity, Total (As CaCO3)			78-120	mg/l	250	230	230	380	370	380	340	280
Ammonia-N			<0.05 - 0.09	mg/l	0.54	< 0.050	< 0.050	< 0.050	< 0.050	0.31	< 0.050	< 0.050
Anion Sum			1.90-2.92	meq/l	6.49	5.81	5.67	8.26	8.14	8.47	7.42	6.33
Cation Sum			2.07 - 3.23	meq/l	6.38	5.52	5.51	7.66	7.69	6.48	5.69	6.14
Chemical Oxygen Demand			< 3- 216	mg/l	77	< 20	< 20	80	44	28	< 20	37
Chloride ion		15000	3 - 12	mg/l	11	9.4	9.3	9.0	9.0	11	8.3	8.0
Color				tcu	6.8	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Dissolved Organic Carbon (DOC)			< 0.5-1.2	mg/l	1.7	1.2	1.2	14	14	2.2	1.6	1.3
Electrical Conductivity			209 - 297	umhos/cm	580	520	500	700	700	750	620	570
Fluoride	1.5		<0.12 - 0.45	mg/l	-	-	-	-	-	-	-	-
Hardness (as CaCO3)			21.6 - 116	mg/l	280	250	250	350	350	290	250	280
Ion Balance			-0.26 - 14.8	%	0.850	2.56	1.43	3.77	2.84	13.3	13.2	1.52
Langelier Index (at 20 C)			-0.62 - 0.08	none	0.740	0.497	0.684	0.988	0.970	1.03	0.857	0.921
Langelier Index (at 4 C)			-0.94 - -0.24	none	0.491	0.248	0.435	0.740	0.721	0.785	0.608	0.672
Nitrate (as N)	10		< 0.2 - 0.24	mg/l	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)			< 0.2 - 0.24	mg/l	0.16	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)	1		<0.05 - 0.07	mg/l	0.019	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)			< 0.01 - 0.07	mg/l	< 0.010	< 0.010	< 0.010	0.012	0.010	< 0.010	< 0.010	< 0.010
pH, Lab			6.2 - 8.4	ph units	7.83	7.64	7.84	7.80	7.79	7.93	7.85	7.95
Phenol			< 0.004 - 0.005	mg/l	< 0.0010	< 0.0010	< 0.0010	0.020	0.020	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)			6.9 - 12.3	mg/l	12	12	12	16	16	19	15	13
pH, Saturation (at 20 C)			8.03 - 8.77	none	7.09	7.14	7.15	6.81	6.82	6.89	6.99	7.03
pH, Saturation (at 4 C)			8.35 - 9.09	none	7.34	7.39	7.40	7.06	7.07	7.14	7.24	7.28
Sulphate			4 - 22	mg/l	60	43	43	16	19	22	20	25
Total Dissolved Solids (Lab)			105 - 178	mg/l	360	310	310	420	420	410	360	330
Total Organic Carbon (TOC)			<100	mg/l	< 50	< 5.0	< 5.0	12	12	< 5.0	< 5.0	< 5.0
Total Suspended Solids			1480 - 39100	mg/l	66000	500	98	5000	5600	630	340	1300
Turbidity			0.8 - 37800	ntu	1000	64	72	1000	72	150	180	860

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG) (2020)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Units: mg/l=milligram per litre, meq/l=milliequivalents per liter, tcu=true colour unit, umhos/cm=micromhos per centimeter, ntu=nephelometric turbidity Units

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D	MW19-03D
				Sample Date	11/19/2019	4/1/2020	4/1/2020	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021	6/9/2021	10/5/2021
				Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
				Sample ID	19X546170-731450	20X589937-1062421	20X589937-1062425	20X606071-1154904	MW19-03D_20200917	MW19-03D_20201216	MW19-03D_20210325	DUP3_20210609	MW19-03D_20210609	MW19-03D_20211005
				Lab Sample ID	731450	1062421	1062425	1154904	NRG098	OLM111	PEB980	PUQ387	PUQ384	QWF776
				Lab Job Number	19X546170	20X589937	20X589937	20X606071	C0O4512	C0X8319	C179966	C1F9831	C1F9831	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	-	-	-	Y	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NR	NR	NR	NR	NA	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW19-03D	MW19-03D	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-09S
				Sample Date	12/13/2021	3/30/2022	11/19/2019	4/1/2020	5/28/2020	5/28/2020	9/15/2020	12/16/2020	3/25/2021	3/25/2021
				Background	Background	Background								
				Sample ID	MW19-03D_20211213	MW19-03D_20220330	19X546170-731455	20X589937-1062422	20X606404-1156933	20X606404-1156941	MW19-09S_20200915	MW19-09S_20201216	DUP3_20210325	MW19-09S_20210325
				Lab Sample ID	RJM391	SGA982	731455	1062422	1156933	1156941	NQU658	OLM142	PEB972	PEB978
				Lab Job Number	C1Z2957	C285511	19X546170	20X589937	20X606404	20X606404	C0O2716	C0X8319	C179966	C179966
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.054	< 0.05	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.054	< 0.10	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.098	< 0.1	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	-	-	Y	Y	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.098	< 0.1	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NR	NR	NR	N	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW19-09S	MW19-09S	MW19-09S	MW19-09S	MW19-10S	MW19-10S	MW19-10S	MW19-11D	MW19-11D	MW19-11D
			Sample Date		6/9/2021	10/5/2021	12/13/2021	3/29/2022	6/1/2020	12/16/2020	3/29/2022	6/1/2020	9/15/2020	12/16/2020
			Background											
			Sample ID		MW19-09S_20210609	MW19-09S_20211005	MW19-09S_20211213	MW19-09S_20220329	20X608058-1165168	MW19-10S_20201216	MW19-10S_20220329	20X608058-1165165	MW19-11D_20200915	MW19-11D_20201216
			Lab Sample ID		PUQ380	QWF777	RJM392	SFM286	1165168	OLM143	SFM287	1165165	NQU665	OLM145
			Lab Job Number		C1F9831	C1T0922	C1Z2957	C282980	20X608058	C0X8319	C282980	20X608058	C0O2716	C0X8319
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.050	0.055
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.1	0.13	0.21
Reached Baseline				none	NA	NA	NA	NA	Y	NA	NA	Y	YES	YES
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.1	**0.13**	**0.26**
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NR	NA	NA	NR	UC (Lube)	UC (Fuel/Lube)

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11D	MW19-11M	MW19-11M	MW19-11M	MW19-11M	MW19-11M
			Sample Date		3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/7/2021
			Background											
			Sample ID		MW19-11D_20210323	MW19-11D_20210607	MW19-11D_20211005	MW19-11D_20211213	MW19-11D_20220328	20X608058-1165164	MW19-11M_20200915	MW19-11M_20201216	MW19-11M_20210323	MW19-11M_20210607
			Lab Sample ID		PDR023	PUI335	QWF780	RJM394	SFM289	1165164	NQU664	OLM144	PDR022	PUI334
			Lab Job Number		C177930	C1F8315	C1T0922	C1Z2957	C282980	20X608058	C0O2716	C0X8319	C177930	C1F8315
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	0.086	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	0.40	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	NA	NA	Y	NA	YES	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	**0.49**	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NA	NR	NA	UC (Fuel/Lube)	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW19-11M	MW19-11M	MW19-11M	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12D
			Sample Date		10/5/2021	12/13/2021	3/28/2022	6/1/2020	6/1/2020	9/17/2020	9/17/2020	12/16/2020	12/16/2020	3/23/2021
			Background											
			Sample ID		MW19-11M_20211005	MW19-11M_20211213	MW19-11M_20220328	20X608058-1165158	20X608058-1165163	DUP 3_20200917	MW19-12D_20200917	DUP3_20201216	MW19-12D_20201216	MW19-12D_20210323
			Lab Sample ID		QWF779	RJM393	SFM288	1165158	1165163	NRG096	NRG093	OLM172	OLM159	PDR026
			Lab Job Number		C1T0922	C1Z2957	C282980	20X608058	20X608058	C0O4512	C0O4512	C0X8319	C0X8319	C177930
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	Y	Y	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NR	NR	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW19-12D	MW19-12D	MW19-12D	MW19-12D	MW19-12S	MW19-12S	MW19-12S	MW19-13D	MW19-13D	MW19-13D
				Sample Date	6/7/2021	10/6/2021	12/13/2021	3/29/2022	12/16/2020	12/13/2021	3/29/2022	11/19/2019	11/19/2019	4/1/2020
				Background										
				Sample ID	MW19-12D_20210607	MW19-12D_20211006	MW19-12D_20211213	MW19-12D_20220329	MW19-12S_20201216	MW19-12S_20211213	MW19-12S_20220329	19X546170-731457	19X546170-731459	20X589937-1062424
				Lab Sample ID	PUI336	QWS509	RJM500	SFM295	OLM146	RJM396	SFM294	731457	731459	1062424
				Lab Job Number	C1F8315	C1T3325	C1Z2957	C282980	C0X8319	C1Z2957	C282980	19X546170	19X546170	20X589937
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	0.53	< 0.1	< 0.1
Reached Baseline				none	NA	NA	NA	NA	NA	NA	NA	-	-	-
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**0.5**	< 0.1	< 0.1
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NA	NA	NA	LOF	NR	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13D	MW19-13S
			Sample Date	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	3/28/2022	11/19/2019
			Background										
			Sample ID	20X606404-1156944	MW19-13D_20200915	MW19-13D_20201216	MW19-13D_20210323	MW19-13D_20210608	MW19-13D_20211005	MW19-13D_20211213	DUP1_20220328	MW19-13D_20220328	19X546170-731456
			Lab Sample ID	1156944	NQU662	OLM161	PDR028	PUI338	QWF783	RJM502	SFM277	SFM297	731456
			Lab Job Number	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	C282980	19X546170
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit									
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.056	< 0.050	< 0.050	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.056	< 0.050	< 0.050	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.1
Reached Baseline				none	Y	NA	NA	NA	NA	NA	NA	NA	NA	-
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.1
Hydrocarbon Resemblance				none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW19-13S	MW1-D	MW1-D
				Sample Date	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	11/19/2019	4/1/2020
				Background										
				Sample ID	20X589937-1062423	20X606404-1156943	MW19-13S_20201216	MW19-13S_20210323	MW19-13S_20210608	MW19-13S_20211005	MW19-13S_20211213	MW19-13S_20220328	19X546170-731448	20X589937-1062415
				Lab Sample ID	1062423	1156943	OLM160	PDR027	PUI337	QWF782	RJM501	SFM296	731448	1062415
				Lab Job Number	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	19X546170	20X589937
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.057	< 0.050	< 0.05	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.057	< 0.050	< 0.10	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.1	0.15	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.1	< 0.1
Reached Baseline				none	-	Y	YES	NA	NA	NA	NA	NA	-	-
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.1	**0.15**	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.1	< 0.1
Hydrocarbon Resemblance				none	NR	NR	UC (Lube)	NA	NA	NA	NA	NA	NR	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-D	MW1-S	MW1-S	MW1-S
			Sample Date	5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	11/19/2019	4/1/2020	5/28/2020
			Background											
			Sample ID	20X606404-1156950	MW1-D_20200915	MW1-D_20201216	MW1-D_20210323	MW1-D_20210608	MW1-D_20211005	MW1-D_20211213	MW1-D_20220328	19X546170-731447	20X589937-1062401	20X606404-1156945
			Lab Sample ID	1156950	NQU661	OLM106	PDR006	PUI324	QWF765	RJM313	SFM273	731447	1062401	1156945
			Lab Job Number	20X606404	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	19X546170	20X589937	20X606404
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1
Reached Baseline				none	Y	NA	NA	NA	NA	NA	NA	NA	-	-	Y
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1
Hydrocarbon Resemblance				none	NR	NA	NA	NA	NA	NA	NA	NA	NR	NR	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW1-S	MW1-S	MW1-S	MW1-S	MW1-S	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D	MW20-14D
			Sample Date		12/16/2020	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021
			Background												
			Sample ID		MW1-S_20201216	MW1-S_20210608	MW1-S_20211005	MW1-S_20211213	MW1-S_20220328	20X606071-1154898	MW20-14D_20200915	MW20-14D_20201216	MW20-14D_20210323	MW20-14D_20210608	MW20-14D_20211005
			Lab Sample ID		OLM105	PUI323	QWF764	RJM311	SFM272	1154898	NQU666	OLM163	PDR030	PUI340	QWF785
			Lab Job Number		C0X8319	C1F8315	C1T0922	C1Z2957	C282980	20X606071	C0O2716	C0X8319	C177930	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.11	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	**< 0.11**	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW20-14D	MW20-14D	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-14S	MW20-15D
			Sample Date		12/13/2021	3/28/2022	5/27/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/28/2022	5/27/2020
			Background											
			Sample ID		MW20-14D_20211213	MW20-14D_20220328	20X606071-1154897	MW20-14S_20201216	MW20-14S_20210323	MW20-14S_20210608	MW20-14S_20211005	MW20-14S_20211213	MW20-14S_20220328	20X606071-1154900
			Lab Sample ID		RJM504	SFM299	1154897	OLM162	PDR029	PUI339	QWF784	RJM503	SFM298	1154900
			Lab Job Number		C1Z2957	C282980	20X606071	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	20X606071
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0026	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0026	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.12	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.12	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1
Reached Baseline				none	NA	NA	Y	NA	NA	NA	NA	NA	NA	Y
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	**< 0.12**	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**< 0.12**	< 0.1
Hydrocarbon Resemblance				none	NA	NA	NR	NA	NA	NA	NA	NA	NA	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15D	MW20-15S	MW20-15S
				Sample Date	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	12/13/2021	3/29/2022	5/27/2020	12/16/2020
				Background										
				Sample ID	MW20-15D_20200915	MW20-15D_20201216	MW20-15D_20210323	MW20-15D_20210608	MW20-15D_20211005	DUP1_20211213	MW20-15D_20211213	MW20-15D_20220329	20X606071-1154899	MW20-15S_20201216
				Lab Sample ID	NQU667	OLM165	PDR032	PUI342	QWF787	RJM529	RJM506	SFM301	1154899	OLM164
				Lab Job Number	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C1Z2957	C282980	20X606071	C0X8319
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0013	< 0.001	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0026	< 0.002	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.12	< 0.01	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	0.30	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090
Reached Baseline				none	YES	NA	NA	NA	NA	NA	NA	NA	Y	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	**0.30**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**< 0.12**	< 0.1	< 0.090
Hydrocarbon Resemblance				none	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NR	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW20-15S	MW20-15S	MW20-15S	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16	MW20-16
			Sample Date		6/8/2021	12/13/2021	3/28/2022	5/27/2020	9/17/2020	12/16/2020	12/16/2020	3/25/2021	6/9/2021	6/9/2021	10/6/2021
			Background					Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID		MW20-15S_20210608	MW20-15S_20211213	MW20-15S_20220328	20X606071-1154901	MW20-16_20200917	DUP2_20201216	MW20-16_20201216	MW20-16_20210325	DUP2_20210609	MW20-16_20210609	DUP3_20211006
			Lab Sample ID		PUI341	RJM505	SFM300	1154901	NRG097	OLM171	OLM166	PEB977	PUQ386	PUQ381	QWS510
			Lab Job Number		C1F8315	C1Z2957	C282980	20X606071	C0O4512	C0X8319	C0X8319	C179966	C1F9831	C1F9831	C1T3325
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	-	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	-	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	-	< 0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	-	< 0.0026	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	-	< 0.12	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	0.11	0.13	< 0.090	< 0.1	< 0.090	< 0.090	0.16	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	Y	Y	NA	Y	NA	NA	YES	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	**0.11**	-	**< 0.12**	< 0.1	< 0.090	< 0.090	**0.16**	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	UC (Lube)	UC	NA	NR	NA	NA	UC (Lube)	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW20-16	MW20-16	MW20-16	MW20-16	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D	MW20-17D
				Sample Date	10/6/2021	12/13/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/5/2021
				Background	Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
				Sample ID	MW20-16_20211006	DUP2_20211213	MW20-16_20211213	MW20-16_20220330	20X606071-1154903	MW20-17D_20200917	MW20-17D_20201216	MW20-17D_20210325	MW20-17D_20210608	DUP1_20211005
				Lab Sample ID	QWS507	RJM530	RJM507	SGA984	1154903	NRG101	OLM168	PEB969	PUI344	QWF770
				Lab Job Number	C1T3325	C1Z2957	C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T0922
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.055	< 0.053	< 0.054	< 0.05	< 0.055	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	0.056	< 0.053	< 0.054	< 0.10	< 0.055	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	0.10	< 0.096	< 0.097	< 0.1	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	Y	NA	NA	Y	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	**0.16**	< 0.096	< 0.097	< 0.1	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	UC (Fuel/ Lube)	NA	NA	NR	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW20-17D	MW20-17D	MW20-17D	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW20-17S	MW20-17S
			Sample Date		10/5/2021	12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/5/2021	12/13/2021
			Background		Background	Background	Background	Background	Background	Background	Background	Background	Background	Background
			Sample ID		MW20-17D_20211005	MW20-17D_20211213	MW20-17D_20220330	20X606071-1154902	MW20-17S_20200917	MW20-17S_20201216	MW20-17S_20210325	MW20-17S_20210608	MW20-17S_20211005	MW20-17S_20211213
			Lab Sample ID		QWF789	RJM509	SGA978	1154902	NRG100	OLM167	PEB973	PUI343	QWF788	RJM508
			Lab Job Number		C1T0922	C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T0922	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	0.0013	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	0.20	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	0.30	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	1.1	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	Y	NA	YES	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	**1.6**	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NR	NA	Fuel/Lube	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW20-17S	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D	MW2-D
			Sample Date		3/30/2022	6/1/2020	6/1/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	10/5/2021	12/13/2021	3/29/2022
			Background		Background										
			Sample ID		MW20-17S_20220330	20X608058-1165149	20X608058-1165159	MW-2D_20200915	MW2-D_20201216	MW2-D_20210323	MW2-D_20210608	DUP2_20211005	MW2-D_20211005	MW2-D_20211213	MW2-D_20220329
			Lab Sample ID		SGA980	1165149	1165159	NQU698	OLM109	PDR009	PUI327	QWF771	QWF768	RJM315	SFM276
			Lab Job Number		C285511	20X608058	20X608058	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1T0922	C1Z2957	C282980
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.054	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.054	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.098	< 0.1	< 0.1	0.11	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	Y	Y	YES	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.098	< 0.1	< 0.1	**0.11**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NR	NR	UC (Lube)	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

				Sample Location	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-M	MW2-S	MW2-S
				Sample Date	6/1/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/29/2022	6/1/2020	12/16/2020
				Background											
				Sample ID	20X608058-1165161	DUP2_20200915	MW-2M_20200915	MW2-M_20201216	MW2-M_20210323	MW2-M_20210608	MW2-M_20211005	MW2-M_20211213	MW2-M_20220329	20X608058-1165160	MW2-S_20201216
				Lab Sample ID	1165161	NQU696	NQU697	OLM108	PDR008	PUI326	QWF767	RJM314	SFM275	1165160	OLM107
				Lab Job Number	20X608058	C0O2716	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	20X608058	C0X8319
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.090	< 0.090	0.10	< 0.090	< 0.090	< 0.090	0.21	< 0.090	< 0.1	0.13
Reached Baseline				none	Y	NA	NA	YES	NA	NA	NA	Y	NA	Y	YES
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.090	< 0.090	0.10	< 0.090	< 0.090	< 0.090	**0.21**	< 0.090	< 0.1	**0.13**
Hydrocarbon Resemblance				none	NR	NA	NA	UC (Lube)	NA	NA	NA	UC (Lube)	NA	NR	UC (Lube)

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW2-S	MW2-S	MW2-S	MW2-S	MW2-S	MW3	MW3	MW3	MW3	MW3	MW3	MW3
			Sample Date		3/23/2021	6/8/2021	10/5/2021	12/13/2021	3/29/2022	11/19/2019	4/1/2020	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/9/2021
			Background							Background	Background	Background	Background	Background	Background	Background
			Sample ID		MW2-S_20210323	MW2-S_20210608	MW2-S_20211005	MW2-S_20211213	MW2-S_20220329	19X546170-731449	20X589937-1062416	20X606071-1154681	MW3_20200917	MW3_20201216	MW-3_20210325	MW3_20210609
			Lab Sample ID		PDR007	PUI325	QWF766	RJM312	SFM274	731449	1062416	1154681	NRG099	OLM110	PEB979	PUQ383
			Lab Job Number		C177930	C1F8315	C1T0922	C1Z2957	C282980	19X546170	20X589937	20X606071	C0O4512	C0X8319	C179966	C1F9831
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**												
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050	< 0.056	< 0.050	< 0.055
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.056	< 0.050	< 0.055
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1	< 0.090	< 0.10	< 0.090	< 0.10
Reached Baseline				none	NA	NA	NA	NA	NA	-	-	Y	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1	< 0.090	< 0.10	< 0.090	< 0.10
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NA	NR	NR	NR	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW3	MW3	MW3	MW3	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D	MW5-D
			Sample Date		10/5/2021	12/13/2021	3/30/2022	3/30/2022	5/27/2020	9/17/2020	12/16/2020	12/16/2020	3/25/2021	3/25/2021	6/8/2021	10/6/2021
			Background		Background	Background	Background	Background								
			Sample ID		MW3_20211005	MW3_20211213	DUP3_20220330	MW3_20220330	20X606071-1154896	MW-5D_20200917	DUP1_20201216	MW5-D_20201216	DUP1_20210325	MW-5D_20210325	MW5-D_20210608	MW5-D_20211006
			Lab Sample ID		QWF769	RJM316	SGA979	SGA983	1154896	NRG095	OLM170	OLM113	PEB970	PEB974	PUI329	QWS514
			Lab Job Number		C1T0922	C1Z2957	C285511	C285511	20X606071	C0O4512	C0X8319	C0X8319	C179966	C179966	C1F8315	C1T3325
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**												
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.061	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.061	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.11	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	0.14	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	NA	Y	NA	NA	YES	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	**< 0.11**	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	**0.14**	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NR	NA	NA	Lube	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW5-D	MW5-D	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW5-S	MW6-D
			Sample Date		12/13/2021	3/30/2022	5/27/2020	9/17/2020	12/16/2020	3/25/2021	6/8/2021	10/6/2021	12/13/2021	3/30/2022	11/19/2019
			Background												
			Sample ID		MW5-D_20211213	MW-5D_20220330	20X606071-1154895	MW-5S_20200917	MW5-S_20201216	MW-5S_20210325	MW5-S_20210608	MW5-S_20211006	MW5-S_20211213	MW-5S_20220330	19X546170-731452
			Lab Sample ID		RJM318	SGA985	1154895	NRG094	OLM112	PEB975	PUI328	QWS513	RJM317	SGA981	731452
			Lab Job Number		C1Z2957	C285511	20X606071	C0O4512	C0X8319	C179966	C1F8315	C1T3325	C1Z2957	C285511	19X546170
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.055	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.054	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.055	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.054	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.099	< 0.090	< 0.1	< 0.090	0.15	< 0.090	< 0.090	< 0.090	< 0.090	< 0.098	< 0.1
Reached Baseline				none	NA	NA	Y	NA	YES	NA	NA	NA	NA	NA	-
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.099	< 0.090	< 0.1	< 0.090	**0.15**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.098	< 0.1
Hydrocarbon Resemblance				none	NA	NA	NR	NA	UC (Lube)	NA	NA	NA	NA	NA	GR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

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Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D	MW6-D
			Sample Date		4/1/2020	5/28/2020	9/15/2020	9/15/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	3/28/2022
			Background												
			Sample ID		20X589937-1062418	20X606404-1156949	DUP1_20200915	MW6-D_20200915	MW6-D_20201216	MW6-D_20210323	MW6-D_20210607	MW6-D_20211005	MW6-D_20211213	DUP2_20220328	MW6-D_20220328
			Lab Sample ID		1062418	1156949	NQU695	NQU663	OLM137	PDR014	PUI331	QWF773	RJM320	SFM285	SFM279
			Lab Job Number		20X589937	20X606404	C0O2716	C0O2716	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	C282980
Parameter	CDWQ[1]	NS-PSS[2]	Background[3]	Unit											
Benzene	0.005	4.6	< 0.001	mg/l	0.001	0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	0.01	0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.05	< 0.050	< 0.050	0.077	0.082	0.068	0.078	0.073	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.10	< 0.050	< 0.050	0.080	0.077	0.057	0.061	0.053	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.1	< 0.090	< 0.090	0.19	0.16	< 0.090	0.10	< 0.090	< 0.090	< 0.090
Reached Baseline				none	-	Y	NA	NA	YES	YES	Y	Y	Y	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.1	< 0.090	< 0.090	**0.34**	**0.32**	0.13	**0.24**	**0.13**	< 0.090	< 0.090
Hydrocarbon Resemblance				none	GR	GR	NA	NA	UC (Fuel/Lube)	Fuel, UC (Lube)	Fuel	UC (Fuel/Lube)	Fuel, UC (Lube)	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

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VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW6-S	MW7-D	MW7-D
			Sample Date	11/19/2019	4/1/2020	5/28/2020	12/16/2020	3/23/2021	6/7/2021	10/5/2021	12/13/2021	3/28/2022	11/19/2019	4/1/2020
			Background											
			Sample ID	19X546170-731451	20X589937-1062417	20X606404-1156948	MW6-S_20201216	MW6-S_20210323	MW6-S_20210607	MW6-S_20211005	MW6-S_20211213	MW6-S_20220328	19X546170-731454	20X589937-1062420
			Lab Sample ID	731451	1062417	1156948	OLM114	PDR013	PUI330	QWF772	RJM319	SFM278	731454	1062420
			Lab Job Number	19X546170	20X589937	20X606404	C0X8319	C177930	C1F8315	C1T0922	C1Z2957	C282980	19X546170	20X589937
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.05	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.10	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.1	< 0.1	0.21	< 0.090	< 0.090	< 0.090	< 0.099	< 0.090	< 0.1	< 0.1
Reached Baseline				none	-	-	Y	YES	NA	NA	NA	NA	NA	-	-
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.1	< 0.1	**0.21**	< 0.090	< 0.090	< 0.090	< 0.099	< 0.090	< 0.1	< 0.1
Hydrocarbon Resemblance				none	NR	NR	NR	UC (Lube)	NA	NA	NA	NA	NA	NR	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-D	MW7-S	MW7-S	MW7-S
			Sample Date		5/28/2020	9/15/2020	12/16/2020	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022	11/19/2019	4/1/2020	5/28/2020
			Background												
			Sample ID		20X606404-1156946	MW7-D_20200915	MW7-D_20201216	MW7-D_20210323	MW7D_20210609	MW7-D_20211005	MW7-D_20211213	MW7-D_20220328	19X546170-731453	20X589937-1062419	20X606404-1156947
			Lab Sample ID		1156946	NQU660	OLM138	PDR016	PUQ379	QWF775	RJM388	SFM282	731453	1062419	1156947
			Lab Job Number		20X606404	C0O2716	C0X8319	C177930	C1F9831	C1T0922	C1Z2957	C282980	19X546170	20X589937	20X606404
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	0.11	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1
Reached Baseline				none	Y	YES	NA	NA	NA	NA	NA	NA	-	-	Y
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	**0.11**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.1	< 0.1	< 0.1
Hydrocarbon Resemblance				none	NR	UC (Lube)	NA	NA	NA	NA	NA	NA	NR	NR	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location	MW7-S	MW7-S	MW7-S	MW7-S	MW7-S	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D	MW8-D
			Sample Date	3/23/2021	6/9/2021	10/5/2021	12/13/2021	3/28/2022	6/1/2020	9/17/2020	12/16/2020	3/23/2021	6/7/2021	10/6/2021	12/13/2021
			Background												
			Sample ID	MW7-S_20210323	MW7S_20210609	MW7-S_20211005	MW7-S_20211213	MW7-S_20220328	20X608058-1165167	MW-8D_20200917	MW8-D_20201216	MW8-D_20210323	MW8-D_20210607	MW8-D_20211006	DUP3_20211213
			Lab Sample ID	PDR015	PUQ378	QWF774	RJM387	SFM281	1165167	NRG092	OLM140	PDR018	PUI333	QWS512	RJM531
			Lab Job Number	C177930	C1F9831	C1T0922	C1Z2957	C282980	20X608058	C0O4512	C0X8319	C177930	C1F8315	C1T3325	C1Z2957
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**											
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.057	< 0.058	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.057	< 0.058	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.10	< 0.10	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline				none	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.10	< 0.10	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Monitoring wells labelled Background are considered to be represenative of background conditions

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location	MW8-D	MW8-D	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	MW8-S	PW19-01
			Sample Date	12/13/2021	3/29/2022	6/1/2020	9/17/2020	12/16/2020	3/23/2021	6/7/2021	10/6/2021	12/13/2021	3/29/2022	5/28/2020
			Background											
			Sample ID	MW8-D_20211213	MW8-D_20220329	20X608058-1165166	MW-8S_20200917	MW8-S_20201216	MW8-S_20210323	MW8-S_20210607	MW8-S_20211006	MW8-S_20211213	MW8-S_20220329	20X606404-1156940
			Lab Sample ID	RJM390	SFM284	1165166	NRG091	OLM139	PDR017	PUI332	QWS511	RJM389	SFM283	1156940
			Lab Job Number	C1Z2957	C282980	20X608058	C0O4512	C0X8319	C177930	C1F8315	C1T3325	C1Z2957	C282980	20X606404
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Toluene	0.06	4.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.001
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.002
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.01
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.05
PHC (>C16-C21)			< 0.10	mg/l	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.10
PHC (>C21-C32)			< 0.1	mg/l	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.098	< 0.090	< 0.1
Reached Baseline				none	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	Y
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.090	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.098	< 0.090	< 0.1
Hydrocarbon Resemblance				none	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NR

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C3
PHC in Groundwater Analytical Results

			Sample Location		PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01	PW19-01
			Sample Date		5/28/2020	9/15/2020	12/16/2020	3/25/2021	3/25/2021	6/9/2021	6/9/2021	10/5/2021	12/13/2021	3/29/2022
			Background											
			Sample ID		20X606404-1156942	PW19-01_20200915	PW19-01_20201216	DUP2_20210325	PW19-01_20210325	DUP1_20210609	PW19-01_20210609	PW19-01_20211005	PW19-01_20211213	PW19-01_20220329
			Lab Sample ID		1156942	NQU659	OLM141	PEB971	PEB976	PUQ385	PUQ382	QWF781	RJM395	SFM290
			Lab Job Number		20X606404	C0O2716	C0X8319	C179966	C179966	C1F9831	C1F9831	C1T0922	C1Z2957	C282980
Parameter	**CDWQ[1]**	**NS-PSS[2]**	**Background[3]**	**Unit**										
Benzene	0.005	4.6	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.06	4.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.14	3.2	< 0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.09	2.8	< 0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX			< 0.01	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)			< 0.05	mg/l	< 0.05	< 0.050	< 0.063	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)			< 0.10	mg/l	< 0.10	< 0.050	0.22	< 0.050	< 0.050	< 0.050	< 0.050	0.074	< 0.050	< 0.050
PHC (>C21-C32)			< 0.1	mg/l	< 0.1	< 0.090	1.7	< 0.090	< 0.090	< 0.090	< 0.090	0.21	< 0.090	< 0.090
Reached Baseline				none	Y	NA	NO	NA	NA	NA	NA	Y	NA	NA
Modified TPH Tier 1		**13 (Gas) 0.84 (Fuel) 0.1 (Lube)**	< 0.1	mg/l	< 0.1	< 0.090	**1.9**	< 0.090	< 0.090	< 0.090	< 0.090	**0.29**	< 0.090	< 0.090
Hydrocarbon Resemblance				none	NR	NA	UC (Fuel/Lube), Lube	NA	NA	NA	NA	UC (Fuel);LOF	NA	NA

Notes:

[1] Health Canada - Canadian Drinking Water Guidelines (CDWG)

[2] Nova Scotia Environment (NSE) Tier II Pathway Specific Standards (PSSs) for groundwater discharge to a surface fresh water body at a greater distance than 10m, Section 5, Table 3, July 6, 2013

[3] Background Concentration - based on 2018 -2020 analytical data (REFERENCE)

VALUE — Results exceeds CDWG

VALUE — Results exceeds NSE-Tier II PSS FRESH/DISTANCE >10m

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested;

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable, LOF=Lube Oil Fraction, GR=Product in Gasoline Range, WFOF=Weathered Fuel Oil Fraction

Units: mg/l=milligram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
			Sample Date	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/6/2020	10/23/2020	11/5/2020
			Sample ID	20X608058-1165256	DIFFUSER_20200717	DIFFUSER_20200729	DIFFUSER_20200811	DIFFUSER_20200824	DIFFUSER_20200908	DIFFUSER_20200924	DIFFUSER_20201006	DUP1_20201006	DIFFUSER_20201023	DIFFUSER_20201105
			Lab Sample ID	1165256	NDH755	NFS559	NIJ481	NLM312	NOK785	NSF571	NUV957	NUW053	NYW160	OBU586
			Lab Job Number	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0Q0953	C0R9712	C0T3354
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Aluminum	**5**	770	ug/l	**439**	**580**	**460**	**450**	**420**	**380**	**710**	**620**	**610**	830	1400
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	3.8	3.4	2.9	3.0	2.8	5.2	4.8	4.8	6.3	9.4
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	57	95	80	< 50	< 50	< 50	< 50	< 50
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.025**	**0.019**	**0.011**	**0.011**	< 0.010	**0.029**	**0.030**	**0.028**	**0.030**	**0.030**
Calcium		1800	ug/l	1300	1400	1600	1700	1900	2000	970	1500	1500	2100	2200
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1
Cobalt	**10**	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	0.44
Copper	**2**	2	ug/l	< 1	< 0.50	0.77	< 0.50	< 0.50	< 0.50	0.96	< 0.50	< 0.50	0.53	0.96
Iron	**300**	790	ug/l	**440**	**610**	**470**	**560**	**540**	**510**	**560**	**610**	**610**	**770**	**1100**
Lead	**1**	1.8	ug/l	0.8	0.94	0.82	0.77	0.75	0.79	**1.3**	0.92	0.88	**1.1**	**1.5**
Magnesium		980	ug/l	400	460	440	460	490	500	520	550	540	710	870
Manganese	**820**	33	ug/l	16	17	20	19	17	14	24	28	28	28	39
Mercury	0.026		ug/l	< 0.026	0.013	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	220	190	160	170	190	350	340	340	360	480
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	3900	4000	4000	4300	4200	4300	4300	4300	5700	5400
Strontium	21000	9.3	ug/l	8	7.8	8.1	8.6	8.9	11	7.1	8.8	9.2	11	12
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	6.1	4.6	5.1	4.7	4.9	8.0	6.5	5.7	10	29
Uranium	300	0.7	ug/l	0.2	0.21	0.25	0.24	0.27	0.26	0.19	0.21	0.20	0.25	0.33
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	2.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5.0	< 5.0	7.3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
		Sample Date	6/1/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021
		Sample ID	20X608058-1165256	DUP1_20201105	DIFFUSER_20201120	DIFFUSER_20201130	DIFFUSER_20201214	DIFFUSER_20201228	DIFFUSER_20210325	DIFFUSER_20210408	DIFFUSER_20210421	DIFFUSER_20210505	DIFFUSER_20210519
		Lab Sample ID	1165256	OBU587	OFF871	OHD063	OKO556	OMT746	PEB837	PGQ140	PJV227	PMO074	PPM344
		Lab Job Number	20X608058	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211
Parameter	NS-EQS[1]	Background[2]	Unit										
Aluminum	5	770	ug/l	439	1100	1000	1300	1100	930	790	610	690	680	590
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	7.6	7.0	10	8.4	8.0	5.5	4.4	5.5	5.2	3.9
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.028	0.030	0.020	0.028	0.025	0.017	0.014	0.025	0.016	0.019
Calcium		1800	ug/l	1300	2000	2000	2900	1800	2800	2000	1300	2300	1700	1400
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	0.45	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	0.98	0.71	0.83	0.72	0.87	0.73	0.57	3.8	0.52	0.59
Iron	300	790	ug/l	440	1100	830	1000	850	900	600	530	570	540	470
Lead	1	1.8	ug/l	0.8	1.5	1.2	1.2	1.1	1.1	0.77	0.82	1.1	0.87	0.77
Magnesium		980	ug/l	400	810	780	920	810	900	620	430	500	520	450
Manganese	820	33	ug/l	16	35	28	33	31	32	23	15	19	19	17
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	4.3	< 2.0	< 2.0	< 2.0	< 2.0	3.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.9	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	110	< 100	< 100
Potassium		900	ug/l	300	380	360	460	430	520	430	320	670	420	300
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	5200	5300	5500	5600	5400	3900	3300	4100	4000	3800
Strontium	21000	9.3	ug/l	8	12	11	14	11	14	8.6	6.1	7.3	8.3	6.1
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	21	16	25	21	17	15	11	12	13	9.1
Uranium	300	0.7	ug/l	0.2	0.33	0.29	0.33	0.23	0.32	0.25	0.22	0.25	0.29	0.24
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	2.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	170	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
		Sample Date	6/1/2020	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021
		Sample ID	20X608058-1165256	DIFFUSER_20210603	DIFFUSER_20210614	DIFFUSER_20210630	DIFFUSER_20210714	DIFFUSER_20210727	DIFFUSER_20210811	DIFFUSER_20210908	DIFFUSER_20210923	DIFFUSER_20211006	DUP1_20211019
		Lab Sample ID	1165256	PST793	PVK702	PZB781	QCI564	QFJ455	QIT123	QPN182	QTA033	QWG510	QZA170
		Lab Job Number	20X608058	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014
Parameter	NS-EQS[1]	Background[2]	Unit										
Aluminum	5	770	ug/l	439	680	600	510	440	430	800	680	850	850	700
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	1.1	1.1	< 1.0	1.4	1.1	1.1	< 1.0
Barium	1000	7	ug/l	< 5	4.9	4.3	4.0	3.8	3.7	5.3	6.2	5.8	6.2	5.5
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.11	0.11	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.018	0.018	< 0.010	< 0.010	< 0.010	0.022	0.010	0.023	0.016	0.014
Calcium		1800	ug/l	1300	2300	1900	2000	2000	2000	1300	2800	2000	2100	2200
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	0.67	0.61	1.0	0.53	0.51	0.56	0.59	0.61	0.51	< 0.50
Iron	300	790	ug/l	440	600	570	520	580	530	840	1000	870	960	790
Lead	1	1.8	ug/l	0.8	0.90	0.83	0.75	0.81	0.73	1.2	1.1	1.1	1.2	0.95
Magnesium		980	ug/l	400	590	550	590	600	630	540	690	680	680	640
Manganese	820	33	ug/l	16	26	27	28	25	20	27	48	39	40	38
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	400	320	400	380	410	210	400	300	380	330
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4000	4300	4600	4800	5000	4600	5000	5200	5000	4600
Strontium	21000	9.3	ug/l	8	10	8.5	9.7	9.5	9.4	7.7	14	10	11	12
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	< 20	8.3	6.1	6.8	6.1	9.2	9.3	8.2	11	9.3
Uranium	300	0.7	ug/l	0.2	0.35	0.36	0.27	0.30	0.28	0.28	0.39	0.32	0.37	0.32
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.6	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
		Sample Date	6/1/2020	10/19/2021	11/2/2021	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	9/24/2020	10/6/2020	10/23/2020
		Sample ID	20X608058-1165256	DIFFUSER_20211019	DIFFUSER_20211102	20X608058-1165174	SW1_20200717	SW1_20200729	SW1_20200811	SW1_20200824	SW1_20200908	SW1_20200924	DUP A_20200924	SW1_20201006	DUP1_20201023
		Lab Sample ID	1165256	QZA169	RCV753	1165174	NDH751	NFS555	NIJ477	NLM308	NOK781	NSF567	NSF572	NUV951	NYW161
		Lab Job Number	20X608058	C1U4014	C1W2029	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0O8769	C0Q0953	C0R9712
Parameter	NS-EQS[1]	Background[2]	Unit												
Aluminum	5	770	ug/l	439	740	890	369	520	450	510	400	360	670	690	610	750
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 2	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	5.8	5.9	< 5	3.1	3.3	3.9	3.0	2.4	4.5	4.4	4.5	5.0
Beryllium	5.3	2	ug/l	< 2	< 0.10	0.11	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	5	< 50	< 50	< 50	78	89	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.017	0.022	< 0.017	0.019	0.017	0.013	< 0.010	0.010	0.021	0.028	0.027	0.024
Calcium		1800	ug/l	1300	2300	2000	500	530	1500	1600	1800	1900	770	800	840	1400
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	< 0.50	0.62	< 1	< 0.50	0.92	< 0.50	0.56	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Iron	300	790	ug/l	440	820	820	428	610	490	790	570	520	550	570	660	690
Lead	1	1.8	ug/l	0.8	2.5	1.2	0.8	0.81	0.84	1.2	0.86	0.81	1.3	1.3	0.93	1.0
Magnesium		980	ug/l	400	670	770	300	350	430	480	470	490	480	490	530	590
Manganese	820	33	ug/l	16	40	30	16	16	20	27	19	22	19	21	33	26
Mercury	0.026		ug/l	< 0.026	—	—	< 0.026	< 0.013	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	350	440	300	220	160	180	180	300	340	350	300	400
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	5000	5200	3700	3900	4000	4300	4300	4600	4300	4600	4800	5100
Strontium	21000	9.3	ug/l	8	12	10	< 5	4.0	8.0	8.9	9.3	9.2	5.3	5.2	6.4	6.9
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	8.5	10	3	4.6	3.8	5.6	5.4	5.7	8.1	7.6	7.1	8.5
Uranium	300	0.7	ug/l	0.2	0.34	0.30	0.2	0.19	0.23	0.23	0.23	0.21	0.19	0.22	0.19	0.21
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2	< 2.0	2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
		Sample Date	6/1/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	11/30/2020	12/14/2020	12/14/2020	12/28/2020	12/28/2020	3/25/2021	3/25/2021	4/8/2021	4/21/2021
		Sample ID	20X608058-1165256	SW1_20201023	SW1_20201105	SW1_20201120	SW1_20201130	DUP1_20201130	DUP1_20201214	SW1_20201214	SW1_20201228	DUP1_20201228	SW1_20210325	DUP4_20210325	SW1_20210408	SW1_20210421
		Lab Sample ID	1165256	NYW153	OBU580	OFF866	OHD057	OHD064	OKO557	OKO550	OMT740	OMT747	PEB831	PEB838	PGQ134	PJV221
		Lab Job Number	20X608058	C0R9712	C0T3354	C0U8920	C0V7696	C0V7696	C0X3829	C0X3829	C0Y4558	C0Y4558	C179941	C179941	C192270	C1A7947
Parameter	NS-EQS[1]	Background[2]	Unit														
Aluminum	5	770	ug/l	439	780	770	710	740	810	720	790	580	550	470	450	440	740
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	5.4	5.1	4.8	5.5	5.7	5.8	6.0	4.4	4.5	3.2	3.0	2.7	5.2
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.032	0.032	0.029	0.022	0.025	0.029	0.97	0.027	0.023	0.015	0.014	0.014	0.016
Calcium		1800	ug/l	1300	880	820	830	1000	970	780	810	680	660	580	530	390	1300
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	< 0.50	< 0.50	0.54	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.65
Iron	300	790	ug/l	440	750	720	600	790	770	540	580	410	430	350	320	320	500
Lead	1	1.8	ug/l	0.8	1.3	1.2	1.4	1.3	1.5	0.98	1.0	0.75	0.77	0.63	0.57	0.64	0.80
Magnesium		980	ug/l	400	570	600	550	620	610	700	720	570	560	410	400	300	500
Manganese	820	33	ug/l	16	26	25	22	29	25	24	26	21	20	16	15	11	20
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	270	250	250	280	270	230	240	240	220	220	210	200	380
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	5000	5200	4800	5300	5200	5900	6100	5400	5100	3900	3900	3300	3900
Strontium	21000	9.3	ug/l	8	6.9	6.7	6.4	8.5	6.8	7.5	7.3	6.1	6.1	4.4	4.3	3.3	7.5
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	8.6	8.3	7.2	9.7	10	7.0	< 20	5.0	5.2	6.1	4.5	4.8	15
Uranium	300	0.7	ug/l	0.2	0.22	0.20	0.19	0.19	0.22	0.17	0.16	0.14	0.15	0.14	0.12	0.12	0.22
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
		Sample Date	6/1/2020	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	9/23/2021	10/6/2021	10/6/2021
		Sample ID	20X608058-1165256	SW1_20210505	SW1_20210519	SW1_20210603	SW1_20210614	SW1_20210630	SW1_20210714	SW1_20210727	SW1_20210811	SW1_20210908	DUP1_20210923	SW1_20210923	DUP1_20211006	SW1_20211006
		Lab Sample ID	1165256	PMO067	PPM339	PST787	PVK696	PZB776	QCI559	QFJ449	QIT117	QPN176	QTA034	QTA027	QWG511	QWG504
		Lab Job Number	20X608058	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1R6341	C1T1039	C1T1039
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Aluminum	**5**	770	ug/l	**439**	**770**	**460**	**600**	**560**	**470**	**370**	**380**	**940**	**650**	**890**	**850**	**770**	**800**
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	1.3	1.1	1.0	< 1.0	1.0
Barium	1000	7	ug/l	< 5	5.3	3.2	4.9	3.9	3.9	3.5	3.6	5.2	5.7	5.9	5.8	5.8	6.0
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.11	0.12	0.11	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.012**	**0.013**	**0.019**	**0.016**	< 0.010	< 0.010	< 0.010	**0.020**	0.010	**0.022**	**0.023**	**0.022**	**0.023**
Calcium		1800	ug/l	1300	1600	790	1800	1800	2000	2000	2000	1300	2600	2000	1900	1900	2200
Chromium		3	ug/l	< 1	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	**2**	2	ug/l	< 1	< 0.50	< 0.50	0.55	0.50	0.50	< 0.50	0.53	0.67	0.53	0.65	< 0.50	< 0.50	< 0.50
Iron	**300**	790	ug/l	**440**	**650**	**360**	**550**	**460**	**510**	**480**	**520**	**820**	**970**	**890**	**860**	**920**	**970**
Lead	**1**	1.8	ug/l	0.8	**1.3**	0.69	0.87	0.79	0.77	0.74	0.72	**1.1**	1.0	**1.1**	**1.1**	**1.1**	**1.1**
Magnesium		980	ug/l	400	510	360	500	530	600	560	640	550	650	670	660	620	710
Manganese	**820**	33	ug/l	16	21	17	22	27	28	23	20	26	44	38	38	36	39
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	430	220	310	320	430	360	410	240	390	340	310	350	320
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4000	3800	3700	4200	4800	4500	5100	4700	4600	5200	5100	4900	5400
Strontium	21000	9.3	ug/l	8	8.1	5.4	8.0	8.3	9.3	8.9	9.5	7.5	13	10	10	9.9	11
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	16	6.1	10	5.4	5.9	5.5	5.2	11	8.2	10	8.3	7.3	9.9
Uranium	300	0.7	ug/l	0.2	0.25	0.17	0.25	0.29	0.29	0.25	0.26	0.29	0.36	0.33	0.31	0.31	0.35
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.9	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
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'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	10/19/2021	11/2/2021	11/2/2021	11/21/2021	11/21/2021	12/1/2021	12/1/2021	12/15/2021	3/24/2022	3/24/2022	4/6/2022	4/6/2022	4/19/2022
			Sample ID	20X608058-1165256	SW1_20211019	DUP1_20211102	SW1_20211102	DUP1_20211121	SW1_20211121	DUP 1_20211201	SW1_20211201	SW1_20211215	DUP1_20220324	SW1_20220324	DUP1_20220406	SW1_20220406	SW1_20220419
			Lab Sample ID	1165256	QZA163	RCV754	RCV729	RIY809	RIY803	RNH012	RNH005	RJJ614	SEH105	SEH099	SHG310	SHG304	SJT836
			Lab Job Number	20X608058	C1U4014	C1W2029	C1W2029	C1Z0716	C1Z0716	C1AG897	C1AG897	C1Z2434	C277826	C277826	C290667	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Aluminum	**5**	770	ug/l	**439**	**670**	**880**	**900**	**860**	**840**	**730**	**730**	**490**	**370**	**370**	**430**	**420**	**440**
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	5.2	5.2	5.3	4.9	5.0	4.9	4.7	3.4	2.4	2.5	2.8	2.7	2.7
Beryllium	5.3	2	ug/l	< 2	< 0.10	0.12	0.14	0.11	0.12	0.12	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.016**	**0.027**	**0.023**	**0.029**	**0.020**	**0.025**	**0.024**	**0.020**	**0.017**	**0.015**	**0.018**	**0.013**	**0.014**
Calcium		1800	ug/l	1300	2100	750	750	740	730	700	700	620	400	400	700	670	620
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	**2**	2	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Iron	**300**	790	ug/l	**440**	**750**	**760**	**780**	**750**	**720**	**560**	**540**	**390**	280	290	**330**	**320**	**330**
Lead	**1**	1.8	ug/l	0.8	0.93	**1.2**	**1.2**	**1.1**	**1.1**	**1.1**	**1.1**	0.88	0.56	0.59	0.69	0.66	0.62
Magnesium		980	ug/l	400	630	620	630	630	610	530	510	390	320	330	350	330	350
Manganese	**820**	33	ug/l	16	38	22	22	21	21	19	19	17	13	13	14	13	15
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	350	260	250	220	220	260	250	300	200	210	250	240	230
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4900	5100	5200	5500	5400	4600	4500	3600	3400	3400	3500	3400	3600
Strontium	21000	9.3	ug/l	8	11	7.1	7.1	6.7	6.9	5.9	6.0	4.5	3.2	3.2	4.4	4.3	4.1
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	7.4	8.8	8.2	8.3	8.2	7.3	9.6	6.3	4.5	4.7	5.4	4.9	4.0
Uranium	300	0.7	ug/l	0.2	0.30	0.20	0.19	0.20	0.19	0.19	0.17	0.16	0.13	0.12	0.20	0.18	0.21
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
		Sample Date	6/1/2020	11/8/2018	4/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020
		Sample ID	20X608058-1165256	SW2_20181108	20X589937-1062436	20X608058-1165251	SW2_20200717	SW2_20200729	SW2_20200811	SW2_20200824	SW2_20200908	SW2_20200924	SW2_20201006	SW2_20201023	SW2_20201105	SW2_20201120
		Lab Sample ID	1165256	9698383	1062436	1165251	NDH752	NFS556	NIJ478	NLM309	NOK782	NSF568	NUV952	NYW154	OBU581	OFF867
		Lab Job Number	20X608058	18X408633	20X589937	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354	C0U8920
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Aluminum	**5**	770	ug/l	**439**	**735**	**423**	**467**	**580**	**520**	**650**	**420**	**450**	**720**	**660**	**810**	**1100**	**1000**
Antimony	20	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	5	< 5	< 5	4.3	3.5	4.3	3.5	4.4	4.9	5.1	11	7.6	6.6
Beryllium	5.3	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	18	18	9	< 50	< 50	130	93	91	< 50	< 50	< 50	< 50	< 50
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**< 0.09**	**< 0.017**	**0.017**	**0.026**	0.010	**0.018**	< 0.010	**0.012**	**0.029**	**0.034**	**0.026**	**0.030**	**0.028**
Calcium		1800	ug/l	1300	2900	3600	1300	1400	1500	2000	2000	2200	890	1900	2800	2000	1800
Chromium		3	ug/l	< 1	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	< 1	< 1	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	**2**	2	ug/l	< 1	< 1	1	1	< 0.50	0.82	< 0.50	< 0.50	< 0.50	0.59	< 0.50	0.82	0.91	0.71
Iron	**300**	790	ug/l	**440**	**538**	**753**	**423**	**630**	**490**	**760**	**550**	**690**	**570**	**660**	**740**	**1000**	**860**
Lead	**1**	1.8	ug/l	0.8	**1.2**	0.7	**1.1**	0.99	0.84	**1.3**	0.81	**1.1**	**1.3**	0.95	**1.1**	**1.4**	**1.2**
Magnesium		980	ug/l	400	700	700	400	450	450	540	490	550	530	620	830	820	750
Manganese	**820**	33	ug/l	16	21	18	16	18	20	22	17	17	24	29	170	34	28
Mercury	0.026		ug/l	< 0.026	< 0.026	< 0.026	< 0.026	0.013	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2	2	6	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 20	< 20	30	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	400	400	300	230	170	180	240	280	380	390	500	400	370
Selenium	**1**	1	ug/l	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4900	4500	3800	3900	4100	4400	4300	4400	4400	4700	5100	5300	5300
Strontium	21000	9.3	ug/l	8	17	16	7	8.1	8.0	10	9.8	11	6.5	11	13	11	10
Thallium	0.8	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	7	4	5	6.0	5.1	9.8	5.7	6.6	8.3	7.5	9.2	18	14
Uranium	300	0.7	ug/l	0.2	0.2	0.3	0.2	0.22	0.22	0.32	0.23	0.27	0.17	0.20	0.26	0.33	0.26
Vanadium	**6**	2.1	ug/l	< 2	< 2	< 2	< 2	< 2.0	2.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5	< 5	13	< 5.0	< 5.0	< 5.0	< 5.0	6.9	< 5.0	< 5.0	6.6	5.9	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
			Sample Date	6/1/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021
			Sample ID	20X608058-1165256	SW2_20201130	SW2_20201214	SW2_20201228	SW2_20210325	SW2_20210408	SW2_20210421	SW2_20210505	SW2_20210519	DUP1_20210603	SW2_20210603	SW2_20210614	SW2_20210630	SW2_20210714
			Lab Sample ID	1165256	OHD058	OKO551	OMT741	PEB832	PGQ135	PJV222	PMO068	PPM340	PST794	PST788	PVK697	PZB777	QCI560
			Lab Job Number	20X608058	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1F0842	C1G3518	C1I1014	C1J6542
Parameter	NS-EQS[1]	Background[2]	Unit														
Aluminum	**5**	770	ug/l	**439**	**1300**	**1000**	**940**	**700**	**610**	**860**	**870**	**610**	**660**	**650**	**680**	**440**	**430**
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1
Barium	1000	7	ug/l	< 5	9.2	11	8.2	5.4	3.9	5.3	6.5	5.1	5.1	5.0	4.4	4.1	3.9
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.023**	**0.030**	**0.023**	**0.014**	**0.016**	**0.014**	**0.016**	**0.024**	**0.017**	**0.017**	**0.017**	**0.013**	< 0.010
Calcium		1800	ug/l	1300	2900	1600	2600	2000	1100	1900	2100	1500	2200	2200	1900	2000	2000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	0.51	< 0.40	0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	**2**	2	ug/l	< 1	0.85	0.62	1.0	0.58	0.83	0.96	0.96	< 0.50	0.61	0.68	0.59	1.1	0.65
Iron	**300**	790	ug/l	**440**	**1000**	**820**	**890**	**550**	**460**	**620**	**750**	**530**	**570**	**590**	**560**	**470**	**530**
Lead	**1**	1.8	ug/l	0.8	**1.2**	**1.1**	**1.2**	0.68	0.75	0.86	**1.2**	0.87	0.91	0.90	0.84	0.73	0.78
Magnesium		980	ug/l	400	920	820	870	590	420	580	600	460	560	580	540	550	600
Manganese	**820**	33	ug/l	16	33	30	31	22	15	20	22	18	25	26	26	25	25
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	460	420	510	420	300	450	500	310	380	400	320	370	380
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	5500	5800	5500	3700	3300	3900	4100	3700	4000	4100	4300	4200	4700
Strontium	21000	9.3	ug/l	8	14	10	13	9.2	5.5	8.8	9.5	7.7	10	9.5	8.3	9.1	9.5
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	25	17	17	16	9.0	< 20	18	11	10	12	9.7	6.2	5.9
Uranium	300	0.7	ug/l	0.2	0.31	0.20	0.27	0.26	0.19	0.30	0.30	0.27	0.31	0.29	0.33	0.26	0.29
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
		Sample Date	6/1/2020	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022
		Sample ID	20X608058-1165256	SW2_20210727	SW2_20210811	SW2_20210908	SW2_20210923	SW2_20211006	SW2_20211019	SW2_20211102	SW2_20211121	SW2_20211201	SW2_20211215	SW2_20220324	SW2_20220406	SW2_20220419
		Lab Sample ID	1165256	QFJ450	QIT118	QPN177	QTA028	QWG505	QZA164	RCV730	RIY804	RNH006	RJJ615	SEH100	SHG305	SJT837
		Lab Job Number	20X608058	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126
Parameter	NS-EQS[1]	Background[2]	Unit													
Aluminum	5	770	ug/l	439	390	790	650	900	850	750	870	850	820	560	480	430	500
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	1.1	< 1.0	1.3	1.1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	3.8	5.5	5.9	6.2	6.0	6.0	6.1	5.9	5.2	3.6	4.3	3.1	3.5
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	0.11	0.12	< 0.10	0.11	0.13	0.12	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.012	0.018	0.015	0.024	0.021	0.018	0.022	0.024	0.024	0.021	0.016	0.018	0.015
Calcium		1800	ug/l	1300	2200	1400	2700	2200	2200	2300	2300	2200	1100	730	2900	1400	1500
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	1.3	0.59	0.69	0.56	< 0.50	0.67	0.56	< 0.50	< 0.50	< 0.50	0.59	< 0.50	1.8
Iron	300	790	ug/l	440	510	790	1000	880	1000	890	810	740	600	400	380	330	800
Lead	1	1.8	ug/l	0.8	0.76	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.2	0.93	0.71	0.64	0.98
Magnesium		980	ug/l	400	610	500	670	720	730	680	790	780	590	410	650	410	490
Manganese	820	33	ug/l	16	19	27	45	41	41	40	30	24	20	17	17	13	19
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	390	220	430	320	320	370	470	460	350	320	420	300	340
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4900	4300	4700	5400	5400	4900	5300	5300	4800	3500	3600	3400	3900
Strontium	21000	9.3	ug/l	8	9.4	7.9	13	11	11	12	12	11	7.1	4.8	11	6.5	6.8
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.9
Titanium		8.5	ug/l	4	6.4	12	9.4	9.4	11	12	12	9.2	11	7.3	10	5.8	7.4
Uranium	300	0.7	ug/l	0.2	0.26	0.28	0.35	0.37	0.34	0.33	0.29	0.31	0.21	0.19	0.40	0.29	0.28
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	5.4	< 5.0	< 5.0	20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.2	18

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	11/8/2018	4/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020
			Sample ID	20X608058-1165256	SW3_20181108	20X589937-1062437	20X608058-1165252	SW3_20200717	SW3_20200729	SW3_20200811	SW3_20200824	SW3_20200908	SW3_20200924	SW3_20201006	SW3_20201023	SW3_20201105	SW3_20201120
			Lab Sample ID	1165256	9698384	1062437	1165252	NDH753	NFS557	NIJ479	NLM310	NOK783	NSF569	NUV953	NYW155	OBU582	OFF868
			Lab Job Number	20X608058	18X408633	20X589937	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354	C0U8920
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Aluminum	**5**	770	ug/l	**439**	**639**	**400**	**572**	**590**	**480**	**700**	**410**	**720**	**770**	**650**	**870**	**1200**	**1600**
Antimony	20	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0
Barium	1000	7	ug/l	< 5	< 5	< 5	< 5	3.8	3.5	4.9	2.7	6.7	5.8	5.5	6.7	8.7	11
Beryllium	5.3	2	ug/l	< 2	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	20	20	15	< 50	< 50	53	96	87	< 50	< 50	< 50	< 50	72
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**< 0.09**	**0.019**	**< 0.017**	**0.023**	**0.014**	**0.019**	< 0.010	**0.020**	**0.031**	**0.029**	**0.025**	**0.030**	**0.037**
Calcium		1800	ug/l	1300	3600	3400	1900	2000	1600	2000	2100	2400	1600	2900	2600	2300	6500
Chromium		3	ug/l	< 1	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2
Cobalt	**10**	1	ug/l	< 1	< 1	< 1	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	0.48	0.73
Copper	**2**	2	ug/l	< 1	< 1	< 1	< 1	< 0.50	0.82	< 0.50	< 0.50	< 0.50	**2.1**	< 0.50	0.56	1.0	1.3
Iron	**300**	790	ug/l	**440**	**441**	**496**	**581**	**640**	**510**	**920**	**540**	**1200**	**590**	**700**	**830**	**1100**	**1600**
Lead	**1**	1.8	ug/l	0.8	1.0	0.7	**1.2**	1.0	0.83	**1.4**	0.78	**1.8**	**1.3**	0.99	**1.2**	**1.5**	**2.0**
Magnesium		980	ug/l	400	700	700	500	540	460	550	490	600	600	790	810	880	1900
Manganese	**820**	33	ug/l	16	18	18	23	20	22	22	15	24	23	35	30	38	61
Mercury	0.026		ug/l	< 0.026	< 0.026	< 0.026	< 0.026	0.017	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	2	3	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 20	50	50	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	400	400	300	240	190	180	230	300	470	370	360	460	600
Selenium	**1**	1	ug/l	< 1	< 1	< 1	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	4600	4500	3900	4000	4000	4200	4400	4400	4500	4400	5100	5300	6200
Strontium	21000	9.3	ug/l	8	19	16	9	10	8.5	10	9.9	12	9.2	14	13	13	26
Thallium	0.8	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	6	5	9	6.1	5.5	15	5.3	15	10	8.2	13	24	37
Uranium	300	0.7	ug/l	0.2	0.2	0.3	0.6	0.56	0.34	0.68	0.32	0.78	0.21	0.45	0.51	0.43	2.6
Vanadium	**6**	2.1	ug/l	< 2	< 2	< 2	< 2	< 2.0	2.4	< 2.0	< 2.0	2.3	< 2.0	< 2.0	< 2.0	2.0	2.8
Zinc	**30**	17	ug/l	< 5	< 5	< 5	6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.5

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021
			Sample ID	20X608058-1165256	SW3_20201130	SW3_20201214	SW3_20201228	SW3_20210325	SW3_20210408	SW3_20210421	SW3_20210505	SW3_20210519	SW3_20210603	SW3_20210614	SW3_20210630	SW3_20210714	SW3_20210727
			Lab Sample ID	1165256	OHD059	OKO552	OMT742	PEB833	PGQ136	PJV223	PMO069	PPM341	PST789	PVK698	PZB778	QCI561	QFJ451
			Lab Job Number	20X608058	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105
Parameter	NS-EQS[1]	Background[2]	Unit														
Aluminum	5	770	ug/l	439	1200	1200	980	870	630	790	740	840	680	710	520	440	440
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.0	1.1	1.1
Barium	1000	7	ug/l	< 5	9.5	8.6	8.6	5.8	4.6	5.9	5.6	6.3	5.2	4.7	4.1	4.0	4.0
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.025	0.026	0.024	0.016	0.014	0.018	0.013	0.017	0.019	0.019	0.012	0.011	< 0.010
Calcium		1800	ug/l	1300	3400	2500	3100	2000	2100	1800	2600	1800	2400	2100	2300	2000	2000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	0.47	< 0.40	0.44	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	0.96	0.84	1.0	0.77	0.66	0.70	0.59	0.91	0.66	0.76	< 0.50	0.63	0.66
Iron	300	790	ug/l	440	1000	930	950	590	570	670	560	840	590	690	580	560	570
Lead	1	1.8	ug/l	0.8	1.2	1.2	1.1	0.74	0.82	0.87	0.85	1.0	0.93	0.91	0.81	0.76	0.79
Magnesium		980	ug/l	400	1000	970	950	620	610	570	710	590	620	580	600	610	600
Manganese	820	33	ug/l	16	38	34	33	24	16	22	23	40	27	37	30	25	21
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	450	560	540	430	340	440	440	350	420	340	450	390	410
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	5700	6100	5400	3900	3500	3700	4000	3800	4200	4200	4500	4700	4800
Strontium	21000	9.3	ug/l	8	16	12	14	8.8	8.8	8.1	11	8.9	10	8.8	10	9.6	9.6
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	24	22	21	15	11	< 20	12	18	13	11	8.0	6.4	9.4
Uranium	300	0.7	ug/l	0.2	0.53	0.40	0.44	0.28	0.47	0.32	0.50	0.40	0.36	0.40	0.33	0.32	0.27
Vanadium	6	2.1	ug/l	< 2	2.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	18

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW04
			Sample Date	6/1/2020	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022	6/1/2020
			Sample ID	20X608058-1165256	SW3_20210811	SW3_20210908	SW3_20210923	SW3_20211006	SW3_20211019	SW3_20211102	SW3_20211121	SW3_20211201	SW3_20211215	SW3_20220324	SW3_20220406	SW3_20220419	20X608058-1165253
			Lab Sample ID	1165256	QIT119	QPN178	QTA029	QWG506	QZA165	RCV731	RIY805	RNH007	RJJ616	SEH101	SHG306	SJT838	1165253
			Lab Job Number	20X608058	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126	20X608058
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Aluminum	**5**	770	ug/l	**439**	**910**	**590**	**880**	**770**	**740**	**950**	**870**	**830**	**560**	**510**	**410**	**430**	**463**
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2
Arsenic	**5**	2	ug/l	< 2	< 1.0	1.2	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2
Barium	1000	7	ug/l	< 5	5.6	5.5	6.0	5.6	6.1	6.3	5.6	6.1	4.0	4.3	3.1	3.3	< 5
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	0.11	0.11	< 0.10	0.12	0.12	0.11	0.10	< 0.10	< 0.10	< 0.10	< 2
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	10
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.022**	**0.011**	**0.021**	**0.015**	**0.016**	**0.022**	**0.021**	**0.026**	**0.023**	**0.020**	**0.016**	**0.013**	**< 0.017**
Calcium		1800	ug/l	1300	1600	2700	2000	2200	3100	2300	2100	2500	1800	2900	1400	1700	1300
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1
Cobalt	**10**	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1
Copper	**2**	2	ug/l	< 1	0.56	0.51	0.60	< 0.50	0.53	0.65	< 0.50	< 0.50	< 0.50	0.53	< 0.50	< 0.50	< 1
Iron	**300**	790	ug/l	**440**	**870**	**980**	**890**	**930**	**830**	**840**	**740**	**620**	**430**	**440**	**310**	**340**	**438**
Lead	**1**	1.8	ug/l	0.8	**1.2**	1.0	**1.1**	1.0	0.97	**1.2**	**1.1**	**1.2**	0.88	0.72	0.61	0.62	1.0
Magnesium		980	ug/l	400	590	650	700	690	850	810	780	810	630	640	400	470	400
Manganese	**820**	33	ug/l	16	37	44	40	39	46	31	23	22	23	19	13	15	17
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	< 0.026
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	50
Potassium		900	ug/l	300	250	400	300	300	380	460	450	450	340	420	280	300	300
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1
Sodium		5400	ug/l	3700	4800	4600	5300	5000	5100	5400	5500	4700	3700	3500	3200	3500	3700
Strontium	21000	9.3	ug/l	8	9.1	13	11	11	14	12	11	12	7.5	11	6.2	7.2	8
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2
Titanium		8.5	ug/l	4	11	7.9	9.9	9.0	9.6	13	9.5	11	7.9	11	5.8	5.9	4
Uranium	300	0.7	ug/l	0.2	0.33	0.34	0.36	0.37	0.55	0.37	0.32	0.60	0.49	0.45	0.27	0.31	0.2
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2
Zinc	**30**	17	ug/l	< 5	< 5.0	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.2	< 5.0	< 5.0	< 5.0	< 5

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
		Sample Date	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020
		Sample ID	20X608058-1165256	SW4_20200717	SW4_20200729	SW4_20200811	SW4_20200824	SW4_20200908	SW4_20200924	SW4_20201006	SW4_20201023	SW4_20201105	SW4_20201120	SW4_20201130	SW4_20201214	SW4_20201228
		Lab Sample ID	1165256	NDH754	NFS558	NIJ480	NLM311	NOK784	NSF570	NUV954	NYW156	OBU583	OFF869	OHD060	OKO553	OMT743
		Lab Job Number	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558
Parameter	NS-EQS[1]	Background[2]	Unit													
Aluminum	5	770	ug/l	439	590	470	470	410	410	730	650	970	1300	1100	1300	1100	960
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	3.8	3.2	3.0	2.9	3.3	5.4	5.2	7.1	8.9	6.7	8.8	8.0	7.7
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	95	86	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.028	0.011	< 0.010	< 0.010	< 0.010	0.033	0.031	0.028	0.029	0.031	0.025	0.028	0.023
Calcium		1800	ug/l	1300	1500	1600	1700	1900	2200	1200	1900	2400	2100	2000	2600	1800	2800
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	0.47	< 0.40	0.43	0.42	< 0.40
Copper	2	2	ug/l	< 1	< 0.50	0.66	< 0.50	< 0.50	< 0.50	0.54	< 0.50	0.74	1.0	1.4	0.89	0.68	0.89
Iron	300	790	ug/l	440	630	470	540	530	560	560	650	920	1200	850	1000	870	920
Lead	1	1.8	ug/l	0.8	0.96	0.77	0.79	0.82	0.90	1.3	0.95	1.7	1.5	1.7	1.4	1.1	1.1
Magnesium		980	ug/l	400	470	450	500	500	540	560	650	810	870	770	860	830	890
Manganese	820	33	ug/l	16	18	19	18	14	13	23	32	32	38	28	33	31	32
Mercury	0.026		ug/l	< 0.026	0.015	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	230	130	120	160	190	380	380	410	440	370	500	460	530
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	3900	4000	4200	4400	4400	4300	4700	5200	5400	5400	5400	5700	5400
Strontium	21000	9.3	ug/l	8	8.4	8.2	8.9	9.8	10	7.8	9.8	12	12	11	14	12	13
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	6.6	4.9	4.0	5.6	5.3	9.5	5.6	15	32	17	24	19	19
Uranium	300	0.7	ug/l	0.2	0.28	0.25	0.26	0.27	0.30	0.18	0.26	0.44	0.37	0.27	0.33	0.22	0.28
Vanadium	6	2.1	ug/l	< 2	< 2.0	2.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	2.3	< 2.0	2.1	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
		Sample Date	6/1/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021
		Sample ID	20X608058-1165256	SW4_20210325	SW4_20210408	SW4_20210421	SW4_20210505	SW4_20210519	SW4_20210603	SW4_20210614	SW4_20210630	SW4_20210714	SW4_20210727	SW4_20210811	SW4_20210908	SW4_20210923
		Lab Sample ID	1165256	PEB834	PGQ137	PJV224	PMO070	PPM342	PST790	PVK699	PZB779	QCI562	QFJ452	QIT120	QPN179	QTA030
		Lab Job Number	20X608058	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341
Parameter	NS-EQS[1]	Background[2]	Unit													
Aluminum	5	770	ug/l	439	760	600	810	760	600	730	620	510	430	380	900	630	860
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.1	1.1	1.0	1.3	1.2
Barium	1000	7	ug/l	< 5	5.4	4.0	5.9	5.7	4.4	6.1	4.5	4.0	3.5	3.5	5.3	5.8	5.9
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.11
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.014	0.017	0.014	0.014	0.040	0.020	0.019	0.012	< 0.010	< 0.010	0.021	0.012	0.024
Calcium		1800	ug/l	1300	2000	1300	1700	1900	1400	2300	2000	2200	2000	2000	1500	2700	2000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	0.61	0.57	0.68	0.54	< 0.50	0.68	0.54	1.0	0.54	0.63	0.59	< 0.50	< 0.50
Iron	300	790	ug/l	440	580	520	660	600	540	690	600	1300	560	490	860	1000	870
Lead	1	1.8	ug/l	0.8	0.68	0.82	0.86	0.93	0.81	1.2	0.87	2.5	0.77	0.71	1.2	1.0	1.1
Magnesium		980	ug/l	400	610	420	550	560	450	610	570	570	590	590	600	660	690
Manganese	820	33	ug/l	16	22	15	21	22	18	28	29	28	23	17	32	44	39
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.1	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	420	310	440	490	270	420	310	490	390	380	260	380	320
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	3800	3300	3700	4100	3700	4000	4200	4400	4600	4800	4800	4700	5200
Strontium	21000	9.3	ug/l	8	8.5	6.0	8.1	8.8	6.8	10	8.5	9.7	9.0	9.1	8.3	12	11
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	14	9.2	19	11	9.0	14	9.2	6.5	6.4	5.3	12	10	10
Uranium	300	0.7	ug/l	0.2	0.28	0.23	0.27	0.28	0.24	0.34	0.34	0.29	0.27	0.25	0.32	0.36	0.32
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW13	SW13
		Sample Date	6/1/2020	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022	11/8/2018	6/1/2020
		Sample ID	20X608058-1165256	SW4_20211006	SW4_20211019	SW4_20211102	SW4_20211121	SW4_20211201	DUP1_20211215	SW4_20211215	SW4_20220324	SW4_20220406	SW4_20220419	SW13_20181108	20X608058-1165254
		Lab Sample ID	1165256	QWG507	QZA166	RCV732	RIY806	RNH011	RJJ620	RJJ617	SEH102	SHG307	SJT839	9698395	1165254
		Lab Job Number	20X608058	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C1Z2434	C277826	C290667	C2A2126	18X408633	20X608058
Parameter	NS-EQS[1]	Background[2]	Unit												
Aluminum	5	770	ug/l	439	810	770	950	910	870	530	560	450	450	430	623	489
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2
Arsenic	5	2	ug/l	< 2	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2
Barium	1000	7	ug/l	< 5	5.7	5.8	6.8	6.2	6.4	3.7	3.6	3.9	3.1	3.4	8	15
Beryllium	5.3	2	ug/l	< 2	< 0.10	< 0.10	0.13	0.12	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 2
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	16	17
Cadmium	0.01	0.1	ug/l	< 0.017	0.020	0.016	0.024	0.024	0.027	0.022	0.022	0.014	0.016	0.012	< 0.09	0.078
Calcium		1800	ug/l	1300	2100	2300	2300	2200	2000	660	670	2600	1400	1700	4000	8300
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	1
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1	2
Copper	2	2	ug/l	< 1	< 0.50	< 0.50	0.53	< 0.50	0.62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2	12
Iron	300	790	ug/l	440	960	820	870	770	670	400	400	350	310	340	497	1240
Lead	1	1.8	ug/l	0.8	1.1	1.0	1.3	1.2	1.3	0.91	0.91	0.74	0.64	0.63	1.2	12.4
Magnesium		980	ug/l	400	700	670	850	810	690	410	400	590	400	470	1100	1800
Manganese	820	33	ug/l	16	38	39	33	25	23	17	17	16	14	14	27	211
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	< 0.026	< 0.026
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Nickel	25	2	ug/l	< 2	< 2.0	2.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	5
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	20	70
Potassium		900	ug/l	300	300	350	470	470	450	300	310	380	310	310	700	1000
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 1
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1
Sodium		5400	ug/l	3700	5300	5000	5700	5600	4900	3600	3600	3400	3400	3500	6100	13400
Strontium	21000	9.3	ug/l	8	11	11	12	12	10	4.6	4.5	10	6.6	7.3	16	30
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Titanium		8.5	ug/l	4	9.5	9.0	13	8.5	13	< 20	9.8	9.9	6.1	6.8	6	10
Uranium	300	0.7	ug/l	0.2	0.35	0.33	0.36	0.30	0.28	0.18	0.15	0.37	0.26	0.31	0.2	0.5
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2
Zinc	30	17	ug/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	9.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	12	39

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/8/2021	4/21/2021
			Sample ID	20X608058-1165256	SW13_20200923	SW13_20201006	SW13_20201023	SW13_20201105	SW13_20201120	DUP1_20201120	SW13_20201130	SW13_20201214	SW13_20201228	SW13_20210325	SW13_20210408	DUP1_20210408	DUP1_20210421
			Lab Sample ID	1165256	NRV927	NUV955	NYW157	OBU584	OFF870	OFF872	OHD061	OKO554	OMT744	PEB835	PGQ138	PGQ141	PJV228
			Lab Job Number	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0U8920	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C192270	C1A7947
Parameter	NS-EQS[1]	Background[2]	Unit														
Aluminum	5	770	ug/l	439	1100	540	580	670	560	600	620	660	970	770	550	540	520
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	1000	7	ug/l	< 5	13	21	11	11	7.4	7.6	9.4	8.5	11	6.2	5.8	5.8	6.7
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.050	0.068	0.035	0.033	0.028	0.029	0.033	0.032	0.040	0.020	0.022	0.022	0.021
Calcium		1800	ug/l	1300	6900	15000	6600	6300	4000	4000	5300	4000	5500	2700	2900	2900	4000
Chromium		3	ug/l	< 1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	0.52	1.0	0.48	0.44	< 0.40	< 0.40	< 0.40	< 0.40	0.53	< 0.40	< 0.40	< 0.40	< 0.40
Copper	2	2	ug/l	< 1	3.9	3.9	2.6	2.0	1.6	1.6	1.6	1.4	2.2	1.4	1.6	1.6	1.9
Iron	300	790	ug/l	440	1000	780	790	780	720	710	740	660	1100	630	580	580	500
Lead	1	1.8	ug/l	0.8	1.7	3.5	1.8	1.3	1.3	1.3	1.3	0.72	1.3	0.70	0.87	0.84	1.0
Magnesium		980	ug/l	400	1200	2000	1400	1700	1400	1400	1500	1500	1600	980	920	910	1100
Manganese	820	33	ug/l	16	42	160	82	59	27	27	51	30	36	18	19	19	30
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	2.7	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	1000	1000	790	830	620	620	700	830	990	620	550	560	640
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	8000	13000	9800	12000	7300	7300	9200	7800	8500	6700	6700	6600	9200
Strontium	21000	9.3	ug/l	8	24	52	23	22	13	14	18	13	19	9.6	10	10	13
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	24	13	8.7	11	7.8	8.1	9.3	< 20	24	15	9.4	9.4	12
Uranium	300	0.7	ug/l	0.2	0.20	0.41	0.40	0.35	0.48	0.50	0.40	0.28	0.20	0.32	0.42	0.40	0.57
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	15	31	13	12	9.5	28	10	8.2	8.2	5.2	6.0	5.3	7.2

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
		Sample Date	6/1/2020	4/21/2021	5/5/2021	5/5/2021	5/19/2021	5/19/2021	6/3/2021	6/14/2021	6/14/2021	6/30/2021	6/30/2021	7/14/2021	7/14/2021
		Sample ID	20X608058-1165256	SW13_20210421	SW13_20210505	DUP1_20210505	DUP1_20210519	SW13_20210519	SW13_20210603	DUP1_20210614	SW13_20210614	SW13_20210630	DUP1_20210630	SW13_20210714	DUP1_20210714
		Lab Sample ID	1165256	PJV225	PMO071	PMO075	PPM345	PPM343	PST791	PVK703	PVK700	PZB780	PZB782	QCI563	QCI565
		Lab Job Number	20X608058	C1A7947	C1C1117	C1C1117	C1D5211	C1D5211	C1F0842	C1G3518	C1G3518	C1I1014	C1I1014	C1J6542	C1J6542
Parameter	NS-EQS[1]	Background[2]	Unit												
Aluminum	5	770	ug/l	439	550	490	520	440	430	570	370	430	320	1300	360	530
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.2	1.6	3.6	2.9	3.3
Barium	1000	7	ug/l	< 5	6.5	7.2	7.6	8.0	7.9	7.2	19	20	16	36	41	45
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.020	0.020	0.020	0.028	0.022	0.025	0.14	0.16	0.11	0.12	0.071	0.087
Calcium		1800	ug/l	1300	3800	4500	4600	6000	5900	4400	16000	15000	14000	23000	21000	23000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	1.0	< 1.0	2.3	1.1	2.1
Cobalt	10	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	3.9	4.4	6.8	9.1	13	14
Copper	2	2	ug/l	< 1	1.8	1.8	1.8	2.1	2.2	2.2	7.7	6.3	5.4	5.7	8.0	4.3
Iron	300	790	ug/l	440	480	590	610	690	650	850	1700	1700	2200	9200	7800	9100
Lead	1	1.8	ug/l	0.8	1.0	1.4	1.4	1.8	1.6	1.3	2.0	2.1	1.9	5.9	2.2	3.1
Magnesium		980	ug/l	400	1100	1200	1300	1600	1500	1200	2900	3000	2700	4200	3800	4000
Manganese	820	33	ug/l	16	29	36	37	69	67	50	990	930	1100	3700	6200	6900
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	7.7	8.5	8.7	8.5	8.1	8.9
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	120	< 100	< 100
Potassium		900	ug/l	300	600	690	710	720	680	540	950	1000	930	1200	1200	1300
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	8800	8400	8600	11000	10000	7700	28000	25000	22000	45000	40000	43000
Strontium	21000	9.3	ug/l	8	12	15	15	19	19	15	54	50	48	87	82	87
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	8.6	6.9	9.6	8.3	9.0	11	9.9	12	5.7	62	13	20
Uranium	300	0.7	ug/l	0.2	0.57	0.74	0.76	0.85	0.80	0.66	0.32	0.35	0.35	0.61	0.49	0.57
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.6	< 2.0	2.0
Zinc	30	17	ug/l	< 5	6.4	8.7	6.7	6.4	6.4	7.0	28	29	19	27	21	19

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
		Sample Date	6/1/2020	7/27/2021	7/27/2021	8/11/2021	8/11/2021	9/1/2021	9/8/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021
		Sample ID	20X608058-1165256	DUP1_20210727	SW13_20210727	DUP1_20210811	SW13_20210811	SW13_20210901	DUP1_20210908	SW13_20210908	SW13_20210923	SW13_20211006	SW13_20211019	SW13_20211102
		Lab Sample ID	1165256	QFJ456	QFJ453	QIT124	QIT121	QNT693	QPN183	QPN180	QTA031	QWG508	QZA167	RCV733
		Lab Job Number	20X608058	C1L1105	C1L1105	C1M6832	C1M6832	C1P1197	C1P9560	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029
Parameter	NS-EQS[1]	Background[2]	Unit											
Aluminum	5	770	ug/l	439	250	250	560	630	490	470	480	160	310	430	690
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	4.1	3.9	1.6	1.6	1.8	1.8	2.0	2.7	1.3	1.5	< 1.0
Barium	1000	7	ug/l	< 5	44	40	13	13	14	13	14	24	15	13	8.4
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	82	< 50	< 50
Cadmium	0.01	0.1	ug/l	< 0.017	0.045	0.039	0.037	0.039	0.035	0.028	0.031	0.030	0.027	0.029	0.029
Calcium		1800	ug/l	1300	21000	20000	8300	8500	9300	11000	11000	23000	12000	12000	4600
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	16	15	1.1	1.1	1.6	1.1	1.2	5.6	1.3	0.72	< 0.40
Copper	2	2	ug/l	< 1	2.6	2.6	4.4	4.7	3.4	2.6	2.7	1.8	3.2	2.0	1.8
Iron	300	790	ug/l	440	11000	9800	1500	1500	1800	2200	2300	5000	1500	1900	1100
Lead	1	1.8	ug/l	0.8	1.7	1.6	5.8	5.9	5.0	4.3	4.4	0.74	4.3	3.2	0.96
Magnesium		980	ug/l	400	4700	4600	1900	2000	2400	2100	2100	3500	2400	2500	1500
Manganese	820	33	ug/l	16	5400	5000	260	290	210	250	250	2000	250	180	33
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	7.6	7.3	2.6	2.7	3.2	3.0	2.9	4.6	2.7	< 2.0	< 2.0
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	1700	1600	770	810	1100	1100	1100	1100	1000	1200	810
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	38000	36000	12000	13000	13000	14000	14000	37000	19000	15000	7800
Strontium	21000	9.3	ug/l	8	80	74	27	29	30	37	37	84	41	37	16
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	5.7	5.4	11	12	13	15	15	3.0	4.3	12	10
Uranium	300	0.7	ug/l	0.2	0.31	0.29	0.99	1.0	0.81	0.94	0.96	0.20	0.51	0.95	0.48
Vanadium	6	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	11	10	12	13	12	12	13	8.7	9.9	8.9	7.1

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW14	SW14	SW14
		Sample Date	6/1/2020	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022	4/19/2022	11/8/2018	9/23/2020	3/25/2021
		Sample ID	20X608058-1165256	SW13_20211121	SW13_20211201	SW13_20211215	SW13_20220324	SW13_20220406	DUP1_20220419	SW13_20220419	SW14_20181108	SW14_20200923	SW14_20210325
		Lab Sample ID	1165256	RIY807	RNH013	RJJ618	SEH103	SHG308	SJT842	SJT840	9698396	NRV928	PEB836
		Lab Job Number	20X608058	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126	C2A2126	18X408633	C0O7061	C179941
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Aluminum	**5**	770	ug/l	**439**	**580**	**580**	**510**	**460**	**700**	**470**	**520**	**2440**	**260**	**350**
Antimony	20	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	2.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	1.3	1.4
Barium	1000	7	ug/l	< 5	7.8	6.7	6.3	6.3	6.2	6.1	6.4	60	51	61
Beryllium	5.3	2	ug/l	< 2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 2	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Boron	1200	50	ug/l	11	< 50	< 50	< 50	< 50	< 50	< 50	< 50	116	120	57
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.034**	**0.024**	**0.030**	**0.017**	**0.016**	**0.013**	**0.017**	**0.10**	**0.097**	**0.023**
Calcium		1800	ug/l	1300	4700	3200	3300	3500	3000	4100	4300	84900	63000	70000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	1	< 0.40	< 0.40
Copper	**2**	2	ug/l	< 1	1.5	1.3	1.3	1.3	1.6	1.7	**2.3**	**12**	**10**	**4.9**
Iron	**300**	790	ug/l	**440**	**760**	**620**	**580**	**440**	**580**	**600**	**670**	**3320**	250	**430**
Lead	**1**	1.8	ug/l	0.8	0.64	0.65	0.88	0.56	0.68	0.97	0.90	**9.4**	**1.6**	< 0.50
Magnesium		980	ug/l	400	1600	1100	1100	1100	950	1200	1400	3500	3000	7500
Manganese	**820**	33	ug/l	16	31	33	40	21	14	25	27	79	6.6	13
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	< 0.026	—	—
Molybdenum	73	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	5	< 2.0	2.2
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	70	< 100	< 100
Potassium		900	ug/l	300	790	620	590	600	680	630	710	3600	3600	8500
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Sodium		5400	ug/l	3700	8400	6300	6900	9300	5700	7500	8200	4700	4900	13000
Strontium	21000	9.3	ug/l	8	16	11	11	12	11	13	13	279	210	210
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2.0	< 2.0
Titanium		8.5	ug/l	4	6.6	7.8	7.5	12	19	12	11	80	9.7	16
Uranium	300	0.7	ug/l	0.2	0.48	0.41	0.47	0.60	0.57	0.77	0.83	0.7	0.27	2.2
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	4	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	6.9	6.2	7.3	8.0	7.0	6.6	13	**73**	**55**	8.1

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
		Sample Date	6/1/2020	7/23/2019	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/30/2020	12/14/2020	12/28/2020	4/8/2021
		Sample ID	20X608058-1165256	19X496499-374957	20X608058-1165255	SW19-20_20200923	SW19-20_20201006	SW19-20_20201023	SW19-20_20201105	SW19-20_20201130	SW19-20_20201214	SW19-20_20201228	SW19-20_20210408
		Lab Sample ID	1165256	374957	1165255	NRV929	NUV956	NYW159	OBU585	OHD062	OKO555	OMT745	PGQ139
		Lab Job Number	20X608058	19X496499	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0V7696	C0X3829	C0Y4558	C192270
Parameter	NS-EQS[1]	Background[2]	Unit										
Aluminum	5	770	ug/l	439	44	16	7000	200	48	1100	7800	1600	9200	110
Antimony	20	2	ug/l	< 2	< 2	2	5.9	2.6	< 1.0	1.4	1.9	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	< 2	< 2	6.4	< 1.0	1.4	1.7	5.5	2.0	5.2	1.0
Barium	1000	7	ug/l	< 5	19	27	73	31	37	34	94	50	130	58
Beryllium	5.3	2	ug/l	< 2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bismuth		2	ug/l	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	1180	749	340	510	710	370	810	530	260	490
Cadmium	0.01	0.1	ug/l	< 0.017	< 0.017	< 0.017	0.11	0.019	0.021	0.019	0.15	0.027	0.048	0.033
Calcium		1800	ug/l	1300	280000	190000	96000	130000	170000	110000	280000	160000	110000	130000
Chromium		3	ug/l	< 1	1	< 1	8.5	< 1.0	< 1.0	1.5	8.9	2.1	10	< 1.0
Cobalt	10	1	ug/l	< 1	< 1	1	4.5	0.91	2.8	1.3	5.1	3.5	4.3	2.3
Copper	2	2	ug/l	< 1	2	2	15	2.0	0.95	3.3	12	2.7	11	1.9
Iron	300	790	ug/l	440	449	1630	9300	610	1600	1500	8500	3900	9200	540
Lead	1	1.8	ug/l	0.8	< 0.5	< 0.5	12	< 0.50	< 0.50	0.94	12	1.5	6.2	< 0.50
Magnesium		980	ug/l	400	22900	17200	6600	7900	15000	8900	24000	14000	15000	14000
Manganese	820	33	ug/l	16	401	567	390	690	2700	640	2700	2300	700	1500
Mercury	0.026		ug/l	< 0.026	< 0.026	< 0.026	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	< 2	< 2	3.6	2.1	2.0	3.5	11	< 2.0	2.7	< 2.0
Nickel	25	2	ug/l	< 2	6	14	11	< 2.0	3.1	3.0	11	4.4	9.4	2.5
Phosphorus		140	ug/l	40	< 20	< 20	290	< 100	< 100	< 100	210	120	190	< 100
Potassium		900	ug/l	300	21200	13000	11000	13000	13000	8900	14000	11000	15000	9300
Selenium	1	1	ug/l	< 1	1	2	< 0.50	< 0.50	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	30300	35800	9800	16000	27000	16000	32000	24000	19000	21000
Strontium	21000	9.3	ug/l	8	1130	814	540	610	730	470	1200	670	440	510
Thallium	0.8	0.1	ug/l	< 0.1	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10
Tin		2	ug/l	< 2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	2	< 2	270	7.3	< 2.0	37	240	68	360	4.5
Uranium	300	0.7	ug/l	0.2	30.9	10.7	2.3	2.8	7.9	4.2	110	7.0	8.8	36
Vanadium	6	2.1	ug/l	< 2	< 2	< 2	13	< 2.0	< 2.0	2.3	12	2.7	14	< 2.0
Zinc	30	17	ug/l	< 5	6	9	43	< 5.0	5.2	9.8	51	10	27	6.8

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
		Sample Date	6/1/2020	4/21/2021	5/5/2021	6/3/2021	6/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021
		Sample ID	20X608058-1165256	SW19-20_20210421	SW19-20_20210505	SW19-20_20210603	SW19-20_20210614	SW19-20_20210727	SW19-20_20210811	SW19-20_20210908	SW19-20_20210923	SW19-20_20211006	SW19-20_20211019
		Lab Sample ID	1165256	PJV226	PMO073	PST792	PVK701	QFJ454	QIT122	QPN181	QTA032	QWG509	QZA168
		Lab Job Number	20X608058	C1A7947	C1C1117	C1F0842	C1G3518	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014
Parameter	NS-EQS[1]	Background[2]	Unit										
Aluminum	5	770	ug/l	439	650	49	1000	92	350	1200	220	1300	570	150
Antimony	20	2	ug/l	< 2	1.1	< 1.0	< 1.0	2.1	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0
Arsenic	5	2	ug/l	< 2	2.5	1.4	2.4	1.4	1.4	3.1	1.5	2.8	2.2	1.7
Barium	1000	7	ug/l	< 5	59	52	49	45	39	49	44	46	34	46
Beryllium	5.3	2	ug/l	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	520	660	510	980	1100	770	460	700	490	320
Cadmium	0.01	0.1	ug/l	< 0.017	0.031	0.035	0.029	0.029	0.030	0.027	0.032	0.039	0.018	0.033
Calcium		1800	ug/l	1300	160000	190000	130000	210000	220000	150000	140000	170000	130000	120000
Chromium		3	ug/l	< 1	1.1	< 1.0	1.5	2.4	< 1.0	1.7	< 1.0	1.8	< 1.0	< 1.0
Cobalt	10	1	ug/l	< 1	1.3	1.3	1.2	1.9	3.6	4.1	1.7	5.2	3.4	9.7
Copper	2	2	ug/l	< 1	4.0	3.0	3.4	8.8	1.2	2.8	6.3	3.0	2.0	3.5
Iron	300	790	ug/l	440	1200	350	1400	880	1200	3700	780	4200	2500	990
Lead	1	1.8	ug/l	0.8	0.58	< 0.50	0.83	< 0.50	< 0.50	1.4	< 0.50	2.9	0.99	0.51
Magnesium		980	ug/l	400	16000	20000	14000	26000	29000	20000	15000	21000	16000	15000
Manganese	820	33	ug/l	16	850	1300	690	2200	6500	5400	1600	7500	5100	4200
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	2.7	3.0	3.6	5.8	6.6	7.5	6.4	9.4	8.8	8.7
Nickel	25	2	ug/l	< 2	2.7	2.7	2.8	4.7	6.0	4.9	4.2	5.2	3.6	2.4
Phosphorus		140	ug/l	40	310	< 100	100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	15000	13000	12000	14000	15000	11000	16000	14000	11000	14000
Selenium	1	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.67
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	21000	23000	17000	34000	40000	25000	25000	28000	21000	23000
Strontium	21000	9.3	ug/l	8	640	760	520	750	800	560	520	610	440	410
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	24	2.5	49	4.3	15	50	7.5	46	25	7.5
Uranium	300	0.7	ug/l	0.2	49	120	49	130	52	52	37	54	28	33
Vanadium	6	2.1	ug/l	< 2	2.0	< 2.0	2.1	< 2.0	< 2.0	2.5	< 2.0	2.3	< 2.0	< 2.0
Zinc	30	17	ug/l	< 5	11	7.1	6.1	38	14	9.8	5.8	11	5.3	< 5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C4
Metals in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022
			Sample ID	20X608058-1165256	SW19-20_20211102	SW19-20_20211121	SW19-20_20211201	SW19-20_20211215	SW19-20_20220324	SW19-20_20220406	SW19-20_20220419
			Lab Sample ID	1165256	RCV734	RIY808	RNH014	RJJ619	SEH104	SHG309	SJT841
			Lab Job Number	20X608058	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**								
Aluminum	**5**	770	ug/l	**439**	**170**	**150**	**280**	**120**	**23**	**50**	**150**
Antimony	20	2	ug/l	< 2	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	**5**	2	ug/l	< 2	1.8	1.1	1.4	1.6	< 1.0	< 1.0	1.7
Barium	1000	7	ug/l	< 5	29	26	27	64	45	33	47
Beryllium	5.3	2	ug/l	< 2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Boron	1200	50	ug/l	11	150	180	110	480	440	260	730
Cadmium	**0.01**	0.1	ug/l	**< 0.017**	**0.018**	**0.023**	**0.015**	**0.042**	**0.021**	**0.013**	**0.027**
Calcium		1800	ug/l	1300	71000	77000	66000	150000	170000	110000	180000
Chromium		3	ug/l	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cobalt	**10**	1	ug/l	< 1	3.4	1.2	0.63	3.8	0.95	0.62	4.5
Copper	**2**	2	ug/l	< 1	**3.1**	**21**	**2.3**	1.3	1.5	1.6	1.2
Iron	**300**	790	ug/l	**440**	**320**	**700**	**550**	**2400**	**550**	**320**	**4800**
Lead	**1**	1.8	ug/l	0.8	< 0.50	0.84	0.54	< 0.50	< 0.50	< 0.50	< 0.50
Magnesium		980	ug/l	400	9000	9500	7400	19000	19000	12000	23000
Manganese	**820**	33	ug/l	16	720	**1000**	370	**2700**	810	540	**2800**
Mercury	0.026		ug/l	< 0.026	—	—	—	—	—	—	—
Molybdenum	73	2	ug/l	< 2	7.0	3.6	2.1	< 2.0	< 2.0	< 2.0	< 2.0
Nickel	25	2	ug/l	< 2	< 2.0	< 2.0	< 2.0	3.0	2.0	< 2.0	3.4
Phosphorus		140	ug/l	40	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Potassium		900	ug/l	300	11000	8800	7300	9800	8800	7900	10000
Selenium	**1**	1	ug/l	< 1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Silver	0.1	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium		5400	ug/l	3700	15000	13000	8000	24000	20000	12000	29000
Strontium	21000	9.3	ug/l	8	210	230	170	470	530	360	590
Thallium	0.8	0.1	ug/l	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin		2	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Titanium		8.5	ug/l	4	8.9	4.7	14	4.8	< 2.0	< 2.0	7.7
Uranium	300	0.7	ug/l	0.2	22	22	15	40	84	38	72
Vanadium	**6**	2.1	ug/l	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Zinc	**30**	17	ug/l	< 5	< 5.0	15	< 5.0	11	5.2	< 5.0	7.7

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 - 2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
			Sample Date	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/6/2020	10/23/2020
			Sample ID	20X608058-1165256	DIFFUSER_20200717	DIFFUSER_20200729	DIFFUSER_20200811	DIFFUSER_20200824	DIFFUSER_20200908	DIFFUSER_20200924	DIFFUSER_20201006	DUP1_20201006	DIFFUSER_20201023
			Lab Sample ID	1165256	NDH755	NFS559	NIJ481	NLM312	NOK785	NSF571	NUV957	NUW053	NYW160
			Lab Job Number	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0Q0953	C0R9712
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	0.055	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.180	0.230	0.250	0.200	0.230	0.210	0.220	0.220	0.190
BOD Carbonaceous		5	mg/l	—	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.8	< 2.0	< 10
Cation Sum		0.44	meq/l	0.33	0.310	0.320	0.320	0.350	0.350	0.350	0.340	0.340	0.460
Chemical Oxygen Demand		53	mg/l	39	68	47	48	47	40	77	66	63	74
Chloride ion		13	mg/l	4	6.5	5.8	6.9	6.7	6.0	7.5	7.8	7.7	6.7
Color		200	tcu	159	210	180	180	160	150	200	200	190	210
Electrical Conductivity		68	umhos/cm	33	37	35	37	38	38	49	42	43	48
Fluoride		0.12	mg/l	< 0.12	< 0.10	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	5.4	5.8	6.1	6.7	7.2	4.6	6.1	6.0	8.1
Ion Balance		45	%	12.7	26.5	16.4	12.3	27.3	20.7	25.0	21.4	21.4	41.5
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	0.060	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	0.060	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.03	5.36	6.03	5.99	6.16	4.32	5.53	5.72	5.04
Phenol	4	0.02	mg/l	< 0.004	0.037	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	3.3	2.7	2.6	2.1	2.1	3.5	3.6	3.6	6.2
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	< 2.0	3.3	2.7	< 2.0	2.8	< 2.0	< 2.0	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	16	19	19	17	18	18	19	19	23
Total Organic Carbon (TOC)		34.4	mg/l	14.7	20	17	16	16	14	28	22	22	25
Total Suspended Solids			mg/l	< 5	—	—	—	—	—	—	—	—	—
Turbidity		2.5	ntu	1.3	1.3	1.1	1.5	1.6	1.5	2.7	1.2	1.5	4.2

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
Sample Date				6/1/2020	11/5/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021
Sample ID				20X608058-1165256	DIFFUSER_20201105	DUP1_20201105	DIFFUSER_20201120	DIFFUSER_20201130	DIFFUSER_20201214	DIFFUSER_20201228	DIFFUSER_20210325	DIFFUSER_20210408	DIFFUSER_20210421
Lab Sample ID				1165256	OBU586	OBU587	OFF871	OHD063	OKO556	OMT746	PEB837	PGQ140	PJV227
Lab Job Number				20X608058	C0T3354	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947
Parameter	NS-EQS[1]	Background[2]	Unit										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.300	0.240	0.250	0.340	0.370	0.390	0.250	0.140	0.150
BOD Carbonaceous		5	mg/l	—	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.5	< 5.0
Cation Sum		0.44	meq/l	0.33	0.480	0.450	0.450	0.510	0.440	0.500	0.350	0.280	0.380
Chemical Oxygen Demand		53	mg/l	39	81	79	76	57	63	54	31	48	48
Chloride ion		13	mg/l	4	8.8	8.6	8.9	9.0	11	11	6.8	5.0	5.4
Color		200	tcu	159	220	220	210	190	180	140	120	140	170
Electrical Conductivity		68	umhos/cm	33	51	49	48	53	52	54	35	32	33
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	9.0	8.5	8.3	11	7.8	11	7.5	5.0	7.9
Ion Balance		45	%	12.7	23.1	30.4	28.6	20.0	8.64	12.4	16.7	33.3	43.4
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.045	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.16	5.05	4.86	5.99	5.57	5.89	6.21	5.19	5.42
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	6.4	6.4	6.1	6.4	6.5	5.4	3.7	2.5	2.5
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	2.2	< 2.0	< 2.0	4.2	2.4	3.3	2.6	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	28	25	24	30	30	31	21	13	16
Total Organic Carbon (TOC)		34.4	mg/l	14.7	26	28	25	22	24	19	11	15	15
Total Suspended Solids			mg/l	< 5	—	—	—	—	3.8	4.7	1.2	2.8	3.4
Turbidity		2.5	ntu	1.3	13	15	7.6	14	11	15	11	7.9	6.3

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
Sample Date				6/1/2020	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021
Sample ID				20X608058-1165256	DIFFUSER_20210505	DIFFUSER_20210519	DIFFUSER_20210603	DIFFUSER_20210614	DIFFUSER_20210630	DIFFUSER_20210714	DIFFUSER_20210727	DIFFUSER_20210811	DIFFUSER_20210908
Lab Sample ID				1165256	PMO074	PPM344	PST793	PVK702	PZB781	QCI564	QFJ455	QIT123	QPN182
Lab Job Number				20X608058	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	5.3	< 1.0	< 1.0	< 1.0	5.2	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	5.3	< 5.0	< 5.0	< 5.0	5.2	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.063	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.230	0.140	0.370	0.190	0.240	0.320	0.390	0.210	0.240
BOD Carbonaceous		5	mg/l	—	< 5.0	< 2.0	< 3.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.340	0.300	0.370	0.360	0.380	0.390	0.400	0.350	0.460
Chemical Oxygen Demand		53	mg/l	39	44	46	48	44	39	43	45	76	57
Chloride ion		13	mg/l	4	5.7	5.0	5.6	4.6	5.5	5.7	6.2	7.6	6.5
Color		200	tcu	159	180	170	180	180	170	140	140	230	220
Electrical Conductivity		68	umhos/cm	33	35	32	38	37	39	40	39	38	43
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	6.4	5.3	8.2	7.0	7.5	7.4	7.6	5.5	10
Ion Balance		45	%	12.7	19.3	36.4	0	30.9	22.6	9.86	1.27	25.0	31.4
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	-4.10	NC	NC	NC	-4.11	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	-4.35	NC	NC	NC	-4.36	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	0.027	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.64	5.28	6.10	6.28	6.23	6.39	6.15	5.14	6.23
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0012	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.2	2.0	2.6	2.4	1.6	1.6	1.1	4.2	4.9
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	10.2	NC	NC	NC	10.3	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	10.5	NC	NC	NC	10.5	NC	NC
Sulphate		6	mg/l	7	3.4	< 2.0	4.9	2.9	3.9	7.6	5.6	< 2.0	3.0
Total Dissolved Solids (Lab)		30	mg/l	18	19	13	24	18	19	23	25	19	24
Total Organic Carbon (TOC)		34.4	mg/l	14.7	17	17	15	16	13	13	13	26	21
Total Suspended Solids			mg/l	< 5	4.0	3.4	3.6	4.0	3.0	2.0	1.4	2.6	3.0
Turbidity		2.5	ntu	1.3	5.4	4.4	5.5	3.5	2.8	4.5	2.4	3.6	2.5

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	9/23/2021	10/6/2021	10/19/2021	10/19/2021	11/2/2021	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020
			Sample ID	20X608058-1165256	DIFFUSER_20210923	DIFFUSER_20211006	DUP1_20211019	DIFFUSER_20211019	DIFFUSER_20211102	20X608058-1165174	SW1_20200717	SW1_20200729	SW1_20200811	SW1_20200824
			Lab Sample ID	1165256	QTA033	QWG510	QZA170	QZA169	RCV753	1165174	NDH751	NFS555	NIJ477	NLM308
			Lab Job Number	20X608058	C1R6341	C1T1039	C1U4014	C1U4014	C1W2029	20X608058	C0H9882	C0J0983	C0K2722	C0L7809
Parameter	NS-EQS[1]	Background[2]	Unit											
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	< 5	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	0.065	0.062	< 0.050	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.190	0.250	0.250	0.240	0.200	0.20	0.170	0.270	0.240	0.200
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	3.2	2.6	< 10	—	< 2.0	< 5.0	2.6	< 5.0
Cation Sum		0.44	meq/l	0.33	0.420	0.430	0.410	0.430	0.440	0.28	0.260	0.310	0.340	0.340
Chemical Oxygen Demand		53	mg/l	39	77	76	68	75	75	40	49	52	53	47
Chloride ion		13	mg/l	4	6.7	9.0	8.8	8.6	7.2	5	5.8	5.8	7.1	6.9
Color		200	tcu	159	260	250	220	210	240	171	200	180	200	160
Electrical Conductivity		68	umhos/cm	33	44	44	42	42	49	32	35	34	36	37
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	< 0.12	< 0.10	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	7.9	8.2	8.2	8.6	8.2	2.5	2.8	5.5	6.0	6.3
Ion Balance		45	%	12.7	37.7	26.5	24.2	28.4	37.5	16.0	20.9	6.90	17.2	25.9
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	-5.88	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	-6.20	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	0.056	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	0.056	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.99	5.99	5.71	5.90	5.60	5.23	4.98	5.57	6.13	6.11
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.004	0.020	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.1	6.0	5.6	5.8	6.0	2.3	3.1	2.5	2.7	2.1
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	11.1	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	11.4	NC	NC	NC	NC
Sulphate		6	mg/l	7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3	< 2.0	5.1	2.1	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	21	24	23	24	23	14	15	20	19	16
Total Organic Carbon (TOC)		34.4	mg/l	14.7	30	26	22	23	29	13.5	18	17	16	16
Total Suspended Solids			mg/l	< 5	3.6	7.0	2.4	6.0	2.2	< 5	—	—	—	—
Turbidity		2.5	ntu	1.3	2.2	3.1	2.9	3.9	4.2	2.0	0.61	1.7	1.8	1.3

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	9/8/2020	9/24/2020	9/24/2020	10/6/2020	10/23/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	11/30/2020	12/14/2020
			Sample ID	20X608058-1165256	SW1_20200908	SW1_20200924	DUP A_20200924	SW1_20201006	DUP1_20201023	SW1_20201023	SW1_20201105	SW1_20201120	SW1_20201130	DUP1_20201130	DUP1_20201214
			Lab Sample ID	1165256	NOK781	NSF567	NSF572	NUV951	NYW161	NYW153	OBU580	OFF866	OHD057	OHD064	OKO557
			Lab Job Number	20X608058	C0N1046	C0O8769	C0O8769	C0Q0953	C0R9712	C0R9712	C0T3354	C0U8920	C0V7696	C0V7696	C0X3829
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.066	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.230	0.210	0.220	0.240	0.220	0.230	0.240	0.200	0.250	0.240	0.340
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	2.2	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.360	0.320	0.360	0.330	0.410	0.360	0.360	0.350	0.370	0.380	0.380
Chemical Oxygen Demand		53	mg/l	39	37	74	74	59	71	78	78	74	67	71	60
Chloride ion		13	mg/l	4	6.4	7.6	7.6	8.2	7.7	8.0	8.4	6.7	9.0	8.4	12
Color		200	tcu	159	150	200	200	180	200	210	210	200	190	180	160
Electrical Conductivity		68	umhos/cm	33	39	48	49	44	49	49	49	47	48	46	57
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	6.9	3.9	4.0	4.3	5.8	4.5	4.5	4.3	5.1	5.0	4.8
Ion Balance		45	%	12.7	22.0	20.8	24.1	15.8	30.2	22.0	20.0	27.3	19.4	22.6	5.56
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	6.17	4.59	4.28	5.43	4.51	4.72	4.86	4.69	5.36	4.72	5.07
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.6	3.8	3.8	7.2	6.4	6.9	6.4	7.3	6.8	6.4	5.9
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	2.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	19	18	18	23	22	22	22	22	24	23	26
Total Organic Carbon (TOC)		34.4	mg/l	14.7	14	29	27	21	25	24	26	23	23	23	24
Total Suspended Solids			mg/l	< 5	—	—	—	—	—	—	—	—	—	—	< 3.0
Turbidity		2.5	ntu	1.3	1.3	3.7	1.7	0.83	1.1	2.8	0.98	2.4	6.7	12	1.8

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
Sample Date				6/1/2020	12/14/2020	12/28/2020	12/28/2020	3/25/2021	3/25/2021	3/30/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021
Sample ID				20X608058-1165256	SW1_20201214	SW1_20201228	DUP1_20201228	SW1_20210325	DUP4_20210325	SW1_20210330	SW1_20210408	SW1_20210421	SW1_20210505	SW1_20210519	SW1_20210603
Lab Sample ID				1165256	OKO550	OMT740	OMT747	PEB831	PEB838	PFK857	PGQ134	PJV221	PMO067	PPM339	PST787
Lab Job Number				20X608058	C0X3829	C0Y4558	C0Y4558	C179941	C179941	C186441	C192270	C1A7947	C1C1117	C1D5211	C1F0842
Parameter	NS-EQS[1]	Background[2]	Unit												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.340	0.310	0.310	0.190	0.190	—	0.160	0.150	0.160	0.150	0.280
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 10	< 10	—	< 5.5	< 5.0	< 5.0	< 2.0	< 3.0
Cation Sum		0.44	meq/l	0.33	0.400	0.360	0.330	0.260	0.250	—	0.220	0.310	0.330	0.250	0.320
Chemical Oxygen Demand		53	mg/l	39	75	47	49	38	38	—	48	43	56	42	44
Chloride ion		13	mg/l	4	12	11	11	6.8	6.6	—	5.4	5.2	5.8	5.4	5.6
Color		200	tcu	159	160	130	140	150	150	—	120	190	180	150	190
Electrical Conductivity		68	umhos/cm	33	60	49	50	35	35	—	33	35	36	32	36
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	5.0	4.0	4.0	3.1	3.0	—	2.2	5.4	6.1	3.5	6.5
Ion Balance		45	%	12.7	8.11	7.46	3.13	15.6	13.6	—	15.8	34.8	34.7	25.0	6.67
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	—	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	—	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	0.12	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	0.12	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	0.068	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.11	4.56	5.21	5.27	5.54	—	4.82	5.89	5.42	5.47	5.78
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.9	5.5	5.5	3.9	4.0	—	2.6	2.3	1.8	2.5	2.4
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	—	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	—	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	—	< 2.0	< 2.0	< 2.0	< 2.0	6.0
Total Dissolved Solids (Lab)		30	mg/l	18	26	24	23	16	16	—	13	14	15	13	21
Total Organic Carbon (TOC)		34.4	mg/l	14.7	24	18	19	14	14	—	15	15	17	15	16
Total Suspended Solids			mg/l	< 5	< 3.2	< 4.0	< 3.1	2.6	< 1.0	2.0	< 1.0	3.6	13	< 2.5	3.2
Turbidity		2.5	ntu	1.3	0.96	1.6	1.7	7.1	3.1	—	2.3	7.9	7.4	1.5	5.0

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	9/23/2021	10/6/2021	10/6/2021	10/19/2021
			Sample ID	20X608058-1165256	SW1_20210614	SW1_20210630	SW1_20210714	SW1_20210727	SW1_20210811	SW1_20210908	DUP1_20210923	SW1_20210923	DUP1_20211006	SW1_20211006	SW1_20211019
			Lab Sample ID	1165256	PVK696	PZB776	QCI559	QFJ449	QIT117	QPN176	QTA034	QTA027	QWG511	QWG504	QZA163
			Lab Job Number	20X608058	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1R6341	C1T1039	C1T1039	C1U4014
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	5.3	< 1.0	5.2	5.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	5.3	< 5.0	5.2	5.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	0.061	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.320	0.260	0.430	0.350	0.210	0.180	0.270	0.270	0.250	0.250	0.410
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3.5
Cation Sum		0.44	meq/l	0.33	0.340	0.390	0.370	0.400	0.360	0.430	0.420	0.420	0.400	0.450	0.440
Chemical Oxygen Demand		53	mg/l	39	44	39	39	50	79	57	80	77	74	76	63
Chloride ion		13	mg/l	4	4.3	5.8	5.8	6.2	7.4	6.5	6.6	6.9	8.9	8.9	8.6
Color		200	tcu	159	170	160	140	150	230	230	280	280	230	230	200
Electrical Conductivity		68	umhos/cm	33	37	40	40	40	38	43	43	43	43	44	64
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	6.7	7.4	7.2	7.6	5.5	9.2	7.6	7.5	7.2	8.4	7.8
Ion Balance		45	%	12.7	3.03	20.0	7.50	6.67	26.3	41.0	21.7	21.7	23.1	28.6	3.53
Langelier Index (at 20 C)		0	none	-5.03	-4.07	NC	-4.06	-3.96	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	-4.32	NC	-4.31	-4.22	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	6.23	6.23	6.21	6.27	4.94	6.10	5.75	5.17	5.76	6.09	4.40
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.0	1.2	1.4	0.97	4.1	4.7	5.0	5.2	5.8	5.9	5.6
pH, Saturation (at 20 C)		11.1	none	10.7	10.3	NC	10.3	10.2	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	10.6	NC	10.5	10.5	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	4.7	4.6	7.9	2.9	< 2.0	< 2.0	3.9	3.6	< 2.0	< 2.0	8.2
Total Dissolved Solids (Lab)		30	mg/l	18	22	20	26	22	19	21	25	25	23	24	31
Total Organic Carbon (TOC)		34.4	mg/l	14.7	16	13	13	14	25	22	30	30	26	26	23
Total Suspended Solids			mg/l	< 5	4.8	2.2	< 2.0	2.8	2.6	2.2	7.0	2.8	8.0	< 5.0	1.6
Turbidity		2.5	ntu	1.3	2.4	2.0	3.6	1.8	3.1	2.6	2.5	2.3	4.2	3.6	2.6

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
		Sample Date	6/1/2020	11/2/2021	11/2/2021	11/21/2021	11/21/2021	12/1/2021	12/1/2021	12/15/2021	3/24/2022	3/24/2022	4/6/2022	4/6/2022
		Sample ID	20X608058-1165256	DUP1_20211102	SW1_20211102	DUP1_20211121	SW1_20211121	DUP 1_20211201	SW1_20211201	SW1_20211215	DUP1_20220324	SW1_20220324	DUP1_20220406	SW1_20220406
		Lab Sample ID	1165256	RCV754	RCV729	RIY809	RIY803	RNH012	RNH005	RJJ614	SEH105	SEH099	SHG310	SHG304
		Lab Job Number	20X608058	C1W2029	C1W2029	C1Z0716	C1Z0716	C1AG897	C1AG897	C1Z2434	C277826	C277826	C290667	C290667
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.200	0.210	0.220	0.220	0.210	0.190	0.160	0.190	0.220	0.160	0.160
BOD Carbonaceous		5	mg/l	—	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.350	0.350	0.390	0.380	0.340	0.320	0.270	0.220	0.220	0.240	0.230
Chemical Oxygen Demand		53	mg/l	39	100	92	77	75	81	85	49	35	33	34	36
Chloride ion		13	mg/l	4	7.1	7.6	7.7	7.9	7.3	6.8	5.6	4.7	4.8	5.6	5.6
Color		200	tcu	159	280	270	220	230	240	230	190	140	150	160	150
Electrical Conductivity		68	umhos/cm	33	52	53	48	51	49	51	37	37	37	35	34
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	4.4	4.5	4.5	4.4	3.9	3.9	3.2	2.3	2.4	3.2	3.0
Ion Balance		45	%	12.7	27.3	25.0	27.9	26.7	23.6	25.5	25.6	7.32	0	20.0	18.0
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.10	5.30	4.58	4.54	4.42	4.62	4.51	4.85	4.95	5.09	5.09
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.3	5.3	5.7	5.5	4.2	4.5	3.0	2.9	2.8	2.8	2.8
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.2	4.2	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	20	20	21	21	18	18	14	15	17	14	13
Total Organic Carbon (TOC)		34.4	mg/l	14.7	32	32	28	28	25	26	18	13	12	13	12
Total Suspended Solids			mg/l	< 5	< 1.0	1.0	1.2	1.4	< 1.0	< 1.0	3.8	< 1.0	< 1.0	< 1.0	1.0
Turbidity		2.5	ntu	1.3	1.7	1.4	1.9	1.0	1.8	1.5	2.1	0.97	0.79	1.7	1.5

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Parameter	NS-EQS[1]	Background[2]	Unit	Sample Location	DIFFUSER	SW01	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
				Sample Date	6/1/2020	4/19/2022	11/8/2018	4/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020
				Sample ID	20X608058-1165256	SW1_20220419	SW2_20181108	20X589937-1062436	20X608058-1165251	SW2_20200717	SW2_20200729	SW2_20200811	SW2_20200824	SW2_20200908	SW2_20200924	SW2_20201006	SW2_20201023
				Lab Sample ID	1165256	SJT836	9698383	1062436	1165251	NDH752	NFS556	NIJ478	NLM309	NOK782	NSF568	NUV952	NYW154
				Lab Job Number	20X608058	C2A2126	18X408633	20X589937	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l		< 5	< 1.0	< 5	< 5	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l		< 10	< 1.0	< 10	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l		< 5	—	< 5	< 5	< 5	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l		< 5	< 2.0	< 5	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l		< 0.03	< 0.050	0.05	0.09	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l		0.26	0.170	0.25	0.20	0.18	0.170	0.230	0.260	0.190	0.230	0.220	0.230	0.160
BOD Carbonaceous		5	mg/l		—	< 5.0	—	—	—	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10
Cation Sum		0.44	meq/l		0.33	0.240	0.54	0.53	0.35	0.320	0.320	0.370	0.350	0.380	0.360	0.390	0.480
Chemical Oxygen Demand		53	mg/l		39	< 20	—	—	40	54	57	51	44	44	81	66	74
Chloride ion		13	mg/l		4	6.0	6	4	4	5.9	4.8	6.9	6.7	6.1	7.8	7.8	5.8
Color		200	tcu		159	150	359	42	146	220	180	190	160	150	200	180	210
Electrical Conductivity		68	umhos/cm		33	35	52	39	34	36	35	37	37	39	49	43	47
Fluoride		0.12	mg/l		< 0.12	—	< 0.12	< 0.12	< 0.12	< 0.10	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l		4.9	3.0	10.1	11.9	4.9	5.4	5.7	7.2	7.0	7.8	4.4	7.3	10
Ion Balance		45	%		12.7	17.1	36.5	45.6	31.5	30.6	16.4	17.5	29.6	24.6	24.1	25.8	50.0
Langelier Index (at 20 C)		0	none		-5.03	NC	-5.42	-4.29	-5.71	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none		-5.35	NC	-5.74	-4.61	-6.03	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l		< 0.05	< 0.050	< 0.05	< 0.05	0.09	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.10	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l		< 0.05	< 0.050	< 0.05	< 0.05	0.09	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.10	< 0.050
Nitrite (as N)		0.25	mg/l		< 0.05	< 0.010	< 0.05	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l		0.01	< 0.010	< 0.01	< 0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units		5.68	5.03	4.94	5.98	4.99	5.09	5.40	6.22	6.02	6.21	4.32	5.48	4.83
Phenol	4	0.02	mg/l		< 0.004	< 0.0010	—	< 0.004	< 0.004	0.057	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l		1.6	2.9	2.9	2.0	1.3	3.2	2.7	2.3	2.0	2.1	3.7	2.7	6.2
pH, Saturation (at 20 C)		11.1	none		10.7	NC	10.4	10.3	10.7	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none		11.0	NC	10.7	10.6	11.0	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l		7	< 2.0	4	4	3	< 2.0	4.7	2.9	< 2.0	2.7	< 2.0	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l		18	14	20	19	14	16	19	20	16	19	18	19	22
Total Organic Carbon (TOC)		34.4	mg/l		14.7	13	22.3	6.8	15.3	20	18	16	16	14	28	24	25
Total Suspended Solids			mg/l		< 5	2.0	—	—	< 5	—	—	—	—	—	—	—	—
Turbidity		2.5	ntu		1.3	2.4	4.1	272	2.6	1.3	1.9	3.1	2.8	2.4	2.5	2.6	2.6

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
			Sample Date	6/1/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	3/30/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021
			Sample ID	20X608058-1165256	SW2_20201105	SW2_20201120	SW2_20201130	SW2_20201214	SW2_20201228	SW2_20210325	SW2_20210330	SW2_20210408	SW2_20210421	SW2_20210505	SW2_20210519
			Lab Sample ID	1165256	OBU581	OFF867	OHD058	OKO551	OMT741	PEB832	PFK858	PGQ135	PJV222	PMO068	PPM340
			Lab Job Number	20X608058	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C186441	C192270	C1A7947	C1C1117	C1D5211
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	—	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.250	0.250	0.260	0.330	0.370	0.240	—	0.150	0.160	0.220	0.140
BOD Carbonaceous		5	mg/l	—	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	—	< 5.5	< 5.0	< 5.0	< 2.0
Cation Sum		0.44	meq/l	0.33	0.460	0.440	0.510	0.450	0.490	0.340	—	0.270	0.350	0.380	0.300
Chemical Oxygen Demand		53	mg/l	39	76	78	57	63	54	31	—	46	45	46	49
Chloride ion		13	mg/l	4	8.8	8.7	9.3	12	11	6.8	—	5.2	5.8	5.6	5.1
Color		200	tcu	159	230	210	190	170	140	120	—	130	170	180	170
Electrical Conductivity		68	umhos/cm	33	50	49	53	54	54	37	—	32	35	37	32
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	8.4	7.6	11	7.3	10	7.4	—	4.3	7.2	7.7	5.6
Ion Balance		45	%	12.7	29.6	27.5	32.5	15.4	14.0	17.2	—	28.6	37.3	26.7	36.4
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	—	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	—	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	4.79	4.75	5.62	5.21	5.87	5.67	—	4.93	5.48	5.44	5.37
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	6.2	6.2	6.5	5.8	5.4	3.6	—	2.5	2.5	2.2	2.1
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	—	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	—	NC	NC	NC	NC
Sulphate		6	mg/l	7	< 2.0	< 2.0	< 2.0	< 2.0	2.6	2.2	—	< 2.0	< 2.0	3.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	25	24	27	27	30	20	—	13	16	19	14
Total Organic Carbon (TOC)		34.4	mg/l	14.7	27	26	23	24	18	12	—	14	15	17	17
Total Suspended Solids			mg/l	< 5	—	—	—	< 3.1	5.0	3.0	9.2	2.2	4.0	6.5	3.6
Turbidity		2.5	ntu	1.3	11	6.3	14	8.7	15	8.7	—	5.9	8.8	6.4	5.1

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
Sample Date				6/1/2020	6/3/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021
Sample ID				20X608058-1165256	DUP1_20210603	SW2_20210603	SW2_20210614	SW2_20210630	SW2_20210714	SW2_20210727	SW2_20210811	SW2_20210908	SW2_20210923	SW2_20211006	SW2_20211019
Lab Sample ID				1165256	PST794	PST788	PVK697	PZB777	QCI560	QFJ450	QIT118	QPN177	QTA028	QWG505	QZA164
Lab Job Number				20X608058	C1F0842	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	5.2	< 1.0	< 1.0	5.6	< 1.0	5.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	5.2	< 5.0	< 5.0	5.6	< 5.0	5.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.050	0.071	< 0.050	< 0.050	< 0.050	< 0.050	0.052
Anion Sum		0.6	meq/l	0.26	0.330	0.260	0.240	0.350	0.320	0.410	0.210	0.180	0.280	0.250	0.250
BOD Carbonaceous		5	mg/l	—	< 3.0	< 3.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3.0
Cation Sum		0.44	meq/l	0.33	0.360	0.370	0.350	0.350	0.390	0.410	0.350	0.450	0.450	0.450	0.430
Chemical Oxygen Demand		53	mg/l	39	46	46	46	39	36	52	79	61	96	78	66
Chloride ion		13	mg/l	4	5.6	5.7	4.2	5.5	5.8	6.2	7.4	6.4	6.8	8.7	8.7
Color		200	tcu	159	180	170	190	200	140	150	230	230	270	230	220
Electrical Conductivity		68	umhos/cm	33	37	36	37	39	40	39	39	42	44	44	41
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	7.7	7.9	7.0	7.2	7.5	7.9	5.4	9.5	8.4	8.5	8.6
Ion Balance		45	%	12.7	4.35	17.5	18.6	0	9.86	0	25.0	42.9	23.3	28.6	26.5
Langelier Index (at 20 C)		0	none	-5.03	-4.33	NC	NC	-4.08	NC	-3.95	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	-4.58	NC	NC	-4.34	NC	-4.20	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	0.088	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	0.088	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.90	5.84	6.03	6.15	6.25	6.25	4.83	6.12	5.21	5.97	5.60
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.5	2.4	2.1	1.5	1.4	1.1	4.1	4.5	5.3	6.0	5.6
pH, Saturation (at 20 C)		11.1	none	10.7	10.2	NC	NC	10.2	NC	10.2	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	10.5	NC	NC	10.5	NC	10.5	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	3.4	4.6	5.7	4.0	7.7	6.0	< 2.0	< 2.0	4.4	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	22	21	20	22	23	25	19	21	26	24	24
Total Organic Carbon (TOC)		34.4	mg/l	14.7	17	17	16	14	14	14	26	22	30	28	22
Total Suspended Solids			mg/l	< 5	2.6	2.4	4.4	2.0	2.2	3.0	3.4	3.0	3.6	< 2.5	3.0
Turbidity		2.5	ntu	1.3	5.4	5.9	4.0	2.7	2.6	2.0	3.5	2.5	2.2	3.7	3.7

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022	11/8/2018	4/1/2020	6/1/2020	7/17/2020
			Sample ID	20X608058-1165256	SW2_20211102	SW2_20211121	SW2_20211201	SW2_20211215	SW2_20220324	SW2_20220406	SW2_20220419	SW3_20181108	20X589937-1062437	20X608058-1165252	SW3_20200717
			Lab Sample ID	1165256	RCV730	RIY804	RNH006	RJJ615	SEH100	SHG305	SJT837	9698384	1062437	1165252	NDH753
			Lab Job Number	20X608058	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126	18X408633	20X589937	20X608058	C0H9882
Parameter	NS-EQS[1]	Background[2]	Unit												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	7.1	< 1.0	< 1.0	< 5	< 5	< 5	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	< 5	< 5	< 5	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	7.1	< 2.0	< 2.0	< 5	< 5	< 5	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	0.096	< 0.050	< 0.050	0.15	0.05	< 0.03	< 0.03	< 0.050
Anion Sum		0.6	meq/l	0.26	0.210	0.220	0.200	0.150	0.340	0.160	0.160	0.25	0.20	0.18	0.250
BOD Carbonaceous		5	mg/l	—	< 10	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	—	—	—	< 2.0
Cation Sum		0.44	meq/l	0.33	0.450	0.450	0.370	0.280	0.380	0.280	0.340	0.54	0.50	0.40	0.350
Chemical Oxygen Demand		53	mg/l	39	82	79	78	54	30	27	< 20	—	—	37	66
Chloride ion		13	mg/l	4	7.6	7.9	7.1	5.2	4.8	5.7	5.7	5	4	4	6.0
Color		200	tcu	159	230	240	240	190	140	150	150	379	114	164	220
Electrical Conductivity		68	umhos/cm	33	50	50	49	36	39	31	33	56	43	34	40
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	< 0.12	< 0.12	< 0.12	< 0.10
Hardness (as CaCO3)		6.3	mg/l	4.9	9.1	8.6	5.1	3.5	10	5.3	5.9	11.9	11.4	6.8	7.2
Ion Balance		45	%	12.7	36.4	34.3	29.8	30.2	5.56	27.3	36.0	37.8	43.5	39.4	16.7
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	-3.65	NC	NC	-4.93	-4.41	-5.23	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	-3.90	NC	NC	-5.25	-4.73	-5.55	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.05	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	< 0.01	< 0.01	< 0.010
pH, Lab		6.13	ph units	5.68	5.61	4.95	4.50	4.55	6.32	5.39	5.40	5.34	5.88	5.31	5.30
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.004	< 0.004	0.0012
Reactive Silica (SiO2)		6.5	mg/l	1.6	6.0	5.3	4.0	2.5	2.6	2.3	2.4	3.1	2.1	1.3	2.9
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	9.97	NC	NC	10.3	10.3	10.5	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	10.2	NC	NC	10.6	10.6	10.9	NC
Sulphate		6	mg/l	7	< 2.0	< 2.0	< 2.0	< 2.0	3.3	< 2.0	< 2.0	5	4	3	4.0
Total Dissolved Solids (Lab)		30	mg/l	18	23	23	19	13	23	14	15	20	18	15	20
Total Organic Carbon (TOC)		34.4	mg/l	14.7	28	28	26	19	11	11	12	22.7	6.9	15.3	21
Total Suspended Solids			mg/l	< 5	3.2	1.8	< 1.0	1.6	1.8	1.0	3.4	—	—	9	—
Turbidity		2.5	ntu	1.3	4.1	2.8	2.6	2.6	4.3	2.7	2.5	1.6	3.6	6.3	1.9

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
Sample Date				6/1/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020
Sample ID				20X608058-1165256	SW3_20200729	SW3_20200811	SW3_20200824	SW3_20200908	SW3_20200924	SW3_20201006	SW3_20201023	SW3_20201105	SW3_20201120	SW3_20201130	SW3_20201214	SW3_20201228
Lab Sample ID				1165256	NFS557	NIJ479	NLM310	NOK783	NSF569	NUV953	NYW155	OBU582	OFF868	OHD059	OKO552	OMT742
Lab Job Number				20X608058	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.8	< 1.0	7.4	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.8	< 5.0	7.4	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.11	< 0.050
Anion Sum		0.6	meq/l	0.26	0.220	0.260	0.200	0.230	0.220	0.300	0.420	0.290	0.650	0.330	0.390	0.460
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.320	0.370	0.360	0.410	0.390	0.440	0.460	0.490	0.820	0.550	0.530	0.520
Chemical Oxygen Demand		53	mg/l	39	49	69	47	56	79	70	71	80	76	55	60	51
Chloride ion		13	mg/l	4	4.4	6.7	6.6	6.1	7.9	8.1	7.8	8.8	9.3	9.1	12	12
Color		200	tcu	159	170	190	160	160	200	180	220	220	220	190	180	150
Electrical Conductivity		68	umhos/cm	33	36	37	39	40	50	52	56	51	72	57	54	59
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	6.0	7.2	7.1	8.5	6.4	10	9.7	9.5	24	13	10	12
Ion Balance		45	%	12.7	18.5	17.5	28.6	28.1	27.9	18.9	4.55	25.6	11.6	25.0	15.2	6.12
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	-4.51	NC	-3.65	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	-4.77	NC	-3.90	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	0.13	0.16	< 0.050	< 0.050	< 0.050	0.088	< 0.050	< 0.050	0.051	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	0.13	0.16	< 0.050	< 0.050	< 0.050	0.088	< 0.050	< 0.050	0.051	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.46	6.12	5.99	6.08	4.42	5.80	5.60	4.85	5.97	5.86	5.66	6.08
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.4	2.2	1.9	2.2	3.3	3.3	6.3	6.3	6.1	6.3	5.8	5.3
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	10.1	NC	9.62	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	10.4	NC	9.87	NC	NC	NC
Sulphate		6	mg/l	7	4.8	2.8	< 2.0	2.9	< 2.0	3.6	3.5	2.2	11	3.3	3.2	6.6
Total Dissolved Solids (Lab)		30	mg/l	18	18	20	17	20	19	24	31	27	48	31	32	34
Total Organic Carbon (TOC)		34.4	mg/l	14.7	18	16	16	15	28	23	25	27	23	22	24	19
Total Suspended Solids			mg/l	< 5	—	—	—	—	—	—	—	—	—	—	9.4	5.1
Turbidity		2.5	ntu	1.3	1.7	3.7	1.5	24	1.6	3.8	6.8	15	20	15	12	21

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
Sample Date				6/1/2020	3/25/2021	3/30/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021
Sample ID				20X608058-1165256	SW3_20210325	SW3_20210330	SW3_20210408	SW3_20210421	SW3_20210505	SW3_20210519	SW3_20210603	SW3_20210614	SW3_20210630	SW3_20210714	SW3_20210727	SW3_20210811
Lab Sample ID				1165256	PEB833	PFK859	PGQ136	PJV223	PMO069	PPM341	PST789	PVK698	PZB778	QCI561	QFJ451	QIT119
Lab Job Number				20X608058	C179941	C186441	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832
Parameter	NS-EQS[1]	Background[2]	Unit													
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	—	< 1.0	< 1.0	5.7	< 1.0	< 1.0	6.5	5.4	< 1.0	6.2	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	—	< 5.0	< 5.0	5.7	< 5.0	< 5.0	6.5	5.4	< 5.0	6.2	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.064	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.240	—	0.140	0.150	0.480	0.150	0.250	0.340	0.350	0.320	0.430	0.370
BOD Carbonaceous		5	mg/l	—	< 10	—	< 5.5	< 5.0	< 5.0	3.0	< 3.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.350	—	0.350	0.340	0.390	0.340	0.390	0.370	0.400	0.380	0.390	0.390
Chemical Oxygen Demand		53	mg/l	39	28	—	43	48	44	46	44	48	36	39	50	79
Chloride ion		13	mg/l	4	6.8	—	5.1	5.5	6.1	5.3	5.6	4.2	5.5	5.6	7.5	7.4
Color		200	tcu	159	130	—	130	180	190	170	170	170	170	130	150	220
Electrical Conductivity		68	umhos/cm	33	37	—	32	33	51	34	37	38	39	40	39	38
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	7.5	—	7.8	6.8	9.5	6.9	8.6	7.6	8.3	7.5	7.5	6.4
Ion Balance		45	%	12.7	18.6	—	42.9	38.8	10.3	38.8	21.9	4.23	6.67	8.57	4.88	2.63
Langelier Index (at 20 C)		0	none	-5.03	NC	—	NC	NC	-3.98	NC	NC	-3.97	-4.05	NC	-3.95	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	—	NC	NC	-4.23	NC	NC	-4.23	-4.30	NC	-4.20	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.73	—	5.06	5.21	6.14	5.57	6.01	6.18	6.13	6.29	6.24	4.90
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	—	0.0011	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	3.5	—	2.5	2.4	1.7	1.9	2.4	2.0	1.6	1.5	1.1	4.7
pH, Saturation (at 20 C)		11.1	none	10.7	NC	—	NC	NC	10.1	NC	NC	10.1	10.2	NC	10.2	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	—	NC	NC	10.4	NC	NC	10.4	10.4	NC	10.4	NC
Sulphate		6	mg/l	7	2.4	—	< 2.0	< 2.0	9.5	< 2.0	4.2	4.4	4.1	7.8	4.4	7.8
Total Dissolved Solids (Lab)		30	mg/l	18	20	—	15	15	29	15	21	22	23	23	25	28
Total Organic Carbon (TOC)		34.4	mg/l	14.7	11	—	15	16	17	17	15	16	14	14	14	26
Total Suspended Solids			mg/l	< 5	2.2	13	2.6	7.4	5.6	14	2.8	7.5	2.2	3.0	4.0	2.6
Turbidity		2.5	ntu	1.3	8.5	—	7.7	8.7	7.5	12	6.9	6.9	2.4	3.1	3.0	3.9

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022
			Sample ID	20X608058-1165256	SW3_20210908	SW3_20210923	SW3_20211006	SW3_20211019	SW3_20211102	SW3_20211121	SW3_20211201	SW3_20211215	SW3_20220324	SW3_20220406	SW3_20220419
			Lab Sample ID	1165256	QPN178	QTA029	QWG506	QZA165	RCV731	RIY805	RNH007	RJJ616	SEH101	SHG306	SJT838
			Lab Job Number	20X608058	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.4	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.4	< 2.0	< 2.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.16
Anion Sum		0.6	meq/l	0.26	0.190	0.270	0.260	0.320	0.250	0.220	0.190	0.160	0.380	0.160	0.230
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	4.2	< 10	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.430	0.430	0.430	0.490	0.460	0.460	0.440	0.350	0.370	0.260	0.310
Chemical Oxygen Demand		53	mg/l	39	57	84	74	68	85	77	76	56	35	34	< 20
Chloride ion		13	mg/l	4	6.7	6.9	9.1	9.1	9.0	7.8	6.8	5.6	4.7	5.5	5.6
Color		200	tcu	159	220	280	250	220	230	250	240	190	140	150	150
Electrical Conductivity		68	umhos/cm	33	43	43	44	47	50	50	46	36	39	31	35
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	9.4	7.9	8.2	11	9.1	8.5	9.5	7.0	9.8	5.1	6.1
Ion Balance		45	%	12.7	38.7	22.9	24.6	21.0	29.6	35.3	39.7	37.3	1.33	23.8	14.8
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	NC	NC	NC	NC	NC	NC	-3.64	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	NC	NC	NC	NC	NC	NC	-3.90	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	6.12	5.97	5.98	5.85	5.76	5.01	4.81	4.54	6.32	5.32	5.40
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	4.8	5.2	6.0	5.6	6.3	5.5	4.1	3.0	2.4	2.4	2.4
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	NC	NC	NC	NC	NC	NC	9.96	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	NC	NC	NC	NC	NC	NC	10.2	NC	NC
Sulphate		6	mg/l	7	< 2.0	3.6	< 2.0	3.3	< 2.0	< 2.0	< 2.0	< 2.0	4.7	< 2.0	3.2
Total Dissolved Solids (Lab)		30	mg/l	18	21	25	24	28	25	23	20	16	24	14	18
Total Organic Carbon (TOC)		34.4	mg/l	14.7	23	30	26	22	28	28	25	19	11	11	12
Total Suspended Solids			mg/l	< 5	3.4	2.8	< 2.5	3.0	1.8	2.0	1.8	2.0	2.0	1.2	2.0
Turbidity		2.5	ntu	1.3	2.7	2.8	3.3	4.0	4.6	2.4	4.0	3.2	5.3	2.4	2.6

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
			Sample Date	6/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020
			Sample ID	20X608058-1165256	20X608058-1165253	SW4_20200717	SW4_20200729	SW4_20200811	SW4_20200824	SW4_20200908	SW4_20200924	SW4_20201006	SW4_20201023	SW4_20201105	SW4_20201120	SW4_20201130
			Lab Sample ID	1165256	1165253	NDH754	NFS558	NIJ480	NLM311	NOK784	NSF570	NUV954	NYW156	OBU583	OFF869	OHD060
			Lab Job Number	20X608058	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354	C0U8920	C0V7696
Parameter	NS-EQS[1]	Background[2]	Unit													
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.03	< 0.050	0.080	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.18	0.220	0.260	0.250	0.190	0.230	0.220	0.220	0.190	0.350	0.260	0.260
BOD Carbonaceous		5	mg/l	—	—	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3.2	< 10	< 10	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.34	0.320	0.320	0.340	0.350	0.370	0.370	0.390	0.470	0.480	0.450	0.490
Chemical Oxygen Demand		53	mg/l	39	39	59	45	51	44	44	86	66	76	78	74	62
Chloride ion		13	mg/l	4	4	6.3	5.3	6.9	6.7	6.1	7.8	7.9	6.6	8.9	9.0	9.3
Color		200	tcu	159	161	210	170	190	160	170	200	200	220	220	220	200
Electrical Conductivity		68	umhos/cm	33	33	37	35	36	37	38	50	45	49	51	49	53
Fluoride		0.12	mg/l	< 0.12	< 0.12	< 0.10	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	4.9	5.8	5.8	6.4	6.8	7.6	5.4	7.3	9.3	8.8	8.2	10
Ion Balance		45	%	12.7	32.3	18.5	10.3	15.3	29.6	23.3	25.4	27.9	42.4	15.7	26.8	30.7
Langelier Index (at 20 C)		0	none	-5.03	-5.62	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	-5.94	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.05	< 0.050	< 0.050	0.059	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.83	0.063	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.05	< 0.050	< 0.050	0.059	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.83	0.063	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.08	5.08	5.38	6.05	5.97	6.09	4.40	5.16	4.99	4.79	4.83	5.55
Phenol	4	0.02	mg/l	< 0.004	< 0.004	0.12	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	1.3	3.3	2.4	2.4	1.9	1.7	3.7	3.2	6.1	6.3	6.2	6.4
pH, Saturation (at 20 C)		11.1	none	10.7	10.7	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	11.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	3	2.2	5.3	2.4	< 2.0	2.8	< 2.0	< 2.0	< 2.0	2.1	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	14	19	20	19	16	19	19	19	22	31	25	26
Total Organic Carbon (TOC)		34.4	mg/l	14.7	15.3	22	18	16	16	14	28	22	24	27	25	23
Total Suspended Solids			mg/l	< 5	< 5	—	—	—	—	—	—	—	—	—	—	—
Turbidity		2.5	ntu	1.3	2.2	1.5	1.1	1.2	1.3	1.2	4.3	1.4	5.3	14	7.9	13

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

Sample Location				DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
Sample Date				6/1/2020	12/14/2020	12/28/2020	3/25/2021	3/30/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021
Sample ID				20X608058-1165256	SW4_20201214	SW4_20201228	SW4_20210325	SW4_20210330	SW4_20210408	SW4_20210421	SW4_20210505	SW4_20210519	SW4_20210603	SW4_20210614	SW4_20210630
Lab Sample ID				1165256	OKO553	OMT743	PEB834	PFK860	PGQ137	PJV224	PMO070	PPM342	PST790	PVK699	PZB779
Lab Job Number				20X608058	C0X3829	C0Y4558	C179941	C186441	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	< 1.0	5.3	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.1	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	< 5.0	5.3	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.1	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.380	0.370	0.350	—	0.120	0.160	0.220	0.140	0.230	0.300	0.240
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 10	—	< 5.5	< 5.0	< 5.0	< 2.0	< 3.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.450	0.490	0.350	—	0.280	0.330	0.360	0.300	0.370	0.360	0.410
Chemical Oxygen Demand		53	mg/l	39	63	56	26	—	48	43	42	49	44	44	39
Chloride ion		13	mg/l	4	11	11	6.9	—	4.3	5.5	6.0	5.1	5.7	3.9	5.5
Color		200	tcu	159	180	150	130	—	180	160	190	170	170	160	170
Electrical Conductivity		68	umhos/cm	33	53	54	37	—	32	33	36	32	37	37	40
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	7.9	11	7.4	—	4.9	6.5	7.1	5.4	8.2	7.2	7.9
Ion Balance		45	%	12.7	8.43	14.0	0	—	40.0	34.7	24.1	36.4	23.3	9.09	26.2
Langelier Index (at 20 C)		0	none	-5.03	NC	NC	-4.59	—	NC	NC	NC	NC	NC	-4.20	NC
Langelier Index (at 4 C)		0	none	-5.35	NC	NC	-4.84	—	NC	NC	NC	NC	NC	-4.45	NC
Nitrate (as N)		0.25	mg/l	< 0.05	0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.098
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.098
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	—	0.012	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	5.25	5.69	5.67	—	4.98	5.16	5.57	5.22	5.97	6.08	6.11
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.8	5.3	3.6	—	2.4	2.8	2.1	2.0	2.3	2.2	1.5
pH, Saturation (at 20 C)		11.1	none	10.7	NC	NC	10.3	—	NC	NC	NC	NC	NC	10.3	NC
pH, Saturation (at 4 C)		11.4	none	11.0	NC	NC	10.5	—	NC	NC	NC	NC	NC	10.5	NC
Sulphate		6	mg/l	7	2.3	3.0	2.5	—	< 2.0	< 2.0	2.2	< 2.0	3.4	4.2	3.8
Total Dissolved Solids (Lab)		30	mg/l	18	29	30	24	—	13	15	18	13	19	21	20
Total Organic Carbon (TOC)		34.4	mg/l	14.7	25	19	11	—	15	15	16	17	15	16	14
Total Suspended Solids			mg/l	< 5	5.0	8.6	2.8	12	1.7	5.2	4.4	3.0	3.4	3.6	2.8
Turbidity		2.5	ntu	1.3	11	17	9.1	—	10	10	7.0	4.0	6.1	4.3	3.2

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
			Sample Date	6/1/2020	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021
			Sample ID	20X608058-1165256	SW4_20210714	SW4_20210727	SW4_20210811	SW4_20210908	SW4_20210923	SW4_20211006	SW4_20211019	SW4_20211102	SW4_20211121	SW4_20211201	DUP1_20211215
			Lab Sample ID	1165256	QCI562	QFJ452	QIT120	QPN179	QTA030	QWG507	QZA166	RCV732	RIY806	RNH011	RJJ620
			Lab Job Number	20X608058	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	6.1	6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	6.1	6.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ammonia-N		0.51	mg/l	< 0.03	0.062	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.055	< 0.050
Anion Sum		0.6	meq/l	0.26	0.430	0.370	0.210	0.180	0.190	0.260	0.250	0.210	0.220	0.210	0.160
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.5	< 10	< 5.0	< 5.0	< 10
Cation Sum		0.44	meq/l	0.33	0.380	0.380	0.380	0.440	0.430	0.430	0.430	0.480	0.470	0.420	0.260
Chemical Oxygen Demand		53	mg/l	39	41	47	76	59	77	76	73	80	91	78	54
Chloride ion		13	mg/l	4	5.6	6.4	7.4	6.3	6.8	9.2	8.9	7.6	7.8	7.4	5.6
Color		200	tcu	159	130	140	230	230	270	240	220	240	250	240	190
Electrical Conductivity		68	umhos/cm	33	40	39	38	41	43	43	42	50	50	46	36
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	7.3	7.3	6.3	9.4	7.9	8.1	8.5	9.2	8.9	7.8	3.3
Ion Balance		45	%	12.7	6.17	1.33	28.8	41.9	38.7	24.6	26.5	39.1	36.2	33.3	23.8
Langelier Index (at 20 C)		0	none	-5.03	-3.97	-4.03	NC	NC	NC	NC	NC	NC	NC	NC	NC
Langelier Index (at 4 C)		0	none	-5.35	-4.22	-4.28	NC	NC	NC	NC	NC	NC	NC	NC	NC
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.055	< 0.050	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.055	< 0.050	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	6.24	6.18	4.87	6.08	5.80	5.69	5.65	5.56	4.91	4.78	4.83
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	1.5	0.95	4.1	4.8	5.1	6.0	5.5	5.9	5.4	4.2	2.8
pH, Saturation (at 20 C)		11.1	none	10.7	10.2	10.2	NC	NC	NC	NC	NC	NC	NC	NC	NC
pH, Saturation (at 4 C)		11.4	none	11.0	10.5	10.5	NC	NC	NC	NC	NC	NC	NC	NC	NC
Sulphate		6	mg/l	7	7.3	3.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Dissolved Solids (Lab)		30	mg/l	18	26	23	19	21	21	25	24	24	23	20	14
Total Organic Carbon (TOC)		34.4	mg/l	14.7	14	13	26	22	30	27	22	28	28	25	20
Total Suspended Solids			mg/l	< 5	2.4	2.0	2.4	3.2	4.4	2.0	2.0	2.2	1.4	3.6	2.0
Turbidity		2.5	ntu	1.3	8.3	1.8	4.2	2.4	1.9	2.9	2.9	3.4	2.7	4.5	2.6

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	12/15/2021	3/24/2022	4/6/2022	4/19/2022	11/8/2018	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020
			Sample ID	20X608058-1165256	SW4_20211215	SW4_20220324	SW4_20220406	SW4_20220419	SW13_20181108	20X608058-1165254	SW13_20200923	SW13_20201006	SW13_20201023	SW13_20201105	SW13_20201120
			Lab Sample ID	1165256	RJJ617	SEH102	SHG307	SJT839	9698395	1165254	NRV927	NUV955	NYW157	OBU584	OFF870
			Lab Job Number	20X608058	C1Z2434	C277826	C290667	C2A2126	18X408633	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0U8920
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	< 1.0	6.8	< 1.0	< 1.0	< 5	10	8.6	16	13	9.6	6.9
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	< 5	< 5	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	< 5.0	6.8	< 2.0	< 2.0	< 5	10	8.6	16	13	9.6	6.9
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.05	< 0.03	0.057	< 0.050	< 0.050	< 0.050	0.060
Anion Sum		0.6	meq/l	0.26	0.140	0.420	0.160	0.200	0.28	0.82	0.680	1.59	0.900	1.02	0.610
BOD Carbonaceous		5	mg/l	—	< 10	< 10	< 5.0	< 5.0	—	—	< 5.0	2.4	< 10	< 10	< 5.0
Cation Sum		0.44	meq/l	0.33	0.280	0.350	0.270	0.300	0.67	1.28	0.860	1.50	0.920	1.02	0.680
Chemical Oxygen Demand		53	mg/l	39	54	33	36	< 20	—	34	88	42	59	50	52
Chloride ion		13	mg/l	4	4.9	4.9	5.6	5.7	7	17	12	25	18	24	15
Color		200	tcu	159	190	140	140	150	218	92	160	100	150	130	130
Electrical Conductivity		68	umhos/cm	33	37	39	31	33	61	115	74	160	100	110	70
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	< 0.12	< 0.12	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	3.3	8.9	5.2	6.1	14.5	28.1	22	45	22	22	16
Ion Balance		45	%	12.7	33.3	9.09	25.6	20.0	40.7	22.2	11.7	2.91	1.10	0	5.43
Langelier Index (at 20 C)		0	none	-5.03	NC	-3.74	NC	NC	-3.76	-3.18	-3.19	-2.30	-2.91	-3.13	-3.71
Langelier Index (at 4 C)		0	none	-5.35	NC	-3.99	NC	NC	-4.08	-3.50	-3.44	-2.55	-3.16	-3.39	-3.96
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	0.15	0.11	0.058	< 0.050	0.24	0.097
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.05	0.15	0.11	0.058	< 0.050	0.24	0.097
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	< 0.010	< 0.01	0.01	< 0.010	0.011	0.011	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	4.50	6.30	5.32	5.57	6.47	6.46	6.35	6.67	6.47	6.41	6.15
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	2.8	2.7	2.3	2.4	3.5	5.0	4.0	7.3	6.5	6.0	5.5
pH, Saturation (at 20 C)		11.1	none	10.7	NC	10.0	NC	NC	10.2	9.64	9.54	8.97	9.38	9.54	9.86
pH, Saturation (at 4 C)		11.4	none	11.0	NC	10.3	NC	NC	10.5	9.96	9.79	9.23	9.63	9.79	10.1
Sulphate		6	mg/l	7	< 2.0	7.0	< 2.0	2.1	4	6	7.5	26	5.8	6.4	2.0
Total Dissolved Solids (Lab)		30	mg/l	18	13	26	14	16	24	56	47	100	58	65	41
Total Organic Carbon (TOC)		34.4	mg/l	14.7	19	12	12	12	16.1	12.9	24	15	19	18	17
Total Suspended Solids			mg/l	< 5	1.4	1.2	1.2	2.0	—	13	—	—	—	—	—
Turbidity		2.5	ntu	1.3	3.4	4.1	2.5	2.4	3.6	6.6	18	4.5	2.8	4.8	3.3

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	2/9/2021	3/25/2021	4/8/2021	4/8/2021	4/21/2021	4/21/2021	5/5/2021
			Sample ID	20X608058-1165256	DUP1_20201120	SW13_20201130	SW13_20201214	SW13_20201228	SW13_20210209	SW13_20210325	SW13_20210408	DUP1_20210408	DUP1_20210421	SW13_20210421	SW13_20210505
			Lab Sample ID	1165256	OFF872	OHD061	OKO554	OMT744	OUR197	PEB835	PGQ138	PGQ141	PJV228	PJV225	PMO071
			Lab Job Number	20X608058	C0U8920	C0V7696	C0X3829	C0Y4558	C135682	C179941	C192270	C192270	C1A7947	C1A7947	C1C1117
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	7.4	8.3	6.1	8.4	—	6.3	7.9	6.4	9.0	8.7	10
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	—	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	7.4	8.3	6.1	8.4	—	6.3	7.9	6.4	9.0	8.7	10
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	—	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anion Sum		0.6	meq/l	0.26	0.610	0.730	0.680	0.910	—	0.590	0.500	0.410	0.570	0.570	0.720
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 5.0	—	< 10	< 5.5	< 5.5	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.670	0.830	0.710	0.840	—	0.550	0.550	0.550	0.730	0.700	0.730
Chemical Oxygen Demand		53	mg/l	39	50	45	46	49	—	31	46	43	26	26	33
Chloride ion		13	mg/l	4	15	18	17	22	—	15	10	9.7	14	14	15
Color		200	tcu	159	130	130	130	110	—	110	98	120	120	110	130
Electrical Conductivity		68	umhos/cm	33	70	91	70	94	—	67	58	58	68	69	76
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	16	19	16	20	—	11	11	11	15	14	16
Ion Balance		45	%	12.7	4.69	6.41	2.16	4.00	—	3.51	4.76	14.6	12.3	10.2	0.690
Langelier Index (at 20 C)		0	none	-5.03	-3.65	-3.10	-3.68	-3.09	—	-3.74	-3.64	-3.64	-3.19	-3.31	-3.02
Langelier Index (at 4 C)		0	none	-5.35	-3.90	-3.35	-3.93	-3.34	—	-4.00	-3.90	-3.89	-3.44	-3.57	-3.28
Nitrate (as N)		0.25	mg/l	< 0.05	0.11	0.070	0.23	0.17	—	0.12	0.093	0.11	0.051	0.051	0.067
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	0.11	0.070	0.23	0.17	—	0.12	0.093	0.11	0.051	0.051	0.067
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	—	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	0.026	—	< 0.010	< 0.010	< 0.010	0.018	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	6.18	6.57	6.23	6.56	—	6.32	6.28	6.38	6.56	6.46	6.63
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.6	5.8	4.9	4.3	—	3.6	3.2	3.1	3.4	3.4	3.4
pH, Saturation (at 20 C)		11.1	none	10.7	9.83	9.67	9.91	9.65	—	10.1	9.93	10.0	9.75	9.78	9.65
pH, Saturation (at 4 C)		11.4	none	11.0	10.1	9.92	10.2	9.90	—	10.3	10.2	10.3	10.0	10.0	9.90
Sulphate		6	mg/l	7	2.0	2.1	2.7	5.9	—	2.3	2.0	< 2.0	< 2.0	< 2.0	5.0
Total Dissolved Solids (Lab)		30	mg/l	18	41	49	45	55	—	36	32	29	38	37	45
Total Organic Carbon (TOC)		34.4	mg/l	14.7	17	17	19	16	—	11	13	12	12	12	13
Total Suspended Solids			mg/l	< 5	—	—	< 3.9	9.5	1.4	1.8	2.2	1.6	1.6	1.8	< 2.0
Turbidity		2.5	ntu	1.3	2.3	3.6	4.4	23	—	12	5.2	5.2	3.7	3.5	3.2

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	5/5/2021	5/19/2021	5/19/2021	6/3/2021	6/14/2021	6/14/2021	6/30/2021	6/30/2021	7/14/2021	7/14/2021	7/27/2021
			Sample ID	20X608058-1165256	DUP1_20210505	DUP1_20210519	SW13_20210519	SW13_20210603	DUP1_20210614	SW13_20210614	SW13_20210630	DUP1_20210630	SW13_20210714	DUP1_20210714	DUP1_20210727
			Lab Sample ID	1165256	PMO075	PPM345	PPM343	PST791	PVK703	PVK700	PZB780	PZB782	QCI563	QCI565	QFJ456
			Lab Job Number	20X608058	C1C1117	C1D5211	C1D5211	C1F0842	C1G3518	C1G3518	C1I1014	C1I1014	C1J6542	C1J6542	C1L1105
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	9.7	15	15	12	65	58	51	81	85	79	71
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	9.7	15	15	12	66	58	51	82	85	79	71
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	0.059	0.097	0.079	0.11	0.14	0.10	0.074
Anion Sum		0.6	meq/l	0.26	0.680	0.830	0.830	0.670	2.91	2.92	2.25	3.31	3.47	3.26	3.44
BOD Carbonaceous		5	mg/l	—	< 5.0	< 2.0	< 2.0	< 3.0	< 5.0	< 5.0	5.3	4.4	4.9	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	0.750	0.950	0.900	0.700	2.33	2.17	1.95	3.80	3.43	3.70	3.53
Chemical Oxygen Demand		53	mg/l	39	37	37	39	44	41	41	48	74	62	68	75
Chloride ion		13	mg/l	4	14	17	17	12	53	54	41	57	58	55	61
Color		200	tcu	159	120	91	100	180	110	92	130	130	100	100	180
Electrical Conductivity		68	umhos/cm	33	75	92	92	70	300	310	250	360	350	330	340
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	17	21	21	16	52	49	46	74	67	73	72
Ion Balance		45	%	12.7	4.90	6.74	4.05	2.19	11.1	14.7	7.14	6.89	0.580	6.32	1.29
Langelier Index (at 20 C)		0	none	-5.03	-3.01	-2.39	-2.51	-2.93	-1.27	-1.35	-1.26	-0.975	-0.646	-1.03	-1.46
Langelier Index (at 4 C)		0	none	-5.35	-3.27	-2.64	-2.76	-3.19	-1.52	-1.60	-1.51	-1.23	-0.895	-1.28	-1.71
Nitrate (as N)		0.25	mg/l	< 0.05	0.067	0.052	0.062	0.089	0.059	0.80	< 0.050	< 0.050	0.067	0.061	0.14
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	0.067	0.052	0.062	0.089	0.059	0.80	< 0.050	< 0.050	0.067	0.061	0.14
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	0.010	0.012	0.011	< 0.010	< 0.010	0.010	0.010	0.011	0.011	0.012
pH, Lab		6.13	ph units	5.68	6.64	6.97	6.85	6.63	7.08	7.08	7.25	7.14	7.50	7.10	6.76
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0015	0.0029	0.0025	0.0038
Reactive Silica (SiO2)		6.5	mg/l	1.6	3.4	3.7	3.8	4.0	6.2	6.4	6.3	7.2	7.9	7.8	7.9
pH, Saturation (at 20 C)		11.1	none	10.7	9.65	9.36	9.37	9.56	8.35	8.43	8.51	8.12	8.14	8.13	8.22
pH, Saturation (at 4 C)		11.4	none	11.0	9.91	9.61	9.62	9.81	8.60	8.68	8.76	8.37	8.39	8.38	8.47
Sulphate		6	mg/l	7	3.9	2.1	2.5	4.3	5.5	8.3	3.2	3.1	5.3	6.0	15
Total Dissolved Solids (Lab)		30	mg/l	18	44	52	52	43	150	150	120	200	200	200	210
Total Organic Carbon (TOC)		34.4	mg/l	14.7	13	13	13	16	14	15	14	18	21	20	19
Total Suspended Solids			mg/l	< 5	< 2.0	1.0	2.8	< 1.0	11	11	52	33	42	22	23
Turbidity		2.5	ntu	1.3	3.5	4.0	2.2	3.4	17	9.0	14	44	21	15	20

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	7/27/2021	8/11/2021	8/11/2021	9/1/2021	9/8/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021
			Sample ID	20X608058-1165256	SW13_20210727	DUP1_20210811	SW13_20210811	SW13_20210901	DUP1_20210908	SW13_20210908	SW13_20210923	SW13_20211006	SW13_20211019
			Lab Sample ID	1165256	QFJ453	QIT124	QIT121	QNT693	QPN183	QPN180	QTA031	QWG508	QZA167
			Lab Job Number	20X608058	C1L1105	C1M6832	C1M6832	C1P1197	C1P9560	C1P9560	C1R6341	C1T1039	C1U4014
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	82	25	21	21	25	23	73	30	14
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	82	25	21	21	25	23	73	30	14
Ammonia-N		0.51	mg/l	< 0.03	0.084	< 0.050	< 0.050	< 0.050	0.059	< 0.050	0.067	0.062	< 0.050
Anion Sum		0.6	meq/l	0.26	3.51	1.45	1.15	1.28	1.23	1.17	3.43	1.87	1.11
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	3.32	1.17	1.22	1.34	1.47	1.47	3.26	1.74	1.53
Chemical Oxygen Demand		53	mg/l	39	73	58	63	46	54	66	37	45	47
Chloride ion		13	mg/l	4	63	25	23	26	23	22	66	39	27
Color		200	tcu	159	190	150	160	110	110	130	100	100	140
Electrical Conductivity		68	umhos/cm	33	350	130	110	140	140	130	370	190	120
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	68	28	30	33	37	37	72	41	39
Ion Balance		45	%	12.7	2.78	10.7	2.95	2.29	8.89	11.4	2.54	3.60	15.9
Langelier Index (at 20 C)		0	none	-5.03	-1.29	-2.31	-2.43	-2.14	-2.00	-2.06	-1.19	-1.91	-2.49
Langelier Index (at 4 C)		0	none	-5.35	-1.54	-2.56	-2.68	-2.39	-2.25	-2.31	-1.44	-2.16	-2.74
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	0.065	0.083	0.097	< 0.050	0.067	< 0.050
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	0.065	0.083	0.097	< 0.050	0.067	< 0.050
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	0.010	0.013	0.013	0.013	0.011	0.011	< 0.010	0.011	0.014
pH, Lab		6.13	ph units	5.68	6.89	6.71	6.64	6.91	6.88	6.84	6.97	6.86	6.64
Phenol	4	0.02	mg/l	< 0.004	0.0028	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	7.9	6.6	6.6	7.3	6.9	6.9	8.7	7.0	6.5
pH, Saturation (at 20 C)		11.1	none	10.7	8.18	9.02	9.07	9.05	8.88	8.90	8.16	8.77	9.13
pH, Saturation (at 4 C)		11.4	none	11.0	8.43	9.27	9.32	9.30	9.13	9.16	8.41	9.03	9.38
Sulphate		6	mg/l	7	4.2	12	3.9	6.4	3.6	3.2	4.9	6.7	3.9
Total Dissolved Solids (Lab)		30	mg/l	18	200	83	72	81	80	78	200	110	78
Total Organic Carbon (TOC)		34.4	mg/l	14.7	19	20	19	17	17	17	14	15	15
Total Suspended Solids			mg/l	< 5	30	6.4	3.6	16	2.6	6.8	17	16	4.8
Turbidity		2.5	ntu	1.3	24	5.1	7.1	2.5	9.3	20	36	3.9	4.7

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW14
			Sample Date	6/1/2020	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022	4/19/2022	11/8/2018
			Sample ID	20X608058-1165256	SW13_20211102	SW13_20211121	SW13_20211201	SW13_20211215	SW13_20220324	SW13_20220406	DUP1_20220419	SW13_20220419	SW14_20181108
			Lab Sample ID	1165256	RCV733	RIY807	RNH013	RJJ618	SEH103	SHG308	SJT842	SJT840	9698396
			Lab Job Number	20X608058	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126	C2A2126	18X408633
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	7.8	8.5	5.7	7.3	8.7	< 1.0	6.1	8.9	148
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	< 5
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	7.8	8.5	5.7	7.3	8.7	< 2.0	6.1	8.9	148
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.03
Anion Sum		0.6	meq/l	0.26	0.600	0.650	0.450	0.460	0.680	0.290	0.580	0.650	3.85
BOD Carbonaceous		5	mg/l	—	< 10	< 5.0	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	—
Cation Sum		0.44	meq/l	0.33	0.750	0.780	0.570	0.600	0.700	0.520	0.670	0.730	5.23
Chemical Oxygen Demand		53	mg/l	39	66	55	59	37	26	32	< 20	< 20	—
Chloride ion		13	mg/l	4	14	15	11	11	15	10	14	14	5
Color		200	tcu	159	200	150	170	130	100	120	120	120	75
Electrical Conductivity		68	umhos/cm	33	78	82	63	58	79	55	75	72	389
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	0.17
Hardness (as CaCO3)		6.3	mg/l	4.9	18	18	13	13	13	11	15	17	226
Ion Balance		45	%	12.7	11.1	9.09	11.8	13.2	1.45	28.4	7.20	5.80	15.2
Langelier Index (at 20 C)		0	none	-5.03	-3.30	-3.47	-4.08	-3.63	-3.18	NC	-3.18	-3.07	0.52
Langelier Index (at 4 C)		0	none	-5.35	-3.55	-3.72	-4.33	-3.89	-3.43	NC	-3.43	-3.32	0.20
Nitrate (as N)		0.25	mg/l	< 0.05	0.14	0.19	0.14	0.12	0.15	0.13	0.15	0.15	< 0.05
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	0.14	0.19	0.14	0.12	0.15	0.13	0.15	0.15	< 0.05
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05
Orthophosphate(as P)		0.05	mg/l	0.01	0.012	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.010	< 0.01
pH, Lab		6.13	ph units	5.68	6.45	6.23	5.95	6.27	6.64	6.48	6.72	6.65	8.04
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—
Reactive Silica (SiO2)		6.5	mg/l	1.6	5.5	5.4	4.3	3.4	2.8	2.9	2.9	2.8	10.5
pH, Saturation (at 20 C)		11.1	none	10.7	9.75	9.70	10.0	9.91	9.82	NC	9.90	9.72	7.52
pH, Saturation (at 4 C)		11.4	none	11.0	10.0	9.95	10.3	10.2	10.1	NC	10.2	9.97	7.84
Sulphate		6	mg/l	7	2.6	2.1	< 2.0	< 2.0	3.8	< 2.0	3.1	3.5	36
Total Dissolved Solids (Lab)		30	mg/l	18	43	45	32	32	42	25	38	41	232
Total Organic Carbon (TOC)		34.4	mg/l	14.7	24	20	18	14	9.3	11	12	12	6.2
Total Suspended Solids			mg/l	< 5	2.0	2.0	2.2	1.4	1.0	2.2	1.6	1.6	—
Turbidity		2.5	ntu	1.3	3.9	2.6	2.6	2.4	4.5	8.7	4.7	4.1	264

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW14	SW14	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	9/23/2020	3/25/2021	7/23/2019	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/30/2020
			Sample ID	20X608058-1165256	SW14_20200923	SW14_20210325	19X496499-374957	20X608058-1165255	SW19-20_20200923	SW19-20_20201006	SW19-20_20201023	SW19-20_20201105	SW19-20_20201130
			Lab Sample ID	1165256	NRV928	PEB836	374957	1165255	NRV929	NUV956	NYW159	OBU585	OHD062
			Lab Job Number	20X608058	C0O7061	C179941	19X496499	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0V7696
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	120	160	322	206	140	200	240	140	230
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	1.3	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	< 5	< 5	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	120	160	322	206	140	200	240	140	240
Ammonia-N		0.51	mg/l	< 0.03	< 0.050	< 0.050	0.09	< 0.03	0.054	0.12	0.13	< 0.050	0.36
Anion Sum		0.6	meq/l	0.26	4.10	5.08	18.7	11.3	5.58	8.53	11.6	7.05	17.7
BOD Carbonaceous		5	mg/l	—	< 5.0	< 10	—	—	< 5.0	2.9	< 10	< 10	< 5.0
Cation Sum		0.44	meq/l	0.33	3.73	4.90	17.8	12.9	6.36	8.02	11.1	7.05	18.2
Chemical Oxygen Demand		53	mg/l	39	37	38	—	30	35	30	43	26	52
Chloride ion		13	mg/l	4	6.4	26	19	17	8.8	15	19	17	36
Color		200	tcu	159	57	26	18	21	34	29	14	19	14
Electrical Conductivity		68	umhos/cm	33	360	490	1540	1070	550	730	990	670	1500
Fluoride		0.12	mg/l	< 0.12	—	—	0.33	0.18	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	170	210	793	545	270	350	480	300	810
Ion Balance		45	%	12.7	4.73	1.80	2.6	6.5	6.53	3.08	2.24	0	1.25
Langelier Index (at 20 C)		0	none	-5.03	0.280	0.569	1.13	0.46	0.553	0.447	0.460	0.310	0.888
Langelier Index (at 4 C)		0	none	-5.35	0.0310	0.320	0.81	0.14	0.304	0.199	0.213	0.0620	0.643
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	0.080	0.58	0.07	0.44	0.12	0.069	0.33	0.36
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	0.090	0.58	0.07	0.45	0.12	0.069	0.35	0.41
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	0.011	< 0.05	< 0.05	0.011	< 0.010	< 0.010	0.019	0.049
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.01	0.02	0.012	< 0.010	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	7.82	7.95	7.87	7.54	7.86	7.52	7.36	7.59	7.63
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	—	< 0.004	< 0.0010	< 0.0010	0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	11	9.2	14.2	14.0	19	13	14	10	8.8
pH, Saturation (at 20 C)		11.1	none	10.7	7.54	7.38	6.74	7.08	7.31	7.08	6.91	7.28	6.75
pH, Saturation (at 4 C)		11.4	none	11.0	7.79	7.63	7.06	7.40	7.56	7.33	7.15	7.53	6.99
Sulphate		6	mg/l	7	77	58	562	322	120	200	300	180	580
Total Dissolved Solids (Lab)		30	mg/l	18	240	290	1130	721	370	510	710	440	1100
Total Organic Carbon (TOC)		34.4	mg/l	14.7	13	10	12.5	11.6	10	9.6	10	7.7	15
Total Suspended Solids			mg/l	< 5	—	33	—	13	—	—	—	—	—
Turbidity		2.5	ntu	1.3	7.7	24	2.2	10.2	280	3.0	9.6	23	210

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	12/14/2020	12/28/2020	4/8/2021	4/21/2021	5/5/2021	6/3/2021	6/14/2021	7/27/2021	8/11/2021
			Sample ID	20X608058-1165256	SW19-20_20201214	SW19-20_20201228	SW19-20_20210408	SW19-20_20210421	SW19-20_20210505	SW19-20_20210603	SW19-20_20210614	SW19-20_20210727	SW19-20_20210811
			Lab Sample ID	1165256	OKO555	OMT745	PGQ139	PJV226	PMO073	PST792	PVK701	QFJ454	QIT122
			Lab Job Number	20X608058	C0X3829	C0Y4558	C192270	C1A7947	C1C1117	C1F0842	C1G3518	C1L1105	C1M6832
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	210	130	210	240	280	230	330	370	290
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0	< 1.0	2.5	2.2	1.4	1.5	1.8	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	210	130	210	250	280	230	330	370	290
Ammonia-N		0.51	mg/l	< 0.03	0.12	0.55	0.16	0.35	< 0.050	0.060	0.099	0.15	0.23
Anion Sum		0.6	meq/l	0.26	10.2	8.54	9.18	10.8	12.2	9.73	14.7	15.2	10.8
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.5	< 5.0	< 5.0	< 3.0	< 5.0	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	10.7	8.46	8.92	10.9	12.2	8.62	14.3	15.6	10.6
Chemical Oxygen Demand		53	mg/l	39	31	39	32	< 20	37	32	39	54	47
Chloride ion		13	mg/l	4	26	29	21	26	24	18	25	27	20
Color		200	tcu	159	8.7	13	11	< 5.0	15	27	17	12	12
Electrical Conductivity		68	umhos/cm	33	910	770	840	960	1000	880	1300	1300	1000
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	460	340	390	480	540	380	620	670	460
Ion Balance		45	%	12.7	2.21	0.470	1.44	0.180	0.210	6.05	1.21	1.43	0.890
Langelier Index (at 20 C)		0	none	-5.03	0.409	0.218	0.549	1.15	1.14	0.799	0.996	1.09	0.611
Langelier Index (at 4 C)		0	none	-5.35	0.162	-0.0300	0.302	0.904	0.888	0.551	0.749	0.842	0.365
Nitrate (as N)		0.25	mg/l	< 0.05	< 0.050	0.51	0.076	0.35	0.077	0.15	0.11	0.25	0.082
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	< 0.050	0.52	0.076	0.37	0.088	0.16	0.13	0.26	0.082
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	0.017	< 0.010	0.025	0.011	0.017	0.016	0.015	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	0.013	0.15	0.011	0.028	< 0.010	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	7.38	7.52	7.59	8.04	7.93	7.81	7.69	7.71	7.46
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	11	7.9	8.6	12	9.2	10	11	15	13
pH, Saturation (at 20 C)		11.1	none	10.7	6.97	7.30	7.04	6.89	6.80	7.02	6.70	6.62	6.85
pH, Saturation (at 4 C)		11.4	none	11.0	7.22	7.55	7.29	7.14	7.04	7.26	6.95	6.87	7.10
Sulphate		6	mg/l	7	250	240	210	250	280	220	350	330	210
Total Dissolved Solids (Lab)		30	mg/l	18	630	530	550	650	730	560	870	910	640
Total Organic Carbon (TOC)		34.4	mg/l	14.7	10	< 50	8.9	8.9	9.5	12	12	14	12
Total Suspended Solids			mg/l	< 5	100	190	18	93	19	13	7.2	29	20
Turbidity		2.5	ntu	1.3	83	220	13	23	8.3	37	4.2	11	52

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022
			Sample ID	20X608058-1165256	SW19-20_20210908	SW19-20_20210923	SW19-20_20211006	SW19-20_20211019	SW19-20_20211102	SW19-20_20211121	SW19-20_20211201	SW19-20_20211215	SW19-20_20220324
			Lab Sample ID	1165256	QPN181	QTA032	QWG509	QZA168	RCV734	RIY808	RNH014	RJJ619	SEH104
			Lab Job Number	20X608058	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**										
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	240	370	280	220	170	180	170	240	240
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	1.3	1.1	1.7	< 1.0	< 1.0	< 1.0	1.0	< 1.0	1.6
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	240	370	280	220	170	180	170	240	240
Ammonia-N		0.51	mg/l	< 0.03	0.11	0.17	0.18	0.65	0.46	0.066	< 0.050	0.19	0.089
Anion Sum		0.6	meq/l	0.26	9.76	11.9	8.54	9.05	5.54	5.50	4.71	9.23	11.1
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0	< 5.0	32	< 10	< 5.0	< 5.0	< 10	< 10
Cation Sum		0.44	meq/l	0.33	9.76	12.1	8.88	8.90	5.26	5.41	4.44	10.4	11.2
Chemical Oxygen Demand		53	mg/l	39	59	58	43	92	21	< 20	< 20	28	< 20
Chloride ion		13	mg/l	4	22	20	18	24	14	11	7.4	16	15
Color		200	tcu	159	35	19	20	24	16	12	11	7.0	7.3
Electrical Conductivity		68	umhos/cm	33	890	1100	790	850	500	530	420	810	1000
Fluoride		0.12	mg/l	< 0.12	—	—	—	—	—	—	—	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	410	520	380	370	210	230	190	450	500
Ion Balance		45	%	12.7	0	1.04	1.95	0.840	2.59	0.820	2.95	5.96	0.360
Langelier Index (at 20 C)		0	none	-5.03	0.806	0.794	0.887	0.516	0.379	0.402	0.448	0.659	0.960
Langelier Index (at 4 C)		0	none	-5.35	0.559	0.547	0.639	0.268	0.130	0.153	0.199	0.411	0.713
Nitrate (as N)		0.25	mg/l	< 0.05	6.3	0.11	0.12	26	9.7	3.7	1.3	0.47	0.35
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	6.6	0.12	0.12	28	10	3.7	1.3	0.47	0.35
Nitrite (as N)		0.25	mg/l	< 0.05	0.33	0.011	< 0.010	2.1	0.37	0.010	< 0.010	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010	< 0.010	0.010	0.037	< 0.010	0.011	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	7.76	7.49	7.81	7.57	7.74	7.69	7.82	7.59	7.85
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	15	14	13	12	9.4	8.1	7.0	6.8	7.0
pH, Saturation (at 20 C)		11.1	none	10.7	6.96	6.70	6.92	7.05	7.36	7.29	7.37	6.93	6.89
pH, Saturation (at 4 C)		11.4	none	11.0	7.20	6.95	7.17	7.30	7.61	7.54	7.62	7.18	7.14
Sulphate		6	mg/l	7	180	190	110	98	52	64	52	190	280
Total Dissolved Solids (Lab)		30	mg/l	18	590	690	500	570	330	320	260	570	670
Total Organic Carbon (TOC)		34.4	mg/l	14.7	23	17	13	24	5.8	5.7	4.9	8.5	6.3
Total Suspended Solids			mg/l	< 5	7.0	85	1000	4.2	3.8	4.4	4.8	9.4	12
Turbidity		2.5	ntu	1.3	8.8	67	63	12	5.4	6.0	5.1	11	5.2

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE	Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines
VALUE	RDL for the Results exceeds, or is equal to, an applicable guideline
VALUE	Results exceeds Background Concentration

'-' = not applicable or not tested
Units: ug/l=microgram per litre

AECOM

Table C5
General Chemistry in Surface Water Analytical Results

		Sample Location		DIFFUSER	SW19-20	SW19-20
		Sample Date		6/1/2020	4/6/2022	4/19/2022
		Sample ID		20X608058-1165256	SW19-20_20220406	SW19-20_20220419
		Lab Sample ID		1165256	SHG309	SJT841
		Lab Job Number		20X608058	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**			
Alkalinity, Bicarbonate (as CaCO3)		5	mg/l	< 5	150	230
Alkalinity, Carbonate (as CaCO3)		10	mg/l	< 10	< 1.0	< 1.0
Alkalinity, hydroxide (as CaCO3)		5	mg/l	< 5	—	—
Alkalinity, Total (As CaCO3)		20	mg/l	< 5	150	230
Ammonia-N		0.51	mg/l	< 0.03	0.099	0.32
Anion Sum		0.6	meq/l	0.26	6.92	12.0
BOD Carbonaceous		5	mg/l	—	< 5.0	< 5.0
Cation Sum		0.44	meq/l	0.33	7.39	12.4
Chemical Oxygen Demand		53	mg/l	39	< 20	< 20
Chloride ion		13	mg/l	4	8.4	20
Color		200	tcu	159	10	17
Electrical Conductivity		68	umhos/cm	33	690	1100
Fluoride		0.12	mg/l	< 0.12	—	—
Hardness (as CaCO3)		6.3	mg/l	4.9	330	530
Ion Balance		45	%	12.7	3.28	1.43
Langelier Index (at 20 C)		0	none	-5.03	0.615	0.283
Langelier Index (at 4 C)		0	none	-5.35	0.367	0.0360
Nitrate (as N)		0.25	mg/l	< 0.05	0.69	0.15
Nitrate plus Nitrite (N)		0.15	mg/l	< 0.05	0.69	0.15
Nitrite (as N)		0.25	mg/l	< 0.05	< 0.010	< 0.010
Orthophosphate(as P)		0.05	mg/l	0.01	< 0.010	< 0.010
pH, Lab		6.13	ph units	5.68	7.85	7.19
Phenol	4	0.02	mg/l	< 0.004	< 0.0010	< 0.0010
Reactive Silica (SiO2)		6.5	mg/l	1.6	6.3	5.7
pH, Saturation (at 20 C)		11.1	none	10.7	7.23	6.91
pH, Saturation (at 4 C)		11.4	none	11.0	7.48	7.16
Sulphate		6	mg/l	7	180	330
Total Dissolved Solids (Lab)		30	mg/l	18	430	740
Total Organic Carbon (TOC)		34.4	mg/l	14.7	5.0	10
Total Suspended Solids			mg/l	< 5	4.0	3.0
Turbidity		2.5	ntu	1.3	2.5	38

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Units: ug/l=microgram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
			Sample Date	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/6/2020	10/23/2020	11/5/2020
			Sample ID	20X608058-1165256	DIFFUSER_2020071	DIFFUSER_2020072	DIFFUSER_2020081	DIFFUSER_2020082	DIFFUSER_2020090	DIFFUSER_2020092	DIFFUSER_2020100	DUP1_20201006	DIFFUSER_2020102	DIFFUSER_2020110
			Lab Sample ID	1165256	NDH755	NFS559	NIJ481	NLM312	NOK785	NSF571	NUV957	NUW053	NYW160	OBU586
			Lab Job Number	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0Q0953	C0R9712	C0T3354
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE — Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE — RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE — Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
			Sample Date	6/1/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021
			Sample ID	20X608058-1165256	DUP1_20201105	DIFFUSER_2020112	DIFFUSER_2020113	DIFFUSER_2020121	DIFFUSER_2020122	DIFFUSER_2021032	DIFFUSER_2021040	DIFFUSER_2021042	DIFFUSER_2021050	DIFFUSER_2021051
			Lab Sample ID	1165256	OBU587	OFF871	OHD063	OKO556	OMT746	PEB837	PGQ140	PJV227	PMO074	PPM344
			Lab Job Number	20X608058	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	—	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER	DIFFUSER
			Sample Date	6/1/2020	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021
			Sample ID	20X608058-1165256	DIFFUSER_2021060	DIFFUSER_2021061	DIFFUSER_2021063	DIFFUSER_2021071	DIFFUSER_2021072	DIFFUSER_2021081	DIFFUSER_2021090	DIFFUSER_2021092	DIFFUSER_2021100	DUP1_20211019
			Lab Sample ID	1165256	PST793	PVK702	PZB781	QCI564	QFJ455	QIT123	QPN182	QTA033	QWG510	QZA170
			Lab Job Number	20X608058	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	0.10	< 0.090	< 0.090	0.66	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	Y	NA	NA	Y	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	0.10	< 0.090	< 0.090	**0.66**	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	UC (Lube)	NA	NA	UC (Lube)	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

		Sample Location	DIFFUSER	DIFFUSER	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
		Sample Date	6/1/2020	10/19/2021	11/2/2021	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	9/24/2020	10/6/2020	10/23/2020
		Sample ID	20X608058-1165256	DIFFUSER_2021101	DIFFUSER_2021110	20X608058-1165174	SW1_20200717	SW1_20200729	SW1_20200811	SW1_20200824	SW1_20200908	SW1_20200924	DUP A_20200924	SW1_20201006	DUP1_20201023
		Lab Sample ID	1165256	QZA169	RCV753	1165174	NDH751	NFS555	NIJ477	NLM308	NOK781	NSF567	NSF572	NUV951	NYW161
		Lab Job Number	20X608058	C1U4014	C1W2029	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0O8769	C0Q0953	C0R9712
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.056	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.056	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.10	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	0.31	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	Y	NA	NA	NA	NA	YES	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.10	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	**0.31**	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NR	NA	NA	NA	NA	UC (Lube)	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

				Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
				Sample Date	6/1/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	11/30/2020	12/14/2020	12/14/2020	12/28/2020	12/28/2020	3/25/2021	3/25/2021	4/8/2021
				Sample ID	20X608058-1165256	SW1_20201023	SW1_20201105	SW1_20201120	SW1_20201130	DUP1_20201130	DUP1_20201214	SW1_20201214	SW1_20201228	DUP1_20201228	SW1_20210325	DUP4_20210325	SW1_20210408
				Lab Sample ID	1165256	NYW153	OBU580	OFF866	OHD057	OHD064	OKO557	OKO550	OMT740	OMT747	PEB831	PEB838	PGQ134
				Lab Job Number	20X608058	C0R9712	C0T3354	C0U8920	C0V7696	C0V7696	C0X3829	C0X3829	C0Y4558	C0Y4558	C179941	C179941	C192270
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.057	< 0.050	< 0.059	< 0.061	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.057	< 0.050	< 0.059	< 0.061	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.10	< 0.090	< 0.11	< 0.11	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.10	< 0.090	**< 0.11**	**< 0.11**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	—
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	9/23/2021	10/6/2021
			Sample ID	20X608058-1165256	SW1_20210421	SW1_20210505	SW1_20210519	SW1_20210603	SW1_20210614	SW1_20210630	SW1_20210714	SW1_20210727	SW1_20210811	SW1_20210908	DUP1_20210923	SW1_20210923	DUP1_20211006
			Lab Sample ID	1165256	PJV221	PMO067	PPM339	PST787	PVK696	PZB776	QCI559	QFJ449	QIT117	QPN176	QTA034	QTA027	QWG511
			Lab Job Number	20X608058	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1R6341	C1T1039
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	0.25	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	**0.25**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

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AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01	SW01
			Sample Date	6/1/2020	10/6/2021	10/19/2021	11/2/2021	11/2/2021	11/21/2021	11/21/2021	12/1/2021	12/1/2021	12/15/2021	3/24/2022	3/24/2022	4/6/2022
			Sample ID	20X608058-1165256	SW1_20211006	SW1_20211019	DUP1_20211102	SW1_20211102	DUP1_20211121	SW1_20211121	DUP 1_20211201	SW1_20211201	SW1_20211215	DUP1_20220324	SW1_20220324	DUP1_20220406
			Lab Sample ID	1165256	QWG504	QZA163	RCV754	RCV729	RIY809	RIY803	RNH012	RNH005	RJJ614	SEH105	SEH099	SHG310
			Lab Job Number	20X608058	C1T1039	C1U4014	C1W2029	C1W2029	C1Z0716	C1Z0716	C1AG897	C1AG897	C1Z2434	C277826	C277826	C290667
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.053	< 0.050	< 0.050	< 0.055
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.053	< 0.050	< 0.050	< 0.055
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.095	< 0.090	< 0.090	< 0.099
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.095	< 0.090	< 0.090	< 0.099
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

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AECOM

Table C6
PHC in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW01	SW01	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
		Sample Date	6/1/2020	4/6/2022	4/19/2022	11/19/2019	4/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020
		Sample ID	20X608058-1165256	SW1_20220406	SW1_20220419	19X546170-	20X589937-	20X608058-	SW2_20200717	SW2_20200729	SW2_20200811	SW2_20200824	SW2_20200908	SW2_20200924	SW2_20201006	SW2_20201023
		Lab Sample ID	1165256	SHG304	SJT836	731444	1062436	1165251	NDH752	NFS556	NIJ478	NLM309	NOK782	NSF568	NUV952	NYW154
		Lab Job Number	20X608058	C290667	C2A2126	19X546170	20X589937	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.053	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.053	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.096	< 0.090	0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	—	—	Y	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.096	< 0.090	0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	UC	NR	NR	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
			Sample Date	6/1/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/3/2021	6/14/2021
			Sample ID	20X608058-1165256	SW2_20201105	SW2_20201120	SW2_20201130	SW2_20201214	SW2_20201228	SW2_20210325	SW2_20210408	SW2_20210421	SW2_20210505	SW2_20210519	DUP1_2021060	SW2_20210603	SW2_20210614
			Lab Sample ID	1165256	OBU581	OFF867	OHD058	OKO551	OMT741	PEB832	PGQ135	PJV222	PMO068	PPM340	PST794	PST788	PVK697
			Lab Job Number	20X608058	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1F0842	C1G3518
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.058	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.058	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	0.17	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	0.45
Reached Baseline			none	Y	NA	YES	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	**0.17**	< 0.090	< 0.090	< 0.090	< 0.090	—	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**0.45**
Hydrocarbon Resemblance			none	NR	NA	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	UC (Lube)

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02	SW02
			Sample Date	6/1/2020	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021
			Sample ID	20X608058-1165256	SW2_20210630	SW2_20210714	SW2_20210727	SW2_20210811	SW2_20210908	SW2_20210923	SW2_20211006	SW2_20211019	SW2_20211102	SW2_20211121	SW2_20211201	SW2_20211215
			Lab Sample ID	1165256	PZB777	QCI560	QFJ450	QIT118	QPN177	QTA028	QWG505	QZA164	RCV730	RIY804	RNH006	RJJ615
			Lab Job Number	20X608058	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	—	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	—	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	—	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	0.13	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	1.7	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	**1.9**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	—	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW02	SW02	SW02	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
		Sample Date	6/1/2020	3/24/2022	4/6/2022	4/19/2022	11/19/2019	4/1/2020	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020
		Sample ID	20X608058-1165256	SW2_20220324	SW2_20220406	SW2_20220419	19X546170-731445	20X589937-1062437	20X608058-1165252	SW3_20200717	SW3_20200729	SW3_20200811	SW3_20200824	SW3_20200908	SW3_20200924	SW3_20201006
		Lab Sample ID	1165256	SEH100	SHG305	SJT837	731445	1062437	1165252	NDH753	NFS557	NIJ479	NLM310	NOK783	NSF569	NUV953
		Lab Job Number	20X608058	C277826	C290667	C2A2126	19X546170	20X589937	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.001	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.002	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.01	< 0.01	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.055	< 0.050	< 0.05	< 0.05	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.055	< 0.050	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.098	< 0.090	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	0.12	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	—	—	Y	NA	NA	NA	Y	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.098	< 0.090	< 0.1	< 0.1	< 0.1	< 0.090	< 0.090	< 0.090	**0.12**	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NR	NR	NR	NA	NA	NA	UC (Lube)	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	10/23/2020	11/5/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021
			Sample ID	20X608058-1165256	SW3_20201023	SW3_20201105	SW3_20201120	SW3_20201130	SW3_20201214	SW3_20201228	SW3_20210325	SW3_20210408	SW3_20210421	SW3_20210505	SW3_20210519	SW3_20210603	SW3_20210614
			Lab Sample ID	1165256	NYW155	OBU582	OFF868	OHD059	OKO552	OMT742	PEB833	PGQ136	PJV223	PMO069	PPM341	PST789	PVK698
			Lab Job Number	20X608058	C0R9712	C0T3354	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.058	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.058	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.10	0.22	0.24	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	YES	Y	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.10	**0.22**	**0.24**	< 0.090	< 0.090	—	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	UC (Lube)	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

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AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03	SW03
			Sample Date	6/1/2020	6/30/2021	7/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021
			Sample ID	20X608058-1165256	SW3_20210630	SW3_20210714	SW3_20210727	SW3_20210811	SW3_20210908	SW3_20210923	SW3_20211006	SW3_20211019	SW3_20211102	SW3_20211121	SW3_20211201	SW3_20211215
			Lab Sample ID	1165256	PZB778	QCI561	QFJ451	QIT119	QPN178	QTA029	QWG506	QZA165	RCV731	RIY805	RNH007	RJJ616
			Lab Job Number	20X608058	C1I1014	C1J6542	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.055
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	0.061	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.055	< 0.050	< 0.055
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	0.94	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.099	< 0.090	< 0.098
Reached Baseline			none	Y	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	**1.0**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.099	< 0.090	< 0.098
Hydrocarbon Resemblance			none	NR	NA	NA	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

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Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW03	SW03	SW03	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
			Sample Date	6/1/2020	3/24/2022	4/6/2022	4/19/2022	6/1/2020	7/17/2020	7/29/2020	8/11/2020	8/24/2020	9/8/2020	9/24/2020	10/6/2020	10/23/2020	11/5/2020
			Sample ID	20X608058-1165256	SW3_20220324	SW3_20220406	SW3_20220419	20X608058-	SW4_20200717	SW4_20200729	SW4_20200811	SW4_20200824	SW4_20200908	SW4_20200924	SW4_20201006	SW4_20201023	SW4_20201105
			Lab Sample ID	1165256	SEH101	SHG306	SJT838	1165253	NDH754	NFS558	NIJ480	NLM311	NOK784	NSF570	NUV954	NYW156	OBU583
			Lab Job Number	20X608058	C277826	C290667	C2A2126	20X608058	C0H9882	C0J0983	C0K2722	C0L7809	C0N1046	C0O8769	C0Q0953	C0R9712	C0T3354
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.053	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.053	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.096	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.096	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
			Sample Date	6/1/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020	3/25/2021	4/8/2021	4/21/2021	5/5/2021	5/19/2021	6/3/2021	6/14/2021	6/30/2021	7/14/2021
			Sample ID	20X608058-1165256	SW4_20201120	SW4_20201130	SW4_20201214	SW4_20201228	SW4_20210325	SW4_20210408	SW4_20210421	SW4_20210505	SW4_20210519	SW4_20210603	SW4_20210614	SW4_20210630	SW4_20210714
			Lab Sample ID	1165256	OFF869	OHD060	OKO553	OMT743	PEB834	PGQ137	PJV224	PMO070	PPM342	PST790	PVK699	PZB779	QCI562
			Lab Job Number	20X608058	C0U8920	C0V7696	C0X3829	C0Y4558	C179941	C192270	C1A7947	C1C1117	C1D5211	C1F0842	C1G3518	C1I1014	C1J6542
Parameter	NS-EQS[1]	Background[2]	Unit														
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.058	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.058	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.10	< 0.090	0.27	0.11	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	Y	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)	0.1	mg/l	< 0.1	< 0.10	< 0.090	**0.27**	**0.11**	< 0.090	—	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	UC (Lube)	Lube	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04	SW04
			Sample Date	6/1/2020	7/27/2021	8/11/2021	9/8/2021	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	12/15/2021	3/24/2022
			Sample ID	20X608058-1165256	SW4_20210727	SW4_20210811	SW4_20210908	SW4_20210923	SW4_20211006	SW4_20211019	SW4_20211102	SW4_20211121	SW4_20211201	DUP1_20211215	SW4_20211215	SW4_20220324
			Lab Sample ID	1165256	QFJ452	QIT120	QPN179	QTA030	QWG507	QZA166	RCV732	RIY806	RNH011	RJJ620	RJJ617	SEH102
			Lab Job Number	20X608058	C1L1105	C1M6832	C1P9560	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C1Z2434	C277826
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	0.25	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	**0.25**	< 0.090	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	UC (Lube)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW04	SW04	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	4/6/2022	4/19/2022	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/20/2020	11/20/2020	11/30/2020	12/14/2020	12/28/2020
			Sample ID	20X608058-1165256	SW4_20220406	SW4_20220419	20X608058-	SW13_20200923	SW13_20201006	SW13_20201023	SW13_20201105	SW13_20201120	DUP1_20201120	SW13_20201130	SW13_20201214	SW13_20201228
			Lab Sample ID	1165256	SHG307	SJT839	1165254	NRV927	NUV955	NYW157	OBU584	OFF870	OFF872	OHD061	OKO554	OMT744
			Lab Job Number	20X608058	C290667	C2A2126	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0U8920	C0U8920	C0V7696	C0X3829	C0Y4558
Parameter	NS-EQS[1]	Background[2]	Unit													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.053	< 0.050	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.053	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.096	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	0.12	< 0.090
Reached Baseline			none	Y	NA	NA	Y	NA	NA	NA	NA	NA	NA	NA	Y	NA
Modified TPH Tier 1	1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)	0.1	mg/l	< 0.1	< 0.096	< 0.090	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**0.12**	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	UC (Lube)	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

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Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	3/25/2021	4/8/2021	4/8/2021	4/21/2021	4/21/2021	5/5/2021	5/5/2021	5/19/2021	5/19/2021	6/3/2021	6/14/2021	6/14/2021
			Sample ID	20X608058-1165256	SW13_20210325	SW13_20210408	DUP1_20210408	DUP1_20210421	SW13_20210421	SW13_20210505	DUP1_20210505	DUP1_20210519	SW13_20210519	SW13_20210603	DUP1_20210614	SW13_20210614
			Lab Sample ID	1165256	PEB835	PGQ138	PGQ141	PJV228	PJV225	PMO071	PMO075	PPM345	PPM343	PST791	PVK703	PVK700
			Lab Job Number	20X608058	C179941	C192270	C192270	C1A7947	C1A7947	C1C1117	C1C1117	C1D5211	C1D5211	C1F0842	C1G3518	C1G3518
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**													
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.054	< 0.050	< 0.050	< 0.050	< 0.050	0.20	0.27
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	1.4	2.1
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Y	Y
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	—	—	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	**1.6**	**2.3**
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	UC (Fuel/Lube)	UC (Fuel/Lube)

Notes:

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AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	6/30/2021	6/30/2021	7/14/2021	7/14/2021	7/27/2021	7/27/2021	8/11/2021	8/11/2021	9/1/2021	9/8/2021	9/8/2021
			Sample ID	20X608058-1165256	SW13_20210630	DUP1_20210630	SW13_20210714	DUP1_20210714	DUP1_20210727	SW13_20210727	DUP1_20210811	SW13_20210811	SW13_20210901	DUP1_20210908	SW13_20210908
			Lab Sample ID	1165256	PZB780	PZB782	QCI563	QCI565	QFJ456	QFJ453	QIT124	QIT121	QNT693	QPN183	QPN180
			Lab Job Number	20X608058	C1I1014	C1I1014	C1J6542	C1J6542	C1L1105	C1L1105	C1M6832	C1M6832	C1P1197	C1P9560	C1P9560
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**												
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0022	0.0021	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	0.18	0.42	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	Y	Y	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	**0.18**	**0.42**	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	UC (Lube)	UC (Lube)	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

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AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13	SW13
			Sample Date	6/1/2020	9/23/2021	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022
			Sample ID	20X608058-1165256	SW13_20210923	SW13_20211006	SW13_20211019	SW13_20211102	SW13_20211121	SW13_20211201	SW13_20211215	SW13_20220324	SW13_20220406	DUP1_20220419
			Lab Sample ID	1165256	QTA031	QWG508	QZA167	RCV733	RIY807	RNH013	RJJ618	SEH103	SHG308	SJT842
			Lab Job Number	20X608058	C1R6341	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.054	< 0.053	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.054	< 0.053	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.097	< 0.096	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.097	< 0.096	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

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Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW13	SW14	SW14	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	4/19/2022	9/23/2020	3/25/2021	6/1/2020	9/23/2020	10/6/2020	10/23/2020	11/5/2020	11/30/2020	12/14/2020
			Sample ID	20X608058-1165256	SW13_20220419	SW14_20200923	SW14_20210325	20X608058-1165255	SW19-20_20200923	SW19-20_20201006	SW19-20_20201023	SW19-20_20201105	SW19-20_20201130	SW19-20_20201214
			Lab Sample ID	1165256	SJT840	NRV928	PEB836	1165255	NRV929	NUV956	NYW159	OBU585	OHD062	OKO555
			Lab Job Number	20X608058	C2A2126	C0O7061	C179941	20X608058	C0O7061	C0Q0953	C0R9712	C0T3354	C0V7696	C0X3829
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.050	< 0.05	< 0.050	< 0.050	< 0.062	< 0.050	< 0.055	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.062	< 0.050	< 0.055	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	< 0.11	< 0.25	< 0.090	< 0.10	< 0.090
Reached Baseline			none	Y	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.090	< 0.1	< 0.090	**< 0.11**	**< 0.25**	< 0.090	< 0.10	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

AECOM

Table C6
PHC in Surface Water Analytical Results

			Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
			Sample Date	6/1/2020	12/28/2020	4/8/2021	4/21/2021	5/5/2021	6/3/2021	6/14/2021	7/27/2021	8/11/2021	9/8/2021	9/23/2021
			Sample ID	20X608058-1165256	SW19-20_20201228	SW19-20_20210408	SW19-20_20210421	SW19-20_20210505	SW19-20_20210603	SW19-20_20210614	SW19-20_20210727	SW19-20_20210811	SW19-20_20210908	SW19-20_20210923
			Lab Sample ID	1165256	OMT745	PGQ139	PJV226	PMO073	PST792	PVK701	QFJ454	QIT122	QPN181	QTA032
			Lab Job Number	20X608058	C0Y4558	C192270	C1A7947	C1C1117	C1F0842	C1G3518	C1L1105	C1M6832	C1P9560	C1R6341
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**											
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.053	< 0.050	< 0.050	< 0.055	< 0.050	< 0.050	< 0.055	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.053	< 0.050	< 0.050	< 0.055	< 0.050	< 0.050	< 0.055	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.096	< 0.090	< 0.090	< 0.10	< 0.090	0.13	0.39	0.19	0.14	0.11
Reached Baseline			none	Y	NA	NA	NA	NA	NA	Y	Y	Y	Y	Y
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.096	—	< 0.090	< 0.10	< 0.090	**0.13**	**0.39**	**0.19**	**0.14**	**0.11**
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	UC (Lube)	UC (Lube)	UC (Lube)	UC (Lube)	UC (Lube)

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

VALUE Results exceeds NSE-EQS (T3)/Surface Water/Freshwater guidelines

VALUE RDL for the Results exceeds, or is equal to, an applicable guideline

VALUE Results exceeds Background Concentration

'-' = not applicable or not tested

Hydrocarbon Resemblance: UC = Unidentified Compounds, NR=No Resemblance, NA=Not Applicable

Units: mg/l=milligram per litre

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Table C6
PHC in Surface Water Analytical Results

		Sample Location	DIFFUSER	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20	SW19-20
		Sample Date	6/1/2020	10/6/2021	10/19/2021	11/2/2021	11/21/2021	12/1/2021	12/15/2021	3/24/2022	4/6/2022	4/19/2022
		Sample ID	20X608058-1165256	SW19-20_20211006	SW19-20_20211019	SW19-20_20211102	SW19-20_20211121	SW19-20_20211201	SW19-20_20211215	SW19-20_20220324	SW19-20_20220406	SW19-20_20220419
		Lab Sample ID	1165256	QWG509	QZA168	RCV734	RIY808	RNH014	RJJ619	SEH104	SHG309	SJT841
		Lab Job Number	20X608058	C1T1039	C1U4014	C1W2029	C1Z0716	C1AG897	C1Z2434	C277826	C290667	C2A2126
Parameter	**NS-EQS[1]**	**Background[2]**	**Unit**									
Benzene	2.1	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Toluene	0.77	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Ethylbenzene	0.32	0.001	mg/l	< 0.001	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010
Xylenes, Total	0.33	0.002	mg/l	< 0.002	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
PHC F1 (C6-C10) minus BTEX		0.09	mg/l	< 0.01	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
PHC F2 (>C10-C16)		0.05	mg/l	< 0.05	< 0.050	< 0.050	< 0.056	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C16-C21)		0.1	mg/l	< 0.10	< 0.050	< 0.050	< 0.056	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
PHC (>C21-C32)		0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Reached Baseline			none	Y	NA	NA	NA	NA	NA	NA	NA	NA	NA
Modified TPH Tier 1	**1.5 (Gas) 0.1 (Fuel) 0.1 (Lube)**	0.1	mg/l	< 0.1	< 0.090	< 0.090	< 0.10	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090
Hydrocarbon Resemblance			none	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

[1] Nova Scotia Environment (NSE) Tier I Environmental Quality Standards (EQSs) for surface water (fresh water); Table 3, July 6, 2013.

[2] Background Concentration - based on 2001 -2020 analytical data from SW1 with outliers removed.

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Units: mg/l=milligram per litre

Appendix D. Laboratory Certificate of Analysis

Your Project #: 60639002

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Your C.O.C. #: 847883-03-01, 847883-01-01, 847883-02-01

Report Date: 2021/10/21
Report #: R6862569
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T0922
Received: 2021/10/05, 17:00

Sample Matrix: Water
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	23	N/A	2021/10/14	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	1	N/A	2021/10/15	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/10/18	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	16	N/A	2021/10/19	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	24	N/A	2021/10/18	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	23	2021/10/14	2021/10/15	ATL SOP 00042	SM 23 5220D m
Chemical Oxygen Demand (COD)	1	2021/10/08	2021/10/12	ATL SOP 00042	SM 23 5220D m
Colour	24	N/A	2021/10/18	ATL SOP 00020	SM 23 2120C m
Organic carbon - Diss (DOC) (2)	4	N/A	2021/10/13	ATL SOP 00203	SM 23 5310B m
Organic carbon - Diss (DOC) (2)	20	N/A	2021/10/14	ATL SOP 00203	SM 23 5310B m
Conductance - water	23	N/A	2021/10/14	ATL SOP 00004	SM 23 2510B m
Conductance - water	1	N/A	2021/10/15	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	3	2021/10/12	2021/10/12	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	4	2021/10/15	2021/10/15	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	9	2021/10/15	2021/10/16	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	8	2021/10/15	2021/10/18	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	16	N/A	2021/10/14	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	8	N/A	2021/10/15	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	16	N/A	2021/10/13	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	8	N/A	2021/10/14	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	9	N/A	2021/10/19	N/A	Auto Calc.
Ion Balance (% Difference)	15	N/A	2021/10/21	N/A	Auto Calc.
Anion and Cation Sum	9	N/A	2021/10/19	N/A	Auto Calc.
Anion and Cation Sum	15	N/A	2021/10/21	N/A	Auto Calc.
Nitrogen Ammonia - water	9	N/A	2021/10/18	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	13	N/A	2021/10/20	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	2	N/A	2021/10/21	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	24	N/A	2021/10/18	ATL SOP 00016	USGS I-2547-11m

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Report Date: 2021/10/21
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CERTIFICATE OF ANALYSIS

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Received: 2021/10/05, 17:00

Sample Matrix: Water
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrite	24	N/A	2021/10/18	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	24	N/A	2021/10/18	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	23	N/A	2021/10/12	CAM SOP-00444	OMOE E3179 m
Phenols (4AAP) (1)	1	N/A	2021/10/13	CAM SOP-00444	OMOE E3179 m
pH (3)	23	N/A	2021/10/14	ATL SOP 00003	SM 23 4500-H+ B m
pH (3)	1	N/A	2021/10/15	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	24	N/A	2021/10/18	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	9	N/A	2021/10/19	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	15	N/A	2021/10/21	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	9	N/A	2021/10/19	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	15	N/A	2021/10/21	ATL SOP 00049	Auto Calc.
Reactive Silica	24	N/A	2021/10/19	ATL SOP 00022	EPA 366.0 m
Sulphate	5	N/A	2021/10/18	ATL SOP 00023	ASTM D516-16 m
Sulphate	19	N/A	2021/10/19	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	9	N/A	2021/10/19	N/A	Auto Calc.
Total Dissolved Solids (TDS calc)	15	N/A	2021/10/21	N/A	Auto Calc.
Organic carbon - Total (TOC) (2)	16	N/A	2021/10/14	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (2)	8	N/A	2021/10/15	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	1	N/A	2021/10/13	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	1	N/A	2021/10/14	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	14	N/A	2021/10/18	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	8	N/A	2021/10/19	N/A	Atl. RBCA v3 m
Total Suspended Solids	4	2021/10/12	2021/10/15	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	20	2021/10/12	2021/10/21	ATL SOP 00007	SM 23 2540D m
Turbidity	16	N/A	2021/10/13	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	8	N/A	2021/10/14	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	11	N/A	2021/10/13	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	13	N/A	2021/10/09	ATL SOP 00130	Atl. RBCA v3.1 m

Your Project #: 60639002

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Your C.O.C. #: 847883-03-01, 847883-01-01, 847883-02-01

Report Date: 2021/10/21
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T0922
Received: 2021/10/05, 17:00
Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Your Project #: 60639002

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Your C.O.C. #: 847883-03-01, 847883-01-01, 847883-02-01

Report Date: 2021/10/21
Report #: R6862569
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T0922
Received: 2021/10/05, 17:00

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Bureau Veritas
21 Oct 2021 14:47:43

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

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Bureau Veritas Job #: C1T0922
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JS

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF764			QWF764			QWF765		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-01-01			847883-01-01			847883-01-01		
	UNITS	MW1-S	RDL	QC Batch	MW1-S Lab-Dup	RDL	QC Batch	MW1-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	26.4	N/A	7624548				29.1	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	700	1.0	7624546				760	1.0	7624546
Calculated TDS	mg/L	1700	1.0	7624551				1700	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	2.2	1.0	7624546				<1.0	1.0	7624546
Cation Sum	me/L	37.3	N/A	7624548				32.3	N/A	7624548
Hardness (CaCO3)	mg/L	1700	1.0	7624317				1400	1.0	7624317
Ion Balance (% Difference)	%	17.1	N/A	7624547				5.14	N/A	7624547
Langelier Index (@ 20C)	N/A	1.45		7624550				0.899		7624550
Langelier Index (@ 4C)	N/A	1.21		7624725				0.655		7624725
Nitrate (N)	mg/L	0.083	0.050	7624190				<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	6.08		7624550				6.16		7624550
Saturation pH (@ 4C)	N/A	6.32		7624725				6.40		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	700	100	7642258				760	100	7642258
Total Chemical Oxygen Demand	mg/L	170	40	7626568				72	20	7635716
Dissolved Chloride (Cl-)	mg/L	43	1.0	7642248				38	1.0	7642248
Colour	TCU	67	25	7642261				16	5.0	7642261
Nitrate + Nitrite (N)	mg/L	0.083	0.050	7642264				<0.050	0.050	7642264
Nitrite (N)	mg/L	<0.010	0.010	7642265				<0.010	0.010	7642265
Nitrogen (Ammonia Nitrogen)	mg/L	2.1	0.25	7642373				0.23	0.050	7642373
Dissolved Organic Carbon (C)	mg/L	36 (1)	5.0	7635674	36 (1)	5.0	7635674	18 (1)	5.0	7632947
Total Organic Carbon (C)	mg/L	44 (2)	5.0	7635668	45 (2)	5.0	7635668	19 (1)	5.0	7635703
Orthophosphate (P)	mg/L	<0.010	0.010	7642263				<0.010	0.010	7642263
pH	pH	7.53		7635663				7.06		7635663
Phenols-4AAP	mg/L	<0.0010	0.0010	7630693				<0.0010	0.0010	7630693
Reactive Silica (SiO2)	mg/L	13	0.50	7642260				10	0.50	7642260
Total Suspended Solids	mg/L	950	17	7630394				47	2.0	7630394
Dissolved Sulphate (SO4)	mg/L	540	20	7642259				620	40	7642259
Turbidity	NTU	640	1.0	7633138				19	0.10	7633138
Conductivity	uS/cm	2700	1.0	7635660				2400	1.0	7635660

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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Bureau Veritas Job #: C1T0922
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JS

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF765			QWF766			QWF766		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-01-01			847883-01-01			847883-01-01		
	UNITS	MW1-D Lab-Dup	RDL	QC Batch	MW2-S	RDL	QC Batch	MW2-S Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				5.05	N/A	7624548			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				200	1.0	7624546			
Calculated TDS	mg/L				270	1.0	7624551			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7624546			
Cation Sum	me/L				5.08	N/A	7624548			
Hardness (CaCO3)	mg/L				220	1.0	7624317			
Ion Balance (% Difference)	%				0.300	N/A	7624547			
Langelier Index (@ 20C)	N/A				-0.0880		7624550			
Langelier Index (@ 4C)	N/A				-0.337		7624725			
Nitrate (N)	mg/L				0.063	0.050	7624190			
Saturation pH (@ 20C)	N/A				7.24		7624550			
Saturation pH (@ 4C)	N/A				7.49		7624725			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				200	25	7642258			
Total Chemical Oxygen Demand	mg/L				27	20	7635716			
Dissolved Chloride (Cl-)	mg/L				10	1.0	7642248			
Colour	TCU				6.5	5.0	7642261			
Nitrate + Nitrite (N)	mg/L				0.063	0.050	7642264			
Nitrite (N)	mg/L				<0.010	0.010	7642265			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7642372	<0.050	0.050	7642372
Dissolved Organic Carbon (C)	mg/L				2.8	0.50	7635674			
Total Organic Carbon (C)	mg/L				<5.0 (1)	5.0	7635703			
Orthophosphate (P)	mg/L				0.036	0.010	7642263			
pH	pH				7.15		7635663			
Phenols-4AAP	mg/L				<0.0010	0.0010	7630728			
Reactive Silica (SiO2)	mg/L				8.7	0.50	7642260			
Total Suspended Solids	mg/L	54	2.0	7630394	4300	100	7630394			
Dissolved Sulphate (SO4)	mg/L				37	2.0	7642259			
Turbidity	NTU				440	1.0	7633138			
Conductivity	uS/cm				480	1.0	7635660			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JS

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF767			QWF767			QWF768		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-01-01			847883-01-01			847883-01-01		
	UNITS	MW2-M	RDL	QC Batch	MW2-M Lab-Dup	RDL	QC Batch	MW2-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	4.45	N/A	7624548				6.80	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	130	1.0	7624546				220	1.0	7624546
Calculated TDS	mg/L	260	1.0	7624551				360	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546				<1.0	1.0	7624546
Cation Sum	me/L	4.39	N/A	7624548				6.04	N/A	7624548
Hardness (CaCO3)	mg/L	180	1.0	7624317				250	1.0	7624317
Ion Balance (% Difference)	%	0.680	N/A	7624547				5.92	N/A	7624547
Langelier Index (@ 20C)	N/A	-0.434		7624550				0.343		7624550
Langelier Index (@ 4C)	N/A	-0.683		7624725				0.0940		7624725
Nitrate (N)	mg/L	0.095	0.050	7624190				<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	7.65		7624550				7.25		7624550
Saturation pH (@ 4C)	N/A	7.90		7624725				7.50		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	130	25	7642258				230	25	7642258
Total Chemical Oxygen Demand	mg/L	<20	20	7635716				34	20	7635716
Dissolved Chloride (Cl-)	mg/L	13	1.0	7642248				34	1.0	7642248
Colour	TCU	<5.0	5.0	7642261				<5.0	5.0	7642261
Nitrate + Nitrite (N)	mg/L	0.095	0.050	7642264				<0.050	0.050	7642264
Nitrite (N)	mg/L	<0.010	0.010	7642265				<0.010	0.010	7642265
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7642373				<0.050	0.050	7642373
Dissolved Organic Carbon (C)	mg/L	0.93	0.50	7635674				1.5	0.50	7632944
Total Organic Carbon (C)	mg/L	0.79	0.50	7635703				1.8	0.50	7635703
Orthophosphate (P)	mg/L	0.050	0.010	7642263				0.055	0.010	7642263
pH	pH	7.21		7635665				7.59		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630728	<0.0010	0.0010	7630728	<0.0010	0.0010	7630728
Reactive Silica (SiO2)	mg/L	12	0.50	7642260				12	0.50	7642260
Total Suspended Solids	mg/L	270	5.0	7630394				110	5.0	7630394
Dissolved Sulphate (SO4)	mg/L	75	2.0	7642259				64	2.0	7642259
Turbidity	NTU	19	0.10	7633138	19	0.10	7633138	260	1.0	7633138
Conductivity	uS/cm	410	1.0	7635664				620	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1T0922
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JS

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF769			QWF769			QWF770		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-01-01			847883-01-01			847883-01-01		
	UNITS	MW3	RDL	QC Batch	MW3 Lab-Dup	RDL	QC Batch	DUP1	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.49	N/A	7624548				2.16	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	98	1.0	7624546				88	1.0	7624546
Calculated TDS	mg/L	140	1.0	7624551				120	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546				<1.0	1.0	7624546
Cation Sum	me/L	2.52	N/A	7624548				2.01	N/A	7624548
Hardness (CaCO3)	mg/L	98	1.0	7624317				74	1.0	7624317
Ion Balance (% Difference)	%	0.600	N/A	7624547				3.60	N/A	7624547
Langelier Index (@ 20C)	N/A	-0.0400		7624550				-0.141		7624550
Langelier Index (@ 4C)	N/A	-0.291		7624725				-0.392		7624725
Nitrate (N)	mg/L	<0.050	0.050	7624190				<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	7.88		7624550				8.03		7624550
Saturation pH (@ 4C)	N/A	8.14		7624725				8.28		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	99 (1)	10	7642258				89	5.0	7642258
Total Chemical Oxygen Demand	mg/L	<20	20	7636410				<20	20	7636410
Dissolved Chloride (Cl-)	mg/L	11	1.0	7642248				9.1	1.0	7642248
Colour	TCU	<5.0	5.0	7642261				<5.0	5.0	7642261
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642264				<0.050	0.050	7642264
Nitrite (N)	mg/L	<0.010	0.010	7642265				<0.010	0.010	7642265
Nitrogen (Ammonia Nitrogen)	mg/L	0.061	0.050	7642377				0.078	0.050	7642377
Dissolved Organic Carbon (C)	mg/L	1.3	0.50	7632947				<0.50	0.50	7632947
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7635703				<5.0 (2)	5.0	7635677
Orthophosphate (P)	mg/L	0.020	0.010	7642263				0.016	0.010	7642263
pH	pH	7.84		7635665	7.89		7635665	7.89		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630767				0.0016	0.0010	7630728
Reactive Silica (SiO2)	mg/L	13	0.50	7642260				9.4	0.50	7642260
Total Suspended Solids	mg/L	3600	100	7630394				1000	17	7630394
Dissolved Sulphate (SO4)	mg/L	9.4	2.0	7642259				5.8	2.0	7642259
Turbidity	NTU	>1000	1.0	7633138				280	1.0	7633138
Conductivity	uS/cm	240	1.0	7635664	240	1.0	7635664	200	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF771			QWF772			QWF773		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-01-01			847883-01-01			847883-01-01		
	UNITS	DUP2	RDL	QC Batch	MW6-S	RDL	QC Batch	MW6-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	7.06	N/A	7624548	4.85	N/A	7624548	41.0	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	250	1.0	7624546	130	1.0	7624546	1100	1.0	7624546
Calculated TDS	mg/L	360	1.0	7624551	280	1.0	7624551	2500	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546	<1.0	1.0	7624546	1.5	1.0	7624546
Cation Sum	me/L	5.90	N/A	7624548	4.85	N/A	7624548	48.2	N/A	7624548
Hardness (CaCO3)	mg/L	240	1.0	7624317	210	1.0	7624317	1800	1.0	7624317
Ion Balance (% Difference)	%	8.95	N/A	7624547	0.00	N/A	7624547	8.05	N/A	7624547
Langelier Index (@ 20C)	N/A	0.326		7624550	-0.302		7624550	1.23		7624550
Langelier Index (@ 4C)	N/A	0.0770		7624725	-0.551		7624725	0.986		7624725
Nitrate (N)	mg/L	<0.050	0.050	7624190	0.13	0.050	7624190	<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	7.23		7624550	7.43		7624550	5.93		7624550
Saturation pH (@ 4C)	N/A	7.47		7624725	7.68		7624725	6.17		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	250	25	7642258	130	25	7642258	1100	100	7642258
Total Chemical Oxygen Demand	mg/L	<20	20	7636410	52	20	7636410	220	20	7636410
Dissolved Chloride (Cl-)	mg/L	28	1.0	7642248	16	1.0	7642248	97	1.0	7642248
Colour	TCU	<5.0	5.0	7642261	20	5.0	7642261	47	5.0	7642261
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642264	0.13	0.050	7642264	<0.050	0.050	7642264
Nitrite (N)	mg/L	<0.010	0.010	7642265	<0.010	0.010	7642265	<0.010	0.010	7642265
Nitrogen (Ammonia Nitrogen)	mg/L	0.057	0.050	7642377	<0.050	0.050	7642377	27	0.75	7647796
Dissolved Organic Carbon (C)	mg/L	1.5	0.50	7632947	19	0.50	7632944	58 (1)	5.0	7632947
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7635703	21	0.50	7635703	65 (1)	5.0	7635703
Orthophosphate (P)	mg/L	0.056	0.010	7642263	<0.010	0.010	7642263	<0.010	0.010	7642263
pH	pH	7.55		7635665	7.13		7635665	7.15		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630728	<0.0010	0.0010	7630693	0.0016	0.0010	7630693
Reactive Silica (SiO2)	mg/L	12	0.50	7642260	3.8	0.50	7642260	12	0.50	7642260
Total Suspended Solids	mg/L	670	17	7630394	51	5.0	7630394	64	10	7630394
Dissolved Sulphate (SO4)	mg/L	64	2.0	7642259	83	2.0	7642259	760	40	7642259
Turbidity	NTU	420	1.0	7633138	22	0.10	7633138	170	1.0	7633138
Conductivity	uS/cm	620	1.0	7635664	470	1.0	7635664	3600	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF774			QWF775			QWF776		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-02-01			847883-02-01			847883-02-01		
	UNITS	MW7-S	RDL	QC Batch	MW7-D	RDL	QC Batch	MW19-03D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	5.62	N/A	7624548	11.0	N/A	7624548	2.24	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	240	1.0	7624546	230	1.0	7624546	95	1.0	7624546
Calculated TDS	mg/L	310	1.0	7624551	660	1.0	7624551	120	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546	<1.0	1.0	7624546	<1.0	1.0	7624546
Cation Sum	me/L	5.58	N/A	7624548	11.3	N/A	7624548	2.14	N/A	7624548
Hardness (CaCO3)	mg/L	230	1.0	7624317	490	1.0	7624317	70	1.0	7624317
Ion Balance (% Difference)	%	0.360	N/A	7624547	1.48	N/A	7624547	2.28	N/A	7624547
Langelier Index (@ 20C)	N/A	0.181		7624550	-0.161		7624550	-0.0930		7624550
Langelier Index (@ 4C)	N/A	-0.0680		7624725	-0.409		7624725	-0.344		7624725
Nitrate (N)	mg/L	0.15	0.050	7624190	<0.050	0.050	7624190	<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	7.11		7624550	6.93		7624550	8.02		7624550
Saturation pH (@ 4C)	N/A	7.36		7624725	7.18		7624725	8.27		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	240	25	7642258	230	25	7642258	96	5.0	7642270
Total Chemical Oxygen Demand	mg/L	40	20	7636410	62	20	7636410	<20	20	7636410
Dissolved Chloride (Cl-)	mg/L	7.3	1.0	7642248	19	1.0	7642248	8.5	1.0	7642250
Colour	TCU	17	5.0	7642261	27	5.0	7642261	<5.0	5.0	7642274
Nitrate + Nitrite (N)	mg/L	0.15	0.050	7642264	<0.050	0.050	7642264	<0.050	0.050	7642276
Nitrite (N)	mg/L	<0.010	0.010	7642265	<0.010	0.010	7642265	<0.010	0.010	7642277
Nitrogen (Ammonia Nitrogen)	mg/L	0.057	0.050	7647796	0.90	0.050	7647796	<0.050	0.050	7647796
Dissolved Organic Carbon (C)	mg/L	8.6	0.50	7632947	19 (1)	5.0	7635674	<0.50	0.50	7635674
Total Organic Carbon (C)	mg/L	37 (2)	5.0	7635677	21	0.50	7635703	<0.50	0.50	7635703
Orthophosphate (P)	mg/L	<0.010	0.010	7642263	<0.010	0.010	7642263	0.077	0.010	7642275
pH	pH	7.29		7635665	6.77		7635665	7.93		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630693	<0.0010	0.0010	7630728	<0.0010	0.0010	7630693
Reactive Silica (SiO2)	mg/L	10	0.50	7642260	5.7	0.50	7642260	7.9	0.50	7642272
Total Suspended Solids	mg/L	5100	100	7630394	28	2.0	7630394	18	2.0	7630394
Dissolved Sulphate (SO4)	mg/L	28	2.0	7642259	280	10	7642259	4.0	2.0	7642271
Turbidity	NTU	>1000	1.0	7635732	9.9	0.10	7633138	5.2	0.10	7633138
Conductivity	uS/cm	530	1.0	7635664	1000	1.0	7635664	210	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF777			QWF779			QWF780		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-02-01			847883-02-01			847883-02-01		
	UNITS	MW19-09S	RDL	QC Batch	MW19-11M	RDL	QC Batch	MW19-11D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	3.73	N/A	7624548	19.8	N/A	7624548	31.0	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	140	1.0	7624546	650	1.0	7624546	910	1.0	7624546
Calculated TDS	mg/L	190	1.0	7624551	1200	1.0	7624551	1800	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.7	1.0	7624546	1.0	1.0	7624546	3.1	1.0	7624546
Cation Sum	me/L	2.46	N/A	7624548	24.8	N/A	7624548	33.6	N/A	7624548
Hardness (CaCO3)	mg/L	86	1.0	7624317	1100	1.0	7624317	1400	1.0	7624317
Ion Balance (% Difference)	%	20.5	N/A	7624547	11.3	N/A	7624547	4.01	N/A	7624547
Langelier Index (@ 20C)	N/A	0.311		7624550	0.992		7624550	1.54		7624550
Langelier Index (@ 4C)	N/A	0.0600		7624725	0.747		7624725	1.29		7624725
Nitrate (N)	mg/L	<0.050	0.050	7624190	<0.050	0.050	7624190	<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	7.78		7624550	6.23		7624550	6.01		7624550
Saturation pH (@ 4C)	N/A	8.03		7624725	6.48		7624725	6.26		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	140	25	7642270	650	50	7642270	910	50	7642270
Total Chemical Oxygen Demand	mg/L	26	20	7636410	100	20	7636410	110	20	7636410
Dissolved Chloride (Cl-)	mg/L	8.5	1.0	7642250	26	1.0	7642250	38	1.0	7642250
Colour	TCU	<5.0	5.0	7642274	22	5.0	7642274	24	5.0	7642274
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642276	<0.050	0.050	7642276	<0.050	0.050	7642276
Nitrite (N)	mg/L	<0.010	0.010	7642277	<0.010	0.010	7642277	<0.010	0.010	7642277
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7647796	5.4	0.25	7647796	9.1	0.25	7647796
Dissolved Organic Carbon (C)	mg/L	0.58	0.50	7632947	21 (1)	5.0	7635674	24 (1)	5.0	7635674
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7635677	27 (2)	5.0	7635677	27 (1)	5.0	7635703
Orthophosphate (P)	mg/L	0.019	0.010	7642275	<0.010	0.010	7642275	<0.010	0.010	7642275
pH	pH	8.09		7635665	7.22		7635665	7.55		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630728	<0.0010	0.0010	7630728	<0.0010	0.0010	7630728
Reactive Silica (SiO2)	mg/L	12	0.50	7642272	5.0	0.50	7642272	7.4	0.50	7642272
Total Suspended Solids	mg/L	5200	100	7630394	1400	100	7630394	380	10	7630394
Dissolved Sulphate (SO4)	mg/L	29	2.0	7642271	290	10	7642271	560	20	7642271
Turbidity	NTU	870	1.0	7633138	280	1.0	7633138	150	1.0	7633138
Conductivity	uS/cm	370	1.0	7635664	1700	1.0	7635664	2500	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF781			QWF782			QWF783		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-02-01			847883-03-01			847883-03-01		
	UNITS	PW19-01	RDL	QC Batch	MW19-13S	RDL	QC Batch	MW19-13D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	8.47	N/A	7624548	1.65	N/A	7624548	2.07	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	380	1.0	7624546	8.2	1.0	7624546	28	1.0	7624546
Calculated TDS	mg/L	410	1.0	7624551	110	1.0	7624551	140	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	3.0	1.0	7624546	<1.0	1.0	7624546	<1.0	1.0	7624546
Cation Sum	me/L	6.48	N/A	7624548	1.50	N/A	7624548	1.83	N/A	7624548
Hardness (CaCO3)	mg/L	290	1.0	7624317	50	1.0	7624317	59	1.0	7624317
Ion Balance (% Difference)	%	13.3	N/A	7624547	4.76	N/A	7624547	6.15	N/A	7624547
Langelier Index (@ 20C)	N/A	1.03		7624550	-3.58		7624550	-1.77		7624550
Langelier Index (@ 4C)	N/A	0.785		7624725	-3.83		7624725	-2.02		7624725
Nitrate (N)	mg/L	<0.050	0.050	7624190	<0.050	0.050	7624190	0.055	0.050	7624190
Saturation pH (@ 20C)	N/A	6.89		7624550	9.34		7624550	8.70		7624550
Saturation pH (@ 4C)	N/A	7.14		7624725	9.59		7624725	8.95		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	380	25	7642270	8.2	5.0	7642270	28	5.0	7642270
Total Chemical Oxygen Demand	mg/L	28	20	7636410	33	20	7636410	31	20	7636410
Dissolved Chloride (Cl-)	mg/L	11	1.0	7642250	13	1.0	7642250	13	1.0	7642250
Colour	TCU	<5.0	5.0	7642274	9.9	5.0	7642274	<5.0	5.0	7642274
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642276	<0.050	0.050	7642276	0.055	0.050	7642276
Nitrite (N)	mg/L	<0.010	0.010	7642277	<0.010	0.010	7642277	<0.010	0.010	7642277
Nitrogen (Ammonia Nitrogen)	mg/L	0.31	0.050	7647796	<0.050	0.050	7647796	<0.050	0.050	7647796
Dissolved Organic Carbon (C)	mg/L	2.2	0.50	7635674	3.7	0.50	7635674	0.81	0.50	7632944
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	7635677	8.3	0.50	7635703	<5.0 (1)	5.0	7635703
Orthophosphate (P)	mg/L	<0.010	0.010	7642275	<0.010	0.010	7642275	0.024	0.010	7642275
pH	pH	7.93		7635665	5.76		7635665	6.93		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630728	<0.0010	0.0010	7630693	<0.0010	0.0010	7630693
Reactive Silica (SiO2)	mg/L	19	0.50	7642272	8.7	0.50	7642272	19	0.50	7642272
Total Suspended Solids	mg/L	630	10	7630394	5900	100	7630394	2600	100	7630394
Dissolved Sulphate (SO4)	mg/L	22	2.0	7642271	54	2.0	7642271	55	2.0	7642271
Turbidity	NTU	150	1.0	7633138	360	1.0	7635732	960	1.0	7635732
Conductivity	uS/cm	750	1.0	7635664	180	1.0	7635664	220	1.0	7635664

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF784			QWF785			QWF785		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-03-01			847883-03-01			847883-03-01		
	UNITS	MW20-14S	RDL	QC Batch	MW20-14D	RDL	QC Batch	MW20-14D Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	4.52	N/A	7624548	7.40	N/A	7624548			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	91	1.0	7624546	90	1.0	7624546			
Calculated TDS	mg/L	270	1.0	7624551	460	1.0	7624551			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546	<1.0	1.0	7624546			
Cation Sum	me/L	3.89	N/A	7624548	6.72	N/A	7624548			
Hardness (CaCO3)	mg/L	160	1.0	7624317	270	1.0	7624317			
Ion Balance (% Difference)	%	7.49	N/A	7624547	4.82	N/A	7624547			
Langelier Index (@ 20C)	N/A	-0.652		7624550	-0.596		7624550			
Langelier Index (@ 4C)	N/A	-0.902		7624725	-0.844		7624725			
Nitrate (N)	mg/L	1.1	0.050	7624190	0.34	0.050	7624190			
Saturation pH (@ 20C)	N/A	7.81		7624550	7.66		7624550			
Saturation pH (@ 4C)	N/A	8.06		7624725	7.91		7624725			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	91	5.0	7642270	90	5.0	7642270			
Total Chemical Oxygen Demand	mg/L	45	20	7636410	<20	20	7636410			
Dissolved Chloride (Cl-)	mg/L	10	1.0	7642250	13	1.0	7642250			
Colour	TCU	<5.0	5.0	7642274	<5.0	5.0	7642274			
Nitrate + Nitrite (N)	mg/L	1.1	0.050	7642276	0.34	0.050	7642276			
Nitrite (N)	mg/L	<0.010	0.010	7642277	<0.010	0.010	7642277			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7647796	<0.050	0.050	7647796			
Dissolved Organic Carbon (C)	mg/L	2.6	0.50	7632947	1.9	0.50	7632947			
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	7635677	1.8	0.50	7635672	1.7	0.50	7635672
Orthophosphate (P)	mg/L	0.015	0.010	7642275	0.011	0.010	7642275			
pH	pH	7.15		7635665	7.07		7635665			
Phenols-4AAP	mg/L	<0.0010	0.0010	7630693	<0.0010	0.0010	7630728			
Reactive Silica (SiO2)	mg/L	9.7	0.50	7642272	12	0.50	7642272			
Total Suspended Solids	mg/L	2400	100	7630394	41	2.0	7630481			
Dissolved Sulphate (SO4)	mg/L	110	10	7642271	250	10	7642271			
Turbidity	NTU	>1000	1.0	7635732	18	0.10	7635732			
Conductivity	uS/cm	460	1.0	7635664	720	1.0	7635664			

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Lab-Dup = Laboratory Initiated Duplicate
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(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF787			QWF787			QWF788		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-03-01			847883-03-01			847883-03-01		
	UNITS	MW20-15D	RDL	QC Batch	MW20-15D Lab-Dup	RDL	QC Batch	MW20-17S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	13.4	N/A	7624548				2.12	N/A	7624548
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	330	1.0	7624546				85	1.0	7624546
Calculated TDS	mg/L	790	1.0	7624551				120	1.0	7624551
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546				1.0	1.0	7624546
Cation Sum	me/L	13.6	N/A	7624548				1.97	N/A	7624548
Hardness (CaCO3)	mg/L	570	1.0	7624317				63	1.0	7624317
Ion Balance (% Difference)	%	0.590	N/A	7624547				3.67	N/A	7624547
Langelier Index (@ 20C)	N/A	0.566		7624550				-0.00600		7624550
Langelier Index (@ 4C)	N/A	0.320		7624725				-0.257		7624725
Nitrate (N)	mg/L	<0.050	0.050	7624190				<0.050	0.050	7624190
Saturation pH (@ 20C)	N/A	6.79		7624550				8.11		7624550
Saturation pH (@ 4C)	N/A	7.04		7624725				8.36		7624725
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	330	25	7642270				86	5.0	7642270
Total Chemical Oxygen Demand	mg/L	<20	20	7636410				<20	20	7636410
Dissolved Chloride (Cl-)	mg/L	38	1.0	7642250				9.8	1.0	7642250
Colour	TCU	<5.0	5.0	7642274				<5.0	5.0	7642274
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642276				<0.050	0.050	7642276
Nitrite (N)	mg/L	<0.010	0.010	7642277				<0.010	0.010	7642277
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7647796				<0.050	0.050	7647796
Dissolved Organic Carbon (C)	mg/L	2.4	0.50	7632944				<0.50	0.50	7632947
Total Organic Carbon (C)	mg/L	2.7	0.50	7635707				<0.50	0.50	7635703
Orthophosphate (P)	mg/L	0.032	0.010	7642275				0.013	0.010	7642275
pH	pH	7.36		7638559	7.38		7638559	8.10		7635665
Phenols-4AAP	mg/L	<0.0010	0.0010	7630728				<0.0010	0.0010	7630767
Reactive Silica (SiO2)	mg/L	25	1.0	7642272				9.4	0.50	7642272
Total Suspended Solids	mg/L	110	2.0	7630481				2500	100	7630481
Dissolved Sulphate (SO4)	mg/L	270	10	7642271				5.6	2.0	7642271
Turbidity	NTU	34	0.10	7635732				600	1.0	7635732
Conductivity	uS/cm	1200	1.0	7638554	1200	1.0	7638554	200	1.0	7635664

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWF789			QWF789		
Sampling Date		2021/10/05			2021/10/05		
COC Number		847883-03-01			847883-03-01		
	UNITS	MW20-17D	RDL	QC Batch	MW20-17D Lab-Dup	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L	2.22	N/A	7624548			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	91	1.0	7624546			
Calculated TDS	mg/L	120	1.0	7624551			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7624546			
Cation Sum	me/L	2.00	N/A	7624548			
Hardness (CaCO3)	mg/L	74	1.0	7624317			
Ion Balance (% Difference)	%	5.21	N/A	7624547			
Langelier Index (@ 20C)	N/A	-0.0240		7624550			
Langelier Index (@ 4C)	N/A	-0.275		7624725			
Nitrate (N)	mg/L	0.055	0.050	7624190			
Saturation pH (@ 20C)	N/A	8.02		7624550			
Saturation pH (@ 4C)	N/A	8.27		7624725			
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	92	5.0	7642270	90	5.0	7642270
Total Chemical Oxygen Demand	mg/L	26	20	7636410			
Dissolved Chloride (Cl-)	mg/L	8.9	1.0	7642250	9.1	1.0	7642250
Colour	TCU	<5.0	5.0	7642274	<5.0	5.0	7642274
Nitrate + Nitrite (N)	mg/L	0.055	0.050	7642276	0.055	0.050	7642276
Nitrite (N)	mg/L	<0.010	0.010	7642277	<0.010	0.010	7642277
Nitrogen (Ammonia Nitrogen)	mg/L	0.054	0.050	7647796			
Dissolved Organic Carbon (C)	mg/L	0.54	0.50	7632947			
Total Organic Carbon (C)	mg/L	<0.50	0.50	7635707			
Orthophosphate (P)	mg/L	0.015	0.010	7642275	0.015	0.010	7642275
pH	pH	7.99		7635665			
Phenols-4AAP	mg/L	0.0012	0.0010	7630767			
Reactive Silica (SiO2)	mg/L	9.2	0.50	7642272	9.3	0.50	7642272
Total Suspended Solids	mg/L	510	10	7630481			
Dissolved Sulphate (SO4)	mg/L	5.8	2.0	7642271	5.7	2.0	7642271
Turbidity	NTU	420	1.0	7635733			
Conductivity	uS/cm	200	1.0	7635664			

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWF764			QWF765		QWF766	QWF767		
Sampling Date		2021/10/05			2021/10/05		2021/10/05	2021/10/05		
COC Number		847883-01-01			847883-01-01		847883-01-01	847883-01-01		
	UNITS	MW1-S	RDL	QC Batch	MW1-D	RDL	MW2-S	MW2-M	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	20	5.0	7632869	16	5.0	47	25	5.0	7632872
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	7632869	<1.0	1.0	<1.0	<1.0	1.0	7632872
Dissolved Arsenic (As)	ug/L	2.2	1.0	7632869	4.6	1.0	<1.0	1.6	1.0	7632872
Dissolved Barium (Ba)	ug/L	73	1.0	7632869	33	1.0	61	14	1.0	7632872
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	7632869	0.15	0.10	<0.10	0.14	0.10	7632872
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	7632869	<2.0	2.0	<2.0	<2.0	2.0	7632872
Dissolved Boron (B)	ug/L	4500	500	7632869	6000	500	160	110	50	7632872
Dissolved Cadmium (Cd)	ug/L	0.066	0.010	7632869	3.0	0.010	0.029	0.073	0.010	7632872
Dissolved Calcium (Ca)	ug/L	510000	100	7632869	380000	100	74000	46000	100	7632872
Dissolved Chromium (Cr)	ug/L	1.2	1.0	7632869	<1.0	1.0	<1.0	<1.0	1.0	7632872
Dissolved Cobalt (Co)	ug/L	3.5	0.40	7632869	9.4	0.40	<0.40	<0.40	0.40	7632872
Dissolved Copper (Cu)	ug/L	3.0	0.50	7632869	3.9	0.50	4.9	1.0	0.50	7632872
Dissolved Iron (Fe)	ug/L	260	50	7632869	220	50	59	<50	50	7632872
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7632869	<0.50	0.50	<0.50	<0.50	0.50	7632872
Dissolved Magnesium (Mg)	ug/L	94000	100	7632869	110000	100	9500	15000	100	7632872
Dissolved Manganese (Mn)	ug/L	15000	2.0	7632869	7900	2.0	11	<2.0	2.0	7632872
Dissolved Molybdenum (Mo)	ug/L	2.5	2.0	7632869	<2.0	2.0	<2.0	<2.0	2.0	7632872
Dissolved Nickel (Ni)	ug/L	12	2.0	7632869	25	2.0	<2.0	<2.0	2.0	7632872
Dissolved Phosphorus (P)	ug/L	<100	100	7632869	<100	100	<100	<100	100	7632872
Dissolved Potassium (K)	ug/L	12000	100	7632869	3600	100	2800	1000	100	7632872
Dissolved Selenium (Se)	ug/L	0.61	0.50	7632869	<0.50	0.50	<0.50	<0.50	0.50	7632872
Dissolved Silver (Ag)	ug/L	<0.10	0.10	7632869	<0.10	0.10	<0.10	<0.10	0.10	7632872
Dissolved Sodium (Na)	ug/L	82000	100	7632869	97000	100	12000	19000	100	7632872
Dissolved Strontium (Sr)	ug/L	2100	2.0	7632869	890	2.0	290	130	2.0	7632872
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	7632869	0.10	0.10	<0.10	<0.10	0.10	7632872
Dissolved Tin (Sn)	ug/L	<2.0	2.0	7632869	<2.0	2.0	<2.0	<2.0	2.0	7632872
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	7632869	<2.0	2.0	<2.0	2.4	2.0	7632872
Dissolved Uranium (U)	ug/L	380	0.10	7632869	870	1.0	0.62	17	0.10	7632872
Dissolved Vanadium (V)	ug/L	<2.0	2.0	7632869	<2.0	2.0	<2.0	<2.0	2.0	7632872
Dissolved Zinc (Zn)	ug/L	5.8	5.0	7632869	110	5.0	9.6	5.4	5.0	7632872

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWF768	QWF769	QWF770	QWF771	QWF772		
Sampling Date		2021/10/05	2021/10/05	2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-01-01	847883-01-01	847883-01-01	847883-01-01	847883-01-01		
	UNITS	MW2-D	MW3	DUP1	DUP2	MW6-S	RDL	QC Batch
Metals								
Dissolved Aluminum (Al)	ug/L	7.7	15	8.1	6.9	89	5.0	7632872
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Arsenic (As)	ug/L	2.2	2.7	2.5	2.1	<1.0	1.0	7632872
Dissolved Barium (Ba)	ug/L	13	21	10	13	25	1.0	7632872
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7632872
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Boron (B)	ug/L	55	<50	<50	51	540	50	7632872
Dissolved Cadmium (Cd)	ug/L	0.052	<0.010	<0.010	0.052	0.018	0.010	7632872
Dissolved Calcium (Ca)	ug/L	68000	31000	24000	66000	72000	100	7632872
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7632872
Dissolved Copper (Cu)	ug/L	2.1	1.8	1.7	0.57	4.3	0.50	7632872
Dissolved Iron (Fe)	ug/L	<50	<50	<50	<50	<50	50	7632872
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7632872
Dissolved Magnesium (Mg)	ug/L	18000	5200	3500	18000	6900	100	7632872
Dissolved Manganese (Mn)	ug/L	<2.0	3.1	24	<2.0	210	2.0	7632872
Dissolved Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	100	7632872
Dissolved Potassium (K)	ug/L	1200	1500	790	1200	1200	100	7632872
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	0.52	0.50	7632872
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7632872
Dissolved Sodium (Na)	ug/L	25000	12000	11000	25000	15000	100	7632872
Dissolved Strontium (Sr)	ug/L	170	110	81	170	210	2.0	7632872
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7632872
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Uranium (U)	ug/L	200	9.3	10	200	1.1	0.10	7632872
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	3.0	<2.0	<2.0	2.0	7632872
Dissolved Zinc (Zn)	ug/L	7.4	<5.0	<5.0	<5.0	5.9	5.0	7632872

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWF773		QWF774	QWF775	QWF776	QWF777		
Sampling Date		2021/10/05		2021/10/05	2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-01-01		847883-02-01	847883-02-01	847883-02-01	847883-02-01		
	UNITS	MW6-D	RDL	MW7-S	MW7-D	MW19-03D	MW19-09S	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	75	50	280	86	14	12	5.0	7632872
Dissolved Antimony (Sb)	ug/L	<10	10	<1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Arsenic (As)	ug/L	48	10	<1.0	2.2	4.7	1.8	1.0	7632872
Dissolved Barium (Ba)	ug/L	89	10	26	35	6.0	16	1.0	7632872
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<0.10	0.27	<0.10	<0.10	0.10	7632872
Dissolved Bismuth (Bi)	ug/L	<20	20	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Boron (B)	ug/L	13000	500	120	1700	<50	<50	50	7632872
Dissolved Cadmium (Cd)	ug/L	<0.10	0.10	0.011	0.25	<0.010	0.012	0.010	7632872
Dissolved Calcium (Ca)	ug/L	500000	1000	86000	160000	22000	28000	100	7632872
Dissolved Chromium (Cr)	ug/L	<10	10	<1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Cobalt (Co)	ug/L	21	4.0	<0.40	6.1	<0.40	<0.40	0.40	7632872
Dissolved Copper (Cu)	ug/L	<5.0	5.0	5.1	2.3	1.9	2.1	0.50	7632872
Dissolved Iron (Fe)	ug/L	14000	500	170	660	<50	<50	50	7632872
Dissolved Lead (Pb)	ug/L	<5.0	5.0	<0.50	2.2	<0.50	<0.50	0.50	7632872
Dissolved Magnesium (Mg)	ug/L	140000	1000	4800	24000	3300	4000	100	7632872
Dissolved Manganese (Mn)	ug/L	23000	20	17	5100	<2.0	3.7	2.0	7632872
Dissolved Molybdenum (Mo)	ug/L	<20	20	<2.0	<2.0	6.0	7.5	2.0	7632872
Dissolved Nickel (Ni)	ug/L	26	20	<2.0	4.5	<2.0	<2.0	2.0	7632872
Dissolved Phosphorus (P)	ug/L	<1000	1000	<100	<100	130	<100	100	7632872
Dissolved Potassium (K)	ug/L	18000	1000	6000	3500	1100	2100	100	7632872
Dissolved Selenium (Se)	ug/L	<5.0	5.0	<0.50	<0.50	<0.50	<0.50	0.50	7632872
Dissolved Silver (Ag)	ug/L	<1.0	1.0	<0.10	<0.10	<0.10	<0.10	0.10	7632872
Dissolved Sodium (Na)	ug/L	200000	1000	17000	29000	16000	16000	100	7632872
Dissolved Strontium (Sr)	ug/L	2300	20	260	420	78	77	2.0	7632872
Dissolved Thallium (Tl)	ug/L	<1.0	1.0	<0.10	0.17	<0.10	<0.10	0.10	7632872
Dissolved Tin (Sn)	ug/L	<20	20	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Titanium (Ti)	ug/L	<20	20	7.6	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Uranium (U)	ug/L	270	1.0	0.90	22	15	4.8	0.10	7632872
Dissolved Vanadium (V)	ug/L	<20	20	<2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Zinc (Zn)	ug/L	<50	50	6.0	41	6.3	13	5.0	7632872

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QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWF779		QWF780		QWF781	QWF782	QWF783		
Sampling Date		2021/10/05		2021/10/05		2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-02-01		847883-02-01		847883-02-01	847883-03-01	847883-03-01		
	UNITS	MW19-11M	RDL	MW19-11D	RDL	PW19-01	MW19-13S	MW19-13D	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	34	5.0	34	5.0	7.2	480	20	5.0	7632872
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Arsenic (As)	ug/L	1.2	1.0	20	1.0	4.7	<1.0	<1.0	1.0	7632872
Dissolved Barium (Ba)	ug/L	75	1.0	67	1.0	68	40	57	1.0	7632872
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	0.16	0.10	<0.10	0.49	1.3	0.10	7632872
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Boron (B)	ug/L	3800	50	5500	500	66	330	240	50	7632872
Dissolved Cadmium (Cd)	ug/L	0.41	0.010	0.061	0.010	<0.010	0.27	0.15	0.010	7632872
Dissolved Calcium (Ca)	ug/L	340000	100	460000	100	94000	12000	16000	100	7632872
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	7632872
Dissolved Cobalt (Co)	ug/L	10	0.40	12	0.40	1.2	1.3	0.65	0.40	7632872
Dissolved Copper (Cu)	ug/L	1.7	0.50	1.5	0.50	1.9	3.3	9.9	0.50	7632872
Dissolved Iron (Fe)	ug/L	4100	50	12000	50	150	93	<50	50	7632872
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	0.50	<0.50	<0.50	<0.50	0.50	7632872
Dissolved Magnesium (Mg)	ug/L	57000	100	74000	100	13000	4700	4400	100	7632872
Dissolved Manganese (Mn)	ug/L	20000	2.0	20000	2.0	2600	1200	81	2.0	7632872
Dissolved Molybdenum (Mo)	ug/L	2.0	2.0	2.4	2.0	2.8	<2.0	<2.0	2.0	7632872
Dissolved Nickel (Ni)	ug/L	6.0	2.0	7.4	2.0	5.3	<2.0	2.5	2.0	7632872
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	<100	<100	<100	100	7632872
Dissolved Potassium (K)	ug/L	11000	100	15000	100	2000	1300	1300	100	7632872
Dissolved Selenium (Se)	ug/L	<0.50	0.50	<0.50	0.50	<0.50	<0.50	<0.50	0.50	7632872
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	<0.10	0.71	0.10	7632872
Dissolved Sodium (Na)	ug/L	55000	100	73000	100	14000	11000	14000	100	7632872
Dissolved Strontium (Sr)	ug/L	1100	2.0	1800	2.0	230	41	90	2.0	7632872
Dissolved Thallium (Tl)	ug/L	0.27	0.10	0.30	0.10	<0.10	<0.10	<0.10	0.10	7632872
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Uranium (U)	ug/L	230	0.10	380	0.10	8.5	0.21	2.4	0.10	7632872
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7632872
Dissolved Zinc (Zn)	ug/L	8.2	5.0	8.8	5.0	5.8	9.3	14	5.0	7632872

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWF784		QWF785	QWF787	QWF788	QWF789		
Sampling Date		2021/10/05		2021/10/05	2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-03-01		847883-03-01	847883-03-01	847883-03-01	847883-03-01		
	UNITS	MW20-14S	QC Batch	MW20-14D	MW20-15D	MW20-17S	MW20-17D	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	45	7632872	6.7	<5.0	35	6.2	5.0	7635864
Dissolved Antimony (Sb)	ug/L	<1.0	7632872	<1.0	<1.0	<1.0	<1.0	1.0	7635864
Dissolved Arsenic (As)	ug/L	<1.0	7632872	<1.0	1.1	1.3	2.5	1.0	7635864
Dissolved Barium (Ba)	ug/L	35	7632872	15	50	17	9.3	1.0	7635864
Dissolved Beryllium (Be)	ug/L	<0.10	7632872	0.24	<0.10	<0.10	<0.10	0.10	7635864
Dissolved Bismuth (Bi)	ug/L	<2.0	7632872	<2.0	<2.0	<2.0	<2.0	2.0	7635864
Dissolved Boron (B)	ug/L	200	7632872	280	76	<50	<50	50	7635864
Dissolved Cadmium (Cd)	ug/L	0.061	7632872	0.26	0.25	<0.010	<0.010	0.010	7635864
Dissolved Calcium (Ca)	ug/L	44000	7632872	69000	160000	20000	24000	100	7635864
Dissolved Chromium (Cr)	ug/L	<1.0	7632872	<1.0	<1.0	<1.0	<1.0	1.0	7635864
Dissolved Cobalt (Co)	ug/L	0.65	7632872	<0.40	<0.40	<0.40	<0.40	0.40	7635864
Dissolved Copper (Cu)	ug/L	3.9	7632872	2.2	2.0	2.8	<0.50	0.50	7635864
Dissolved Iron (Fe)	ug/L	<50	7632872	<50	<50	<50	<50	50	7635864
Dissolved Lead (Pb)	ug/L	<0.50	7632872	<0.50	<0.50	<0.50	<0.50	0.50	7635864
Dissolved Magnesium (Mg)	ug/L	12000	7632872	24000	40000	2800	3500	100	7635864
Dissolved Manganese (Mn)	ug/L	79	7632872	18	110	120	19	2.0	7635864
Dissolved Molybdenum (Mo)	ug/L	<2.0	7632872	<2.0	<2.0	5.3	<2.0	2.0	7635864
Dissolved Nickel (Ni)	ug/L	4.7	7632872	2.6	<2.0	<2.0	<2.0	2.0	7635864
Dissolved Phosphorus (P)	ug/L	<100	7632872	<100	<100	<100	<100	100	7635864
Dissolved Potassium (K)	ug/L	2200	7632872	1700	2200	970	700	100	7635864
Dissolved Selenium (Se)	ug/L	<0.50	7632872	<0.50	<0.50	<0.50	<0.50	0.50	7635864
Dissolved Silver (Ag)	ug/L	<0.10	7632872	<0.10	<0.10	<0.10	<0.10	0.10	7635864
Dissolved Sodium (Na)	ug/L	15000	7632872	29000	49000	16000	11000	100	7635864
Dissolved Strontium (Sr)	ug/L	160	7632872	260	300	55	81	2.0	7635864
Dissolved Thallium (Tl)	ug/L	<0.10	7632872	<0.10	<0.10	<0.10	<0.10	0.10	7635864
Dissolved Tin (Sn)	ug/L	<2.0	7632872	<2.0	<2.0	<2.0	<2.0	2.0	7635864
Dissolved Titanium (Ti)	ug/L	<2.0	7632872	<2.0	<2.0	<2.0	<2.0	2.0	7635864
Dissolved Uranium (U)	ug/L	<0.10	7632872	1.5	240	0.82	10	0.10	7635864
Dissolved Vanadium (V)	ug/L	<2.0	7632872	<2.0	<2.0	<2.0	3.0	2.0	7635864
Dissolved Zinc (Zn)	ug/L	<5.0	7632872	34	13	5.1	<5.0	5.0	7635864

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF764		QWF765	QWF766	QWF767	QWF768		
Sampling Date		2021/10/05		2021/10/05	2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-01-01		847883-01-01	847883-01-01	847883-01-01	847883-01-01		
	UNITS	MW1-S	QC Batch	MW1-D	MW2-S	MW2-M	MW2-D	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	7626215	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626215
Toluene	mg/L	<0.0010	7626215	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626215
Ethylbenzene	mg/L	<0.0010	7626215	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626215
Total Xylenes	mg/L	<0.0020	7626215	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7626215
C6 - C10 (less BTEX)	mg/L	<0.090	7626215	<0.090	<0.090	<0.090	<0.090	0.090	7626215
>C10-C16 Hydrocarbons	mg/L	<0.050	7630556	<0.050	<0.050	<0.050	<0.050	0.050	7639497
>C16-C21 Hydrocarbons	mg/L	<0.050	7630556	<0.050	<0.050	<0.050	<0.050	0.050	7639497
>C21-<C32 Hydrocarbons	mg/L	<0.090	7630556	<0.090	<0.090	<0.090	<0.090	0.090	7639497
Modified TPH (Tier1)	mg/L	<0.090	7624435	<0.090	<0.090	<0.090	<0.090	0.090	7624435
Reached Baseline at C32	mg/L	NA	7630556	NA	NA	NA	NA	N/A	7639497
Hydrocarbon Resemblance	mg/L	NA	7630556	NA	NA	NA	NA	N/A	7639497
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	91	7630556	93	95	94	95		7639497
n-Dotriacontane - Extractable	%	107 (1)	7630556	97	96 (1)	96	97		7639497
Isobutylbenzene - Volatile	%	104	7626215	105	102 (2)	101	102		7626215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF769	QWF770	QWF771	QWF772		QWF773		
Sampling Date		2021/10/05	2021/10/05	2021/10/05	2021/10/05		2021/10/05		
COC Number		847883-01-01	847883-01-01	847883-01-01	847883-01-01		847883-01-01		
	UNITS	MW3	DUP1	DUP2	MW6-S	QC Batch	MW6-D	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7626215	<0.0010	0.0010	7626215
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7626215	<0.0010	0.0010	7626215
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7626215	<0.0010	0.0010	7626215
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	7626215	<0.0020	0.0020	7626215
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	7626215	<0.090	0.090	7626215
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	7639497	0.078	0.050	7630556
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	7639497	0.061	0.050	7630556
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	7639497	0.10	0.090	7630556
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	7624435	0.24	0.090	7624435
Reached Baseline at C32	mg/L	NA	NA	NA	NA	7639497	Yes	N/A	7630556
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	7639497	COMMENT (1)	N/A	7630556
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	89	94	94	93	7639497	89		7630556
n-Dotriacontane - Extractable	%	91 (2)	95 (2)	96	97	7639497	101		7630556
Isobutylbenzene - Volatile	%	101 (3)	101	103	101	7626215	101		7626215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Weathered fuel oil fraction. Possible lube oil fraction.
(2) TEH sample contained sediment.
(3) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF773			QWF774		QWF775		
Sampling Date		2021/10/05			2021/10/05		2021/10/05		
COC Number		847883-01-01			847883-02-01		847883-02-01		
	UNITS	MW6-D Lab-Dup	RDL	QC Batch	MW7-S	RDL	MW7-D	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L				<0.0010	0.0010	<0.0010	0.0010	7626215
Toluene	mg/L				<0.0010	0.0010	<0.0010	0.0010	7626215
Ethylbenzene	mg/L				<0.0010	0.0010	<0.0010	0.0010	7626215
Total Xylenes	mg/L				<0.0020	0.0020	<0.0020	0.0020	7626215
C6 - C10 (less BTEX)	mg/L				<0.090	0.090	<0.090	0.090	7626215
>C10-C16 Hydrocarbons	mg/L	0.075	0.050	7630556	<0.058	0.058	<0.050	0.050	7639497
>C16-C21 Hydrocarbons	mg/L	0.056	0.050	7630556	<0.058	0.058	<0.050	0.050	7639497
>C21-<C32 Hydrocarbons	mg/L	0.096	0.090	7630556	<0.10	0.10	<0.090	0.090	7639497
Modified TPH (Tier1)	mg/L				<0.10	0.10	<0.090	0.090	7624435
Reached Baseline at C32	mg/L				NA	N/A	NA	N/A	7639497
Hydrocarbon Resemblance	mg/L				NA	N/A	NA	N/A	7639497
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	92		7630556	91		90		7639497
n-Dotriacontane - Extractable	%	105		7630556	93 (1)		93		7639497
Isobutylbenzene - Volatile	%				103 (2)		100		7626215

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample. TEH sample decanted due to sediment.
(2) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF776			QWF776			QWF777		
Sampling Date		2021/10/05			2021/10/05			2021/10/05		
COC Number		847883-02-01			847883-02-01			847883-02-01		
	UNITS	MW19-03D	RDL	QC Batch	MW19-03D Lab-Dup	RDL	QC Batch	MW19-09S	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7626215				<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	0.0010	7626215				<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	0.0010	7626215				<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	0.0020	7626215				<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7626215				<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7639482	<0.050	0.050	7639482	<0.050	0.050	7639497
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7639482	<0.050	0.050	7639482	<0.050	0.050	7639497
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7639482	<0.090	0.090	7639482	<0.090	0.090	7639497
Modified TPH (Tier1)	mg/L	<0.090	0.090	7624435				<0.090	0.090	7624435
Reached Baseline at C32	mg/L	NA	N/A	7639482				NA	N/A	7639497
Hydrocarbon Resemblance	mg/L	NA	N/A	7639482				NA	N/A	7639497
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	91		7639482	91		7639482	94		7639497
n-Dotriacontane - Extractable	%	92		7639482	89		7639482	97 (1)		7639497
Isobutylbenzene - Volatile	%	100		7626215				106		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) TEH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF777			QWF779	QWF780	QWF781		
Sampling Date		2021/10/05			2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-02-01			847883-02-01	847883-02-01	847883-02-01		
	UNITS	MW19-09S Lab-Dup	RDL	QC Batch	MW19-11M	MW19-11D	PW19-01	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	0.0010	7632817	<0.0010	<0.0010	<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	0.0010	7632817	<0.0010	<0.0010	<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	0.0010	7632817	<0.0010	<0.0010	<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	0.0020	7632817	<0.0020	<0.0020	<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7632817	<0.090	<0.090	<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L				<0.050	<0.050	<0.050	0.050	7639497
>C16-C21 Hydrocarbons	mg/L				<0.050	<0.050	0.074	0.050	7639497
>C21-<C32 Hydrocarbons	mg/L				<0.090	<0.090	0.21	0.090	7639497
Modified TPH (Tier1)	mg/L				<0.090	<0.090	0.29	0.090	7624435
Reached Baseline at C32	mg/L				NA	NA	Yes	N/A	7639497
Hydrocarbon Resemblance	mg/L				NA	NA	COMMENT (1)	N/A	7639497
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%				89	90	88		7639497
n-Dotriacontane - Extractable	%				91 (2)	90 (2)	99 (2)		7639497
Isobutylbenzene - Volatile	%	112		7632817	103	108	106		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Unidentified compound(s) in fuel oil range. Possible lube oil fraction.
(2) TEH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF782	QWF783	QWF784		QWF785		
Sampling Date		2021/10/05	2021/10/05	2021/10/05		2021/10/05		
COC Number		847883-03-01	847883-03-01	847883-03-01		847883-03-01		
	UNITS	MW19-13S	MW19-13D	MW20-14S	QC Batch	MW20-14D	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	7632817	<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	<0.0010	<0.0010	7632817	<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	7632817	<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	7632817	<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	7632817	<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7639482	<0.050	0.050	7630556
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7639482	<0.050	0.050	7630556
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	7639482	<0.090	0.090	7630556
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	7624435	<0.090	0.090	7624435
Reached Baseline at C32	mg/L	NA	NA	NA	7639482	NA	N/A	7630556
Hydrocarbon Resemblance	mg/L	NA	NA	NA	7639482	NA	N/A	7630556
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	93	91	91	7639482	92		7630556
n-Dotriacontane - Extractable	%	94 (1)	93 (1)	92 (1)	7639482	109		7630556
Isobutylbenzene - Volatile	%	98	95	107	7632817	101		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWF787	QWF788	QWF789		
Sampling Date		2021/10/05	2021/10/05	2021/10/05		
COC Number		847883-03-01	847883-03-01	847883-03-01		
	UNITS	MW20-15D	MW20-17S	MW20-17D	RDL	QC Batch
Petroleum Hydrocarbons						
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	7639497
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	7639497
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	0.090	7639497
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	0.090	7624435
Reached Baseline at C32	mg/L	NA	NA	NA	N/A	7639497
Hydrocarbon Resemblance	mg/L	NA	NA	NA	N/A	7639497
Surrogate Recovery (%)						
Isobutylbenzene - Extractable	%	83	91	93		7639497
n-Dotriacontane - Extractable	%	87	95 (1)	97 (1)		7639497
Isobutylbenzene - Volatile	%	119	77	116		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.3°C
Package 2	15.0°C
Package 3	12.7°C
Package 4	15.0°C
Package 5	15.7°C

Sample QWF764 [MW1-S] : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample QWF765 [MW1-D] : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample QWF766 [MW2-S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF767 [MW2-M] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF768 [MW2-D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample QWF769 [MW3] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD: Sample contained >5% sediment, analysis performed on aqueous phase only.

Sample QWF770 [DUP1] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF771 [DUP2] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample QWF773 [MW6-D] : Elevated reporting limits for trace metals due to sample matrix.
Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample QWF774 [MW7-S] : COD: Sample contained >5% sediment, analysis performed on aqueous phase only.

Sample QWF777 [MW19-09S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample QWF779 [MW19-11M] : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample QWF781 [PW19-01] : Poor RCAp Ion Balance due to sample matrix. Cation sum does not include contribution from Mn.

Sample QWF783 [MW19-13D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample QWF784 [MW20-14S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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Poor RCAp Ion Balance due to sample matrix.

Sample QWF785 [MW20-14D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF787 [MW20-15D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF788 [MW20-17S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWF789 [MW20-17D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7626215	THL	Matrix Spike [QWF764-10]	Isobutylbenzene - Volatile	2021/10/09		104	%	70 - 130
			Benzene	2021/10/09		86	%	70 - 130
			Toluene	2021/10/09		90	%	70 - 130
			Ethylbenzene	2021/10/09		93	%	70 - 130
			Total Xylenes	2021/10/09		92	%	70 - 130
7626215	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/09		100	%	70 - 130
			Benzene	2021/10/09		98	%	70 - 130
			Toluene	2021/10/09		97	%	70 - 130
			Ethylbenzene	2021/10/09		99	%	70 - 130
			Total Xylenes	2021/10/09		97	%	70 - 130
7626215	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/09		103	%	70 - 130
			Benzene	2021/10/09	<0.0010		mg/L	
			Toluene	2021/10/09	<0.0010		mg/L	
			Ethylbenzene	2021/10/09	<0.0010		mg/L	
			Total Xylenes	2021/10/09	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/09	<0.090		mg/L	
7626215	THL	RPD	Benzene	2021/10/09	NC		%	40
			Toluene	2021/10/09	NC		%	40
			Ethylbenzene	2021/10/09	NC		%	40
			Total Xylenes	2021/10/09	NC		%	40
			C6 - C10 (less BTEX)	2021/10/09	NC		%	40
7626568	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/12		103	%	80 - 120
7626568	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/12		98	%	80 - 120
7626568	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/12		100	%	80 - 120
7626568	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/12	<20		mg/L	
7626568	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/12	NC		%	25
7630394	DME	QC Standard	Total Suspended Solids	2021/10/21		96	%	80 - 120
7630394	DME	Method Blank	Total Suspended Solids	2021/10/21	<1.0		mg/L	
7630394	DME	RPD [QWF765-03]	Total Suspended Solids	2021/10/21	13		%	20
7630481	DME	QC Standard	Total Suspended Solids	2021/10/15		97	%	80 - 120
7630481	DME	Method Blank	Total Suspended Solids	2021/10/15	<1.0		mg/L	
7630481	DME	RPD	Total Suspended Solids	2021/10/15	NC		%	20
7630556	MSK	Matrix Spike [QWF785-04]	Isobutylbenzene - Extractable	2021/10/12		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/12		115	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/12		96	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/12		94	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/12		97	%	70 - 130
7630556	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/10/12		85	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/12		117	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/12		99	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/12		97	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/12		102	%	70 - 130
7630556	MSK	Method Blank	Isobutylbenzene - Extractable	2021/10/12		64 (1)	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/12		108	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/12	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/12	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/12	<0.090		mg/L	
7630556	MSK	RPD [QWF773-04]	>C10-C16 Hydrocarbons	2021/10/12	3.6		%	40
			>C16-C21 Hydrocarbons	2021/10/12	7.0		%	40
			>C21-<C32 Hydrocarbons	2021/10/12	4.9		%	40
7630693	DRM	Matrix Spike	Phenols-4AAP	2021/10/12		100	%	80 - 120
7630693	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7630693	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630693	DRM	RPD	Phenols-4AAP	2021/10/12	NC		%	20
7630728	DRM	Matrix Spike [QWF767-07]	Phenols-4AAP	2021/10/12		97	%	80 - 120
7630728	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		100	%	80 - 120
7630728	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630728	DRM	RPD [QWF767-07]	Phenols-4AAP	2021/10/12	NC		%	20
7630767	DRM	Matrix Spike	Phenols-4AAP	2021/10/12		97	%	80 - 120
7630767	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		98	%	80 - 120
7630767	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630767	DRM	RPD	Phenols-4AAP	2021/10/12	NC		%	20
7632817	THL	Matrix Spike [QWF779-10]	Isobutylbenzene - Volatile	2021/10/13		101	%	70 - 130
			Benzene	2021/10/13		97	%	70 - 130
			Toluene	2021/10/13		102	%	70 - 130
			Ethylbenzene	2021/10/13		97	%	70 - 130
			Total Xylenes	2021/10/13		101	%	70 - 130
7632817	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/13		105	%	70 - 130
			Benzene	2021/10/13		111	%	70 - 130
			Toluene	2021/10/13		97	%	70 - 130
			Ethylbenzene	2021/10/13		106	%	70 - 130
			Total Xylenes	2021/10/13		107	%	70 - 130
7632817	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/13		100	%	70 - 130
			Benzene	2021/10/13	<0.0010		mg/L	
			Toluene	2021/10/13	<0.0010		mg/L	
			Ethylbenzene	2021/10/13	<0.0010		mg/L	
			Total Xylenes	2021/10/13	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/13	<0.090		mg/L	
7632817	THL	RPD [QWF777-10]	Benzene	2021/10/13	NC		%	40
			Toluene	2021/10/13	NC		%	40
			Ethylbenzene	2021/10/13	NC		%	40
			Total Xylenes	2021/10/13	NC		%	40
			C6 - C10 (less BTEX)	2021/10/13	NC		%	40
7632869	BAN	Matrix Spike	Dissolved Aluminum (Al)	2021/10/13		109	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/13		104	%	80 - 120
			Dissolved Arsenic (As)	2021/10/13		99	%	80 - 120
			Dissolved Barium (Ba)	2021/10/13		100	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/13		106	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/13		99	%	80 - 120
			Dissolved Boron (B)	2021/10/13		97	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/13		100	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/13		106	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/13		103	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/13		101	%	80 - 120
			Dissolved Copper (Cu)	2021/10/13		101	%	80 - 120
			Dissolved Iron (Fe)	2021/10/13		107	%	80 - 120
			Dissolved Lead (Pb)	2021/10/13		100	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/13		105	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/13		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/13		103	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/13		102	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/13		111	%	80 - 120
			Dissolved Potassium (K)	2021/10/13		108	%	80 - 120
			Dissolved Selenium (Se)	2021/10/13		104	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silver (Ag)	2021/10/13		98	%	80 - 120
			Dissolved Sodium (Na)	2021/10/13		106	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/13		101	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/13		101	%	80 - 120
			Dissolved Tin (Sn)	2021/10/13		103	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/13		104	%	80 - 120
			Dissolved Uranium (U)	2021/10/13		105	%	80 - 120
			Dissolved Vanadium (V)	2021/10/13		103	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/13		104	%	80 - 120
7632869	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/10/13		109	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/13		106	%	80 - 120
			Dissolved Arsenic (As)	2021/10/13		99	%	80 - 120
			Dissolved Barium (Ba)	2021/10/13		102	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/13		104	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/13		104	%	80 - 120
			Dissolved Boron (B)	2021/10/13		102	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/13		101	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/13		109	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/13		104	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/13		102	%	80 - 120
			Dissolved Copper (Cu)	2021/10/13		102	%	80 - 120
			Dissolved Iron (Fe)	2021/10/13		107	%	80 - 120
			Dissolved Lead (Pb)	2021/10/13		102	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/13		109	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/13		105	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/13		106	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/13		103	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/13		112	%	80 - 120
			Dissolved Potassium (K)	2021/10/13		110	%	80 - 120
			Dissolved Selenium (Se)	2021/10/13		105	%	80 - 120
			Dissolved Silver (Ag)	2021/10/13		99	%	80 - 120
			Dissolved Sodium (Na)	2021/10/13		106	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/13		101	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/13		104	%	80 - 120
			Dissolved Tin (Sn)	2021/10/13		106	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/13		105	%	80 - 120
			Dissolved Uranium (U)	2021/10/13		106	%	80 - 120
			Dissolved Vanadium (V)	2021/10/13		103	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/13		106	%	80 - 120
7632869	BAN	Method Blank	Dissolved Aluminum (Al)	2021/10/13	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/10/13	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/10/13	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/13	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/13	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/10/13	<2.0		ug/L	
			Dissolved Boron (B)	2021/10/13	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/10/13	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/10/13	<100		ug/L	
			Dissolved Chromium (Cr)	2021/10/13	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/13	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/10/13	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/10/13	<50		ug/L	
			Dissolved Lead (Pb)	2021/10/13	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/10/13	<100		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Manganese (Mn)	2021/10/13	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/13	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/10/13	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/10/13	<100		ug/L	
			Dissolved Potassium (K)	2021/10/13	<100		ug/L	
			Dissolved Selenium (Se)	2021/10/13	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/10/13	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/10/13	<100		ug/L	
			Dissolved Strontium (Sr)	2021/10/13	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/10/13	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/10/13	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/10/13	<2.0		ug/L	
			Dissolved Uranium (U)	2021/10/13	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/13	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/10/13	<5.0		ug/L	
7632869	BAN	RPD	Dissolved Iron (Fe)	2021/10/13	NC		%	20
7632872	MLB	Matrix Spike	Dissolved Aluminum (Al)	2021/10/13		109	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/13		102	%	80 - 120
			Dissolved Arsenic (As)	2021/10/13		98	%	80 - 120
			Dissolved Barium (Ba)	2021/10/13		NC	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/13		102	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/13		96	%	80 - 120
			Dissolved Boron (B)	2021/10/13		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/13		99	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/13		106	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/13		101	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/13		99	%	80 - 120
			Dissolved Copper (Cu)	2021/10/13		100	%	80 - 120
			Dissolved Iron (Fe)	2021/10/13		105	%	80 - 120
			Dissolved Lead (Pb)	2021/10/13		99	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/13		107	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/13		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/13		101	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/13		99	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/13		110	%	80 - 120
			Dissolved Potassium (K)	2021/10/13		109	%	80 - 120
			Dissolved Selenium (Se)	2021/10/13		104	%	80 - 120
			Dissolved Silver (Ag)	2021/10/13		95	%	80 - 120
			Dissolved Sodium (Na)	2021/10/13		101	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/13		96	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/13		97	%	80 - 120
			Dissolved Tin (Sn)	2021/10/13		100	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/13		101	%	80 - 120
			Dissolved Uranium (U)	2021/10/13		103	%	80 - 120
			Dissolved Vanadium (V)	2021/10/13		100	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/13		101	%	80 - 120
7632872	MLB	Spiked Blank	Dissolved Aluminum (Al)	2021/10/13		112	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/13		100	%	80 - 120
			Dissolved Arsenic (As)	2021/10/13		94	%	80 - 120
			Dissolved Barium (Ba)	2021/10/13		97	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/13		100	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/13		97	%	80 - 120
			Dissolved Boron (B)	2021/10/13		96	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/13		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Calcium (Ca)	2021/10/13		110	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/13		99	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/13		97	%	80 - 120
			Dissolved Copper (Cu)	2021/10/13		98	%	80 - 120
			Dissolved Iron (Fe)	2021/10/13		110	%	80 - 120
			Dissolved Lead (Pb)	2021/10/13		97	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/13		111	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/13		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/13		99	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/13		99	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/13		113	%	80 - 120
			Dissolved Potassium (K)	2021/10/13		111	%	80 - 120
			Dissolved Selenium (Se)	2021/10/13		100	%	80 - 120
			Dissolved Silver (Ag)	2021/10/13		97	%	80 - 120
			Dissolved Sodium (Na)	2021/10/13		107	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/13		96	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/13		98	%	80 - 120
			Dissolved Tin (Sn)	2021/10/13		98	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/13		98	%	80 - 120
			Dissolved Uranium (U)	2021/10/13		102	%	80 - 120
			Dissolved Vanadium (V)	2021/10/13		98	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/13		99	%	80 - 120
7632872	MLB	Method Blank	Dissolved Aluminum (Al)	2021/10/13	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/10/13	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/10/13	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/13	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/13	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/10/13	<2.0		ug/L	
			Dissolved Boron (B)	2021/10/13	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/10/13	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/10/13	<100		ug/L	
			Dissolved Chromium (Cr)	2021/10/13	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/13	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/10/13	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/10/13	<50		ug/L	
			Dissolved Lead (Pb)	2021/10/13	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/10/13	<100		ug/L	
			Dissolved Manganese (Mn)	2021/10/13	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/13	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/10/13	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/10/13	<100		ug/L	
			Dissolved Potassium (K)	2021/10/13	<100		ug/L	
			Dissolved Selenium (Se)	2021/10/13	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/10/13	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/10/13	<100		ug/L	
			Dissolved Strontium (Sr)	2021/10/13	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/10/13	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/10/13	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/10/13	<2.0		ug/L	
			Dissolved Uranium (U)	2021/10/13	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/13	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/10/13	<5.0		ug/L	
7632872	MLB	RPD	Dissolved Zinc (Zn)	2021/10/13	NC		%	20
7632944	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/10/13		90	%	85 - 115

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7632944	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/10/13		96	%	80 - 120
7632944	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/10/13	<0.50		mg/L	
7632944	NGI	RPD	Dissolved Organic Carbon (C)	2021/10/13	0.39		%	15
7632947	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/10/14		90	%	85 - 115
7632947	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/10/13		95	%	80 - 120
7632947	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/10/13	<0.50		mg/L	
7632947	NGI	RPD	Dissolved Organic Carbon (C)	2021/10/14	NC		%	15
7633138	SHW	QC Standard	Turbidity	2021/10/13		100	%	80 - 120
7633138	SHW	Spiked Blank	Turbidity	2021/10/13		102	%	80 - 120
7633138	SHW	Method Blank	Turbidity	2021/10/13	<0.10		NTU	
7633138	SHW	RPD [QWF767-01]	Turbidity	2021/10/13	4.5		%	20
7635660	SHW	Spiked Blank	Conductivity	2021/10/14		102	%	80 - 120
7635660	SHW	Method Blank	Conductivity	2021/10/14	<1.0		uS/cm	
7635660	SHW	RPD	Conductivity	2021/10/14	0.36		%	10
7635663	SHW	Spiked Blank	pH	2021/10/14		100	%	97 - 103
7635663	SHW	RPD	pH	2021/10/14	0.069		%	N/A
7635664	SHW	Spiked Blank	Conductivity	2021/10/14		101	%	80 - 120
7635664	SHW	Method Blank	Conductivity	2021/10/14	<1.0		uS/cm	
7635664	SHW	RPD [QWF769-01]	Conductivity	2021/10/14	0.85		%	10
7635665	SHW	Spiked Blank	pH	2021/10/14		100	%	97 - 103
7635665	SHW	RPD [QWF769-01]	pH	2021/10/14	0.59		%	N/A
7635668	NGI	Matrix Spike [QWF764-08]	Total Organic Carbon (C)	2021/10/14		NC	%	85 - 115
7635668	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		97	%	80 - 120
7635668	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635668	NGI	RPD [QWF764-08]	Total Organic Carbon (C)	2021/10/14	3.3 (2)		%	15
7635672	NGI	Matrix Spike [QWF785-08]	Total Organic Carbon (C)	2021/10/14		90	%	85 - 115
7635672	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		97	%	80 - 120
7635672	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635672	NGI	RPD [QWF785-08]	Total Organic Carbon (C)	2021/10/14	2.9		%	15
7635674	NGI	Matrix Spike [QWF764-01]	Dissolved Organic Carbon (C)	2021/10/14		NC	%	85 - 115
7635674	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/10/14		96	%	80 - 120
7635674	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635674	NGI	RPD [QWF764-01]	Dissolved Organic Carbon (C)	2021/10/14	1.3 (3)		%	15
7635677	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/15		NC	%	85 - 115
7635677	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		95	%	80 - 120
7635677	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635677	NGI	RPD	Total Organic Carbon (C)	2021/10/15	5.0 (3)		%	15
7635703	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/14		94	%	85 - 115
7635703	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		99	%	80 - 120
7635703	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635703	NGI	RPD	Total Organic Carbon (C)	2021/10/14	NC (2)		%	15
7635707	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/15		94	%	85 - 115
7635707	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/15		100	%	80 - 120
7635707	NGI	Method Blank	Total Organic Carbon (C)	2021/10/15	<0.50		mg/L	
7635707	NGI	RPD	Total Organic Carbon (C)	2021/10/15	9.0 (3)		%	15
7635716	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/15		104	%	80 - 120
7635716	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/15		98	%	80 - 120
7635716	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/15		100	%	80 - 120
7635716	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/15	<20		mg/L	
7635716	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/15	NC		%	25
7635732	SHW	QC Standard	Turbidity	2021/10/14		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7635732	SHW	Spiked Blank	Turbidity	2021/10/14		101	%	80 - 120
7635732	SHW	Method Blank	Turbidity	2021/10/14	<0.10		NTU	
7635732	SHW	RPD	Turbidity	2021/10/14	NC		%	20
7635733	SHW	QC Standard	Turbidity	2021/10/14		102	%	80 - 120
7635733	SHW	Spiked Blank	Turbidity	2021/10/14		102	%	80 - 120
7635733	SHW	Method Blank	Turbidity	2021/10/14	<0.10		NTU	
7635733	SHW	RPD	Turbidity	2021/10/14	13		%	20
7635864	MLB	Matrix Spike	Dissolved Aluminum (Al)	2021/10/14		103	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/14		104	%	80 - 120
			Dissolved Arsenic (As)	2021/10/14		98	%	80 - 120
			Dissolved Barium (Ba)	2021/10/14		97	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/14		102	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/14		98	%	80 - 120
			Dissolved Boron (B)	2021/10/14		100	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/14		99	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/14		NC	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/14		99	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/14		99	%	80 - 120
			Dissolved Copper (Cu)	2021/10/14		100	%	80 - 120
			Dissolved Iron (Fe)	2021/10/14		104	%	80 - 120
			Dissolved Lead (Pb)	2021/10/14		98	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/14		NC	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/14		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/14		108	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/14		99	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/14		108	%	80 - 120
			Dissolved Potassium (K)	2021/10/14		104	%	80 - 120
			Dissolved Selenium (Se)	2021/10/14		103	%	80 - 120
			Dissolved Silver (Ag)	2021/10/14		87	%	80 - 120
			Dissolved Sodium (Na)	2021/10/14		NC	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/14		NC	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/14		101	%	80 - 120
			Dissolved Tin (Sn)	2021/10/14		105	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/14		104	%	80 - 120
			Dissolved Uranium (U)	2021/10/14		106	%	80 - 120
			Dissolved Vanadium (V)	2021/10/14		101	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/14		101	%	80 - 120
7635864	MLB	Spiked Blank	Dissolved Aluminum (Al)	2021/10/14		103	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/14		99	%	80 - 120
			Dissolved Arsenic (As)	2021/10/14		95	%	80 - 120
			Dissolved Barium (Ba)	2021/10/14		97	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/14		98	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/14		99	%	80 - 120
			Dissolved Boron (B)	2021/10/14		96	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/14		98	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/14		104	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/14		98	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/14		99	%	80 - 120
			Dissolved Copper (Cu)	2021/10/14		99	%	80 - 120
			Dissolved Iron (Fe)	2021/10/14		104	%	80 - 120
			Dissolved Lead (Pb)	2021/10/14		98	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/14		103	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/14		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/14		101	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Nickel (Ni)	2021/10/14		99	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/14		104	%	80 - 120
			Dissolved Potassium (K)	2021/10/14		102	%	80 - 120
			Dissolved Selenium (Se)	2021/10/14		100	%	80 - 120
			Dissolved Silver (Ag)	2021/10/14		86	%	80 - 120
			Dissolved Sodium (Na)	2021/10/14		102	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/14		99	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/14		100	%	80 - 120
			Dissolved Tin (Sn)	2021/10/14		100	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/14		99	%	80 - 120
			Dissolved Uranium (U)	2021/10/14		102	%	80 - 120
			Dissolved Vanadium (V)	2021/10/14		99	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/14		101	%	80 - 120
7635864	MLB	Method Blank	Dissolved Aluminum (Al)	2021/10/14	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/10/14	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/10/14	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/14	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/14	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/10/14	<2.0		ug/L	
			Dissolved Boron (B)	2021/10/14	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/10/14	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/10/14	<100		ug/L	
			Dissolved Chromium (Cr)	2021/10/14	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/14	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/10/14	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/10/14	<50		ug/L	
			Dissolved Lead (Pb)	2021/10/14	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/10/14	<100		ug/L	
			Dissolved Manganese (Mn)	2021/10/14	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/14	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/10/14	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/10/14	<100		ug/L	
			Dissolved Potassium (K)	2021/10/14	<100		ug/L	
			Dissolved Selenium (Se)	2021/10/14	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/10/14	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/10/14	<100		ug/L	
			Dissolved Strontium (Sr)	2021/10/14	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/10/14	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/10/14	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/10/14	<2.0		ug/L	
			Dissolved Uranium (U)	2021/10/14	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/14	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/10/14	<5.0		ug/L	
7635864	MLB	RPD	Dissolved Aluminum (Al)	2021/10/14	4.8		%	20
			Dissolved Antimony (Sb)	2021/10/14	NC		%	20
			Dissolved Arsenic (As)	2021/10/14	NC		%	20
			Dissolved Barium (Ba)	2021/10/14	0.13		%	20
			Dissolved Beryllium (Be)	2021/10/14	NC		%	20
			Dissolved Bismuth (Bi)	2021/10/14	NC		%	20
			Dissolved Boron (B)	2021/10/14	NC		%	20
			Dissolved Cadmium (Cd)	2021/10/14	NC		%	20
			Dissolved Calcium (Ca)	2021/10/14	0.22		%	20
			Dissolved Chromium (Cr)	2021/10/14	NC		%	20
			Dissolved Cobalt (Co)	2021/10/14	0.66		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Copper (Cu)	2021/10/14	NC		%	20
			Dissolved Iron (Fe)	2021/10/14	1.5		%	20
			Dissolved Lead (Pb)	2021/10/14	NC		%	20
			Dissolved Magnesium (Mg)	2021/10/14	0.35		%	20
			Dissolved Manganese (Mn)	2021/10/14	0.41		%	20
			Dissolved Molybdenum (Mo)	2021/10/14	NC		%	20
			Dissolved Nickel (Ni)	2021/10/14	NC		%	20
			Dissolved Phosphorus (P)	2021/10/14	NC		%	20
			Dissolved Potassium (K)	2021/10/14	0.94		%	20
			Dissolved Selenium (Se)	2021/10/14	NC		%	20
			Dissolved Silver (Ag)	2021/10/14	NC		%	20
			Dissolved Sodium (Na)	2021/10/14	0.55		%	20
			Dissolved Strontium (Sr)	2021/10/14	1.2		%	20
			Dissolved Thallium (Tl)	2021/10/14	NC		%	20
			Dissolved Tin (Sn)	2021/10/14	NC		%	20
			Dissolved Titanium (Ti)	2021/10/14	NC		%	20
			Dissolved Uranium (U)	2021/10/14	NC		%	20
			Dissolved Vanadium (V)	2021/10/14	NC		%	20
			Dissolved Zinc (Zn)	2021/10/14	NC		%	20
7636410	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/15		102	%	80 - 120
7636410	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/15		99	%	80 - 120
7636410	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/15		102	%	80 - 120
7636410	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/15	<20		mg/L	
7636410	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/15	5.8		%	25
7638554	SHW	Spiked Blank	Conductivity	2021/10/15		102	%	80 - 120
7638554	SHW	Method Blank	Conductivity	2021/10/15	<1.0		uS/cm	
7638554	SHW	RPD [QWF787-01]	Conductivity	2021/10/15	1.0		%	10
7638559	SHW	Spiked Blank	pH	2021/10/15		100	%	97 - 103
7638559	SHW	RPD [QWF787-01]	pH	2021/10/15	0.34		%	N/A
7639482	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/10/15		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		93	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15		73	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/15		68 (4)	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/15		59 (4)	%	70 - 130
7639482	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/10/15		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		97	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15		98	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/15		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/15		80	%	70 - 130
7639482	MGN	Method Blank	Isobutylbenzene - Extractable	2021/10/15		92	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		90	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/15	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/15	<0.090		mg/L	
7639482	MGN	RPD [QWF776-04]	>C10-C16 Hydrocarbons	2021/10/15	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/15	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/15	NC		%	40
7639497	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/10/18		97	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/18		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/18		103	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/18		97	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/18		94	%	70 - 130
7639497	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/10/16		93	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/16		102	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C10-C16 Hydrocarbons	2021/10/16		102	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/16		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/16		86	%	70 - 130
7639497	MGN	Method Blank	Isobutylbenzene - Extractable	2021/10/16		93	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/16		98	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/16	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/16	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/16	<0.090		mg/L	
7639497	MGN	RPD	>C10-C16 Hydrocarbons	2021/10/18	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/18	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/18	NC		%	40
7642248	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/18		88	%	80 - 120
7642248	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/18		95	%	80 - 120
7642248	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/18	<1.0		mg/L	
7642248	MCN	RPD	Dissolved Chloride (Cl-)	2021/10/18	1.5		%	20
7642250	MCN	Matrix Spike [QWF789-01]	Dissolved Chloride (Cl-)	2021/10/18		91	%	80 - 120
7642250	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/18		95	%	80 - 120
7642250	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/18	<1.0		mg/L	
7642250	MCN	RPD [QWF789-01]	Dissolved Chloride (Cl-)	2021/10/18	1.9		%	20
7642258	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/10/19		NC	%	80 - 120
7642258	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/19		102	%	80 - 120
7642258	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/19	<5.0		mg/L	
7642258	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/10/19	0.99		%	20
7642259	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/10/19		96	%	80 - 120
7642259	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/19		91	%	80 - 120
7642259	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/19	<2.0		mg/L	
7642259	MCN	RPD	Dissolved Sulphate (SO4)	2021/10/19	0.078		%	20
7642260	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/10/19		NC	%	80 - 120
7642260	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/19		96	%	80 - 120
7642260	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/19	<0.50		mg/L	
7642260	MCN	RPD	Reactive Silica (SiO2)	2021/10/19	2.0		%	20
7642261	MCN	Spiked Blank	Colour	2021/10/18		105	%	80 - 120
7642261	MCN	Method Blank	Colour	2021/10/18	<5.0		TCU	
7642261	MCN	RPD	Colour	2021/10/18	NC		%	20
7642263	MCN	Matrix Spike	Orthophosphate (P)	2021/10/18		97	%	80 - 120
7642263	MCN	Spiked Blank	Orthophosphate (P)	2021/10/18		104	%	80 - 120
7642263	MCN	Method Blank	Orthophosphate (P)	2021/10/18	<0.010		mg/L	
7642263	MCN	RPD	Orthophosphate (P)	2021/10/18	NC		%	20
7642264	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/10/18		99	%	80 - 120
7642264	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/18		100	%	80 - 120
7642264	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/18	<0.050		mg/L	
7642264	MCN	RPD	Nitrate + Nitrite (N)	2021/10/18	NC		%	20
7642265	MCN	Matrix Spike	Nitrite (N)	2021/10/18		99	%	80 - 120
7642265	MCN	Spiked Blank	Nitrite (N)	2021/10/18		100	%	80 - 120
7642265	MCN	Method Blank	Nitrite (N)	2021/10/18	<0.010		mg/L	
7642265	MCN	RPD	Nitrite (N)	2021/10/18	NC		%	20
7642270	MCN	Matrix Spike [QWF789-01]	Total Alkalinity (Total as CaCO3)	2021/10/19		NC	%	80 - 120
7642270	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/19		103	%	80 - 120
7642270	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/19	<5.0		mg/L	
7642270	MCN	RPD [QWF789-01]	Total Alkalinity (Total as CaCO3)	2021/10/19	2.0		%	20
7642271	MCN	Matrix Spike [QWF789-01]	Dissolved Sulphate (SO4)	2021/10/18		96	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7642271	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/18		96	%	80 - 120
7642271	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/18	<2.0		mg/L	
7642271	MCN	RPD [QWF789-01]	Dissolved Sulphate (SO4)	2021/10/18	1.5		%	20
7642272	MCN	Matrix Spike [QWF789-01]	Reactive Silica (SiO2)	2021/10/19		91	%	80 - 120
7642272	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/19		95	%	80 - 120
7642272	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/19	<0.50		mg/L	
7642272	MCN	RPD [QWF789-01]	Reactive Silica (SiO2)	2021/10/19	1.1		%	20
7642274	MCN	Spiked Blank	Colour	2021/10/18		108	%	80 - 120
7642274	MCN	Method Blank	Colour	2021/10/18	<5.0		TCU	
7642274	MCN	RPD [QWF789-01]	Colour	2021/10/18	NC		%	20
7642275	MCN	Matrix Spike [QWF789-01]	Orthophosphate (P)	2021/10/18		96	%	80 - 120
7642275	MCN	Spiked Blank	Orthophosphate (P)	2021/10/18		103	%	80 - 120
7642275	MCN	Method Blank	Orthophosphate (P)	2021/10/18	<0.010		mg/L	
7642275	MCN	RPD [QWF789-01]	Orthophosphate (P)	2021/10/18	0		%	20
7642276	MCN	Matrix Spike [QWF789-01]	Nitrate + Nitrite (N)	2021/10/18		101	%	80 - 120
7642276	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/18		101	%	80 - 120
7642276	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/18	<0.050		mg/L	
7642276	MCN	RPD [QWF789-01]	Nitrate + Nitrite (N)	2021/10/18	0.18		%	20
7642277	MCN	Matrix Spike [QWF789-01]	Nitrite (N)	2021/10/18		100	%	80 - 120
7642277	MCN	Spiked Blank	Nitrite (N)	2021/10/18		100	%	80 - 120
7642277	MCN	Method Blank	Nitrite (N)	2021/10/18	<0.010		mg/L	
7642277	MCN	RPD [QWF789-01]	Nitrite (N)	2021/10/18	NC		%	20
7642372	MCN	Matrix Spike [QWF766-06]	Nitrogen (Ammonia Nitrogen)	2021/10/18		95	%	80 - 120
7642372	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18		100	%	80 - 120
7642372	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18	<0.050		mg/L	
7642372	MCN	RPD [QWF766-06]	Nitrogen (Ammonia Nitrogen)	2021/10/18	NC		%	20
7642373	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/18		101	%	80 - 120
7642373	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18		99	%	80 - 120
7642373	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18	<0.050		mg/L	
7642373	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/18	NC		%	20
7642377	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/19		94	%	80 - 120
7642377	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18		99	%	80 - 120
7642377	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18	<0.050		mg/L	
7642377	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/19	6.0		%	20
7647796	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/21		NC	%	80 - 120
7647796	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/20		101	%	80 - 120
7647796	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/20	<0.050		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7647796	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/21	0.79		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) TEH surrogate(s) not within acceptance limits. Insufficient sample to repeat.

(2) Elevated reporting limit due to turbidity.

(3) Elevated reporting limit due to sample matrix.

(4) Matrix Spike: results are outside acceptance limit due to probable matrix interference.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Alan Stewart, Organics Manager, Bedford

Colleen Acker, B.Sc, Scientific Service Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

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Automated Statchk

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For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job # ~~C15~~ C15511922 KS	Bottle Order #: 847883
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #			
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address		Project #	60639002		
				Project Name		Chain Of Custody Record	Project Manager
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #		C#847883-01-01	Marie Mulse
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By			

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: X

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		MW1-S	2021/10/05	AM	GW	X		X	12	
2		MW1-D				X		X		
3		MW2-S				X		X		
4		MW2-M				X		X		
5		MW2-D				X		X		
6		MW3				X		X		
7		~~MW5-S~~ DUP1				X		X		
8		~~MW5-D~~ DUP2				X		X		
9		MW6-S				X		X		
10		MW6-D				X		X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	21/10/05	4:35pm						SEE ATR	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

2021 OCT 5 17:00

Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C155977	847883
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#847883-02-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	JD DH		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		MW7-S	2021/10/05	PM	GW	X		X	12	
2		MW7-D				X		X	12	
3		~~MW8-S~~						X		
4		~~MW8-D~~						X		
5		MW19-03D				X		X	12	
6		MW19-09S				X		X		
7		MW19-10S				X		X		
8		MW19-11M				X		X		
9		MW19-11D				X		X		
10		PW19-01				X		X	12	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	21/10/05	4:35pm					☐	9.2 ACTIC	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

2021 OCT 5 17:00

Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job # C1T0922	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C1S747 YS	847883
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#847883-03-01	Marie Muise
Phone	(902) 428-2021 Fax (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	JS/PM		

Regulatory Criteria

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advence notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (If applies to entire submission)

Date Required: Time Required:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		~~MW19-12S~~						X		
2		MW19-13S	2021/10/05	PM	GW	X		X		
3		MW19-13D				X		X		
4		MW20-14S				X		X		
5		MW20-14D				X		X		
6		MW20-15S				X		X		
7		MW20-15D				X		X		
8		~~MW20-16~~						X		
9		MW20-17S				X		X		
10		MW20-17D				X		X		

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	21/10/05	4:35pm	J. KENNEBERGH					9.1 ACK	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

2021 OCT 5 17:00

Your Project #: 60639002
Your C.O.C. #: 847883-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/21
Report #: R6862193
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T3325
Received: 2021/10/08, 15:07

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	4	N/A	2021/10/15	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	3	N/A	2021/10/18	N/A	SM 23 4500-CO2 D
Alkalinity	7	N/A	2021/10/19	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	7	N/A	2021/10/19	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2021/10/14	2021/10/15	ATL SOP 00042	SM 23 5220D m
Colour	7	N/A	2021/10/20	ATL SOP 00020	SM 23 2120C m
Organic carbon - Diss (DOC) (2)	7	N/A	2021/10/15	ATL SOP 00203	SM 23 5310B m
Conductance - water	4	N/A	2021/10/15	ATL SOP 00004	SM 23 2510B m
Conductance - water	3	N/A	2021/10/18	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	1	2021/10/15	2021/10/15	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	6	2021/10/18	2021/10/18	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2021/10/18	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	6	N/A	2021/10/15	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	1	N/A	2021/10/18	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2021/10/20	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2021/10/19	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2021/10/18	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2021/10/20	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	7	N/A	2021/10/20	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2021/10/20	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2021/10/14	CAM SOP-00444	OMOE E3179 m
pH (3)	4	N/A	2021/10/15	ATL SOP 00003	SM 23 4500-H+ B m
pH (3)	3	N/A	2021/10/18	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	7	N/A	2021/10/20	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	7	N/A	2021/10/20	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	7	N/A	2021/10/20	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2021/10/19	ATL SOP 00022	EPA 366.0 m
Sulphate	7	N/A	2021/10/20	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2021/10/20	N/A	Auto Calc.
Organic carbon - Total (TOC) (2)	7	N/A	2021/10/15	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	1	N/A	2021/10/18	N/A	Atl. RBCA v3 m

Your Project #: 60639002
Your C.O.C. #: 847883-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/21
Report #: R6862193
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T3325
Received: 2021/10/08, 15:07

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
ModTPH (T1) Calc. for Water	6	N/A	2021/10/19	N/A	Atl. RBCA v3 m
Total Suspended Solids	4	2021/10/13	2021/10/15	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	3	2021/10/13	2021/10/19	ATL SOP 00007	SM 23 2540D m
Turbidity	2	N/A	2021/10/14	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	2	N/A	2021/10/15	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	3	N/A	2021/10/18	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	7	N/A	2021/10/13	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Your Project #: 60639002
Your C.O.C. #: 847883-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/21
Report #: R6862193
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T3325
Received: 2021/10/08, 15:07

Encryption Key



Bureau Veritas
21 Oct 2021 10:59:22

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWS507			QWS509			QWS510		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		847883-04-01			847883-04-01			847883-04-01		
	UNITS	MW20-16	RDL	QC Batch	MW19-12D	RDL	QC Batch	DUP3	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.70	N/A	7627331	3.39	N/A	7627331	2.70	N/A	7627331
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	97	1.0	7627325	100	1.0	7627325	96	1.0	7627325
Calculated TDS	mg/L	150	1.0	7627338	200	1.0	7627338	150	1.0	7627338
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7627325	<1.0	1.0	7627325	<1.0	1.0	7627325
Cation Sum	me/L	2.58	N/A	7627331	3.30	N/A	7627331	2.58	N/A	7627331
Hardness (CaCO3)	mg/L	100	1.0	7627329	140	1.0	7627329	100	1.0	7627329
Ion Balance (% Difference)	%	2.27	N/A	7627330	1.35	N/A	7627330	2.27	N/A	7627330
Langelier Index (@ 20C)	N/A	-0.345		7627336	-0.607		7627336	-0.377		7627336
Langelier Index (@ 4C)	N/A	-0.596		7627337	-0.857		7627337	-0.627		7627337
Nitrate (N)	mg/L	0.071	0.050	7627334	0.50	0.050	7627334	0.084	0.050	7627334
Saturation pH (@ 20C)	N/A	7.88		7627336	7.75		7627336	7.89		7627336
Saturation pH (@ 4C)	N/A	8.13		7627337	8.00		7627337	8.14		7627337
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	98	5.0	7642575	100	10	7642575	96	5.0	7642575
Total Chemical Oxygen Demand	mg/L	<20	20	7636414	<20	20	7636414	<20	20	7636414
Dissolved Chloride (Cl-)	mg/L	21	1.0	7642598	14	1.0	7642598	22	1.0	7642598
Colour	TCU	5.1	5.0	7642606	<5.0	5.0	7642606	6.9	5.0	7642606
Nitrate + Nitrite (N)	mg/L	0.071	0.050	7642609	0.50	0.050	7642609	0.084	0.050	7642609
Nitrite (N)	mg/L	<0.010	0.010	7642612	<0.010	0.010	7642612	<0.010	0.010	7642612
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7642373	<0.050	0.050	7642373	<0.050	0.050	7642373
Dissolved Organic Carbon (C)	mg/L	0.94	0.50	7638580	<0.50	0.50	7638580	1.0	0.50	7638580
Total Organic Carbon (C)	mg/L	1.4	0.50	7638573	1.0	0.50	7638573	1.4	0.50	7638573
Orthophosphate (P)	mg/L	0.057	0.010	7642607	<0.010	0.010	7642607	0.065	0.010	7642607
pH	pH	7.54		7642411	7.14		7638566	7.51		7638566
Phenols-4AAP	mg/L	<0.0010	0.0010	7635675	<0.0010	0.0010	7635675	<0.0010	0.0010	7635675
Reactive Silica (SiO2)	mg/L	13	0.50	7642603	11	0.50	7642603	13	0.50	7642603
Total Suspended Solids	mg/L	98	5.0	7633601	120	10	7633601	150	10	7633601
Dissolved Sulphate (SO4)	mg/L	6.7	2.0	7642599	44	2.0	7642599	6.9	2.0	7642599
Turbidity	NTU	45	0.10	7642553	250	1.0	7638808	46	0.10	7635733
Conductivity	uS/cm	260	1.0	7642410	330	1.0	7638565	260	1.0	7638565

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C1T3325
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JD

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWS511			QWS512			QWS513		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		847883-04-01			847883-04-01			847883-04-01		
	UNITS	MW8-S	RDL	QC Batch	MW8-D	RDL	QC Batch	MW5-S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	10.5	N/A	7627331	6.19	N/A	7627331	2.06	N/A	7627331
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	150	1.0	7627325	130	1.0	7627325	76	1.0	7627325
Calculated TDS	mg/L	600	1.0	7627338	360	1.0	7627338	120	1.0	7627338
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7627325	<1.0	1.0	7627325	<1.0	1.0	7627325
Cation Sum	me/L	9.03	N/A	7627331	6.30	N/A	7627331	2.01	N/A	7627331
Hardness (CaCO3)	mg/L	350	1.0	7627329	260	1.0	7627329	79	1.0	7627329
Ion Balance (% Difference)	%	7.62	N/A	7627330	0.880	N/A	7627330	1.23	N/A	7627330
Langelier Index (@ 20C)	N/A	0.557		7627336	0.352		7627336	-1.05		7627336
Langelier Index (@ 4C)	N/A	0.310		7627337	0.103		7627337	-1.30		7627337
Nitrate (N)	mg/L	<0.050	0.050	7627334	<0.050	0.050	7627334	<0.050	0.050	7627334
Saturation pH (@ 20C)	N/A	7.24		7627336	7.42		7627336	8.09		7627336
Saturation pH (@ 4C)	N/A	7.49		7627337	7.66		7627337	8.34		7627337
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	150	25	7642615	130	25	7642615	76	5.0	7644823
Total Chemical Oxygen Demand	mg/L	<20	20	7636414	<20	20	7636414	<20	20	7636414
Dissolved Chloride (Cl-)	mg/L	120	5.0	7642678	64	1.0	7642678	13	1.0	7644869
Colour	TCU	<5.0	5.0	7642688	<5.0	5.0	7642688	<5.0	5.0	7644879
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7642690	<0.050	0.050	7642690	<0.050	0.050	7644884
Nitrite (N)	mg/L	<0.010	0.010	7642694	<0.010	0.010	7642694	<0.010	0.010	7644887
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7642373	<0.050	0.050	7642373	<0.050	0.050	7642373
Dissolved Organic Carbon (C)	mg/L	1.3	0.50	7638580	0.51	0.50	7638580	1.0	0.50	7638580
Total Organic Carbon (C)	mg/L	1.2	0.50	7638577	0.93	0.50	7638573	2.1	0.50	7638573
Orthophosphate (P)	mg/L	0.018	0.010	7642689	0.074	0.010	7642689	0.035	0.010	7644882
pH	pH	7.80		7638566	7.77		7642411	7.04		7638566
Phenols-4AAP	mg/L	<0.0010	0.0010	7635675	<0.0010	0.0010	7635675	<0.0010	0.0010	7635675
Reactive Silica (SiO2)	mg/L	14	0.50	7642684	13	0.50	7642684	13	0.50	7644876
Total Suspended Solids	mg/L	5.2	1.0	7633036	7.8	1.0	7633036	40	10	7633036
Dissolved Sulphate (SO4)	mg/L	200	10	7642683	88	2.0	7642683	7.6	2.0	7644874
Turbidity	NTU	0.97	0.10	7635733	3.2	0.10	7642553	63	0.10	7638808
Conductivity	uS/cm	1000	1.0	7638565	630	1.0	7642410	200	1.0	7638565

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C1T3325
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JD

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		QWS513			QWS514			QWS514		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		847883-04-01			847883-04-01			847883-04-01		
	UNITS	MW5-S Lab-Dup	RDL	QC Batch	MW5-D	RDL	QC Batch	MW5-D Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				2.35	N/A	7627331			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				89	1.0	7627325			
Calculated TDS	mg/L				130	1.0	7627338			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7627325			
Cation Sum	me/L				2.30	N/A	7627331			
Hardness (CaCO3)	mg/L				91	1.0	7627329			
Ion Balance (% Difference)	%				1.08	N/A	7627330			
Langelier Index (@ 20C)	N/A				-0.777		7627336			
Langelier Index (@ 4C)	N/A				-1.03		7627337			
Nitrate (N)	mg/L				<0.050	0.050	7627334			
Saturation pH (@ 20C)	N/A				7.97		7627336			
Saturation pH (@ 4C)	N/A				8.22		7627337			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	77	5.0	7644823	89	5.0	7642615			
Total Chemical Oxygen Demand	mg/L				<20	20	7636414			
Dissolved Chloride (Cl-)	mg/L	13	1.0	7644869	15	1.0	7642678			
Colour	TCU	<5.0	5.0	7644879	<5.0	5.0	7642688			
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7644884	<0.050	0.050	7642690			
Nitrite (N)	mg/L	<0.010	0.010	7644887	<0.010	0.010	7642694			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7642373			
Dissolved Organic Carbon (C)	mg/L				0.89	0.50	7638580			
Total Organic Carbon (C)	mg/L				2.2	0.50	7635688			
Orthophosphate (P)	mg/L	0.033	0.010	7644882	0.041	0.010	7642689			
pH	pH				7.19		7642411			
Phenols-4AAP	mg/L				<0.0010	0.0010	7635675			
Reactive Silica (SiO2)	mg/L	15	0.50	7644876	14	0.50	7642684			
Total Suspended Solids	mg/L				270	10	7633036	260	10	7633036
Dissolved Sulphate (SO4)	mg/L	7.5	2.0	7644874	6.4	2.0	7642683			
Turbidity	NTU				140	1.0	7642553			
Conductivity	uS/cm				220	1.0	7642410			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWS507	QWS509	QWS510	QWS511		QWS512		
Sampling Date		2021/10/06	2021/10/06	2021/10/06	2021/10/06		2021/10/06		
COC Number		847883-04-01	847883-04-01	847883-04-01	847883-04-01		847883-04-01		
	UNITS	MW20-16	MW19-12D	DUP3	MW8-S	RDL	MW8-D	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	18	6.3	14	<5.0	5.0	<5.0	5.0	7638899
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	1.0	7638899
Dissolved Arsenic (As)	ug/L	7.4	1.1	7.6	2.1	1.0	7.9	1.0	7638899
Dissolved Barium (Ba)	ug/L	12	11	12	18	1.0	11	1.0	7638899
Dissolved Beryllium (Be)	ug/L	0.23	<0.10	0.24	<0.10	0.10	<0.10	0.10	7638899
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	7638899
Dissolved Boron (B)	ug/L	<50	78	<50	130	50	<50	50	7638899
Dissolved Cadmium (Cd)	ug/L	0.034	0.14	0.032	0.082	0.010	0.034	0.010	7638899
Dissolved Calcium (Ca)	ug/L	31000	42000	31000	120000	100	83000	100	7638899
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	1.0	7638899
Dissolved Cobalt (Co)	ug/L	<0.40	0.58	<0.40	<0.40	0.40	<0.40	0.40	7638899
Dissolved Copper (Cu)	ug/L	1.2	2.1	2.6	2.4	0.50	1.9	0.50	7638899
Dissolved Iron (Fe)	ug/L	<50	72	<50	<50	50	<50	50	7638899
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	<0.50	0.50	7638899
Dissolved Magnesium (Mg)	ug/L	5700	8300	5800	15000	100	12000	100	7638899
Dissolved Manganese (Mn)	ug/L	23	71	23	120	2.0	15	2.0	7638899
Dissolved Molybdenum (Mo)	ug/L	6.4	<2.0	6.6	<2.0	2.0	8.3	2.0	7638899
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	2.5	2.0	<2.0	2.0	7638899
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	100	<100	100	7638899
Dissolved Potassium (K)	ug/L	1300	1200	1200	2300	100	1800	100	7638899
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	<0.50	0.50	7638899
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	0.10	7638899
Dissolved Sodium (Na)	ug/L	12000	11000	12000	43000	100	26000	100	7638899
Dissolved Strontium (Sr)	ug/L	87	110	88	220	2.0	210	2.0	7638899
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	0.10	7638899
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	7638899
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	7638899
Dissolved Uranium (U)	ug/L	19	10	18	62	0.10	510	1.0	7638899
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	7638899
Dissolved Zinc (Zn)	ug/L	<5.0	19	5.1	5.8	5.0	6.3	5.0	7638899

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		QWS513	QWS513	QWS514		
Sampling Date		2021/10/06	2021/10/06	2021/10/06		
COC Number		847883-04-01	847883-04-01	847883-04-01		
	UNITS	MW5-S	MW5-S Lab-Dup	MW5-D	RDL	QC Batch
Metals						
Dissolved Aluminum (Al)	ug/L	13	14	30	5.0	7638899
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	1.0	7638899
Dissolved Arsenic (As)	ug/L	4.8	4.6	10	1.0	7638899
Dissolved Barium (Ba)	ug/L	9.9	9.6	7.4	1.0	7638899
Dissolved Beryllium (Be)	ug/L	0.27	0.26	0.13	0.10	7638899
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	2.0	7638899
Dissolved Boron (B)	ug/L	<50	<50	<50	50	7638899
Dissolved Cadmium (Cd)	ug/L	0.34	0.35	0.078	0.010	7638899
Dissolved Calcium (Ca)	ug/L	24000	23000	28000	100	7638899
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.0	7638899
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	0.40	7638899
Dissolved Copper (Cu)	ug/L	1.9	2.0	1.9	0.50	7638899
Dissolved Iron (Fe)	ug/L	<50	<50	<50	50	7638899
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	0.50	7638899
Dissolved Magnesium (Mg)	ug/L	4700	4600	5200	100	7638899
Dissolved Manganese (Mn)	ug/L	110	110	9.8	2.0	7638899
Dissolved Molybdenum (Mo)	ug/L	3.3	3.1	4.4	2.0	7638899
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	2.0	7638899
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	100	7638899
Dissolved Potassium (K)	ug/L	970	990	1100	100	7638899
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	0.50	7638899
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	0.10	7638899
Dissolved Sodium (Na)	ug/L	9300	9300	11000	100	7638899
Dissolved Strontium (Sr)	ug/L	66	68	83	2.0	7638899
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	0.10	7638899
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	2.0	7638899
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	2.0	7638899
Dissolved Uranium (U)	ug/L	9.1	9.1	18	0.10	7638899
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	2.0	7638899
Dissolved Zinc (Zn)	ug/L	6.7	6.8	6.3	5.0	7638899

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
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Bureau Veritas Job #: C1T3325
Report Date: 2021/10/21

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: JD

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWS507	QWS509	QWS510	QWS511	QWS512	QWS513		
Sampling Date		2021/10/06	2021/10/06	2021/10/06	2021/10/06	2021/10/06	2021/10/06		
COC Number		847883-04-01	847883-04-01	847883-04-01	847883-04-01	847883-04-01	847883-04-01		
	UNITS	MW20-16	MW19-12D	DUP3	MW8-S	MW8-D	MW5-S	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7642413
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7642413
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7642413
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7627341
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA	NA	N/A	7642413
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA	NA	N/A	7642413
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	95	91	92	98	91	100		7642413
n-Dotriacontane - Extractable	%	122	93	92	108	114	101		7642413
Isobutylbenzene - Volatile	%	117	108	108	96	103	109		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		QWS514		
Sampling Date		2021/10/06		
COC Number		847883-04-01		
	UNITS	MW5-D	RDL	QC Batch
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	7632817
Toluene	mg/L	<0.0010	0.0010	7632817
Ethylbenzene	mg/L	<0.0010	0.0010	7632817
Total Xylenes	mg/L	<0.0020	0.0020	7632817
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7632817
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7639482
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7639482
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7639482
Modified TPH (Tier1)	mg/L	<0.090	0.090	7627341
Reached Baseline at C32	mg/L	NA	N/A	7639482
Hydrocarbon Resemblance	mg/L	NA	N/A	7639482
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	89		7639482
n-Dotriacontane - Extractable	%	91		7639482
Isobutylbenzene - Volatile	%	100		7632817

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	13.0°C
Package 2	15.3°C
Package 3	12.7°C
Package 4	15.0°C
Package 5	14.7°C

Sample QWS507 [MW20-16] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWS509 [MW19-12D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWS510 [DUP3] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWS511 [MW8-S] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample QWS512 [MW8-D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWS513 [MW5-S] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWS514 [MW5-D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7632817	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/10/13		101	%	70 - 130
			Benzene	2021/10/13		97	%	70 - 130
			Toluene	2021/10/13		102	%	70 - 130
			Ethylbenzene	2021/10/13		97	%	70 - 130
			Total Xylenes	2021/10/13		101	%	70 - 130
7632817	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/13		105	%	70 - 130
			Benzene	2021/10/13		111	%	70 - 130
			Toluene	2021/10/13		97	%	70 - 130
			Ethylbenzene	2021/10/13		106	%	70 - 130
			Total Xylenes	2021/10/13		107	%	70 - 130
7632817	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/13		100	%	70 - 130
			Benzene	2021/10/13	<0.0010		mg/L	
			Toluene	2021/10/13	<0.0010		mg/L	
			Ethylbenzene	2021/10/13	<0.0010		mg/L	
			Total Xylenes	2021/10/13	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/13	<0.090		mg/L	
7632817	THL	RPD	Benzene	2021/10/13	NC		%	40
			Toluene	2021/10/13	NC		%	40
			Ethylbenzene	2021/10/13	NC		%	40
			Total Xylenes	2021/10/13	NC		%	40
			C6 - C10 (less BTEX)	2021/10/13	NC		%	40
7633036	DME	QC Standard	Total Suspended Solids	2021/10/15		99	%	80 - 120
7633036	DME	Method Blank	Total Suspended Solids	2021/10/15	<1.0		mg/L	
7633036	DME	RPD [QWS514-09]	Total Suspended Solids	2021/10/15	4.5		%	20
7633601	ZZH	QC Standard	Total Suspended Solids	2021/10/19		99	%	80 - 120
7633601	ZZH	Method Blank	Total Suspended Solids	2021/10/19	<1.0		mg/L	
7633601	ZZH	RPD	Total Suspended Solids	2021/10/19	0		%	20
7635675	DRM	Matrix Spike	Phenols-4AAP	2021/10/14		94	%	80 - 120
7635675	DRM	Spiked Blank	Phenols-4AAP	2021/10/14		100	%	80 - 120
7635675	DRM	Method Blank	Phenols-4AAP	2021/10/14	<0.0010		mg/L	
7635675	DRM	RPD	Phenols-4AAP	2021/10/14	0		%	20
7635688	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/15		93	%	85 - 115
7635688	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/15		97	%	80 - 120
7635688	NGI	Method Blank	Total Organic Carbon (C)	2021/10/15	<0.50		mg/L	
7635688	NGI	RPD	Total Organic Carbon (C)	2021/10/15	NC		%	15
7635733	SHW	QC Standard	Turbidity	2021/10/14		102	%	80 - 120
7635733	SHW	Spiked Blank	Turbidity	2021/10/14		102	%	80 - 120
7635733	SHW	Method Blank	Turbidity	2021/10/14	<0.10		NTU	
7635733	SHW	RPD	Turbidity	2021/10/14	13		%	20
7636414	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/15		102	%	80 - 120
7636414	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/15		97	%	80 - 120
7636414	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/15		104	%	80 - 120
7636414	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/15	<20		mg/L	
7636414	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/15	NC		%	25
7638565	SHW	Spiked Blank	Conductivity	2021/10/15		101	%	80 - 120
7638565	SHW	Method Blank	Conductivity	2021/10/15	<1.0		uS/cm	
7638565	SHW	RPD	Conductivity	2021/10/15	0.40		%	10
7638566	SHW	Spiked Blank	pH	2021/10/15		100	%	97 - 103
7638566	SHW	RPD	pH	2021/10/15	0.76		%	N/A
7638573	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/15		93	%	85 - 115
7638573	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/15		100	%	80 - 120
7638573	NGI	Method Blank	Total Organic Carbon (C)	2021/10/15	<0.50		mg/L	
7638573	NGI	RPD	Total Organic Carbon (C)	2021/10/15	NC		%	15
7638577	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/15		88	%	85 - 115

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7638577	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/15		99	%	80 - 120
7638577	NGI	Method Blank	Total Organic Carbon (C)	2021/10/15	<0.50		mg/L	
7638577	NGI	RPD	Total Organic Carbon (C)	2021/10/15	0.65		%	15
7638580	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/10/15		93	%	85 - 115
7638580	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/10/15		99	%	80 - 120
7638580	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/10/15	<0.50		mg/L	
7638580	NGI	RPD	Dissolved Organic Carbon (C)	2021/10/15	2.0		%	15
7638808	SHW	QC Standard	Turbidity	2021/10/15		102	%	80 - 120
7638808	SHW	Spiked Blank	Turbidity	2021/10/15		103	%	80 - 120
7638808	SHW	Method Blank	Turbidity	2021/10/15	<0.10		NTU	
7638808	SHW	RPD	Turbidity	2021/10/15	9.5		%	20
7638899	BAN	Matrix Spike [QWS513-05]	Dissolved Aluminum (Al)	2021/10/15		104	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/15		111	%	80 - 120
			Dissolved Arsenic (As)	2021/10/15		101	%	80 - 120
			Dissolved Barium (Ba)	2021/10/15		103	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/15		101	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/15		107	%	80 - 120
			Dissolved Boron (B)	2021/10/15		98	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/15		103	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/15		108	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/15		99	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/15		100	%	80 - 120
			Dissolved Copper (Cu)	2021/10/15		102	%	80 - 120
			Dissolved Iron (Fe)	2021/10/15		104	%	80 - 120
			Dissolved Lead (Pb)	2021/10/15		106	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/15		98	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/15		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/15		109	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/15		99	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/15		110	%	80 - 120
			Dissolved Potassium (K)	2021/10/15		106	%	80 - 120
			Dissolved Selenium (Se)	2021/10/15		104	%	80 - 120
			Dissolved Silver (Ag)	2021/10/15		79 (1)	%	80 - 120
			Dissolved Sodium (Na)	2021/10/15		97	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/15		105	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/15		109	%	80 - 120
			Dissolved Tin (Sn)	2021/10/15		108	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/15		105	%	80 - 120
			Dissolved Uranium (U)	2021/10/15		113	%	80 - 120
			Dissolved Vanadium (V)	2021/10/15		102	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/15		106	%	80 - 120
7638899	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/10/15		108	%	80 - 120
			Dissolved Antimony (Sb)	2021/10/15		105	%	80 - 120
			Dissolved Arsenic (As)	2021/10/15		101	%	80 - 120
			Dissolved Barium (Ba)	2021/10/15		104	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/15		100	%	80 - 120
			Dissolved Bismuth (Bi)	2021/10/15		106	%	80 - 120
			Dissolved Boron (B)	2021/10/15		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/15		103	%	80 - 120
			Dissolved Calcium (Ca)	2021/10/15		112	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/15		100	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/15		102	%	80 - 120
			Dissolved Copper (Cu)	2021/10/15		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Iron (Fe)	2021/10/15		109	%	80 - 120
			Dissolved Lead (Pb)	2021/10/15		106	%	80 - 120
			Dissolved Magnesium (Mg)	2021/10/15		108	%	80 - 120
			Dissolved Manganese (Mn)	2021/10/15		105	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/15		104	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/15		101	%	80 - 120
			Dissolved Phosphorus (P)	2021/10/15		116	%	80 - 120
			Dissolved Potassium (K)	2021/10/15		112	%	80 - 120
			Dissolved Selenium (Se)	2021/10/15		104	%	80 - 120
			Dissolved Silver (Ag)	2021/10/15		83	%	80 - 120
			Dissolved Sodium (Na)	2021/10/15		103	%	80 - 120
			Dissolved Strontium (Sr)	2021/10/15		106	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/15		105	%	80 - 120
			Dissolved Tin (Sn)	2021/10/15		108	%	80 - 120
			Dissolved Titanium (Ti)	2021/10/15		106	%	80 - 120
			Dissolved Uranium (U)	2021/10/15		111	%	80 - 120
			Dissolved Vanadium (V)	2021/10/15		102	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/15		104	%	80 - 120
7638899	BAN	Method Blank	Dissolved Aluminum (Al)	2021/10/15	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/10/15	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/10/15	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/15	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/15	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/10/15	<2.0		ug/L	
			Dissolved Boron (B)	2021/10/15	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/10/15	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/10/15	<100		ug/L	
			Dissolved Chromium (Cr)	2021/10/15	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/15	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/10/15	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/10/15	<50		ug/L	
			Dissolved Lead (Pb)	2021/10/15	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/10/15	<100		ug/L	
			Dissolved Manganese (Mn)	2021/10/15	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/15	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/10/15	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/10/15	<100		ug/L	
			Dissolved Potassium (K)	2021/10/15	<100		ug/L	
			Dissolved Selenium (Se)	2021/10/15	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/10/15	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/10/15	<100		ug/L	
			Dissolved Strontium (Sr)	2021/10/15	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/10/15	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/10/15	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/10/15	<2.0		ug/L	
			Dissolved Uranium (U)	2021/10/15	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/15	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/10/15	<5.0		ug/L	
7638899	BAN	RPD [QWS513-05]	Dissolved Aluminum (Al)	2021/10/15	0.30		%	20
			Dissolved Antimony (Sb)	2021/10/15	NC		%	20
			Dissolved Arsenic (As)	2021/10/15	3.6		%	20
			Dissolved Barium (Ba)	2021/10/15	2.6		%	20
			Dissolved Beryllium (Be)	2021/10/15	1.7		%	20
			Dissolved Bismuth (Bi)	2021/10/15	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Boron (B)	2021/10/15	NC		%	20
			Dissolved Cadmium (Cd)	2021/10/15	1.1		%	20
			Dissolved Calcium (Ca)	2021/10/15	2.2		%	20
			Dissolved Chromium (Cr)	2021/10/15	NC		%	20
			Dissolved Cobalt (Co)	2021/10/15	NC		%	20
			Dissolved Copper (Cu)	2021/10/15	8.3		%	20
			Dissolved Iron (Fe)	2021/10/15	NC		%	20
			Dissolved Lead (Pb)	2021/10/15	NC		%	20
			Dissolved Magnesium (Mg)	2021/10/15	0.46		%	20
			Dissolved Manganese (Mn)	2021/10/15	0.65		%	20
			Dissolved Molybdenum (Mo)	2021/10/15	5.6		%	20
			Dissolved Nickel (Ni)	2021/10/15	NC		%	20
			Dissolved Phosphorus (P)	2021/10/15	NC		%	20
			Dissolved Potassium (K)	2021/10/15	1.7		%	20
			Dissolved Selenium (Se)	2021/10/15	NC		%	20
			Dissolved Silver (Ag)	2021/10/15	NC		%	20
			Dissolved Sodium (Na)	2021/10/15	0.29		%	20
			Dissolved Strontium (Sr)	2021/10/15	2.3		%	20
			Dissolved Thallium (Tl)	2021/10/15	NC		%	20
			Dissolved Tin (Sn)	2021/10/15	NC		%	20
			Dissolved Titanium (Ti)	2021/10/15	NC		%	20
			Dissolved Uranium (U)	2021/10/15	0.94		%	20
			Dissolved Vanadium (V)	2021/10/15	NC		%	20
			Dissolved Zinc (Zn)	2021/10/15	1.1		%	20
7639482	MGN	Matrix Spike [QWS514-04]	Isobutylbenzene - Extractable	2021/10/15		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		93	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15		73	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/15		68 (2)	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/15		59 (2)	%	70 - 130
7639482	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/10/15		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		97	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15		98	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/15		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/15		80	%	70 - 130
7639482	MGN	Method Blank	Isobutylbenzene - Extractable	2021/10/15		92	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/15		90	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/15	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/15	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/15	<0.090		mg/L	
7639482	MGN	RPD	>C10-C16 Hydrocarbons	2021/10/15	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/15	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/15	NC		%	40
7642373	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/18		101	%	80 - 120
7642373	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18		99	%	80 - 120
7642373	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/18	<0.050		mg/L	
7642373	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/18	NC		%	20
7642410	SHW	Spiked Blank	Conductivity	2021/10/18		101	%	80 - 120
7642410	SHW	Method Blank	Conductivity	2021/10/18	<1.0		uS/cm	
7642410	SHW	RPD	Conductivity	2021/10/18	0.13		%	10
7642411	SHW	Spiked Blank	pH	2021/10/18		100	%	97 - 103
7642411	SHW	RPD	pH	2021/10/18	1.2		%	N/A
7642413	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/10/18		88	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/18		109	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C10-C16 Hydrocarbons	2021/10/18		97	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/18		103	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/18		114	%	70 - 130
7642413	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/10/18		90	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/18		93	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/18		99	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/18		93	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/18		95	%	70 - 130
7642413	MSK	Method Blank	Isobutylbenzene - Extractable	2021/10/18		87	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/18		100	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/18	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/18	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/18	<0.090		mg/L	
7642413	MSK	RPD	>C10-C16 Hydrocarbons	2021/10/18	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/18	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/18	NC		%	40
7642553	SHW	QC Standard	Turbidity	2021/10/18		99	%	80 - 120
7642553	SHW	Spiked Blank	Turbidity	2021/10/18		102	%	80 - 120
7642553	SHW	Method Blank	Turbidity	2021/10/18	<0.10		NTU	
7642553	SHW	RPD	Turbidity	2021/10/18	6.4		%	20
7642575	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/10/19		76 (3)	%	80 - 120
7642575	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/19		102	%	80 - 120
7642575	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/19	<5.0		mg/L	
7642575	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/10/19	0.27		%	20
7642598	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/19		NC	%	80 - 120
7642598	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/19		97	%	80 - 120
7642598	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/19	<1.0		mg/L	
7642598	MCN	RPD	Dissolved Chloride (Cl-)	2021/10/19	2.8		%	20
7642599	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/10/20		NC	%	80 - 120
7642599	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/20		96	%	80 - 120
7642599	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/20	<2.0		mg/L	
7642599	MCN	RPD	Dissolved Sulphate (SO4)	2021/10/20	0.11		%	20
7642603	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/10/19		85	%	80 - 120
7642603	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/19		94	%	80 - 120
7642603	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/19	<0.50		mg/L	
7642603	MCN	RPD	Reactive Silica (SiO2)	2021/10/19	1.0 (4)		%	20
7642606	MCN	Spiked Blank	Colour	2021/10/20		99	%	80 - 120
7642606	MCN	Method Blank	Colour	2021/10/20	<5.0		TCU	
7642606	MCN	RPD	Colour	2021/10/20	NC		%	20
7642607	MCN	Matrix Spike	Orthophosphate (P)	2021/10/20		95	%	80 - 120
7642607	MCN	Spiked Blank	Orthophosphate (P)	2021/10/20		98	%	80 - 120
7642607	MCN	Method Blank	Orthophosphate (P)	2021/10/20	<0.010		mg/L	
7642607	MCN	RPD	Orthophosphate (P)	2021/10/20	NC		%	20
7642609	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/10/20		95	%	80 - 120
7642609	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/20		102	%	80 - 120
7642609	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/20	<0.050		mg/L	
7642609	MCN	RPD	Nitrate + Nitrite (N)	2021/10/20	0.53		%	20
7642612	MCN	Matrix Spike	Nitrite (N)	2021/10/20		102	%	80 - 120
7642612	MCN	Spiked Blank	Nitrite (N)	2021/10/20		100	%	80 - 120
7642612	MCN	Method Blank	Nitrite (N)	2021/10/20	<0.010		mg/L	
7642612	MCN	RPD	Nitrite (N)	2021/10/20	NC		%	20
7642615	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/10/19		85	%	80 - 120
7642615	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/19		102	%	80 - 120
7642615	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/19	<5.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7642615	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/10/19	0.37		%	20
7642678	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/19		NC	%	80 - 120
7642678	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/19		95	%	80 - 120
7642678	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/19	<1.0		mg/L	
7642678	MCN	RPD	Dissolved Chloride (Cl-)	2021/10/19	1.9		%	20
7642683	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/10/20		88	%	80 - 120
7642683	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/20		94	%	80 - 120
7642683	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/20	<2.0		mg/L	
7642683	MCN	RPD	Dissolved Sulphate (SO4)	2021/10/20	1.1		%	20
7642684	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/10/19		NC	%	80 - 120
7642684	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/19		93	%	80 - 120
7642684	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/19	<0.50		mg/L	
7642684	MCN	RPD	Reactive Silica (SiO2)	2021/10/19	0.43		%	20
7642688	MCN	Spiked Blank	Colour	2021/10/20		98	%	80 - 120
7642688	MCN	Method Blank	Colour	2021/10/20	<5.0		TCU	
7642688	MCN	RPD	Colour	2021/10/20	NC		%	20
7642689	MCN	Matrix Spike	Orthophosphate (P)	2021/10/20		93	%	80 - 120
7642689	MCN	Spiked Blank	Orthophosphate (P)	2021/10/20		99	%	80 - 120
7642689	MCN	Method Blank	Orthophosphate (P)	2021/10/20	<0.010		mg/L	
7642689	MCN	RPD	Orthophosphate (P)	2021/10/20	NC		%	20
7642690	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/10/20		97	%	80 - 120
7642690	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/20		103	%	80 - 120
7642690	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/20	<0.050		mg/L	
7642690	MCN	RPD	Nitrate + Nitrite (N)	2021/10/20	1.0		%	20
7642694	MCN	Matrix Spike	Nitrite (N)	2021/10/20		100	%	80 - 120
7642694	MCN	Spiked Blank	Nitrite (N)	2021/10/20		100	%	80 - 120
7642694	MCN	Method Blank	Nitrite (N)	2021/10/20	<0.010		mg/L	
7642694	MCN	RPD	Nitrite (N)	2021/10/20	NC		%	20
7644823	MCN	Matrix Spike [QWS513-01]	Total Alkalinity (Total as CaCO3)	2021/10/19		NC	%	80 - 120
7644823	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/19		100	%	80 - 120
7644823	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/19	<5.0		mg/L	
7644823	MCN	RPD [QWS513-01]	Total Alkalinity (Total as CaCO3)	2021/10/19	1.3		%	20
7644869	MCN	Matrix Spike [QWS513-01]	Dissolved Chloride (Cl-)	2021/10/19		88	%	80 - 120
7644869	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/19		96	%	80 - 120
7644869	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/19	<1.0		mg/L	
7644869	MCN	RPD [QWS513-01]	Dissolved Chloride (Cl-)	2021/10/19	0.63		%	20
7644874	MCN	Matrix Spike [QWS513-01]	Dissolved Sulphate (SO4)	2021/10/20		95	%	80 - 120
7644874	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/20		94	%	80 - 120
7644874	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/20	<2.0		mg/L	
7644874	MCN	RPD [QWS513-01]	Dissolved Sulphate (SO4)	2021/10/20	1.0		%	20
7644876	MCN	Matrix Spike [QWS513-01]	Reactive Silica (SiO2)	2021/10/19		NC	%	80 - 120
7644876	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/19		93	%	80 - 120
7644876	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/19	<0.50		mg/L	
7644876	MCN	RPD [QWS513-01]	Reactive Silica (SiO2)	2021/10/19	14		%	20
7644879	MCN	Spiked Blank	Colour	2021/10/20		94	%	80 - 120
7644879	MCN	Method Blank	Colour	2021/10/20	<5.0		TCU	
7644879	MCN	RPD [QWS513-01]	Colour	2021/10/20	NC		%	20
7644882	MCN	Matrix Spike [QWS513-01]	Orthophosphate (P)	2021/10/20		95	%	80 - 120
7644882	MCN	Spiked Blank	Orthophosphate (P)	2021/10/20		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7644882	MCN	Method Blank	Orthophosphate (P)	2021/10/20	<0.010		mg/L	
7644882	MCN	RPD [QWS513-01]	Orthophosphate (P)	2021/10/20	3.8		%	20
7644884	MCN	Matrix Spike [QWS513-01]	Nitrate + Nitrite (N)	2021/10/20		102	%	80 - 120
7644884	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/20		98	%	80 - 120
7644884	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/20	<0.050		mg/L	
7644884	MCN	RPD [QWS513-01]	Nitrate + Nitrite (N)	2021/10/20	NC		%	20
7644887	MCN	Matrix Spike [QWS513-01]	Nitrite (N)	2021/10/20		99	%	80 - 120
7644887	MCN	Spiked Blank	Nitrite (N)	2021/10/20		101	%	80 - 120
7644887	MCN	Method Blank	Nitrite (N)	2021/10/20	<0.010		mg/L	
7644887	MCN	RPD [QWS513-01]	Nitrite (N)	2021/10/20	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery is within QC acceptance limits. < 10 % of compounds in multi-component analysis in violation.

(2) Matrix Spike: results are outside acceptance limit due to probable matrix interference.

(3) Poor spike recovery due to probable sample matrix interference.

(4) Elevated reporting limit due to sample matrix.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

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Automated Statchk

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Page 1 of 1

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C1T3325	847883
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#847883-04-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	SD/DH		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		~~MW20-16 DUP1~~	2021/10/06	PM	GW			X	12	
2		~~MW17-121 DUP2~~						X		
3		DUP3						X		
4		MW8-S						X		
5		MW8-D						X		
6		MW5-S						X		
7		MW5-D						X		
8										
9										
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal intact on Cooler?
O'BRIEN, John	21/10/06	4:45pm	JENNIFER BERRY				☐	See ACTR	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

2021 OCT 6 16:56

Your Project #: 60639002
Site Location: HARRIETSFIELD
Your C.O.C. #: D55346, D55347, D55348, D55349

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965240
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2957
Received: 2021/12/15, 11:58

Sample Matrix: Water
Samples Received: 33

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	3	N/A	2021/12/30	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	30	N/A	2021/12/31	N/A	SM 23 4500-CO2 D
Alkalinity	6	N/A	2022/01/04	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	1	N/A	2022/01/06	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	19	N/A	2021/12/22	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	5	N/A	2021/12/23	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	2	N/A	2021/12/24	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	6	N/A	2022/01/04	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	1	N/A	2022/01/06	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	19	N/A	2021/12/22	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	7	N/A	2021/12/23	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	33	2021/12/21	2021/12/21	ATL SOP 00042	SM 23 5220D m
Colour	6	N/A	2022/01/04	ATL SOP 00020	SM 23 2120C m
Colour	1	N/A	2022/01/06	ATL SOP 00020	SM 23 2120C m
Colour	19	N/A	2021/12/22	ATL SOP 00020	SM 23 2120C m
Colour	7	N/A	2021/12/23	ATL SOP 00020	SM 23 2120C m
Organic carbon - Diss (DOC) (2)	4	N/A	2021/12/21	ATL SOP 00203	SM 23 5310B m
Organic carbon - Diss (DOC) (2)	14	N/A	2021/12/22	ATL SOP 00203	SM 23 5310B m
Organic carbon - Diss (DOC) (2)	15	N/A	2021/12/23	ATL SOP 00203	SM 23 5310B m
Conductance - water	3	N/A	2021/12/29	ATL SOP 00004	SM 23 2510B m
Conductance - water	30	N/A	2021/12/30	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	5	2021/12/17	2021/12/18	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	2	2021/12/17	2021/12/20	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	10	2021/12/20	2021/12/20	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	3	2021/12/20	2021/12/21	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	13	2021/12/22	2021/12/22	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	1	N/A	2021/12/22	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	31	N/A	2021/12/23	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2021/12/24	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (3)	1	N/A	2021/12/22	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	1	N/A	2021/12/21	ATL SOP 00058	EPA 6020B R2 m

Your Project #: 60639002
Site Location: HARRIETSFIELD
Your C.O.C. #: D55346, D55347, D55348, D55349

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965240
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2957
Received: 2021/12/15, 11:58

Sample Matrix: Water
Samples Received: 33

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Metals Water Diss. MS (as rec'd)	30	N/A	2021/12/22	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	1	N/A	2021/12/23	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	26	N/A	2022/01/10	N/A	Auto Calc.
Ion Balance (% Difference)	6	N/A	2022/01/11	N/A	Auto Calc.
Ion Balance (% Difference)	1	N/A	2021/12/31	N/A	Auto Calc.
Anion and Cation Sum	32	N/A	2022/01/10	N/A	Auto Calc.
Anion and Cation Sum	1	N/A	2021/12/31	N/A	Auto Calc.
Nitrogen Ammonia - water	31	N/A	2021/12/21	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	2	N/A	2021/12/22	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	1	N/A	2022/01/06	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	19	N/A	2021/12/22	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	7	N/A	2021/12/23	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	1	N/A	2021/12/29	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	5	N/A	2021/12/30	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	6	N/A	2022/01/04	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	1	N/A	2022/01/06	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	19	N/A	2021/12/22	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	7	N/A	2021/12/23	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	6	N/A	2022/01/11	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	1	N/A	2022/01/07	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	19	N/A	2021/12/23	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	7	N/A	2021/12/30	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	29	N/A	2021/12/20	CAM SOP-00444	OMOE E3179 m
Phenols (4AAP) (1)	4	N/A	2021/12/21	CAM SOP-00444	OMOE E3179 m
pH (4)	3	N/A	2021/12/29	ATL SOP 00003	SM 23 4500-H+ B m
pH (4)	30	N/A	2021/12/30	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	6	N/A	2022/01/04	ATL SOP 00021	SM 23 4500-P E m
Phosphorus - ortho	1	N/A	2022/01/06	ATL SOP 00021	SM 23 4500-P E m
Phosphorus - ortho	19	N/A	2021/12/22	ATL SOP 00021	SM 23 4500-P E m
Phosphorus - ortho	7	N/A	2021/12/23	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	26	N/A	2022/01/10	ATL SOP 00049	Auto Calc.

Your Project #: 60639002
Site Location: HARRIETSFIELD
Your C.O.C. #: D55346, D55347, D55348, D55349

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965240
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2957
Received: 2021/12/15, 11:58

Sample Matrix: Water
Samples Received: 33

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sat. pH and Langelier Index (@ 20C)	6	N/A	2022/01/11	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	1	N/A	2021/12/31	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	26	N/A	2022/01/10	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	6	N/A	2022/01/11	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	1	N/A	2021/12/31	ATL SOP 00049	Auto Calc.
Reactive Silica	6	N/A	2022/01/04	ATL SOP 00022	EPA 366.0 m
Reactive Silica	1	N/A	2022/01/06	ATL SOP 00022	EPA 366.0 m
Reactive Silica	19	N/A	2021/12/22	ATL SOP 00022	EPA 366.0 m
Reactive Silica	7	N/A	2021/12/23	ATL SOP 00022	EPA 366.0 m
Sulphate	6	N/A	2022/01/04	ATL SOP 00023	ASTM D516-16 m
Sulphate	1	N/A	2022/01/06	ATL SOP 00023	ASTM D516-16 m
Sulphate	19	N/A	2021/12/22	ATL SOP 00023	ASTM D516-16 m
Sulphate	7	N/A	2021/12/23	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	26	N/A	2022/01/10	N/A	Auto Calc.
Total Dissolved Solids (TDS calc)	6	N/A	2022/01/11	N/A	Auto Calc.
Total Dissolved Solids (TDS calc)	1	N/A	2021/12/23	N/A	Auto Calc.
Organic carbon - Total (TOC) (2)	3	N/A	2021/12/21	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (2)	27	N/A	2021/12/22	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (2)	3	N/A	2021/12/23	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	12	N/A	2021/12/21	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	4	N/A	2021/12/22	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	16	N/A	2021/12/23	N/A	Atl. RBCA v3 m
Total Suspended Solids	17	2021/12/17	2022/01/07	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	16	2021/12/17	2021/12/20	ATL SOP 00007	SM 23 2540D m
Turbidity	11	N/A	2022/01/04	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	22	N/A	2021/12/30	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	32	N/A	2021/12/20	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

Your Project #: 60639002
Site Location: HARRIETSFIELD
Your C.O.C. #: D55346, D55347, D55348, D55349

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
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CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2957
Received: 2021/12/15, 11:58

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

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Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(3) Sample filtered in laboratory prior to analysis for dissolved metals.
(4) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
17 Jan 2022 14:21:56

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM311			RJM311			RJM312		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55346			D55346			D55346		
	UNITS	MW1-S	RDL	QC Batch	MW1-S Lab-Dup	RDL	QC Batch	MW2-S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	19.9	N/A	7731142				4.86	N/A	7731142
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	540	1.0	7731130				200	1.0	7731130
Calculated TDS	mg/L	1200	1.0	7731158				260	1.0	7731158
Carb. Alkalinity (calc. as CaCO3)	mg/L	4.1	1.0	7731130				<1.0	1.0	7731130
Cation Sum	me/L	25.2	N/A	7731142				4.92	N/A	7731142
Hardness (CaCO3)	mg/L	1100	1.0	7731398				210	1.0	7731398
Ion Balance (% Difference)	%	11.9	N/A	7731141				0.610	N/A	7731141
Langelier Index (@ 20C)	N/A	1.57		7731156				0.355		7731156
Langelier Index (@ 4C)	N/A	1.33		7731157				0.106		7731157
Nitrate (N)	mg/L	0.092	0.050	7731399				0.090	0.050	7731399
Saturation pH (@ 20C)	N/A	6.33		7731156				7.26		7731156
Saturation pH (@ 4C)	N/A	6.57		7731157				7.51		7731157
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	540	50	7747990				200	25	7747990
Total Chemical Oxygen Demand	mg/L	150	20	7744448				23	20	7744448
Dissolved Chloride (Cl-)	mg/L	29	1.0	7747994				7.7	1.0	7747994
Colour	TCU	45	5.0	7748002				<5.0	5.0	7748002
Nitrate + Nitrite (N)	mg/L	0.092	0.050	7748004				0.090	0.050	7748004
Nitrite (N)	mg/L	<0.010	0.010	7748006				<0.010	0.010	7748006
Nitrogen (Ammonia Nitrogen)	mg/L	2.0	0.050	7744518				<0.050	0.050	7744518
Dissolved Organic Carbon (C)	mg/L	30 (1)	5.0	7750865				2.4	0.50	7750865
Total Organic Carbon (C)	mg/L	78 (2)	50	7744538				<5.0 (2)	5.0	7744538
Orthophosphate (P)	mg/L	<0.010	0.010	7748003				0.030	0.010	7748003
pH	pH	7.90		7759112				7.62		7759112
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101	<0.0010	0.0010	7741101	<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L	10	0.50	7748000				8.4	0.50	7748000
Total Suspended Solids	mg/L	8200	500	7734750				3700	250	7734750
Dissolved Sulphate (SO4)	mg/L	390	10	7747998				31	2.0	7747998
Turbidity	NTU	>1000	1.0	7759592				620	1.0	7759592
Conductivity	uS/cm	2000	1.0	7759111				460	1.0	7759111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM313			RJM314		RJM315		
Sampling Date		2021/12/13			2021/12/13		2021/12/13		
COC Number		D55346			D55346		D55346		
	UNITS	MW1-D	RDL	QC Batch	MW2-M	QC Batch	MW2-D	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	30.6	N/A	7732232	4.46	7732232	5.86	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	840	1.0	7732227	130	7732227	200	1.0	7732227
Calculated TDS	mg/L	1700	1.0	7732238	260	7732238	320	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.3	1.0	7732227	<1.0	7732227	<1.0	1.0	7732227
Cation Sum	me/L	30.3	N/A	7732232	4.51	7732232	5.71	N/A	7732232
Hardness (CaCO3)	mg/L	1300	1.0	7731398	180	7731398	230	1.0	7731398
Ion Balance (% Difference)	%	0.590	N/A	7731141	0.560	7731141	1.30	N/A	7732230
Langelier Index (@ 20C)	N/A	1.08		7732236	-0.170	7732236	0.266		7732236
Langelier Index (@ 4C)	N/A	0.839		7732237	-0.419	7732237	0.0170		7732237
Nitrate (N)	mg/L	<0.050	0.050	7731399	0.091	7731399	0.051	0.050	7731399
Saturation pH (@ 20C)	N/A	6.15		7732236	7.62	7732236	7.31		7732236
Saturation pH (@ 4C)	N/A	6.39		7732237	7.87	7732237	7.56		7732237
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	840	100	7747990	130	7747990	200	25	7744961
Total Chemical Oxygen Demand	mg/L	70	20	7744448	<20	7744467	52	20	7744467
Dissolved Chloride (Cl-)	mg/L	32	1.0	7747994	12	7747994	22	1.0	7744964
Colour	TCU	11	5.0	7748002	<5.0	7748002	<5.0	5.0	7744978
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7748004	0.091	7748004	0.051	0.050	7744981
Nitrite (N)	mg/L	<0.010	0.010	7748006	<0.010	7748006	<0.010	0.010	7744983
Nitrogen (Ammonia Nitrogen)	mg/L	0.50	0.050	7744518	0.15	7744518	<0.050	0.050	7744518
Dissolved Organic Carbon (C)	mg/L	20 (1)	5.0	7750865	1.1	7750865	1.3	0.50	7742700
Total Organic Carbon (C)	mg/L	21 (1)	5.0	7744519	1.6	7744532	2.5	0.50	7744538
Orthophosphate (P)	mg/L	<0.010	0.010	7748003	0.051	7748003	0.052	0.010	7744979
pH	pH	7.23		7759112	7.45	7756786	7.58		7759112
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101	<0.0010	7741101	<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L	10	0.50	7748000	12	7748000	13	0.50	7744971
Total Suspended Solids	mg/L	140	2.5	7734801	240	7734801	150	5.0	7734936
Dissolved Sulphate (SO4)	mg/L	620	20	7747998	70	7747998	60	2.0	7744969
Turbidity	NTU	42	0.10	7759612	26	7759612	26	0.10	7759612
Conductivity	uS/cm	2400	1.0	7759111	430	7756785	540	1.0	7759111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM316			RJM317			RJM318		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55346			D55346			D55346		
	UNITS	MW3	RDL	QC Batch	MW5-S	RDL	QC Batch	MW5-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.54	N/A	7732232	2.12	N/A	7732232	2.35	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	100	1.0	7732227	83	1.0	7732227	88	1.0	7732227
Calculated TDS	mg/L	140	1.0	7732238	120	1.0	7732238	140	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.5	1.0	7732227	<1.0	1.0	7732227	<1.0	1.0	7732227
Cation Sum	me/L	2.49	N/A	7732232	2.00	N/A	7732232	2.33	N/A	7732232
Hardness (CaCO3)	mg/L	98	1.0	7731398	79	1.0	7731398	91	1.0	7731398
Ion Balance (% Difference)	%	0.990	N/A	7732230	2.91	N/A	7732230	0.430	N/A	7732230
Langelier Index (@ 20C)	N/A	0.319		7732236	-0.722		7732236	-0.295		7732236
Langelier Index (@ 4C)	N/A	0.0680		7732237	-0.973		7732237	-0.546		7732237
Nitrate (N)	mg/L	<0.050	0.050	7731399	<0.050	0.050	7731399	<0.050	0.050	7731399
Saturation pH (@ 20C)	N/A	7.87		7732236	8.05		7732236	7.97		7732236
Saturation pH (@ 4C)	N/A	8.12		7732237	8.30		7732237	8.22		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	100	10	7744961	83	5.0	7744961	88	5.0	7753600
Total Chemical Oxygen Demand	mg/L	<20	20	7744467	<20	20	7744467	68	20	7744467
Dissolved Chloride (Cl-)	mg/L	8.6	1.0	7744964	9.8	1.0	7744964	15	1.0	7753601
Colour	TCU	<5.0	5.0	7744978	<5.0	5.0	7744978	<5.0	5.0	7753605
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7744981	<0.050	0.050	7744981	<0.050	0.050	7753608
Nitrite (N)	mg/L	<0.010	0.010	7744983	<0.010	0.010	7744983	<0.010	0.010	7753609
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744518	<0.050	0.050	7744518	<0.050	0.050	7744518
Dissolved Organic Carbon (C)	mg/L	0.59	0.50	7744510	1.4	0.50	7742700	1.0	0.50	7750865
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	7744538	2.0	0.50	7747675	<5.0 (1)	5.0	7744532
Orthophosphate (P)	mg/L	0.016	0.010	7744979	0.034	0.010	7744979	0.077	0.010	7753607
pH	pH	8.19		7759112	7.33		7759112	7.68		7759112
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101	<0.0010	0.0010	7741101	<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L	11	0.50	7744971	13	0.50	7744971	14	0.50	7753603
Total Suspended Solids	mg/L	47000	500	7734936	28	5.0	7734936	300	100	7734936
Dissolved Sulphate (SO4)	mg/L	9.8	2.0	7744969	8.6	2.0	7744969	7.8	2.0	7753602
Turbidity	NTU	>1000	1.0	7759612	28	0.10	7759612	75	0.10	7759612
Conductivity	uS/cm	240	1.0	7759111	200	1.0	7759111	230	1.0	7759111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM318			RJM319			RJM320		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55346			D55346			D55346		
	UNITS	MW5-D Lab-Dup	RDL	QC Batch	MW6-S	RDL	QC Batch	MW6-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				9.74	N/A	7732232	44.4	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				280	1.0	7732227	1300	1.0	7732227
Calculated TDS	mg/L				600	1.0	7732238	2500	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7732227	1.4	1.0	7732227
Cation Sum	me/L				12.6	N/A	7732232	43.6	N/A	7732232
Hardness (CaCO3)	mg/L				510	1.0	7731398	1700	1.0	7731398
Ion Balance (% Difference)	%				12.7	N/A	7732230	0.880	N/A	7732230
Langelier Index (@ 20C)	N/A				0.223		7732236	1.14		7732236
Langelier Index (@ 4C)	N/A				-0.0240		7732237	0.896		7732237
Nitrate (N)	mg/L				0.066	0.050	7731399	<0.050	0.050	7731399
Saturation pH (@ 20C)	N/A				6.86		7732236	5.90		7732236
Saturation pH (@ 4C)	N/A				7.10		7732237	6.14		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	92	5.0	7753600	280	25	7753591	1300	75	7753591
Total Chemical Oxygen Demand	mg/L				220	20	7744467	<20	20	7744467
Dissolved Chloride (Cl-)	mg/L	15	1.0	7753601	26	1.0	7753592	89	1.0	7753592
Colour	TCU	<5.0	5.0	7753605	17	5.0	7753595	45	5.0	7753595
Nitrate + Nitrite (N)	mg/L	0.050	0.050	7753608	0.066	0.050	7753597	<0.050	0.050	7753597
Nitrite (N)	mg/L	<0.010	0.010	7753609	<0.010	0.010	7753598	<0.010	0.010	7753598
Nitrogen (Ammonia Nitrogen)	mg/L				3.9	0.25	7744518	25	1.5	7744518
Dissolved Organic Carbon (C)	mg/L				23 (1)	5.0	7750865	58 (1)	5.0	7744510
Total Organic Carbon (C)	mg/L				30 (1)	5.0	7744519	65 (1)	5.0	7744519
Orthophosphate (P)	mg/L	0.077	0.010	7753607	<0.010	0.010	7753596	<0.010	0.010	7753596
pH	pH				7.08		7759112	7.04		7759868
Phenols-4AAP	mg/L				<0.0010	0.0010	7741101	0.0016	0.0010	7741101
Reactive Silica (SiO2)	mg/L	14	0.50	7753603	4.7	0.50	7753594	12	0.50	7753594
Total Suspended Solids	mg/L				67	5.0	7734750	94	5.0	7734801
Dissolved Sulphate (SO4)	mg/L	7.1	2.0	7753602	160	10	7753593	740	20	7753593
Turbidity	NTU	83	0.10	7759612	11	0.10	7759612	140	1.0	7759612
Conductivity	uS/cm				880	1.0	7759111	3300	1.0	7759867

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM320			RJM387			RJM387		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55346			D55347			D55347		
	UNITS	MW6-D Lab-Dup	RDL	QC Batch	MW7-S	RDL	QC Batch	MW7-S Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				4.33	N/A	7732232			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				190	1.0	7732227			
Calculated TDS	mg/L				230	1.0	7732238			
Carb. Alkalinity (calc. as CaCO3)	mg/L				1.0	1.0	7732227			
Cation Sum	me/L				4.27	N/A	7732232			
Hardness (CaCO3)	mg/L				190	1.0	7731398			
Ion Balance (% Difference)	%				0.700	N/A	7732230			
Langelier Index (@ 20C)	N/A				0.466		7732236			
Langelier Index (@ 4C)	N/A				0.216		7732237			
Nitrate (N)	mg/L				0.16	0.050	7731399			
Saturation pH (@ 20C)	N/A				7.28		7732236			
Saturation pH (@ 4C)	N/A				7.53		7732237			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				190	25	7744961			
Total Chemical Oxygen Demand	mg/L				120	20	7744467			
Dissolved Chloride (Cl-)	mg/L				5.0	1.0	7744964			
Colour	TCU				11	5.0	7744978			
Nitrate + Nitrite (N)	mg/L				0.16	0.050	7744981			
Nitrite (N)	mg/L				<0.010	0.010	7744983			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7744518			
Dissolved Organic Carbon (C)	mg/L				6.1	0.50	7744510			
Total Organic Carbon (C)	mg/L				57 (1)	50	7744538			
Orthophosphate (P)	mg/L				<0.010	0.010	7744979			
pH	pH				7.74		7759109	7.68		7759109
Phenols-4AAP	mg/L				<0.0010	0.0010	7741101			
Reactive Silica (SiO2)	mg/L				7.1	0.50	7744971			
Total Suspended Solids	mg/L	94	5.0	7734801	4200	100	7734801			
Dissolved Sulphate (SO4)	mg/L				14	2.0	7744969			
Turbidity	NTU				>1000	1.0	7759612			
Conductivity	uS/cm				370	1.0	7759107	370	1.0	7759107

RDL = Reportable Detection Limit
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N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM388			RJM388			RJM389		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55347			D55347		
	UNITS	MW7-D	RDL	QC Batch	MW7-D Lab-Dup	RDL	QC Batch	MW8-S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	8.01	N/A	7732232				12.5	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	200	1.0	7732227				220	1.0	7732227
Calculated TDS	mg/L	480	1.0	7732238				750	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7732227				1.3	1.0	7732227
Cation Sum	me/L	8.59	N/A	7732232				12.3	N/A	7732232
Hardness (CaCO3)	mg/L	370	1.0	7731398				410	1.0	7731398
Ion Balance (% Difference)	%	3.49	N/A	7732230				0.770	N/A	7732230
Langelier Index (@ 20C)	N/A	-0.100		7732236				0.750		7732236
Langelier Index (@ 4C)	N/A	-0.348		7732237				0.503		7732237
Nitrate (N)	mg/L	<0.050	0.050	7731399				0.36	0.050	7731399
Saturation pH (@ 20C)	N/A	7.07		7732236				7.05		7732236
Saturation pH (@ 4C)	N/A	7.32		7732237				7.29		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	200	25	7747990				220	25	7744961
Total Chemical Oxygen Demand	mg/L	61	20	7744467				<20	20	7744467
Dissolved Chloride (Cl-)	mg/L	14	1.0	7747994				86	1.0	7744964
Colour	TCU	26	5.0	7748002				<5.0	5.0	7744978
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7748004				0.36	0.050	7744981
Nitrite (N)	mg/L	<0.010	0.010	7748006				<0.010	0.010	7744983
Nitrogen (Ammonia Nitrogen)	mg/L	0.81	0.050	7744518				<0.050	0.050	7744518
Dissolved Organic Carbon (C)	mg/L	21	0.50	7750865				2.2	0.50	7744510
Total Organic Carbon (C)	mg/L	21	0.50	7744532				11	0.50	7744532
Orthophosphate (P)	mg/L	<0.010	0.010	7748003				0.030	0.010	7744979
pH	pH	6.97		7756788	6.91		7756788	7.80		7759868
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101				<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L	6.0	0.50	7748000				14	0.50	7744971
Total Suspended Solids	mg/L	89	5.0	7734801				33	2.5	7734936
Dissolved Sulphate (SO4)	mg/L	170	10	7747998				260	10	7744969
Turbidity	NTU	22	0.10	7759612				13	0.10	7759612
Conductivity	uS/cm	740	1.0	7756787	750	1.0	7756787	1100	1.0	7759867

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM389			RJM390			RJM391		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55347			D55347		
	UNITS	MW8-S Lab-Dup	RDL	QC Batch	MW8-D	RDL	QC Batch	MW19-03D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				5.05	N/A	7732232	2.27	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				130	1.0	7732227	97	1.0	7732227
Calculated TDS	mg/L				310	1.0	7732238	120	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L				1.0	1.0	7732227	1.1	1.0	7732227
Cation Sum	me/L				5.83	N/A	7732232	2.11	N/A	7732232
Hardness (CaCO3)	mg/L				230	1.0	7731398	69	1.0	7731398
Ion Balance (% Difference)	%				7.17	N/A	7732230	3.65	N/A	7732230
Langelier Index (@ 20C)	N/A				0.486		7732236	0.0460		7732236
Langelier Index (@ 4C)	N/A				0.237		7732237	-0.205		7732237
Nitrate (N)	mg/L				<0.050	0.050	7731399	<0.050	0.050	7731399
Saturation pH (@ 20C)	N/A				7.44		7732236	8.01		7732236
Saturation pH (@ 4C)	N/A				7.69		7732237	8.27		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				130	25	7744961	98	5.0	7747990
Total Chemical Oxygen Demand	mg/L	<20	20	7744467	<20	20	7744467	<20	20	7744467
Dissolved Chloride (Cl-)	mg/L				40	1.0	7744964	6.9	1.0	7747994
Colour	TCU				<5.0	5.0	7744978	<5.0	5.0	7748002
Nitrate + Nitrite (N)	mg/L				<0.050	0.050	7744981	<0.050	0.050	7748004
Nitrite (N)	mg/L				<0.010	0.010	7744983	<0.010	0.010	7748006
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7744518	<0.050	0.050	7744518
Dissolved Organic Carbon (C)	mg/L				0.65	0.50	7742700	<0.50	0.50	7750865
Total Organic Carbon (C)	mg/L				0.68	0.50	7744538	0.85	0.50	7744538
Orthophosphate (P)	mg/L				0.082	0.010	7744979	0.082	0.010	7748003
pH	pH				7.93		7759868	8.06		7756786
Phenols-4AAP	mg/L				<0.0010	0.0010	7741101	<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L				13	0.50	7744971	7.8	0.50	7748000
Total Suspended Solids	mg/L	32	2.5	7734936	170	5.0	7734801	6.0	1.0	7734750
Dissolved Sulphate (SO4)	mg/L				64	2.0	7744969	5.1	2.0	7747998
Turbidity	NTU				3.5	0.10	7759612	4.7	0.10	7759612
Conductivity	uS/cm				480	1.0	7759867	200	1.0	7756785

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM392			RJM392			RJM393		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55347			D55347		
	UNITS	MW19-09S	RDL	QC Batch	MW19-09S Lab-Dup	RDL	QC Batch	MW19-11M	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.51	N/A	7732232				10.3	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	100	1.0	7732227				400	1.0	7732227
Calculated TDS	mg/L	140	1.0	7732238				580	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.4	1.0	7732227				<1.0	1.0	7732227
Cation Sum	me/L	2.44	N/A	7732232				11.3	N/A	7732232
Hardness (CaCO3)	mg/L	86	1.0	7731398				500	1.0	7731398
Ion Balance (% Difference)	%	1.41	N/A	7732230				4.52	N/A	7732230
Langelier Index (@ 20C)	N/A	0.250		7732236				0.715		7732236
Langelier Index (@ 4C)	N/A	-0.00100		7732237				0.468		7732237
Nitrate (N)	mg/L	<0.050	0.050	7731399				0.49	0.050	7731399
Saturation pH (@ 20C)	N/A	7.90		7732236				6.68		7732236
Saturation pH (@ 4C)	N/A	8.16		7732237				6.92		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	100	10	7753591				400	25	7744961
Total Chemical Oxygen Demand	mg/L	63	20	7744467				73	20	7744467
Dissolved Chloride (Cl-)	mg/L	7.3	1.0	7753592				11	1.0	7744964
Colour	TCU	<5.0	5.0	7753595				23	5.0	7744978
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7753597				0.53	0.050	7744981
Nitrite (N)	mg/L	<0.010	0.010	7753598				0.046	0.010	7744983
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744521	<0.050	0.050	7744521	2.0	0.050	7744518
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	7750865				12	0.50	7744510
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	7747675				26 (1)	5.0	7744538
Orthophosphate (P)	mg/L	0.015	0.010	7753596				0.050	0.010	7744979
pH	pH	8.15		7759868				7.39		7759868
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101				<0.0010	0.0010	7741101
Reactive Silica (SiO2)	mg/L	9.5	0.50	7753594				5.0	0.50	7744971
Total Suspended Solids	mg/L	47000	100	7734801				340	100	7734936
Dissolved Sulphate (SO4)	mg/L	11	2.0	7753593				98	2.0	7744969
Turbidity	NTU	>1000	1.0	7759612				630	1.0	7759612
Conductivity	uS/cm	220	1.0	7759867				850	1.0	7759867

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM394			RJM395			RJM395		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55347			D55347		
	UNITS	MW19-11D	RDL	QC Batch	PW19-01	RDL	QC Batch	PW19-01 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	28.0	N/A	7732232	7.42	N/A	7732232			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	890	1.0	7732227	340	1.0	7732227			
Calculated TDS	mg/L	1600	1.0	7732238	360	1.0	7732238			
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.6	1.0	7732227	2.2	1.0	7732227			
Cation Sum	me/L	28.8	N/A	7732232	5.69	N/A	7732232			
Hardness (CaCO3)	mg/L	1200	1.0	7731398	250	1.0	7731398			
Ion Balance (% Difference)	%	1.45	N/A	7732230	13.2	N/A	7732230			
Langelier Index (@ 20C)	N/A	1.21		7732236	0.857		7732236			
Langelier Index (@ 4C)	N/A	0.964		7732237	0.608		7732237			
Nitrate (N)	mg/L	<0.050	0.050	7731399	<0.050	0.050	7731399			
Saturation pH (@ 20C)	N/A	6.07		7732236	6.99		7732236			
Saturation pH (@ 4C)	N/A	6.31		7732237	7.24		7732237			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	900	75	7744961	340	25	7753623	350	25	7753623
Total Chemical Oxygen Demand	mg/L	94	20	7744467	<20	20	7744467			
Dissolved Chloride (Cl-)	mg/L	29	1.0	7744964	8.3	1.0	7757018	8.2	1.0	7757018
Colour	TCU	20	5.0	7744978	<5.0	5.0	7757021	<5.0	5.0	7757021
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7744981	<0.050	0.050	7757034	<0.050	0.050	7757034
Nitrite (N)	mg/L	0.058	0.010	7744983	<0.010	0.010	7757035	<0.010	0.010	7757035
Nitrogen (Ammonia Nitrogen)	mg/L	9.4	0.50	7744518	<0.050	0.050	7744518			
Dissolved Organic Carbon (C)	mg/L	23 (1)	5.0	7744510	1.6	0.50	7744510			
Total Organic Carbon (C)	mg/L	26 (1)	5.0	7747675	<5.0 (2)	5.0	7744532			
Orthophosphate (P)	mg/L	<0.010	0.010	7744979	<0.010	0.010	7757023	<0.010	0.010	7757023
pH	pH	7.27		7759868	7.85		7759868			
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101	<0.0010	0.0010	7741101			
Reactive Silica (SiO2)	mg/L	6.9	0.50	7744971	15	0.50	7757020	15	0.50	7757020
Total Suspended Solids	mg/L	120	2.5	7734936	340	10	7734750			
Dissolved Sulphate (SO4)	mg/L	440	10	7744969	20	2.0	7757019	20	2.0	7757019
Turbidity	NTU	140	1.0	7759612	180	1.0	7759612			
Conductivity	uS/cm	2100	1.0	7759867	620	1.0	7759867			

RDL = Reportable Detection Limit
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(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM396			RJM500			RJM500		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55348			D55348		
	UNITS	MW19-12S	RDL	QC Batch	MW19-12D	RDL	QC Batch	MW19-12D Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	4.59	N/A	7732232	4.39	N/A	7732232			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	180	1.0	7732227	140	1.0	7732227			
Calculated TDS	mg/L	250	1.0	7732238	250	1.0	7732238			
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.3	1.0	7732227	<1.0	1.0	7732227			
Cation Sum	me/L	4.55	N/A	7732232	4.21	N/A	7732232			
Hardness (CaCO3)	mg/L	200	1.0	7731398	180	1.0	7731398			
Ion Balance (% Difference)	%	0.440	N/A	7732230	2.09	N/A	7732230			
Langelier Index (@ 20C)	N/A	0.548		7732236	-0.0850		7732236			
Langelier Index (@ 4C)	N/A	0.299		7732237	-0.334		7732237			
Nitrate (N)	mg/L	0.14	0.050	7731399	0.56	0.050	7731399			
Saturation pH (@ 20C)	N/A	7.31		7732236	7.49		7732236			
Saturation pH (@ 4C)	N/A	7.56		7732237	7.74		7732237			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	190	25	7744961	140	25	7765779	140	25	7765779
Total Chemical Oxygen Demand	mg/L	63	20	7744467	<20	20	7744467			
Dissolved Chloride (Cl-)	mg/L	7.9	1.0	7744964	13	1.0	7766021	13	1.0	7766021
Colour	TCU	21	5.0	7744978	<5.0	5.0	7766082	<5.0	5.0	7766082
Nitrate + Nitrite (N)	mg/L	0.14	0.050	7744981	0.56	0.050	7766094	0.54	0.050	7766094
Nitrite (N)	mg/L	<0.010	0.010	7744983	<0.010	0.010	7766116	<0.010	0.010	7766116
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744521	<0.050	0.050	7744521			
Dissolved Organic Carbon (C)	mg/L	5.2	0.50	7744510	1.3	0.50	7742700			
Total Organic Carbon (C)	mg/L	7.6 (1)	5.0	7744532	2.5	0.50	7744538			
Orthophosphate (P)	mg/L	0.025	0.010	7744979	<0.010	0.010	7766086	<0.010	0.010	7766086
pH	pH	7.86		7759868	7.41		7759868			
Phenols-4AAP	mg/L	<0.0010	0.0010	7741101	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121
Reactive Silica (SiO2)	mg/L	9.0	0.50	7744971	11	0.50	7766080	11	0.50	7766080
Total Suspended Solids	mg/L	780	100	7734750	210	10	7734750			
Dissolved Sulphate (SO4)	mg/L	31	2.0	7744969	53	2.0	7766077	52	2.0	7766077
Turbidity	NTU	520	1.0	7759612	85	0.10	7759612			
Conductivity	uS/cm	410	1.0	7759867	390	1.0	7759867			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM501			RJM502			RJM503		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55348			D55348			D55348		
	UNITS	MW19-13S	RDL	QC Batch	MW19-13D	RDL	QC Batch	MW20-14S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	1.54	N/A	7732232	1.92	N/A	7732232	3.12	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	7.8	1.0	7732227	24	1.0	7732227	70	1.0	7732227
Calculated TDS	mg/L	100	1.0	7732238	130	1.0	7732238	180	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7732227	<1.0	1.0	7732227	<1.0	1.0	7732227
Cation Sum	me/L	1.42	N/A	7732232	1.80	N/A	7732232	2.22	N/A	7732232
Hardness (CaCO3)	mg/L	49	1.0	7731398	57	1.0	7731398	87	1.0	7731398
Ion Balance (% Difference)	%	4.05	N/A	7732230	3.23	N/A	7732230	16.9	N/A	7732230
Langelier Index (@ 20C)	N/A	-3.80		7732236	-2.12		7732236	-1.28		7732236
Langelier Index (@ 4C)	N/A	-4.06		7732237	-2.37		7732237	-1.53		7732237
Nitrate (N)	mg/L	<0.050	0.050	7731399	0.077	0.050	7731399	2.0	0.25	7731399
Saturation pH (@ 20C)	N/A	9.38		7732236	8.79		7732236	8.16		7732236
Saturation pH (@ 4C)	N/A	9.63		7732237	9.04		7732237	8.41		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	7.8	5.0	7744961	24	5.0	7744961	70	5.0	7744961
Total Chemical Oxygen Demand	mg/L	180	20	7744467	30	20	7744467	74	20	7745747
Dissolved Chloride (Cl-)	mg/L	12	1.0	7744964	9.9	1.0	7744964	8.0	1.0	7744964
Colour	TCU	6.4	5.0	7744978	<5.0	5.0	7744978	<5.0	5.0	7744978
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7744981	0.077	0.050	7744981	2.0	0.25	7744981
Nitrite (N)	mg/L	<0.010	0.010	7744983	<0.010	0.010	7744983	<0.010	0.010	7744983
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744521	<0.050	0.050	7744521	<0.050	0.050	7744521
Dissolved Organic Carbon (C)	mg/L	4.3	0.50	7744510	0.88	0.50	7750865	2.2	0.50	7744510
Total Organic Carbon (C)	mg/L	55 (1)	50	7744538	<5.0 (1)	5.0	7744538	5.6 (1)	5.0	7744532
Orthophosphate (P)	mg/L	<0.010	0.010	7744979	0.029	0.010	7744979	<0.010	0.010	7744979
pH	pH	5.57		7759868	6.67		7759868	6.88		7759868
Phenols-4AAP	mg/L	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121
Reactive Silica (SiO2)	mg/L	6.6	0.50	7744971	18	0.50	7744971	9.2	0.50	7744971
Total Suspended Solids	mg/L	110000	500	7734750	15000	100	7734801	2300	250	7734750
Dissolved Sulphate (SO4)	mg/L	50	2.0	7744969	56	2.0	7744969	65	2.0	7744969
Turbidity	NTU	>1000	1.0	7759612	280	1.0	7762907	>1000	1.0	7762907
Conductivity	uS/cm	160	1.0	7759867	190	1.0	7759867	290	1.0	7759867

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM504			RJM505			RJM506		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55348			D55348			D55348		
	UNITS	MW20-14D	RDL	QC Batch	MW20-15S	RDL	QC Batch	MW20-15D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	7.18	N/A	7732232	7.00	N/A	7732232	13.4	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	86	1.0	7732227	230	1.0	7732227	360	1.0	7732227
Calculated TDS	mg/L	450	1.0	7732238	400	1.0	7732238	780	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7732227	1.1	1.0	7732227	1.6	1.0	7732227
Cation Sum	me/L	6.88	N/A	7732232	6.54	N/A	7732232	13.0	N/A	7732232
Hardness (CaCO3)	mg/L	280	1.0	7731398	240	1.0	7731398	550	1.0	7731398
Ion Balance (% Difference)	%	2.13	N/A	7732230	3.40	N/A	7732230	1.51	N/A	7732230
Langelier Index (@ 20C)	N/A	-0.636		7732236	0.477		7732236	0.897		7732236
Langelier Index (@ 4C)	N/A	-0.884		7732237	0.229		7732237	0.650		7732237
Nitrate (N)	mg/L	0.41	0.050	7731399	0.31	0.050	7731399	0.096	0.050	7731399
Saturation pH (@ 20C)	N/A	7.68		7732236	7.23		7732236	6.77		7732236
Saturation pH (@ 4C)	N/A	7.93		7732237	7.47		7732237	7.02		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	86	5.0	7744986	230	25	7744986	360	25	7744986
Total Chemical Oxygen Demand	mg/L	<20	20	7745747	21	20	7745747	<20	20	7745747
Dissolved Chloride (Cl-)	mg/L	9.4	1.0	7744989	6.3	1.0	7744989	22	1.0	7744989
Colour	TCU	<5.0	5.0	7744997	<5.0	5.0	7744997	<5.0	5.0	7744997
Nitrate + Nitrite (N)	mg/L	0.41	0.050	7745000	0.31	0.050	7745000	0.096	0.050	7745000
Nitrite (N)	mg/L	<0.010	0.010	7745003	<0.010	0.010	7745003	<0.010	0.010	7745003
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744521	<0.050	0.050	7744521	<0.050	0.050	7747594
Dissolved Organic Carbon (C)	mg/L	2.0	0.50	7747690	1.7	0.50	7750865	2.2	0.50	7747690
Total Organic Carbon (C)	mg/L	2.0	0.50	7744532	<5.0 (1)	5.0	7744532	2.5	0.50	7744532
Orthophosphate (P)	mg/L	0.025	0.010	7744998	<0.010	0.010	7744998	0.031	0.010	7744998
pH	pH	7.04		7759868	7.70		7759868	7.67		7759868
Phenols-4AAP	mg/L	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121
Reactive Silica (SiO2)	mg/L	12	0.50	7744994	23	1.0	7744994	26	1.0	7744994
Total Suspended Solids	mg/L	46	1.0	7734750	1600	170	7734750	55	2.0	7734750
Dissolved Sulphate (SO4)	mg/L	250	10	7744990	100	4.0	7744990	270	10	7744990
Turbidity	NTU	37	0.10	7762907	720	1.0	7762907	38	0.10	7762907
Conductivity	uS/cm	650	1.0	7759867	600	1.0	7759867	1100	1.0	7759867

RDL = Reportable Detection Limit
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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM506			RJM507			RJM508		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55348			D55348			D55348		
	UNITS	MW20-15D Lab-Dup	RDL	QC Batch	MW20-16	RDL	QC Batch	MW20-17S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				2.49	N/A	7732232	2.08	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				94	1.0	7732227	84	1.0	7732227
Calculated TDS	mg/L				140	1.0	7732238	120	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7732227	1.0	1.0	7732227
Cation Sum	me/L				2.35	N/A	7732232	1.92	N/A	7732232
Hardness (CaCO3)	mg/L				92	1.0	7731398	70	1.0	7731398
Ion Balance (% Difference)	%				2.89	N/A	7732230	4.00	N/A	7732230
Langelier Index (@ 20C)	N/A				-0.245		7732236	0.0450		7732236
Langelier Index (@ 4C)	N/A				-0.495		7732237	-0.205		7732237
Nitrate (N)	mg/L				0.064	0.050	7731399	0.052	0.050	7731399
Saturation pH (@ 20C)	N/A				7.94		7732236	8.07		7732236
Saturation pH (@ 4C)	N/A				8.19		7732237	8.32		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				94	5.0	7747990	85	5.0	7744986
Total Chemical Oxygen Demand	mg/L				50	20	7745747	21	20	7745747
Dissolved Chloride (Cl-)	mg/L				15	1.0	7747994	7.5	1.0	7744989
Colour	TCU				7.7	5.0	7748002	<5.0	5.0	7744997
Nitrate + Nitrite (N)	mg/L				0.064	0.050	7748004	0.052	0.050	7745000
Nitrite (N)	mg/L				<0.010	0.010	7748006	<0.010	0.010	7745003
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7747594	<0.050	0.050	7744521	<0.050	0.050	7744521
Dissolved Organic Carbon (C)	mg/L				1.7	0.50	7744510	<0.50	0.50	7750865
Total Organic Carbon (C)	mg/L	2.4	0.50	7744532	<5.0 (1)	5.0	7744532	<5.0 (1)	5.0	7744538
Orthophosphate (P)	mg/L				0.057	0.010	7748003	0.011	0.010	7744998
pH	pH	7.77		7759868	7.69		7759868	8.11		7759868
Phenols-4AAP	mg/L				<0.0010	0.0010	7741121	<0.0010	0.0010	7741121
Reactive Silica (SiO2)	mg/L				12	0.50	7748000	9.4	0.50	7744994
Total Suspended Solids	mg/L				470	170	7734936	840	100	7734750
Dissolved Sulphate (SO4)	mg/L				8.0	2.0	7747998	8.2	2.0	7744990
Turbidity	NTU				96	0.10	7762907	120	1.0	7762907
Conductivity	uS/cm	1100	1.0	7759867	220	1.0	7759867	180	1.0	7759867

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM509			RJM529			RJM530		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55348			D55349			D55349		
	UNITS	MW20-17D	RDL	QC Batch	DUP1	RDL	QC Batch	DUP2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.19	N/A	7732232	13.6	N/A	7732232	2.47	N/A	7732232
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	92	1.0	7732227	370	1.0	7732227	93	1.0	7732227
Calculated TDS	mg/L	120	1.0	7732238	780	1.0	7732238	140	1.0	7732238
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	1.0	7732227	2.2	1.0	7732227	<1.0	1.0	7732227
Cation Sum	me/L	2.12	N/A	7732232	13.0	N/A	7732232	2.39	N/A	7732232
Hardness (CaCO3)	mg/L	78	1.0	7731398	550	1.0	7731398	95	1.0	7731398
Ion Balance (% Difference)	%	1.62	N/A	7732230	2.07	N/A	7732230	1.65	N/A	7732230
Langelier Index (@ 20C)	N/A	0.104		7732236	1.06		7732236	-0.234		7732236
Langelier Index (@ 4C)	N/A	-0.147		7732237	0.809		7732237	-0.485		7732237
Nitrate (N)	mg/L	0.070	0.050	7731399	<0.050	0.050	7731399	0.066	0.050	7731399
Saturation pH (@ 20C)	N/A	7.99		7732236	6.76		7732236	7.93		7732236
Saturation pH (@ 4C)	N/A	8.24		7732237	7.01		7732237	8.18		7732237
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	93	5.0	7744986	370	25	7753591	94	5.0	7744986
Total Chemical Oxygen Demand	mg/L	31	20	7745747	<20	20	7745747	57	20	7745747
Dissolved Chloride (Cl-)	mg/L	6.9	1.0	7744989	24	1.0	7753592	15	1.0	7744989
Colour	TCU	<5.0	5.0	7744997	<5.0	5.0	7753595	6.1	5.0	7744997
Nitrate + Nitrite (N)	mg/L	0.070	0.050	7745000	<0.050	0.050	7753597	0.066	0.050	7745000
Nitrite (N)	mg/L	<0.010	0.010	7745003	<0.010	0.010	7753598	<0.010	0.010	7745003
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744521	<0.050	0.050	7744521	<0.050	0.050	7744521
Dissolved Organic Carbon (C)	mg/L	0.60	0.50	7744510	2.2	0.50	7744510	1.9	0.50	7744510
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	7744532	2.3	0.50	7744532	<5.0 (1)	5.0	7744538
Orthophosphate (P)	mg/L	0.020	0.010	7744998	0.028	0.010	7753596	0.057	0.010	7744998
pH	pH	8.09		7759868	7.81		7759868	7.69		7759890
Phenols-4AAP	mg/L	0.0021	0.0010	7741121	<0.0010	0.0010	7741121	<0.0010	0.0010	7741121
Reactive Silica (SiO2)	mg/L	9.0	0.50	7744994	27	1.0	7753594	12	0.50	7744994
Total Suspended Solids	mg/L	1200	100	7734750	59	2.5	7734750	140	5.0	7734750
Dissolved Sulphate (SO4)	mg/L	6.5	2.0	7744990	270	10	7753593	8.5	2.0	7744990
Turbidity	NTU	610	1.0	7762907	36	0.10	7762907	140	1.0	7762908
Conductivity	uS/cm	190	1.0	7759867	1100	1.0	7759867	220	1.0	7759887

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RJM530			RJM531			RJM531		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55349			D55349			D55349		
	UNITS	DUP2 Lab-Dup	RDL	QC Batch	DUP3	RDL	QC Batch	DUP3 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				5.16	N/A	7732232			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				130	1.0	7732227			
Calculated TDS	mg/L				310	1.0	7732238			
Carb. Alkalinity (calc. as CaCO3)	mg/L				1.1	1.0	7732227			
Cation Sum	me/L				5.69	N/A	7732232			
Hardness (CaCO3)	mg/L				230	1.0	7732229			
Ion Balance (% Difference)	%				4.88	N/A	7732230			
Langelier Index (@ 20C)	N/A				0.514		7732236			
Langelier Index (@ 4C)	N/A				0.265		7732237			
Nitrate (N)	mg/L				<0.050	0.050	7731399			
Saturation pH (@ 20C)	N/A				7.43		7732236			
Saturation pH (@ 4C)	N/A				7.68		7732237			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				130	25	7744986			
Total Chemical Oxygen Demand	mg/L				<20	20	7745747			
Dissolved Chloride (Cl-)	mg/L				40	1.0	7744989			
Colour	TCU				<5.0	5.0	7744997			
Nitrate + Nitrite (N)	mg/L				<0.050	0.050	7745000			
Nitrite (N)	mg/L				<0.010	0.010	7745003			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7744521			
Dissolved Organic Carbon (C)	mg/L	1.7	0.50	7744510	0.65	0.50	7750865			
Total Organic Carbon (C)	mg/L				0.64	0.50	7747681			
Orthophosphate (P)	mg/L				0.084	0.010	7744998			
pH	pH				7.95		7759112	7.98		7759112
Phenols-4AAP	mg/L				<0.0010	0.0010	7741121			
Reactive Silica (SiO2)	mg/L				13	0.50	7744994			
Total Suspended Solids	mg/L				170	5.0	7734750	170	5.0	7734750
Dissolved Sulphate (SO4)	mg/L				64	2.0	7744990			
Turbidity	NTU				3.5	0.10	7762908			
Conductivity	uS/cm				480	1.0	7759111	490	1.0	7759111

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Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM311		RJM312		RJM313		RJM314	RJM315		
Sampling Date		2021/12/13		2021/12/13		2021/12/13		2021/12/13	2021/12/13		
COC Number		D55346		D55346		D55346		D55346	D55346		
	UNITS	MW1-S	RDL	MW2-S	RDL	MW1-D	RDL	MW2-M	MW2-D	RDL	QC Batch
Metals											
Dissolved Aluminum (Al)	ug/L	<50	50	<5.0	5.0	<50	50	7.9	<5.0	5.0	7745053
Dissolved Antimony (Sb)	ug/L	<10	10	<1.0	1.0	<10	10	<1.0	<1.0	1.0	7745053
Dissolved Arsenic (As)	ug/L	<10	10	<1.0	1.0	<10	10	1.7	2.1	1.0	7745053
Dissolved Barium (Ba)	ug/L	46	10	54	1.0	33	10	14	13	1.0	7745053
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<0.10	0.10	<1.0	1.0	<0.10	<0.10	0.10	7745053
Dissolved Bismuth (Bi)	ug/L	<20	20	<2.0	2.0	<20	20	<2.0	<2.0	2.0	7745053
Dissolved Boron (B)	ug/L	3300	500	110	50	5100	500	110	57	50	7745053
Dissolved Cadmium (Cd)	ug/L	<0.10	0.10	0.022	0.010	1.7	0.10	0.086	0.062	0.010	7745053
Dissolved Calcium (Ca)	ug/L	330000	1000	70000	100	360000	1000	47000	65000	100	7745053
Dissolved Chromium (Cr)	ug/L	<10	10	<1.0	1.0	<10	10	<1.0	<1.0	1.0	7745053
Dissolved Cobalt (Co)	ug/L	<4.0	4.0	<0.40	0.40	11	4.0	<0.40	<0.40	0.40	7745053
Dissolved Copper (Cu)	ug/L	<5.0	5.0	2.1	0.50	<5.0	5.0	1.6	1.7	0.50	7745053
Dissolved Iron (Fe)	ug/L	1600	500	<50	50	2100	500	<50	<50	50	7745053
Dissolved Lead (Pb)	ug/L	<5.0	5.0	<0.50	0.50	<5.0	5.0	<0.50	<0.50	0.50	7745053
Dissolved Magnesium (Mg)	ug/L	65000	1000	8900	100	100000	1000	15000	17000	100	7745053
Dissolved Manganese (Mn)	ug/L	11000	20	4.3	2.0	8800	20	<2.0	<2.0	2.0	7745053
Dissolved Molybdenum (Mo)	ug/L	<20	20	<2.0	2.0	<20	20	<2.0	<2.0	2.0	7745053
Dissolved Nickel (Ni)	ug/L	<20	20	<2.0	2.0	27	20	<2.0	<2.0	2.0	7745053
Dissolved Phosphorus (P)	ug/L	<1000	1000	<100	100	<1000	1000	<100	<100	100	7745053
Dissolved Potassium (K)	ug/L	7900	1000	2300	100	3400	1000	1100	1100	100	7745053
Dissolved Selenium (Se)	ug/L	<5.0	5.0	<0.50	0.50	<5.0	5.0	<0.50	<0.50	0.50	7745053
Dissolved Silver (Ag)	ug/L	<1.0	1.0	<0.10	0.10	<1.0	1.0	<0.10	<0.10	0.10	7745053
Dissolved Sodium (Na)	ug/L	71000	1000	14000	100	88000	1000	20000	24000	100	7745053
Dissolved Strontium (Sr)	ug/L	1300	20	270	2.0	860	20	140	160	2.0	7745053
Dissolved Thallium (Tl)	ug/L	<1.0	1.0	<0.10	0.10	<1.0	1.0	<0.10	<0.10	0.10	7745053
Dissolved Tin (Sn)	ug/L	<20	20	<2.0	2.0	<20	20	<2.0	<2.0	2.0	7745053
Dissolved Titanium (Ti)	ug/L	<20	20	<2.0	2.0	<20	20	<2.0	<2.0	2.0	7745053
Dissolved Uranium (U)	ug/L	250	1.0	0.69	0.10	780	1.0	24	200	0.10	7745053
Dissolved Vanadium (V)	ug/L	<20	20	<2.0	2.0	<20	20	<2.0	<2.0	2.0	7745053
Dissolved Zinc (Zn)	ug/L	<50	50	7.5	5.0	130	50	7.4	5.5	5.0	7745053

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM316	RJM317	RJM318	RJM319		RJM320		RJM387		
Sampling Date		2021/12/13	2021/12/13	2021/12/13	2021/12/13		2021/12/13		2021/12/13		
COC Number		D55346	D55346	D55346	D55346		D55346		D55347		
	UNITS	MW3	MW5-S	MW5-D	MW6-S	RDL	MW6-D	RDL	MW7-S	RDL	QC Batch
Metals											
Dissolved Aluminum (Al)	ug/L	28	13	8.9	69	5.0	65	50	51	5.0	7745053
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	<10	10	<1.0	1.0	7745053
Dissolved Arsenic (As)	ug/L	2.5	4.6	11	2.6	1.0	39	10	<1.0	1.0	7745053
Dissolved Barium (Ba)	ug/L	21	9.0	7.3	49	1.0	76	10	17	1.0	7745053
Dissolved Beryllium (Be)	ug/L	<0.10	0.25	<0.10	<0.10	0.10	<1.0	1.0	<0.10	0.10	7745053
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	<2.0	2.0	7745053
Dissolved Boron (B)	ug/L	<50	<50	<50	2600	50	12000	500	65	50	7745053
Dissolved Cadmium (Cd)	ug/L	<0.010	0.22	0.16	0.087	0.010	<0.10	0.10	0.010	0.010	7745053
Dissolved Calcium (Ca)	ug/L	30000	24000	28000	150000	100	460000	1000	68000	100	7745053
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.2	1.0	<10	10	<1.0	1.0	7745053
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	3.3	0.40	19	4.0	<0.40	0.40	7745053
Dissolved Copper (Cu)	ug/L	1.0	1.8	<0.50	2.3	0.50	<5.0	5.0	2.8	0.50	7745053
Dissolved Iron (Fe)	ug/L	<50	<50	<50	53	50	11000	500	<50	50	7745053
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	<5.0	5.0	<0.50	0.50	7745053
Dissolved Magnesium (Mg)	ug/L	5200	4600	5300	31000	100	120000	1000	4600	100	7745053
Dissolved Manganese (Mn)	ug/L	12	120	140	3600	2.0	22000	20	2.6	2.0	7745053
Dissolved Molybdenum (Mo)	ug/L	2.3	2.6	5.3	<2.0	2.0	<20	20	<2.0	2.0	7745053
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	4.3	2.0	25	20	<2.0	2.0	7745053
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	100	<1000	1000	<100	100	7745053
Dissolved Potassium (K)	ug/L	1500	830	1100	3300	100	16000	1000	3200	100	7745053
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	<5.0	5.0	<0.50	0.50	7745053
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<1.0	1.0	<0.10	0.10	7745053
Dissolved Sodium (Na)	ug/L	12000	9100	11000	48000	100	180000	1000	9400	100	7745053
Dissolved Strontium (Sr)	ug/L	110	65	82	540	2.0	2100	20	190	2.0	7745053
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<1.0	1.0	<0.10	0.10	7745053
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	<2.0	2.0	7745053
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	<2.0	2.0	7745053
Dissolved Uranium (U)	ug/L	10	9.9	19	30	0.10	250	1.0	0.75	0.10	7745053
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	<2.0	2.0	7745053
Dissolved Zinc (Zn)	ug/L	<5.0	5.3	5.1	<5.0	5.0	<50	50	<5.0	5.0	7745053

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM388	RJM389	RJM390	RJM391	RJM392	RJM393	RJM394		
Sampling Date		2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13		
COC Number		D55347	D55347	D55347	D55347	D55347	D55347	D55347		
	UNITS	**MW7-D**	**MW8-S**	**MW8-D**	**MW19-03D**	**MW19-09S**	**MW19-11M**	**MW19-11D**	**RDL**	**QC Batch**
Metals										
Dissolved Aluminum (Al)	ug/L	96	<5.0	<5.0	6.5	8.8	52	25	5.0	7745053
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7745053
Dissolved Arsenic (As)	ug/L	3.4	2.9	7.4	4.3	1.4	1.8	27	1.0	7745053
Dissolved Barium (Ba)	ug/L	26	20	10	6.7	16	56	55	1.0	7745053
Dissolved Beryllium (Be)	ug/L	0.25	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	0.10	7745053
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7745053
Dissolved Boron (B)	ug/L	1100	140	60	<50	<50	1400	4300	50	7745053
Dissolved Cadmium (Cd)	ug/L	0.16	0.032	0.024	<0.010	<0.010	0.21	0.037	0.010	7745053
Dissolved Calcium (Ca)	ug/L	120000	130000	75000	22000	28000	160000	400000	100	7745053
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7745053
Dissolved Cobalt (Co)	ug/L	4.8	<0.40	<0.40	<0.40	<0.40	3.7	11	0.40	7745053
Dissolved Copper (Cu)	ug/L	1.5	3.6	<0.50	<0.50	<0.50	3.0	0.67	0.50	7745053
Dissolved Iron (Fe)	ug/L	1100	<50	<50	<50	<50	940	13000	50	7745053
Dissolved Lead (Pb)	ug/L	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7745053
Dissolved Magnesium (Mg)	ug/L	17000	19000	11000	3200	3900	23000	60000	100	7745053
Dissolved Manganese (Mn)	ug/L	4200	9.3	29	12	<2.0	8500	18000	2.0	7745053
Dissolved Molybdenum (Mo)	ug/L	<2.0	14	7.8	5.2	6.1	<2.0	2.2	2.0	7745053
Dissolved Nickel (Ni)	ug/L	3.1	5.8	<2.0	<2.0	<2.0	2.8	6.1	2.0	7745053
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	110	<100	100	7745053
Dissolved Potassium (K)	ug/L	2900	2800	1700	1000	1900	7700	15000	100	7745053
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7745053
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7745053
Dissolved Sodium (Na)	ug/L	21000	93000	26000	16000	15000	22000	60000	100	7745053
Dissolved Strontium (Sr)	ug/L	320	240	180	81	78	480	1600	2.0	7745053
Dissolved Thallium (Tl)	ug/L	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	0.24	0.10	7745053
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7745053
Dissolved Titanium (Ti)	ug/L	<2.0	3.5	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7745053
Dissolved Uranium (U)	ug/L	11	92	380	18	5.1	85	300	0.10	7745053
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7745053
Dissolved Zinc (Zn)	ug/L	25	<5.0	<5.0	<5.0	<5.0	10	6.4	5.0	7745053

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM395	RJM395		RJM396		RJM500	RJM501		
Sampling Date		2021/12/13	2021/12/13		2021/12/13		2021/12/13	2021/12/13		
COC Number		D55347	D55347		D55347		D55348	D55348		
	UNITS	PW19-01	PW19-01 Lab-Dup	QC Batch	MW19-12S	QC Batch	MW19-12D	MW19-13S	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	<5.0	<5.0	7744995	7.5	7745053	<5.0	540	5.0	7747635
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	7744995	<1.0	7745053	<1.0	<1.0	1.0	7747635
Dissolved Arsenic (As)	ug/L	5.3	5.3	7744995	<1.0	7745053	2.7	<1.0	1.0	7747635
Dissolved Barium (Ba)	ug/L	54	54	7744995	56	7745053	16	32	1.0	7747635
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	7744995	<0.10	7745053	<0.10	0.37	0.10	7747635
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	7744995	<2.0	7745053	<2.0	<2.0	2.0	7747635
Dissolved Boron (B)	ug/L	54	<50	7744995	190	7745053	92	250	50	7747635
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	7744995	0.060	7745053	0.15	0.24	0.010	7747635
Dissolved Calcium (Ca)	ug/L	82000	83000	7744995	67000	7745053	57000	12000	100	7747635
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	7744995	<1.0	7745053	<1.0	<1.0	1.0	7747635
Dissolved Cobalt (Co)	ug/L	0.41	0.41	7744995	<0.40	7745053	<0.40	2.0	0.40	7747635
Dissolved Copper (Cu)	ug/L	0.66	0.73	7744995	7.8	7745053	2.4	1.3	0.50	7747635
Dissolved Iron (Fe)	ug/L	1000	1000	7744995	<50	7745053	160	140	50	7747635
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	7744995	<0.50	7745053	<0.50	<0.50	0.50	7747635
Dissolved Magnesium (Mg)	ug/L	11000	11000	7744995	8200	7745053	10000	4600	100	7747635
Dissolved Manganese (Mn)	ug/L	1700	1700	7744995	2.7	7745053	7.5	1100	2.0	7747635
Dissolved Molybdenum (Mo)	ug/L	3.1	3.2	7744995	<2.0	7745053	<2.0	<2.0	2.0	7747635
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	7744995	2.1	7745053	<2.0	<2.0	2.0	7747635
Dissolved Phosphorus (P)	ug/L	<100	<100	7744995	<100	7745053	<100	<100	100	7747635
Dissolved Potassium (K)	ug/L	1700	1700	7744995	7100	7745053	1700	970	100	7747635
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	7744995	<0.50	7745053	<0.50	<0.50	0.50	7747635
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	7744995	<0.10	7745053	<0.10	<0.10	0.10	7747635
Dissolved Sodium (Na)	ug/L	13000	13000	7744995	8500	7745053	11000	9500	100	7747635
Dissolved Strontium (Sr)	ug/L	220	220	7744995	180	7745053	150	38	2.0	7747635
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	7744995	<0.10	7745053	<0.10	<0.10	0.10	7747635
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	7744995	<2.0	7745053	<2.0	<2.0	2.0	7747635
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	7744995	<2.0	7745053	<2.0	<2.0	2.0	7747635
Dissolved Uranium (U)	ug/L	7.5	7.4	7744995	2.4	7745053	22	0.27	0.10	7747635
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	7744995	<2.0	7745053	<2.0	<2.0	2.0	7747635
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	7744995	38	7745053	19	5.3	5.0	7747635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM502	RJM503	RJM504	RJM505	RJM506	RJM507	RJM508		
Sampling Date		2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13	2021/12/13		
COC Number		D55348	D55348	D55348	D55348	D55348	D55348	D55348		
	UNITS	MW19-13D	MW20-14S	MW20-14D	MW20-15S	MW20-15D	MW20-16	MW20-17S	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	18	25	7.1	13	<5.0	17	10	5.0	7747635
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7747635
Dissolved Arsenic (As)	ug/L	<1.0	1.1	<1.0	<1.0	1.3	6.9	<1.0	1.0	7747635
Dissolved Barium (Ba)	ug/L	57	27	16	33	48	9.9	14	1.0	7747635
Dissolved Beryllium (Be)	ug/L	1.1	<0.10	0.29	<0.10	<0.10	0.22	<0.10	0.10	7747635
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7747635
Dissolved Boron (B)	ug/L	230	73	290	200	65	<50	<50	50	7747635
Dissolved Cadmium (Cd)	ug/L	0.17	0.043	0.25	0.038	0.057	0.023	<0.010	0.010	7747635
Dissolved Calcium (Ca)	ug/L	16000	24000	70000	71000	160000	28000	23000	100	7747635
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7747635
Dissolved Cobalt (Co)	ug/L	5.1	2.7	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7747635
Dissolved Copper (Cu)	ug/L	7.5	1.3	1.1	5.6	0.90	1.6	<0.50	0.50	7747635
Dissolved Iron (Fe)	ug/L	<50	440	<50	<50	<50	<50	<50	50	7747635
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7747635
Dissolved Magnesium (Mg)	ug/L	4400	6900	25000	15000	38000	5300	3100	100	7747635
Dissolved Manganese (Mn)	ug/L	150	280	22	51	14	23	65	2.0	7747635
Dissolved Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	5.6	3.5	2.0	7747635
Dissolved Nickel (Ni)	ug/L	3.1	6.2	2.5	30	<2.0	<2.0	<2.0	2.0	7747635
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	<100	100	7747635
Dissolved Potassium (K)	ug/L	1400	1400	1700	1900	2200	1100	1100	100	7747635
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7747635
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7747635
Dissolved Sodium (Na)	ug/L	14000	9600	30000	39000	45000	11000	12000	100	7747635
Dissolved Strontium (Sr)	ug/L	93	100	280	130	290	76	60	2.0	7747635
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7747635
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7747635
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7747635
Dissolved Uranium (U)	ug/L	2.5	<0.10	1.5	2.5	260	15	1.3	0.10	7747635
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7747635
Dissolved Zinc (Zn)	ug/L	13	<5.0	30	75	6.9	<5.0	<5.0	5.0	7747635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM509		RJM529		RJM530	RJM530		
Sampling Date		2021/12/13		2021/12/13		2021/12/13	2021/12/13		
COC Number		D55348		D55349		D55349	D55349		
	UNITS	MW20-17D	QC Batch	DUP1	QC Batch	DUP2	DUP2 Lab-Dup	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	<5.0	7747814	110	7747635	17	17	5.0	7745053
Dissolved Antimony (Sb)	ug/L	<1.0	7747814	<1.0	7747635	<1.0	<1.0	1.0	7745053
Dissolved Arsenic (As)	ug/L	2.7	7747814	1.5	7747635	6.8	6.8	1.0	7745053
Dissolved Barium (Ba)	ug/L	14	7747814	48	7747635	10	10	1.0	7745053
Dissolved Beryllium (Be)	ug/L	<0.10	7747814	<0.10	7747635	0.19	0.21	0.10	7745053
Dissolved Bismuth (Bi)	ug/L	<2.0	7747814	<2.0	7747635	<2.0	<2.0	2.0	7745053
Dissolved Boron (B)	ug/L	<50	7747814	58	7747635	<50	<50	50	7745053
Dissolved Cadmium (Cd)	ug/L	<0.010	7747814	0.097	7747635	0.025	0.026	0.010	7745053
Dissolved Calcium (Ca)	ug/L	25000	7747814	160000	7747635	29000	29000	100	7745053
Dissolved Chromium (Cr)	ug/L	<1.0	7747814	<1.0	7747635	<1.0	<1.0	1.0	7745053
Dissolved Cobalt (Co)	ug/L	<0.40	7747814	<0.40	7747635	<0.40	<0.40	0.40	7745053
Dissolved Copper (Cu)	ug/L	<0.50	7747814	0.78	7747635	2.7	2.7	0.50	7745053
Dissolved Iron (Fe)	ug/L	<50	7747814	<50	7747635	<50	<50	50	7745053
Dissolved Lead (Pb)	ug/L	<0.50	7747814	<0.50	7747635	<0.50	<0.50	0.50	7745053
Dissolved Magnesium (Mg)	ug/L	3800	7747814	38000	7747635	5300	5400	100	7745053
Dissolved Manganese (Mn)	ug/L	180	7747814	15	7747635	28	28	2.0	7745053
Dissolved Molybdenum (Mo)	ug/L	2.1	7747814	<2.0	7747635	5.4	5.7	2.0	7745053
Dissolved Nickel (Ni)	ug/L	<2.0	7747814	<2.0	7747635	<2.0	<2.0	2.0	7745053
Dissolved Phosphorus (P)	ug/L	<100	7747814	<100	7747635	<100	<100	100	7745053
Dissolved Potassium (K)	ug/L	640	7747814	2200	7747635	1100	1100	100	7745053
Dissolved Selenium (Se)	ug/L	<0.50	7747814	<0.50	7747635	<0.50	<0.50	0.50	7745053
Dissolved Silver (Ag)	ug/L	<0.10	7747814	<0.10	7747635	<0.10	<0.10	0.10	7745053
Dissolved Sodium (Na)	ug/L	12000	7747814	45000	7747635	11000	11000	100	7745053
Dissolved Strontium (Sr)	ug/L	83	7747814	290	7747635	75	75	2.0	7745053
Dissolved Thallium (Tl)	ug/L	<0.10	7747814	<0.10	7747635	<0.10	<0.10	0.10	7745053
Dissolved Tin (Sn)	ug/L	<2.0	7747814	<2.0	7747635	<2.0	<2.0	2.0	7745053
Dissolved Titanium (Ti)	ug/L	<2.0	7747814	<2.0	7747635	<2.0	<2.0	2.0	7745053
Dissolved Uranium (U)	ug/L	14	7747814	260	7747635	15	15	0.10	7745053
Dissolved Vanadium (V)	ug/L	2.7	7747814	<2.0	7747635	<2.0	<2.0	2.0	7745053
Dissolved Zinc (Zn)	ug/L	<5.0	7747814	7.3	7747635	<5.0	<5.0	5.0	7745053

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RJM531		
Sampling Date		2021/12/13		
COC Number		D55349		
	UNITS	DUP3	RDL	QC Batch
Metals				
Dissolved Aluminum (Al)	ug/L	<5.0	5.0	7747635
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	7747635
Dissolved Arsenic (As)	ug/L	7.4	1.0	7747635
Dissolved Barium (Ba)	ug/L	10	1.0	7747635
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	7747635
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	7747635
Dissolved Boron (B)	ug/L	52	50	7747635
Dissolved Cadmium (Cd)	ug/L	0.021	0.010	7747635
Dissolved Calcium (Ca)	ug/L	73000	100	7747635
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	7747635
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	7747635
Dissolved Copper (Cu)	ug/L	0.67	0.50	7747635
Dissolved Iron (Fe)	ug/L	<50	50	7747635
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7747635
Dissolved Magnesium (Mg)	ug/L	11000	100	7747635
Dissolved Manganese (Mn)	ug/L	29	2.0	7747635
Dissolved Molybdenum (Mo)	ug/L	7.7	2.0	7747635
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	7747635
Dissolved Phosphorus (P)	ug/L	<100	100	7747635
Dissolved Potassium (K)	ug/L	1700	100	7747635
Dissolved Selenium (Se)	ug/L	<0.50	0.50	7747635
Dissolved Silver (Ag)	ug/L	<0.10	0.10	7747635
Dissolved Sodium (Na)	ug/L	26000	100	7747635
Dissolved Strontium (Sr)	ug/L	180	2.0	7747635
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	7747635
Dissolved Tin (Sn)	ug/L	<2.0	2.0	7747635
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	7747635
Dissolved Uranium (U)	ug/L	370	0.10	7747635
Dissolved Vanadium (V)	ug/L	<2.0	2.0	7747635
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	7747635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM311		RJM312		RJM313	RJM314		
Sampling Date		2021/12/13		2021/12/13		2021/12/13	2021/12/13		
COC Number		D55346		D55346		D55346	D55346		
	UNITS	MW1-S	QC Batch	MW2-S	QC Batch	MW1-D	MW2-M	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	7738376	<0.0010	7738376	<0.0010	<0.0010	0.0010	7738376
Toluene	mg/L	<0.0010	7738376	<0.0010	7738376	<0.0010	<0.0010	0.0010	7738376
Ethylbenzene	mg/L	<0.0010	7738376	<0.0010	7738376	<0.0010	<0.0010	0.0010	7738376
Total Xylenes	mg/L	<0.0020	7738376	<0.0020	7738376	<0.0020	<0.0020	0.0020	7738376
C6 - C10 (less BTEX)	mg/L	<0.090	7738376	<0.090	7738376	<0.090	<0.090	0.090	7738376
>C10-C16 Hydrocarbons	mg/L	<0.050	7747875	<0.050	7734783	<0.050	<0.050	0.050	7747875
>C16-C21 Hydrocarbons	mg/L	<0.050	7747875	<0.050	7734783	<0.050	<0.050	0.050	7747875
>C21-<C32 Hydrocarbons	mg/L	<0.090	7747875	<0.090	7734783	<0.090	0.21	0.090	7747875
Modified TPH (Tier1)	mg/L	<0.090	7730649	<0.090	7732239	<0.090	0.21	0.090	7732239
Reached Baseline at C32	mg/L	NA	7747875	NA	7734783	NA	Yes	N/A	7747875
Hydrocarbon Resemblance	mg/L	NA	7747875	NA	7734783	NA	COMMENT (1)	N/A	7747875
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	79	7747875	89	7734783	93	94		7747875
n-Dotriacontane - Extractable	%	71 (2)	7747875	87 (2)	7734783	106	106		7747875
Isobutylbenzene - Volatile	%	113 (3)	7738376	112	7738376	115	110		7738376

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range.
(2) TEH sample contained sediment.
(3) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM315		RJM316			RJM317		
Sampling Date		2021/12/13		2021/12/13			2021/12/13		
COC Number		D55346		D55346			D55346		
	UNITS	MW2-D	RDL	MW3	RDL	QC Batch	MW5-S	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7738376	<0.0010	0.0010	7738376
Toluene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7738376	<0.0010	0.0010	7738376
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7738376	<0.0010	0.0010	7738376
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	0.0020	7738376	<0.0020	0.0020	7738376
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	0.090	7738376	<0.090	0.090	7738376
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	<0.061	0.061	7747875	<0.050	0.050	7734783
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	<0.061	0.061	7747875	<0.050	0.050	7734783
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	<0.11	0.11	7747875	<0.090	0.090	7734783
Modified TPH (Tier1)	mg/L	<0.090	0.090	<0.11	0.11	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	N/A	NA	N/A	7747875	NA	N/A	7734783
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	N/A	7747875	NA	N/A	7734783
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	88		91		7747875	86		7734783
n-Dotriacontane - Extractable	%	88		112 (1)		7747875	120		7734783
Isobutylbenzene - Volatile	%	111		111 (2)		7738376	109		7738376

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample decanted due to sediment. Elevated TEH RDL(s) due to limited sample.
(2) VPH sample contained sediment.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM318	RJM319			RJM320		RJM387		
Sampling Date		2021/12/13	2021/12/13			2021/12/13		2021/12/13		
COC Number		D55346	D55346			D55346		D55347		
	UNITS	MW5-D	MW6-S	RDL	QC Batch	MW6-D	QC Batch	MW7-S	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	<0.0010	0.0010	7738376	<0.0010	7738376	<0.0010	0.0010	7738376
Toluene	mg/L	<0.0010	<0.0010	0.0010	7738376	<0.0010	7738376	<0.0010	0.0010	7738376
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	7738376	<0.0010	7738376	<0.0010	0.0010	7738376
Total Xylenes	mg/L	<0.0020	<0.0020	0.0020	7738376	<0.0020	7738376	<0.0020	0.0020	7738376
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	0.090	7738376	<0.090	7738376	<0.090	0.090	7738376
>C10-C16 Hydrocarbons	mg/L	<0.055	<0.055	0.055	7747875	0.073	7734783	<0.050	0.050	7747875
>C16-C21 Hydrocarbons	mg/L	<0.055	<0.055	0.055	7747875	0.053	7734783	<0.050	0.050	7747875
>C21-<C32 Hydrocarbons	mg/L	<0.099	<0.099	0.099	7747875	<0.090	7734783	<0.090	0.090	7747875
Modified TPH (Tier1)	mg/L	<0.099	<0.099	0.099	7732239	0.13	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	NA	N/A	7747875	Yes	7734783	NA	N/A	7747875
Hydrocarbon Resemblance	mg/L	NA	NA	N/A	7747875	COMMENT (1)	7734783	NA	N/A	7747875
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	90	91		7747875	89	7734783	86		7747875
n-Dotriacontane - Extractable	%	110 (2)	111 (2)		7747875	82	7734783	83 (3)		7747875
Isobutylbenzene - Volatile	%	110	110		7738376	112	7738376	111 (4)		7738376

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Weathered fuel oil fraction.
(2) Elevated TEH RDL(s) due to limited sample.
(3) TEH sample contained sediment.
(4) VPH sample contained sediment.

Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM388			RJM389			RJM390		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55347			D55347			D55347		
	UNITS	MW7-D	RDL	QC Batch	MW8-S	RDL	QC Batch	MW8-D	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964
Toluene	mg/L	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964
Ethylbenzene	mg/L	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964	<0.0010	0.0010	7740964
Total Xylenes	mg/L	<0.0020	0.0020	7740964	<0.0020	0.0020	7740964	<0.0020	0.0020	7740964
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7740964	<0.090	0.090	7740964	<0.090	0.090	7740964
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7747875	<0.055	0.055	7734783	<0.050	0.050	7741456
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7747875	<0.055	0.055	7734783	<0.050	0.050	7741456
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7747875	<0.098	0.098	7734783	<0.090	0.090	7741456
Modified TPH (Tier1)	mg/L	<0.090	0.090	7732239	<0.098	0.098	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	N/A	7747875	NA	N/A	7734783	NA	N/A	7741456
Hydrocarbon Resemblance	mg/L	NA	N/A	7747875	NA	N/A	7734783	NA	N/A	7741456
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	91		7747875	111		7734783	100		7741456
n-Dotriacontane - Extractable	%	101		7747875	115 (1)		7734783	117		7741456
Isobutylbenzene - Volatile	%	105		7740964	104		7740964	101		7740964

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM391		RJM392		RJM393		RJM394		
Sampling Date		2021/12/13		2021/12/13		2021/12/13		2021/12/13		
COC Number		D55347		D55347		D55347		D55347		
	UNITS	MW19-03D	QC Batch	MW19-09S	QC Batch	MW19-11M	QC Batch	MW19-11D	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	7740964	<0.0010	7740964	<0.0010	7740964	<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	7740964	<0.0010	7740964	<0.0010	7740964	<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	7740964	<0.0010	7740964	<0.0010	7740964	<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	7740964	<0.0020	7740964	<0.0020	7740964	<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	7740964	<0.090	7740964	<0.090	7740964	<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L	<0.050	7741456	<0.050	7734783	<0.050	7741456	<0.050	0.050	7747875
>C16-C21 Hydrocarbons	mg/L	<0.050	7741456	<0.050	7734783	<0.050	7741456	<0.050	0.050	7747875
>C21-<C32 Hydrocarbons	mg/L	<0.090	7741456	<0.090	7734783	<0.090	7741456	<0.090	0.090	7747875
Modified TPH (Tier1)	mg/L	<0.090	7732239	<0.090	7732239	<0.090	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	7741456	NA	7734783	NA	7741456	NA	N/A	7747875
Hydrocarbon Resemblance	mg/L	NA	7741456	NA	7734783	NA	7741456	NA	N/A	7747875
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	90	7741456	112	7734783	87	7741456	89		7747875
n-Dotriacontane - Extractable	%	99	7741456	113 (1)	7734783	91	7741456	101		7747875
Isobutylbenzene - Volatile	%	104	7740964	102 (2)	7740964	106	7740964	114		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) VPH sample contained sediment.

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM394			RJM395	RJM396		RJM500		
Sampling Date		2021/12/13			2021/12/13	2021/12/13		2021/12/13		
COC Number		D55347			D55347	D55347		D55348		
	UNITS	MW19-11D Lab-Dup	RDL	QC Batch	PW19-01	MW19-12S	QC Batch	MW19-12D	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7740965	<0.0010	<0.0010	7740965	<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	0.0010	7740965	<0.0010	<0.0010	7740965	<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	0.0010	7740965	<0.0010	<0.0010	7740965	<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	0.0020	7740965	<0.0020	<0.0020	7740965	<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7740965	<0.090	<0.090	7740965	<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L				<0.050	<0.050	7747875	<0.050	0.050	7741085
>C16-C21 Hydrocarbons	mg/L				<0.050	<0.050	7747875	<0.050	0.050	7741085
>C21-<C32 Hydrocarbons	mg/L				<0.090	<0.090	7747875	<0.090	0.090	7741085
Modified TPH (Tier1)	mg/L				<0.090	<0.090	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L				NA	NA	7747875	NA	N/A	7741085
Hydrocarbon Resemblance	mg/L				NA	NA	7747875	NA	N/A	7741085
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%				90	87	7747875	97		7741085
n-Dotriacontane - Extractable	%				100	94	7747875	99		7741085
Isobutylbenzene - Volatile	%	114		7740965	109	109	7740965	109		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM501		RJM502			RJM503		
Sampling Date		2021/12/13		2021/12/13			2021/12/13		
COC Number		D55348		D55348			D55348		
	UNITS	MW19-13S	RDL	MW19-13D	RDL	QC Batch	MW20-14S	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	0.0020	7740965	<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	0.090	7740965	<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L	<0.057	0.057	<0.056	0.056	7741384	<0.050	0.050	7734783
>C16-C21 Hydrocarbons	mg/L	<0.057	0.057	<0.056	0.056	7741384	<0.050	0.050	7734783
>C21-<C32 Hydrocarbons	mg/L	<0.10	0.10	<0.10	0.10	7741384	<0.090	0.090	7734783
Modified TPH (Tier1)	mg/L	<0.10	0.10	<0.10	0.10	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	N/A	NA	N/A	7741384	NA	N/A	7734783
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	N/A	7741384	NA	N/A	7734783
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	104		98		7741384	104		7734783
n-Dotriacontane - Extractable	%	104 (1)		70 (2)		7741384	124		7734783
Isobutylbenzene - Volatile	%	108 (3)		109		7740965	108		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample. TEH sample decanted due to sediment.
(2) Elevated TEH RDL(s) due to limited sample. TEH sample contained sediment.
(3) VPH sample contained sediment.

Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM504			RJM505			RJM506		
Sampling Date		2021/12/13			2021/12/13			2021/12/13		
COC Number		D55348			D55348			D55348		
	UNITS	MW20-14D	RDL	QC Batch	MW20-15S	RDL	QC Batch	MW20-15D	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7740965				<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	0.0010	7740965				<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	0.0010	7740965				<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	0.0020	7740965				<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7740965				<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7741384	<0.050	0.050	7747875	<0.050	0.050	7741085
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7741384	<0.050	0.050	7747875	<0.050	0.050	7741085
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7741384	0.13	0.090	7747875	<0.090	0.090	7741085
Modified TPH (Tier1)	mg/L	<0.090	0.090	7732239				<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	N/A	7741384	Yes	N/A	7747875	NA	N/A	7741085
Hydrocarbon Resemblance	mg/L	NA	N/A	7741384	COMMENT (1)	N/A	7747875	NA	N/A	7741085
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	100		7741384	97		7747875	93		7741085
n-Dotriacontane - Extractable	%	101		7741384	103		7747875	97		7741085
Isobutylbenzene - Volatile	%	110		7740965				108		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM507		RJM508		RJM509		RJM529		
Sampling Date		2021/12/13		2021/12/13		2021/12/13		2021/12/13		
COC Number		D55348		D55348		D55348		D55349		
	UNITS	MW20-16	RDL	MW20-17S	QC Batch	MW20-17D	QC Batch	DUP1	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	<0.0010	7740965	<0.0010	7740965	<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	0.0010	<0.0010	7740965	<0.0010	7740965	<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	7740965	<0.0010	7740965	<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	7740965	<0.0020	7740965	<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	7740965	<0.090	7740965	<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L	<0.053	0.053	<0.050	7741384	<0.050	7734783	<0.050	0.050	7741085
>C16-C21 Hydrocarbons	mg/L	<0.053	0.053	<0.050	7741384	<0.050	7734783	<0.050	0.050	7741085
>C21-<C32 Hydrocarbons	mg/L	<0.096	0.096	<0.090	7741384	<0.090	7734783	<0.090	0.090	7741085
Modified TPH (Tier1)	mg/L	<0.096	0.096	<0.090	7732239	<0.090	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	NA	N/A	NA	7741384	NA	7734783	NA	N/A	7741085
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	7741384	NA	7734783	NA	N/A	7741085
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	105		103	7741384	102	7734783	96		7741085
n-Dotriacontane - Extractable	%	106 (1)		102 (2)	7741384	123	7734783	94		7741085
Isobutylbenzene - Volatile	%	108		111	7740965	108	7740965	109		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample. TEH sample contained sediment.
(2) TEH sample contained sediment.

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RJM530			RJM531		
Sampling Date		2021/12/13			2021/12/13		
COC Number		D55349			D55349		
	UNITS	DUP2	RDL	QC Batch	DUP3	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Toluene	mg/L	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Ethylbenzene	mg/L	<0.0010	0.0010	7740965	<0.0010	0.0010	7740965
Total Xylenes	mg/L	<0.0020	0.0020	7740965	<0.0020	0.0020	7740965
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7740965	<0.090	0.090	7740965
>C10-C16 Hydrocarbons	mg/L	<0.055	0.055	7741085	<0.050	0.050	7741384
>C16-C21 Hydrocarbons	mg/L	0.056	0.055	7741085	<0.050	0.050	7741384
>C21-<C32 Hydrocarbons	mg/L	0.10	0.098	7741085	<0.090	0.090	7741384
Modified TPH (Tier1)	mg/L	0.16	0.098	7732239	<0.090	0.090	7732239
Reached Baseline at C32	mg/L	Yes	N/A	7741085	NA	N/A	7741384
Hydrocarbon Resemblance	mg/L	COMMENT (1)	N/A	7741085	NA	N/A	7741384
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	93		7741085	103		7741384
n-Dotriacontane - Extractable	%	107 (2)		7741085	95		7741384
Isobutylbenzene - Volatile	%	106		7740965	108		7740965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in fuel / lube range.
(2) Elevated TEH RDL(s) due to limited sample.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	4.3°C
Package 3	3.3°C
Package 4	3.3°C
Package 5	2.7°C
Package 6	4.3°C

Sample RJM311 [MW1-S] : Elevated reporting limits for trace metals due to sample matrix.

Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample RJM312 [MW2-S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM313 [MW1-D] : Elevated reporting limits for trace metals due to sample matrix.

Sample RJM314 [MW2-M] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM315 [MW2-D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM316 [MW3] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM317 [MW5-S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM318 [MW5-D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM319 [MW6-S] : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter. Anion sum does not include contribution from Total Organic Carbon.

Sample RJM320 [MW6-D] : Elevated reporting limits for trace metals due to sample matrix.

Sample RJM389 [MW8-S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM390 [MW8-D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix.

Sample RJM391 [MW19-03D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM392 [MW19-09S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM394 [MW19-11D] : NOX < NO2 : Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM395 [PW19-01] : Poor RCAp Ion Balance due to sample matrix. Cation sum does not include contribution from Mn.

Sample RJM396 [MW19-12S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

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Sample RJM500 [MW19-12D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM502 [MW19-13D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM503 [MW20-14S] : Poor RCAp Ion Balance due to sample matrix.

Sample RJM504 [MW20-14D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM506 [MW20-15D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM507 [MW20-16] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM508 [MW20-17S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM509 [MW20-17D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM529 [DUP1] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM530 [DUP2] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RJM531 [DUP3] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7734750	MKX	QC Standard	Total Suspended Solids	2022/01/07		100	%	80 - 120
7734750	MKX	Method Blank	Total Suspended Solids	2022/01/07	<1.0		mg/L	
7734750	MKX	RPD [RJM531-01]	Total Suspended Solids	2022/01/07	2.9		%	20
7734783	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/12/17		87	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/17		110	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/17		79	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/17		75	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/17		78	%	70 - 130
7734783	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/12/20		71	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		95	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		92	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		97	%	70 - 130
7734783	MSK	Method Blank	Isobutylbenzene - Extractable	2021/12/20		49 (1)	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		106	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/20	<0.090		mg/L	
7734783	MSK	RPD	>C10-C16 Hydrocarbons	2021/12/17	NC		%	40
			>C16-C21 Hydrocarbons	2021/12/17	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/17	NC		%	40
7734801	BBD	QC Standard	Total Suspended Solids	2021/12/20		101	%	80 - 120
7734801	BBD	Method Blank	Total Suspended Solids	2021/12/20	<1.0		mg/L	
7734801	BBD	RPD [RJM320-01]	Total Suspended Solids	2021/12/20	0		%	20
7734936	MKX	QC Standard	Total Suspended Solids	2021/12/20		101	%	80 - 120
7734936	MKX	Method Blank	Total Suspended Solids	2021/12/20	<1.0		mg/L	
7734936	MKX	RPD [RJM389-01]	Total Suspended Solids	2021/12/20	3.1		%	20
7738376	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/12/20		111	%	70 - 130
			Benzene	2021/12/20		104	%	70 - 130
			Toluene	2021/12/20		103	%	70 - 130
			Ethylbenzene	2021/12/20		104	%	70 - 130
			Total Xylenes	2021/12/20		103	%	70 - 130
7738376	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/12/20		113	%	70 - 130
			Benzene	2021/12/20		102	%	70 - 130
			Toluene	2021/12/20		104	%	70 - 130
			Ethylbenzene	2021/12/20		107	%	70 - 130
			Total Xylenes	2021/12/20		107	%	70 - 130
7738376	THL	Method Blank	Isobutylbenzene - Volatile	2021/12/20		110	%	70 - 130
			Benzene	2021/12/20	<0.0010		mg/L	
			Toluene	2021/12/20	<0.0010		mg/L	
			Ethylbenzene	2021/12/20	<0.0010		mg/L	
			Total Xylenes	2021/12/20	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/12/20	<0.090		mg/L	
7738376	THL	RPD	Benzene	2021/12/20	NC		%	40
			Toluene	2021/12/20	NC		%	40
			Ethylbenzene	2021/12/20	NC		%	40
			Total Xylenes	2021/12/20	NC		%	40
			C6 - C10 (less BTEX)	2021/12/20	NC		%	40
7740964	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/12/20		105	%	70 - 130
			Benzene	2021/12/20		95	%	70 - 130
			Toluene	2021/12/20		95	%	70 - 130
			Ethylbenzene	2021/12/20		99	%	70 - 130
			Total Xylenes	2021/12/20		97	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7740964	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/12/20		104	%	70 - 130
			Benzene	2021/12/20		93	%	70 - 130
			Toluene	2021/12/20		95	%	70 - 130
			Ethylbenzene	2021/12/20		99	%	70 - 130
			Total Xylenes	2021/12/20		97	%	70 - 130
7740964	THL	Method Blank	Isobutylbenzene - Volatile	2021/12/20		105	%	70 - 130
			Benzene	2021/12/20	<0.0010		mg/L	
			Toluene	2021/12/20	<0.0010		mg/L	
			Ethylbenzene	2021/12/20	<0.0010		mg/L	
			Total Xylenes	2021/12/20	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/12/20	<0.090		mg/L	
7740964	THL	RPD	Benzene	2021/12/20	NC		%	40
			Toluene	2021/12/20	NC		%	40
			Ethylbenzene	2021/12/20	NC		%	40
			Total Xylenes	2021/12/20	NC		%	40
			C6 - C10 (less BTEX)	2021/12/20	NC		%	40
7740965	THL	Matrix Spike [RJM395-09]	Isobutylbenzene - Volatile	2021/12/20		113	%	70 - 130
			Benzene	2021/12/20		105	%	70 - 130
			Toluene	2021/12/20		105	%	70 - 130
			Ethylbenzene	2021/12/20		106	%	70 - 130
			Total Xylenes	2021/12/20		105	%	70 - 130
7740965	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/12/20		108	%	70 - 130
			Benzene	2021/12/20		101	%	70 - 130
			Toluene	2021/12/20		102	%	70 - 130
			Ethylbenzene	2021/12/20		104	%	70 - 130
			Total Xylenes	2021/12/20		102	%	70 - 130
7740965	THL	Method Blank	Isobutylbenzene - Volatile	2021/12/20		106	%	70 - 130
			Benzene	2021/12/20	<0.0010		mg/L	
			Toluene	2021/12/20	<0.0010		mg/L	
			Ethylbenzene	2021/12/20	<0.0010		mg/L	
			Total Xylenes	2021/12/20	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/12/20	<0.090		mg/L	
7740965	THL	RPD [RJM394-09]	Benzene	2021/12/20	NC		%	40
			Toluene	2021/12/20	NC		%	40
			Ethylbenzene	2021/12/20	NC		%	40
			Total Xylenes	2021/12/20	NC		%	40
			C6 - C10 (less BTEX)	2021/12/20	NC		%	40
7741085	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/12/20		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		91	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		89	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		86	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		86	%	70 - 130
7741085	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/12/20		78	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		108	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		88	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		81	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		75	%	70 - 130
7741085	MGN	Method Blank	Isobutylbenzene - Extractable	2021/12/20		78	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		108	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/20	<0.090		mg/L	
7741085	MGN	RPD	>C10-C16 Hydrocarbons	2021/12/20	NC		%	40

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C16-C21 Hydrocarbons	2021/12/20	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/20	NC		%	40
7741101	LHA	Matrix Spike [RJM311-07]	Phenols-4AAP	2021/12/20		97	%	80 - 120
7741101	LHA	Spiked Blank	Phenols-4AAP	2021/12/20		97	%	80 - 120
7741101	LHA	Method Blank	Phenols-4AAP	2021/12/20	<0.0010		mg/L	
7741101	LHA	RPD [RJM311-07]	Phenols-4AAP	2021/12/20	NC		%	20
7741121	LHA	Matrix Spike [RJM500-07]	Phenols-4AAP	2021/12/20		98	%	80 - 120
7741121	LHA	Spiked Blank	Phenols-4AAP	2021/12/20		96	%	80 - 120
7741121	LHA	Method Blank	Phenols-4AAP	2021/12/20	<0.0010		mg/L	
7741121	LHA	RPD [RJM500-07]	Phenols-4AAP	2021/12/20	NC		%	20
7741384	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/12/20		113	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		70	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		82	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		75	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		72	%	70 - 130
7741384	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/12/20		113	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		111	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		108	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		105	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		117	%	70 - 130
7741384	MSK	Method Blank	Isobutylbenzene - Extractable	2021/12/21		85	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/21		83	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/21	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/21	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/21	<0.090		mg/L	
7741384	MSK	RPD	>C10-C16 Hydrocarbons	2021/12/22	8.2		%	40
			>C16-C21 Hydrocarbons	2021/12/22	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/22	NC		%	40
7741456	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/12/21		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/21		73	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/21		83	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/21		75	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/21		72	%	70 - 130
7741456	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/12/21		92	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/21		119	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/21		101	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/21		96	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/21		98	%	70 - 130
7741456	MGN	Method Blank	Isobutylbenzene - Extractable	2021/12/21		78	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/21		125	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/21	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/21	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/21	<0.090		mg/L	
7741456	MGN	RPD	>C10-C16 Hydrocarbons	2021/12/21	NC		%	40
			>C16-C21 Hydrocarbons	2021/12/21	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/21	NC		%	40
7742700	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/12/21		97	%	85 - 115
7742700	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/12/21		100	%	80 - 120
7742700	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/12/21	<0.50		mg/L	
7742700	NGI	RPD	Dissolved Organic Carbon (C)	2021/12/21	0.79		%	15
7744448	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/12/21		103	%	80 - 120
7744448	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/12/21		99	%	80 - 120
7744448	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/12/21		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7744448	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/12/21	<20		mg/L	
7744448	ZZH	RPD	Total Chemical Oxygen Demand	2021/12/21	NC		%	25
7744467	ZZH	Matrix Spike [RJM389-03]	Total Chemical Oxygen Demand	2021/12/21		103	%	80 - 120
7744467	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/12/21		97	%	80 - 120
7744467	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/12/21		107	%	80 - 120
7744467	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/12/21	<20		mg/L	
7744467	ZZH	RPD [RJM389-03]	Total Chemical Oxygen Demand	2021/12/21	NC		%	25
7744510	NGI	Matrix Spike [RJM530-02]	Dissolved Organic Carbon (C)	2021/12/22		95	%	85 - 115
7744510	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/12/22		99	%	80 - 120
7744510	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/12/22	<0.50		mg/L	
7744510	NGI	RPD [RJM530-02]	Dissolved Organic Carbon (C)	2021/12/22	11		%	15
7744518	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/12/21		107	%	80 - 120
7744518	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21		106	%	80 - 120
7744518	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21	<0.050		mg/L	
7744518	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/12/21	NC		%	20
7744519	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/21		97	%	85 - 115
7744519	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/21		100	%	80 - 120
7744519	NGI	Method Blank	Total Organic Carbon (C)	2021/12/21	<0.50		mg/L	
7744519	NGI	RPD	Total Organic Carbon (C)	2021/12/21	1.2		%	15
7744521	MCN	Matrix Spike [RJM392-10]	Nitrogen (Ammonia Nitrogen)	2021/12/21		90	%	80 - 120
7744521	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21		107	%	80 - 120
7744521	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21	<0.050		mg/L	
7744521	MCN	RPD [RJM392-10]	Nitrogen (Ammonia Nitrogen)	2021/12/21	NC		%	20
7744532	NGI	Matrix Spike [RJM506-04]	Total Organic Carbon (C)	2021/12/22		95	%	85 - 115
7744532	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/22		100	%	80 - 120
7744532	NGI	Method Blank	Total Organic Carbon (C)	2021/12/22	<0.50		mg/L	
7744532	NGI	RPD [RJM506-04]	Total Organic Carbon (C)	2021/12/22	3.2		%	15
7744538	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/22		97	%	85 - 115
7744538	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/22		100	%	80 - 120
7744538	NGI	Method Blank	Total Organic Carbon (C)	2021/12/22	<0.50		mg/L	
7744538	NGI	RPD	Total Organic Carbon (C)	2021/12/22	1.8		%	15
7744961	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/22		95	%	80 - 120
7744961	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/22		106	%	80 - 120
7744961	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/22	<5.0		mg/L	
7744961	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/12/22	NC		%	20
7744964	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/22		91	%	80 - 120
7744964	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/22		92	%	80 - 120
7744964	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/12/22	<1.0		mg/L	
7744964	EMT	RPD	Dissolved Chloride (Cl-)	2021/12/22	NC		%	20
7744969	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/22		94	%	80 - 120
7744969	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/22		95	%	80 - 120
7744969	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/12/22	<2.0		mg/L	
7744969	EMT	RPD	Dissolved Sulphate (SO4)	2021/12/22	NC		%	20
7744971	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/12/22		87	%	80 - 120
7744971	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/12/22		91	%	80 - 120
7744971	EMT	Method Blank	Reactive Silica (SiO2)	2021/12/22	<0.50		mg/L	
7744971	EMT	RPD	Reactive Silica (SiO2)	2021/12/22	NC		%	20
7744978	EMT	Spiked Blank	Colour	2021/12/22		100	%	80 - 120
7744978	EMT	Method Blank	Colour	2021/12/22	<5.0		TCU	
7744978	EMT	RPD	Colour	2021/12/22	NC		%	20
7744979	EMT	Matrix Spike	Orthophosphate (P)	2021/12/22		101	%	80 - 120
7744979	EMT	Spiked Blank	Orthophosphate (P)	2021/12/22		101	%	80 - 120
7744979	EMT	Method Blank	Orthophosphate (P)	2021/12/22	<0.010		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7744979	EMT	RPD	Orthophosphate (P)	2021/12/22	NC		%	20
7744981	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/22		98	%	80 - 120
7744981	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/22		98	%	80 - 120
7744981	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/22	<0.050		mg/L	
7744981	EMT	RPD	Nitrate + Nitrite (N)	2021/12/22	NC		%	20
7744983	EMT	Matrix Spike	Nitrite (N)	2021/12/22		100	%	80 - 120
7744983	EMT	Spiked Blank	Nitrite (N)	2021/12/22		103	%	80 - 120
7744983	EMT	Method Blank	Nitrite (N)	2021/12/22	<0.010		mg/L	
7744983	EMT	RPD	Nitrite (N)	2021/12/22	NC		%	20
7744986	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/22		90	%	80 - 120
7744986	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/22		103	%	80 - 120
7744986	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/22	<5.0		mg/L	
7744986	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/12/22	3.3		%	20
7744989	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/22		93	%	80 - 120
7744989	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/22		91	%	80 - 120
7744989	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/12/22	<1.0		mg/L	
7744989	EMT	RPD	Dissolved Chloride (Cl-)	2021/12/22	1.0		%	20
7744990	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/22		98	%	80 - 120
7744990	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/22		95	%	80 - 120
7744990	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/12/22	<2.0		mg/L	
7744990	EMT	RPD	Dissolved Sulphate (SO4)	2021/12/22	0.39		%	20
7744994	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/12/22		86	%	80 - 120
7744994	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/12/22		92	%	80 - 120
7744994	EMT	Method Blank	Reactive Silica (SiO2)	2021/12/22	<0.50		mg/L	
7744994	EMT	RPD	Reactive Silica (SiO2)	2021/12/22	0.96		%	20
7744995	BAN	Matrix Spike [RJM395-06]	Dissolved Aluminum (Al)	2021/12/23		101	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/23		104	%	80 - 120
			Dissolved Arsenic (As)	2021/12/23		94	%	80 - 120
			Dissolved Barium (Ba)	2021/12/23		96	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/23		99	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/23		95	%	80 - 120
			Dissolved Boron (B)	2021/12/23		94	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/23		97	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/23		NC	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/23		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/23		94	%	80 - 120
			Dissolved Copper (Cu)	2021/12/23		94	%	80 - 120
			Dissolved Iron (Fe)	2021/12/23		NC	%	80 - 120
			Dissolved Lead (Pb)	2021/12/23		98	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/23		NC	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/23		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/23		102	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/23		94	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/23		106	%	80 - 120
			Dissolved Potassium (K)	2021/12/23		100	%	80 - 120
			Dissolved Selenium (Se)	2021/12/23		98	%	80 - 120
			Dissolved Silver (Ag)	2021/12/23		95	%	80 - 120
			Dissolved Sodium (Na)	2021/12/23		96	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/23		NC	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/23		98	%	80 - 120
			Dissolved Tin (Sn)	2021/12/23		104	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/23		99	%	80 - 120
			Dissolved Uranium (U)	2021/12/23		103	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Vanadium (V)	2021/12/23		100	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/23		96	%	80 - 120
7744995	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/12/22		102	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		99	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		92	%	80 - 120
			Dissolved Barium (Ba)	2021/12/22		95	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		96	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		97	%	80 - 120
			Dissolved Boron (B)	2021/12/22		98	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		97	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		102	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		95	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		95	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		99	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		97	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		100	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		101	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		96	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		102	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		101	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		95	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		96	%	80 - 120
			Dissolved Sodium (Na)	2021/12/22		97	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		97	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		98	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		100	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/22		99	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		101	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		98	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/22		98	%	80 - 120
7744995	BAN	Method Blank	Dissolved Aluminum (Al)	2021/12/22	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/12/22	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/12/22	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/12/22	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/12/22	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/12/22	<2.0		ug/L	
			Dissolved Boron (B)	2021/12/22	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/12/22	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/12/22	<100		ug/L	
			Dissolved Chromium (Cr)	2021/12/22	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/12/22	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/12/22	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/12/22	<50		ug/L	
			Dissolved Lead (Pb)	2021/12/22	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/12/22	<100		ug/L	
			Dissolved Manganese (Mn)	2021/12/22	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/12/22	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/12/22	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/12/22	<100		ug/L	
			Dissolved Potassium (K)	2021/12/22	<100		ug/L	
			Dissolved Selenium (Se)	2021/12/22	<0.50		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silver (Ag)	2021/12/22	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/12/22	<100		ug/L	
			Dissolved Strontium (Sr)	2021/12/22	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/12/22	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/12/22	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/12/22	<2.0		ug/L	
			Dissolved Uranium (U)	2021/12/22	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/12/22	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/12/22	<5.0		ug/L	
7744995	BAN	RPD [RJM395-06]	Dissolved Aluminum (Al)	2021/12/23	NC		%	20
			Dissolved Antimony (Sb)	2021/12/23	NC		%	20
			Dissolved Arsenic (As)	2021/12/23	0.053		%	20
			Dissolved Barium (Ba)	2021/12/23	0.81		%	20
			Dissolved Beryllium (Be)	2021/12/23	NC		%	20
			Dissolved Bismuth (Bi)	2021/12/23	NC		%	20
			Dissolved Boron (B)	2021/12/23	8.4		%	20
			Dissolved Cadmium (Cd)	2021/12/23	NC		%	20
			Dissolved Calcium (Ca)	2021/12/23	1.1		%	20
			Dissolved Chromium (Cr)	2021/12/23	NC		%	20
			Dissolved Cobalt (Co)	2021/12/23	0.31		%	20
			Dissolved Copper (Cu)	2021/12/23	9.8		%	20
			Dissolved Iron (Fe)	2021/12/23	0.45		%	20
			Dissolved Lead (Pb)	2021/12/23	NC		%	20
			Dissolved Magnesium (Mg)	2021/12/23	1.2		%	20
			Dissolved Manganese (Mn)	2021/12/23	1.5		%	20
			Dissolved Molybdenum (Mo)	2021/12/23	0.34		%	20
			Dissolved Nickel (Ni)	2021/12/23	NC		%	20
			Dissolved Phosphorus (P)	2021/12/23	NC		%	20
			Dissolved Potassium (K)	2021/12/23	0.40		%	20
			Dissolved Selenium (Se)	2021/12/23	NC		%	20
			Dissolved Silver (Ag)	2021/12/23	NC		%	20
			Dissolved Sodium (Na)	2021/12/23	0.86		%	20
			Dissolved Strontium (Sr)	2021/12/23	1.0		%	20
			Dissolved Thallium (Tl)	2021/12/23	NC		%	20
			Dissolved Tin (Sn)	2021/12/23	NC		%	20
			Dissolved Titanium (Ti)	2021/12/23	NC		%	20
			Dissolved Uranium (U)	2021/12/23	1.8		%	20
			Dissolved Vanadium (V)	2021/12/23	NC		%	20
			Dissolved Zinc (Zn)	2021/12/23	NC		%	20
7744997	EMT	Spiked Blank	Colour	2021/12/22		105	%	80 - 120
7744997	EMT	Method Blank	Colour	2021/12/22	<5.0		TCU	
7744997	EMT	RPD	Colour	2021/12/22	6.4		%	20
7744998	EMT	Matrix Spike	Orthophosphate (P)	2021/12/22		98	%	80 - 120
7744998	EMT	Spiked Blank	Orthophosphate (P)	2021/12/22		104	%	80 - 120
7744998	EMT	Method Blank	Orthophosphate (P)	2021/12/22	<0.010		mg/L	
7744998	EMT	RPD	Orthophosphate (P)	2021/12/22	NC		%	20
7745000	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/22		97	%	80 - 120
7745000	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/22		100	%	80 - 120
7745000	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/22	<0.050		mg/L	
7745000	EMT	RPD	Nitrate + Nitrite (N)	2021/12/22	1.4		%	20
7745003	EMT	Matrix Spike	Nitrite (N)	2021/12/22		100	%	80 - 120
7745003	EMT	Spiked Blank	Nitrite (N)	2021/12/22		104	%	80 - 120
7745003	EMT	Method Blank	Nitrite (N)	2021/12/22	<0.010		mg/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7745003	EMT	RPD	Nitrite (N)	2021/12/22	NC		%	20
7745053	BAN	Matrix Spike [RJM530-06]	Dissolved Aluminum (Al)	2021/12/21		102	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/21		101	%	80 - 120
			Dissolved Arsenic (As)	2021/12/21		94	%	80 - 120
			Dissolved Barium (Ba)	2021/12/21		97	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/21		95	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/21		96	%	80 - 120
			Dissolved Boron (B)	2021/12/21		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/21		96	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/21		NC	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/21		95	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/21		94	%	80 - 120
			Dissolved Copper (Cu)	2021/12/21		94	%	80 - 120
			Dissolved Iron (Fe)	2021/12/21		99	%	80 - 120
			Dissolved Lead (Pb)	2021/12/21		98	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/21		99	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/21		95	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/21		102	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/21		94	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/21		104	%	80 - 120
			Dissolved Potassium (K)	2021/12/21		103	%	80 - 120
			Dissolved Selenium (Se)	2021/12/21		96	%	80 - 120
			Dissolved Silver (Ag)	2021/12/21		98	%	80 - 120
			Dissolved Sodium (Na)	2021/12/21		98	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/21		95	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/21		100	%	80 - 120
			Dissolved Tin (Sn)	2021/12/21		101	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/21		95	%	80 - 120
			Dissolved Uranium (U)	2021/12/21		107	%	80 - 120
			Dissolved Vanadium (V)	2021/12/21		98	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/21		97	%	80 - 120
7745053	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/12/22		100	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		100	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		94	%	80 - 120
			Dissolved Barium (Ba)	2021/12/22		98	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		95	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		99	%	80 - 120
			Dissolved Boron (B)	2021/12/22		94	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		98	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		103	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		98	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		97	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		98	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		103	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		99	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		104	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		99	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		99	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		98	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		103	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		103	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		98	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		97	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sodium (Na)	2021/12/22		99	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		97	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		100	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		100	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/22		100	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		105	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		100	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/22		99	%	80 - 120
7745053	BAN	Method Blank	Dissolved Aluminum (Al)	2021/12/21	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/12/21	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/12/21	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/12/21	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/12/21	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/12/21	<2.0		ug/L	
			Dissolved Boron (B)	2021/12/21	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/12/21	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/12/21	<100		ug/L	
			Dissolved Chromium (Cr)	2021/12/21	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/12/21	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/12/21	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/12/21	<50		ug/L	
			Dissolved Lead (Pb)	2021/12/21	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/12/21	<100		ug/L	
			Dissolved Manganese (Mn)	2021/12/21	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/12/21	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/12/21	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/12/21	<100		ug/L	
			Dissolved Potassium (K)	2021/12/21	<100		ug/L	
			Dissolved Selenium (Se)	2021/12/21	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/12/21	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/12/21	<100		ug/L	
			Dissolved Strontium (Sr)	2021/12/21	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/12/21	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/12/21	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/12/21	<2.0		ug/L	
			Dissolved Uranium (U)	2021/12/21	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/12/21	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/12/21	<5.0		ug/L	
7745053	BAN	RPD [RJM530-06]	Dissolved Aluminum (Al)	2021/12/21	0.032		%	20
			Dissolved Antimony (Sb)	2021/12/21	NC		%	20
			Dissolved Arsenic (As)	2021/12/21	0.23		%	20
			Dissolved Barium (Ba)	2021/12/21	0.29		%	20
			Dissolved Beryllium (Be)	2021/12/21	12		%	20
			Dissolved Bismuth (Bi)	2021/12/21	NC		%	20
			Dissolved Boron (B)	2021/12/21	NC		%	20
			Dissolved Cadmium (Cd)	2021/12/21	5.3		%	20
			Dissolved Calcium (Ca)	2021/12/21	1.9		%	20
			Dissolved Chromium (Cr)	2021/12/21	NC		%	20
			Dissolved Cobalt (Co)	2021/12/21	NC		%	20
			Dissolved Copper (Cu)	2021/12/21	1.6		%	20
			Dissolved Iron (Fe)	2021/12/21	NC		%	20
			Dissolved Lead (Pb)	2021/12/21	NC		%	20
			Dissolved Magnesium (Mg)	2021/12/21	2.2		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Manganese (Mn)	2021/12/21	0.93		%	20
			Dissolved Molybdenum (Mo)	2021/12/21	4.1		%	20
			Dissolved Nickel (Ni)	2021/12/21	NC		%	20
			Dissolved Phosphorus (P)	2021/12/21	NC		%	20
			Dissolved Potassium (K)	2021/12/21	0.042		%	20
			Dissolved Selenium (Se)	2021/12/21	NC		%	20
			Dissolved Silver (Ag)	2021/12/21	NC		%	20
			Dissolved Sodium (Na)	2021/12/21	0.32		%	20
			Dissolved Strontium (Sr)	2021/12/21	0.081		%	20
			Dissolved Thallium (Tl)	2021/12/21	NC		%	20
			Dissolved Tin (Sn)	2021/12/21	NC		%	20
			Dissolved Titanium (Ti)	2021/12/21	NC		%	20
			Dissolved Uranium (U)	2021/12/21	0.50		%	20
			Dissolved Vanadium (V)	2021/12/21	NC		%	20
			Dissolved Zinc (Zn)	2021/12/21	NC		%	20
7745747	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/12/21		102	%	80 - 120
7745747	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/12/21		102	%	80 - 120
7745747	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/12/21		103	%	80 - 120
7745747	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/12/21	<20		mg/L	
7745747	ZZH	RPD	Total Chemical Oxygen Demand	2021/12/21	NC		%	25
7747594	MCN	Matrix Spike [RJM506-10]	Nitrogen (Ammonia Nitrogen)	2021/12/22		104	%	80 - 120
7747594	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/22		106	%	80 - 120
7747594	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/22	<0.050		mg/L	
7747594	MCN	RPD [RJM506-10]	Nitrogen (Ammonia Nitrogen)	2021/12/22	NC		%	20
7747635	BAN	Matrix Spike	Dissolved Aluminum (Al)	2021/12/22		100	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		100	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		94	%	80 - 120
			Dissolved Barium (Ba)	2021/12/22		96	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		97	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		97	%	80 - 120
			Dissolved Boron (B)	2021/12/22		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		98	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		100	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		95	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		97	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		100	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		98	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		103	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		99	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		97	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		105	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		100	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		99	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		95	%	80 - 120
			Dissolved Sodium (Na)	2021/12/22		98	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		97	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		100	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		98	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/22		99	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		103	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Zinc (Zn)	2021/12/22		99	%	80 - 120
7747635	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/12/22		101	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		99	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		94	%	80 - 120
			Dissolved Barium (Ba)	2021/12/22		96	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		96	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		99	%	80 - 120
			Dissolved Boron (B)	2021/12/22		94	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		100	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		99	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		95	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		98	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		101	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		99	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		102	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		100	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		98	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		107	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		103	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		99	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		97	%	80 - 120
			Dissolved Sodium (Na)	2021/12/22		99	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		98	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		100	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		99	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/22		100	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		103	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		97	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/22		100	%	80 - 120
7747635	BAN	Method Blank	Dissolved Aluminum (Al)	2021/12/22	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/12/22	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/12/22	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/12/22	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/12/22	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/12/22	<2.0		ug/L	
			Dissolved Boron (B)	2021/12/22	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/12/22	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/12/22	<100		ug/L	
			Dissolved Chromium (Cr)	2021/12/22	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/12/22	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/12/22	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/12/22	<50		ug/L	
			Dissolved Lead (Pb)	2021/12/22	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/12/22	<100		ug/L	
			Dissolved Manganese (Mn)	2021/12/22	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/12/22	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/12/22	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/12/22	<100		ug/L	
			Dissolved Potassium (K)	2021/12/22	<100		ug/L	
			Dissolved Selenium (Se)	2021/12/22	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/12/22	<0.10		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Sodium (Na)	2021/12/22	<100		ug/L	
			Dissolved Strontium (Sr)	2021/12/22	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/12/22	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/12/22	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/12/22	<2.0		ug/L	
			Dissolved Uranium (U)	2021/12/22	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/12/22	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/12/22	<5.0		ug/L	
7747635	BAN	RPD	Dissolved Aluminum (Al)	2021/12/22	NC		%	20
			Dissolved Antimony (Sb)	2021/12/22	NC		%	20
			Dissolved Arsenic (As)	2021/12/22	NC		%	20
			Dissolved Barium (Ba)	2021/12/22	0.059		%	20
			Dissolved Beryllium (Be)	2021/12/22	NC		%	20
			Dissolved Bismuth (Bi)	2021/12/22	NC		%	20
			Dissolved Boron (B)	2021/12/22	NC		%	20
			Dissolved Cadmium (Cd)	2021/12/22	NC		%	20
			Dissolved Calcium (Ca)	2021/12/22	1.1		%	20
			Dissolved Chromium (Cr)	2021/12/22	NC		%	20
			Dissolved Cobalt (Co)	2021/12/22	1.9		%	20
			Dissolved Copper (Cu)	2021/12/22	0.97		%	20
			Dissolved Iron (Fe)	2021/12/22	NC		%	20
			Dissolved Lead (Pb)	2021/12/22	NC		%	20
			Dissolved Magnesium (Mg)	2021/12/22	1.2		%	20
			Dissolved Manganese (Mn)	2021/12/22	5.9		%	20
			Dissolved Molybdenum (Mo)	2021/12/22	NC		%	20
			Dissolved Nickel (Ni)	2021/12/22	0.65		%	20
			Dissolved Phosphorus (P)	2021/12/22	NC		%	20
			Dissolved Potassium (K)	2021/12/22	0.33		%	20
			Dissolved Selenium (Se)	2021/12/22	NC		%	20
			Dissolved Silver (Ag)	2021/12/22	NC		%	20
			Dissolved Sodium (Na)	2021/12/22	1.3		%	20
			Dissolved Strontium (Sr)	2021/12/22	0.77		%	20
			Dissolved Thallium (Tl)	2021/12/22	NC		%	20
			Dissolved Tin (Sn)	2021/12/22	NC		%	20
			Dissolved Titanium (Ti)	2021/12/22	NC		%	20
			Dissolved Uranium (U)	2021/12/22	NC		%	20
			Dissolved Vanadium (V)	2021/12/22	NC		%	20
			Dissolved Zinc (Zn)	2021/12/22	2.8		%	20
7747675	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/23		95	%	85 - 115
7747675	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/23		98	%	80 - 120
7747675	NGI	Method Blank	Total Organic Carbon (C)	2021/12/23	<0.50		mg/L	
7747675	NGI	RPD	Total Organic Carbon (C)	2021/12/23	1.3		%	15
7747681	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/22		96	%	85 - 115
7747681	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/22		99	%	80 - 120
7747681	NGI	Method Blank	Total Organic Carbon (C)	2021/12/22	<0.50		mg/L	
7747681	NGI	RPD	Total Organic Carbon (C)	2021/12/22	1.5		%	15
7747690	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/12/23		97	%	85 - 115
7747690	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/12/23		99	%	80 - 120
7747690	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/12/23	<0.50		mg/L	
7747690	NGI	RPD	Dissolved Organic Carbon (C)	2021/12/23	0.041		%	15
7747814	BAN	Matrix Spike	Dissolved Aluminum (Al)	2021/12/22		99	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		100	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		94	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Barium (Ba)	2021/12/22		93	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		97	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		96	%	80 - 120
			Dissolved Boron (B)	2021/12/22		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		98	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		99	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		96	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		95	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		96	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		100	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		96	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		104	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		99	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		96	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		106	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		99	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		99	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		94	%	80 - 120
			Dissolved Sodium (Na)	2021/12/22		99	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		96	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		98	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		99	%	80 - 120
			Dissolved Titanium (Ti)	2021/12/22		99	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		101	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		97	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/22		99	%	80 - 120
7747814	BAN	Spiked Blank	Dissolved Aluminum (Al)	2021/12/22		100	%	80 - 120
			Dissolved Antimony (Sb)	2021/12/22		99	%	80 - 120
			Dissolved Arsenic (As)	2021/12/22		93	%	80 - 120
			Dissolved Barium (Ba)	2021/12/22		93	%	80 - 120
			Dissolved Beryllium (Be)	2021/12/22		97	%	80 - 120
			Dissolved Bismuth (Bi)	2021/12/22		97	%	80 - 120
			Dissolved Boron (B)	2021/12/22		96	%	80 - 120
			Dissolved Cadmium (Cd)	2021/12/22		98	%	80 - 120
			Dissolved Calcium (Ca)	2021/12/22		100	%	80 - 120
			Dissolved Chromium (Cr)	2021/12/22		95	%	80 - 120
			Dissolved Cobalt (Co)	2021/12/22		94	%	80 - 120
			Dissolved Copper (Cu)	2021/12/22		96	%	80 - 120
			Dissolved Iron (Fe)	2021/12/22		99	%	80 - 120
			Dissolved Lead (Pb)	2021/12/22		97	%	80 - 120
			Dissolved Magnesium (Mg)	2021/12/22		102	%	80 - 120
			Dissolved Manganese (Mn)	2021/12/22		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/12/22		98	%	80 - 120
			Dissolved Nickel (Ni)	2021/12/22		96	%	80 - 120
			Dissolved Phosphorus (P)	2021/12/22		105	%	80 - 120
			Dissolved Potassium (K)	2021/12/22		99	%	80 - 120
			Dissolved Selenium (Se)	2021/12/22		99	%	80 - 120
			Dissolved Silver (Ag)	2021/12/22		95	%	80 - 120
			Dissolved Sodium (Na)	2021/12/22		98	%	80 - 120
			Dissolved Strontium (Sr)	2021/12/22		95	%	80 - 120
			Dissolved Thallium (Tl)	2021/12/22		98	%	80 - 120
			Dissolved Tin (Sn)	2021/12/22		98	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Titanium (Ti)	2021/12/22		99	%	80 - 120
			Dissolved Uranium (U)	2021/12/22		102	%	80 - 120
			Dissolved Vanadium (V)	2021/12/22		95	%	80 - 120
			Dissolved Zinc (Zn)	2021/12/22		98	%	80 - 120
7747814	BAN	Method Blank	Dissolved Aluminum (Al)	2021/12/22	<5.0		ug/L	
			Dissolved Antimony (Sb)	2021/12/22	<1.0		ug/L	
			Dissolved Arsenic (As)	2021/12/22	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/12/22	<1.0		ug/L	
			Dissolved Beryllium (Be)	2021/12/22	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2021/12/22	<2.0		ug/L	
			Dissolved Boron (B)	2021/12/22	<50		ug/L	
			Dissolved Cadmium (Cd)	2021/12/22	<0.010		ug/L	
			Dissolved Calcium (Ca)	2021/12/22	<100		ug/L	
			Dissolved Chromium (Cr)	2021/12/22	<1.0		ug/L	
			Dissolved Cobalt (Co)	2021/12/22	<0.40		ug/L	
			Dissolved Copper (Cu)	2021/12/22	<0.50		ug/L	
			Dissolved Iron (Fe)	2021/12/22	<50		ug/L	
			Dissolved Lead (Pb)	2021/12/22	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2021/12/22	<100		ug/L	
			Dissolved Manganese (Mn)	2021/12/22	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2021/12/22	<2.0		ug/L	
			Dissolved Nickel (Ni)	2021/12/22	<2.0		ug/L	
			Dissolved Phosphorus (P)	2021/12/22	<100		ug/L	
			Dissolved Potassium (K)	2021/12/22	<100		ug/L	
			Dissolved Selenium (Se)	2021/12/22	<0.50		ug/L	
			Dissolved Silver (Ag)	2021/12/22	<0.10		ug/L	
			Dissolved Sodium (Na)	2021/12/22	<100		ug/L	
			Dissolved Strontium (Sr)	2021/12/22	<2.0		ug/L	
			Dissolved Thallium (Tl)	2021/12/22	<0.10		ug/L	
			Dissolved Tin (Sn)	2021/12/22	<2.0		ug/L	
			Dissolved Titanium (Ti)	2021/12/22	<2.0		ug/L	
			Dissolved Uranium (U)	2021/12/22	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/12/22	<2.0		ug/L	
			Dissolved Zinc (Zn)	2021/12/22	<5.0		ug/L	
7747814	BAN	RPD	Dissolved Aluminum (Al)	2021/12/22	NC		%	20
			Dissolved Antimony (Sb)	2021/12/22	NC		%	20
			Dissolved Arsenic (As)	2021/12/22	NC		%	20
			Dissolved Barium (Ba)	2021/12/22	2.0		%	20
			Dissolved Beryllium (Be)	2021/12/22	NC		%	20
			Dissolved Bismuth (Bi)	2021/12/22	NC		%	20
			Dissolved Boron (B)	2021/12/22	NC		%	20
			Dissolved Cadmium (Cd)	2021/12/22	NC		%	20
			Dissolved Calcium (Ca)	2021/12/22	0.074		%	20
			Dissolved Chromium (Cr)	2021/12/22	NC		%	20
			Dissolved Cobalt (Co)	2021/12/22	NC		%	20
			Dissolved Copper (Cu)	2021/12/22	1.6		%	20
			Dissolved Iron (Fe)	2021/12/22	NC		%	20
			Dissolved Lead (Pb)	2021/12/22	NC		%	20
			Dissolved Magnesium (Mg)	2021/12/22	0.050		%	20
			Dissolved Manganese (Mn)	2021/12/22	NC		%	20
			Dissolved Molybdenum (Mo)	2021/12/22	NC		%	20
			Dissolved Nickel (Ni)	2021/12/22	NC		%	20
			Dissolved Phosphorus (P)	2021/12/22	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Potassium (K)	2021/12/22	NC		%	20
			Dissolved Selenium (Se)	2021/12/22	NC		%	20
			Dissolved Silver (Ag)	2021/12/22	NC		%	20
			Dissolved Sodium (Na)	2021/12/22	2.7		%	20
			Dissolved Strontium (Sr)	2021/12/22	1.1		%	20
			Dissolved Thallium (Tl)	2021/12/22	NC		%	20
			Dissolved Tin (Sn)	2021/12/22	NC		%	20
			Dissolved Titanium (Ti)	2021/12/22	NC		%	20
			Dissolved Uranium (U)	2021/12/22	NC		%	20
			Dissolved Vanadium (V)	2021/12/22	NC		%	20
			Dissolved Zinc (Zn)	2021/12/22	NC		%	20
7747875	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/12/22		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/22		106	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/22		94	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/22		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/22		95	%	70 - 130
7747875	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/12/22		95	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/22		111	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/22		109	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/22		104	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/22		108	%	70 - 130
7747875	MSK	Method Blank	Isobutylbenzene - Extractable	2021/12/22		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/22		109	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/22	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/22	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/22	<0.090		mg/L	
7747875	MSK	RPD	>C10-C16 Hydrocarbons	2021/12/22	NC		%	40
			>C16-C21 Hydrocarbons	2021/12/22	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/22	NC		%	40
7747990	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/23		NC	%	80 - 120
7747990	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/23		112	%	80 - 120
7747990	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/23	<5.0		mg/L	
7747990	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/12/23	2.6		%	20
7747994	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/23		94	%	80 - 120
7747994	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/23		93	%	80 - 120
7747994	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/12/23	<1.0		mg/L	
7747994	EMT	RPD	Dissolved Chloride (Cl-)	2021/12/23	0.79		%	20
7747998	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/23		94	%	80 - 120
7747998	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/23		94	%	80 - 120
7747998	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/12/23	<2.0		mg/L	
7747998	EMT	RPD	Dissolved Sulphate (SO4)	2021/12/23	11		%	20
7748000	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/12/23		NC	%	80 - 120
7748000	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/12/23		97	%	80 - 120
7748000	EMT	Method Blank	Reactive Silica (SiO2)	2021/12/23	<0.50		mg/L	
7748000	EMT	RPD	Reactive Silica (SiO2)	2021/12/23	0.78		%	20
7748002	EMT	Spiked Blank	Colour	2021/12/23		98	%	80 - 120
7748002	EMT	Method Blank	Colour	2021/12/23	<5.0		TCU	
7748002	EMT	RPD	Colour	2021/12/23	NC		%	20
7748003	EMT	Matrix Spike	Orthophosphate (P)	2021/12/23		98	%	80 - 120
7748003	EMT	Spiked Blank	Orthophosphate (P)	2021/12/23		102	%	80 - 120
7748003	EMT	Method Blank	Orthophosphate (P)	2021/12/23	<0.010		mg/L	
7748003	EMT	RPD	Orthophosphate (P)	2021/12/23	NC		%	20
7748004	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/23		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7748004	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/23		99	%	80 - 120
7748004	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/23	<0.050		mg/L	
7748004	EMT	RPD	Nitrate + Nitrite (N)	2021/12/23	6.9		%	20
7748006	EMT	Matrix Spike	Nitrite (N)	2021/12/23		103	%	80 - 120
7748006	EMT	Spiked Blank	Nitrite (N)	2021/12/23		106	%	80 - 120
7748006	EMT	Method Blank	Nitrite (N)	2021/12/23	<0.010		mg/L	
7748006	EMT	RPD	Nitrite (N)	2021/12/23	0.15		%	20
7750865	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2021/12/23		99	%	85 - 115
7750865	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2021/12/23		99	%	80 - 120
7750865	NGI	Method Blank	Dissolved Organic Carbon (C)	2021/12/23	<0.50		mg/L	
7750865	NGI	RPD	Dissolved Organic Carbon (C)	2021/12/23	0.21		%	15
7753591	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2022/01/04		80	%	80 - 120
7753591	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/01/04		102	%	80 - 120
7753591	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2022/01/04	<5.0		mg/L	
7753591	EMT	RPD	Total Alkalinity (Total as CaCO3)	2022/01/04	12		%	20
7753592	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2022/01/04		89	%	80 - 120
7753592	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2022/01/04		94	%	80 - 120
7753592	EMT	Method Blank	Dissolved Chloride (Cl-)	2022/01/04	<1.0		mg/L	
7753592	EMT	RPD	Dissolved Chloride (Cl-)	2022/01/04	2.1		%	20
7753593	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2022/01/04		NC	%	80 - 120
7753593	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2022/01/04		97	%	80 - 120
7753593	EMT	Method Blank	Dissolved Sulphate (SO4)	2022/01/04	<2.0		mg/L	
7753593	EMT	RPD	Dissolved Sulphate (SO4)	2022/01/04	0.94		%	20
7753594	EMT	Matrix Spike	Reactive Silica (SiO2)	2022/01/04		NC	%	80 - 120
7753594	EMT	Spiked Blank	Reactive Silica (SiO2)	2022/01/04		96	%	80 - 120
7753594	EMT	Method Blank	Reactive Silica (SiO2)	2022/01/04	<0.50		mg/L	
7753594	EMT	RPD	Reactive Silica (SiO2)	2022/01/04	2.3		%	20
7753595	EMT	Spiked Blank	Colour	2022/01/04		96	%	80 - 120
7753595	EMT	Method Blank	Colour	2022/01/04	<5.0		TCU	
7753595	EMT	RPD	Colour	2022/01/04	NC		%	20
7753596	EMT	Matrix Spike	Orthophosphate (P)	2022/01/04		115	%	80 - 120
7753596	EMT	Spiked Blank	Orthophosphate (P)	2022/01/04		100	%	80 - 120
7753596	EMT	Method Blank	Orthophosphate (P)	2022/01/04	<0.010		mg/L	
7753596	EMT	RPD	Orthophosphate (P)	2022/01/04	NC		%	20
7753597	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/30		105	%	80 - 120
7753597	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/30		104	%	80 - 120
7753597	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/30	<0.050		mg/L	
7753597	EMT	RPD	Nitrate + Nitrite (N)	2021/12/30	1.3		%	20
7753598	EMT	Matrix Spike	Nitrite (N)	2022/01/04		100	%	80 - 120
7753598	EMT	Spiked Blank	Nitrite (N)	2022/01/04		102	%	80 - 120
7753598	EMT	Method Blank	Nitrite (N)	2022/01/04	<0.010		mg/L	
7753598	EMT	RPD	Nitrite (N)	2022/01/04	NC		%	20
7753600	EMT	Matrix Spike [RJM318-02]	Total Alkalinity (Total as CaCO3)	2022/01/04		NC	%	80 - 120
7753600	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/01/04		106	%	80 - 120
7753600	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2022/01/04	<5.0		mg/L	
7753600	EMT	RPD [RJM318-02]	Total Alkalinity (Total as CaCO3)	2022/01/04	4.8		%	20
7753601	EMT	Matrix Spike [RJM318-02]	Dissolved Chloride (Cl-)	2022/01/04		96	%	80 - 120
7753601	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2022/01/04		96	%	80 - 120
7753601	EMT	Method Blank	Dissolved Chloride (Cl-)	2022/01/04	<1.0		mg/L	
7753601	EMT	RPD [RJM318-02]	Dissolved Chloride (Cl-)	2022/01/04	0.51		%	20
7753602	EMT	Matrix Spike [RJM318-02]	Dissolved Sulphate (SO4)	2022/01/04		97	%	80 - 120
7753602	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2022/01/04		92	%	80 - 120
7753602	EMT	Method Blank	Dissolved Sulphate (SO4)	2022/01/04	<2.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7753602	EMT	RPD [RJM318-02]	Dissolved Sulphate (SO4)	2022/01/04	9.8		%	20
7753603	EMT	Matrix Spike [RJM318-02]	Reactive Silica (SiO2)	2022/01/04		NC	%	80 - 120
7753603	EMT	Spiked Blank	Reactive Silica (SiO2)	2022/01/04		93	%	80 - 120
7753603	EMT	Method Blank	Reactive Silica (SiO2)	2022/01/04	<0.50		mg/L	
7753603	EMT	RPD [RJM318-02]	Reactive Silica (SiO2)	2022/01/04	0.18		%	20
7753605	EMT	Spiked Blank	Colour	2022/01/04		102	%	80 - 120
7753605	EMT	Method Blank	Colour	2022/01/04	<5.0		TCU	
7753605	EMT	RPD [RJM318-02]	Colour	2022/01/04	NC		%	20
7753607	EMT	Matrix Spike [RJM318-02]	Orthophosphate (P)	2022/01/04		99	%	80 - 120
7753607	EMT	Spiked Blank	Orthophosphate (P)	2022/01/04		104	%	80 - 120
7753607	EMT	Method Blank	Orthophosphate (P)	2022/01/04	<0.010		mg/L	
7753607	EMT	RPD [RJM318-02]	Orthophosphate (P)	2022/01/04	0.65		%	20
7753608	EMT	Matrix Spike [RJM318-02]	Nitrate + Nitrite (N)	2021/12/30		108	%	80 - 120
7753608	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/30		103	%	80 - 120
7753608	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/30	<0.050		mg/L	
7753608	EMT	RPD [RJM318-02]	Nitrate + Nitrite (N)	2021/12/30	0.60		%	20
7753609	EMT	Matrix Spike [RJM318-02]	Nitrite (N)	2022/01/04		101	%	80 - 120
7753609	EMT	Spiked Blank	Nitrite (N)	2022/01/04		100	%	80 - 120
7753609	EMT	Method Blank	Nitrite (N)	2022/01/04	<0.010		mg/L	
7753609	EMT	RPD [RJM318-02]	Nitrite (N)	2022/01/04	NC		%	20
7753623	EMT	Matrix Spike [RJM395-02]	Total Alkalinity (Total as CaCO3)	2022/01/04		NC	%	80 - 120
7753623	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/01/04		107	%	80 - 120
7753623	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2022/01/04	<5.0		mg/L	
7753623	EMT	RPD [RJM395-02]	Total Alkalinity (Total as CaCO3)	2022/01/04	1.9		%	20
7756785	SHW	Spiked Blank	Conductivity	2021/12/29		99	%	80 - 120
7756785	SHW	Method Blank	Conductivity	2021/12/29	1.3, RDL=1.0		uS/cm	
7756785	SHW	RPD	Conductivity	2021/12/29	0.81		%	10
7756786	SHW	Spiked Blank	pH	2021/12/29		100	%	97 - 103
7756786	SHW	RPD	pH	2021/12/29	0.24		%	N/A
7756787	SHW	Spiked Blank	Conductivity	2021/12/29		98	%	80 - 120
7756787	SHW	Method Blank	Conductivity	2021/12/29	1.3, RDL=1.0		uS/cm	
7756787	SHW	RPD [RJM388-02]	Conductivity	2021/12/29	0.79		%	10
7756788	SHW	Spiked Blank	pH	2021/12/29		100	%	97 - 103
7756788	SHW	RPD [RJM388-02]	pH	2021/12/29	0.89		%	N/A
7757018	EMT	Matrix Spike [RJM395-02]	Dissolved Chloride (Cl-)	2022/01/04		94	%	80 - 120
7757018	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2022/01/04		96	%	80 - 120
7757018	EMT	Method Blank	Dissolved Chloride (Cl-)	2022/01/04	<1.0		mg/L	
7757018	EMT	RPD [RJM395-02]	Dissolved Chloride (Cl-)	2022/01/04	1.4		%	20
7757019	EMT	Matrix Spike [RJM395-02]	Dissolved Sulphate (SO4)	2022/01/04		95	%	80 - 120
7757019	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2022/01/04		97	%	80 - 120
7757019	EMT	Method Blank	Dissolved Sulphate (SO4)	2022/01/04	<2.0		mg/L	
7757019	EMT	RPD [RJM395-02]	Dissolved Sulphate (SO4)	2022/01/04	0.35		%	20
7757020	EMT	Matrix Spike [RJM395-02]	Reactive Silica (SiO2)	2022/01/04		NC	%	80 - 120
7757020	EMT	Spiked Blank	Reactive Silica (SiO2)	2022/01/04		95	%	80 - 120
7757020	EMT	Method Blank	Reactive Silica (SiO2)	2022/01/04	<0.50		mg/L	
7757020	EMT	RPD [RJM395-02]	Reactive Silica (SiO2)	2022/01/04	0.76		%	20
7757021	EMT	Spiked Blank	Colour	2022/01/04		99	%	80 - 120
7757021	EMT	Method Blank	Colour	2022/01/04	<5.0		TCU	
7757021	EMT	RPD [RJM395-02]	Colour	2022/01/04	NC		%	20
7757023	EMT	Matrix Spike [RJM395-02]	Orthophosphate (P)	2022/01/04		78 (2)	%	80 - 120
7757023	EMT	Spiked Blank	Orthophosphate (P)	2022/01/04		106	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7757023	EMT	Method Blank	Orthophosphate (P)	2022/01/04	<0.010		mg/L	
7757023	EMT	RPD [RJM395-02]	Orthophosphate (P)	2022/01/04	NC		%	20
7757034	EMT	Matrix Spike [RJM395-02]	Nitrate + Nitrite (N)	2021/12/29		99	%	80 - 120
7757034	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/29		101	%	80 - 120
7757034	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/29	<0.050		mg/L	
7757034	EMT	RPD [RJM395-02]	Nitrate + Nitrite (N)	2021/12/29	NC		%	20
7757035	EMT	Matrix Spike [RJM395-02]	Nitrite (N)	2022/01/04		98	%	80 - 120
7757035	EMT	Spiked Blank	Nitrite (N)	2022/01/04		102	%	80 - 120
7757035	EMT	Method Blank	Nitrite (N)	2022/01/04	<0.010		mg/L	
7757035	EMT	RPD [RJM395-02]	Nitrite (N)	2022/01/04	NC		%	20
7759107	SHW	Spiked Blank	Conductivity	2021/12/30		98	%	80 - 120
7759107	SHW	Method Blank	Conductivity	2021/12/30	1.2, RDL=1.0		uS/cm	
7759107	SHW	RPD [RJM387-02]	Conductivity	2021/12/30	0.81		%	10
7759109	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759109	SHW	RPD [RJM387-02]	pH	2021/12/30	0.81		%	N/A
7759111	SHW	Spiked Blank	Conductivity	2021/12/30		97	%	80 - 120
7759111	SHW	Method Blank	Conductivity	2021/12/30	1.3, RDL=1.0		uS/cm	
7759111	SHW	RPD [RJM531-02]	Conductivity	2021/12/30	1.2		%	10
7759112	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759112	SHW	RPD [RJM531-02]	pH	2021/12/30	0.41		%	N/A
7759592	SHW	QC Standard	Turbidity	2021/12/30		99	%	80 - 120
7759592	SHW	Spiked Blank	Turbidity	2021/12/30		102	%	80 - 120
7759592	SHW	Method Blank	Turbidity	2021/12/30	<0.10		NTU	
7759592	SHW	RPD	Turbidity	2021/12/30	0.94		%	20
7759612	SHW	QC Standard	Turbidity	2021/12/30		100	%	80 - 120
7759612	SHW	Spiked Blank	Turbidity	2021/12/30		101	%	80 - 120
7759612	SHW	Method Blank	Turbidity	2021/12/30	<0.10		NTU	
7759612	SHW	RPD [RJM318-02]	Turbidity	2021/12/30	11		%	20
7759867	SHW	Spiked Blank	Conductivity	2021/12/30		96	%	80 - 120
7759867	SHW	Method Blank	Conductivity	2021/12/30	1.2, RDL=1.0		uS/cm	
7759867	SHW	RPD [RJM506-02]	Conductivity	2021/12/30	2.3		%	10
7759868	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759868	SHW	RPD [RJM506-02]	pH	2021/12/30	1.4		%	N/A
7759887	SHW	Spiked Blank	Conductivity	2021/12/30		99	%	80 - 120
7759887	SHW	Method Blank	Conductivity	2021/12/30	1.1, RDL=1.0		uS/cm	
7759887	SHW	RPD	Conductivity	2021/12/30	1.3		%	10
7759890	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759890	SHW	RPD	pH	2021/12/30	1.7		%	N/A
7762907	SHW	QC Standard	Turbidity	2022/01/04		99	%	80 - 120
7762907	SHW	Spiked Blank	Turbidity	2022/01/04		100	%	80 - 120
7762907	SHW	Method Blank	Turbidity	2022/01/04	<0.10		NTU	
7762907	SHW	RPD	Turbidity	2022/01/04	4.3		%	20
7762908	SHW	QC Standard	Turbidity	2022/01/04		98	%	80 - 120
7762908	SHW	Spiked Blank	Turbidity	2022/01/04		100	%	80 - 120
7762908	SHW	Method Blank	Turbidity	2022/01/04	<0.10		NTU	
7762908	SHW	RPD	Turbidity	2022/01/04	3.4		%	20
7765779	MCN	Matrix Spike [RJM500-02]	Total Alkalinity (Total as CaCO3)	2022/01/06		NC	%	80 - 120
7765779	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/01/05		107	%	80 - 120
7765779	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/01/05	<5.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7765779	MCN	RPD [RJM500-02]	Total Alkalinity (Total as CaCO3)	2022/01/06	2.2		%	20
7766021	MCN	Matrix Spike [RJM500-02]	Dissolved Chloride (Cl-)	2022/01/06		93	%	80 - 120
7766021	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/01/06		93	%	80 - 120
7766021	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/01/06	<1.0		mg/L	
7766021	MCN	RPD [RJM500-02]	Dissolved Chloride (Cl-)	2022/01/06	0.19		%	20
7766077	MCN	Matrix Spike [RJM500-02]	Dissolved Sulphate (SO4)	2022/01/06		NC	%	80 - 120
7766077	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/01/06		92	%	80 - 120
7766077	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/01/06	<2.0		mg/L	
7766077	MCN	RPD [RJM500-02]	Dissolved Sulphate (SO4)	2022/01/06	2.1		%	20
7766080	MCN	Matrix Spike [RJM500-02]	Reactive Silica (SiO2)	2022/01/06		NC	%	80 - 120
7766080	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/01/06		93	%	80 - 120
7766080	MCN	Method Blank	Reactive Silica (SiO2)	2022/01/06	<0.50		mg/L	
7766080	MCN	RPD [RJM500-02]	Reactive Silica (SiO2)	2022/01/06	1.9		%	20
7766082	MCN	Spiked Blank	Colour	2022/01/06		96	%	80 - 120
7766082	MCN	Method Blank	Colour	2022/01/06	<5.0		TCU	
7766082	MCN	RPD [RJM500-02]	Colour	2022/01/06	NC		%	20
7766086	MCN	Matrix Spike [RJM500-02]	Orthophosphate (P)	2022/01/06		88	%	80 - 120
7766086	MCN	Spiked Blank	Orthophosphate (P)	2022/01/06		99	%	80 - 120
7766086	MCN	Method Blank	Orthophosphate (P)	2022/01/06	<0.010		mg/L	
7766086	MCN	RPD [RJM500-02]	Orthophosphate (P)	2022/01/06	NC		%	20
7766094	MCN	Matrix Spike [RJM500-02]	Nitrate + Nitrite (N)	2022/01/06		85	%	80 - 120
7766094	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/01/06		97	%	80 - 120
7766094	MCN	Method Blank	Nitrate + Nitrite (N)	2022/01/06	<0.050		mg/L	
7766094	MCN	RPD [RJM500-02]	Nitrate + Nitrite (N)	2022/01/06	2.7		%	20
7766116	MCN	Matrix Spike [RJM500-02]	Nitrite (N)	2022/01/06		97	%	80 - 120
7766116	MCN	Spiked Blank	Nitrite (N)	2022/01/06		98	%	80 - 120
7766116	MCN	Method Blank	Nitrite (N)	2022/01/06	<0.010		mg/L	
7766116	MCN	RPD [RJM500-02]	Nitrite (N)	2022/01/06	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) TEH surrogate(s) not within acceptance limits. Samples tested had insufficient volume to repeat the analytical run.

(2) Poor spike recovery due to probable matrix interference.

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Bureau Veritas Job #: C1Z2957
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: HARRIETSFIELD
Sampler Initials: RN

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Rosemarie MacDonald, Scientific Specialist (Organics)

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN OF CUSTODY RECORD

COC #: D 55346 Page 1 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Aecom Canada Ltd	Company Name: Same	Quotation #: Harrietsfield	☒ Regular TAT (5 business days) Most analyses
Contact Name: Derek Heath	Contact Name:	Purchase Order#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 1701 Hollis St Halifax NS PC:	Address: PC:	Project #: @60639662	IF RUSH please specify date (Surcharges will be applied)
Phone: (902) 233-1674	Phone:	Site Location:	DATE REQUIRED:
Email: derek.heath@aecom.com	Email:	Site Province:	
Report Copies:	Report Copies:	Site #:	
		Sampled By: RM/DB/RM/TS/DN	

Laboratory Use Only

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	LAB FILTRATION REQUIRED	RCAP-MS (Total Metals) Well / Surface	RCAP-MS(Dissolved Metals) Ground water	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury (CIRCLE) TOTAL / DISSOLVED	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural/ Landfill)	RBCA Hydrocarbons (BTEX, C6-C32)	CCME Hydrocarbons (CWS-PHC F1/BTEX, F2-F4)	PAHs (Default for water/soil)	PAHs (FWAL /CCME Sediment)	PCBs - Select One: Default or CCME Sediment	VOCs	Total Coliform/E.coli (Presence/Absence)	Total Coliform/E.Coli (Count)			HOLD- DO NOT ANALYZE	Regulatory Requirements (Specify)
1	MW1-S																					✓				
2	MW2-S																					✓				
3	MW1-D																					✓				
4	MW2-M																					✓				
5	MW2-D																					✓				
6	MW3																					✓				
7	MW5-S																					✓				
8	MW5-D																					✓				
9	MW6-S																					✓				
10	MW6-D																					✓				

Sub Packages (Metals MW1-S2)

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY:(Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV LABS JOB #
Derek Heath	2021/12/15	10:15				C122957

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to BV Labs standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms which are available for viewing at www.bvna.com

White: Bureau Veritas Pink: Client

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CHAIN OF CUSTODY RECORD

COC #: D 55347 Page 2 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Aecon Canada Ltd	Company Name: Same	Quotation #: Ambient Field	[X] Regular TAT (5 business days) Most analyses
Contact Name: Derek Heath	Contact Name:	Purchase Order#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 1701 Hollis St	Address:	Project #: 60639002	IF RUSH please specify date (Surcharges will be applied)
PC:	PC:	Site Location:	DATE REQUIRED:
Phone: (902) 233-1679	Phone:	Site Province:	
Email: derek.heath@aecon.com	Email:	Site #:	
Report Copies:	Report Copies:	Sampled By: KM/DG/KM/BM	

Laboratory Use Only

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	LAB FILTRATION REQUIRED	RCAP-MS (Total Metals) Well / Surface	RCAP-MS (Dissolved Metals) Ground water	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury (CIRCLE) TOTAL / DISSOLVED	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural/ Landfill)	RBCA Hydrocarbons (BTEX, C6-C32)	CCME Hydrocarbons (CWS-PHC F1/BTEX, F2-F4)	PAHs (Default for water/soil)	PAHs (FWAL/CCME Sediment)	PCBs - Select One: Default or CCME Sediment	VOCs	Total Coliform/E.coli (Presence/Absence)	Total Coliform/E.Coli (Count)			HOLD- DO NOT ANALYZE	Regulatory Requirements (Specify)
1	MW7-S																					✓				
2	MW7-D																					✓				
3	MW8-S																					✓				
4	MW8-D																					✓				
5	MW19-03D																					✓				
6	MW19-09S																					✓				
7	MW19-11M																					✓				
8	MW19-11D																					✓				
9	DUP19-01																					✓				
10	MW19-12S																					✓				

Field Blanks (Metals)

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY:(Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV LABS JOB #
Derek Heath	2021/12/15	10:15 AM				C122957

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White: Bureau Veritas Pink: Client

200 Bluewater Road, Suite 105, Bedford, Nova Scotia B4B 1G9 Tel: 902-420-0203 Fax: 902-420-8612 Toll Free: 1-800-565-7227
49-55 Elizabeth Avenue, St John's, NL A1A 1W9 Tel: 709-754-0203 Fax: 709-754-8612 Toll Free: 1-888-492-7227
465 George Street,Unit G,Sydney, NS B1P 1K5 Tel: 902-567-1255 Fax: 902-539-6504 Toll Free: 1-888-535-7770
www.bvna.com E-mail: customerservicebedford@bureauveritas.com

CHAIN OF CUSTODY RECORD

COC #: D 55348 Page 3 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Aecom Canada Ltd	Company Name: Same	Quotation #: Harriets Field	[X] Regular TAT (5 business days) Most analyses
Contact Name: Derek Heath	Contact Name:	Purchase Order#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 1701 Hollis St Hfx NS PC:	Address: PC:	Project #: 60639002	IF RUSH please specify date (Surcharges will be applied)
Phone: (902) 233-1674	Phone:	Site Location:	DATE REQUIRED:
Email: derek.heath@aecom.com	Email:	Site Province:	
Report Copies:	Report Copies:	Site #:	
		Sampled By: RM/DB/RM/JS/DH	

Laboratory Use Only

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (<10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	LAB FILTRATION REQUIRED	RCAP-MS (Total Metals) Well / Surface	RCAP-MS(Dissolved Metals) Ground water	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury (CIRCLE) TOTAL / DISSOLVED	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural/ Landfill)	RBCA Hydrocarbons (BTEX, C6-C32)	CCME Hydrocarbons (CWS-PHC F1/BTEX, F2-F4)	PAHs (Default for water/soil)	PAHs (FWAL/CCME Sediment)	PCBs - Select One: Default or CCME Sediment	VOCs	Total Coliform/E.coli (Presence/Absence)	Total Coliform/E.Coli (Count)	GW Jackson / Marie-J Muise		HOLD- DO NOT ANALYZE	Regulatory Requirements (Specify)
1	MW19-12D	B Dec.	Afternoon	GW																			✓			
2	MW19-13S	↓	↓	↓																			✓			
3	MW19-13D																						✓			
4	MW20-14S																						✓			
5	MW20-14D																						✓			
6	MW20-15S																						✓			
7	MW20-15D																						✓			
8	MW20-16																						✓			
9	MW20-17S																						✓			
10	MW20-17D																						✓			

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY:(Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV LABS JOB #
Derek Heath	2021/12/15	10:15 am				C122957

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White: Bureau Veritas Pink: Client

200 Bluewater Road, Suite 105, Bedford, Nova Scotia B4B 1G9 Tel: 902-420-0203 Fax: 902-420-8612 Toll Free: 1-800-565-7227
49-55 Elizabeth Avenue, St John's, NL A1A 1W9 Tel: 709-754-0203 Fax: 709-754-8612 Toll Free: 1-888-492-7227
465 George Street,Unit G,Sydney, NS B1P 1K5 Tel: 902-567-1255 Fax: 902-539-6504 Toll Free: 1-888-535-7770
www.bvna.com E-mail: customerservicebedford@bureauveritas.com

CHAIN OF CUSTODY RECORD

COC #: D 55349 Page 4 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Accom Canada Ltd	Company Name: Same	Quotation #: Harrietsfield	[X] Regular TAT (5 business days) Most analyses
Contact Name: Derek Heath	Contact Name:	Purchase Order#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 101 Hollis St Hfx NS PC:	Address: PC:	Project #: 60639002	IF RUSH please specify date (Surcharges will be applied)
Phone: (902) 233-1674	Phone:	Site Location:	DATE REQUIRED:
Email: derek.heath@accom.com	Email:	Site Province:	
Report Copies:	Report Copies:	Site #:	
		Sampled By: RM/JG/RM/JS/RH	

Laboratory Use Only

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED & PRESERVED	LAB FILTRATION REQUIRED	RCAP-MS (Total Metals) Well / Surface	RCAP-MS(Dissolved Metals) Ground water	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury [CIRCLE] TOTAL / DISSOLVED	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural/ Landfill)	RBCA Hydrocarbons (BTEX, C6-C32)	CCME Hydrocarbons (CWS-PHC F1/BTEX, F2-F4)	PAHs (Default for water/soil)	PAHs (PWAL /CCME Sediment)	PCBs - Select One: Default or CCME Sediment	VOCs	Total Coliform/E.coli (Presence/Absence)	Total Coliform/E.Coli (Count)	GW Package (Please Please)			HOLD- DO NOT ANALYZE	Regulatory Requirements (Specify) / COMMENTS
1	DUP1	13 Dec.	Afternoon	GW																			✓				
2	DUP2	↓	↓	↓																			✓				
3	DUP3	↓	↓	↓																			✓				
4																											
5																											
6																											
7																											
8																											
9																											
10																											

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	BV LABS JOB #
Derek Heath	2021/12/15	10:15 AM				C122957

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White: Bureau Veritas Pink: Client

Your Project #: 60639002

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Your C.O.C. #: 869451-01-01, 869451-02-01, 869451-03-01

Report Date: 2022/04/06
Report #: R7075141
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282980
Received: 2022/03/29, 14:34

Sample Matrix: Ground Water
Samples Received: 26

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	15	N/A	2022/04/03	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	9	N/A	2022/04/05	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	2	N/A	2022/04/06	N/A	SM 23 4500-CO2 D
Alkalinity	26	N/A	2022/04/05	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	26	N/A	2022/04/06	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	26	2022/04/05	2022/04/05	ATL SOP 00042	SM 23 5220D m
Colour	26	N/A	2022/04/06	ATL SOP 00020	SM 23 2120C m
Organic carbon - Diss (DOC) (2)	1	N/A	2022/04/01	ATL SOP 00203	SM 23 5310B m
Organic carbon - Diss (DOC) (2)	20	N/A	2022/04/04	ATL SOP 00203	SM 23 5310B m
Organic carbon - Diss (DOC) (2)	5	N/A	2022/04/05	ATL SOP 00203	SM 23 5310B m
Conductance - water	15	N/A	2022/04/03	ATL SOP 00004	SM 23 2510B m
Conductance - water	9	N/A	2022/04/05	ATL SOP 00004	SM 23 2510B m
Conductance - water	2	N/A	2022/04/06	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	23	2022/03/31	2022/03/31	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	3	2022/04/01	2022/04/04	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	12	N/A	2022/04/01	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	9	N/A	2022/04/04	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	4	N/A	2022/04/05	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2022/04/06	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	21	N/A	2022/04/01	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	4	N/A	2022/04/04	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	1	N/A	2022/04/05	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	26	N/A	2022/04/06	N/A	Auto Calc.
Anion and Cation Sum	26	N/A	2022/04/06	N/A	Auto Calc.
Nitrogen Ammonia - water	26	N/A	2022/04/05	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	26	N/A	2022/04/06	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	26	N/A	2022/04/06	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	26	N/A	2022/04/06	ATL SOP 00018	ASTM D3867-16

Your Project #: 60639002

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Your C.O.C. #: 869451-01-01, 869451-02-01, 869451-03-01

Report Date: 2022/04/06
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282980
Received: 2022/03/29, 14:34

Sample Matrix: Ground Water
Samples Received: 26

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phenols (4AAP) (1)	26	N/A	2022/04/04	CAM SOP-00444	OMOE E3179 m
pH (3)	15	N/A	2022/04/03	ATL SOP 00003	SM 23 4500-H+ B m
pH (3)	9	N/A	2022/04/05	ATL SOP 00003	SM 23 4500-H+ B m
pH (3)	2	N/A	2022/04/06	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	26	N/A	2022/04/06	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	26	N/A	2022/04/06	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	26	N/A	2022/04/06	ATL SOP 00049	Auto Calc.
Reactive Silica	26	N/A	2022/04/06	ATL SOP 00022	EPA 366.0 m
Sulphate	26	N/A	2022/04/06	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	26	N/A	2022/04/06	N/A	Auto Calc.
Organic carbon - Total (TOC) (2)	13	N/A	2022/04/01	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (2)	13	N/A	2022/04/04	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	22	N/A	2022/04/01	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	1	N/A	2022/04/04	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	3	N/A	2022/04/05	N/A	Atl. RBCA v3 m
Total Suspended Solids	16	2022/03/30	2022/04/04	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	10	2022/03/30	2022/04/05	ATL SOP 00007	SM 23 2540D m
Turbidity	5	N/A	2022/04/03	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	21	N/A	2022/04/05	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	22	N/A	2022/03/31	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	4	N/A	2022/04/04	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are

Your Project #: 60639002

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Your C.O.C. #: 869451-01-01, 869451-02-01, 869451-03-01

Report Date: 2022/04/06
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282980
Received: 2022/03/29, 14:34

reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Encryption Key



Bureau Veritas
06 Apr 2022 16:51:53

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253
==========
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For Service Group specific validation please refer to the Validation Signature Page.

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM272			SFM272			SFM273		
Sampling Date		2022/03/28			2022/03/28			2022/03/28		
COC Number		869451-01-01			869451-01-01			869451-01-01		
	UNITS	MW1-S	RDL	QC Batch	MW1-S Lab-Dup	RDL	QC Batch	MW1-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	22.8	N/A	7911184				28.1	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	740	1.0	7911179				780	1.0	7911179
Calculated TDS	mg/L	1300	1.0	7911189				1600	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	4.2	1.0	7911179				<1.0	1.0	7911179
Cation Sum	me/L	22.6	N/A	7911184				28.0	N/A	7911184
Hardness (CaCO3)	mg/L	980	1.0	7911182				1200	1.0	7911182
Ion Balance (% Difference)	%	0.370	N/A	7911183				0.110	N/A	7911183
Langelier Index (@ 20C)	N/A	1.55		7911187				0.749		7911187
Langelier Index (@ 4C)	N/A	1.31		7911188				0.504		7911188
Nitrate (N)	mg/L	0.31	0.050	7911185				<0.050	0.050	7911185
Saturation pH (@ 20C)	N/A	6.23		7911187				6.20		7911187
Saturation pH (@ 4C)	N/A	6.48		7911188				6.45		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	740	75	7922071				790	75	7922071
Total Chemical Oxygen Demand	mg/L	240	20	7921826				70	20	7921826
Dissolved Chloride (Cl-)	mg/L	26	1.0	7922073				31	1.0	7922073
Colour	TCU	30	5.0	7922076				11	5.0	7922076
Nitrate + Nitrite (N)	mg/L	0.31	0.050	7922078				<0.050	0.050	7922078
Nitrite (N)	mg/L	<0.010	0.010	7922079				<0.010	0.010	7922079
Nitrogen (Ammonia Nitrogen)	mg/L	2.1	0.25	7921835				0.20	0.050	7921835
Dissolved Organic Carbon (C)	mg/L	21 (1)	5.0	7916269				18 (1)	5.0	7916269
Total Organic Carbon (C)	mg/L	29 (2)	5.0	7916190				18 (1)	5.0	7916264
Orthophosphate (P)	mg/L	<0.010	0.010	7922077				<0.010	0.010	7922077
pH	pH	7.78		7921839				6.95		7916343
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314
Reactive Silica (SiO2)	mg/L	8.3	0.50	7922075				9.0	0.50	7922075
Total Suspended Solids	mg/L	10000	250	7911833				150	2.5	7911833
Dissolved Sulphate (SO4)	mg/L	340	10	7922074				550	20	7922074
Turbidity	NTU	>1000	1.0	7922007				100	0.10	7919403
Conductivity	uS/cm	1800	1.0	7921837				2200	1.0	7916349

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM273			SFM274			SFM275		
Sampling Date		2022/03/28			2022/03/29			2022/03/29		
COC Number		869451-01-01			869451-01-01			869451-01-01		
	UNITS	MW1-D Lab-Dup	RDL	QC Batch	MW2-S	RDL	QC Batch	MW2-M	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				4.32	N/A	7911184	4.34	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				170	1.0	7911179	130	1.0	7911179
Calculated TDS	mg/L				230	1.0	7911189	250	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7911179	<1.0	1.0	7911179
Cation Sum	me/L				4.27	N/A	7911184	4.40	N/A	7911184
Hardness (CaCO3)	mg/L				190	1.0	7911182	180	1.0	7911182
Ion Balance (% Difference)	%				0.580	N/A	7911183	0.690	N/A	7911183
Langelier Index (@ 20C)	N/A				-0.0660		7911187	-0.141		7911187
Langelier Index (@ 4C)	N/A				-0.316		7911188	-0.390		7911188
Nitrate (N)	mg/L				0.071	0.050	7911185	0.10	0.050	7911185
Saturation pH (@ 20C)	N/A				7.36		7911187	7.63		7911187
Saturation pH (@ 4C)	N/A				7.61		7911188	7.88		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				170	25	7922071	130	25	7922081
Total Chemical Oxygen Demand	mg/L				84	20	7921826	<20	20	7921826
Dissolved Chloride (Cl-)	mg/L				9.1	1.0	7922073	13	1.0	7922084
Colour	TCU				<5.0	5.0	7922076	<5.0	5.0	7922090
Nitrate + Nitrite (N)	mg/L				0.071	0.050	7922078	0.10	0.050	7922094
Nitrite (N)	mg/L				<0.010	0.010	7922079	<0.010	0.010	7922095
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7921835	<0.050	0.050	7921835
Dissolved Organic Carbon (C)	mg/L				3.2	0.50	7916269	1.3	0.50	7916269
Total Organic Carbon (C)	mg/L				<50 (1)	50	7916190	<5.0 (1)	5.0	7916264
Orthophosphate (P)	mg/L				0.026	0.010	7922077	0.047	0.010	7922091
pH	pH				7.29		7916343	7.49		7921839
Phenols-4AAP	mg/L				<0.0010	0.0010	7920314	<0.0010	0.0010	7920314
Reactive Silica (SiO2)	mg/L				8.0	0.50	7922075	12	0.50	7922087
Total Suspended Solids	mg/L				29000	250	7911833	210	6.3	7911906
Dissolved Sulphate (SO4)	mg/L				28	2.0	7922074	65	2.0	7922085
Turbidity	NTU	95	0.10	7919403	>1000	1.0	7922007	110	1.0	7922007
Conductivity	uS/cm				430	1.0	7916349	420	1.0	7921837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM275			SFM276			SFM276		
Sampling Date		2022/03/29			2022/03/29			2022/03/29		
COC Number		869451-01-01			869451-01-01			869451-01-01		
	UNITS	MW2-M Lab-Dup	RDL	QC Batch	MW2-D	RDL	QC Batch	MW2-D Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				5.65	N/A	7911184			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				190	1.0	7911179			
Calculated TDS	mg/L				310	1.0	7911189			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7911179			
Cation Sum	me/L				5.58	N/A	7911184			
Hardness (CaCO3)	mg/L				230	1.0	7911182			
Ion Balance (% Difference)	%				0.620	N/A	7911183			
Langelier Index (@ 20C)	N/A				0.209		7911187			
Langelier Index (@ 4C)	N/A				-0.0400		7911188			
Nitrate (N)	mg/L				0.052	0.050	7911185			
Saturation pH (@ 20C)	N/A				7.34		7911187			
Saturation pH (@ 4C)	N/A				7.59		7911188			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	130	25	7922081	190	25	7922071			
Total Chemical Oxygen Demand	mg/L				<20	20	7921826			
Dissolved Chloride (Cl-)	mg/L	13	1.0	7922084	22	1.0	7922073			
Colour	TCU	<5.0	5.0	7922090	<5.0	5.0	7922076			
Nitrate + Nitrite (N)	mg/L	0.098	0.050	7922094	0.052	0.050	7922078			
Nitrite (N)	mg/L	<0.010	0.010	7922095	<0.010	0.010	7922079			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7921835			
Dissolved Organic Carbon (C)	mg/L	1.3	0.50	7916269	1.6	0.50	7916269			
Total Organic Carbon (C)	mg/L				<5.0 (1)	5.0	7916264	<5.0 (1)	5.0	7916264
Orthophosphate (P)	mg/L	0.046	0.010	7922091	0.047	0.010	7922077			
pH	pH				7.55		7916343			
Phenols-4AAP	mg/L				<0.0010	0.0010	7920314			
Reactive Silica (SiO2)	mg/L	12	0.50	7922087	13	0.50	7922075			
Total Suspended Solids	mg/L				440	10	7911906			
Dissolved Sulphate (SO4)	mg/L	65	2.0	7922085	58	2.0	7922074			
Turbidity	NTU				240	1.0	7922007			
Conductivity	uS/cm				550	1.0	7916349			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM277			SFM278			SFM279		
Sampling Date		2022/03/28			2022/03/28			2022/03/28		
COC Number		869451-01-01			869451-01-01			869451-01-01		
	UNITS	DUP1	RDL	QC Batch	MW6-S	RDL	QC Batch	MW6-D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	1.87	N/A	7911184	4.82	N/A	7911184	41.6	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	22	1.0	7911179	160	1.0	7911179	1300	1.0	7911179
Calculated TDS	mg/L	130	1.0	7911189	270	1.0	7911189	2300	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7911179	<1.0	1.0	7911179	<1.0	1.0	7911179
Cation Sum	me/L	1.75	N/A	7911184	4.97	N/A	7911184	39.0	N/A	7911184
Hardness (CaCO3)	mg/L	57	1.0	7911182	220	1.0	7911182	1500	1.0	7911182
Ion Balance (% Difference)	%	3.31	N/A	7911183	1.53	N/A	7911183	3.23	N/A	7911183
Langelier Index (@ 20C)	N/A	-2.40		7911187	-0.334		7911187	0.882		7911187
Langelier Index (@ 4C)	N/A	-2.65		7911188	-0.583		7911188	0.639		7911188
Nitrate (N)	mg/L	0.079	0.050	7911185	0.053	0.050	7911185	<0.050	0.050	7911185
Saturation pH (@ 20C)	N/A	8.83		7911187	7.34		7911187	5.94		7911187
Saturation pH (@ 4C)	N/A	9.08		7911188	7.59		7911188	6.19		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	22	5.0	7922071	160	25	7922071	1300	75	7922071
Total Chemical Oxygen Demand	mg/L	<20	20	7921826	46	20	7921826	200	20	7921826
Dissolved Chloride (Cl-)	mg/L	10	1.0	7922073	12	1.0	7922073	80	1.0	7922073
Colour	TCU	<5.0	5.0	7922076	10	5.0	7922076	40	5.0	7922076
Nitrate + Nitrite (N)	mg/L	0.079	0.050	7922078	0.053	0.050	7922078	<0.050	0.050	7922078
Nitrite (N)	mg/L	<0.010	0.010	7922079	<0.010	0.010	7922079	<0.010	0.010	7922079
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921835	0.071	0.050	7921835	21	1.0	7921835
Dissolved Organic Carbon (C)	mg/L	0.84	0.50	7916269	15	0.50	7916269	55 (1)	5.0	7916269
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7916264	16	0.50	7916190	60 (1)	5.0	7916264
Orthophosphate (P)	mg/L	0.041	0.010	7922077	<0.010	0.010	7922077	<0.010	0.010	7922077
pH	pH	6.43		7916343	7.00		7916343	6.83		7916343
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314	0.0014	0.0010	7920314
Reactive Silica (SiO2)	mg/L	17	0.50	7922075	3.3	0.50	7922075	11	0.50	7922075
Total Suspended Solids	mg/L	270	5.0	7911833	21	2.0	7911833	48	5.0	7911833
Dissolved Sulphate (SO4)	mg/L	54	2.0	7922074	58	2.0	7922074	640	20	7922074
Turbidity	NTU	260	1.0	7922007	8.7	0.10	7922007	130	1.0	7922007
Conductivity	uS/cm	210	1.0	7916349	470	1.0	7916349	3200	1.0	7916349

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM279			SFM281			SFM281		
Sampling Date		2022/03/28			2022/03/28			2022/03/28		
COC Number		869451-01-01			869451-02-01			869451-02-01		
	UNITS	MW6-D Lab-Dup	RDL	QC Batch	MW7-S	RDL	QC Batch	MW7-S Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				3.18	N/A	7911184			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				140	1.0	7911179			
Calculated TDS	mg/L				170	1.0	7911189			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7911179			
Cation Sum	me/L				3.15	N/A	7911184			
Hardness (CaCO3)	mg/L				140	1.0	7911182			
Ion Balance (% Difference)	%				0.470	N/A	7911183			
Langelier Index (@ 20C)	N/A				0.256		7911187			
Langelier Index (@ 4C)	N/A				0.00500		7911188			
Nitrate (N)	mg/L				0.18	0.050	7911185			
Saturation pH (@ 20C)	N/A				7.53		7911187			
Saturation pH (@ 4C)	N/A				7.79		7911188			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				140	25	7922071			
Total Chemical Oxygen Demand	mg/L				100	20	7921827			
Dissolved Chloride (Cl-)	mg/L				5.3	1.0	7922073			
Colour	TCU				6.3	5.0	7922076			
Nitrate + Nitrite (N)	mg/L				0.18	0.050	7922078			
Nitrite (N)	mg/L				<0.010	0.010	7922079			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7921835	<0.050	0.050	7921835
Dissolved Organic Carbon (C)	mg/L				3.5	0.50	7916269			
Total Organic Carbon (C)	mg/L				24 (1)	5.0	7916190			
Orthophosphate (P)	mg/L				<0.010	0.010	7922077			
pH	pH				7.79		7916343			
Phenols-4AAP	mg/L				<0.0010	0.0010	7920314			
Reactive Silica (SiO2)	mg/L				6.1	0.50	7922075			
Total Suspended Solids	mg/L				2200	250	7911833			
Dissolved Sulphate (SO4)	mg/L				6.5	2.0	7922074			
Turbidity	NTU	130	1.0	7922007	>1000	1.0	7922007			
Conductivity	uS/cm				310	1.0	7916349			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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Bureau Veritas Job #: C282980
Report Date: 2022/04/06

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: DB

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM282			SFM283			SFM283		
Sampling Date		2022/03/28			2022/03/29			2022/03/29		
COC Number		869451-02-01			869451-02-01			869451-02-01		
	UNITS	MW7-D	RDL	QC Batch	MW8-S	RDL	QC Batch	MW8-S Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	6.85	N/A	7911184	18.4	N/A	7911184			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	190	1.0	7911179	250	1.0	7911179			
Calculated TDS	mg/L	400	1.0	7911189	1100	1.0	7911189			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7911179	1.7	1.0	7911179			
Cation Sum	me/L	6.83	N/A	7911184	17.9	N/A	7911184			
Hardness (CaCO3)	mg/L	300	1.0	7911182	640	1.0	7911182			
Ion Balance (% Difference)	%	0.150	N/A	7911183	1.41	N/A	7911183			
Langelier Index (@ 20C)	N/A	-0.281		7911187	1.00		7911187			
Langelier Index (@ 4C)	N/A	-0.530		7911188	0.759		7911188			
Nitrate (N)	mg/L	0.057	0.050	7911185	0.30	0.050	7911185			
Saturation pH (@ 20C)	N/A	7.18		7911187	6.85		7911187			
Saturation pH (@ 4C)	N/A	7.43		7911188	7.09		7911188			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	190	25	7922071	250	25	7922097	250	25	7922097
Total Chemical Oxygen Demand	mg/L	32	20	7921827	<20	20	7921827			
Dissolved Chloride (Cl-)	mg/L	12	1.0	7922073	170	5.0	7922098	170	5.0	7922098
Colour	TCU	25	5.0	7922076	<5.0	5.0	7922103	<5.0	5.0	7922103
Nitrate + Nitrite (N)	mg/L	0.057	0.050	7922078	0.30	0.050	7922106	0.31	0.050	7922106
Nitrite (N)	mg/L	<0.010	0.010	7922079	<0.010	0.010	7922107	<0.010	0.010	7922107
Nitrogen (Ammonia Nitrogen)	mg/L	0.73	0.050	7921835	<0.050	0.050	7921835			
Dissolved Organic Carbon (C)	mg/L	16	0.50	7919715	2.5	0.50	7916269			
Total Organic Carbon (C)	mg/L	17	0.50	7916190	<5.0 (1)	5.0	7916264			
Orthophosphate (P)	mg/L	<0.010	0.010	7922077	<0.010	0.010	7922104	<0.010	0.010	7922104
pH	pH	6.90		7916343	7.85		7916343			
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314			
Reactive Silica (SiO2)	mg/L	5.2	0.50	7922075	12	0.50	7922100	12	0.50	7922100
Total Suspended Solids	mg/L	22	1.4	7911833	66	5.0	7911906	72	5.0	7911906
Dissolved Sulphate (SO4)	mg/L	130	10	7922074	420	10	7922099	410	10	7922099
Turbidity	NTU	14	0.10	7919403	40	0.10	7919403			
Conductivity	uS/cm	680	1.0	7916349	1800	1.0	7916349			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM284			SFM284			SFM285		
Sampling Date		2022/03/29			2022/03/29			2022/03/28		
COC Number		869451-02-01			869451-02-01			869451-02-01		
	UNITS	MW8-D	RDL	QC Batch	MW8-D Lab-Dup	RDL	QC Batch	DUP2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	4.91	N/A	7911184				42.1	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	130	1.0	7911179				1300	1.0	7911179
Calculated TDS	mg/L	280	1.0	7911189				2300	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	1.0	7911179				<1.0	1.0	7911179
Cation Sum	me/L	4.77	N/A	7911184				38.7	N/A	7911184
Hardness (CaCO3)	mg/L	190	1.0	7911182				1500	1.0	7911182
Ion Balance (% Difference)	%	1.45	N/A	7911183				4.20	N/A	7911183
Langelier Index (@ 20C)	N/A	0.415		7911187				0.855		7911187
Langelier Index (@ 4C)	N/A	0.166		7911188				0.613		7911188
Nitrate (N)	mg/L	<0.050	0.050	7911185				<0.050	0.050	7911185
Saturation pH (@ 20C)	N/A	7.53		7911187				5.95		7911187
Saturation pH (@ 4C)	N/A	7.78		7911188				6.19		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	130	25	7922071				1300	75	7922071
Total Chemical Oxygen Demand	mg/L	<20	20	7921827				200	20	7921827
Dissolved Chloride (Cl-)	mg/L	39	1.0	7922073				81	1.0	7922073
Colour	TCU	<5.0	5.0	7922076				42	5.0	7922076
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7922078				<0.050	0.050	7922078
Nitrite (N)	mg/L	<0.010	0.010	7922079				<0.010	0.010	7922079
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921835				20	1.0	7921835
Dissolved Organic Carbon (C)	mg/L	0.68	0.50	7916269				55 (1)	5.0	7916269
Total Organic Carbon (C)	mg/L	0.56	0.50	7919713				57 (1)	5.0	7916264
Orthophosphate (P)	mg/L	0.078	0.010	7922077				<0.010	0.010	7922077
pH	pH	7.94		7924265	7.96		7924265	6.80		7916343
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314				0.0013	0.0010	7920314
Reactive Silica (SiO2)	mg/L	13	0.50	7922075				11	0.50	7922075
Total Suspended Solids	mg/L	11	1.0	7911906				38	5.0	7911833
Dissolved Sulphate (SO4)	mg/L	59	2.0	7922074				650	20	7922074
Turbidity	NTU	3.8	0.10	7919403				140	1.0	7922007
Conductivity	uS/cm	490	1.0	7924263	490	1.0	7924263	3200	1.0	7916349

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM285			SFM286			SFM286		
Sampling Date		2022/03/28			2022/03/29			2022/03/29		
COC Number		869451-02-01			869451-02-01			869451-02-01		
	UNITS	DUP2 Lab-Dup	RDL	QC Batch	MW19-09S	RDL	QC Batch	MW19-09S Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				2.51	N/A	7911184			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				100	1.0	7911179			
Calculated TDS	mg/L				140	1.0	7911189			
Carb. Alkalinity (calc. as CaCO3)	mg/L				1.3	1.0	7911179			
Cation Sum	me/L				2.53	N/A	7911184			
Hardness (CaCO3)	mg/L				92	1.0	7911182			
Ion Balance (% Difference)	%				0.400	N/A	7911183			
Langelier Index (@ 20C)	N/A				0.257		7911187			
Langelier Index (@ 4C)	N/A				0.00600		7911188			
Nitrate (N)	mg/L				<0.050	0.050	7911185			
Saturation pH (@ 20C)	N/A				7.89		7911187			
Saturation pH (@ 4C)	N/A				8.14		7911188			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				100	25	7922071			
Total Chemical Oxygen Demand	mg/L	190	20	7921827	22	20	7921827			
Dissolved Chloride (Cl-)	mg/L				6.9	1.0	7922073			
Colour	TCU				<5.0	5.0	7922076			
Nitrate + Nitrite (N)	mg/L				<0.050	0.050	7922078			
Nitrite (N)	mg/L				<0.010	0.010	7922079			
Nitrogen (Ammonia Nitrogen)	mg/L				0.051	0.050	7921835			
Dissolved Organic Carbon (C)	mg/L				0.90	0.50	7916269			
Total Organic Carbon (C)	mg/L				<50 (1)	50	7916190	<50 (1)	50	7916190
Orthophosphate (P)	mg/L				0.013	0.010	7922077			
pH	pH				8.14		7921839			
Phenols-4AAP	mg/L				<0.0010	0.0010	7920314			
Reactive Silica (SiO2)	mg/L				8.3	0.50	7922075			
Total Suspended Solids	mg/L				14000	250	7911906			
Dissolved Sulphate (SO4)	mg/L				13	2.0	7922074			
Turbidity	NTU				>1000	1.0	7922007			
Conductivity	uS/cm				250	1.0	7921837			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM287			SFM288			SFM289		
Sampling Date		2022/03/29			2022/03/28			2022/03/28		
COC Number		869451-02-01			869451-02-01			869451-02-01		
	UNITS	MW19-10S	RDL	QC Batch	MW19-11M	RDL	QC Batch	MW19-11D	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	3.68	N/A	7911184	10.4	N/A	7911184	27.3	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	77	1.0	7911179	410	1.0	7911179	900	1.0	7911179
Calculated TDS	mg/L	230	1.0	7911189	560	1.0	7911189	1500	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7911179	<1.0	1.0	7911179	1.0	1.0	7911179
Cation Sum	me/L	3.57	N/A	7911184	10.4	N/A	7911184	26.3	N/A	7911184
Hardness (CaCO3)	mg/L	150	1.0	7911182	460	1.0	7911182	1100	1.0	7911182
Ion Balance (% Difference)	%	1.52	N/A	7911183	0.140	N/A	7911183	1.87	N/A	7911183
Langelier Index (@ 20C)	N/A	-0.787		7911187	0.467		7911187	0.980		7911187
Langelier Index (@ 4C)	N/A	-1.04		7911188	0.220		7911188	0.735		7911188
Nitrate (N)	mg/L	1.1	0.050	7911185	0.30	0.050	7911185	<0.050	0.050	7911185
Saturation pH (@ 20C)	N/A	7.85		7911187	6.70		7911187	6.09		7911187
Saturation pH (@ 4C)	N/A	8.10		7911188	6.94		7911188	6.34		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	78	5.0	7922071	410	25	7922071	900	75	7922071
Total Chemical Oxygen Demand	mg/L	29	20	7921827	240	20	7921827	74	20	7921827
Dissolved Chloride (Cl-)	mg/L	11	1.0	7922073	11	1.0	7922073	28	1.0	7922073
Colour	TCU	<5.0	5.0	7922076	16	5.0	7922076	20	5.0	7922076
Nitrate + Nitrite (N)	mg/L	1.1	0.050	7922078	0.31	0.050	7922078	<0.050	0.050	7922078
Nitrite (N)	mg/L	<0.010	0.010	7922079	0.016	0.010	7922079	<0.010	0.010	7922079
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921835	1.4	0.050	7921835	7.0	0.25	7921835
Dissolved Organic Carbon (C)	mg/L	1.5	0.50	7916269	15	0.50	7916269	19 (1)	5.0	7919715
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7916190	55 (2)	5.0	7916190	23 (1)	5.0	7916264
Orthophosphate (P)	mg/L	0.010	0.010	7922077	0.011	0.010	7922077	<0.010	0.010	7922077
pH	pH	7.06		7916343	7.16		7916343	7.07		7916343
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314	<0.0010	0.0010	7920314
Reactive Silica (SiO2)	mg/L	11	0.50	7922075	4.5	0.50	7922075	7.4	0.50	7922075
Total Suspended Solids	mg/L	7300	250	7911906	3000	250	7911833	620	10	7911833
Dissolved Sulphate (SO4)	mg/L	84	2.0	7922074	94	2.0	7922074	400	10	7922074
Turbidity	NTU	>1000	1.0	7922007	>1000	1.0	7922007	130	1.0	7922008
Conductivity	uS/cm	380	1.0	7916349	940	1.0	7916349	2200	1.0	7916349

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM289			SFM290		SFM294		
Sampling Date		2022/03/28			2022/03/29		2022/03/29		
COC Number		869451-02-01			869451-02-01		869451-03-01		
	UNITS	MW19-11D Lab-Dup	RDL	QC Batch	PW19-01	QC Batch	MW19-12S	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L				6.33	7911184	4.84	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				280	7911179	200	1.0	7911179
Calculated TDS	mg/L				330	7911189	260	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L				2.3	7911179	<1.0	1.0	7911179
Cation Sum	me/L				6.14	7911184	4.61	N/A	7911184
Hardness (CaCO3)	mg/L				280	7911182	210	1.0	7911182
Ion Balance (% Difference)	%				1.52	7911183	2.43	N/A	7911183
Langelier Index (@ 20C)	N/A				0.921	7911187	0.367		7911187
Langelier Index (@ 4C)	N/A				0.672	7911188	0.117		7911188
Nitrate (N)	mg/L				<0.050	7911185	0.42	0.050	7911185
Saturation pH (@ 20C)	N/A				7.03	7911187	7.26		7911187
Saturation pH (@ 4C)	N/A				7.28	7911188	7.51		7911188
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L				280	7922071	200	25	7922081
Total Chemical Oxygen Demand	mg/L				37	7921827	86	20	7921827
Dissolved Chloride (Cl-)	mg/L				8.0	7922073	6.3	1.0	7922084
Colour	TCU				<5.0	7922076	20	5.0	7922090
Nitrate + Nitrite (N)	mg/L				<0.050	7922078	0.42	0.050	7922094
Nitrite (N)	mg/L				<0.010	7922079	<0.010	0.010	7922095
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	7921835	<0.050	0.050	7921844
Dissolved Organic Carbon (C)	mg/L	19 (1)	5.0	7919715	1.3	7919715	5.8	0.50	7916269
Total Organic Carbon (C)	mg/L				<5.0 (2)	7916190	10 (2)	5.0	7916190
Orthophosphate (P)	mg/L				<0.010	7922077	0.022	0.010	7922091
pH	pH				7.95	7921839	7.63		7916343
Phenols-4AAP	mg/L				<0.0010	7920314	<0.0010	0.0010	7920314
Reactive Silica (SiO2)	mg/L				13	7922075	7.9	0.50	7922087
Total Suspended Solids	mg/L				1300	7911906	1400	100	7911906
Dissolved Sulphate (SO4)	mg/L				25	7922074	29	2.0	7922085
Turbidity	NTU				860	7922008	940	1.0	7922008
Conductivity	uS/cm				570	7921837	450	1.0	7916349

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM295			SFM295			SFM296		
Sampling Date		2022/03/29			2022/03/29			2022/03/28		
COC Number		869451-03-01			869451-03-01			869451-03-01		
	UNITS	MW19-12D	RDL	QC Batch	MW19-12D Lab-Dup	RDL	QC Batch	MW19-13S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	4.16	N/A	7911184				1.46	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	150	1.0	7911179				9.2	1.0	7911179
Calculated TDS	mg/L	230	1.0	7911189				96	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7911179				<1.0	1.0	7911179
Cation Sum	me/L	3.99	N/A	7911184				1.40	N/A	7911184
Hardness (CaCO3)	mg/L	170	1.0	7911182				48	1.0	7911182
Ion Balance (% Difference)	%	2.09	N/A	7911183				2.10	N/A	7911183
Langelier Index (@ 20C)	N/A	-0.193		7911187				-3.27		7911187
Langelier Index (@ 4C)	N/A	-0.443		7911188				-3.52		7911188
Nitrate (N)	mg/L	0.39	0.050	7911185				<0.050	0.050	7911185
Saturation pH (@ 20C)	N/A	7.49		7911187				9.30		7911187
Saturation pH (@ 4C)	N/A	7.74		7911188				9.55		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	150	25	7922108	150	25	7922108	9.2	5.0	7922081
Total Chemical Oxygen Demand	mg/L	<20	20	7921827				89	20	7921827
Dissolved Chloride (Cl-)	mg/L	12	1.0	7922109	12	1.0	7922109	9.7	1.0	7922084
Colour	TCU	10	5.0	7922116	12	5.0	7922116	14	5.0	7922090
Nitrate + Nitrite (N)	mg/L	0.39	0.050	7922118	0.36	0.050	7922118	<0.050	0.050	7922094
Nitrite (N)	mg/L	<0.010	0.010	7922121	<0.010	0.010	7922121	<0.010	0.010	7922095
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921844				<0.050	0.050	7921844
Dissolved Organic Carbon (C)	mg/L	1.7	0.50	7919715				4.8	0.50	7920203
Total Organic Carbon (C)	mg/L	1.8	0.50	7919713				20 (1)	5.0	7916190
Orthophosphate (P)	mg/L	<0.010	0.010	7922117	<0.010	0.010	7922117	<0.010	0.010	7922091
pH	pH	7.30		7916343	7.32		7916343	6.03		7921839
Phenols-4AAP	mg/L	<0.0010	0.0010	7920314				<0.0010	0.0010	7920342
Reactive Silica (SiO2)	mg/L	8.3	0.50	7922114	8.3	0.50	7922114	5.2	0.50	7922087
Total Suspended Solids	mg/L	1000	50	7911906				7800	170	7911833
Dissolved Sulphate (SO4)	mg/L	43	2.0	7922112	43	2.0	7922112	48	2.0	7922085
Turbidity	NTU	140	1.0	7922008				>1000	1.0	7922008
Conductivity	uS/cm	400	1.0	7916349	400	1.0	7916349	170	1.0	7921837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM296			SFM297			SFM297		
Sampling Date		2022/03/28			2022/03/28			2022/03/28		
COC Number		869451-03-01			869451-03-01			869451-03-01		
	UNITS	MW19-13S Lab-Dup	RDL	QC Batch	MW19-13D	RDL	QC Batch	MW19-13D Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				1.84	N/A	7911184			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				21	1.0	7911179			
Calculated TDS	mg/L				130	1.0	7911189			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7911179			
Cation Sum	me/L				1.76	N/A	7911184			
Hardness (CaCO3)	mg/L				57	1.0	7911182			
Ion Balance (% Difference)	%				2.22	N/A	7911183			
Langelier Index (@ 20C)	N/A				-2.01		7911187			
Langelier Index (@ 4C)	N/A				-2.26		7911188			
Nitrate (N)	mg/L				0.076	0.050	7911185			
Saturation pH (@ 20C)	N/A				8.85		7911187			
Saturation pH (@ 4C)	N/A				9.10		7911188			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				21	5.0	7922081			
Total Chemical Oxygen Demand	mg/L				<20	20	7921827			
Dissolved Chloride (Cl-)	mg/L				10	1.0	7922084			
Colour	TCU				<5.0	5.0	7922090			
Nitrate + Nitrite (N)	mg/L				0.076	0.050	7922094			
Nitrite (N)	mg/L				<0.010	0.010	7922095			
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7921844			
Dissolved Organic Carbon (C)	mg/L				0.94	0.50	7913780	0.92	0.50	7913780
Total Organic Carbon (C)	mg/L				<5.0 (1)	5.0	7916264			
Orthophosphate (P)	mg/L				0.043	0.010	7922091			
pH	pH				6.84		7921839			
Phenols-4AAP	mg/L	<0.0010	0.0010	7920342	<0.0010	0.0010	7920342			
Reactive Silica (SiO2)	mg/L				17	0.50	7922087			
Total Suspended Solids	mg/L				380	10	7911833			
Dissolved Sulphate (SO4)	mg/L				54	2.0	7922085			
Turbidity	NTU				260	1.0	7922008			
Conductivity	uS/cm				210	1.0	7921837			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM298			SFM299			SFM300		
Sampling Date		2022/03/28			2022/03/28			2022/03/28		
COC Number		869451-03-01			869451-03-01			869451-03-01		
	UNITS	MW20-14S	RDL	QC Batch	MW20-14D	RDL	QC Batch	MW20-15S	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	1.53	N/A	7911184	6.32	N/A	7911184	6.10	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	42	1.0	7911179	93	1.0	7911179	200	1.0	7911179
Calculated TDS	mg/L	94	1.0	7911189	390	1.0	7911189	370	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7911179	<1.0	1.0	7911179	<1.0	1.0	7911179
Cation Sum	me/L	1.52	N/A	7911184	5.88	N/A	7911184	6.62	N/A	7911184
Hardness (CaCO3)	mg/L	57	1.0	7911182	240	1.0	7911182	250	1.0	7911182
Ion Balance (% Difference)	%	0.330	N/A	7911183	3.61	N/A	7911183	4.09	N/A	7911183
Langelier Index (@ 20C)	N/A	-1.85		7911187	-0.538		7911187	0.359		7911187
Langelier Index (@ 4C)	N/A	-2.10		7911188	-0.787		7911188	0.110		7911188
Nitrate (N)	mg/L	1.5	0.050	7911185	0.49	0.050	7911185	0.31	0.050	7911185
Saturation pH (@ 20C)	N/A	8.53		7911187	7.69		7911187	7.28		7911187
Saturation pH (@ 4C)	N/A	8.78		7911188	7.93		7911188	7.52		7911188
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	42	5.0	7922081	93	5.0	7922081	200	25	7922081
Total Chemical Oxygen Demand	mg/L	77	20	7921827	<20	20	7921827	<20	20	7921827
Dissolved Chloride (Cl-)	mg/L	8.0	1.0	7922084	10	1.0	7922084	7.3	1.0	7922084
Colour	TCU	8.3	5.0	7922090	7.0	5.0	7922090	<5.0	5.0	7922090
Nitrate + Nitrite (N)	mg/L	1.5	0.050	7922094	0.49	0.050	7922094	0.31	0.050	7922094
Nitrite (N)	mg/L	<0.010	0.010	7922095	<0.010	0.010	7922095	<0.010	0.010	7922095
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921844	<0.050	0.050	7921844	0.080	0.050	7921844
Dissolved Organic Carbon (C)	mg/L	4.0	0.50	7916269	2.0	0.50	7916269	1.4	0.50	7916269
Total Organic Carbon (C)	mg/L	9.0 (1)	5.0	7916190	2.2	0.50	7919713	<5.0 (1)	5.0	7916264
Orthophosphate (P)	mg/L	0.013	0.010	7922091	<0.010	0.010	7922091	<0.010	0.010	7922091
pH	pH	6.69		7921839	7.15		7921839	7.63		7921839
Phenols-4AAP	mg/L	<0.0010	0.0010	7920342	<0.0010	0.0010	7920342	<0.0010	0.0010	7920342
Reactive Silica (SiO2)	mg/L	7.2	0.50	7922087	11	0.50	7922087	20	1.0	7922087
Total Suspended Solids	mg/L	3000	250	7911833	140	5.0	7911833	510	10	7911833
Dissolved Sulphate (SO4)	mg/L	17	2.0	7922085	200	10	7922085	94	2.0	7922085
Turbidity	NTU	>1000	1.0	7922008	77	0.10	7922008	340	1.0	7922008
Conductivity	uS/cm	160	1.0	7921837	630	1.0	7921837	580	1.0	7921837

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SFM301		
Sampling Date		2022/03/29		
COC Number		869451-03-01		
	UNITS	MW20-15D	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	13.6	N/A	7911184
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	350	1.0	7911179
Calculated TDS	mg/L	790	1.0	7911189
Carb. Alkalinity (calc. as CaCO3)	mg/L	2.0	1.0	7911179
Cation Sum	me/L	13.3	N/A	7911184
Hardness (CaCO3)	mg/L	580	1.0	7911182
Ion Balance (% Difference)	%	1.08	N/A	7911183
Langelier Index (@ 20C)	N/A	1.03		7911187
Langelier Index (@ 4C)	N/A	0.780		7911188
Nitrate (N)	mg/L	0.072	0.050	7911185
Saturation pH (@ 20C)	N/A	6.76		7911187
Saturation pH (@ 4C)	N/A	7.01		7911188
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	350	25	7922081
Total Chemical Oxygen Demand	mg/L	<20	20	7921827
Dissolved Chloride (Cl-)	mg/L	23	1.0	7922084
Colour	TCU	<5.0	5.0	7922090
Nitrate + Nitrite (N)	mg/L	0.072	0.050	7922094
Nitrite (N)	mg/L	<0.010	0.010	7922095
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7921844
Dissolved Organic Carbon (C)	mg/L	2.2	0.50	7916269
Total Organic Carbon (C)	mg/L	2.3	0.50	7916190
Orthophosphate (P)	mg/L	0.035	0.010	7922091
pH	pH	7.79		7924265
Phenols-4AAP	mg/L	<0.0010	0.0010	7920342
Reactive Silica (SiO2)	mg/L	25	1.0	7922087
Total Suspended Solids	mg/L	21	1.0	7911906
Dissolved Sulphate (SO4)	mg/L	290	10	7922085
Turbidity	NTU	12	0.10	7919403
Conductivity	uS/cm	1200	1.0	7924263

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM272		SFM273		SFM274	SFM275	SFM276		
Sampling Date		2022/03/28		2022/03/28		2022/03/29	2022/03/29	2022/03/29		
COC Number		869451-01-01		869451-01-01		869451-01-01	869451-01-01	869451-01-01		
	UNITS	MW1-S	RDL	MW1-D	RDL	MW2-S	MW2-M	MW2-D	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	1500	5.0	5.6	5.0	8.2	<5.0	5.2	5.0	7916263
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	7916263
Dissolved Arsenic (As)	ug/L	2.9	1.0	3.9	1.0	<1.0	1.7	2.2	1.0	7916263
Dissolved Barium (Ba)	ug/L	58	1.0	25	1.0	45	13	13	1.0	7916263
Dissolved Beryllium (Be)	ug/L	0.15	0.10	0.11	0.10	<0.10	<0.10	<0.10	0.10	7916263
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Boron (B)	ug/L	3100	50	4800	500	81	94	51	50	7916263
Dissolved Cadmium (Cd)	ug/L	0.050	0.010	1.1	0.010	0.014	0.065	0.044	0.010	7916263
Dissolved Calcium (Ca)	ug/L	300000	100	330000	100	63000	46000	63000	100	7916263
Dissolved Chromium (Cr)	ug/L	2.6	1.0	<1.0	1.0	<1.0	<1.0	<1.0	1.0	7916263
Dissolved Cobalt (Co)	ug/L	4.0	0.40	9.1	0.40	<0.40	<0.40	<0.40	0.40	7916263
Dissolved Copper (Cu)	ug/L	3.6	0.50	1.3	0.50	1.9	3.6	1.3	0.50	7916263
Dissolved Iron (Fe)	ug/L	2500	50	2200	50	<50	<50	<50	50	7916263
Dissolved Lead (Pb)	ug/L	2.5	0.50	0.51	0.50	<0.50	<0.50	<0.50	0.50	7916263
Dissolved Magnesium (Mg)	ug/L	55000	100	98000	100	6900	15000	17000	100	7916263
Dissolved Manganese (Mn)	ug/L	9600	2.0	8000	2.0	4.2	<2.0	<2.0	2.0	7916263
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Nickel (Ni)	ug/L	9.5	2.0	21	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Phosphorus (P)	ug/L	140	100	<100	100	<100	<100	<100	100	7916263
Dissolved Potassium (K)	ug/L	8400	100	2600	100	2100	1000	1100	100	7916263
Dissolved Selenium (Se)	ug/L	<0.50	0.50	<0.50	0.50	<0.50	<0.50	<0.50	0.50	7916263
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	<0.10	<0.10	0.10	7916263
Dissolved Sodium (Na)	ug/L	58000	100	78000	100	11000	19000	24000	100	7916263
Dissolved Strontium (Sr)	ug/L	1200	2.0	790	2.0	250	140	160	2.0	7916263
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	<0.10	<0.10	0.10	7916263
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Titanium (Ti)	ug/L	56	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Uranium (U)	ug/L	210	0.10	630	1.0	0.56	27	190	0.10	7916263
Dissolved Vanadium (V)	ug/L	3.3	2.0	<2.0	2.0	<2.0	<2.0	<2.0	2.0	7916263
Dissolved Zinc (Zn)	ug/L	19	5.0	78	5.0	76	5.0	<5.0	5.0	7916263

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM277		SFM278		SFM279		SFM281		
Sampling Date		2022/03/28		2022/03/28		2022/03/28		2022/03/28		
COC Number		869451-01-01		869451-01-01		869451-01-01		869451-02-01		
	UNITS	DUP1	QC Batch	MW6-S	RDL	MW6-D	RDL	MW7-S	RDL	QC Batch
Metals										
Dissolved Aluminum (Al)	ug/L	44	7916263	82	5.0	65	50	20	5.0	7916267
Dissolved Antimony (Sb)	ug/L	<1.0	7916263	<1.0	1.0	<10	10	<1.0	1.0	7916267
Dissolved Arsenic (As)	ug/L	1.1	7916263	<1.0	1.0	38	10	<1.0	1.0	7916267
Dissolved Barium (Ba)	ug/L	57	7916263	18	1.0	60	10	13	1.0	7916267
Dissolved Beryllium (Be)	ug/L	1.4	7916263	<0.10	0.10	<1.0	1.0	<0.10	0.10	7916267
Dissolved Bismuth (Bi)	ug/L	<2.0	7916263	<2.0	2.0	<20	20	<2.0	2.0	7916267
Dissolved Boron (B)	ug/L	210	7916263	380	50	11000	500	<50	50	7916267
Dissolved Cadmium (Cd)	ug/L	0.14	7916263	0.032	0.010	<0.10	0.10	<0.010	0.010	7916267
Dissolved Calcium (Ca)	ug/L	15000	7916263	72000	100	410000	1000	48000	100	7916267
Dissolved Chromium (Cr)	ug/L	<1.0	7916263	<1.0	1.0	<10	10	<1.0	1.0	7916267
Dissolved Cobalt (Co)	ug/L	0.58	7916263	<0.40	0.40	19	4.0	<0.40	0.40	7916267
Dissolved Copper (Cu)	ug/L	9.8	7916263	2.5	0.50	<5.0	5.0	1.6	0.50	7916267
Dissolved Iron (Fe)	ug/L	<50	7916263	<50	50	13000	500	<50	50	7916267
Dissolved Lead (Pb)	ug/L	<0.50	7916263	<0.50	0.50	<5.0	5.0	<0.50	0.50	7916267
Dissolved Magnesium (Mg)	ug/L	4500	7916263	9200	100	110000	1000	4700	100	7916267
Dissolved Manganese (Mn)	ug/L	49	7916263	460	2.0	21000	20	2.2	2.0	7916267
Dissolved Molybdenum (Mo)	ug/L	<2.0	7916263	<2.0	2.0	<20	20	<2.0	2.0	7916267
Dissolved Nickel (Ni)	ug/L	<2.0	7916263	<2.0	2.0	24	20	<2.0	2.0	7916267
Dissolved Phosphorus (P)	ug/L	<100	7916263	<100	100	<1000	1000	<100	100	7916267
Dissolved Potassium (K)	ug/L	1100	7916263	820	100	14000	1000	2100	100	7916267
Dissolved Selenium (Se)	ug/L	<0.50	7916263	<0.50	0.50	<5.0	5.0	<0.50	0.50	7916267
Dissolved Silver (Ag)	ug/L	1.1	7916263	<0.10	0.10	<1.0	1.0	<0.10	0.10	7916267
Dissolved Sodium (Na)	ug/L	14000	7916263	13000	100	170000	1000	6800	100	7916267
Dissolved Strontium (Sr)	ug/L	89	7916263	200	2.0	1800	20	130	2.0	7916267
Dissolved Thallium (Tl)	ug/L	<0.10	7916263	<0.10	0.10	<1.0	1.0	<0.10	0.10	7916267
Dissolved Tin (Sn)	ug/L	<2.0	7916263	<2.0	2.0	<20	20	<2.0	2.0	7916267
Dissolved Titanium (Ti)	ug/L	<2.0	7916263	<2.0	2.0	<20	20	<2.0	2.0	7916267
Dissolved Uranium (U)	ug/L	2.4	7916263	2.1	0.10	210	1.0	0.78	0.10	7916267
Dissolved Vanadium (V)	ug/L	<2.0	7916263	<2.0	2.0	<20	20	<2.0	2.0	7916267
Dissolved Zinc (Zn)	ug/L	22	7916263	<5.0	5.0	<50	50	<5.0	5.0	7916267

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM282	SFM283	SFM283	SFM284		SFM285		
Sampling Date		2022/03/28	2022/03/29	2022/03/29	2022/03/29		2022/03/28		
COC Number		869451-02-01	869451-02-01	869451-02-01	869451-02-01		869451-02-01		
	UNITS	MW7-D	MW8-S	MW8-S Lab-Dup	MW8-D	RDL	DUP2	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	93	<5.0	<5.0	<5.0	5.0	65	50	7916267
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	<10	10	7916267
Dissolved Arsenic (As)	ug/L	3.6	2.3	2.2	8.7	1.0	38	10	7916267
Dissolved Barium (Ba)	ug/L	19	25	26	7.2	1.0	60	10	7916267
Dissolved Beryllium (Be)	ug/L	0.23	<0.10	<0.10	<0.10	0.10	<1.0	1.0	7916267
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	7916267
Dissolved Boron (B)	ug/L	690	130	110	<50	50	11000	500	7916267
Dissolved Cadmium (Cd)	ug/L	0.12	0.034	0.039	0.028	0.010	<0.10	0.10	7916267
Dissolved Calcium (Ca)	ug/L	98000	210000	210000	61000	100	400000	1000	7916267
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	<10	10	7916267
Dissolved Cobalt (Co)	ug/L	4.4	<0.40	<0.40	<0.40	0.40	19	4.0	7916267
Dissolved Copper (Cu)	ug/L	1.3	3.3	3.3	0.61	0.50	<5.0	5.0	7916267
Dissolved Iron (Fe)	ug/L	1000	<50	<50	<50	50	13000	500	7916267
Dissolved Lead (Pb)	ug/L	1.4	<0.50	<0.50	<0.50	0.50	<5.0	5.0	7916267
Dissolved Magnesium (Mg)	ug/L	13000	29000	29000	9300	100	110000	1000	7916267
Dissolved Manganese (Mn)	ug/L	3700	22	22	11	2.0	21000	20	7916267
Dissolved Molybdenum (Mo)	ug/L	<2.0	5.1	5.9	8.8	2.0	<20	20	7916267
Dissolved Nickel (Ni)	ug/L	2.2	6.2	6.3	<2.0	2.0	24	20	7916267
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	100	100	<1000	1000	7916267
Dissolved Potassium (K)	ug/L	2300	3100	3100	1500	100	14000	1000	7916267
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	<5.0	5.0	7916267
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<1.0	1.0	7916267
Dissolved Sodium (Na)	ug/L	16000	110000	110000	22000	100	160000	1000	7916267
Dissolved Strontium (Sr)	ug/L	270	430	430	150	2.0	1800	20	7916267
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	<1.0	1.0	7916267
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	7916267
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	7916267
Dissolved Uranium (U)	ug/L	9.0	140	140	370	0.10	210	1.0	7916267
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	<20	20	7916267
Dissolved Zinc (Zn)	ug/L	23	5.3	<5.0	<5.0	5.0	<50	50	7916267

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM286	SFM287	SFM288	SFM289	SFM290	SFM294		
Sampling Date		2022/03/29	2022/03/29	2022/03/28	2022/03/28	2022/03/29	2022/03/29		
COC Number		869451-02-01	869451-02-01	869451-02-01	869451-02-01	869451-02-01	869451-03-01		
	UNITS	MW19-09S	MW19-10S	MW19-11M	MW19-11D	PW19-01	MW19-12S	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	7.6	<5.0	100	31	5.8	33	5.0	7916267
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7916267
Dissolved Arsenic (As)	ug/L	1.2	<1.0	2.1	27	6.9	1.0	1.0	7916267
Dissolved Barium (Ba)	ug/L	16	25	40	46	60	56	1.0	7916267
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	0.10	7916267
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Boron (B)	ug/L	53	210	1200	3800	<50	82	50	7916267
Dissolved Cadmium (Cd)	ug/L	<0.010	0.034	0.078	0.017	<0.010	0.048	0.010	7916267
Dissolved Calcium (Ca)	ug/L	30000	45000	150000	360000	90000	70000	100	7916267
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	1.0	7916267
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	3.8	10	0.91	<0.40	0.40	7916267
Dissolved Copper (Cu)	ug/L	2.8	2.1	1.6	0.95	<0.50	11	0.50	7916267
Dissolved Iron (Fe)	ug/L	<50	<50	2600	13000	860	<50	50	7916267
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7916267
Dissolved Magnesium (Mg)	ug/L	4400	7700	20000	54000	13000	7800	100	7916267
Dissolved Manganese (Mn)	ug/L	<2.0	<2.0	8300	16000	1700	3.1	2.0	7916267
Dissolved Molybdenum (Mo)	ug/L	5.8	<2.0	16	2.4	<2.0	<2.0	2.0	7916267
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	2.2	5.7	2.8	2.2	2.0	7916267
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7916267
Dissolved Potassium (K)	ug/L	1800	2100	6100	13000	1600	6700	100	7916267
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7916267
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7916267
Dissolved Sodium (Na)	ug/L	15000	14000	19000	54000	12000	7100	100	7916267
Dissolved Strontium (Sr)	ug/L	86	170	460	1500	230	190	2.0	7916267
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	0.17	<0.10	<0.10	0.10	7916267
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	4.3	2.5	<2.0	<2.0	2.0	7916267
Dissolved Uranium (U)	ug/L	5.9	4.0	63	260	8.9	2.9	0.10	7916267
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	7.3	5.7	<5.0	37	5.0	7916267

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM295	SFM296	SFM297	SFM298	SFM299	SFM300		
Sampling Date		2022/03/29	2022/03/28	2022/03/28	2022/03/28	2022/03/28	2022/03/28		
COC Number		869451-03-01	869451-03-01	869451-03-01	869451-03-01	869451-03-01	869451-03-01		
	UNITS	MW19-12D	MW19-13S	MW19-13D	MW20-14S	MW20-14D	MW20-15S	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	5.6	460	38	97	7.2	<5.0	5.0	7916267
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7916267
Dissolved Arsenic (As)	ug/L	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7916267
Dissolved Barium (Ba)	ug/L	20	21	56	21	14	33	1.0	7916267
Dissolved Beryllium (Be)	ug/L	<0.10	0.20	1.4	<0.10	0.26	<0.10	0.10	7916267
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Boron (B)	ug/L	82	240	210	<50	230	150	50	7916267
Dissolved Cadmium (Cd)	ug/L	0.076	0.13	0.14	0.029	0.14	0.024	0.010	7916267
Dissolved Calcium (Ca)	ug/L	55000	12000	15000	15000	61000	74000	100	7916267
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7916267
Dissolved Cobalt (Co)	ug/L	<0.40	3.0	0.64	2.0	<0.40	<0.40	0.40	7916267
Dissolved Copper (Cu)	ug/L	1.5	1.8	9.0	2.6	0.59	15	0.50	7916267
Dissolved Iron (Fe)	ug/L	480	920	<50	550	56	<50	50	7916267
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7916267
Dissolved Magnesium (Mg)	ug/L	8900	4400	4500	4600	21000	16000	100	7916267
Dissolved Manganese (Mn)	ug/L	34	600	48	190	27	33	2.0	7916267
Dissolved Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	58	2.0	7916267
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	<2.0	4.8	2.1	18	2.0	7916267
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7916267
Dissolved Potassium (K)	ug/L	2000	780	1200	1400	1500	1600	100	7916267
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7916267
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	1.2	<0.10	<0.10	<0.10	0.10	7916267
Dissolved Sodium (Na)	ug/L	9900	8900	14000	7500	24000	35000	100	7916267
Dissolved Strontium (Sr)	ug/L	160	32	89	74	240	140	2.0	7916267
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7916267
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	3.1	<2.0	<2.0	2.0	7916267
Dissolved Uranium (U)	ug/L	16	0.19	2.3	<0.10	1.4	2.9	0.10	7916267
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7916267
Dissolved Zinc (Zn)	ug/L	13	5.6	14	<5.0	73	59	5.0	7916267

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SFM301		
Sampling Date		2022/03/29		
COC Number		869451-03-01		
	UNITS	MW20-15D	RDL	QC Batch
Metals				
Dissolved Aluminum (Al)	ug/L	<5.0	5.0	7916267
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	7916267
Dissolved Arsenic (As)	ug/L	1.7	1.0	7916267
Dissolved Barium (Ba)	ug/L	45	1.0	7916267
Dissolved Beryllium (Be)	ug/L	<0.10	0.10	7916267
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	7916267
Dissolved Boron (B)	ug/L	53	50	7916267
Dissolved Cadmium (Cd)	ug/L	0.039	0.010	7916267
Dissolved Calcium (Ca)	ug/L	170000	100	7916267
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	7916267
Dissolved Cobalt (Co)	ug/L	<0.40	0.40	7916267
Dissolved Copper (Cu)	ug/L	0.76	0.50	7916267
Dissolved Iron (Fe)	ug/L	<50	50	7916267
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7916267
Dissolved Magnesium (Mg)	ug/L	39000	100	7916267
Dissolved Manganese (Mn)	ug/L	2.1	2.0	7916267
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	7916267
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	7916267
Dissolved Phosphorus (P)	ug/L	<100	100	7916267
Dissolved Potassium (K)	ug/L	2000	100	7916267
Dissolved Selenium (Se)	ug/L	<0.50	0.50	7916267
Dissolved Silver (Ag)	ug/L	<0.10	0.10	7916267
Dissolved Sodium (Na)	ug/L	40000	100	7916267
Dissolved Strontium (Sr)	ug/L	290	2.0	7916267
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	7916267
Dissolved Tin (Sn)	ug/L	<2.0	2.0	7916267
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	7916267
Dissolved Uranium (U)	ug/L	310	0.10	7916267
Dissolved Vanadium (V)	ug/L	<2.0	2.0	7916267
Dissolved Zinc (Zn)	ug/L	7.6	5.0	7916267

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM272			SFM273		SFM274	SFM275		
Sampling Date		2022/03/28			2022/03/28		2022/03/29	2022/03/29		
COC Number		869451-01-01			869451-01-01		869451-01-01	869451-01-01		
	UNITS	MW1-S	RDL	QC Batch	MW1-D	QC Batch	MW2-S	MW2-M	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7913702	<0.0010	7913702	<0.0010	<0.0010	0.0010	7913702
Toluene	mg/L	<0.0010	0.0010	7913702	<0.0010	7913702	<0.0010	<0.0010	0.0010	7913702
Ethylbenzene	mg/L	<0.0010	0.0010	7913702	<0.0010	7913702	<0.0010	<0.0010	0.0010	7913702
Total Xylenes	mg/L	<0.0020	0.0020	7913702	<0.0020	7913702	<0.0020	<0.0020	0.0020	7913702
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7913702	<0.090	7913702	<0.090	<0.090	0.090	7913702
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7914331	<0.050	7913863	<0.050	<0.050	0.050	7914331
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7914331	<0.050	7913863	<0.050	<0.050	0.050	7914331
>C21-<C32 Hydrocarbons	mg/L	<0.11 (1)	0.11	7914331	<0.090	7913863	<0.090	<0.090	0.090	7914331
Modified TPH (Tier1)	mg/L	<0.11	0.11	7911236	<0.090	7911236	<0.090	<0.090	0.090	7911236
Reached Baseline at C32	mg/L	NA	N/A	7914331	NA	7913863	NA	NA	N/A	7914331
Hydrocarbon Resemblance	mg/L	NA	N/A	7914331	NA	7913863	NA	NA	N/A	7914331
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	83		7914331	91	7913863	89	100		7914331
n-Dotriacontane - Extractable	%	71 (2)		7914331	98	7913863	76 (2)	93		7914331
Isobutylbenzene - Volatile	%	118 (3)		7913702	116	7913702	114 (3)	108		7913702

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to lab artifact.
(2) TEH sample contained sediment.
(3) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM276	SFM277		SFM278		SFM279		
Sampling Date		2022/03/29	2022/03/28		2022/03/28		2022/03/28		
COC Number		869451-01-01	869451-01-01		869451-01-01		869451-01-01		
	UNITS	MW2-D	DUP1	QC Batch	MW6-S	QC Batch	MW6-D	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	7913703	<0.0010	7913703	<0.0010	0.0010	7913703
Toluene	mg/L	<0.0010	<0.0010	7913703	<0.0010	7913703	<0.0010	0.0010	7913703
Ethylbenzene	mg/L	<0.0010	<0.0010	7913703	<0.0010	7913703	<0.0010	0.0010	7913703
Total Xylenes	mg/L	<0.0020	<0.0020	7913703	<0.0020	7913703	<0.0020	0.0020	7913703
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	7913703	<0.090	7913703	<0.090	0.090	7913703
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	7914331	<0.050	7913863	<0.050	0.050	7914331
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	7914331	<0.050	7913863	<0.050	0.050	7914331
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	7914331	<0.090	7913863	<0.090	0.090	7914331
Modified TPH (Tier1)	mg/L	<0.090	<0.090	7911236	<0.090	7911236	<0.090	0.090	7911236
Reached Baseline at C32	mg/L	NA	NA	7914331	NA	7913863	NA	N/A	7914331
Hydrocarbon Resemblance	mg/L	NA	NA	7914331	NA	7913863	NA	N/A	7914331
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	94	101	7914331	91	7913863	98		7914331
n-Dotriacontane - Extractable	%	84	98	7914331	99	7913863	90		7914331
Isobutylbenzene - Volatile	%	110	111	7913703	111	7913703	117		7913703

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM281	SFM282	SFM283	SFM284	SFM285	SFM286		
Sampling Date		2022/03/28	2022/03/28	2022/03/29	2022/03/29	2022/03/28	2022/03/29		
COC Number		869451-02-01	869451-02-01	869451-02-01	869451-02-01	869451-02-01	869451-02-01		
	UNITS	MW7-S	MW7-D	MW8-S	MW8-D	DUP2	MW19-09S	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7913703
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7913703
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7913703
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7913703
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7913703
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7914331
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7914331
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7914331
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7911236
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA	NA	N/A	7914331
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA	NA	N/A	7914331
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	100	100	98	105	96	99		7914331
n-Dotriacontane - Extractable	%	92 (1)	91	94	101	94	95 (1)		7914331
Isobutylbenzene - Volatile	%	107 (2)	110	111	112	111	108 (2)		7913703

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM287		SFM288	SFM289		SFM290		
Sampling Date		2022/03/29		2022/03/28	2022/03/28		2022/03/29		
COC Number		869451-02-01		869451-02-01	869451-02-01		869451-02-01		
	UNITS	MW19-10S	QC Batch	MW19-11M	MW19-11D	QC Batch	PW19-01	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	7913703	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Toluene	mg/L	<0.0010	7913703	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Ethylbenzene	mg/L	<0.0010	7913703	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Total Xylenes	mg/L	<0.0020	7913703	<0.0020	<0.0020	7913703	<0.0020	0.0020	7913703
C6 - C10 (less BTEX)	mg/L	<0.090	7913703	<0.090	<0.090	7913703	<0.090	0.090	7913703
>C10-C16 Hydrocarbons	mg/L	<0.050	7914331	<0.050	<0.050	7913863	<0.050	0.050	7914331
>C16-C21 Hydrocarbons	mg/L	<0.050	7914331	<0.050	<0.050	7913863	<0.050	0.050	7914331
>C21-<C32 Hydrocarbons	mg/L	<0.090	7914331	<0.090	<0.090	7913863	<0.090	0.090	7914331
Modified TPH (Tier1)	mg/L	<0.090	7911236	<0.090	<0.090	7911236	<0.090	0.090	7911236
Reached Baseline at C32	mg/L	NA	7914331	NA	NA	7913863	NA	N/A	7914331
Hydrocarbon Resemblance	mg/L	NA	7914331	NA	NA	7913863	NA	N/A	7914331
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	109	7914331	89	95	7913863	97		7914331
n-Dotriacontane - Extractable	%	99 (1)	7914331	96 (1)	104	7913863	93 (1)		7914331
Isobutylbenzene - Volatile	%	109 (2)	7913703	118 (2)	110	7913703	109		7913703

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM294	SFM295	SFM296		SFM297		
Sampling Date		2022/03/29	2022/03/29	2022/03/28		2022/03/28		
COC Number		869451-03-01	869451-03-01	869451-03-01		869451-03-01		
	UNITS	MW19-12S	MW19-12D	MW19-13S	QC Batch	MW19-13D	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Toluene	mg/L	<0.0010	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	7913703	<0.0010	0.0010	7913703
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	7913703	<0.0020	0.0020	7913703
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	7913703	<0.090	0.090	7913703
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7914331	<0.050	0.050	7913863
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7914331	<0.050	0.050	7913863
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	7914331	<0.090	0.090	7913863
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	7911236	<0.090	0.090	7911236
Reached Baseline at C32	mg/L	NA	NA	NA	7914331	NA	N/A	7913863
Hydrocarbon Resemblance	mg/L	NA	NA	NA	7914331	NA	N/A	7913863
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	98	98	100	7914331	98		7913863
n-Dotriacontane - Extractable	%	94 (1)	98	99 (1)	7914331	110		7913863
Isobutylbenzene - Volatile	%	110	106	106	7913703	108		7913703

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SFM298		SFM299	SFM300	SFM301		
Sampling Date		2022/03/28		2022/03/28	2022/03/28	2022/03/29		
COC Number		869451-03-01		869451-03-01	869451-03-01	869451-03-01		
	UNITS	**MW20-14S**	**QC Batch**	**MW20-14D**	**MW20-15S**	**MW20-15D**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0013	7916173	<0.0013	<0.0013	<0.0013	0.0013	7916173
Toluene	mg/L	<0.0013	7916173	<0.0013	<0.0013	<0.0013	0.0013	7916173
Ethylbenzene	mg/L	<0.0013	7916173	<0.0013	<0.0013	<0.0013	0.0013	7916173
Total Xylenes	mg/L	<0.0026	7916173	<0.0026	<0.0026	<0.0026	0.0026	7916173
C6 - C10 (less BTEX)	mg/L	<0.12	7916173	<0.12	<0.12	<0.12	0.12	7916173
>C10-C16 Hydrocarbons	mg/L	<0.050	7914331	<0.050	<0.050	<0.050	0.050	7916261
>C16-C21 Hydrocarbons	mg/L	<0.050	7914331	<0.050	<0.050	<0.050	0.050	7916261
>C21-<C32 Hydrocarbons	mg/L	<0.090	7914331	<0.090	<0.090	<0.090	0.090	7916261
Modified TPH (Tier1)	mg/L	<0.12	7911236	<0.12	<0.12	<0.12	0.12	7911236
Reached Baseline at C32	mg/L	NA	7914331	NA	NA	NA	N/A	7916261
Hydrocarbon Resemblance	mg/L	NA	7914331	NA	NA	NA	N/A	7916261
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	104	7914331	96	101	95		7916261
n-Dotriacontane - Extractable	%	98 (1)	7914331	125	106	126		7916261
Isobutylbenzene - Volatile	%	97 (2)	7916173	99 (3)	101 (3)	100 (3)		7916173

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) VPH sample contained sediment. VPH analysis performed on previously opened vial.
(3) VPH analysis performed on previously opened vial.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.7°C
Package 2	0.7°C
Package 3	-1.7°C
Package 4	2.7°C
Package 5	0.0°C

Sample SFM274 [MW2-S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM275 [MW2-M] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM276 [MW2-D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM277 [DUP1] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM279 [MW6-D] : Elevated reporting limits for trace metals due to sample matrix.

Sample SFM284 [MW8-D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM285 [DUP2] : Elevated reporting limits for trace metals due to sample matrix.

Sample SFM286 [MW19-09S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM287 [MW19-10S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM288 [MW19-11M] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM294 [MW19-12S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM295 [MW19-12D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM297 [MW19-13D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM298 [MW20-14S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM299 [MW20-14D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SFM301 [MW20-15D] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7911833	MKX	QC Standard	Total Suspended Solids	2022/04/04		99	%	80 - 120
7911833	MKX	Method Blank	Total Suspended Solids	2022/04/04	<1.0		mg/L	
7911833	MKX	RPD	Total Suspended Solids	2022/04/04	8.0		%	20
7911906	RMK	QC Standard	Total Suspended Solids	2022/04/05		98	%	80 - 120
7911906	RMK	Method Blank	Total Suspended Solids	2022/04/05	<1.0		mg/L	
7911906	RMK	RPD [SFM283-09]	Total Suspended Solids	2022/04/05	8.7		%	20
7913702	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/03/31		109	%	70 - 130
			Benzene	2022/03/31		107	%	70 - 130
			Toluene	2022/03/31		100	%	70 - 130
			Ethylbenzene	2022/03/31		98	%	70 - 130
			Total Xylenes	2022/03/31		102	%	70 - 130
7913702	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/03/31		108	%	70 - 130
			Benzene	2022/03/31		103	%	70 - 130
			Toluene	2022/03/31		95	%	70 - 130
			Ethylbenzene	2022/03/31		94	%	70 - 130
			Total Xylenes	2022/03/31		96	%	70 - 130
7913702	THL	Method Blank	Isobutylbenzene - Volatile	2022/03/31		114	%	70 - 130
			Benzene	2022/03/31	<0.0010		mg/L	
			Toluene	2022/03/31	<0.0010		mg/L	
			Ethylbenzene	2022/03/31	<0.0010		mg/L	
			Total Xylenes	2022/03/31	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/03/31	<0.090		mg/L	
7913702	THL	RPD	Benzene	2022/03/31	NC		%	40
			Toluene	2022/03/31	NC		%	40
			Ethylbenzene	2022/03/31	NC		%	40
			Total Xylenes	2022/03/31	NC		%	40
			C6 - C10 (less BTEX)	2022/03/31	NC		%	40
7913703	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/03/31		110	%	70 - 130
			Benzene	2022/03/31		104	%	70 - 130
			Toluene	2022/03/31		99	%	70 - 130
			Ethylbenzene	2022/03/31		94	%	70 - 130
			Total Xylenes	2022/03/31		97	%	70 - 130
7913703	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/03/31		108	%	70 - 130
			Benzene	2022/03/31		106	%	70 - 130
			Toluene	2022/03/31		99	%	70 - 130
			Ethylbenzene	2022/03/31		95	%	70 - 130
			Total Xylenes	2022/03/31		99	%	70 - 130
7913703	THL	Method Blank	Isobutylbenzene - Volatile	2022/03/31		111	%	70 - 130
			Benzene	2022/03/31	<0.0010		mg/L	
			Toluene	2022/03/31	<0.0010		mg/L	
			Ethylbenzene	2022/03/31	<0.0010		mg/L	
			Total Xylenes	2022/03/31	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/03/31	<0.090		mg/L	
7913703	THL	RPD	Benzene	2022/03/31	NC		%	40
			Toluene	2022/03/31	NC		%	40
			Ethylbenzene	2022/03/31	NC		%	40
			Total Xylenes	2022/03/31	NC		%	40
			C6 - C10 (less BTEX)	2022/03/31	NC		%	40
7913780	NGI	Matrix Spike [SFM297-03]	Dissolved Organic Carbon (C)	2022/04/01		95	%	85 - 115
7913780	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2022/04/01		98	%	80 - 120
7913780	NGI	Method Blank	Dissolved Organic Carbon (C)	2022/04/01	<0.50		mg/L	
7913780	NGI	RPD [SFM297-03]	Dissolved Organic Carbon (C)	2022/04/01	2.2		%	15
7913863	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/03/31		100	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		104	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C10-C16 Hydrocarbons	2022/03/31		100	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/31		96	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/31		97	%	70 - 130
7913863	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/03/31		106	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		108	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/31		105	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/31		96	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/31		99	%	70 - 130
7913863	MGN	Method Blank	Isobutylbenzene - Extractable	2022/03/31		103	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		107	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/31	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/03/31	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/03/31	<0.090		mg/L	
7913863	MGN	RPD	>C10-C16 Hydrocarbons	2022/03/31	NC		%	40
			>C16-C21 Hydrocarbons	2022/03/31	NC		%	40
			>C21-<C32 Hydrocarbons	2022/03/31	NC		%	40
7914331	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/03/31		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		92	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/31		77	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/31		84	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/31		79	%	70 - 130
7914331	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/03/31		95	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		104	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/31		85	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/31		91	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/31		87	%	70 - 130
7914331	MGN	Method Blank	Isobutylbenzene - Extractable	2022/03/31		95	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/31		101	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/31	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/03/31	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/03/31	<0.090		mg/L	
7914331	MGN	RPD	>C10-C16 Hydrocarbons	2022/03/31	21		%	40
			>C16-C21 Hydrocarbons	2022/03/31	15		%	40
			>C21-<C32 Hydrocarbons	2022/03/31	18		%	40
7916173	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/04/04		110	%	70 - 130
			Benzene	2022/04/04		96	%	70 - 130
			Toluene	2022/04/04		102	%	70 - 130
			Ethylbenzene	2022/04/04		104	%	70 - 130
			Total Xylenes	2022/04/04		102	%	70 - 130
7916173	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/04/04		113	%	70 - 130
			Benzene	2022/04/04		94	%	70 - 130
			Toluene	2022/04/04		99	%	70 - 130
			Ethylbenzene	2022/04/04		99	%	70 - 130
			Total Xylenes	2022/04/04		103	%	70 - 130
7916173	THL	Method Blank	Isobutylbenzene - Volatile	2022/04/04		111	%	70 - 130
			Benzene	2022/04/04	<0.0010		mg/L	
			Toluene	2022/04/04	<0.0010		mg/L	
			Ethylbenzene	2022/04/04	<0.0010		mg/L	
			Total Xylenes	2022/04/04	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/04/04	<0.090		mg/L	
7916173	THL	RPD	Benzene	2022/04/04	NC		%	40
			Toluene	2022/04/04	NC		%	40
			Ethylbenzene	2022/04/04	NC		%	40
			Total Xylenes	2022/04/04	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			C6 - C10 (less BTEX)	2022/04/04	NC		%	40
7916190	NGI	Matrix Spike [SFM286-08]	Total Organic Carbon (C)	2022/04/01		97	%	85 - 115
7916190	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/01		99	%	80 - 120
7916190	NGI	Method Blank	Total Organic Carbon (C)	2022/04/01	<0.50		mg/L	
7916190	NGI	RPD [SFM286-08]	Total Organic Carbon (C)	2022/04/01	NC (1)		%	15
7916261	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/04/04		98	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		98	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04		NC	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/04		82	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/04		95	%	70 - 130
7916261	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/04/04		95	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		97	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04		76	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/04		75	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/04		91	%	70 - 130
7916261	MGN	Method Blank	Isobutylbenzene - Extractable	2022/04/04		112	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		112	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/04/04	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/04/04	<0.090		mg/L	
7916261	MGN	RPD	>C10-C16 Hydrocarbons	2022/04/04	NC		%	40
			>C16-C21 Hydrocarbons	2022/04/04	NC		%	40
			>C21-<C32 Hydrocarbons	2022/04/04	NC		%	40
7916263	BAN	Matrix Spike	Dissolved Aluminum (Al)	2022/04/01		97	%	80 - 120
			Dissolved Antimony (Sb)	2022/04/01		94	%	80 - 120
			Dissolved Arsenic (As)	2022/04/01		95	%	80 - 120
			Dissolved Barium (Ba)	2022/04/01		94	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/01		94	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/01		96	%	80 - 120
			Dissolved Boron (B)	2022/04/01		97	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/01		98	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/01		102	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/01		96	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/01		97	%	80 - 120
			Dissolved Copper (Cu)	2022/04/01		98	%	80 - 120
			Dissolved Iron (Fe)	2022/04/01		101	%	80 - 120
			Dissolved Lead (Pb)	2022/04/01		98	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/01		99	%	80 - 120
			Dissolved Manganese (Mn)	2022/04/01		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/04/01		98	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/01		99	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/01		102	%	80 - 120
			Dissolved Potassium (K)	2022/04/01		100	%	80 - 120
			Dissolved Selenium (Se)	2022/04/01		101	%	80 - 120
			Dissolved Silver (Ag)	2022/04/01		99	%	80 - 120
			Dissolved Sodium (Na)	2022/04/01		98	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/01		95	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/01		98	%	80 - 120
			Dissolved Tin (Sn)	2022/04/01		109	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/01		98	%	80 - 120
			Dissolved Uranium (U)	2022/04/01		101	%	80 - 120
			Dissolved Vanadium (V)	2022/04/01		96	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/01		98	%	80 - 120
7916263	BAN	Spiked Blank	Dissolved Aluminum (Al)	2022/04/01		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Antimony (Sb)	2022/04/01		93	%	80 - 120
			Dissolved Arsenic (As)	2022/04/01		94	%	80 - 120
			Dissolved Barium (Ba)	2022/04/01		94	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/01		94	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/01		99	%	80 - 120
			Dissolved Boron (B)	2022/04/01		100	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/01		95	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/01		101	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/01		97	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/01		98	%	80 - 120
			Dissolved Copper (Cu)	2022/04/01		99	%	80 - 120
			Dissolved Iron (Fe)	2022/04/01		104	%	80 - 120
			Dissolved Lead (Pb)	2022/04/01		97	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/01		102	%	80 - 120
			Dissolved Manganese (Mn)	2022/04/01		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/04/01		98	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/01		98	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/01		103	%	80 - 120
			Dissolved Potassium (K)	2022/04/01		102	%	80 - 120
			Dissolved Selenium (Se)	2022/04/01		98	%	80 - 120
			Dissolved Silver (Ag)	2022/04/01		96	%	80 - 120
			Dissolved Sodium (Na)	2022/04/01		100	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/01		96	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/01		100	%	80 - 120
			Dissolved Tin (Sn)	2022/04/01		110	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/01		101	%	80 - 120
			Dissolved Uranium (U)	2022/04/01		100	%	80 - 120
			Dissolved Vanadium (V)	2022/04/01		97	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/01		99	%	80 - 120
7916263	BAN	Method Blank	Dissolved Aluminum (Al)	2022/04/01	<5.0		ug/L	
			Dissolved Antimony (Sb)	2022/04/01	<1.0		ug/L	
			Dissolved Arsenic (As)	2022/04/01	<1.0		ug/L	
			Dissolved Barium (Ba)	2022/04/01	<1.0		ug/L	
			Dissolved Beryllium (Be)	2022/04/01	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2022/04/01	<2.0		ug/L	
			Dissolved Boron (B)	2022/04/01	<50		ug/L	
			Dissolved Cadmium (Cd)	2022/04/01	<0.010		ug/L	
			Dissolved Calcium (Ca)	2022/04/01	<100		ug/L	
			Dissolved Chromium (Cr)	2022/04/01	<1.0		ug/L	
			Dissolved Cobalt (Co)	2022/04/01	<0.40		ug/L	
			Dissolved Copper (Cu)	2022/04/01	<0.50		ug/L	
			Dissolved Iron (Fe)	2022/04/01	<50		ug/L	
			Dissolved Lead (Pb)	2022/04/01	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/04/01	<100		ug/L	
			Dissolved Manganese (Mn)	2022/04/01	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2022/04/01	<2.0		ug/L	
			Dissolved Nickel (Ni)	2022/04/01	<2.0		ug/L	
			Dissolved Phosphorus (P)	2022/04/01	<100		ug/L	
			Dissolved Potassium (K)	2022/04/01	<100		ug/L	
			Dissolved Selenium (Se)	2022/04/01	<0.50		ug/L	
			Dissolved Silver (Ag)	2022/04/01	<0.10		ug/L	
			Dissolved Sodium (Na)	2022/04/01	<100		ug/L	
			Dissolved Strontium (Sr)	2022/04/01	<2.0		ug/L	
			Dissolved Thallium (Tl)	2022/04/01	<0.10		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Tin (Sn)	2022/04/01	<2.0		ug/L	
			Dissolved Titanium (Ti)	2022/04/01	<2.0		ug/L	
			Dissolved Uranium (U)	2022/04/01	<0.10		ug/L	
			Dissolved Vanadium (V)	2022/04/01	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/04/01	<5.0		ug/L	
7916263	BAN	RPD	Dissolved Aluminum (Al)	2022/04/01	1.2		%	20
			Dissolved Antimony (Sb)	2022/04/01	NC		%	20
			Dissolved Arsenic (As)	2022/04/01	NC		%	20
			Dissolved Barium (Ba)	2022/04/01	5.8		%	20
			Dissolved Beryllium (Be)	2022/04/01	NC		%	20
			Dissolved Bismuth (Bi)	2022/04/01	NC		%	20
			Dissolved Boron (B)	2022/04/01	NC		%	20
			Dissolved Cadmium (Cd)	2022/04/01	NC		%	20
			Dissolved Calcium (Ca)	2022/04/01	0.33		%	20
			Dissolved Chromium (Cr)	2022/04/01	NC		%	20
			Dissolved Cobalt (Co)	2022/04/01	NC		%	20
			Dissolved Copper (Cu)	2022/04/01	4.0		%	20
			Dissolved Iron (Fe)	2022/04/01	NC		%	20
			Dissolved Lead (Pb)	2022/04/01	NC		%	20
			Dissolved Magnesium (Mg)	2022/04/01	0.15		%	20
			Dissolved Manganese (Mn)	2022/04/01	NC		%	20
			Dissolved Molybdenum (Mo)	2022/04/01	NC		%	20
			Dissolved Nickel (Ni)	2022/04/01	NC		%	20
			Dissolved Phosphorus (P)	2022/04/01	NC		%	20
			Dissolved Potassium (K)	2022/04/01	5.5		%	20
			Dissolved Selenium (Se)	2022/04/01	1.5		%	20
			Dissolved Silver (Ag)	2022/04/01	NC		%	20
			Dissolved Sodium (Na)	2022/04/01	0.62		%	20
			Dissolved Strontium (Sr)	2022/04/01	0.63		%	20
			Dissolved Thallium (Tl)	2022/04/01	NC		%	20
			Dissolved Tin (Sn)	2022/04/01	NC		%	20
			Dissolved Titanium (Ti)	2022/04/01	NC		%	20
			Dissolved Uranium (U)	2022/04/01	NC		%	20
			Dissolved Vanadium (V)	2022/04/01	0.68		%	20
			Dissolved Zinc (Zn)	2022/04/01	NC		%	20
7916264	NGI	Matrix Spike [SFM276-08]	Total Organic Carbon (C)	2022/04/04		96	%	85 - 115
7916264	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/04		99	%	80 - 120
7916264	NGI	Method Blank	Total Organic Carbon (C)	2022/04/04	<0.50		mg/L	
7916264	NGI	RPD [SFM276-08]	Total Organic Carbon (C)	2022/04/04	NC (1)		%	15
7916267	BAN	Matrix Spike [SFM283-05]	Dissolved Aluminum (Al)	2022/04/01		99	%	80 - 120
			Dissolved Antimony (Sb)	2022/04/01		95	%	80 - 120
			Dissolved Arsenic (As)	2022/04/01		97	%	80 - 120
			Dissolved Barium (Ba)	2022/04/01		94	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/01		96	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/01		91	%	80 - 120
			Dissolved Boron (B)	2022/04/01		91	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/01		98	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/01		NC	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/01		97	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/01		97	%	80 - 120
			Dissolved Copper (Cu)	2022/04/01		97	%	80 - 120
			Dissolved Iron (Fe)	2022/04/01		102	%	80 - 120
			Dissolved Lead (Pb)	2022/04/01		96	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/01		NC	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Manganese (Mn)	2022/04/01		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/04/01		101	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/01		98	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/01		105	%	80 - 120
			Dissolved Potassium (K)	2022/04/01		98	%	80 - 120
			Dissolved Selenium (Se)	2022/04/01		102	%	80 - 120
			Dissolved Silver (Ag)	2022/04/01		94	%	80 - 120
			Dissolved Sodium (Na)	2022/04/01		NC	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/01		NC	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/01		95	%	80 - 120
			Dissolved Tin (Sn)	2022/04/01		109	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/01		101	%	80 - 120
			Dissolved Uranium (U)	2022/04/01		NC	%	80 - 120
			Dissolved Vanadium (V)	2022/04/01		98	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/01		95	%	80 - 120
7916267	BAN	Spiked Blank	Dissolved Aluminum (Al)	2022/04/01		106	%	80 - 120
			Dissolved Antimony (Sb)	2022/04/01		93	%	80 - 120
			Dissolved Arsenic (As)	2022/04/01		99	%	80 - 120
			Dissolved Barium (Ba)	2022/04/01		97	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/01		96	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/01		96	%	80 - 120
			Dissolved Boron (B)	2022/04/01		97	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/01		100	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/01		109	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/01		101	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/01		101	%	80 - 120
			Dissolved Copper (Cu)	2022/04/01		103	%	80 - 120
			Dissolved Iron (Fe)	2022/04/01		111	%	80 - 120
			Dissolved Lead (Pb)	2022/04/01		100	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/01		108	%	80 - 120
			Dissolved Manganese (Mn)	2022/04/01		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/04/01		98	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/01		103	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/01		110	%	80 - 120
			Dissolved Potassium (K)	2022/04/01		107	%	80 - 120
			Dissolved Selenium (Se)	2022/04/01		102	%	80 - 120
			Dissolved Silver (Ag)	2022/04/01		101	%	80 - 120
			Dissolved Sodium (Na)	2022/04/01		107	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/01		101	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/01		97	%	80 - 120
			Dissolved Tin (Sn)	2022/04/01		107	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/01		102	%	80 - 120
			Dissolved Uranium (U)	2022/04/01		104	%	80 - 120
			Dissolved Vanadium (V)	2022/04/01		102	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/01		101	%	80 - 120
7916267	BAN	Method Blank	Dissolved Aluminum (Al)	2022/04/01	<5.0		ug/L	
			Dissolved Antimony (Sb)	2022/04/01	<1.0		ug/L	
			Dissolved Arsenic (As)	2022/04/01	<1.0		ug/L	
			Dissolved Barium (Ba)	2022/04/01	<1.0		ug/L	
			Dissolved Beryllium (Be)	2022/04/01	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2022/04/01	<2.0		ug/L	
			Dissolved Boron (B)	2022/04/01	<50		ug/L	
			Dissolved Cadmium (Cd)	2022/04/01	<0.010		ug/L	
			Dissolved Calcium (Ca)	2022/04/01	<100		ug/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Chromium (Cr)	2022/04/01	<1.0		ug/L	
			Dissolved Cobalt (Co)	2022/04/01	<0.40		ug/L	
			Dissolved Copper (Cu)	2022/04/01	<0.50		ug/L	
			Dissolved Iron (Fe)	2022/04/01	<50		ug/L	
			Dissolved Lead (Pb)	2022/04/01	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/04/01	<100		ug/L	
			Dissolved Manganese (Mn)	2022/04/01	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2022/04/01	<2.0		ug/L	
			Dissolved Nickel (Ni)	2022/04/01	<2.0		ug/L	
			Dissolved Phosphorus (P)	2022/04/01	<100		ug/L	
			Dissolved Potassium (K)	2022/04/01	<100		ug/L	
			Dissolved Selenium (Se)	2022/04/01	<0.50		ug/L	
			Dissolved Silver (Ag)	2022/04/01	<0.10		ug/L	
			Dissolved Sodium (Na)	2022/04/01	<100		ug/L	
			Dissolved Strontium (Sr)	2022/04/01	<2.0		ug/L	
			Dissolved Thallium (Tl)	2022/04/01	<0.10		ug/L	
			Dissolved Tin (Sn)	2022/04/01	<2.0		ug/L	
			Dissolved Titanium (Ti)	2022/04/01	<2.0		ug/L	
			Dissolved Uranium (U)	2022/04/01	<0.10		ug/L	
			Dissolved Vanadium (V)	2022/04/01	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/04/01	<5.0		ug/L	
7916267	BAN	RPD [SFM283-05]	Dissolved Aluminum (Al)	2022/04/01	NC		%	20
			Dissolved Antimony (Sb)	2022/04/01	NC		%	20
			Dissolved Arsenic (As)	2022/04/01	3.1		%	20
			Dissolved Barium (Ba)	2022/04/01	0.80		%	20
			Dissolved Beryllium (Be)	2022/04/01	NC		%	20
			Dissolved Bismuth (Bi)	2022/04/01	NC		%	20
			Dissolved Boron (B)	2022/04/01	13		%	20
			Dissolved Cadmium (Cd)	2022/04/01	14		%	20
			Dissolved Calcium (Ca)	2022/04/01	0.90		%	20
			Dissolved Chromium (Cr)	2022/04/01	NC		%	20
			Dissolved Cobalt (Co)	2022/04/01	NC		%	20
			Dissolved Copper (Cu)	2022/04/01	0.15		%	20
			Dissolved Iron (Fe)	2022/04/01	NC		%	20
			Dissolved Lead (Pb)	2022/04/01	NC		%	20
			Dissolved Magnesium (Mg)	2022/04/01	0.89		%	20
			Dissolved Manganese (Mn)	2022/04/01	1.3		%	20
			Dissolved Molybdenum (Mo)	2022/04/01	15		%	20
			Dissolved Nickel (Ni)	2022/04/01	1.3		%	20
			Dissolved Phosphorus (P)	2022/04/01	NC		%	20
			Dissolved Potassium (K)	2022/04/01	0.044		%	20
			Dissolved Selenium (Se)	2022/04/01	NC		%	20
			Dissolved Silver (Ag)	2022/04/01	NC		%	20
			Dissolved Sodium (Na)	2022/04/01	0.098		%	20
			Dissolved Strontium (Sr)	2022/04/01	0.57		%	20
			Dissolved Thallium (Tl)	2022/04/01	NC		%	20
			Dissolved Tin (Sn)	2022/04/01	NC		%	20
			Dissolved Titanium (Ti)	2022/04/01	NC		%	20
			Dissolved Uranium (U)	2022/04/01	0.53		%	20
			Dissolved Vanadium (V)	2022/04/01	NC		%	20
			Dissolved Zinc (Zn)	2022/04/01	6.1		%	20
7916269	NGI	Matrix Spike [SFM275-03]	Dissolved Organic Carbon (C)	2022/04/04		93	%	85 - 115
7916269	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2022/04/04		99	%	80 - 120
7916269	NGI	Method Blank	Dissolved Organic Carbon (C)	2022/04/04	<0.50		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7916269	NGI	RPD [SFM275-03]	Dissolved Organic Carbon (C)	2022/04/04	0.85		%	15
7916343	KMC	Spiked Blank	pH	2022/04/03		100	%	97 - 103
7916343	KMC	RPD [SFM295-01]	pH	2022/04/03	0.28		%	N/A
7916349	KMC	Spiked Blank	Conductivity	2022/04/03		105	%	80 - 120
7916349	KMC	Method Blank	Conductivity	2022/04/03	<1.0		uS/cm	
7916349	KMC	RPD [SFM295-01]	Conductivity	2022/04/03	1.3		%	10
7919403	KMC	QC Standard	Turbidity	2022/04/03		98	%	80 - 120
7919403	KMC	Spiked Blank	Turbidity	2022/04/03		99	%	80 - 120
7919403	KMC	Method Blank	Turbidity	2022/04/03	<0.10		NTU	
7919403	KMC	RPD [SFM273-01]	Turbidity	2022/04/03	4.2		%	20
7919713	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/04		95	%	85 - 115
7919713	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/04		99	%	80 - 120
7919713	NGI	Method Blank	Total Organic Carbon (C)	2022/04/04	<0.50		mg/L	
7919713	NGI	RPD	Total Organic Carbon (C)	2022/04/04	3.2		%	15
7919715	NGI	Matrix Spike [SFM289-03]	Dissolved Organic Carbon (C)	2022/04/05		97	%	85 - 115
7919715	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2022/04/05		99	%	80 - 120
7919715	NGI	Method Blank	Dissolved Organic Carbon (C)	2022/04/05	<0.50		mg/L	
7919715	NGI	RPD [SFM289-03]	Dissolved Organic Carbon (C)	2022/04/05	2.8 (2)		%	15
7920203	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2022/04/05		98	%	85 - 115
7920203	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2022/04/05		100	%	80 - 120
7920203	NGI	Method Blank	Dissolved Organic Carbon (C)	2022/04/05	<0.50		mg/L	
7920203	NGI	RPD	Dissolved Organic Carbon (C)	2022/04/05	0.29		%	15
7920314	LHA	Matrix Spike [SFM272-07]	Phenols-4AAP	2022/04/04		101	%	80 - 120
7920314	LHA	Spiked Blank	Phenols-4AAP	2022/04/04		102	%	80 - 120
7920314	LHA	Method Blank	Phenols-4AAP	2022/04/04	<0.0010		mg/L	
7920314	LHA	RPD [SFM272-07]	Phenols-4AAP	2022/04/04	NC		%	20
7920342	LHA	Matrix Spike [SFM296-07]	Phenols-4AAP	2022/04/04		100	%	80 - 120
7920342	LHA	Spiked Blank	Phenols-4AAP	2022/04/04		101	%	80 - 120
7920342	LHA	Method Blank	Phenols-4AAP	2022/04/04	<0.0010		mg/L	
7920342	LHA	RPD [SFM296-07]	Phenols-4AAP	2022/04/04	NC		%	20
7921826	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2022/04/05		101	%	80 - 120
7921826	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/04/05		103	%	80 - 120
7921826	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/04/05		99	%	80 - 120
7921826	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/04/05	<20		mg/L	
7921826	ZZH	RPD	Total Chemical Oxygen Demand	2022/04/05	NC		%	25
7921827	ZZH	Matrix Spike [SFM285-02]	Total Chemical Oxygen Demand	2022/04/05		101	%	80 - 120
7921827	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/04/05		102	%	80 - 120
7921827	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/04/05		100	%	80 - 120
7921827	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/04/05	<20		mg/L	
7921827	ZZH	RPD [SFM285-02]	Total Chemical Oxygen Demand	2022/04/05	3.7		%	25
7921835	MCN	Matrix Spike [SFM281-06]	Nitrogen (Ammonia Nitrogen)	2022/04/05		91	%	80 - 120
7921835	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/05		97	%	80 - 120
7921835	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/05	<0.050		mg/L	
7921835	MCN	RPD [SFM281-06]	Nitrogen (Ammonia Nitrogen)	2022/04/05	NC		%	20
7921837	SHW	Spiked Blank	Conductivity	2022/04/05		100	%	80 - 120
7921837	SHW	Method Blank	Conductivity	2022/04/05	1.3, RDL=1.0		uS/cm	
7921837	SHW	RPD	Conductivity	2022/04/05	0.13		%	10
7921839	SHW	Spiked Blank	pH	2022/04/05		100	%	97 - 103
7921839	SHW	RPD	pH	2022/04/05	0.23		%	N/A
7921844	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2022/04/05		87	%	80 - 120
7921844	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/05		97	%	80 - 120
7921844	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/05	<0.050		mg/L	
7921844	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2022/04/05	0.65		%	20

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7922007	SHW	QC Standard	Turbidity	2022/04/05		99	%	80 - 120
7922007	SHW	Spiked Blank	Turbidity	2022/04/05		99	%	80 - 120
7922007	SHW	Method Blank	Turbidity	2022/04/05	<0.10		NTU	
7922007	SHW	RPD [SFM279-01]	Turbidity	2022/04/05	1.6		%	20
7922008	SHW	QC Standard	Turbidity	2022/04/05		98	%	80 - 120
7922008	SHW	Spiked Blank	Turbidity	2022/04/05		98	%	80 - 120
7922008	SHW	Method Blank	Turbidity	2022/04/05	<0.10		NTU	
7922008	SHW	RPD	Turbidity	2022/04/05	NC		%	20
7922071	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2022/04/05		93	%	80 - 120
7922071	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/05		107	%	80 - 120
7922071	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/05	<5.0		mg/L	
7922071	MCN	RPD	Total Alkalinity (Total as CaCO3)	2022/04/05	1.9		%	20
7922073	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2022/04/06		97	%	80 - 120
7922073	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/06		97	%	80 - 120
7922073	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/06	<1.0		mg/L	
7922073	MCN	RPD	Dissolved Chloride (Cl-)	2022/04/06	1.8		%	20
7922074	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2022/04/06		94	%	80 - 120
7922074	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/06		98	%	80 - 120
7922074	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/06	<2.0		mg/L	
7922074	MCN	RPD	Dissolved Sulphate (SO4)	2022/04/06	NC		%	20
7922075	MCN	Matrix Spike	Reactive Silica (SiO2)	2022/04/06		NC	%	80 - 120
7922075	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/06		97	%	80 - 120
7922075	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/06	<0.50		mg/L	
7922075	MCN	RPD	Reactive Silica (SiO2)	2022/04/06	0.87		%	20
7922076	MCN	Spiked Blank	Colour	2022/04/06		96	%	80 - 120
7922076	MCN	Method Blank	Colour	2022/04/06	<5.0		TCU	
7922076	MCN	RPD	Colour	2022/04/06	NC		%	20
7922077	MCN	Matrix Spike	Orthophosphate (P)	2022/04/06		94	%	80 - 120
7922077	MCN	Spiked Blank	Orthophosphate (P)	2022/04/06		99	%	80 - 120
7922077	MCN	Method Blank	Orthophosphate (P)	2022/04/06	<0.010		mg/L	
7922077	MCN	RPD	Orthophosphate (P)	2022/04/06	NC		%	20
7922078	MCN	Matrix Spike	Nitrate + Nitrite (N)	2022/04/06		97	%	80 - 120
7922078	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/06		101	%	80 - 120
7922078	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/06	<0.050		mg/L	
7922078	MCN	RPD	Nitrate + Nitrite (N)	2022/04/06	7.7		%	20
7922079	MCN	Matrix Spike	Nitrite (N)	2022/04/06		95	%	80 - 120
7922079	MCN	Spiked Blank	Nitrite (N)	2022/04/06		100	%	80 - 120
7922079	MCN	Method Blank	Nitrite (N)	2022/04/06	<0.010		mg/L	
7922079	MCN	RPD	Nitrite (N)	2022/04/06	NC		%	20
7922081	MCN	Matrix Spike [SFM275-01]	Total Alkalinity (Total as CaCO3)	2022/04/05		NC	%	80 - 120
7922081	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/05		102	%	80 - 120
7922081	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/05	<5.0		mg/L	
7922081	MCN	RPD [SFM275-01]	Total Alkalinity (Total as CaCO3)	2022/04/05	0.084		%	20
7922084	MCN	Matrix Spike [SFM275-01]	Dissolved Chloride (Cl-)	2022/04/06		95	%	80 - 120
7922084	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/06		96	%	80 - 120
7922084	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/06	<1.0		mg/L	
7922084	MCN	RPD [SFM275-01]	Dissolved Chloride (Cl-)	2022/04/06	0.29		%	20
7922085	MCN	Matrix Spike [SFM275-01]	Dissolved Sulphate (SO4)	2022/04/06		NC	%	80 - 120
7922085	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/06		95	%	80 - 120
7922085	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/06	<2.0		mg/L	
7922085	MCN	RPD [SFM275-01]	Dissolved Sulphate (SO4)	2022/04/06	0.39		%	20
7922087	MCN	Matrix Spike [SFM275-01]	Reactive Silica (SiO2)	2022/04/06		NC	%	80 - 120
7922087	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/06		96	%	80 - 120
7922087	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/06	<0.50		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7922087	MCN	RPD [SFM275-01]	Reactive Silica (SiO2)	2022/04/06	4.2		%	20
7922090	MCN	Spiked Blank	Colour	2022/04/06		96	%	80 - 120
7922090	MCN	Method Blank	Colour	2022/04/06	<5.0		TCU	
7922090	MCN	RPD [SFM275-01]	Colour	2022/04/06	NC		%	20
7922091	MCN	Matrix Spike [SFM275-01]	Orthophosphate (P)	2022/04/06		93	%	80 - 120
7922091	MCN	Spiked Blank	Orthophosphate (P)	2022/04/06		98	%	80 - 120
7922091	MCN	Method Blank	Orthophosphate (P)	2022/04/06	<0.010		mg/L	
7922091	MCN	RPD [SFM275-01]	Orthophosphate (P)	2022/04/06	1.7		%	20
7922094	MCN	Matrix Spike [SFM275-01]	Nitrate + Nitrite (N)	2022/04/06		97	%	80 - 120
7922094	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/06		100	%	80 - 120
7922094	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/06	<0.050		mg/L	
7922094	MCN	RPD [SFM275-01]	Nitrate + Nitrite (N)	2022/04/06	5.2		%	20
7922095	MCN	Matrix Spike [SFM275-01]	Nitrite (N)	2022/04/06		99	%	80 - 120
7922095	MCN	Spiked Blank	Nitrite (N)	2022/04/06		99	%	80 - 120
7922095	MCN	Method Blank	Nitrite (N)	2022/04/06	<0.010		mg/L	
7922095	MCN	RPD [SFM275-01]	Nitrite (N)	2022/04/06	NC		%	20
7922097	MCN	Matrix Spike [SFM283-01]	Total Alkalinity (Total as CaCO3)	2022/04/05		NC	%	80 - 120
7922097	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/05		103	%	80 - 120
7922097	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/05	<5.0		mg/L	
7922097	MCN	RPD [SFM283-01]	Total Alkalinity (Total as CaCO3)	2022/04/05	1.8		%	20
7922098	MCN	Matrix Spike [SFM283-01]	Dissolved Chloride (Cl-)	2022/04/06		NC	%	80 - 120
7922098	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/06		96	%	80 - 120
7922098	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/06	<1.0		mg/L	
7922098	MCN	RPD [SFM283-01]	Dissolved Chloride (Cl-)	2022/04/06	0.61		%	20
7922099	MCN	Matrix Spike [SFM283-01]	Dissolved Sulphate (SO4)	2022/04/06		NC	%	80 - 120
7922099	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/06		96	%	80 - 120
7922099	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/06	<2.0		mg/L	
7922099	MCN	RPD [SFM283-01]	Dissolved Sulphate (SO4)	2022/04/06	0.99		%	20
7922100	MCN	Matrix Spike [SFM283-01]	Reactive Silica (SiO2)	2022/04/06		NC	%	80 - 120
7922100	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/06		95	%	80 - 120
7922100	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/06	<0.50		mg/L	
7922100	MCN	RPD [SFM283-01]	Reactive Silica (SiO2)	2022/04/06	0.32		%	20
7922103	MCN	Spiked Blank	Colour	2022/04/06		101	%	80 - 120
7922103	MCN	Method Blank	Colour	2022/04/06	<5.0		TCU	
7922103	MCN	RPD [SFM283-01]	Colour	2022/04/06	NC		%	20
7922104	MCN	Matrix Spike [SFM283-01]	Orthophosphate (P)	2022/04/06		52 (3)	%	80 - 120
7922104	MCN	Spiked Blank	Orthophosphate (P)	2022/04/06		97	%	80 - 120
7922104	MCN	Method Blank	Orthophosphate (P)	2022/04/06	<0.010		mg/L	
7922104	MCN	RPD [SFM283-01]	Orthophosphate (P)	2022/04/06	NC		%	20
7922106	MCN	Matrix Spike [SFM283-01]	Nitrate + Nitrite (N)	2022/04/06		97	%	80 - 120
7922106	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/06		100	%	80 - 120
7922106	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/06	<0.050		mg/L	
7922106	MCN	RPD [SFM283-01]	Nitrate + Nitrite (N)	2022/04/06	2.3		%	20
7922107	MCN	Matrix Spike [SFM283-01]	Nitrite (N)	2022/04/06		98	%	80 - 120
7922107	MCN	Spiked Blank	Nitrite (N)	2022/04/06		98	%	80 - 120
7922107	MCN	Method Blank	Nitrite (N)	2022/04/06	<0.010		mg/L	
7922107	MCN	RPD [SFM283-01]	Nitrite (N)	2022/04/06	NC		%	20
7922108	MCN	Matrix Spike [SFM295-01]	Total Alkalinity (Total as CaCO3)	2022/04/05		NC	%	80 - 120
7922108	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/05		105	%	80 - 120
7922108	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/05	<5.0		mg/L	
7922108	MCN	RPD [SFM295-01]	Total Alkalinity (Total as CaCO3)	2022/04/05	2.0		%	20
7922109	MCN	Matrix Spike [SFM295-01]	Dissolved Chloride (Cl-)	2022/04/06		95	%	80 - 120
7922109	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/06		95	%	80 - 120
7922109	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/06	<1.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7922109	MCN	RPD [SFM295-01]	Dissolved Chloride (Cl-)	2022/04/06	0.76		%	20
7922112	MCN	Matrix Spike [SFM295-01]	Dissolved Sulphate (SO4)	2022/04/06		89	%	80 - 120
7922112	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/06		96	%	80 - 120
7922112	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/06	<2.0		mg/L	
7922112	MCN	RPD [SFM295-01]	Dissolved Sulphate (SO4)	2022/04/06	1.6		%	20
7922114	MCN	Matrix Spike [SFM295-01]	Reactive Silica (SiO2)	2022/04/06		89	%	80 - 120
7922114	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/06		96	%	80 - 120
7922114	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/06	<0.50		mg/L	
7922114	MCN	RPD [SFM295-01]	Reactive Silica (SiO2)	2022/04/06	0.54		%	20
7922116	MCN	Spiked Blank	Colour	2022/04/06		99	%	80 - 120
7922116	MCN	Method Blank	Colour	2022/04/06	<5.0		TCU	
7922116	MCN	RPD [SFM295-01]	Colour	2022/04/06	14		%	20
7922117	MCN	Matrix Spike [SFM295-01]	Orthophosphate (P)	2022/04/06		95	%	80 - 120
7922117	MCN	Spiked Blank	Orthophosphate (P)	2022/04/06		100	%	80 - 120
7922117	MCN	Method Blank	Orthophosphate (P)	2022/04/06	<0.010		mg/L	
7922117	MCN	RPD [SFM295-01]	Orthophosphate (P)	2022/04/06	NC		%	20
7922118	MCN	Matrix Spike [SFM295-01]	Nitrate + Nitrite (N)	2022/04/06		96	%	80 - 120
7922118	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/06		101	%	80 - 120
7922118	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/06	<0.050		mg/L	
7922118	MCN	RPD [SFM295-01]	Nitrate + Nitrite (N)	2022/04/06	5.9		%	20
7922121	MCN	Matrix Spike [SFM295-01]	Nitrite (N)	2022/04/06		97	%	80 - 120
7922121	MCN	Spiked Blank	Nitrite (N)	2022/04/06		101	%	80 - 120
7922121	MCN	Method Blank	Nitrite (N)	2022/04/06	<0.010		mg/L	
7922121	MCN	RPD [SFM295-01]	Nitrite (N)	2022/04/06	NC		%	20
7924263	SHW	Spiked Blank	Conductivity	2022/04/06		101	%	80 - 120
7924263	SHW	Method Blank	Conductivity	2022/04/06	1.2, RDL=1.0		uS/cm	
7924263	SHW	RPD [SFM284-01]	Conductivity	2022/04/06	1.2		%	10
7924265	SHW	Spiked Blank	pH	2022/04/06		100	%	97 - 103
7924265	SHW	RPD [SFM284-01]	pH	2022/04/06	0.21		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Elevated reporting limit due to turbidity.

(2) Elevated reporting limit due to sample matrix.

(3) Poor spike recovery due to probable sample matrix interference.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C21451	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C282980	869451
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#869451-01-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	DB/MM		

Regulatory Criteria

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

X

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		206 MW1-S	Mar 28	AM	GW			X	Various	
2		206 MW1-D	Mar 28	AM	GW			X		
3		Red MW2-S	Mar 29	AM	GW			X		
4		Red MW2-M	Mar 29	AM	GW			X		
5		Red MW2-D	Mar 27	AM	GW			X		
6		MW3 DUP1	MAR28	AM	GW			X		
7		~~MW5-S~~						X		
8		~~MW5-D~~						X		
9		206 MW6-S	Mar 28	AM	GW			X		
10		206 MW6-D	Mar 28	AM	GW			X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Michael MacGregor / Michael MacGregor	22/03/29	14:30	MATT GRACE					See ACTR	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C21451	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C287980	869451
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#869451-02-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	DB/MM		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event									# of Bottles	Comments / Hazards / Other Required Analysis
1		MW7-S	Mar 28	AM	GW			X									various	
2		MW7-D	Mar 28	AM	GW			X										
3		MW8-S	Mar 29	AM	GW			X										
4		MW8-D	Mar 29	AM	GW			X										
5		~~MW19-03D~~ DUP2	MAR 28	AM	GW			X										
6		MW19-09S	Mar 29	AM	GW			X										
7		MW19-10S	Mar 29	PM	GW			X										
8		MW19-11M	Mar 28	~~AM~~ PM	GW			X										
9		MW19-11D	Mar 28	~~AM~~ PM	GW			X										
10		PW19-01	Mar 29	PM	GW			X										

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified): X

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only		
Michael MacGregor-Mitchell	22/03/29	14:30	MATT GRACE				Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
								See ACTR	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C21451	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C282980	869451
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#869451-03-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	DB/MM		

Regulatory Criteria

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event									# of Bottles	Comments / Hazards / Other Required Analysis
1		MW19-12S	Mar 29	AM	GW			X									VOCs	
2		MW19-12D	Mar 29	AM	GW			X										
3		MW19-13S	Mar 28	AM	GW			X										
4		MW19-13D	Mar 28	AM	GW			X										
5		MW20-14S	Mar 28	PM	GW			X										
6		MW20-14D	Mar 28	PM	GW			X										
7		MW20-15S	Mar 28	PM	GW			X										
8		MW20-15D	Mar 29	AM	GW			X										
9		~~MW20-16~~						X										
10		~~MW20-17S~~						X										

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only		
Michelle Day / Michael MacGregor	22/03/29	14:30	MATT GRACE				Time Sensitive	Temperature (°C) on Receipt: See ACTR	Custody Seal Intact on Cooler? Yes No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

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22 MR 29 1430

Your Project #: 60639002
Your C.O.C. #: 869451-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/07
Report #: R7076164
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C285511
Received: 2022/03/30, 11:31

Sample Matrix: Ground Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	8	N/A	2022/04/05	N/A	SM 23 4500-CO2 D
Alkalinity	6	N/A	2022/04/04	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	2	N/A	2022/04/05	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	8	N/A	2022/04/05	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2022/04/05	2022/04/05	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2022/04/05	ATL SOP 00020	SM 23 2120C m
Organic carbon - Diss (DOC) (2)	8	N/A	2022/04/05	ATL SOP 00203	SM 23 5310B m
Conductance - water	8	N/A	2022/04/05	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	8	2022/04/04	2022/04/04	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	8	N/A	2022/04/05	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	8	N/A	2022/04/04	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/04/05	N/A	Auto Calc.
Ion Balance (% Difference)	1	N/A	2022/04/06	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/04/05	N/A	Auto Calc.
Anion and Cation Sum	1	N/A	2022/04/06	N/A	Auto Calc.
Nitrogen Ammonia - water	8	N/A	2022/04/04	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2022/04/05	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2022/04/05	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2022/04/05	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2022/04/06	CAM SOP-00444	OMOE E3179 m
pH (3)	8	N/A	2022/04/05	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2022/04/05	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	7	N/A	2022/04/05	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	1	N/A	2022/04/06	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	7	N/A	2022/04/05	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	1	N/A	2022/04/06	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2022/04/05	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2022/04/05	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/04/05	N/A	Auto Calc.
Total Dissolved Solids (TDS calc)	1	N/A	2022/04/06	N/A	Auto Calc.
Organic carbon - Total (TOC) (2)	8	N/A	2022/04/04	ATL SOP 00203	SM 23 5310B m

Your Project #: 60639002
Your C.O.C. #: 869451-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/07
Report #: R7076164
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C285511
Received: 2022/03/30, 11:31

Sample Matrix: Ground Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
ModTPH (T1) Calc. for Water	8	N/A	2022/04/05	N/A	Atl. RBCA v3 m
Total Suspended Solids	8	2022/04/01	2022/04/05	ATL SOP 00007	SM 23 2540D m
Turbidity	8	N/A	2022/04/05	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	7	N/A	2022/04/01	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	1	N/A	2022/04/02	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Your Project #: 60639002
Your C.O.C. #: 869451-04-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/07
Report #: R7076164
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C285511
Received: 2022/03/30, 11:31

Encryption Key



Bureau Veritas
07 Apr 2022 11:04:58

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SGA978			SGA978			SGA979		
Sampling Date		2022/03/30			2022/03/30			2022/03/30		
COC Number		869451-04-01			869451-04-01			869451-04-01		
	UNITS	MW20-17D	RDL	QC Batch	MW20-17D Lab-Dup	RDL	QC Batch	DUP3	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	2.26	N/A	7916215				2.41	N/A	7916215
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	95	1.0	7916211				96	1.0	7916211
Calculated TDS	mg/L	120	1.0	7916221				140	1.0	7916221
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7916211				1.5	1.0	7916211
Cation Sum	me/L	1.99	N/A	7916215				2.42	N/A	7916215
Hardness (CaCO3)	mg/L	72	1.0	7916213				95	1.0	7916213
Ion Balance (% Difference)	%	6.35	N/A	7916214				0.210	N/A	7916214
Langelier Index (@ 20C)	N/A	-0.0220		7916219				0.320		7916219
Langelier Index (@ 4C)	N/A	-0.273		7916220				0.0700		7916220
Nitrate (N)	mg/L	<0.050	0.050	7916216				<0.050	0.050	7916216
Saturation pH (@ 20C)	N/A	8.01		7916219				7.91		7916219
Saturation pH (@ 4C)	N/A	8.26		7916220				8.16		7916220
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	96	5.0	7919909				97 (1)	10	7919909
Total Chemical Oxygen Demand	mg/L	25	20	7921826				51	20	7921826
Dissolved Chloride (Cl-)	mg/L	7.9	1.0	7919911				9.4	1.0	7919911
Colour	TCU	<5.0	5.0	7919916				<5.0	5.0	7919916
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7919919				<0.050	0.050	7919919
Nitrite (N)	mg/L	<0.010	0.010	7919920				<0.010	0.010	7919920
Nitrogen (Ammonia Nitrogen)	mg/L	0.068	0.050	7919731				<0.050	0.050	7919731
Dissolved Organic Carbon (C)	mg/L	0.88	0.50	7920203				1.2	0.50	7920203
Total Organic Carbon (C)	mg/L	<5.0 (2)	5.0	7919706				<5.0 (2)	5.0	7919706
Orthophosphate (P)	mg/L	<0.010	0.010	7919917				0.016	0.010	7919917
pH	pH	7.99		7921834				8.22		7921834
Phenols-4AAP	mg/L	0.015	0.0010	7924623	0.015	0.0010	7924623	<0.0010	0.0010	7924623
Reactive Silica (SiO2)	mg/L	9.9	0.50	7919914				10	0.50	7919914
Total Suspended Solids	mg/L	2900	100	7917022				8200	100	7917022
Dissolved Sulphate (SO4)	mg/L	5.5	2.0	7919913				9.5	2.0	7919913
Turbidity	NTU	570	1.0	7921999				>1000	1.0	7921999
Conductivity	uS/cm	210	1.0	7921832				240	1.0	7921832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SGA980		SGA981			SGA981		
Sampling Date		2022/03/30		2022/03/30			2022/03/30		
COC Number		869451-04-01		869451-04-01			869451-04-01		
	UNITS	MW20-17S	RDL	MW-5S	RDL	QC Batch	MW-5S Lab-Dup	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	2.00	N/A	2.27	N/A	7916215			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	80	1.0	87	1.0	7916211			
Calculated TDS	mg/L	110	1.0	130	1.0	7916221			
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	1.0	<1.0	1.0	7916211			
Cation Sum	me/L	1.81	N/A	2.13	N/A	7916215			
Hardness (CaCO3)	mg/L	63	1.0	84	1.0	7916213			
Ion Balance (% Difference)	%	4.99	N/A	3.18	N/A	7916214			
Langelier Index (@ 20C)	N/A	0.0530		-0.445		7916219			
Langelier Index (@ 4C)	N/A	-0.197		-0.696		7916220			
Nitrate (N)	mg/L	<0.050	0.050	0.059	0.050	7916216			
Saturation pH (@ 20C)	N/A	8.13		8.01		7916219			
Saturation pH (@ 4C)	N/A	8.38		8.27		7916220			
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	81	5.0	87	5.0	7919909			
Total Chemical Oxygen Demand	mg/L	37	20	<20	20	7921826			
Dissolved Chloride (Cl-)	mg/L	8.5	1.0	14	1.0	7919911			
Colour	TCU	<5.0	5.0	<5.0	5.0	7919916			
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	0.059	0.050	7919919			
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	7919920			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	<0.050	0.050	7919731			
Dissolved Organic Carbon (C)	mg/L	0.79	0.50	0.88	0.50	7920203			
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	1.6	0.50	7919706			
Orthophosphate (P)	mg/L	<0.010	0.010	0.041	0.010	7919917			
pH	pH	8.18		7.57		7921834			
Phenols-4AAP	mg/L	<0.0010	0.0010	<0.0010	0.0010	7924623			
Reactive Silica (SiO2)	mg/L	8.1	0.50	12	0.50	7919914			
Total Suspended Solids	mg/L	5100	170	57	5.0	7917022	63	5.0	7917022
Dissolved Sulphate (SO4)	mg/L	6.3	2.0	6.8	2.0	7919913			
Turbidity	NTU	>1000	1.0	50	0.10	7921999			
Conductivity	uS/cm	180	1.0	220	1.0	7921832			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SGA982		SGA983			SGA984		
Sampling Date		2022/03/30		2022/03/30			2022/03/30		
COC Number		869451-04-01		869451-04-01			869451-04-01		
	UNITS	MW19-03D	RDL	MW3	RDL	QC Batch	MW20-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	2.25	N/A	2.41	N/A	7916215	2.49	N/A	7916215
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	96	1.0	95	1.0	7916211	95	1.0	7916211
Calculated TDS	mg/L	120	1.0	130	1.0	7916221	150	1.0	7916221
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.2	1.0	1.6	1.0	7916211	<1.0	1.0	7916211
Cation Sum	me/L	2.05	N/A	2.39	N/A	7916215	2.76	N/A	7916215
Hardness (CaCO3)	mg/L	67	1.0	94	1.0	7916213	94	1.0	7916213
Ion Balance (% Difference)	%	4.65	N/A	0.420	N/A	7916214	5.14	N/A	7916214
Langelier Index (@ 20C)	N/A	0.0860		0.330		7916219	-0.158		7916219
Langelier Index (@ 4C)	N/A	-0.164		0.0800		7916220	-0.408		7916220
Nitrate (N)	mg/L	<0.050	0.050	<0.050	0.050	7916216	0.076	0.050	7916216
Saturation pH (@ 20C)	N/A	8.04		7.91		7916219	7.93		7916219
Saturation pH (@ 4C)	N/A	8.29		8.16		7916220	8.18		7916220
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	97	5.0	97 (1)	10	7919909	96	5.0	7919909
Total Chemical Oxygen Demand	mg/L	<20	20	39	20	7921826	<20	20	7921826
Dissolved Chloride (Cl-)	mg/L	7.3	1.0	9.4	1.0	7919911	15	1.0	7919911
Colour	TCU	<5.0	5.0	<5.0	5.0	7919916	<5.0	5.0	7919916
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	<0.050	0.050	7919919	0.076	0.050	7919919
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	7919920	<0.010	0.010	7919920
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	<0.050	0.050	7919731	<0.050	0.050	7919731
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	1.1	0.50	7920203	1.1	0.50	7920203
Total Organic Carbon (C)	mg/L	0.61	0.50	<5.0 (2)	5.0	7919706	1.2	0.50	7919713
Orthophosphate (P)	mg/L	0.081	0.010	0.015	0.010	7919917	0.056	0.010	7919917
pH	pH	8.12		8.24		7921834	7.77		7921834
Phenols-4AAP	mg/L	<0.0010	0.0010	<0.0010	0.0010	7924623	<0.0010	0.0010	7924623
Reactive Silica (SiO2)	mg/L	11	0.50	10	0.50	7919914	11	0.50	7919914
Total Suspended Solids	mg/L	34	1.0	7800	170	7917022	130	2.0	7917022
Dissolved Sulphate (SO4)	mg/L	4.6	2.0	10	2.0	7919913	7.0	2.0	7919913
Turbidity	NTU	20	0.10	>1000	1.0	7921999	150	1.0	7921999
Conductivity	uS/cm	210	1.0	240	1.0	7921832	240	1.0	7921832

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.
(2) Elevated reporting limit due to turbidity.

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RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		SGA985			SGA985		
Sampling Date		2022/03/30			2022/03/30		
COC Number		869451-04-01			869451-04-01		
	UNITS	MW-5D	RDL	QC Batch	MW-5D Lab-Dup	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L	2.40	N/A	7916215			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	93	1.0	7916211			
Calculated TDS	mg/L	130	1.0	7916221			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7916211			
Cation Sum	me/L	2.26	N/A	7916215			
Hardness (CaCO3)	mg/L	89	1.0	7916213			
Ion Balance (% Difference)	%	3.00	N/A	7916214			
Langelier Index (@ 20C)	N/A	-0.291		7916219			
Langelier Index (@ 4C)	N/A	-0.541		7916220			
Nitrate (N)	mg/L	0.067	0.050	7916216			
Saturation pH (@ 20C)	N/A	7.96		7916219			
Saturation pH (@ 4C)	N/A	8.21		7916220			
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	93	5.0	7919909			
Total Chemical Oxygen Demand	mg/L	<20	20	7921826	<20	20	7921826
Dissolved Chloride (Cl-)	mg/L	14	1.0	7919911			
Colour	TCU	<5.0	5.0	7919916			
Nitrate + Nitrite (N)	mg/L	0.067	0.050	7919919			
Nitrite (N)	mg/L	<0.010	0.010	7919920			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7919734	<0.050	0.050	7919734
Dissolved Organic Carbon (C)	mg/L	1.1	0.50	7920203			
Total Organic Carbon (C)	mg/L	1.3	0.50	7919709			
Orthophosphate (P)	mg/L	0.065	0.010	7919917			
pH	pH	7.67		7921834			
Phenols-4AAP	mg/L	<0.0010	0.0010	7924623			
Reactive Silica (SiO2)	mg/L	12	0.50	7919914			
Total Suspended Solids	mg/L	170	5.0	7917022			
Dissolved Sulphate (SO4)	mg/L	6.5	2.0	7919913			
Turbidity	NTU	110	1.0	7921999			
Conductivity	uS/cm	220	1.0	7921832			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SGA978	SGA979	SGA980	SGA981	SGA982	SGA983		
Sampling Date		2022/03/30	2022/03/30	2022/03/30	2022/03/30	2022/03/30	2022/03/30		
COC Number		869451-04-01	869451-04-01	869451-04-01	869451-04-01	869451-04-01	869451-04-01		
	UNITS	MW20-17D	DUP3	MW20-17S	MW-5S	MW19-03D	MW3	RDL	QC Batch
Metals									
Dissolved Aluminum (Al)	ug/L	5.6	6.6	<5.0	7.1	7.4	9.4	5.0	7919806
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7919806
Dissolved Arsenic (As)	ug/L	4.4	3.6	1.5	6.9	5.0	3.1	1.0	7919806
Dissolved Barium (Ba)	ug/L	14	20	13	7.4	7.7	19	1.0	7919806
Dissolved Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	0.17	<0.10	<0.10	0.10	7919806
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7919806
Dissolved Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	7919806
Dissolved Cadmium (Cd)	ug/L	<0.010	<0.010	<0.010	0.10	<0.010	<0.010	0.010	7919806
Dissolved Calcium (Ca)	ug/L	23000	30000	21000	25000	22000	29000	100	7919806
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7919806
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7919806
Dissolved Copper (Cu)	ug/L	<0.50	<0.50	0.66	0.59	7.4	1.5	0.50	7919806
Dissolved Iron (Fe)	ug/L	230	<50	<50	<50	<50	<50	50	7919806
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7919806
Dissolved Magnesium (Mg)	ug/L	3500	5100	2800	4900	3200	5000	100	7919806
Dissolved Manganese (Mn)	ug/L	370	<2.0	55	58	12	<2.0	2.0	7919806
Dissolved Molybdenum (Mo)	ug/L	2.0	2.2	6.4	3.6	5.6	<2.0	2.0	7919806
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7919806
Dissolved Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7919806
Dissolved Potassium (K)	ug/L	1000	1400	860	840	1000	1400	100	7919806
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7919806
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7919806
Dissolved Sodium (Na)	ug/L	12000	11000	12000	10000	16000	11000	100	7919806
Dissolved Strontium (Sr)	ug/L	80	110	51	71	78	110	2.0	7919806
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7919806
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7919806
Dissolved Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7919806
Dissolved Uranium (U)	ug/L	8.9	9.9	0.38	20	17	9.8	0.10	7919806
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7919806
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	7919806

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		SGA984	SGA985		
Sampling Date		2022/03/30	2022/03/30		
COC Number		869451-04-01	869451-04-01		
	UNITS	MW20-16	MW-5D	RDL	QC Batch
Metals					
Dissolved Aluminum (Al)	ug/L	55	5.1	5.0	7919806
Dissolved Antimony (Sb)	ug/L	<1.0	<1.0	1.0	7919806
Dissolved Arsenic (As)	ug/L	7.1	10	1.0	7919806
Dissolved Barium (Ba)	ug/L	8.0	5.1	1.0	7919806
Dissolved Beryllium (Be)	ug/L	0.15	<0.10	0.10	7919806
Dissolved Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	7919806
Dissolved Boron (B)	ug/L	<50	<50	50	7919806
Dissolved Cadmium (Cd)	ug/L	0.015	0.049	0.010	7919806
Dissolved Calcium (Ca)	ug/L	28000	27000	100	7919806
Dissolved Chromium (Cr)	ug/L	<1.0	<1.0	1.0	7919806
Dissolved Cobalt (Co)	ug/L	<0.40	<0.40	0.40	7919806
Dissolved Copper (Cu)	ug/L	2.4	0.54	0.50	7919806
Dissolved Iron (Fe)	ug/L	63	<50	50	7919806
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	0.50	7919806
Dissolved Magnesium (Mg)	ug/L	5500	5300	100	7919806
Dissolved Manganese (Mn)	ug/L	4.1	21	2.0	7919806
Dissolved Molybdenum (Mo)	ug/L	5.1	5.9	2.0	7919806
Dissolved Nickel (Ni)	ug/L	<2.0	<2.0	2.0	7919806
Dissolved Phosphorus (P)	ug/L	<100	<100	100	7919806
Dissolved Potassium (K)	ug/L	1000	1000	100	7919806
Dissolved Selenium (Se)	ug/L	<0.50	<0.50	0.50	7919806
Dissolved Silver (Ag)	ug/L	<0.10	<0.10	0.10	7919806
Dissolved Sodium (Na)	ug/L	20000	11000	100	7919806
Dissolved Strontium (Sr)	ug/L	76	81	2.0	7919806
Dissolved Thallium (Tl)	ug/L	<0.10	<0.10	0.10	7919806
Dissolved Tin (Sn)	ug/L	<2.0	<2.0	2.0	7919806
Dissolved Titanium (Ti)	ug/L	2.5	<2.0	2.0	7919806
Dissolved Uranium (U)	ug/L	16	25	0.10	7919806
Dissolved Vanadium (V)	ug/L	<2.0	<2.0	2.0	7919806
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	7919806

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SGA978	SGA979		SGA980	SGA981	SGA982		
Sampling Date		2022/03/30	2022/03/30		2022/03/30	2022/03/30	2022/03/30		
COC Number		869451-04-01	869451-04-01		869451-04-01	869451-04-01	869451-04-01		
	UNITS	MW20-17D	DUP3	RDL	MW20-17S	MW-5S	MW19-03D	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7916301
Toluene	mg/L	0.0013	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7916301
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7916301
Total Xylenes	mg/L	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	0.0020	7916301
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	0.090	<0.090	<0.090	<0.090	0.090	7916301
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	0.050	<0.054	<0.054	<0.054	0.054	7919738
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	0.050	<0.054	<0.054	<0.054	0.054	7919738
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	0.090	<0.098	<0.098	<0.098	0.098	7919738
Modified TPH (Tier1)	mg/L	<0.090	<0.090	0.090	<0.098	<0.098	<0.098	0.098	7916277
Reached Baseline at C32	mg/L	NA	NA	N/A	NA	NA	NA	N/A	7919738
Hydrocarbon Resemblance	mg/L	NA	NA	N/A	NA	NA	NA	N/A	7919738
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	98	99		96	97	97		7919738
n-Dotriacontane - Extractable	%	112 (1)	113 (1)		115 (2)	111 (3)	112 (3)		7919738
Isobutylbenzene - Volatile	%	109	112 (4)		110 (4)	112 (4)	110		7916301

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) Elevated TEH RDL(s) due to limited sample. TEH sample contained sediment.
(3) Elevated TEH RDL(s) due to limited sample.
(4) VPH sample contained sediment.

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ATLANTIC RBCA HYDROCARBONS (GROUND WATER)

Bureau Veritas ID		SGA983		SGA984		SGA985		
Sampling Date		2022/03/30		2022/03/30		2022/03/30		
COC Number		869451-04-01		869451-04-01		869451-04-01		
	UNITS	MW3	RDL	MW20-16	RDL	MW-5D	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7916301
Toluene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7916301
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7916301
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	7916301
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	0.090	<0.090	0.090	7916301
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	<0.054	0.054	<0.050	0.050	7919738
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	<0.054	0.054	<0.050	0.050	7919738
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	<0.097	0.097	<0.090	0.090	7919738
Modified TPH (Tier1)	mg/L	<0.090	0.090	<0.097	0.097	<0.090	0.090	7916277
Reached Baseline at C32	mg/L	NA	N/A	NA	N/A	NA	N/A	7919738
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	N/A	NA	N/A	7919738
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	98		98		100		7919738
n-Dotriacontane - Extractable	%	113 (1)		112 (2)		113		7919738
Isobutylbenzene - Volatile	%	112 (3)		105		111		7916301

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) TEH sample contained sediment.
(2) Elevated TEH RDL(s) due to limited sample.
(3) VPH sample contained sediment.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C
Package 2	3.7°C

Sample SGA978 [MW20-17D] : Poor RCAp Ion Balance due to sample matrix. Cation sum does not include contribution from Mn.

Sample SGA979 [DUP3] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SGA981 [MW-5S] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SGA982 [MW19-03D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SGA983 [MW3] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SGA984 [MW20-16] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter.

Sample SGA985 [MW-5D] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7916301	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/04/01		116	%	70 - 130
			Benzene	2022/04/01		99	%	70 - 130
			Toluene	2022/04/01		105	%	70 - 130
			Ethylbenzene	2022/04/01		106	%	70 - 130
			Total Xylenes	2022/04/01		106	%	70 - 130
7916301	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/04/01		111	%	70 - 130
			Benzene	2022/04/01		92	%	70 - 130
			Toluene	2022/04/01		100	%	70 - 130
			Ethylbenzene	2022/04/01		102	%	70 - 130
			Total Xylenes	2022/04/01		104	%	70 - 130
7916301	THL	Method Blank	Isobutylbenzene - Volatile	2022/04/01		109	%	70 - 130
			Benzene	2022/04/01	<0.0010		mg/L	
			Toluene	2022/04/01	<0.0010		mg/L	
			Ethylbenzene	2022/04/01	<0.0010		mg/L	
			Total Xylenes	2022/04/01	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/04/01	<0.090		mg/L	
7916301	THL	RPD	Benzene	2022/04/01	NC		%	40
			Toluene	2022/04/01	NC		%	40
			Ethylbenzene	2022/04/01	NC		%	40
			Total Xylenes	2022/04/01	NC		%	40
			C6 - C10 (less BTEX)	2022/04/01	NC		%	40
7917022	MKX	QC Standard	Total Suspended Solids	2022/04/05		88	%	80 - 120
7917022	MKX	Method Blank	Total Suspended Solids	2022/04/05	<1.0		mg/L	
7917022	MKX	RPD [SGA981-09]	Total Suspended Solids	2022/04/05	10		%	20
7919706	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/04		96	%	85 - 115
7919706	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/04		99	%	80 - 120
7919706	NGI	Method Blank	Total Organic Carbon (C)	2022/04/04	<0.50		mg/L	
7919706	NGI	RPD	Total Organic Carbon (C)	2022/04/04	0.84 (1)		%	15
7919709	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/04		97	%	85 - 115
7919709	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/04		99	%	80 - 120
7919709	NGI	Method Blank	Total Organic Carbon (C)	2022/04/04	<0.50		mg/L	
7919709	NGI	RPD	Total Organic Carbon (C)	2022/04/04	0.57		%	15
7919713	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/04		95	%	85 - 115
7919713	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/04		99	%	80 - 120
7919713	NGI	Method Blank	Total Organic Carbon (C)	2022/04/04	<0.50		mg/L	
7919713	NGI	RPD	Total Organic Carbon (C)	2022/04/04	3.2		%	15
7919731	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2022/04/04		92	%	80 - 120
7919731	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/04		96	%	80 - 120
7919731	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/04	<0.050		mg/L	
7919731	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2022/04/04	NC		%	20
7919734	MCN	Matrix Spike [SGA985-06]	Nitrogen (Ammonia Nitrogen)	2022/04/04		95	%	80 - 120
7919734	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/04		94	%	80 - 120
7919734	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/04	<0.050		mg/L	
7919734	MCN	RPD [SGA985-06]	Nitrogen (Ammonia Nitrogen)	2022/04/04	NC		%	20
7919738	THL	Matrix Spike	Isobutylbenzene - Extractable	2022/04/04		101	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		103	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04		101	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/04		94	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/04		102	%	70 - 130
7919738	THL	Spiked Blank	Isobutylbenzene - Extractable	2022/04/04		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		106	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04		100	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/04		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/04		92	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7919738	THL	Method Blank	Isobutylbenzene - Extractable	2022/04/04		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/04		103	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/04	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/04/04	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/04/04	<0.090		mg/L	
7919738	THL	RPD	>C10-C16 Hydrocarbons	2022/04/04	NC		%	40
			>C16-C21 Hydrocarbons	2022/04/04	NC		%	40
			>C21-<C32 Hydrocarbons	2022/04/04	30		%	40
7919806	BAN	Matrix Spike	Dissolved Aluminum (Al)	2022/04/05		101	%	80 - 120
			Dissolved Antimony (Sb)	2022/04/05		97	%	80 - 120
			Dissolved Arsenic (As)	2022/04/05		NC	%	80 - 120
			Dissolved Barium (Ba)	2022/04/05		95	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/05		96	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/05		95	%	80 - 120
			Dissolved Boron (B)	2022/04/05		96	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/05		95	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/05		NC	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/05		96	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/05		92	%	80 - 120
			Dissolved Copper (Cu)	2022/04/05		96	%	80 - 120
			Dissolved Iron (Fe)	2022/04/05		NC	%	80 - 120
			Dissolved Lead (Pb)	2022/04/05		95	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/05		93	%	80 - 120
			Dissolved Manganese (Mn)	2022/04/05		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/04/05		98	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/05		95	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/05		103	%	80 - 120
			Dissolved Potassium (K)	2022/04/05		96	%	80 - 120
			Dissolved Selenium (Se)	2022/04/05		100	%	80 - 120
			Dissolved Silver (Ag)	2022/04/05		95	%	80 - 120
			Dissolved Sodium (Na)	2022/04/05		95	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/05		NC	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/05		98	%	80 - 120
			Dissolved Tin (Sn)	2022/04/05		114	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/05		97	%	80 - 120
			Dissolved Uranium (U)	2022/04/05		103	%	80 - 120
			Dissolved Vanadium (V)	2022/04/05		97	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/05		93	%	80 - 120
7919806	BAN	Spiked Blank	Dissolved Aluminum (Al)	2022/04/04		101	%	80 - 120
			Dissolved Antimony (Sb)	2022/04/04		96	%	80 - 120
			Dissolved Arsenic (As)	2022/04/04		93	%	80 - 120
			Dissolved Barium (Ba)	2022/04/04		97	%	80 - 120
			Dissolved Beryllium (Be)	2022/04/04		96	%	80 - 120
			Dissolved Bismuth (Bi)	2022/04/04		97	%	80 - 120
			Dissolved Boron (B)	2022/04/04		98	%	80 - 120
			Dissolved Cadmium (Cd)	2022/04/04		96	%	80 - 120
			Dissolved Calcium (Ca)	2022/04/04		100	%	80 - 120
			Dissolved Chromium (Cr)	2022/04/04		97	%	80 - 120
			Dissolved Cobalt (Co)	2022/04/04		96	%	80 - 120
			Dissolved Copper (Cu)	2022/04/04		98	%	80 - 120
			Dissolved Iron (Fe)	2022/04/04		101	%	80 - 120
			Dissolved Lead (Pb)	2022/04/04		98	%	80 - 120
			Dissolved Magnesium (Mg)	2022/04/04		100	%	80 - 120
			Dissolved Manganese (Mn)	2022/04/04		98	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Molybdenum (Mo)	2022/04/04		99	%	80 - 120
			Dissolved Nickel (Ni)	2022/04/04		97	%	80 - 120
			Dissolved Phosphorus (P)	2022/04/04		103	%	80 - 120
			Dissolved Potassium (K)	2022/04/04		99	%	80 - 120
			Dissolved Selenium (Se)	2022/04/04		98	%	80 - 120
			Dissolved Silver (Ag)	2022/04/04		97	%	80 - 120
			Dissolved Sodium (Na)	2022/04/04		99	%	80 - 120
			Dissolved Strontium (Sr)	2022/04/04		97	%	80 - 120
			Dissolved Thallium (Tl)	2022/04/04		99	%	80 - 120
			Dissolved Tin (Sn)	2022/04/04		114	%	80 - 120
			Dissolved Titanium (Ti)	2022/04/04		101	%	80 - 120
			Dissolved Uranium (U)	2022/04/04		102	%	80 - 120
			Dissolved Vanadium (V)	2022/04/04		98	%	80 - 120
			Dissolved Zinc (Zn)	2022/04/04		97	%	80 - 120
7919806	BAN	Method Blank	Dissolved Aluminum (Al)	2022/04/04	<5.0		ug/L	
			Dissolved Antimony (Sb)	2022/04/04	<1.0		ug/L	
			Dissolved Arsenic (As)	2022/04/04	<1.0		ug/L	
			Dissolved Barium (Ba)	2022/04/04	<1.0		ug/L	
			Dissolved Beryllium (Be)	2022/04/04	<0.10		ug/L	
			Dissolved Bismuth (Bi)	2022/04/04	<2.0		ug/L	
			Dissolved Boron (B)	2022/04/04	<50		ug/L	
			Dissolved Cadmium (Cd)	2022/04/04	<0.010		ug/L	
			Dissolved Calcium (Ca)	2022/04/04	<100		ug/L	
			Dissolved Chromium (Cr)	2022/04/04	<1.0		ug/L	
			Dissolved Cobalt (Co)	2022/04/04	<0.40		ug/L	
			Dissolved Copper (Cu)	2022/04/04	<0.50		ug/L	
			Dissolved Iron (Fe)	2022/04/04	<50		ug/L	
			Dissolved Lead (Pb)	2022/04/04	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/04/04	<100		ug/L	
			Dissolved Manganese (Mn)	2022/04/04	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2022/04/04	<2.0		ug/L	
			Dissolved Nickel (Ni)	2022/04/04	<2.0		ug/L	
			Dissolved Phosphorus (P)	2022/04/04	<100		ug/L	
			Dissolved Potassium (K)	2022/04/04	<100		ug/L	
			Dissolved Selenium (Se)	2022/04/04	<0.50		ug/L	
			Dissolved Silver (Ag)	2022/04/04	<0.10		ug/L	
			Dissolved Sodium (Na)	2022/04/04	<100		ug/L	
			Dissolved Strontium (Sr)	2022/04/04	<2.0		ug/L	
			Dissolved Thallium (Tl)	2022/04/04	<0.10		ug/L	
			Dissolved Tin (Sn)	2022/04/04	<2.0		ug/L	
			Dissolved Titanium (Ti)	2022/04/04	<2.0		ug/L	
			Dissolved Uranium (U)	2022/04/04	<0.10		ug/L	
			Dissolved Vanadium (V)	2022/04/04	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/04/04	<5.0		ug/L	
7919806	BAN	RPD	Dissolved Aluminum (Al)	2022/04/05	0.90		%	20
			Dissolved Antimony (Sb)	2022/04/05	NC		%	20
			Dissolved Arsenic (As)	2022/04/05	1.0		%	20
			Dissolved Barium (Ba)	2022/04/05	2.4		%	20
			Dissolved Beryllium (Be)	2022/04/05	NC		%	20
			Dissolved Bismuth (Bi)	2022/04/05	NC		%	20
			Dissolved Boron (B)	2022/04/05	NC		%	20
			Dissolved Cadmium (Cd)	2022/04/05	0.75		%	20
			Dissolved Calcium (Ca)	2022/04/05	0.84		%	20
			Dissolved Chromium (Cr)	2022/04/05	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Cobalt (Co)	2022/04/05	1.4		%	20
			Dissolved Copper (Cu)	2022/04/05	3.8		%	20
			Dissolved Iron (Fe)	2022/04/05	2.7		%	20
			Dissolved Lead (Pb)	2022/04/05	NC		%	20
			Dissolved Magnesium (Mg)	2022/04/05	0.65		%	20
			Dissolved Manganese (Mn)	2022/04/05	1.3		%	20
			Dissolved Molybdenum (Mo)	2022/04/05	0.81		%	20
			Dissolved Nickel (Ni)	2022/04/05	0.80		%	20
			Dissolved Phosphorus (P)	2022/04/05	NC		%	20
			Dissolved Potassium (K)	2022/04/05	0.27		%	20
			Dissolved Selenium (Se)	2022/04/05	NC		%	20
			Dissolved Silver (Ag)	2022/04/05	NC		%	20
			Dissolved Sodium (Na)	2022/04/05	0.62		%	20
			Dissolved Strontium (Sr)	2022/04/05	0.68		%	20
			Dissolved Thallium (Tl)	2022/04/05	NC		%	20
			Dissolved Tin (Sn)	2022/04/05	NC		%	20
			Dissolved Titanium (Ti)	2022/04/05	NC		%	20
			Dissolved Uranium (U)	2022/04/05	2.9		%	20
			Dissolved Vanadium (V)	2022/04/05	NC		%	20
			Dissolved Zinc (Zn)	2022/04/05	1.1		%	20
7919909	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2022/04/04		NC	%	80 - 120
7919909	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/04		103	%	80 - 120
7919909	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/04	<5.0		mg/L	
7919909	MCN	RPD	Total Alkalinity (Total as CaCO3)	2022/04/04	3.1		%	20
7919911	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2022/04/05		NC	%	80 - 120
7919911	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/05		96	%	80 - 120
7919911	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/05	<1.0		mg/L	
7919911	MCN	RPD	Dissolved Chloride (Cl-)	2022/04/05	0.47		%	20
7919913	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2022/04/05		NC	%	80 - 120
7919913	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/05		95	%	80 - 120
7919913	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/05	<2.0		mg/L	
7919913	MCN	RPD	Dissolved Sulphate (SO4)	2022/04/05	0.33		%	20
7919914	MCN	Matrix Spike	Reactive Silica (SiO2)	2022/04/05		87	%	80 - 120
7919914	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/05		92	%	80 - 120
7919914	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/05	<0.50		mg/L	
7919914	MCN	RPD	Reactive Silica (SiO2)	2022/04/05	1.1		%	20
7919916	MCN	Spiked Blank	Colour	2022/04/05		93	%	80 - 120
7919916	MCN	Method Blank	Colour	2022/04/05	<5.0		TCU	
7919916	MCN	RPD	Colour	2022/04/05	NC		%	20
7919917	MCN	Matrix Spike	Orthophosphate (P)	2022/04/05		93	%	80 - 120
7919917	MCN	Spiked Blank	Orthophosphate (P)	2022/04/05		94	%	80 - 120
7919917	MCN	Method Blank	Orthophosphate (P)	2022/04/05	<0.010		mg/L	
7919917	MCN	RPD	Orthophosphate (P)	2022/04/05	2.0		%	20
7919919	MCN	Matrix Spike	Nitrate + Nitrite (N)	2022/04/05		90	%	80 - 120
7919919	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/05		99	%	80 - 120
7919919	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/05	<0.050		mg/L	
7919919	MCN	RPD	Nitrate + Nitrite (N)	2022/04/05	1.3		%	20
7919920	MCN	Matrix Spike	Nitrite (N)	2022/04/05		96	%	80 - 120
7919920	MCN	Spiked Blank	Nitrite (N)	2022/04/05		97	%	80 - 120
7919920	MCN	Method Blank	Nitrite (N)	2022/04/05	<0.010		mg/L	
7919920	MCN	RPD	Nitrite (N)	2022/04/05	NC		%	20
7920203	NGI	Matrix Spike	Dissolved Organic Carbon (C)	2022/04/05		98	%	85 - 115
7920203	NGI	Spiked Blank	Dissolved Organic Carbon (C)	2022/04/05		100	%	80 - 120
7920203	NGI	Method Blank	Dissolved Organic Carbon (C)	2022/04/05	<0.50		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7920203	NGI	RPD	Dissolved Organic Carbon (C)	2022/04/05	0.29		%	15
7921826	ZZH	Matrix Spike [SGA985-02]	Total Chemical Oxygen Demand	2022/04/05		101	%	80 - 120
7921826	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/04/05		103	%	80 - 120
7921826	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/04/05		99	%	80 - 120
7921826	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/04/05	<20		mg/L	
7921826	ZZH	RPD [SGA985-02]	Total Chemical Oxygen Demand	2022/04/05	NC		%	25
7921832	SHW	Spiked Blank	Conductivity	2022/04/05		102	%	80 - 120
7921832	SHW	Method Blank	Conductivity	2022/04/05	1.1, RDL=1.0		uS/cm	
7921832	SHW	RPD	Conductivity	2022/04/05	0		%	10
7921834	SHW	Spiked Blank	pH	2022/04/05		100	%	97 - 103
7921834	SHW	RPD	pH	2022/04/05	0.29		%	N/A
7921999	SHW	QC Standard	Turbidity	2022/04/05		100	%	80 - 120
7921999	SHW	Spiked Blank	Turbidity	2022/04/05		99	%	80 - 120
7921999	SHW	Method Blank	Turbidity	2022/04/05	<0.10		NTU	
7921999	SHW	RPD	Turbidity	2022/04/05	16		%	20
7924623	LHA	Matrix Spike [SGA978-07]	Phenols-4AAP	2022/04/06		101	%	80 - 120
7924623	LHA	Spiked Blank	Phenols-4AAP	2022/04/06		102	%	80 - 120
7924623	LHA	Method Blank	Phenols-4AAP	2022/04/06	<0.0010		mg/L	
7924623	LHA	RPD [SGA978-07]	Phenols-4AAP	2022/04/06	0.67		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Elevated reporting limit due to turbidity.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C285511
Report Date: 2022/04/07

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas Proprietary Software
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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C21451	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable Harrietsfield	Contact Name	Janice Shea	P.O. #		C285511	889451
Address	1701 Hollis St SH400	Address		Project #	60639002	Chain Of Custody Record	Project Manager
	Halifax NS B3J 3M8			Project Name		C#889451-04-01	Marie Muise
Phone	(902) 428-2021 Fax: (902) 428-2031	Phone	Fax:	Site #			
Email	CANSSC.E-billing@aecom.com, rory.mcneil@aecom.c	Email	Janice.shea@aecom.com	Sampled By	MM/BD		

Regulatory Criteria

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (If applies to entire submission)
Date Required: Time Required: ☐

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Groundwater Quarterly Event	# of Bottles	Comments / Hazards / Other Required Analysis
1		MW20-17D	Mar 30	AM	GW			X	Various	
2		~~DUP1~~ 206	~~Mar 28~~	~~AM~~				X		
3		~~DUP2~~	~~Mar 28~~	~~AM~~				X		
4		DUP3	Mar 30	AM	GW			X	Various	
5		MW 20-17S	Mar 30	AM	GW					
6		~~MW 20-17D~~ MW-55	Mar 30	AM	GW					
7		MW 19-03D	Mar 30	AM	GW					
8		MW 3	Mar 30	AM	GW					
9		MW 20-16	Mar 30	AM	GW					
10		MW 5-D	Mar 30	AM	GW					

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Michael MacGregor	22/03/30	11:12	RON STEELE				☐	5,4,3/4,4,3	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

2022 MAR 30 11:31

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 839425-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/08/20
Report #: R6774319
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1M6832
Received: 2021/08/11, 15:09

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	8	N/A	2021/08/13	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/08/19	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/08/12	2021/08/17	ATL SOP 00041	SM 23 5210B m
Chloride	8	N/A	2021/08/19	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/08/12	2021/08/12	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2021/08/20	ATL SOP 00020	SM 23 2120C m
Conductance - water	8	N/A	2021/08/13	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	1	2021/08/12	2021/08/12	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	5	2021/08/12	2021/08/13	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	2	2021/08/13	2021/08/13	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	6	N/A	2021/08/13	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	2	N/A	2021/08/16	ATL SOP 00048	Auto Calc
Metals Water Total MS	5	2021/08/12	2021/08/12	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/08/12	2021/08/13	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	2	2021/08/12	2021/08/16	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	8	N/A	2021/08/20	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/08/19	N/A	Auto Calc.
Nitrogen Ammonia - water	8	N/A	2021/08/18	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2021/08/19	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2021/08/19	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2021/08/20	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/08/16	CAM SOP-00444	OMOE E3179 m
pH (2)	8	N/A	2021/08/13	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2021/08/19	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	8	N/A	2021/08/20	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	8	N/A	2021/08/20	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2021/08/19	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2021/08/19	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	8	N/A	2021/08/20	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	8	N/A	2021/08/13	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	8	N/A	2021/08/16	N/A	Atl. RBCA v3 m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 839425-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/08/20
Report #: R6774319
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1M6832
Received: 2021/08/11, 15:09

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids	8	2021/08/18	2021/08/18	ATL SOP 00007	SM 23 2540D m
Turbidity	3	N/A	2021/08/12	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	5	N/A	2021/08/13	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	8	N/A	2021/08/13	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 839425-01-01

Attention: Janice Shea

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1701 Hollis St
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Report Date: 2021/08/20
Report #: R6774319
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1M6832
Received: 2021/08/11, 15:09

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
20 Aug 2021 14:10:47

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253
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BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QIT117			QIT117			QIT118		
Sampling Date		2021/08/11 11:45			2021/08/11 11:45			2021/08/11 11:36		
COC Number		839425-01-01			839425-01-01			839425-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	0.210	N/A	7512694				0.210	N/A	7512694
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7512688				<1.0	1.0	7512688
Calculated TDS	mg/L	19	1.0	7512702				19	1.0	7512702
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7512688				<1.0	1.0	7512688
Cation Sum	me/L	0.360	N/A	7512694				0.350	N/A	7512694
Hardness (CaCO3)	mg/L	5.5	1.0	7513294				5.4	1.0	7513294
Ion Balance (% Difference)	%	26.3	N/A	7512693				25.0	N/A	7512693
Langelier Index (@ 20C)	N/A	NC		7512700				NC		7512700
Langelier Index (@ 4C)	N/A	NC		7512701				NC		7512701
Nitrate (N)	mg/L	<0.050	0.050	7513296				<0.050	0.050	7513296
Saturation pH (@ 20C)	N/A	NC		7512700				NC		7512700
Saturation pH (@ 4C)	N/A	NC		7512701				NC		7512701
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7527153				<5.0	5.0	7527153
Carbonaceous BOD	mg/L	<5.0	5.0	7515008				<5.0	5.0	7515008
Total Chemical Oxygen Demand	mg/L	79	20	7515097				79	20	7515192
Dissolved Chloride (Cl-)	mg/L	7.4	1.0	7527156				7.4	1.0	7527156
Colour	TCU	230	25	7527166				230	25	7527166
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7527169				<0.050	0.050	7527169
Nitrite (N)	mg/L	<0.010	0.010	7527170				<0.010	0.010	7527170
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7526326	<0.050	0.050	7526326	<0.050	0.050	7526323
Total Organic Carbon (C)	mg/L	25	0.50	7517723				26	0.50	7517723
Orthophosphate (P)	mg/L	<0.010	0.010	7527168				<0.010	0.010	7527168
pH	pH	4.94		7517720	4.84		7517720	4.83		7517720
Phenols-4AAP	mg/L	<0.0010	0.0010	7521335				<0.0010	0.0010	7521335
Reactive Silica (SiO2)	mg/L	4.1	0.50	7527164				4.1	0.50	7527164
Total Suspended Solids	mg/L	2.6	1.0	7526194				3.4	1.0	7526194
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7527162				<2.0	2.0	7527162
Turbidity	NTU	3.1	0.10	7517748	3.2	0.10	7517748	3.5	0.10	7515380
Conductivity	uS/cm	38	1.0	7517716	38	1.0	7517716	39	1.0	7517716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QIT118			QIT119	QIT120		QIT121		
Sampling Date		2021/08/11 11:36			2021/08/11 11:15	2021/08/11 11:23		2021/08/11 10:40		
COC Number		839425-01-01			839425-01-01	839425-01-01		839425-01-01		
Sample #		SW2			SW3	SW4		SW13		
	UNITS	SW2 Lab-Dup	RDL	QC Batch	SW3	SW4	RDL	SW13	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				0.370	0.210	N/A	1.15	N/A	7512694
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	<1.0	1.0	21	1.0	7512688
Calculated TDS	mg/L				28	19	1.0	72	1.0	7512702
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	<1.0	1.0	<1.0	1.0	7512688
Cation Sum	me/L				0.390	0.380	N/A	1.22	N/A	7512694
Hardness (CaCO3)	mg/L				6.4	6.3	1.0	30	1.0	7513294
Ion Balance (% Difference)	%				2.63	28.8	N/A	2.95	N/A	7512693
Langelier Index (@ 20C)	N/A				NC	NC		-2.43		7512700
Langelier Index (@ 4C)	N/A				NC	NC		-2.68		7512701
Nitrate (N)	mg/L				<0.050	<0.050	0.050	<0.050	0.050	7513296
Saturation pH (@ 20C)	N/A				NC	NC		9.07		7512700
Saturation pH (@ 4C)	N/A				NC	NC		9.32		7512701
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				<5.0	<5.0	5.0	21	5.0	7527153
Carbonaceous BOD	mg/L				<5.0	<5.0	5.0	<5.0	5.0	7515008
Total Chemical Oxygen Demand	mg/L	74	20	7515192	79	76	20	63	20	7515192
Dissolved Chloride (Cl-)	mg/L				7.4	7.4	1.0	23	1.0	7527156
Colour	TCU				220	230	25	160	25	7527166
Nitrate + Nitrite (N)	mg/L				<0.050	<0.050	0.050	<0.050	0.050	7527169
Nitrite (N)	mg/L				<0.010	<0.010	0.010	<0.010	0.010	7527170
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	<0.050	0.050	<0.050	0.050	7526323
Total Organic Carbon (C)	mg/L				26	26	0.50	19	0.50	7517723
Orthophosphate (P)	mg/L				<0.010	<0.010	0.010	0.013	0.010	7527168
pH	pH				4.90	4.87		6.64		7517720
Phenols-4AAP	mg/L				<0.0010	<0.0010	0.0010	<0.0010	0.0010	7521335
Reactive Silica (SiO2)	mg/L				4.7	4.1	0.50	6.6	0.50	7527164
Total Suspended Solids	mg/L				2.6	2.4	1.0	3.6	2.0	7526194
Dissolved Sulphate (SO4)	mg/L				7.8	<2.0	2.0	3.9	2.0	7527162
Turbidity	NTU				3.9	4.2	0.10	7.1	0.10	7517757
Conductivity	uS/cm				38	38	1.0	110	1.0	7517716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QIT122			QIT123		QIT124		
Sampling Date		2021/08/11 12:30			2021/08/11 11:10		2021/08/11		
COC Number		839425-01-01			839425-01-01		839425-01-01		
Sample #		SW19-20			DIFFUSER		DUP1		
	UNITS	**SW19-20**	**RDL**	**QC Batch**	**Diffuser**	**RDL**	**DUP1**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	me/L	10.8	N/A	7512694	0.210	N/A	1.45	N/A	7512694
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	290	1.0	7512688	<1.0	1.0	25	1.0	7512688
Calculated TDS	mg/L	640	1.0	7512702	19	1.0	83	1.0	7512702
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7512688	<1.0	1.0	<1.0	1.0	7512688
Cation Sum	me/L	10.6	N/A	7512694	0.350	N/A	1.17	N/A	7512694
Hardness (CaCO3)	mg/L	460	1.0	7513294	5.5	1.0	28	1.0	7513294
Ion Balance (% Difference)	%	0.890	N/A	7512693	25.0	N/A	10.7	N/A	7512693
Langelier Index (@ 20C)	N/A	0.611		7512700	NC		-2.31		7512700
Langelier Index (@ 4C)	N/A	0.365		7512701	NC		-2.56		7512701
Nitrate (N)	mg/L	0.082	0.050	7513296	<0.050	0.050	<0.050	0.050	7513296
Saturation pH (@ 20C)	N/A	6.85		7512700	NC		9.02		7512700
Saturation pH (@ 4C)	N/A	7.10		7512701	NC		9.27		7512701
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	290	25	7527153	<5.0	5.0	25	5.0	7527153
Carbonaceous BOD	mg/L	<5.0	5.0	7515008	<5.0	5.0	<5.0	5.0	7515008
Total Chemical Oxygen Demand	mg/L	47	20	7515192	76	20	58	20	7515192
Dissolved Chloride (Cl-)	mg/L	20	1.0	7527156	7.6	1.0	25	1.0	7527156
Colour	TCU	12	5.0	7527166	230	25	150	25	7527166
Nitrate + Nitrite (N)	mg/L	0.082	0.050	7527169	<0.050	0.050	<0.050	0.050	7527169
Nitrite (N)	mg/L	<0.010	0.010	7527170	<0.010	0.010	<0.010	0.010	7527170
Nitrogen (Ammonia Nitrogen)	mg/L	0.23	0.050	7526323	<0.050	0.050	<0.050	0.050	7526323
Total Organic Carbon (C)	mg/L	12	0.50	7517723	26	0.50	20	0.50	7517723
Orthophosphate (P)	mg/L	<0.010	0.010	7527168	<0.010	0.010	0.013	0.010	7527168
pH	pH	7.46		7517720	5.14		6.71		7517720
Phenols-4AAP	mg/L	<0.0010	0.0010	7521335	<0.0010	0.0010	<0.0010	0.0010	7521335
Reactive Silica (SiO2)	mg/L	13	0.50	7527164	4.2	0.50	6.6	0.50	7527164
Total Suspended Solids	mg/L	20	1.0	7526194	2.6	1.0	6.4	2.0	7526194
Dissolved Sulphate (SO4)	mg/L	210	10	7527162	<2.0	2.0	12	2.0	7527162
Turbidity	NTU	52	0.10	7517757	3.6	0.10	5.1	0.10	7515380
Conductivity	uS/cm	1000	1.0	7517716	38	1.0	130	1.0	7517716

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QIT117		QIT118		QIT119	QIT120	QIT121		
Sampling Date		2021/08/11 11:45		2021/08/11 11:36		2021/08/11 11:15	2021/08/11 11:23	2021/08/11 10:40		
COC Number		839425-01-01		839425-01-01		839425-01-01	839425-01-01	839425-01-01		
Sample #		SW1		SW2		SW3	SW4	SW13		
	UNITS	**SW1**	**QC Batch**	**SW2**	**QC Batch**	**SW3**	**SW4**	**SW13**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	ug/L	940	7515298	790	7515593	910	900	630	5.0	7515298
Total Antimony (Sb)	ug/L	<1.0	7515298	<1.0	7515593	<1.0	<1.0	<1.0	1.0	7515298
Total Arsenic (As)	ug/L	<1.0	7515298	<1.0	7515593	<1.0	1.0	1.6	1.0	7515298
Total Barium (Ba)	ug/L	5.2	7515298	5.5	7515593	5.6	5.3	13	1.0	7515298
Total Beryllium (Be)	ug/L	<1.0	7515298	<1.0	7515593	<1.0	<1.0	<1.0	1.0	7515298
Total Bismuth (Bi)	ug/L	<2.0	7515298	<2.0	7515593	<2.0	<2.0	<2.0	2.0	7515298
Total Boron (B)	ug/L	<50	7515298	<50	7515593	<50	<50	<50	50	7515298
Total Cadmium (Cd)	ug/L	0.020	7515298	0.018	7515593	0.022	0.021	0.039	0.010	7515298
Total Calcium (Ca)	ug/L	1300	7515298	1400	7515593	1600	1500	8500	100	7515298
Total Chromium (Cr)	ug/L	<1.0	7515298	<1.0	7515593	<1.0	<1.0	1.1	1.0	7515298
Total Cobalt (Co)	ug/L	<0.40	7515298	<0.40	7515593	<0.40	<0.40	1.1	0.40	7515298
Total Copper (Cu)	ug/L	0.67	7515298	0.59	7515593	0.56	0.59	4.7	0.50	7515298
Total Iron (Fe)	ug/L	820	7515298	790	7515593	870	860	1500	50	7515298
Total Lead (Pb)	ug/L	1.1	7515298	1.1	7515593	1.2	1.2	5.9	0.50	7515298
Total Magnesium (Mg)	ug/L	550	7515298	500	7515593	590	600	2000	100	7515298
Total Manganese (Mn)	ug/L	26	7515298	27	7515593	37	32	290	2.0	7515298
Total Molybdenum (Mo)	ug/L	<2.0	7515298	<2.0	7515593	<2.0	<2.0	<2.0	2.0	7515298
Total Nickel (Ni)	ug/L	<2.0	7515298	<2.0	7515593	<2.0	<2.0	2.7	2.0	7515298
Total Phosphorus (P)	ug/L	<100	7515298	<100	7515593	<100	<100	<100	100	7515298
Total Potassium (K)	ug/L	240	7515298	220	7515593	250	260	810	100	7515298
Total Selenium (Se)	ug/L	<0.50	7515298	<0.50	7515593	<0.50	<0.50	<0.50	0.50	7515298
Total Silver (Ag)	ug/L	<0.10	7515298	<0.10	7515593	<0.10	<0.10	<0.10	0.10	7515298
Total Sodium (Na)	ug/L	4700	7515298	4300	7515593	4800	4800	13000	100	7515298
Total Strontium (Sr)	ug/L	7.5	7515298	7.9	7515593	9.1	8.3	29	2.0	7515298
Total Thallium (Tl)	ug/L	<0.10	7515298	<0.10	7515593	<0.10	<0.10	<0.10	0.10	7515298
Total Tin (Sn)	ug/L	<2.0	7515298	<2.0	7515593	<2.0	<2.0	<2.0	2.0	7515298
Total Titanium (Ti)	ug/L	11	7515298	12	7515593	11	12	12	2.0	7515298
Total Uranium (U)	ug/L	0.29	7515298	0.28	7515593	0.33	0.32	1.0	0.10	7515298
Total Vanadium (V)	ug/L	<2.0	7515298	<2.0	7515593	<2.0	<2.0	<2.0	2.0	7515298
Total Zinc (Zn)	ug/L	<5.0	7515298	<5.0	7515593	<5.0	<5.0	13	5.0	7515298

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QIT122		QIT123	QIT124		
Sampling Date		2021/08/11 12:30		2021/08/11 11:10	2021/08/11		
COC Number		839425-01-01		839425-01-01	839425-01-01		
Sample #		SW19-20		DIFFUSER	DUP1		
	UNITS	**SW19-20**	**QC Batch**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Metals							
Total Aluminum (Al)	ug/L	1200	7515298	800	560	5.0	7515583
Total Antimony (Sb)	ug/L	<1.0	7515298	<1.0	<1.0	1.0	7515583
Total Arsenic (As)	ug/L	3.1	7515298	<1.0	1.6	1.0	7515583
Total Barium (Ba)	ug/L	49	7515298	5.3	13	1.0	7515583
Total Beryllium (Be)	ug/L	<1.0	7515298	<1.0	<1.0	1.0	7515583
Total Bismuth (Bi)	ug/L	<2.0	7515298	<2.0	<2.0	2.0	7515583
Total Boron (B)	ug/L	770	7515298	<50	<50	50	7515583
Total Cadmium (Cd)	ug/L	0.027	7515298	0.022	0.037	0.010	7515583
Total Calcium (Ca)	ug/L	150000	7515298	1300	8300	100	7515583
Total Chromium (Cr)	ug/L	1.7	7515298	<1.0	<1.0	1.0	7515583
Total Cobalt (Co)	ug/L	4.1	7515298	<0.40	1.1	0.40	7515583
Total Copper (Cu)	ug/L	2.8	7515298	0.56	4.4	0.50	7515583
Total Iron (Fe)	ug/L	3700	7515298	840	1500	50	7515583
Total Lead (Pb)	ug/L	1.4	7515298	1.2	5.8	0.50	7515583
Total Magnesium (Mg)	ug/L	20000	7515298	540	1900	100	7515583
Total Manganese (Mn)	ug/L	5400	7515298	27	260	2.0	7515583
Total Molybdenum (Mo)	ug/L	7.5	7515298	<2.0	<2.0	2.0	7515583
Total Nickel (Ni)	ug/L	4.9	7515298	<2.0	2.6	2.0	7515583
Total Phosphorus (P)	ug/L	<100	7515298	<100	<100	100	7515583
Total Potassium (K)	ug/L	11000	7515298	210	770	100	7515583
Total Selenium (Se)	ug/L	<0.50	7515298	<0.50	<0.50	0.50	7515583
Total Silver (Ag)	ug/L	<0.10	7515298	<0.10	<0.10	0.10	7515583
Total Sodium (Na)	ug/L	25000	7515298	4600	12000	100	7515583
Total Strontium (Sr)	ug/L	560	7515298	7.7	27	2.0	7515583
Total Thallium (Tl)	ug/L	<0.10	7515298	<0.10	<0.10	0.10	7515583
Total Tin (Sn)	ug/L	<2.0	7515298	<2.0	<2.0	2.0	7515583
Total Titanium (Ti)	ug/L	50	7515298	9.2	11	2.0	7515583
Total Uranium (U)	ug/L	52	7515298	0.28	0.99	0.10	7515583
Total Vanadium (V)	ug/L	2.5	7515298	<2.0	<2.0	2.0	7515583
Total Zinc (Zn)	ug/L	9.8	7515298	<5.0	12	5.0	7515583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1M6832
Report Date: 2021/08/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QIT117	QIT118	QIT119	QIT120	QIT121		
Sampling Date		2021/08/11 11:45	2021/08/11 11:36	2021/08/11 11:15	2021/08/11 11:23	2021/08/11 10:40		
COC Number		839425-01-01	839425-01-01	839425-01-01	839425-01-01	839425-01-01		
Sample #		SW1	SW2	SW3	SW4	SW13		
	UNITS	**SW1**	**SW2**	**SW3**	**SW4**	**SW13**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7515063
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7515063
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7515063
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7515063
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7515063
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7515735
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7515735
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7515735
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7512705
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA	N/A	7515735
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA	N/A	7515735
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	101	101	103	100	100		7515735
n-Dotriacontane - Extractable	%	114	118	117	115	115		7515735
Isobutylbenzene - Volatile	%	104	104	105	106	107		7515063

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QIT122		QIT123	QIT124		
Sampling Date		2021/08/11 12:30		2021/08/11 11:10	2021/08/11		
COC Number		839425-01-01		839425-01-01	839425-01-01		
Sample #		SW19-20		DIFFUSER	DUP1		
	UNITS	**SW19-20**	**QC Batch**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	7515063	<0.0010	<0.0010	0.0010	7515063
Toluene	mg/L	<0.0010	7515063	<0.0010	<0.0010	0.0010	7515063
Ethylbenzene	mg/L	<0.0010	7515063	<0.0010	<0.0010	0.0010	7515063
Total Xylenes	mg/L	<0.0020	7515063	<0.0020	<0.0020	0.0020	7515063
C6 - C10 (less BTEX)	mg/L	<0.090	7515063	<0.090	<0.090	0.090	7515063
>C10-C16 Hydrocarbons	mg/L	<0.050	7515259	<0.050	<0.050	0.050	7518061
>C16-C21 Hydrocarbons	mg/L	<0.050	7515259	<0.050	<0.050	0.050	7518061
>C21-<C32 Hydrocarbons	mg/L	0.19	7515259	<0.090	<0.090	0.090	7518061
Modified TPH (Tier1)	mg/L	0.19	7512705	<0.090	<0.090	0.090	7512705
Reached Baseline at C32	mg/L	Yes	7515259	NA	NA	N/A	7518061
Hydrocarbon Resemblance	mg/L	COMMENT (1)	7515259	NA	NA	N/A	7518061
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	97	7515259	89	97		7518061
n-Dotriacontane - Extractable	%	110	7515259	128	95		7518061
Isobutylbenzene - Volatile	%	105	7515063	105	104		7515063

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	18.7°C
Package 2	20.3°C
Package 3	18.7°C

Sample QIT117 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QIT118 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QIT120 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QIT123 [Diffuser] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QIT124 [DUP1] : Poor RCAp Ion Balance due to sample matrix.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7515008	KLE	QC Standard	Carbonaceous BOD	2021/08/17		133 (1)	%	80 - 120
7515008	KLE	Spiked Blank	Carbonaceous BOD	2021/08/17		145 (2)	%	80 - 120
7515008	KLE	Method Blank	Carbonaceous BOD	2021/08/17	<2.0		mg/L	
7515008	KLE	RPD	Carbonaceous BOD	2021/08/17	1.5		%	25
7515063	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/08/13		105	%	70 - 130
			Benzene	2021/08/13		93	%	70 - 130
			Toluene	2021/08/13		95	%	70 - 130
			Ethylbenzene	2021/08/13		98	%	70 - 130
			Total Xylenes	2021/08/13		98	%	70 - 130
7515063	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/08/13		106	%	70 - 130
			Benzene	2021/08/13		96	%	70 - 130
			Toluene	2021/08/13		100	%	70 - 130
			Ethylbenzene	2021/08/13		102	%	70 - 130
			Total Xylenes	2021/08/13		102	%	70 - 130
7515063	THL	Method Blank	Isobutylbenzene - Volatile	2021/08/13		105	%	70 - 130
			Benzene	2021/08/13	<0.0010		mg/L	
			Toluene	2021/08/13	<0.0010		mg/L	
			Ethylbenzene	2021/08/13	<0.0010		mg/L	
			Total Xylenes	2021/08/13	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/08/13	<0.090		mg/L	
7515063	THL	RPD	Benzene	2021/08/13	NC		%	40
			Toluene	2021/08/13	NC		%	40
			Ethylbenzene	2021/08/13	NC		%	40
			Total Xylenes	2021/08/13	NC		%	40
			C6 - C10 (less BTEX)	2021/08/13	NC		%	40
7515097	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/08/12		101	%	80 - 120
7515097	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/08/12		101	%	80 - 120
7515097	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/08/12		101	%	80 - 120
7515097	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/08/12	<20		mg/L	
7515097	ZZH	RPD	Total Chemical Oxygen Demand	2021/08/12	NC		%	25
7515192	ZZH	Matrix Spike [QIT118-02]	Total Chemical Oxygen Demand	2021/08/12		100	%	80 - 120
7515192	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/08/12		100	%	80 - 120
7515192	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/08/12		101	%	80 - 120
7515192	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/08/12	<20		mg/L	
7515192	ZZH	RPD [QIT118-02]	Total Chemical Oxygen Demand	2021/08/12	6.0		%	25
7515259	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/08/12		99	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/12		124	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/12		91	%	70 - 130
			>C16-C21 Hydrocarbons	2021/08/12		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/12		87	%	70 - 130
7515259	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/08/12		95	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/12		129	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/12		90	%	70 - 130
			>C16-C21 Hydrocarbons	2021/08/12		91	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/12		89	%	70 - 130
7515259	MSK	Method Blank	Isobutylbenzene - Extractable	2021/08/12		98	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/12		115	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/12	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/08/12	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/08/12	<0.090		mg/L	
7515259	MSK	RPD	>C10-C16 Hydrocarbons	2021/08/12	NC		%	40
			>C16-C21 Hydrocarbons	2021/08/12	NC		%	40
			>C21-<C32 Hydrocarbons	2021/08/12	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7515298	BAN	Matrix Spike	Total Aluminum (Al)	2021/08/12		99	%	80 - 120
			Total Antimony (Sb)	2021/08/12		97	%	80 - 120
			Total Arsenic (As)	2021/08/12		96	%	80 - 120
			Total Barium (Ba)	2021/08/12		93	%	80 - 120
			Total Beryllium (Be)	2021/08/12		97	%	80 - 120
			Total Bismuth (Bi)	2021/08/12		93	%	80 - 120
			Total Boron (B)	2021/08/12		102	%	80 - 120
			Total Cadmium (Cd)	2021/08/12		96	%	80 - 120
			Total Calcium (Ca)	2021/08/12		NC	%	80 - 120
			Total Chromium (Cr)	2021/08/12		98	%	80 - 120
			Total Cobalt (Co)	2021/08/12		98	%	80 - 120
			Total Copper (Cu)	2021/08/12		98	%	80 - 120
			Total Iron (Fe)	2021/08/12		NC	%	80 - 120
			Total Lead (Pb)	2021/08/12		94	%	80 - 120
			Total Magnesium (Mg)	2021/08/12		NC	%	80 - 120
			Total Manganese (Mn)	2021/08/12		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/08/12		102	%	80 - 120
			Total Nickel (Ni)	2021/08/12		97	%	80 - 120
			Total Phosphorus (P)	2021/08/12		99	%	80 - 120
			Total Potassium (K)	2021/08/12		95	%	80 - 120
			Total Selenium (Se)	2021/08/12		101	%	80 - 120
			Total Silver (Ag)	2021/08/12		96	%	80 - 120
			Total Sodium (Na)	2021/08/12		100	%	80 - 120
			Total Strontium (Sr)	2021/08/12		NC	%	80 - 120
			Total Thallium (Tl)	2021/08/12		95	%	80 - 120
			Total Tin (Sn)	2021/08/12		96	%	80 - 120
			Total Titanium (Ti)	2021/08/12		101	%	80 - 120
			Total Uranium (U)	2021/08/12		101	%	80 - 120
			Total Vanadium (V)	2021/08/12		102	%	80 - 120
			Total Zinc (Zn)	2021/08/12		98	%	80 - 120
7515298	BAN	Spiked Blank	Total Aluminum (Al)	2021/08/12		92	%	80 - 120
			Total Antimony (Sb)	2021/08/12		98	%	80 - 120
			Total Arsenic (As)	2021/08/12		96	%	80 - 120
			Total Barium (Ba)	2021/08/12		95	%	80 - 120
			Total Beryllium (Be)	2021/08/12		85	%	80 - 120
			Total Bismuth (Bi)	2021/08/12		97	%	80 - 120
			Total Boron (B)	2021/08/12		83	%	80 - 120
			Total Cadmium (Cd)	2021/08/12		85	%	80 - 120
			Total Calcium (Ca)	2021/08/12		97	%	80 - 120
			Total Chromium (Cr)	2021/08/12		98	%	80 - 120
			Total Cobalt (Co)	2021/08/12		100	%	80 - 120
			Total Copper (Cu)	2021/08/12		101	%	80 - 120
			Total Iron (Fe)	2021/08/12		102	%	80 - 120
			Total Lead (Pb)	2021/08/12		98	%	80 - 120
			Total Magnesium (Mg)	2021/08/12		107	%	80 - 120
			Total Manganese (Mn)	2021/08/12		101	%	80 - 120
			Total Molybdenum (Mo)	2021/08/12		101	%	80 - 120
			Total Nickel (Ni)	2021/08/12		101	%	80 - 120
			Total Phosphorus (P)	2021/08/12		103	%	80 - 120
			Total Potassium (K)	2021/08/12		99	%	80 - 120
			Total Selenium (Se)	2021/08/12		98	%	80 - 120
			Total Silver (Ag)	2021/08/12		97	%	80 - 120
			Total Sodium (Na)	2021/08/12		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Strontium (Sr)	2021/08/12		95	%	80 - 120
			Total Thallium (Tl)	2021/08/12		98	%	80 - 120
			Total Tin (Sn)	2021/08/12		96	%	80 - 120
			Total Titanium (Ti)	2021/08/12		102	%	80 - 120
			Total Uranium (U)	2021/08/12		103	%	80 - 120
			Total Vanadium (V)	2021/08/12		101	%	80 - 120
			Total Zinc (Zn)	2021/08/12		100	%	80 - 120
7515298	BAN	Method Blank	Total Aluminum (Al)	2021/08/12	<5.0		ug/L	
			Total Antimony (Sb)	2021/08/12	<1.0		ug/L	
			Total Arsenic (As)	2021/08/12	<1.0		ug/L	
			Total Barium (Ba)	2021/08/12	<1.0		ug/L	
			Total Beryllium (Be)	2021/08/12	<1.0		ug/L	
			Total Bismuth (Bi)	2021/08/12	<2.0		ug/L	
			Total Boron (B)	2021/08/12	<50		ug/L	
			Total Cadmium (Cd)	2021/08/12	<0.010		ug/L	
			Total Calcium (Ca)	2021/08/12	<100		ug/L	
			Total Chromium (Cr)	2021/08/12	<1.0		ug/L	
			Total Cobalt (Co)	2021/08/12	<0.40		ug/L	
			Total Copper (Cu)	2021/08/12	<0.50		ug/L	
			Total Iron (Fe)	2021/08/12	<50		ug/L	
			Total Lead (Pb)	2021/08/12	<0.50		ug/L	
			Total Magnesium (Mg)	2021/08/12	<100		ug/L	
			Total Manganese (Mn)	2021/08/12	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/08/12	<2.0		ug/L	
			Total Nickel (Ni)	2021/08/12	<2.0		ug/L	
			Total Phosphorus (P)	2021/08/12	<100		ug/L	
			Total Potassium (K)	2021/08/12	<100		ug/L	
			Total Selenium (Se)	2021/08/12	<0.50		ug/L	
			Total Silver (Ag)	2021/08/12	<0.10		ug/L	
			Total Sodium (Na)	2021/08/12	<100		ug/L	
			Total Strontium (Sr)	2021/08/12	<2.0		ug/L	
			Total Thallium (Tl)	2021/08/12	<0.10		ug/L	
			Total Tin (Sn)	2021/08/12	<2.0		ug/L	
			Total Titanium (Ti)	2021/08/12	<2.0		ug/L	
			Total Uranium (U)	2021/08/12	<0.10		ug/L	
			Total Vanadium (V)	2021/08/12	<2.0		ug/L	
			Total Zinc (Zn)	2021/08/12	<5.0		ug/L	
7515298	BAN	RPD	Total Manganese (Mn)	2021/08/12	3.2		%	20
7515380	SHW	QC Standard	Turbidity	2021/08/12		104	%	80 - 120
7515380	SHW	Spiked Blank	Turbidity	2021/08/12		106	%	80 - 120
7515380	SHW	Method Blank	Turbidity	2021/08/12	<0.10		NTU	
7515380	SHW	RPD	Turbidity	2021/08/12	7.1		%	20
7515583	BAN	Matrix Spike	Total Aluminum (Al)	2021/08/13		95	%	80 - 120
			Total Antimony (Sb)	2021/08/13		98	%	80 - 120
			Total Arsenic (As)	2021/08/13		93	%	80 - 120
			Total Barium (Ba)	2021/08/13		94	%	80 - 120
			Total Beryllium (Be)	2021/08/13		95	%	80 - 120
			Total Bismuth (Bi)	2021/08/13		97	%	80 - 120
			Total Boron (B)	2021/08/13		95	%	80 - 120
			Total Cadmium (Cd)	2021/08/13		94	%	80 - 120
			Total Calcium (Ca)	2021/08/13		97	%	80 - 120
			Total Chromium (Cr)	2021/08/13		95	%	80 - 120
			Total Cobalt (Co)	2021/08/13		96	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Copper (Cu)	2021/08/13		97	%	80 - 120
			Total Iron (Fe)	2021/08/13		100	%	80 - 120
			Total Lead (Pb)	2021/08/13		97	%	80 - 120
			Total Magnesium (Mg)	2021/08/13		99	%	80 - 120
			Total Manganese (Mn)	2021/08/13		97	%	80 - 120
			Total Molybdenum (Mo)	2021/08/13		99	%	80 - 120
			Total Nickel (Ni)	2021/08/13		96	%	80 - 120
			Total Phosphorus (P)	2021/08/13		100	%	80 - 120
			Total Potassium (K)	2021/08/13		100	%	80 - 120
			Total Selenium (Se)	2021/08/13		97	%	80 - 120
			Total Silver (Ag)	2021/08/13		93	%	80 - 120
			Total Sodium (Na)	2021/08/13		100	%	80 - 120
			Total Strontium (Sr)	2021/08/13		95	%	80 - 120
			Total Thallium (Tl)	2021/08/13		98	%	80 - 120
			Total Tin (Sn)	2021/08/13		98	%	80 - 120
			Total Titanium (Ti)	2021/08/13		98	%	80 - 120
			Total Uranium (U)	2021/08/13		100	%	80 - 120
			Total Vanadium (V)	2021/08/13		96	%	80 - 120
			Total Zinc (Zn)	2021/08/13		97	%	80 - 120
7515583	BAN	Spiked Blank	Total Aluminum (Al)	2021/08/13		95	%	80 - 120
			Total Antimony (Sb)	2021/08/13		97	%	80 - 120
			Total Arsenic (As)	2021/08/13		94	%	80 - 120
			Total Barium (Ba)	2021/08/13		97	%	80 - 120
			Total Beryllium (Be)	2021/08/13		97	%	80 - 120
			Total Bismuth (Bi)	2021/08/13		98	%	80 - 120
			Total Boron (B)	2021/08/13		93	%	80 - 120
			Total Cadmium (Cd)	2021/08/13		95	%	80 - 120
			Total Calcium (Ca)	2021/08/13		97	%	80 - 120
			Total Chromium (Cr)	2021/08/13		96	%	80 - 120
			Total Cobalt (Co)	2021/08/13		95	%	80 - 120
			Total Copper (Cu)	2021/08/13		96	%	80 - 120
			Total Iron (Fe)	2021/08/13		99	%	80 - 120
			Total Lead (Pb)	2021/08/13		98	%	80 - 120
			Total Magnesium (Mg)	2021/08/13		97	%	80 - 120
			Total Manganese (Mn)	2021/08/13		97	%	80 - 120
			Total Molybdenum (Mo)	2021/08/13		98	%	80 - 120
			Total Nickel (Ni)	2021/08/13		96	%	80 - 120
			Total Phosphorus (P)	2021/08/13		100	%	80 - 120
			Total Potassium (K)	2021/08/13		99	%	80 - 120
			Total Selenium (Se)	2021/08/13		95	%	80 - 120
			Total Silver (Ag)	2021/08/13		95	%	80 - 120
			Total Sodium (Na)	2021/08/13		98	%	80 - 120
			Total Strontium (Sr)	2021/08/13		95	%	80 - 120
			Total Thallium (Tl)	2021/08/13		98	%	80 - 120
			Total Tin (Sn)	2021/08/13		97	%	80 - 120
			Total Titanium (Ti)	2021/08/13		99	%	80 - 120
			Total Uranium (U)	2021/08/13		101	%	80 - 120
			Total Vanadium (V)	2021/08/13		97	%	80 - 120
			Total Zinc (Zn)	2021/08/13		95	%	80 - 120
7515583	BAN	Method Blank	Total Aluminum (Al)	2021/08/13	<5.0		ug/L	
			Total Antimony (Sb)	2021/08/13	<1.0		ug/L	
			Total Arsenic (As)	2021/08/13	<1.0		ug/L	
			Total Barium (Ba)	2021/08/13	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Beryllium (Be)	2021/08/13	<1.0		ug/L	
			Total Bismuth (Bi)	2021/08/13	<2.0		ug/L	
			Total Boron (B)	2021/08/13	<50		ug/L	
			Total Cadmium (Cd)	2021/08/13	<0.010		ug/L	
			Total Calcium (Ca)	2021/08/13	<100		ug/L	
			Total Chromium (Cr)	2021/08/13	<1.0		ug/L	
			Total Cobalt (Co)	2021/08/13	<0.40		ug/L	
			Total Copper (Cu)	2021/08/13	<0.50		ug/L	
			Total Iron (Fe)	2021/08/13	<50		ug/L	
			Total Lead (Pb)	2021/08/13	<0.50		ug/L	
			Total Magnesium (Mg)	2021/08/13	<100		ug/L	
			Total Manganese (Mn)	2021/08/13	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/08/13	<2.0		ug/L	
			Total Nickel (Ni)	2021/08/13	<2.0		ug/L	
			Total Phosphorus (P)	2021/08/13	<100		ug/L	
			Total Potassium (K)	2021/08/13	<100		ug/L	
			Total Selenium (Se)	2021/08/13	<0.50		ug/L	
			Total Silver (Ag)	2021/08/13	<0.10		ug/L	
			Total Sodium (Na)	2021/08/13	<100		ug/L	
			Total Strontium (Sr)	2021/08/13	<2.0		ug/L	
			Total Thallium (Tl)	2021/08/13	<0.10		ug/L	
			Total Tin (Sn)	2021/08/13	<2.0		ug/L	
			Total Titanium (Ti)	2021/08/13	<2.0		ug/L	
			Total Uranium (U)	2021/08/13	<0.10		ug/L	
			Total Vanadium (V)	2021/08/13	<2.0		ug/L	
			Total Zinc (Zn)	2021/08/13	<5.0		ug/L	
7515583	BAN	RPD	Total Aluminum (Al)	2021/08/13	1.5		%	20
			Total Antimony (Sb)	2021/08/13	NC		%	20
			Total Arsenic (As)	2021/08/13	NC		%	20
			Total Barium (Ba)	2021/08/13	2.9		%	20
			Total Boron (B)	2021/08/13	NC		%	20
			Total Cadmium (Cd)	2021/08/13	NC		%	20
			Total Calcium (Ca)	2021/08/13	0.61		%	20
			Total Chromium (Cr)	2021/08/13	NC		%	20
			Total Copper (Cu)	2021/08/13	0.34		%	20
			Total Iron (Fe)	2021/08/13	NC		%	20
			Total Lead (Pb)	2021/08/13	NC		%	20
			Total Magnesium (Mg)	2021/08/13	2.4		%	20
			Total Manganese (Mn)	2021/08/13	NC		%	20
			Total Nickel (Ni)	2021/08/13	NC		%	20
			Total Phosphorus (P)	2021/08/13	NC		%	20
			Total Selenium (Se)	2021/08/13	NC		%	20
			Total Sodium (Na)	2021/08/13	1.8		%	20
			Total Strontium (Sr)	2021/08/13	0.87		%	20
			Total Uranium (U)	2021/08/13	NC		%	20
			Total Zinc (Zn)	2021/08/13	NC		%	20
7515593	BAN	Matrix Spike	Total Aluminum (Al)	2021/08/12		91	%	80 - 120
			Total Antimony (Sb)	2021/08/12		95	%	80 - 120
			Total Arsenic (As)	2021/08/12		93	%	80 - 120
			Total Barium (Ba)	2021/08/12		92	%	80 - 120
			Total Beryllium (Be)	2021/08/12		85	%	80 - 120
			Total Bismuth (Bi)	2021/08/12		94	%	80 - 120
			Total Boron (B)	2021/08/12		82	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Cadmium (Cd)	2021/08/12		83	%	80 - 120
			Total Calcium (Ca)	2021/08/12		95	%	80 - 120
			Total Chromium (Cr)	2021/08/12		95	%	80 - 120
			Total Cobalt (Co)	2021/08/12		96	%	80 - 120
			Total Copper (Cu)	2021/08/12		96	%	80 - 120
			Total Iron (Fe)	2021/08/12		97	%	80 - 120
			Total Lead (Pb)	2021/08/12		94	%	80 - 120
			Total Magnesium (Mg)	2021/08/12		104	%	80 - 120
			Total Manganese (Mn)	2021/08/12		96	%	80 - 120
			Total Molybdenum (Mo)	2021/08/12		99	%	80 - 120
			Total Nickel (Ni)	2021/08/12		97	%	80 - 120
			Total Phosphorus (P)	2021/08/12		99	%	80 - 120
			Total Potassium (K)	2021/08/12		96	%	80 - 120
			Total Selenium (Se)	2021/08/12		97	%	80 - 120
			Total Silver (Ag)	2021/08/12		95	%	80 - 120
			Total Sodium (Na)	2021/08/12		98	%	80 - 120
			Total Strontium (Sr)	2021/08/12		92	%	80 - 120
			Total Thallium (Tl)	2021/08/12		94	%	80 - 120
			Total Tin (Sn)	2021/08/12		93	%	80 - 120
			Total Titanium (Ti)	2021/08/12		99	%	80 - 120
			Total Uranium (U)	2021/08/12		101	%	80 - 120
			Total Vanadium (V)	2021/08/12		99	%	80 - 120
			Total Zinc (Zn)	2021/08/12		98	%	80 - 120
7515593	BAN	Spiked Blank	Total Aluminum (Al)	2021/08/12		93	%	80 - 120
			Total Antimony (Sb)	2021/08/12		95	%	80 - 120
			Total Arsenic (As)	2021/08/12		93	%	80 - 120
			Total Barium (Ba)	2021/08/12		94	%	80 - 120
			Total Beryllium (Be)	2021/08/12		89	%	80 - 120
			Total Bismuth (Bi)	2021/08/12		96	%	80 - 120
			Total Boron (B)	2021/08/12		87	%	80 - 120
			Total Cadmium (Cd)	2021/08/12		86	%	80 - 120
			Total Calcium (Ca)	2021/08/12		96	%	80 - 120
			Total Chromium (Cr)	2021/08/12		97	%	80 - 120
			Total Cobalt (Co)	2021/08/12		97	%	80 - 120
			Total Copper (Cu)	2021/08/12		99	%	80 - 120
			Total Iron (Fe)	2021/08/12		99	%	80 - 120
			Total Lead (Pb)	2021/08/12		95	%	80 - 120
			Total Magnesium (Mg)	2021/08/12		104	%	80 - 120
			Total Manganese (Mn)	2021/08/12		99	%	80 - 120
			Total Molybdenum (Mo)	2021/08/12		99	%	80 - 120
			Total Nickel (Ni)	2021/08/12		98	%	80 - 120
			Total Phosphorus (P)	2021/08/12		100	%	80 - 120
			Total Potassium (K)	2021/08/12		97	%	80 - 120
			Total Selenium (Se)	2021/08/12		97	%	80 - 120
			Total Silver (Ag)	2021/08/12		96	%	80 - 120
			Total Sodium (Na)	2021/08/12		99	%	80 - 120
			Total Strontium (Sr)	2021/08/12		94	%	80 - 120
			Total Thallium (Tl)	2021/08/12		96	%	80 - 120
			Total Tin (Sn)	2021/08/12		94	%	80 - 120
			Total Titanium (Ti)	2021/08/12		99	%	80 - 120
			Total Uranium (U)	2021/08/12		101	%	80 - 120
			Total Vanadium (V)	2021/08/12		100	%	80 - 120
			Total Zinc (Zn)	2021/08/12		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7515593	BAN	Method Blank	Total Aluminum (Al)	2021/08/12	<5.0		ug/L	
			Total Antimony (Sb)	2021/08/12	<1.0		ug/L	
			Total Arsenic (As)	2021/08/12	<1.0		ug/L	
			Total Barium (Ba)	2021/08/12	<1.0		ug/L	
			Total Beryllium (Be)	2021/08/12	<1.0		ug/L	
			Total Bismuth (Bi)	2021/08/12	<2.0		ug/L	
			Total Boron (B)	2021/08/12	<50		ug/L	
			Total Cadmium (Cd)	2021/08/12	<0.010		ug/L	
			Total Calcium (Ca)	2021/08/12	<100		ug/L	
			Total Chromium (Cr)	2021/08/12	<1.0		ug/L	
			Total Cobalt (Co)	2021/08/12	<0.40		ug/L	
			Total Copper (Cu)	2021/08/12	<0.50		ug/L	
			Total Iron (Fe)	2021/08/12	<50		ug/L	
			Total Lead (Pb)	2021/08/12	<0.50		ug/L	
			Total Magnesium (Mg)	2021/08/12	<100		ug/L	
			Total Manganese (Mn)	2021/08/12	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/08/12	<2.0		ug/L	
			Total Nickel (Ni)	2021/08/12	<2.0		ug/L	
			Total Phosphorus (P)	2021/08/12	<100		ug/L	
			Total Potassium (K)	2021/08/12	<100		ug/L	
			Total Selenium (Se)	2021/08/12	<0.50		ug/L	
			Total Silver (Ag)	2021/08/12	<0.10		ug/L	
			Total Sodium (Na)	2021/08/12	<100		ug/L	
			Total Strontium (Sr)	2021/08/12	<2.0		ug/L	
			Total Thallium (Tl)	2021/08/12	<0.10		ug/L	
			Total Tin (Sn)	2021/08/12	<2.0		ug/L	
			Total Titanium (Ti)	2021/08/12	<2.0		ug/L	
			Total Uranium (U)	2021/08/12	<0.10		ug/L	
			Total Vanadium (V)	2021/08/12	<2.0		ug/L	
			Total Zinc (Zn)	2021/08/12	<5.0		ug/L	
7515593	BAN	RPD	Total Aluminum (Al)	2021/08/12	4.3		%	20
			Total Antimony (Sb)	2021/08/12	NC		%	20
			Total Arsenic (As)	2021/08/12	NC		%	20
			Total Barium (Ba)	2021/08/12	1.7		%	20
			Total Boron (B)	2021/08/12	NC		%	20
			Total Cadmium (Cd)	2021/08/12	NC		%	20
			Total Calcium (Ca)	2021/08/12	1.1		%	20
			Total Chromium (Cr)	2021/08/12	2.1		%	20
			Total Copper (Cu)	2021/08/12	2.3		%	20
			Total Iron (Fe)	2021/08/12	NC		%	20
			Total Lead (Pb)	2021/08/12	2.5		%	20
			Total Magnesium (Mg)	2021/08/12	4.3		%	20
			Total Manganese (Mn)	2021/08/12	NC		%	20
			Total Nickel (Ni)	2021/08/12	NC		%	20
			Total Phosphorus (P)	2021/08/12	NC		%	20
			Total Selenium (Se)	2021/08/12	NC		%	20
			Total Sodium (Na)	2021/08/12	2.8		%	20
			Total Strontium (Sr)	2021/08/12	1.3		%	20
			Total Uranium (U)	2021/08/12	NC		%	20
			Total Zinc (Zn)	2021/08/12	NC		%	20
7515735	BCD	Matrix Spike	Isobutylbenzene - Extractable	2021/08/13		100	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		115	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13		101	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C16-C21 Hydrocarbons	2021/08/13		89	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/13		87	%	70 - 130
7515735	BCD	Spiked Blank	Isobutylbenzene - Extractable	2021/08/13		100	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		115	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13		105	%	70 - 130
			>C16-C21 Hydrocarbons	2021/08/13		94	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/13		93	%	70 - 130
7515735	BCD	Method Blank	Isobutylbenzene - Extractable	2021/08/13		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		115	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/08/13	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/08/13	<0.090		mg/L	
7515735	BCD	RPD	>C10-C16 Hydrocarbons	2021/08/13	NC		%	40
			>C16-C21 Hydrocarbons	2021/08/13	NC		%	40
			>C21-<C32 Hydrocarbons	2021/08/13	NC		%	40
7517716	SHW	Spiked Blank	Conductivity	2021/08/13		102	%	80 - 120
7517716	SHW	Method Blank	Conductivity	2021/08/13	<1.0		uS/cm	
7517716	SHW	RPD [QIT117-07]	Conductivity	2021/08/13	0.74		%	10
7517720	SHW	Spiked Blank	pH	2021/08/13		100	%	97 - 103
7517720	SHW	RPD [QIT117-07]	pH	2021/08/13	2.1		%	N/A
7517723	NGI	Matrix Spike	Total Organic Carbon (C)	2021/08/13		94	%	85 - 115
7517723	NGI	Spiked Blank	Total Organic Carbon (C)	2021/08/13		98	%	80 - 120
7517723	NGI	Method Blank	Total Organic Carbon (C)	2021/08/13	<0.50		mg/L	
7517723	NGI	RPD	Total Organic Carbon (C)	2021/08/13	0.67		%	15
7517748	SHW	QC Standard	Turbidity	2021/08/13		102	%	80 - 120
7517748	SHW	Spiked Blank	Turbidity	2021/08/13		104	%	80 - 120
7517748	SHW	Method Blank	Turbidity	2021/08/13	<0.10		NTU	
7517748	SHW	RPD [QIT117-07]	Turbidity	2021/08/13	3.5		%	20
7517757	SHW	QC Standard	Turbidity	2021/08/13		100	%	80 - 120
7517757	SHW	Spiked Blank	Turbidity	2021/08/13		106	%	80 - 120
7517757	SHW	Method Blank	Turbidity	2021/08/13	<0.10		NTU	
7517757	SHW	RPD	Turbidity	2021/08/13	0.48		%	20
7518061	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/08/13		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		117	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13		90	%	70 - 130
			>C16-C21 Hydrocarbons	2021/08/13		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/13		100	%	70 - 130
7518061	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/08/13		95	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		111	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13		92	%	70 - 130
			>C16-C21 Hydrocarbons	2021/08/13		88	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/08/13		94	%	70 - 130
7518061	MSK	Method Blank	Isobutylbenzene - Extractable	2021/08/13		97	%	70 - 130
			n-Dotriacontane - Extractable	2021/08/13		102	%	70 - 130
			>C10-C16 Hydrocarbons	2021/08/13	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/08/13	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/08/13	<0.090		mg/L	
7518061	MSK	RPD	>C10-C16 Hydrocarbons	2021/08/13	NC		%	40
			>C16-C21 Hydrocarbons	2021/08/13	NC		%	40
			>C21-<C32 Hydrocarbons	2021/08/13	NC		%	40
7521335	DRM	Matrix Spike	Phenols-4AAP	2021/08/16		99	%	80 - 120
7521335	DRM	Spiked Blank	Phenols-4AAP	2021/08/16		102	%	80 - 120
7521335	DRM	Method Blank	Phenols-4AAP	2021/08/16	<0.0010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7521335	DRM	RPD	Phenols-4AAP	2021/08/16	NC		%	20
7526194	GTH	QC Standard	Total Suspended Solids	2021/08/18		99	%	80 - 120
7526194	GTH	Method Blank	Total Suspended Solids	2021/08/18	<1.0		mg/L	
7526194	GTH	RPD	Total Suspended Solids	2021/08/18	NC		%	20
7526323	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/08/18		99	%	80 - 120
7526323	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/08/18		102	%	80 - 120
7526323	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/08/18	<0.050		mg/L	
7526323	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/08/18	NC		%	20
7526326	MCN	Matrix Spike [QIT117-09]	Nitrogen (Ammonia Nitrogen)	2021/08/18		95	%	80 - 120
7526326	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/08/18		102	%	80 - 120
7526326	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/08/18	<0.050		mg/L	
7526326	MCN	RPD [QIT117-09]	Nitrogen (Ammonia Nitrogen)	2021/08/18	NC		%	20
7527153	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/08/19		NC	%	80 - 120
7527153	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/08/19		101	%	80 - 120
7527153	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/08/19	<5.0		mg/L	
7527153	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/08/19	4.0		%	20
7527156	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/08/19		NC	%	80 - 120
7527156	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/08/19		99	%	80 - 120
7527156	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/08/19	<1.0		mg/L	
7527156	MCN	RPD	Dissolved Chloride (Cl-)	2021/08/19	1.0		%	20
7527162	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/08/19		NC	%	80 - 120
7527162	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/08/19		102	%	80 - 120
7527162	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/08/19	<2.0		mg/L	
7527162	MCN	RPD	Dissolved Sulphate (SO4)	2021/08/19	0.093		%	20
7527164	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/08/19		93	%	80 - 120
7527164	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/08/19		100	%	80 - 120
7527164	MCN	Method Blank	Reactive Silica (SiO2)	2021/08/19	<0.50		mg/L	
7527164	MCN	RPD	Reactive Silica (SiO2)	2021/08/19	0.28		%	20
7527166	MCN	Spiked Blank	Colour	2021/08/20		95	%	80 - 120
7527166	MCN	Method Blank	Colour	2021/08/20	<5.0		TCU	
7527166	MCN	RPD	Colour	2021/08/20	11		%	20
7527168	MCN	Matrix Spike	Orthophosphate (P)	2021/08/19		97	%	80 - 120
7527168	MCN	Spiked Blank	Orthophosphate (P)	2021/08/19		101	%	80 - 120
7527168	MCN	Method Blank	Orthophosphate (P)	2021/08/19	<0.010		mg/L	
7527168	MCN	RPD	Orthophosphate (P)	2021/08/19	NC		%	20
7527169	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/08/19		79 (3)	%	80 - 120
7527169	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/08/19		89	%	80 - 120
7527169	MCN	Method Blank	Nitrate + Nitrite (N)	2021/08/19	<0.050		mg/L	
7527169	MCN	RPD	Nitrate + Nitrite (N)	2021/08/19	17		%	20
7527170	MCN	Matrix Spike	Nitrite (N)	2021/08/19		97	%	80 - 120
7527170	MCN	Spiked Blank	Nitrite (N)	2021/08/19		101	%	80 - 120
7527170	MCN	Method Blank	Nitrite (N)	2021/08/19	<0.010		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7527170	MCN	RPD	Nitrite (N)	2021/08/19	6.3		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery and Second source QC recovery high. All other QC acceptable.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Poor spike recovery due to probable sample matrix interference.

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BV Labs Job #: C1M6832
Report Date: 2021/08/20

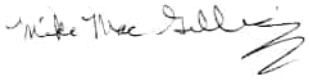
AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Brad Newman, B.Sc., C.Chem., Scientific Service Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)



Rosemarie MacDonald, Scientific Specialist (Organics)

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1M6832	839425
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#839425-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	SS/DB		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Non-potable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	21/08/11	10:45	SW			X		
2		SW2		11:36	SW			X		
3		SW3		11:15	SW			X		
4		SW4		11:23	SW			X		Attempt to Cool: Yes ___ No ___
5		SW13		10:40	SW			X		
6		~~SW14~~						~~X~~		
7		SW19-20		12:30	SW			X		
8		Diffuser		11:10	SW			X		
9		DUP1		AM	SW			X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Justin Cotton	21/08/11		J. Kennaberry					18,18,20 / 15,23,23	Yes / No
								18,20,18	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

Bureau Veritas Canada (2013) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 808095-01-01

Attention: Rory McNeil

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/09/13
Report #: R6808228
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1P1197
Received: 2021/09/01, 14:14

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	1	N/A	2021/09/08	N/A	SM 23 4500-CO2 D
Alkalinity	1	N/A	2021/09/09	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	1	2021/09/02	2021/09/07	ATL SOP 00041	SM 23 5210B m
Chloride	1	N/A	2021/09/09	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	1	2021/09/02	2021/09/02	ATL SOP 00042	SM 23 5220D m
Colour	1	N/A	2021/09/09	ATL SOP 00020	SM 23 2120C m
Conductance - water	1	N/A	2021/09/08	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	1	2021/09/07	2021/09/07	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	1	N/A	2021/09/07	ATL SOP 00048	Auto Calc
Metals Water Total MS	1	2021/09/02	2021/09/03	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	1	N/A	2021/09/10	N/A	Auto Calc.
Anion and Cation Sum	1	N/A	2021/09/09	N/A	Auto Calc.
Nitrogen Ammonia - water	1	N/A	2021/09/08	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	1	N/A	2021/09/09	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	1	N/A	2021/09/09	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	1	N/A	2021/09/10	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	1	N/A	2021/09/07	CAM SOP-00444	OMOE E3179 m
pH (2)	1	N/A	2021/09/08	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	1	N/A	2021/09/09	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	1	N/A	2021/09/10	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	1	N/A	2021/09/10	ATL SOP 00049	Auto Calc.
Reactive Silica	1	N/A	2021/09/09	ATL SOP 00022	EPA 366.0 m
Sulphate	1	N/A	2021/09/09	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	1	N/A	2021/09/10	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	1	N/A	2021/09/10	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	1	N/A	2021/09/08	N/A	Atl. RBCA v3 m
Total Suspended Solids	1	2021/09/08	2021/09/13	ATL SOP 00007	SM 23 2540D m
Turbidity	1	N/A	2021/09/08	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	1	N/A	2021/09/02	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 808095-01-01

Attention: Rory McNeil

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/09/13
Report #: R6808228
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1P1197
Received: 2021/09/01, 14:14

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key



Bureau Veritas
13 Sep 2021 14:47:10

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1P1197
Report Date: 2021/09/13

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF WATER

BV Labs ID		QNT693		
Sampling Date		2021/09/01 13:15		
COC Number		808095-01-01		
	UNITS	SW13	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	1.28	N/A	7555583
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	21	1.0	7555580
Calculated TDS	mg/L	81	1.0	7555587
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7555580
Cation Sum	me/L	1.34	N/A	7555583
Hardness (CaCO3)	mg/L	33	1.0	7555581
Ion Balance (% Difference)	%	2.29	N/A	7555582
Langelier Index (@ 20C)	N/A	-2.14		7555585
Langelier Index (@ 4C)	N/A	-2.39		7555586
Nitrate (N)	mg/L	0.065	0.050	7555584
Saturation pH (@ 20C)	N/A	9.05		7555585
Saturation pH (@ 4C)	N/A	9.30		7555586
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	21	5.0	7564794
Carbonaceous BOD	mg/L	<5.0	5.0	7555602
Total Chemical Oxygen Demand	mg/L	46	20	7555623
Dissolved Chloride (Cl-)	mg/L	26	1.0	7564806
Colour	TCU	110	25	7564820
Nitrate + Nitrite (N)	mg/L	0.065	0.050	7564826
Nitrite (N)	mg/L	<0.010	0.010	7564832
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7563880
Total Organic Carbon (C)	mg/L	17	0.50	7566505
Orthophosphate (P)	mg/L	0.013	0.010	7564825
pH	pH	6.91		7563897
Phenols-4AAP	mg/L	<0.0010	0.0010	7561620
Reactive Silica (SiO2)	mg/L	7.3	0.50	7564817
Total Suspended Solids	mg/L	16	5.0	7563974
Dissolved Sulphate (SO4)	mg/L	6.4	2.0	7564814
Turbidity	NTU	2.5	0.10	7564157
Conductivity	uS/cm	140	1.0	7563894

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (WATER)

BV Labs ID		QNT693		
Sampling Date		2021/09/01 13:15		
COC Number		808095-01-01		
	UNITS	SW13	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	490	5.0	7556363
Total Antimony (Sb)	ug/L	<1.0	1.0	7556363
Total Arsenic (As)	ug/L	1.8	1.0	7556363
Total Barium (Ba)	ug/L	14	1.0	7556363
Total Beryllium (Be)	ug/L	<1.0	1.0	7556363
Total Bismuth (Bi)	ug/L	<2.0	2.0	7556363
Total Boron (B)	ug/L	<50	50	7556363
Total Cadmium (Cd)	ug/L	0.035	0.010	7556363
Total Calcium (Ca)	ug/L	9300	100	7556363
Total Chromium (Cr)	ug/L	<1.0	1.0	7556363
Total Cobalt (Co)	ug/L	1.6	0.40	7556363
Total Copper (Cu)	ug/L	3.4	0.50	7556363
Total Iron (Fe)	ug/L	1800	50	7556363
Total Lead (Pb)	ug/L	5.0	0.50	7556363
Total Magnesium (Mg)	ug/L	2400	100	7556363
Total Manganese (Mn)	ug/L	210	2.0	7556363
Total Molybdenum (Mo)	ug/L	<2.0	2.0	7556363
Total Nickel (Ni)	ug/L	3.2	2.0	7556363
Total Phosphorus (P)	ug/L	<100	100	7556363
Total Potassium (K)	ug/L	1100	100	7556363
Total Selenium (Se)	ug/L	<0.50	0.50	7556363
Total Silver (Ag)	ug/L	<0.10	0.10	7556363
Total Sodium (Na)	ug/L	13000	100	7556363
Total Strontium (Sr)	ug/L	30	2.0	7556363
Total Thallium (Tl)	ug/L	<0.10	0.10	7556363
Total Tin (Sn)	ug/L	<2.0	2.0	7556363
Total Titanium (Ti)	ug/L	13	2.0	7556363
Total Uranium (U)	ug/L	0.81	0.10	7556363
Total Vanadium (V)	ug/L	<2.0	2.0	7556363
Total Zinc (Zn)	ug/L	12	5.0	7556363

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1P1197
Report Date: 2021/09/13

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

ATLANTIC RBCA HYDROCARBONS (WATER)

BV Labs ID		QNT693		
Sampling Date		2021/09/01 13:15		
COC Number		808095-01-01		
	UNITS	SW13	RDL	QC Batch
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	7555553
Toluene	mg/L	<0.0010	0.0010	7555553
Ethylbenzene	mg/L	<0.0010	0.0010	7555553
Total Xylenes	mg/L	<0.0020	0.0020	7555553
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7555553
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7561629
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7561629
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7561629
Modified TPH (Tier1)	mg/L	<0.090	0.090	7555575
Reached Baseline at C32	mg/L	NA	N/A	7561629
Hydrocarbon Resemblance	mg/L	NA	N/A	7561629
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	78		7561629
n-Dotriacontane - Extractable	%	81		7561629
Isobutylbenzene - Volatile	%	109		7555553

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	19.3°C

Sample QNT693 [SW13] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

BV Labs Job #: C1P1197
Report Date: 2021/09/13

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7555553	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/09/02		110	%	70 - 130
			Benzene	2021/09/02		92	%	70 - 130
			Toluene	2021/09/02		93	%	70 - 130
			Ethylbenzene	2021/09/02		95	%	70 - 130
			Total Xylenes	2021/09/02		95	%	70 - 130
7555553	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/09/02		112	%	70 - 130
			Benzene	2021/09/02		97	%	70 - 130
			Toluene	2021/09/02		98	%	70 - 130
			Ethylbenzene	2021/09/02		100	%	70 - 130
			Total Xylenes	2021/09/02		99	%	70 - 130
7555553	THL	Method Blank	Isobutylbenzene - Volatile	2021/09/02		110	%	70 - 130
			Benzene	2021/09/02	<0.0010		mg/L	
			Toluene	2021/09/02	<0.0010		mg/L	
			Ethylbenzene	2021/09/02	<0.0010		mg/L	
			Total Xylenes	2021/09/02	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/09/02	<0.090		mg/L	
7555553	THL	RPD	Benzene	2021/09/02	NC		%	40
			Toluene	2021/09/02	NC		%	40
			Ethylbenzene	2021/09/02	NC		%	40
			Total Xylenes	2021/09/02	NC		%	40
			C6 - C10 (less BTEX)	2021/09/02	NC		%	40
7555602	KLE	QC Standard	Carbonaceous BOD	2021/09/07		132 (1)	%	80 - 120
7555602	KLE	Spiked Blank	Carbonaceous BOD	2021/09/07		121 (2)	%	80 - 120
7555602	KLE	Method Blank	Carbonaceous BOD	2021/09/07	<2.0		mg/L	
7555602	KLE	RPD	Carbonaceous BOD	2021/09/07	5.9		%	25
7555623	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/09/02		102	%	80 - 120
7555623	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/09/02		98	%	80 - 120
7555623	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/09/02		104	%	80 - 120
7555623	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/09/02	<20		mg/L	
7555623	ZZH	RPD	Total Chemical Oxygen Demand	2021/09/02	NC		%	25
7556363	BAN	Matrix Spike	Total Aluminum (Al)	2021/09/03		101	%	80 - 120
			Total Antimony (Sb)	2021/09/03		102	%	80 - 120
			Total Arsenic (As)	2021/09/03		95	%	80 - 120
			Total Barium (Ba)	2021/09/03		99	%	80 - 120
			Total Beryllium (Be)	2021/09/03		101	%	80 - 120
			Total Bismuth (Bi)	2021/09/03		97	%	80 - 120
			Total Boron (B)	2021/09/03		105	%	80 - 120
			Total Cadmium (Cd)	2021/09/03		98	%	80 - 120
			Total Calcium (Ca)	2021/09/03		99	%	80 - 120
			Total Chromium (Cr)	2021/09/03		97	%	80 - 120
			Total Cobalt (Co)	2021/09/03		98	%	80 - 120
			Total Copper (Cu)	2021/09/03		101	%	80 - 120
			Total Iron (Fe)	2021/09/03		101	%	80 - 120
			Total Lead (Pb)	2021/09/03		98	%	80 - 120
			Total Magnesium (Mg)	2021/09/03		103	%	80 - 120
			Total Manganese (Mn)	2021/09/03		98	%	80 - 120
			Total Molybdenum (Mo)	2021/09/03		101	%	80 - 120
			Total Nickel (Ni)	2021/09/03		99	%	80 - 120
			Total Phosphorus (P)	2021/09/03		104	%	80 - 120
			Total Potassium (K)	2021/09/03		98	%	80 - 120
			Total Selenium (Se)	2021/09/03		99	%	80 - 120
			Total Silver (Ag)	2021/09/03		97	%	80 - 120
			Total Sodium (Na)	2021/09/03		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Strontium (Sr)	2021/09/03		101	%	80 - 120
			Total Thallium (Tl)	2021/09/03		97	%	80 - 120
			Total Tin (Sn)	2021/09/03		101	%	80 - 120
			Total Titanium (Ti)	2021/09/03		99	%	80 - 120
			Total Uranium (U)	2021/09/03		101	%	80 - 120
			Total Vanadium (V)	2021/09/03		100	%	80 - 120
			Total Zinc (Zn)	2021/09/03		100	%	80 - 120
7556363	BAN	Spiked Blank	Total Aluminum (Al)	2021/09/03		103	%	80 - 120
			Total Antimony (Sb)	2021/09/03		102	%	80 - 120
			Total Arsenic (As)	2021/09/03		98	%	80 - 120
			Total Barium (Ba)	2021/09/03		100	%	80 - 120
			Total Beryllium (Be)	2021/09/03		104	%	80 - 120
			Total Bismuth (Bi)	2021/09/03		102	%	80 - 120
			Total Boron (B)	2021/09/03		105	%	80 - 120
			Total Cadmium (Cd)	2021/09/03		102	%	80 - 120
			Total Calcium (Ca)	2021/09/03		100	%	80 - 120
			Total Chromium (Cr)	2021/09/03		101	%	80 - 120
			Total Cobalt (Co)	2021/09/03		102	%	80 - 120
			Total Copper (Cu)	2021/09/03		101	%	80 - 120
			Total Iron (Fe)	2021/09/03		104	%	80 - 120
			Total Lead (Pb)	2021/09/03		103	%	80 - 120
			Total Magnesium (Mg)	2021/09/03		106	%	80 - 120
			Total Manganese (Mn)	2021/09/03		101	%	80 - 120
			Total Molybdenum (Mo)	2021/09/03		103	%	80 - 120
			Total Nickel (Ni)	2021/09/03		102	%	80 - 120
			Total Phosphorus (P)	2021/09/03		107	%	80 - 120
			Total Potassium (K)	2021/09/03		101	%	80 - 120
			Total Selenium (Se)	2021/09/03		103	%	80 - 120
			Total Silver (Ag)	2021/09/03		100	%	80 - 120
			Total Sodium (Na)	2021/09/03		104	%	80 - 120
			Total Strontium (Sr)	2021/09/03		100	%	80 - 120
			Total Thallium (Tl)	2021/09/03		101	%	80 - 120
			Total Tin (Sn)	2021/09/03		101	%	80 - 120
			Total Titanium (Ti)	2021/09/03		107	%	80 - 120
			Total Uranium (U)	2021/09/03		106	%	80 - 120
			Total Vanadium (V)	2021/09/03		105	%	80 - 120
			Total Zinc (Zn)	2021/09/03		103	%	80 - 120
7556363	BAN	Method Blank	Total Aluminum (Al)	2021/09/03	<5.0		ug/L	
			Total Antimony (Sb)	2021/09/03	<1.0		ug/L	
			Total Arsenic (As)	2021/09/03	<1.0		ug/L	
			Total Barium (Ba)	2021/09/03	<1.0		ug/L	
			Total Beryllium (Be)	2021/09/03	<1.0		ug/L	
			Total Bismuth (Bi)	2021/09/03	<2.0		ug/L	
			Total Boron (B)	2021/09/03	<50		ug/L	
			Total Cadmium (Cd)	2021/09/03	<0.010		ug/L	
			Total Calcium (Ca)	2021/09/03	<100		ug/L	
			Total Chromium (Cr)	2021/09/03	<1.0		ug/L	
			Total Cobalt (Co)	2021/09/03	<0.40		ug/L	
			Total Copper (Cu)	2021/09/03	<0.50		ug/L	
			Total Iron (Fe)	2021/09/03	<50		ug/L	
			Total Lead (Pb)	2021/09/03	<0.50		ug/L	
			Total Magnesium (Mg)	2021/09/03	<100		ug/L	
			Total Manganese (Mn)	2021/09/03	<2.0		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Molybdenum (Mo)	2021/09/03	<2.0		ug/L	
			Total Nickel (Ni)	2021/09/03	<2.0		ug/L	
			Total Phosphorus (P)	2021/09/03	<100		ug/L	
			Total Potassium (K)	2021/09/03	<100		ug/L	
			Total Selenium (Se)	2021/09/03	<0.50		ug/L	
			Total Silver (Ag)	2021/09/03	<0.10		ug/L	
			Total Sodium (Na)	2021/09/03	<100		ug/L	
			Total Strontium (Sr)	2021/09/03	<2.0		ug/L	
			Total Thallium (Tl)	2021/09/03	<0.10		ug/L	
			Total Tin (Sn)	2021/09/03	<2.0		ug/L	
			Total Titanium (Ti)	2021/09/03	<2.0		ug/L	
			Total Uranium (U)	2021/09/03	<0.10		ug/L	
			Total Vanadium (V)	2021/09/03	<2.0		ug/L	
			Total Zinc (Zn)	2021/09/03	<5.0		ug/L	
7556363	BAN	RPD	Total Aluminum (Al)	2021/09/03	3.2		%	20
			Total Antimony (Sb)	2021/09/03	NC		%	20
			Total Arsenic (As)	2021/09/03	NC		%	20
			Total Barium (Ba)	2021/09/03	5.2		%	20
			Total Beryllium (Be)	2021/09/03	NC		%	20
			Total Bismuth (Bi)	2021/09/03	NC		%	20
			Total Boron (B)	2021/09/03	NC		%	20
			Total Cadmium (Cd)	2021/09/03	7.5		%	20
			Total Calcium (Ca)	2021/09/03	3.1		%	20
			Total Chromium (Cr)	2021/09/03	NC		%	20
			Total Cobalt (Co)	2021/09/03	NC		%	20
			Total Copper (Cu)	2021/09/03	4.3		%	20
			Total Iron (Fe)	2021/09/03	2.9		%	20
			Total Lead (Pb)	2021/09/03	0.77		%	20
			Total Magnesium (Mg)	2021/09/03	1.3		%	20
			Total Manganese (Mn)	2021/09/03	3.1		%	20
			Total Molybdenum (Mo)	2021/09/03	NC		%	20
			Total Nickel (Ni)	2021/09/03	NC		%	20
			Total Phosphorus (P)	2021/09/03	NC		%	20
			Total Potassium (K)	2021/09/03	2.5		%	20
			Total Selenium (Se)	2021/09/03	NC		%	20
			Total Silver (Ag)	2021/09/03	NC		%	20
			Total Sodium (Na)	2021/09/03	2.8		%	20
			Total Strontium (Sr)	2021/09/03	6.1		%	20
			Total Thallium (Tl)	2021/09/03	NC		%	20
			Total Tin (Sn)	2021/09/03	NC		%	20
			Total Titanium (Ti)	2021/09/03	NC		%	20
			Total Uranium (U)	2021/09/03	3.4		%	20
			Total Vanadium (V)	2021/09/03	NC		%	20
			Total Zinc (Zn)	2021/09/03	NC		%	20
7561620	DRM	Matrix Spike	Phenols-4AAP	2021/09/07		98	%	80 - 120
7561620	DRM	Spiked Blank	Phenols-4AAP	2021/09/07		99	%	80 - 120
7561620	DRM	Method Blank	Phenols-4AAP	2021/09/07	<0.0010		mg/L	
7561620	DRM	RPD	Phenols-4AAP	2021/09/07	6.5		%	20
7561629	BCD	Matrix Spike	Isobutylbenzene - Extractable	2021/09/07		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/07		97	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/07		90	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/07		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/07		84	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7561629	BCD	Spiked Blank	Isobutylbenzene - Extractable	2021/09/07		102	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/07		112	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/07		99	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/07		97	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/07		93	%	70 - 130
7561629	BCD	Method Blank	Isobutylbenzene - Extractable	2021/09/07		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/07		102	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/07	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/09/07	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/09/07	<0.090		mg/L	
7561629	BCD	RPD	>C10-C16 Hydrocarbons	2021/09/07	NC		%	40
			>C16-C21 Hydrocarbons	2021/09/07	NC		%	40
			>C21-<C32 Hydrocarbons	2021/09/07	NC		%	40
7563880	EMT	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/09/08		102	%	80 - 120
7563880	EMT	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/09/08		103	%	80 - 120
7563880	EMT	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/09/08	<0.050		mg/L	
7563880	EMT	RPD	Nitrogen (Ammonia Nitrogen)	2021/09/08	NC		%	20
7563894	SHW	Spiked Blank	Conductivity	2021/09/08		100	%	80 - 120
7563894	SHW	Method Blank	Conductivity	2021/09/08	<1.0		uS/cm	
7563894	SHW	RPD	Conductivity	2021/09/08	0.52		%	10
7563897	SHW	Spiked Blank	pH	2021/09/08		100	%	97 - 103
7563897	SHW	RPD	pH	2021/09/08	2.1		%	N/A
7563974	DME	QC Standard	Total Suspended Solids	2021/09/13		96	%	80 - 120
7563974	DME	Method Blank	Total Suspended Solids	2021/09/13	<1.0		mg/L	
7563974	DME	RPD	Total Suspended Solids	2021/09/13	11		%	20
7564157	SHW	QC Standard	Turbidity	2021/09/08		101	%	80 - 120
7564157	SHW	Spiked Blank	Turbidity	2021/09/08		101	%	80 - 120
7564157	SHW	Method Blank	Turbidity	2021/09/08	<0.10		NTU	
7564157	SHW	RPD	Turbidity	2021/09/08	1.4		%	20
7564794	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/09/09		NC	%	80 - 120
7564794	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/09/09		106	%	80 - 120
7564794	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/09/09	<5.0		mg/L	
7564794	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/09/09	1.1		%	20
7564806	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/09/09		97	%	80 - 120
7564806	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/09/09		96	%	80 - 120
7564806	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/09/09	<1.0		mg/L	
7564806	EMT	RPD	Dissolved Chloride (Cl-)	2021/09/09	0.35		%	20
7564814	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/09/09		NC	%	80 - 120
7564814	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/09/09		99	%	80 - 120
7564814	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/09/09	<2.0		mg/L	
7564814	EMT	RPD	Dissolved Sulphate (SO4)	2021/09/09	0.25		%	20
7564817	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/09/09		NC	%	80 - 120
7564817	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/09/09		97	%	80 - 120
7564817	EMT	Method Blank	Reactive Silica (SiO2)	2021/09/09	<0.50		mg/L	
7564817	EMT	RPD	Reactive Silica (SiO2)	2021/09/09	0.61		%	20
7564820	EMT	Spiked Blank	Colour	2021/09/09		103	%	80 - 120
7564820	EMT	Method Blank	Colour	2021/09/09	<5.0		TCU	
7564820	EMT	RPD	Colour	2021/09/09	NC		%	20
7564825	EMT	Matrix Spike	Orthophosphate (P)	2021/09/09		91	%	80 - 120
7564825	EMT	Spiked Blank	Orthophosphate (P)	2021/09/09		100	%	80 - 120
7564825	EMT	Method Blank	Orthophosphate (P)	2021/09/09	<0.010		mg/L	
7564825	EMT	RPD	Orthophosphate (P)	2021/09/09	NC		%	20
7564826	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/09/09		83	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7564826	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/09/09		86	%	80 - 120
7564826	EMT	Method Blank	Nitrate + Nitrite (N)	2021/09/09	<0.050		mg/L	
7564826	EMT	RPD	Nitrate + Nitrite (N)	2021/09/09	4.8		%	20
7564832	EMT	Matrix Spike	Nitrite (N)	2021/09/09		101	%	80 - 120
7564832	EMT	Spiked Blank	Nitrite (N)	2021/09/09		106	%	80 - 120
7564832	EMT	Method Blank	Nitrite (N)	2021/09/09	<0.010		mg/L	
7564832	EMT	RPD	Nitrite (N)	2021/09/09	NC		%	20
7566505	NGI	Matrix Spike	Total Organic Carbon (C)	2021/09/10		99	%	85 - 115
7566505	NGI	Spiked Blank	Total Organic Carbon (C)	2021/09/10		111	%	80 - 120
7566505	NGI	Method Blank	Total Organic Carbon (C)	2021/09/10	<0.50		mg/L	
7566505	NGI	RPD	Total Organic Carbon (C)	2021/09/10	NC		%	15

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference material and second source recovery were high.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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BV Labs Job #: C1P1197
Report Date: 2021/09/13

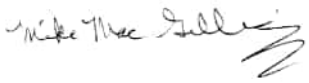
AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

VALIDATION SIGNATURE PAGE

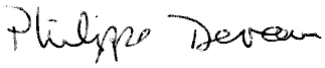
The analytical data and all QC contained in this report were reviewed and validated by:



Brad Newman, B.Sc., C.Chem., Scientific Service Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)



Phil Deveau, Scientific Specialist (Organics)

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For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel (902) 420-0203 Toll-free 800-563-6266 Fax (902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Rory McNeil	P.O. #		C1P1197	808095
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address		Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#808095-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	rory.mcneil@aecom.com	Site #			
				Sampled By	D.B		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Attempt to Cool: Yes ✓ No

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required: ☐

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		~~SW1~~						X		
2		~~SW2~~						X		
3		~~SW3~~						X		
4		~~SW4~~						X		
5		SW13	Sep 1, 2021	13:15	SW			X	12	
6		~~SW14~~						X		
7		~~SW19-20~~						X		
8		~~Diffuser~~						X		
9		~~DUP1~~						X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Rory McNeil	21/09/01	13:45	J. JENNIKERRY				☐	18.2°C, 2.8	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 843972-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/09/20
Report #: R6818926
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1P9560
Received: 2021/09/09, 12:03

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	8	N/A	2021/09/16	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/09/16	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/09/10	2021/09/15	ATL SOP 00041	SM 23 5210B m
Chloride	8	N/A	2021/09/16	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/09/13	2021/09/14	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2021/09/16	ATL SOP 00020	SM 23 2120C m
Conductance - water	8	N/A	2021/09/16	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	8	2021/09/13	2021/09/13	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	8	N/A	2021/09/14	ATL SOP 00048	Auto Calc
Metals Water Total MS	6	2021/09/13	2021/09/13	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	2	2021/09/13	2021/09/14	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	8	N/A	2021/09/17	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/09/17	N/A	Auto Calc.
Nitrogen Ammonia - water	1	N/A	2021/09/16	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	7	N/A	2021/09/17	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2021/09/16	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2021/09/16	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2021/09/17	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/09/15	CAM SOP-00444	OMOE E3179 m
pH (2)	8	N/A	2021/09/16	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2021/09/16	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	8	N/A	2021/09/17	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	8	N/A	2021/09/17	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2021/09/16	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2021/09/16	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	8	N/A	2021/09/17	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	3	N/A	2021/09/18	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (3)	5	N/A	2021/09/20	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	5	N/A	2021/09/15	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	3	N/A	2021/09/16	N/A	Atl. RBCA v3 m
Total Suspended Solids	8	2021/09/15	2021/09/18	ATL SOP 00007	SM 23 2540D m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 843972-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/09/20
Report #: R6818926
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1P9560
Received: 2021/09/09, 12:03

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Turbidity	8	N/A	2021/09/15	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	5	N/A	2021/09/14	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	3	N/A	2021/09/15	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 843972-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/09/20
Report #: R6818926
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1P9560
Received: 2021/09/09, 12:03

Encryption Key

AUTHORIZED REPORT
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Bureau Veritas
20 Sep 2021 16:18:36

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QPN176		QPN177		QPN178		
Sampling Date		2021/09/08 13:27		2021/09/08 13:36		2021/09/08 14:13		
COC Number		843972-01-01		843972-01-01		843972-01-01		
Sample #		SW1		SW2		SW3		
	UNITS	SW1	QC Batch	SW2	QC Batch	SW3	RDL	QC Batch
Calculated Parameters								
Anion Sum	me/L	0.180	7569277	0.180	7569277	0.190	N/A	7569277
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7569270	<1.0	7569270	<1.0	1.0	7569270
Calculated TDS	mg/L	21	7569274	21	7569274	21	1.0	7569274
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7569270	<1.0	7569270	<1.0	1.0	7569270
Cation Sum	me/L	0.430	7569277	0.450	7569277	0.430	N/A	7569277
Hardness (CaCO3)	mg/L	9.2	7569275	9.5	7569275	9.4	1.0	7569275
Ion Balance (% Difference)	%	41.0	7569276	42.9	7569276	38.7	N/A	7569276
Langelier Index (@ 20C)	N/A	NC	7569271	NC	7569271	NC		7569271
Langelier Index (@ 4C)	N/A	NC	7569272	NC	7569272	NC		7569272
Nitrate (N)	mg/L	<0.050	7569278	<0.050	7569278	<0.050	0.050	7569278
Saturation pH (@ 20C)	N/A	NC	7569271	NC	7569271	NC		7569271
Saturation pH (@ 4C)	N/A	NC	7569272	NC	7569272	NC		7569272
Inorganics								
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	7578821	<5.0	7578821	<5.0	5.0	7578821
Carbonaceous BOD	mg/L	<5.0	7569172	<5.0	7569172	<5.0	5.0	7569172
Total Chemical Oxygen Demand	mg/L	57	7573731	61	7573735	57	20	7573735
Dissolved Chloride (Cl-)	mg/L	6.5	7580578	6.4	7580578	6.7	1.0	7580578
Colour	TCU	230	7580582	230	7580582	220	25	7580582
Nitrate + Nitrite (N)	mg/L	<0.050	7580584	<0.050	7580584	<0.050	0.050	7580584
Nitrite (N)	mg/L	0.010	7580585	<0.010	7580585	<0.010	0.010	7580585
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7580728	<0.050	7580728	<0.050	0.050	7580728
Total Organic Carbon (C)	mg/L	22	7583337	22	7583338	23	0.50	7583337
Orthophosphate (P)	mg/L	<0.010	7580583	<0.010	7580583	<0.010	0.010	7580583
pH	pH	6.10	7580534	6.12	7580534	6.12		7580534
Phenols-4AAP	mg/L	<0.0010	7577925	<0.0010	7577925	<0.0010	0.0010	7577925
Reactive Silica (SiO2)	mg/L	4.7	7580580	4.5	7580580	4.8	0.50	7580580
Total Suspended Solids	mg/L	2.2	7578295	3.0	7578295	3.4	1.0	7578295
Dissolved Sulphate (SO4)	mg/L	<2.0	7580579	<2.0	7580579	<2.0	2.0	7580579
Turbidity	NTU	2.6	7578011	2.5	7578011	2.7	0.10	7578011
Conductivity	uS/cm	43	7580531	42	7580531	43	1.0	7580531

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QPN179			QPN180			QPN180		
Sampling Date		2021/09/08 14:04			2021/09/08 10:40			2021/09/08 10:40		
COC Number		843972-01-01			843972-01-01			843972-01-01		
Sample #		SW4			SW13			SW13		
	UNITS	SW4	RDL	QC Batch	SW13	RDL	QC Batch	SW13 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.180	N/A	7569277	1.17	N/A	7569277			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7569270	23	1.0	7569270			
Calculated TDS	mg/L	21	1.0	7569274	78	1.0	7569274			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7569270	<1.0	1.0	7569270			
Cation Sum	me/L	0.440	N/A	7569277	1.47	N/A	7569277			
Hardness (CaCO3)	mg/L	9.4	1.0	7569275	37	1.0	7569275			
Ion Balance (% Difference)	%	41.9	N/A	7569276	11.4	N/A	7569276			
Langelier Index (@ 20C)	N/A	NC		7569271	-2.06		7569271			
Langelier Index (@ 4C)	N/A	NC		7569272	-2.31		7569272			
Nitrate (N)	mg/L	<0.050	0.050	7569278	0.097	0.050	7569278			
Saturation pH (@ 20C)	N/A	NC		7569271	8.90		7569271			
Saturation pH (@ 4C)	N/A	NC		7569272	9.16		7569272			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7578821	23	5.0	7578821			
Carbonaceous BOD	mg/L	<5.0	5.0	7569172	<5.0	5.0	7569430	<5.0	5.0	7569430
Total Chemical Oxygen Demand	mg/L	59	20	7573735	66	20	7573735			
Dissolved Chloride (Cl-)	mg/L	6.3	1.0	7580578	22	1.0	7580578			
Colour	TCU	230	25	7580582	130	25	7580582			
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7580584	0.097	0.050	7580584			
Nitrite (N)	mg/L	<0.010	0.010	7580585	<0.010	0.010	7580585			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7580728	<0.050	0.050	7580728			
Total Organic Carbon (C)	mg/L	22	0.50	7583338	17	0.50	7583338			
Orthophosphate (P)	mg/L	<0.010	0.010	7580583	0.011	0.010	7580583			
pH	pH	6.08		7580534	6.84		7580534			
Phenols-4AAP	mg/L	<0.0010	0.0010	7577935	<0.0010	0.0010	7577925			
Reactive Silica (SiO2)	mg/L	4.8	0.50	7580580	6.9	0.50	7580580			
Total Suspended Solids	mg/L	3.2	1.0	7578295	6.8	2.0	7578295	7.2	2.0	7578295
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7580579	3.2	2.0	7580579			
Turbidity	NTU	2.4	0.10	7578011	20	0.10	7578011			
Conductivity	uS/cm	41	1.0	7580531	130	1.0	7580531			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QPN181			QPN182		QPN183		
Sampling Date		2021/09/08 10:57			2021/09/08 13:56		2021/09/08		
COC Number		843972-01-01			843972-01-01		843972-01-01		
Sample #		SW19-20			DIFFUSER		DUP1		
	UNITS	**SW19-20**	**RDL**	**QC Batch**	**Diffuser**	**QC Batch**	**DUP1**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	me/L	9.76	N/A	7569277	0.240	7569277	1.23	N/A	7569277
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	240	1.0	7569270	<1.0	7569270	25	1.0	7569270
Calculated TDS	mg/L	590	1.0	7569274	24	7569274	80	1.0	7569274
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.3	1.0	7569270	<1.0	7569270	<1.0	1.0	7569270
Cation Sum	me/L	9.76	N/A	7569277	0.460	7569277	1.47	N/A	7569277
Hardness (CaCO3)	mg/L	410	1.0	7569275	10	7569275	37	1.0	7569275
Ion Balance (% Difference)	%	0.00	N/A	7569276	31.4	7569276	8.89	N/A	7569276
Langelier Index (@ 20C)	N/A	0.806		7569271	NC	7569271	-2.00		7569271
Langelier Index (@ 4C)	N/A	0.559		7569272	NC	7569272	-2.25		7569272
Nitrate (N)	mg/L	6.3	0.25	7569278	<0.050	7569278	0.083	0.050	7569278
Saturation pH (@ 20C)	N/A	6.96		7569271	NC	7569271	8.88		7569271
Saturation pH (@ 4C)	N/A	7.20		7569272	NC	7569272	9.13		7569272
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	240	25	7578821	<5.0	7578821	25	5.0	7578821
Carbonaceous BOD	mg/L	<5.0	5.0	7569430	<5.0	7569430	<5.0	5.0	7569430
Total Chemical Oxygen Demand	mg/L	59	20	7573735	57	7573735	54	20	7573735
Dissolved Chloride (Cl-)	mg/L	22	1.0	7580578	6.5	7580578	23	1.0	7580578
Colour	TCU	35	5.0	7580582	220	7580582	110	25	7580582
Nitrate + Nitrite (N)	mg/L	6.6	0.25	7580584	<0.050	7580584	0.083	0.050	7580584
Nitrite (N)	mg/L	0.33	0.010	7580585	<0.010	7580585	<0.010	0.010	7580585
Nitrogen (Ammonia Nitrogen)	mg/L	0.11	0.050	7580728	<0.050	7580728	0.059	0.050	7580728
Total Organic Carbon (C)	mg/L	23	0.50	7583338	21	7583337	17	0.50	7583338
Orthophosphate (P)	mg/L	<0.010	0.010	7580583	<0.010	7580583	0.011	0.010	7580583
pH	pH	7.76		7580534	6.23	7580534	6.88		7580534
Phenols-4AAP	mg/L	<0.0010	0.0010	7577925	<0.0010	7577925	<0.0010	0.0010	7577925
Reactive Silica (SiO2)	mg/L	15	0.50	7580580	4.9	7580580	6.9	0.50	7580580
Total Suspended Solids	mg/L	7.0	1.0	7578295	3.0	7578295	2.6	1.0	7578295
Dissolved Sulphate (SO4)	mg/L	180	10	7580579	3.0	7580579	3.6	2.0	7580579
Turbidity	NTU	8.8	0.10	7578011	2.5	7578011	9.3	0.10	7578011
Conductivity	uS/cm	890	1.0	7580531	43	7580531	140	1.0	7580531

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QPN176	QPN177	QPN178		QPN179		QPN180		
Sampling Date		2021/09/08 13:27	2021/09/08 13:36	2021/09/08 14:13		2021/09/08 14:04		2021/09/08 10:40		
COC Number		843972-01-01	843972-01-01	843972-01-01		843972-01-01		843972-01-01		
Sample #		SW1	SW2	SW3		SW4		SW13		
	UNITS	**SW1**	**SW2**	**SW3**	**QC Batch**	**SW4**	**QC Batch**	**SW13**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	ug/L	650	650	590	7573299	630	7573305	480	5.0	7573299
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	7573299	<1.0	7573305	<1.0	1.0	7573299
Total Arsenic (As)	ug/L	1.3	1.3	1.2	7573299	1.3	7573305	2.0	1.0	7573299
Total Barium (Ba)	ug/L	5.7	5.9	5.5	7573299	5.8	7573305	14	1.0	7573299
Total Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	7573299	<1.0	7573305	<1.0	1.0	7573299
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	7573299	<2.0	7573305	<2.0	2.0	7573299
Total Boron (B)	ug/L	<50	<50	<50	7573299	<50	7573305	<50	50	7573299
Total Cadmium (Cd)	ug/L	0.010	0.015	0.011	7573299	0.012	7573305	0.031	0.010	7573299
Total Calcium (Ca)	ug/L	2600	2700	2700	7573299	2700	7573305	11000	100	7573299
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	7573299	<1.0	7573305	<1.0	1.0	7573299
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	7573299	<0.40	7573305	1.2	0.40	7573299
Total Copper (Cu)	ug/L	0.53	0.69	0.51	7573299	<0.50	7573305	2.7	0.50	7573299
Total Iron (Fe)	ug/L	970	1000	980	7573299	1000	7573305	2300	50	7573299
Total Lead (Pb)	ug/L	1.0	1.1	1.0	7573299	1.0	7573305	4.4	0.50	7573299
Total Magnesium (Mg)	ug/L	650	670	650	7573299	660	7573305	2100	100	7573299
Total Manganese (Mn)	ug/L	44	45	44	7573299	44	7573305	250	2.0	7573299
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	7573299	<2.0	7573305	<2.0	2.0	7573299
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	7573299	2.1	7573305	2.9	2.0	7573299
Total Phosphorus (P)	ug/L	<100	<100	<100	7573299	<100	7573305	<100	100	7573299
Total Potassium (K)	ug/L	390	430	400	7573299	380	7573305	1100	100	7573299
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	7573299	<0.50	7573305	<0.50	0.50	7573299
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	7573299	<0.10	7573305	<0.10	0.10	7573299
Total Sodium (Na)	ug/L	4600	4700	4600	7573299	4700	7573305	14000	100	7573299
Total Strontium (Sr)	ug/L	13	13	13	7573299	12	7573305	37	2.0	7573299
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	7573299	<0.10	7573305	<0.10	0.10	7573299
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	7573299	<2.0	7573305	<2.0	2.0	7573299
Total Titanium (Ti)	ug/L	8.2	9.4	7.9	7573299	10	7573305	15	2.0	7573299
Total Uranium (U)	ug/L	0.36	0.35	0.34	7573299	0.36	7573305	0.96	0.10	7573299
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	7573299	<2.0	7573305	<2.0	2.0	7573299
Total Zinc (Zn)	ug/L	5.9	5.4	5.0	7573299	<5.0	7573305	13	5.0	7573299

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QPN181		QPN182	QPN183		
Sampling Date		2021/09/08 10:57		2021/09/08 13:56	2021/09/08		
COC Number		843972-01-01		843972-01-01	843972-01-01		
Sample #		SW19-20		DIFFUSER	DUP1		
	UNITS	**SW19-20**	**QC Batch**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Metals							
Total Aluminum (Al)	ug/L	220	7573305	680	470	5.0	7573299
Total Antimony (Sb)	ug/L	1.4	7573305	<1.0	<1.0	1.0	7573299
Total Arsenic (As)	ug/L	1.5	7573305	1.4	1.8	1.0	7573299
Total Barium (Ba)	ug/L	44	7573305	6.2	13	1.0	7573299
Total Beryllium (Be)	ug/L	<1.0	7573305	<1.0	<1.0	1.0	7573299
Total Bismuth (Bi)	ug/L	<2.0	7573305	<2.0	<2.0	2.0	7573299
Total Boron (B)	ug/L	460	7573305	<50	<50	50	7573299
Total Cadmium (Cd)	ug/L	0.032	7573305	0.010	0.028	0.010	7573299
Total Calcium (Ca)	ug/L	140000	7573305	2800	11000	100	7573299
Total Chromium (Cr)	ug/L	<1.0	7573305	<1.0	<1.0	1.0	7573299
Total Cobalt (Co)	ug/L	1.7	7573305	<0.40	1.1	0.40	7573299
Total Copper (Cu)	ug/L	6.3	7573305	0.59	2.6	0.50	7573299
Total Iron (Fe)	ug/L	780	7573305	1000	2200	50	7573299
Total Lead (Pb)	ug/L	<0.50	7573305	1.1	4.3	0.50	7573299
Total Magnesium (Mg)	ug/L	15000	7573305	690	2100	100	7573299
Total Manganese (Mn)	ug/L	1600	7573305	48	250	2.0	7573299
Total Molybdenum (Mo)	ug/L	6.4	7573305	<2.0	<2.0	2.0	7573299
Total Nickel (Ni)	ug/L	4.2	7573305	<2.0	3.0	2.0	7573299
Total Phosphorus (P)	ug/L	<100	7573305	<100	<100	100	7573299
Total Potassium (K)	ug/L	16000	7573305	400	1100	100	7573299
Total Selenium (Se)	ug/L	<0.50	7573305	<0.50	<0.50	0.50	7573299
Total Silver (Ag)	ug/L	<0.10	7573305	<0.10	<0.10	0.10	7573299
Total Sodium (Na)	ug/L	25000	7573305	5000	14000	100	7573299
Total Strontium (Sr)	ug/L	520	7573305	14	37	2.0	7573299
Total Thallium (Tl)	ug/L	<0.10	7573305	<0.10	<0.10	0.10	7573299
Total Tin (Sn)	ug/L	<2.0	7573305	<2.0	<2.0	2.0	7573299
Total Titanium (Ti)	ug/L	7.5	7573305	9.3	15	2.0	7573299
Total Uranium (U)	ug/L	37	7573305	0.39	0.94	0.10	7573299
Total Vanadium (V)	ug/L	<2.0	7573305	<2.0	<2.0	2.0	7573299
Total Zinc (Zn)	ug/L	5.8	7573305	5.6	12	5.0	7573299

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QPN176			QPN176			QPN177		
Sampling Date		2021/09/08 13:27			2021/09/08 13:27			2021/09/08 13:36		
COC Number		843972-01-01			843972-01-01			843972-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262
Toluene	mg/L	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262
Ethylbenzene	mg/L	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262	<0.0010	0.0010	7575262
Total Xylenes	mg/L	<0.0020	0.0020	7575262	<0.0020	0.0020	7575262	<0.0020	0.0020	7575262
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7575262	<0.090	0.090	7575262	<0.090	0.090	7575262
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7573486				<0.050	0.050	7573486
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7573486				<0.050	0.050	7573486
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7573486				<0.090	0.090	7573486
Modified TPH (Tier1)	mg/L	<0.090	0.090	7569414				<0.090	0.090	7569414
Reached Baseline at C32	mg/L	NA	N/A	7573486				NA	N/A	7573486
Hydrocarbon Resemblance	mg/L	NA	N/A	7573486				NA	N/A	7573486
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	93		7573486				95		7573486
n-Dotriacontane - Extractable	%	83		7573486				81		7573486
Isobutylbenzene - Volatile	%	102		7575262	101		7575262	101		7575262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QPN178	QPN179	QPN180		QPN181		
Sampling Date		2021/09/08 14:13	2021/09/08 14:04	2021/09/08 10:40		2021/09/08 10:57		
COC Number		843972-01-01	843972-01-01	843972-01-01		843972-01-01		
Sample #		SW3	SW4	SW13		SW19-20		
	UNITS	**SW3**	**SW4**	**SW13**	**QC Batch**	**SW19-20**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	7575262	<0.0010	0.0010	7577895
Toluene	mg/L	<0.0010	<0.0010	<0.0010	7575262	<0.0010	0.0010	7577895
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	7575262	<0.0010	0.0010	7577895
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	7575262	<0.0020	0.0020	7577895
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	7575262	<0.090	0.090	7577895
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7573486	<0.050	0.050	7573486
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	7573486	<0.050	0.050	7573486
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	7573486	0.14	0.090	7573486
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	7569414	0.14	0.090	7569414
Reached Baseline at C32	mg/L	NA	NA	NA	7573486	Yes	N/A	7573486
Hydrocarbon Resemblance	mg/L	NA	NA	NA	7573486	COMMENT (1)	N/A	7573486
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	94	84	98	7573486	88		7573486
n-Dotriacontane - Extractable	%	82	81	94	7573486	87		7573486
Isobutylbenzene - Volatile	%	101	101	102	7575262	106		7577895

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range.

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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QPN181			QPN182	QPN183		
Sampling Date		2021/09/08 10:57			2021/09/08 13:56	2021/09/08		
COC Number		843972-01-01			843972-01-01	843972-01-01		
Sample #		SW19-20			DIFFUSER	DUP1		
	UNITS	SW19-20 Lab-Dup	RDL	QC Batch	Diffuser	DUP1	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	0.0010	7577895	<0.0010	<0.0010	0.0010	7577895
Toluene	mg/L	<0.0010	0.0010	7577895	<0.0010	<0.0010	0.0010	7577895
Ethylbenzene	mg/L	<0.0010	0.0010	7577895	<0.0010	<0.0010	0.0010	7577895
Total Xylenes	mg/L	<0.0020	0.0020	7577895	<0.0020	<0.0020	0.0020	7577895
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7577895	<0.090	<0.090	0.090	7577895
>C10-C16 Hydrocarbons	mg/L				<0.050	<0.050	0.050	7573486
>C16-C21 Hydrocarbons	mg/L				<0.050	<0.050	0.050	7573486
>C21-<C32 Hydrocarbons	mg/L				<0.090	<0.090	0.090	7573486
Modified TPH (Tier1)	mg/L				<0.090	<0.090	0.090	7569414
Reached Baseline at C32	mg/L				NA	NA	N/A	7573486
Hydrocarbon Resemblance	mg/L				NA	NA	N/A	7573486
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%				101	84		7573486
n-Dotriacontane - Extractable	%				96	83		7573486
Isobutylbenzene - Volatile	%	104		7577895	103	102 (1)		7577895

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) VPH sample contained headspace.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	8.7°C

Sample QPN176 [SW1] : NOX < NO2 : Both values fall within the method uncertainty for duplicates and are likely equivalent.

RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QPN177 [SW2] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QPN178 [SW3] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QPN179 [SW4] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QPN180 [SW13] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample QPN182 [Diffuser] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QPN183 [DUP1] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7569172	KLE	QC Standard	Carbonaceous BOD	2021/09/15		134 (1)	%	80 - 120
7569172	KLE	Spiked Blank	Carbonaceous BOD	2021/09/15		129 (2)	%	80 - 120
7569172	KLE	Method Blank	Carbonaceous BOD	2021/09/15	<2.0		mg/L	
7569172	KLE	RPD	Carbonaceous BOD	2021/09/15	12		%	25
7569430	KLE	QC Standard	Carbonaceous BOD	2021/09/15		117	%	80 - 120
7569430	KLE	Spiked Blank	Carbonaceous BOD	2021/09/15		133 (3)	%	80 - 120
7569430	KLE	Method Blank	Carbonaceous BOD	2021/09/15	<2.0		mg/L	
7569430	KLE	RPD [QPN180-01]	Carbonaceous BOD	2021/09/15	NC		%	25
7573299	BAN	Matrix Spike	Total Aluminum (Al)	2021/09/13		96	%	80 - 120
			Total Antimony (Sb)	2021/09/13		108	%	80 - 120
			Total Arsenic (As)	2021/09/13		96	%	80 - 120
			Total Barium (Ba)	2021/09/13		98	%	80 - 120
			Total Beryllium (Be)	2021/09/13		98	%	80 - 120
			Total Bismuth (Bi)	2021/09/13		101	%	80 - 120
			Total Boron (B)	2021/09/13		100	%	80 - 120
			Total Cadmium (Cd)	2021/09/13		95	%	80 - 120
			Total Calcium (Ca)	2021/09/13		103	%	80 - 120
			Total Chromium (Cr)	2021/09/13		94	%	80 - 120
			Total Cobalt (Co)	2021/09/13		96	%	80 - 120
			Total Copper (Cu)	2021/09/13		97	%	80 - 120
			Total Iron (Fe)	2021/09/13		103	%	80 - 120
			Total Lead (Pb)	2021/09/13		101	%	80 - 120
			Total Magnesium (Mg)	2021/09/13		100	%	80 - 120
			Total Manganese (Mn)	2021/09/13		100	%	80 - 120
			Total Molybdenum (Mo)	2021/09/13		104	%	80 - 120
			Total Nickel (Ni)	2021/09/13		96	%	80 - 120
			Total Phosphorus (P)	2021/09/13		103	%	80 - 120
			Total Potassium (K)	2021/09/13		105	%	80 - 120
			Total Selenium (Se)	2021/09/13		96	%	80 - 120
			Total Silver (Ag)	2021/09/13		97	%	80 - 120
			Total Sodium (Na)	2021/09/13		98	%	80 - 120
			Total Strontium (Sr)	2021/09/13		103	%	80 - 120
			Total Thallium (Tl)	2021/09/13		100	%	80 - 120
			Total Tin (Sn)	2021/09/13		103	%	80 - 120
			Total Titanium (Ti)	2021/09/13		99	%	80 - 120
			Total Uranium (U)	2021/09/13		102	%	80 - 120
			Total Vanadium (V)	2021/09/13		99	%	80 - 120
			Total Zinc (Zn)	2021/09/13		100	%	80 - 120
7573299	BAN	Spiked Blank	Total Aluminum (Al)	2021/09/13		98	%	80 - 120
			Total Antimony (Sb)	2021/09/13		108	%	80 - 120
			Total Arsenic (As)	2021/09/13		96	%	80 - 120
			Total Barium (Ba)	2021/09/13		101	%	80 - 120
			Total Beryllium (Be)	2021/09/13		99	%	80 - 120
			Total Bismuth (Bi)	2021/09/13		102	%	80 - 120
			Total Boron (B)	2021/09/13		103	%	80 - 120
			Total Cadmium (Cd)	2021/09/13		96	%	80 - 120
			Total Calcium (Ca)	2021/09/13		106	%	80 - 120
			Total Chromium (Cr)	2021/09/13		97	%	80 - 120
			Total Cobalt (Co)	2021/09/13		99	%	80 - 120
			Total Copper (Cu)	2021/09/13		100	%	80 - 120
			Total Iron (Fe)	2021/09/13		105	%	80 - 120
			Total Lead (Pb)	2021/09/13		104	%	80 - 120
			Total Magnesium (Mg)	2021/09/13		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Manganese (Mn)	2021/09/13		102	%	80 - 120
			Total Molybdenum (Mo)	2021/09/13		106	%	80 - 120
			Total Nickel (Ni)	2021/09/13		98	%	80 - 120
			Total Phosphorus (P)	2021/09/13		104	%	80 - 120
			Total Potassium (K)	2021/09/13		106	%	80 - 120
			Total Selenium (Se)	2021/09/13		97	%	80 - 120
			Total Silver (Ag)	2021/09/13		98	%	80 - 120
			Total Sodium (Na)	2021/09/13		99	%	80 - 120
			Total Strontium (Sr)	2021/09/13		100	%	80 - 120
			Total Thallium (Tl)	2021/09/13		102	%	80 - 120
			Total Tin (Sn)	2021/09/13		103	%	80 - 120
			Total Titanium (Ti)	2021/09/13		102	%	80 - 120
			Total Uranium (U)	2021/09/13		104	%	80 - 120
			Total Vanadium (V)	2021/09/13		102	%	80 - 120
			Total Zinc (Zn)	2021/09/13		103	%	80 - 120
7573299	BAN	Method Blank	Total Aluminum (Al)	2021/09/13	<5.0		ug/L	
			Total Antimony (Sb)	2021/09/13	<1.0		ug/L	
			Total Arsenic (As)	2021/09/13	<1.0		ug/L	
			Total Barium (Ba)	2021/09/13	<1.0		ug/L	
			Total Beryllium (Be)	2021/09/13	<1.0		ug/L	
			Total Bismuth (Bi)	2021/09/13	<2.0		ug/L	
			Total Boron (B)	2021/09/13	<50		ug/L	
			Total Cadmium (Cd)	2021/09/13	<0.010		ug/L	
			Total Calcium (Ca)	2021/09/13	<100		ug/L	
			Total Chromium (Cr)	2021/09/13	<1.0		ug/L	
			Total Cobalt (Co)	2021/09/13	<0.40		ug/L	
			Total Copper (Cu)	2021/09/13	<0.50		ug/L	
			Total Iron (Fe)	2021/09/13	<50		ug/L	
			Total Lead (Pb)	2021/09/13	<0.50		ug/L	
			Total Magnesium (Mg)	2021/09/13	<100		ug/L	
			Total Manganese (Mn)	2021/09/13	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/09/13	<2.0		ug/L	
			Total Nickel (Ni)	2021/09/13	<2.0		ug/L	
			Total Phosphorus (P)	2021/09/13	<100		ug/L	
			Total Potassium (K)	2021/09/13	<100		ug/L	
			Total Selenium (Se)	2021/09/13	<0.50		ug/L	
			Total Silver (Ag)	2021/09/13	<0.10		ug/L	
			Total Sodium (Na)	2021/09/13	<100		ug/L	
			Total Strontium (Sr)	2021/09/13	<2.0		ug/L	
			Total Thallium (Tl)	2021/09/13	<0.10		ug/L	
			Total Tin (Sn)	2021/09/13	<2.0		ug/L	
			Total Titanium (Ti)	2021/09/13	<2.0		ug/L	
			Total Uranium (U)	2021/09/13	<0.10		ug/L	
			Total Vanadium (V)	2021/09/13	<2.0		ug/L	
			Total Zinc (Zn)	2021/09/13	<5.0		ug/L	
7573299	BAN	RPD	Total Aluminum (Al)	2021/09/13	4.1		%	20
			Total Iron (Fe)	2021/09/13	NC		%	20
			Total Manganese (Mn)	2021/09/13	0.79		%	20
7573305	BAN	Matrix Spike	Total Aluminum (Al)	2021/09/14		97	%	80 - 120
			Total Antimony (Sb)	2021/09/14		110	%	80 - 120
			Total Arsenic (As)	2021/09/14		94	%	80 - 120
			Total Barium (Ba)	2021/09/14		NC	%	80 - 120
			Total Beryllium (Be)	2021/09/14		100	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Bismuth (Bi)	2021/09/14		101	%	80 - 120
			Total Boron (B)	2021/09/14		104	%	80 - 120
			Total Cadmium (Cd)	2021/09/14		97	%	80 - 120
			Total Calcium (Ca)	2021/09/14		NC	%	80 - 120
			Total Chromium (Cr)	2021/09/14		94	%	80 - 120
			Total Cobalt (Co)	2021/09/14		93	%	80 - 120
			Total Copper (Cu)	2021/09/14		96	%	80 - 120
			Total Iron (Fe)	2021/09/14		101	%	80 - 120
			Total Lead (Pb)	2021/09/14		102	%	80 - 120
			Total Magnesium (Mg)	2021/09/14		95	%	80 - 120
			Total Manganese (Mn)	2021/09/14		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/09/14		104	%	80 - 120
			Total Nickel (Ni)	2021/09/14		96	%	80 - 120
			Total Phosphorus (P)	2021/09/14		104	%	80 - 120
			Total Potassium (K)	2021/09/14		108	%	80 - 120
			Total Selenium (Se)	2021/09/14		95	%	80 - 120
			Total Silver (Ag)	2021/09/14		100	%	80 - 120
			Total Sodium (Na)	2021/09/14		94	%	80 - 120
			Total Strontium (Sr)	2021/09/14		NC	%	80 - 120
			Total Thallium (Tl)	2021/09/14		100	%	80 - 120
			Total Tin (Sn)	2021/09/14		106	%	80 - 120
			Total Titanium (Ti)	2021/09/14		98	%	80 - 120
			Total Uranium (U)	2021/09/14		103	%	80 - 120
			Total Vanadium (V)	2021/09/14		98	%	80 - 120
			Total Zinc (Zn)	2021/09/14		98	%	80 - 120
7573305	BAN	Spiked Blank	Total Aluminum (Al)	2021/09/14		97	%	80 - 120
			Total Antimony (Sb)	2021/09/14		111	%	80 - 120
			Total Arsenic (As)	2021/09/14		94	%	80 - 120
			Total Barium (Ba)	2021/09/14		102	%	80 - 120
			Total Beryllium (Be)	2021/09/14		99	%	80 - 120
			Total Bismuth (Bi)	2021/09/14		103	%	80 - 120
			Total Boron (B)	2021/09/14		101	%	80 - 120
			Total Cadmium (Cd)	2021/09/14		96	%	80 - 120
			Total Calcium (Ca)	2021/09/14		106	%	80 - 120
			Total Chromium (Cr)	2021/09/14		96	%	80 - 120
			Total Cobalt (Co)	2021/09/14		97	%	80 - 120
			Total Copper (Cu)	2021/09/14		97	%	80 - 120
			Total Iron (Fe)	2021/09/14		102	%	80 - 120
			Total Lead (Pb)	2021/09/14		104	%	80 - 120
			Total Magnesium (Mg)	2021/09/14		100	%	80 - 120
			Total Manganese (Mn)	2021/09/14		100	%	80 - 120
			Total Molybdenum (Mo)	2021/09/14		106	%	80 - 120
			Total Nickel (Ni)	2021/09/14		97	%	80 - 120
			Total Phosphorus (P)	2021/09/14		104	%	80 - 120
			Total Potassium (K)	2021/09/14		108	%	80 - 120
			Total Selenium (Se)	2021/09/14		96	%	80 - 120
			Total Silver (Ag)	2021/09/14		99	%	80 - 120
			Total Sodium (Na)	2021/09/14		96	%	80 - 120
			Total Strontium (Sr)	2021/09/14		100	%	80 - 120
			Total Thallium (Tl)	2021/09/14		102	%	80 - 120
			Total Tin (Sn)	2021/09/14		104	%	80 - 120
			Total Titanium (Ti)	2021/09/14		100	%	80 - 120
			Total Uranium (U)	2021/09/14		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2021/09/14		100	%	80 - 120
			Total Zinc (Zn)	2021/09/14		101	%	80 - 120
7573305	BAN	Method Blank	Total Aluminum (Al)	2021/09/14	<5.0		ug/L	
			Total Antimony (Sb)	2021/09/14	<1.0		ug/L	
			Total Arsenic (As)	2021/09/14	<1.0		ug/L	
			Total Barium (Ba)	2021/09/14	<1.0		ug/L	
			Total Beryllium (Be)	2021/09/14	<1.0		ug/L	
			Total Bismuth (Bi)	2021/09/14	<2.0		ug/L	
			Total Boron (B)	2021/09/14	<50		ug/L	
			Total Cadmium (Cd)	2021/09/14	<0.010		ug/L	
			Total Calcium (Ca)	2021/09/14	<100		ug/L	
			Total Chromium (Cr)	2021/09/14	<1.0		ug/L	
			Total Cobalt (Co)	2021/09/14	<0.40		ug/L	
			Total Copper (Cu)	2021/09/14	<0.50		ug/L	
			Total Iron (Fe)	2021/09/14	<50		ug/L	
			Total Lead (Pb)	2021/09/14	<0.50		ug/L	
			Total Magnesium (Mg)	2021/09/14	<100		ug/L	
			Total Manganese (Mn)	2021/09/14	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/09/14	<2.0		ug/L	
			Total Nickel (Ni)	2021/09/14	<2.0		ug/L	
			Total Phosphorus (P)	2021/09/14	<100		ug/L	
			Total Potassium (K)	2021/09/14	<100		ug/L	
			Total Selenium (Se)	2021/09/14	<0.50		ug/L	
			Total Silver (Ag)	2021/09/14	<0.10		ug/L	
			Total Sodium (Na)	2021/09/14	<100		ug/L	
			Total Strontium (Sr)	2021/09/14	<2.0		ug/L	
			Total Thallium (Tl)	2021/09/14	<0.10		ug/L	
			Total Tin (Sn)	2021/09/14	<2.0		ug/L	
			Total Titanium (Ti)	2021/09/14	<2.0		ug/L	
			Total Uranium (U)	2021/09/14	<0.10		ug/L	
			Total Vanadium (V)	2021/09/14	<2.0		ug/L	
			Total Zinc (Zn)	2021/09/14	<5.0		ug/L	
7573305	BAN	RPD	Total Aluminum (Al)	2021/09/14	9.8		%	20
			Total Antimony (Sb)	2021/09/14	NC		%	20
			Total Arsenic (As)	2021/09/14	NC		%	20
			Total Barium (Ba)	2021/09/14	3.6		%	20
			Total Beryllium (Be)	2021/09/14	NC		%	20
			Total Bismuth (Bi)	2021/09/14	NC		%	20
			Total Boron (B)	2021/09/14	NC		%	20
			Total Cadmium (Cd)	2021/09/14	NC		%	20
			Total Calcium (Ca)	2021/09/14	2.6		%	20
			Total Chromium (Cr)	2021/09/14	NC		%	20
			Total Cobalt (Co)	2021/09/14	NC		%	20
			Total Copper (Cu)	2021/09/14	5.7		%	20
			Total Iron (Fe)	2021/09/14	NC		%	20
			Total Lead (Pb)	2021/09/14	NC		%	20
			Total Magnesium (Mg)	2021/09/14	5.0		%	20
			Total Manganese (Mn)	2021/09/14	5.4 (4)		%	20
			Total Molybdenum (Mo)	2021/09/14	NC		%	20
			Total Nickel (Ni)	2021/09/14	NC		%	20
			Total Phosphorus (P)	2021/09/14	NC		%	20
			Total Potassium (K)	2021/09/14	4.0		%	20
			Total Selenium (Se)	2021/09/14	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Silver (Ag)	2021/09/14	NC		%	20
			Total Sodium (Na)	2021/09/14	3.9		%	20
			Total Strontium (Sr)	2021/09/14	3.4		%	20
			Total Thallium (Tl)	2021/09/14	NC		%	20
			Total Tin (Sn)	2021/09/14	NC		%	20
			Total Titanium (Ti)	2021/09/14	NC		%	20
			Total Uranium (U)	2021/09/14	NC		%	20
			Total Vanadium (V)	2021/09/14	NC		%	20
			Total Zinc (Zn)	2021/09/14	1.3		%	20
7573486	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/09/13		86	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/13		84	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/13		87	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/13		85	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/13		87	%	70 - 130
7573486	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/09/13		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/13		99	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/13		97	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/13		94	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/13		97	%	70 - 130
7573486	MGN	Method Blank	Isobutylbenzene - Extractable	2021/09/13		99	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/13		100	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/13	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/09/13	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/09/13	<0.090		mg/L	
7573486	MGN	RPD	>C10-C16 Hydrocarbons	2021/09/13	NC		%	40
			>C16-C21 Hydrocarbons	2021/09/13	NC		%	40
			>C21-<C32 Hydrocarbons	2021/09/13	NC		%	40
7573731	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/09/14		101	%	80 - 120
7573731	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/09/14		98	%	80 - 120
7573731	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/09/14		100	%	80 - 120
7573731	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/09/14	<20		mg/L	
7573731	ZZH	RPD	Total Chemical Oxygen Demand	2021/09/14	NC		%	25
7573735	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/09/14		102	%	80 - 120
7573735	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/09/14		101	%	80 - 120
7573735	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/09/14		101	%	N/A
7573735	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/09/14	<20		mg/L	
7573735	ZZH	RPD	Total Chemical Oxygen Demand	2021/09/14	5.0		%	25
7575262	THL	Matrix Spike [QPN177-06]	Isobutylbenzene - Volatile	2021/09/14		104	%	70 - 130
			Benzene	2021/09/14		92	%	70 - 130
			Toluene	2021/09/14		94	%	70 - 130
			Ethylbenzene	2021/09/14		97	%	70 - 130
			Total Xylenes	2021/09/14		97	%	70 - 130
7575262	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/09/14		104	%	70 - 130
			Benzene	2021/09/14		88	%	70 - 130
			Toluene	2021/09/14		88	%	70 - 130
			Ethylbenzene	2021/09/14		92	%	70 - 130
			Total Xylenes	2021/09/14		92	%	70 - 130
7575262	THL	Method Blank	Isobutylbenzene - Volatile	2021/09/14		104	%	70 - 130
			Benzene	2021/09/14	<0.0010		mg/L	
			Toluene	2021/09/14	<0.0010		mg/L	
			Ethylbenzene	2021/09/14	<0.0010		mg/L	
			Total Xylenes	2021/09/14	<0.0020		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			C6 - C10 (less BTEX)	2021/09/14	<0.090		mg/L	
7575262	THL	RPD [QPN176-06]	Benzene	2021/09/14	NC		%	40
			Toluene	2021/09/14	NC		%	40
			Ethylbenzene	2021/09/14	NC		%	40
			Total Xylenes	2021/09/14	NC		%	40
			C6 - C10 (less BTEX)	2021/09/14	NC		%	40
7577895	THL	Matrix Spike [QPN182-06]	Isobutylbenzene - Volatile	2021/09/15		103	%	70 - 130
			Benzene	2021/09/15		90	%	70 - 130
			Toluene	2021/09/15		92	%	70 - 130
			Ethylbenzene	2021/09/15		95	%	70 - 130
			Total Xylenes	2021/09/15		95	%	70 - 130
7577895	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/09/15		103	%	70 - 130
			Benzene	2021/09/15		90	%	70 - 130
			Toluene	2021/09/15		90	%	70 - 130
			Ethylbenzene	2021/09/15		94	%	70 - 130
			Total Xylenes	2021/09/15		95	%	70 - 130
7577895	THL	Method Blank	Isobutylbenzene - Volatile	2021/09/15		102	%	70 - 130
			Benzene	2021/09/15	<0.0010		mg/L	
			Toluene	2021/09/15	<0.0010		mg/L	
			Ethylbenzene	2021/09/15	<0.0010		mg/L	
			Total Xylenes	2021/09/15	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/09/15	<0.090		mg/L	
7577895	THL	RPD [QPN181-06]	Benzene	2021/09/15	NC		%	40
			Toluene	2021/09/15	NC		%	40
			Ethylbenzene	2021/09/15	NC		%	40
			Total Xylenes	2021/09/15	NC		%	40
			C6 - C10 (less BTEX)	2021/09/15	NC		%	40
7577925	DRM	Matrix Spike	Phenols-4AAP	2021/09/15		98	%	80 - 120
7577925	DRM	Spiked Blank	Phenols-4AAP	2021/09/15		99	%	80 - 120
7577925	DRM	Method Blank	Phenols-4AAP	2021/09/15	<0.0010		mg/L	
7577925	DRM	RPD	Phenols-4AAP	2021/09/15	NC		%	20
7577935	DRM	Matrix Spike	Phenols-4AAP	2021/09/15		95	%	80 - 120
7577935	DRM	Spiked Blank	Phenols-4AAP	2021/09/15		99	%	80 - 120
7577935	DRM	Method Blank	Phenols-4AAP	2021/09/15	<0.0010		mg/L	
7577935	DRM	RPD	Phenols-4AAP	2021/09/15	14		%	20
7578011	SHW	QC Standard	Turbidity	2021/09/15		101	%	80 - 120
7578011	SHW	Spiked Blank	Turbidity	2021/09/15		100	%	80 - 120
7578011	SHW	Method Blank	Turbidity	2021/09/15	<0.10		NTU	
7578011	SHW	RPD	Turbidity	2021/09/15	NC		%	20
7578295	MKX	QC Standard	Total Suspended Solids	2021/09/18		100	%	80 - 120
7578295	MKX	Method Blank	Total Suspended Solids	2021/09/18	<1.0		mg/L	
7578295	MKX	RPD [QPN180-04]	Total Suspended Solids	2021/09/18	5.7		%	20
7578821	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/09/16		NC	%	80 - 120
7578821	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/09/16		106	%	80 - 120
7578821	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/09/16	<5.0		mg/L	
7578821	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/09/16	1.5		%	20
7580531	SHW	Spiked Blank	Conductivity	2021/09/16		101	%	80 - 120
7580531	SHW	Method Blank	Conductivity	2021/09/16	<1.0		uS/cm	
7580531	SHW	RPD	Conductivity	2021/09/16	0.53		%	10
7580534	SHW	Spiked Blank	pH	2021/09/16		100	%	97 - 103
7580534	SHW	RPD	pH	2021/09/16	0.64		%	N/A
7580578	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/09/16		NC	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7580578	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/09/16		96	%	80 - 120
7580578	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/09/16	<1.0		mg/L	
7580578	EMT	RPD	Dissolved Chloride (Cl-)	2021/09/16	0.72		%	20
7580579	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/09/16		102	%	80 - 120
7580579	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/09/16		105	%	80 - 120
7580579	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/09/16	<2.0		mg/L	
7580579	EMT	RPD	Dissolved Sulphate (SO4)	2021/09/16	1.8		%	20
7580580	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/09/16		NC	%	80 - 120
7580580	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/09/16		91	%	80 - 120
7580580	EMT	Method Blank	Reactive Silica (SiO2)	2021/09/16	<0.50		mg/L	
7580580	EMT	RPD	Reactive Silica (SiO2)	2021/09/16	0.42		%	20
7580582	EMT	Spiked Blank	Colour	2021/09/16		98	%	80 - 120
7580582	EMT	Method Blank	Colour	2021/09/16	<5.0		TCU	
7580582	EMT	RPD	Colour	2021/09/16	NC		%	20
7580583	EMT	Matrix Spike	Orthophosphate (P)	2021/09/16		81	%	80 - 120
7580583	EMT	Spiked Blank	Orthophosphate (P)	2021/09/16		96	%	80 - 120
7580583	EMT	Method Blank	Orthophosphate (P)	2021/09/16	<0.010		mg/L	
7580583	EMT	RPD	Orthophosphate (P)	2021/09/16	4.1		%	20
7580584	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/09/16		77 (5)	%	80 - 120
7580584	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/09/16		93	%	80 - 120
7580584	EMT	Method Blank	Nitrate + Nitrite (N)	2021/09/16	<0.050		mg/L	
7580584	EMT	RPD	Nitrate + Nitrite (N)	2021/09/16	0.97		%	20
7580585	EMT	Matrix Spike	Nitrite (N)	2021/09/16		67 (5)	%	80 - 120
7580585	EMT	Spiked Blank	Nitrite (N)	2021/09/16		109	%	80 - 120
7580585	EMT	Method Blank	Nitrite (N)	2021/09/16	<0.010		mg/L	
7580585	EMT	RPD	Nitrite (N)	2021/09/16	NC		%	20
7580728	EMT	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/09/16		101	%	80 - 120
7580728	EMT	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/09/16		106	%	80 - 120
7580728	EMT	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/09/16	<0.050		mg/L	
7580728	EMT	RPD	Nitrogen (Ammonia Nitrogen)	2021/09/16	NC		%	20
7583337	NGI	Matrix Spike	Total Organic Carbon (C)	2021/09/18		99	%	85 - 115
7583337	NGI	Spiked Blank	Total Organic Carbon (C)	2021/09/18		99	%	80 - 120
7583337	NGI	Method Blank	Total Organic Carbon (C)	2021/09/18	<0.50		mg/L	
7583337	NGI	RPD	Total Organic Carbon (C)	2021/09/18	NC		%	15
7583338	NGI	Matrix Spike	Total Organic Carbon (C)	2021/09/20		99	%	85 - 115
7583338	NGI	Spiked Blank	Total Organic Carbon (C)	2021/09/20		100	%	80 - 120
7583338	NGI	Method Blank	Total Organic Carbon (C)	2021/09/20	<0.50		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7583338	NGI	RPD	Total Organic Carbon (C)	2021/09/20	NC		%	15

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference material and second source recovery were high.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) CBOD Analysis: second source recovery was high.

(4) POTENTIAL EXCEEDANCE FOR PARAMETER

(5) Poor spike recovery due to probable sample matrix interference.

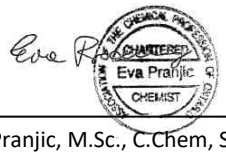
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BV Labs Job #: C1P9560
Report Date: 2021/09/20

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G8 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1P956Ø	843972
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#843972-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	DB/RM		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Non-potable/Tissue/Soil/Sludge/Metal

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	Sept 8/21	13:27	SW			X	Various	
2		SW2	Sept 8/21	13:36				X		
3		SW3	Sept 8/21	14:13				X		
4		SW4	Sept 8/21	14:04				X		
5		SW13	Sept 8/21	10:40				X		
6		~~SW14~~						X		
7		SW19-20	Sept 8/21	10:57				X		
8		Diffuser	Sept 8/21	13:56				X		
9		DUP1	Sept 8/21	—				X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	Sept 8/21	16:32	MATT GRACE				☐	5, 4, 5 8, 8, 9	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 845837-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/07
Report #: R6843948
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1R6341
Received: 2021/09/24, 10:08

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	6	N/A	2021/10/01	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	2	N/A	2021/09/30	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/10/05	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/09/24	2021/09/29	ATL SOP 00041	SM 23 5210B m
Chloride	8	N/A	2021/10/05	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/10/04	2021/10/05	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2021/10/05	ATL SOP 00020	SM 23 2120C m
Conductance - water	6	N/A	2021/10/01	ATL SOP 00004	SM 23 2510B m
Conductance - water	2	N/A	2021/09/30	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	8	2021/09/28	2021/09/28	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2021/09/28	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2021/09/29	ATL SOP 00048	Auto Calc
Metals Water Total MS	4	2021/09/24	2021/09/27	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	4	2021/09/24	2021/09/28	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	8	N/A	2021/10/06	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/10/05	N/A	Auto Calc.
Nitrogen Ammonia - water	3	N/A	2021/10/04	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	5	N/A	2021/10/05	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2021/10/05	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2021/10/05	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2021/10/06	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/09/27	CAM SOP-00444	OMOE E3179 m
pH (2)	6	N/A	2021/10/01	ATL SOP 00003	SM 23 4500-H+ B m
pH (2)	2	N/A	2021/09/30	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2021/10/05	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	8	N/A	2021/10/06	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	8	N/A	2021/10/06	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2021/10/05	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2021/10/05	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	8	N/A	2021/10/06	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	6	N/A	2021/10/06	ATL SOP 00203	SM 23 5310B m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 845837-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/07
Report #: R6843948
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1R6341
Received: 2021/09/24, 10:08

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Organic carbon - Total (TOC) (3)	2	N/A	2021/10/07	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	8	N/A	2021/10/04	N/A	Atl. RBCA v3 m
Total Suspended Solids	8	2021/09/30	2021/09/30	ATL SOP 00007	SM 23 2540D m
Turbidity	4	N/A	2021/10/01	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	4	N/A	2021/09/27	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	6	N/A	2021/10/01	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	2	N/A	2021/10/02	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 845837-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/07
Report #: R6843948
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1R6341
Received: 2021/09/24, 10:08

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
07 Oct 2021 14:22:34

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

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BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QTA027			QTA027			QTA028		
Sampling Date		2021/09/23 10:30			2021/09/23 10:30			2021/09/23 10:50		
COC Number		845837-01-01			845837-01-01			845837-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	SW1	RDL	QC Batch	SW1 Lab-Dup	RDL	QC Batch	SW2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.270	N/A	7597915				0.280	N/A	7597915
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7597912				<1.0	1.0	7597912
Calculated TDS	mg/L	25	1.0	7597919				26	1.0	7597919
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7597912				<1.0	1.0	7597912
Cation Sum	me/L	0.420	N/A	7597915				0.450	N/A	7597915
Hardness (CaCO3)	mg/L	7.5	1.0	7597913				8.4	1.0	7597913
Ion Balance (% Difference)	%	21.7	N/A	7597914				23.3	N/A	7597914
Langelier Index (@ 20C)	N/A	NC		7597917				NC		7597917
Langelier Index (@ 4C)	N/A	NC		7597918				NC		7597918
Nitrate (N)	mg/L	<0.050	0.050	7597916				<0.050	0.050	7597916
Saturation pH (@ 20C)	N/A	NC		7597917				NC		7597917
Saturation pH (@ 4C)	N/A	NC		7597918				NC		7597918
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7618016	<5.0	5.0	7618016	<5.0	5.0	7618016
Carbonaceous BOD	mg/L	<5.0	5.0	7598243				<5.0	5.0	7598243
Total Chemical Oxygen Demand	mg/L	77	20	7615873				96	20	7615873
Dissolved Chloride (Cl-)	mg/L	6.9	1.0	7618046	6.8	1.0	7618046	6.8	1.0	7618046
Colour	TCU	280	50	7618052	290	50	7618052	270	50	7618052
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7618056	<0.050	0.050	7618056	<0.050	0.050	7618056
Nitrite (N)	mg/L	<0.010	0.010	7618057	<0.010	0.010	7618057	<0.010	0.010	7618057
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7615928				<0.050	0.050	7615928
Total Organic Carbon (C)	mg/L	30	0.50	7620865				30	0.50	7620865
Orthophosphate (P)	mg/L	<0.010	0.010	7618053	<0.010	0.010	7618053	<0.010	0.010	7618053
pH	pH	5.17		7609717				5.21		7609717
Phenols-4AAP	mg/L	<0.0010	0.0010	7601960				<0.0010	0.0010	7601960
Reactive Silica (SiO2)	mg/L	5.2	0.50	7618050	5.2	0.50	7618050	5.3	0.50	7618050
Total Suspended Solids	mg/L	2.8	2.0	7609764				3.6	2.0	7609764
Dissolved Sulphate (SO4)	mg/L	3.6	2.0	7618048	3.9	2.0	7618048	4.4	2.0	7618048
Turbidity	NTU	2.3	0.10	7601884				2.2	0.10	7601884
Conductivity	uS/cm	43	1.0	7609715				44	1.0	7609715

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QTA029		QTA030			QTA031		
Sampling Date		2021/09/23 11:15		2021/09/23 11:25			2021/09/23 14:25		
COC Number		845837-01-01		845837-01-01			845837-01-01		
Sample #		SW3		SW4			SW13		
	UNITS	**SW3**	**QC Batch**	**SW4**	**RDL**	**QC Batch**	**SW13**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	me/L	0.270	7597915	0.190	N/A	7597915	3.43	N/A	7597915
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7597912	<1.0	1.0	7597912	73	1.0	7597912
Calculated TDS	mg/L	25	7597919	21	1.0	7597919	200	1.0	7597919
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7597912	<1.0	1.0	7597912	<1.0	1.0	7597912
Cation Sum	me/L	0.430	7597915	0.430	N/A	7597915	3.26	N/A	7597915
Hardness (CaCO3)	mg/L	7.9	7597913	7.9	1.0	7597913	72	1.0	7597913
Ion Balance (% Difference)	%	22.9	7597914	38.7	N/A	7597914	2.54	N/A	7597914
Langelier Index (@ 20C)	N/A	NC	7597917	NC		7597917	-1.19		7597917
Langelier Index (@ 4C)	N/A	NC	7597918	NC		7597918	-1.44		7597918
Nitrate (N)	mg/L	<0.050	7597916	<0.050	0.050	7597916	<0.050	0.050	7597916
Saturation pH (@ 20C)	N/A	NC	7597917	NC		7597917	8.16		7597917
Saturation pH (@ 4C)	N/A	NC	7597918	NC		7597918	8.41		7597918
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	7618016	<5.0	5.0	7618016	73	5.0	7618016
Carbonaceous BOD	mg/L	<5.0	7598243	<5.0	5.0	7598243	<5.0	5.0	7598243
Total Chemical Oxygen Demand	mg/L	84	7615873	77	20	7615873	37	20	7615873
Dissolved Chloride (Cl-)	mg/L	6.9	7618046	6.8	1.0	7618046	66	1.0	7618046
Colour	TCU	280	7618052	270	50	7618052	100	25	7618052
Nitrate + Nitrite (N)	mg/L	<0.050	7618056	<0.050	0.050	7618056	<0.050	0.050	7618056
Nitrite (N)	mg/L	<0.010	7618057	<0.010	0.010	7618057	<0.010	0.010	7618057
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7615928	<0.050	0.050	7615928	0.067	0.050	7615928
Total Organic Carbon (C)	mg/L	30	7620865	30	0.50	7620865	14	0.50	7620865
Orthophosphate (P)	mg/L	<0.010	7618053	<0.010	0.010	7618053	<0.010	0.010	7618053
pH	pH	5.97	7612046	5.80		7612046	6.97		7612046
Phenols-4AAP	mg/L	<0.0010	7601972	<0.0010	0.0010	7601960	<0.0010	0.0010	7601972
Reactive Silica (SiO2)	mg/L	5.2	7618050	5.1	0.50	7618050	8.7	0.50	7618050
Total Suspended Solids	mg/L	2.8	7609764	4.4	2.0	7609764	17	5.0	7609764
Dissolved Sulphate (SO4)	mg/L	3.6	7618048	<2.0	2.0	7618048	4.9	2.0	7618048
Turbidity	NTU	2.8	7601884	1.9	0.10	7601884	36	0.10	7612170
Conductivity	uS/cm	43	7612042	43	1.0	7612042	370	1.0	7612042

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QTA032			QTA033			QTA034		
Sampling Date		2021/09/23 14:10			2021/09/23 11:05			2021/09/23		
COC Number		845837-01-01			845837-01-01			845837-01-01		
Sample #		SW19-20			DIFFUSER			DUP1		
	UNITS	**SW19-20**	**RDL**	**QC Batch**	**Diffuser**	**RDL**	**QC Batch**	**DUP1**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	11.9	N/A	7597915	0.190	N/A	7597915	0.270	N/A	7597915
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	370	1.0	7597912	<1.0	1.0	7597912	<1.0	1.0	7597912
Calculated TDS	mg/L	690	1.0	7597919	21	1.0	7597919	25	1.0	7597919
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	1.0	7597912	<1.0	1.0	7597912	<1.0	1.0	7597912
Cation Sum	me/L	12.1	N/A	7597915	0.420	N/A	7597915	0.420	N/A	7597915
Hardness (CaCO3)	mg/L	520	1.0	7597913	7.9	1.0	7597913	7.6	1.0	7597913
Ion Balance (% Difference)	%	1.04	N/A	7597914	37.7	N/A	7597914	21.7	N/A	7597914
Langelier Index (@ 20C)	N/A	0.794		7597917	NC		7597917	NC		7597917
Langelier Index (@ 4C)	N/A	0.547		7597918	NC		7597918	NC		7597918
Nitrate (N)	mg/L	0.11	0.050	7597916	<0.050	0.050	7597916	<0.050	0.050	7597916
Saturation pH (@ 20C)	N/A	6.70		7597917	NC		7597917	NC		7597917
Saturation pH (@ 4C)	N/A	6.95		7597918	NC		7597918	NC		7597918
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	370	25	7618016	<5.0	5.0	7618016	<5.0	5.0	7618016
Carbonaceous BOD	mg/L	<5.0	5.0	7598243	<5.0	5.0	7598243	<5.0	5.0	7598243
Total Chemical Oxygen Demand	mg/L	58	20	7615873	77	20	7615873	80	20	7615873
Dissolved Chloride (Cl-)	mg/L	20	1.0	7618046	6.7	1.0	7618046	6.6	1.0	7618046
Colour	TCU	19	5.0	7618052	260	50	7618052	280	50	7618052
Nitrate + Nitrite (N)	mg/L	0.12	0.050	7618056	<0.050	0.050	7618056	<0.050	0.050	7618056
Nitrite (N)	mg/L	0.011	0.010	7618057	<0.010	0.010	7618057	<0.010	0.010	7618057
Nitrogen (Ammonia Nitrogen)	mg/L	0.17	0.050	7615928	<0.050	0.050	7615935	<0.050	0.050	7615935
Total Organic Carbon (C)	mg/L	17	0.50	7620876	30	0.50	7620876	30	0.50	7620865
Orthophosphate (P)	mg/L	<0.010	0.010	7618053	<0.010	0.010	7618053	<0.010	0.010	7618053
pH	pH	7.49		7612046	5.99		7612046	5.75		7612046
Phenols-4AAP	mg/L	<0.0010	0.0010	7601972	<0.0010	0.0010	7601972	<0.0010	0.0010	7601960
Reactive Silica (SiO2)	mg/L	14	0.50	7618050	5.1	0.50	7618050	5.0	0.50	7618050
Total Suspended Solids	mg/L	85	5.0	7609764	3.6	2.0	7609764	7.0	5.0	7609764
Dissolved Sulphate (SO4)	mg/L	190	10	7618048	<2.0	2.0	7618048	3.9	2.0	7618048
Turbidity	NTU	67	0.10	7612170	2.2	0.10	7612170	2.5	0.10	7612170
Conductivity	uS/cm	1100	1.0	7612042	44	1.0	7612042	43	1.0	7612042

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

BV Labs ID		QTA034		
Sampling Date		2021/09/23		
COC Number		845837-01-01		
Sample #		DUP1		
	UNITS	DUP1 Lab-Dup	RDL	QC Batch
Inorganics				
Total Organic Carbon (C)	mg/L	30	0.50	7620865

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QTA027		QTA028	QTA029		QTA030		
Sampling Date		2021/09/23 10:30		2021/09/23 10:50	2021/09/23 11:15		2021/09/23 11:25		
COC Number		845837-01-01		845837-01-01	845837-01-01		845837-01-01		
Sample #		SW1		SW2	SW3		SW4		
	UNITS	**SW1**	**QC Batch**	**SW2**	**SW3**	**QC Batch**	**SW4**	**RDL**	**QC Batch**
Metals									
Total Aluminum (Al)	ug/L	850	7599167	900	880	7599258	860	5.0	7599167
Total Antimony (Sb)	ug/L	<1.0	7599167	<1.0	<1.0	7599258	<1.0	1.0	7599167
Total Arsenic (As)	ug/L	1.0	7599167	1.1	1.1	7599258	1.2	1.0	7599167
Total Barium (Ba)	ug/L	5.8	7599167	6.2	6.0	7599258	5.9	1.0	7599167
Total Beryllium (Be)	ug/L	0.12	7599167	0.11	0.11	7599258	0.11	0.10	7599167
Total Bismuth (Bi)	ug/L	<2.0	7599167	<2.0	<2.0	7599258	<2.0	2.0	7599167
Total Boron (B)	ug/L	<50	7599167	<50	<50	7599258	<50	50	7599167
Total Cadmium (Cd)	ug/L	0.023	7599167	0.024	0.021	7599258	0.024	0.010	7599167
Total Calcium (Ca)	ug/L	1900	7599167	2200	2000	7599258	2000	100	7599167
Total Chromium (Cr)	ug/L	<1.0	7599167	<1.0	<1.0	7599258	<1.0	1.0	7599167
Total Cobalt (Co)	ug/L	<0.40	7599167	<0.40	<0.40	7599258	<0.40	0.40	7599167
Total Copper (Cu)	ug/L	<0.50	7599167	0.56	0.60	7599258	<0.50	0.50	7599167
Total Iron (Fe)	ug/L	860	7599167	880	890	7599258	870	50	7599167
Total Lead (Pb)	ug/L	1.1	7599167	1.1	1.1	7599258	1.1	0.50	7599167
Total Magnesium (Mg)	ug/L	660	7599167	720	700	7599258	690	100	7599167
Total Manganese (Mn)	ug/L	38	7599167	41	40	7599258	39	2.0	7599167
Total Molybdenum (Mo)	ug/L	<2.0	7599167	<2.0	<2.0	7599258	<2.0	2.0	7599167
Total Nickel (Ni)	ug/L	<2.0	7599167	<2.0	<2.0	7599258	<2.0	2.0	7599167
Total Phosphorus (P)	ug/L	<100	7599167	<100	<100	7599258	<100	100	7599167
Total Potassium (K)	ug/L	310	7599167	320	300	7599258	320	100	7599167
Total Selenium (Se)	ug/L	<0.50	7599167	<0.50	<0.50	7599258	<0.50	0.50	7599167
Total Silver (Ag)	ug/L	<0.10	7599167	<0.10	<0.10	7599258	<0.10	0.10	7599167
Total Sodium (Na)	ug/L	5100	7599167	5400	5300	7599258	5200	100	7599167
Total Strontium (Sr)	ug/L	10	7599167	11	11	7599258	11	2.0	7599167
Total Thallium (Tl)	ug/L	<0.10	7599167	<0.10	<0.10	7599258	<0.10	0.10	7599167
Total Tin (Sn)	ug/L	<2.0	7599167	<2.0	<2.0	7599258	<2.0	2.0	7599167
Total Titanium (Ti)	ug/L	8.3	7599167	9.4	9.9	7599258	10	2.0	7599167
Total Uranium (U)	ug/L	0.31	7599167	0.37	0.36	7599258	0.32	0.10	7599167
Total Vanadium (V)	ug/L	<2.0	7599167	<2.0	<2.0	7599258	<2.0	2.0	7599167
Total Zinc (Zn)	ug/L	<5.0	7599167	<5.0	<5.0	7599258	<5.0	5.0	7599167

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

BV Labs ID		QTA031	QTA032	QTA033	QTA034		
Sampling Date		2021/09/23 14:25	2021/09/23 14:10	2021/09/23 11:05	2021/09/23		
COC Number		845837-01-01	845837-01-01	845837-01-01	845837-01-01		
Sample #		SW13	SW19-20	DIFFUSER	DUP1		
	UNITS	**SW13**	**SW19-20**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Metals							
Total Aluminum (Al)	ug/L	160	1300	850	890	5.0	7599258
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	7599258
Total Arsenic (As)	ug/L	2.7	2.8	1.1	1.1	1.0	7599258
Total Barium (Ba)	ug/L	24	46	5.8	5.9	1.0	7599258
Total Beryllium (Be)	ug/L	<0.10	<0.10	0.11	0.11	0.10	7599258
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	7599258
Total Boron (B)	ug/L	<50	700	<50	<50	50	7599258
Total Cadmium (Cd)	ug/L	0.030	0.039	0.023	0.022	0.010	7599258
Total Calcium (Ca)	ug/L	23000	170000	2000	2000	100	7599258
Total Chromium (Cr)	ug/L	<1.0	1.8	<1.0	<1.0	1.0	7599258
Total Cobalt (Co)	ug/L	5.6	5.2	<0.40	<0.40	0.40	7599258
Total Copper (Cu)	ug/L	1.8	3.0	0.61	0.65	0.50	7599258
Total Iron (Fe)	ug/L	5000	4200	870	890	50	7599258
Total Lead (Pb)	ug/L	0.74	2.9	1.1	1.1	0.50	7599258
Total Magnesium (Mg)	ug/L	3500	21000	680	670	100	7599258
Total Manganese (Mn)	ug/L	2000	7500	39	38	2.0	7599258
Total Molybdenum (Mo)	ug/L	<2.0	9.4	<2.0	<2.0	2.0	7599258
Total Nickel (Ni)	ug/L	4.6	5.2	<2.0	<2.0	2.0	7599258
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	100	7599258
Total Potassium (K)	ug/L	1100	14000	300	340	100	7599258
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	7599258
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	7599258
Total Sodium (Na)	ug/L	37000	28000	5200	5200	100	7599258
Total Strontium (Sr)	ug/L	84	610	10	10	2.0	7599258
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	7599258
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	7599258
Total Titanium (Ti)	ug/L	3.0	46	8.2	10	2.0	7599258
Total Uranium (U)	ug/L	0.20	54	0.32	0.33	0.10	7599258
Total Vanadium (V)	ug/L	<2.0	2.3	<2.0	<2.0	2.0	7599258
Total Zinc (Zn)	ug/L	8.7	11	<5.0	<5.0	5.0	7599258

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QTA027			QTA027			QTA028		
Sampling Date		2021/09/23 10:30			2021/09/23 10:30			2021/09/23 10:50		
COC Number		845837-01-01			845837-01-01			845837-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940
Toluene	mg/L	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940
Ethylbenzene	mg/L	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940	<0.0010	0.0010	7611940
Total Xylenes	mg/L	<0.0020	0.0020	7611940	<0.0020	0.0020	7611940	<0.0020	0.0020	7611940
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7611940	<0.090	0.090	7611940	<0.090	0.090	7611940
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7604113				<0.050	0.050	7604113
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7604113				<0.050	0.050	7604113
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7604113				<0.090	0.090	7604113
Modified TPH (Tier1)	mg/L	<0.090	0.090	7598086				<0.090	0.090	7598086
Reached Baseline at C32	mg/L	NA	N/A	7604113				NA	N/A	7604113
Hydrocarbon Resemblance	mg/L	NA	N/A	7604113				NA	N/A	7604113
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	82		7604113				84		7604113
n-Dotriacontane - Extractable	%	83		7604113				82		7604113
Isobutylbenzene - Volatile	%	93		7611940	94		7611940	93		7611940

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QTA029	QTA030	QTA031	QTA032	QTA033		
Sampling Date		2021/09/23 11:15	2021/09/23 11:25	2021/09/23 14:25	2021/09/23 14:10	2021/09/23 11:05		
COC Number		845837-01-01	845837-01-01	845837-01-01	845837-01-01	845837-01-01		
Sample #		SW3	SW4	SW13	SW19-20	DIFFUSER		
	UNITS	**SW3**	**SW4**	**SW13**	**SW19-20**	**Diffuser**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7611940
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7611940
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7611940
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7611940
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7611940
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7604113
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7604113
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	0.11	0.66	0.090	7604113
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	0.11	0.66	0.090	7598086
Reached Baseline at C32	mg/L	NA	NA	NA	Yes	Yes	N/A	7604113
Hydrocarbon Resemblance	mg/L	NA	NA	NA	COMMENT (1)	COMMENT (1)	N/A	7604113
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	81	79	85	88	81		7604113
n-Dotriacontane - Extractable	%	82	77	85	86	80		7604113
Isobutylbenzene - Volatile	%	94	93	95	97	93		7611940

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Unidentified compound(s) in lube oil range.

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

BV Labs ID		QTA034		
Sampling Date		2021/09/23		
COC Number		845837-01-01		
Sample #		DUP1		
	UNITS	DUP1	RDL	QC Batch
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	7611940
Toluene	mg/L	<0.0010	0.0010	7611940
Ethylbenzene	mg/L	<0.0010	0.0010	7611940
Total Xylenes	mg/L	<0.0020	0.0020	7611940
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7611940
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7604113
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7604113
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7604113
Modified TPH (Tier1)	mg/L	<0.090	0.090	7598086
Reached Baseline at C32	mg/L	NA	N/A	7604113
Hydrocarbon Resemblance	mg/L	NA	N/A	7604113
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	90		7604113
n-Dotriacontane - Extractable	%	88		7604113
Isobutylbenzene - Volatile	%	93		7611940

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.7°C
Package 2	10.7°C

Some of the samples were received with an average temperature above 10°C with an attempt to cool. 2021/09/24 MMC

Sample QTA027 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QTA028 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QTA029 [SW3] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QTA030 [SW4] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QTA033 [Diffuser] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample QTA034 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7598243	DME	QC Standard	Carbonaceous BOD	2021/09/29		123 (1)	%	80 - 120
7598243	DME	Spiked Blank	Carbonaceous BOD	2021/09/29		125 (2)	%	80 - 120
7598243	DME	Method Blank	Carbonaceous BOD	2021/09/29	<2.0		mg/L	
7598243	DME	RPD	Carbonaceous BOD	2021/09/29	NC		%	25
7599167	MLB	Matrix Spike	Total Aluminum (Al)	2021/09/27		NC	%	80 - 120
			Total Antimony (Sb)	2021/09/27		107	%	80 - 120
			Total Arsenic (As)	2021/09/27		95	%	80 - 120
			Total Barium (Ba)	2021/09/27		99	%	80 - 120
			Total Beryllium (Be)	2021/09/27		103	%	80 - 120
			Total Bismuth (Bi)	2021/09/27		100	%	80 - 120
			Total Boron (B)	2021/09/27		106	%	80 - 120
			Total Cadmium (Cd)	2021/09/27		98	%	80 - 120
			Total Calcium (Ca)	2021/09/27		105	%	80 - 120
			Total Chromium (Cr)	2021/09/27		99	%	80 - 120
			Total Cobalt (Co)	2021/09/27		100	%	80 - 120
			Total Copper (Cu)	2021/09/27		98	%	80 - 120
			Total Iron (Fe)	2021/09/27		104	%	80 - 120
			Total Lead (Pb)	2021/09/27		102	%	80 - 120
			Total Magnesium (Mg)	2021/09/27		105	%	80 - 120
			Total Manganese (Mn)	2021/09/27		103	%	80 - 120
			Total Molybdenum (Mo)	2021/09/27		105	%	80 - 120
			Total Nickel (Ni)	2021/09/27		99	%	80 - 120
			Total Phosphorus (P)	2021/09/27		104	%	80 - 120
			Total Potassium (K)	2021/09/27		104	%	80 - 120
			Total Selenium (Se)	2021/09/27		98	%	80 - 120
			Total Silver (Ag)	2021/09/27		100	%	80 - 120
			Total Sodium (Na)	2021/09/27		NC	%	80 - 120
			Total Strontium (Sr)	2021/09/27		99	%	80 - 120
			Total Thallium (Tl)	2021/09/27		101	%	80 - 120
			Total Tin (Sn)	2021/09/27		105	%	80 - 120
			Total Titanium (Ti)	2021/09/27		104	%	80 - 120
			Total Uranium (U)	2021/09/27		104	%	80 - 120
			Total Vanadium (V)	2021/09/27		102	%	80 - 120
			Total Zinc (Zn)	2021/09/27		97	%	80 - 120
7599167	MLB	Spiked Blank	Total Aluminum (Al)	2021/09/27		101	%	80 - 120
			Total Antimony (Sb)	2021/09/27		100	%	80 - 120
			Total Arsenic (As)	2021/09/27		92	%	80 - 120
			Total Barium (Ba)	2021/09/27		96	%	80 - 120
			Total Beryllium (Be)	2021/09/27		98	%	80 - 120
			Total Bismuth (Bi)	2021/09/27		96	%	80 - 120
			Total Boron (B)	2021/09/27		101	%	80 - 120
			Total Cadmium (Cd)	2021/09/27		95	%	80 - 120
			Total Calcium (Ca)	2021/09/27		103	%	80 - 120
			Total Chromium (Cr)	2021/09/27		96	%	80 - 120
			Total Cobalt (Co)	2021/09/27		97	%	80 - 120
			Total Copper (Cu)	2021/09/27		96	%	80 - 120
			Total Iron (Fe)	2021/09/27		100	%	80 - 120
			Total Lead (Pb)	2021/09/27		98	%	80 - 120
			Total Magnesium (Mg)	2021/09/27		101	%	80 - 120
			Total Manganese (Mn)	2021/09/27		97	%	80 - 120
			Total Molybdenum (Mo)	2021/09/27		102	%	80 - 120
			Total Nickel (Ni)	2021/09/27		97	%	80 - 120
			Total Phosphorus (P)	2021/09/27		103	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Potassium (K)	2021/09/27		100	%	80 - 120
			Total Selenium (Se)	2021/09/27		94	%	80 - 120
			Total Silver (Ag)	2021/09/27		98	%	80 - 120
			Total Sodium (Na)	2021/09/27		101	%	80 - 120
			Total Strontium (Sr)	2021/09/27		97	%	80 - 120
			Total Thallium (Tl)	2021/09/27		96	%	80 - 120
			Total Tin (Sn)	2021/09/27		100	%	80 - 120
			Total Titanium (Ti)	2021/09/27		99	%	80 - 120
			Total Uranium (U)	2021/09/27		97	%	80 - 120
			Total Vanadium (V)	2021/09/27		100	%	80 - 120
			Total Zinc (Zn)	2021/09/27		93	%	80 - 120
7599167	MLB	Method Blank	Total Aluminum (Al)	2021/09/27	<5.0		ug/L	
			Total Antimony (Sb)	2021/09/27	<1.0		ug/L	
			Total Arsenic (As)	2021/09/27	<1.0		ug/L	
			Total Barium (Ba)	2021/09/27	<1.0		ug/L	
			Total Beryllium (Be)	2021/09/27	<0.10		ug/L	
			Total Bismuth (Bi)	2021/09/27	<2.0		ug/L	
			Total Boron (B)	2021/09/27	<50		ug/L	
			Total Cadmium (Cd)	2021/09/27	<0.010		ug/L	
			Total Calcium (Ca)	2021/09/27	<100		ug/L	
			Total Chromium (Cr)	2021/09/27	<1.0		ug/L	
			Total Cobalt (Co)	2021/09/27	<0.40		ug/L	
			Total Copper (Cu)	2021/09/27	<0.50		ug/L	
			Total Iron (Fe)	2021/09/27	<50		ug/L	
			Total Lead (Pb)	2021/09/27	<0.50		ug/L	
			Total Magnesium (Mg)	2021/09/27	<100		ug/L	
			Total Manganese (Mn)	2021/09/27	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/09/27	<2.0		ug/L	
			Total Nickel (Ni)	2021/09/27	<2.0		ug/L	
			Total Phosphorus (P)	2021/09/27	<100		ug/L	
			Total Potassium (K)	2021/09/27	<100		ug/L	
			Total Selenium (Se)	2021/09/27	<0.50		ug/L	
			Total Silver (Ag)	2021/09/27	<0.10		ug/L	
			Total Sodium (Na)	2021/09/27	<100		ug/L	
			Total Strontium (Sr)	2021/09/27	<2.0		ug/L	
			Total Thallium (Tl)	2021/09/27	<0.10		ug/L	
			Total Tin (Sn)	2021/09/27	<2.0		ug/L	
			Total Titanium (Ti)	2021/09/27	<2.0		ug/L	
			Total Uranium (U)	2021/09/27	<0.10		ug/L	
			Total Vanadium (V)	2021/09/27	<2.0		ug/L	
			Total Zinc (Zn)	2021/09/27	<5.0		ug/L	
7599167	MLB	RPD	Total Iron (Fe)	2021/09/27	1.4		%	20
			Total Nickel (Ni)	2021/09/27	3.1		%	20
			Total Vanadium (V)	2021/09/27	0.43		%	20
7599258	BAN	Matrix Spike	Total Aluminum (Al)	2021/09/27		102	%	80 - 120
			Total Antimony (Sb)	2021/09/27		99	%	80 - 120
			Total Arsenic (As)	2021/09/27		95	%	80 - 120
			Total Barium (Ba)	2021/09/27		92	%	80 - 120
			Total Beryllium (Be)	2021/09/27		96	%	80 - 120
			Total Bismuth (Bi)	2021/09/27		95	%	80 - 120
			Total Boron (B)	2021/09/27		98	%	80 - 120
			Total Cadmium (Cd)	2021/09/27		96	%	80 - 120
			Total Calcium (Ca)	2021/09/27		102	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2021/09/27		96	%	80 - 120
			Total Cobalt (Co)	2021/09/27		96	%	80 - 120
			Total Copper (Cu)	2021/09/27		95	%	80 - 120
			Total Iron (Fe)	2021/09/27		102	%	80 - 120
			Total Lead (Pb)	2021/09/27		95	%	80 - 120
			Total Magnesium (Mg)	2021/09/27		98	%	80 - 120
			Total Manganese (Mn)	2021/09/27		98	%	80 - 120
			Total Molybdenum (Mo)	2021/09/27		103	%	80 - 120
			Total Nickel (Ni)	2021/09/27		96	%	80 - 120
			Total Phosphorus (P)	2021/09/27		103	%	80 - 120
			Total Potassium (K)	2021/09/27		104	%	80 - 120
			Total Selenium (Se)	2021/09/27		100	%	80 - 120
			Total Silver (Ag)	2021/09/27		96	%	80 - 120
			Total Sodium (Na)	2021/09/27		NC	%	80 - 120
			Total Strontium (Sr)	2021/09/27		NC	%	80 - 120
			Total Thallium (Tl)	2021/09/27		97	%	80 - 120
			Total Tin (Sn)	2021/09/27		99	%	80 - 120
			Total Titanium (Ti)	2021/09/27		101	%	80 - 120
			Total Uranium (U)	2021/09/27		103	%	80 - 120
			Total Vanadium (V)	2021/09/27		98	%	80 - 120
			Total Zinc (Zn)	2021/09/27		96	%	80 - 120
7599258	BAN	Spiked Blank	Total Aluminum (Al)	2021/09/27		102	%	80 - 120
			Total Antimony (Sb)	2021/09/27		99	%	80 - 120
			Total Arsenic (As)	2021/09/27		94	%	80 - 120
			Total Barium (Ba)	2021/09/27		94	%	80 - 120
			Total Beryllium (Be)	2021/09/27		95	%	80 - 120
			Total Bismuth (Bi)	2021/09/27		98	%	80 - 120
			Total Boron (B)	2021/09/27		96	%	80 - 120
			Total Cadmium (Cd)	2021/09/27		95	%	80 - 120
			Total Calcium (Ca)	2021/09/27		101	%	80 - 120
			Total Chromium (Cr)	2021/09/27		97	%	80 - 120
			Total Cobalt (Co)	2021/09/27		96	%	80 - 120
			Total Copper (Cu)	2021/09/27		97	%	80 - 120
			Total Iron (Fe)	2021/09/27		103	%	80 - 120
			Total Lead (Pb)	2021/09/27		97	%	80 - 120
			Total Magnesium (Mg)	2021/09/27		103	%	80 - 120
			Total Manganese (Mn)	2021/09/27		100	%	80 - 120
			Total Molybdenum (Mo)	2021/09/27		100	%	80 - 120
			Total Nickel (Ni)	2021/09/27		97	%	80 - 120
			Total Phosphorus (P)	2021/09/27		102	%	80 - 120
			Total Potassium (K)	2021/09/27		100	%	80 - 120
			Total Selenium (Se)	2021/09/27		98	%	80 - 120
			Total Silver (Ag)	2021/09/27		95	%	80 - 120
			Total Sodium (Na)	2021/09/27		100	%	80 - 120
			Total Strontium (Sr)	2021/09/27		98	%	80 - 120
			Total Thallium (Tl)	2021/09/27		97	%	80 - 120
			Total Tin (Sn)	2021/09/27		99	%	80 - 120
			Total Titanium (Ti)	2021/09/27		99	%	80 - 120
			Total Uranium (U)	2021/09/27		100	%	80 - 120
			Total Vanadium (V)	2021/09/27		98	%	80 - 120
			Total Zinc (Zn)	2021/09/27		97	%	80 - 120
7599258	BAN	Method Blank	Total Aluminum (Al)	2021/09/27	<5.0		ug/L	
			Total Antimony (Sb)	2021/09/27	<1.0		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Arsenic (As)	2021/09/27	<1.0		ug/L	
			Total Barium (Ba)	2021/09/27	<1.0		ug/L	
			Total Beryllium (Be)	2021/09/27	<0.10		ug/L	
			Total Bismuth (Bi)	2021/09/27	<2.0		ug/L	
			Total Boron (B)	2021/09/27	<50		ug/L	
			Total Cadmium (Cd)	2021/09/27	<0.010		ug/L	
			Total Calcium (Ca)	2021/09/27	<100		ug/L	
			Total Chromium (Cr)	2021/09/27	<1.0		ug/L	
			Total Cobalt (Co)	2021/09/27	<0.40		ug/L	
			Total Copper (Cu)	2021/09/27	<0.50		ug/L	
			Total Iron (Fe)	2021/09/27	<50		ug/L	
			Total Lead (Pb)	2021/09/27	<0.50		ug/L	
			Total Magnesium (Mg)	2021/09/27	<100		ug/L	
			Total Manganese (Mn)	2021/09/27	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/09/27	<2.0		ug/L	
			Total Nickel (Ni)	2021/09/27	<2.0		ug/L	
			Total Phosphorus (P)	2021/09/27	<100		ug/L	
			Total Potassium (K)	2021/09/27	<100		ug/L	
			Total Selenium (Se)	2021/09/27	<0.50		ug/L	
			Total Silver (Ag)	2021/09/27	<0.10		ug/L	
			Total Sodium (Na)	2021/09/27	<100		ug/L	
			Total Strontium (Sr)	2021/09/27	<2.0		ug/L	
			Total Thallium (Tl)	2021/09/27	<0.10		ug/L	
			Total Tin (Sn)	2021/09/27	<2.0		ug/L	
			Total Titanium (Ti)	2021/09/27	<2.0		ug/L	
			Total Uranium (U)	2021/09/27	<0.10		ug/L	
			Total Vanadium (V)	2021/09/27	<2.0		ug/L	
			Total Zinc (Zn)	2021/09/27	<5.0		ug/L	
7599258	BAN	RPD	Total Aluminum (Al)	2021/09/27	5.9		%	20
			Total Antimony (Sb)	2021/09/27	1.7		%	20
			Total Arsenic (As)	2021/09/27	NC		%	20
			Total Barium (Ba)	2021/09/27	1.2		%	20
			Total Boron (B)	2021/09/27	NC		%	20
			Total Cadmium (Cd)	2021/09/27	2.9		%	20
			Total Calcium (Ca)	2021/09/27	6.4		%	20
			Total Chromium (Cr)	2021/09/27	NC		%	20
			Total Copper (Cu)	2021/09/27	4.0		%	20
			Total Iron (Fe)	2021/09/27	NC		%	20
			Total Lead (Pb)	2021/09/27	NC		%	20
			Total Magnesium (Mg)	2021/09/27	4.1		%	20
			Total Manganese (Mn)	2021/09/27	5.3		%	20
			Total Selenium (Se)	2021/09/27	NC		%	20
			Total Silver (Ag)	2021/09/27	NC		%	20
			Total Sodium (Na)	2021/09/27	2.5		%	20
			Total Strontium (Sr)	2021/09/27	0.11		%	20
			Total Uranium (U)	2021/09/27	0.21		%	20
			Total Zinc (Zn)	2021/09/27	15		%	20
7601884	SHW	QC Standard	Turbidity	2021/09/27		97	%	80 - 120
7601884	SHW	Spiked Blank	Turbidity	2021/09/27		105	%	80 - 120
7601884	SHW	Method Blank	Turbidity	2021/09/27	<0.10		NTU	
7601884	SHW	RPD	Turbidity	2021/09/27	4.2		%	20
7601960	DRM	Matrix Spike	Phenols-4AAP	2021/09/27		100	%	80 - 120
7601960	DRM	Spiked Blank	Phenols-4AAP	2021/09/27		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7601960	DRM	Method Blank	Phenols-4AAP	2021/09/27	<0.0010		mg/L	
7601960	DRM	RPD	Phenols-4AAP	2021/09/27	13		%	20
7601972	DRM	Matrix Spike	Phenols-4AAP	2021/09/27		99	%	80 - 120
7601972	DRM	Spiked Blank	Phenols-4AAP	2021/09/27		97	%	80 - 120
7601972	DRM	Method Blank	Phenols-4AAP	2021/09/27	<0.0010		mg/L	
7601972	DRM	RPD	Phenols-4AAP	2021/09/27	1.9		%	20
7604113	SPY	Matrix Spike	Isobutylbenzene - Extractable	2021/09/28		86	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/28		87	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/28		87	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/28		84	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/28		78	%	70 - 130
7604113	SPY	Spiked Blank	Isobutylbenzene - Extractable	2021/09/28		102	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/28		109	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/28		109	%	70 - 130
			>C16-C21 Hydrocarbons	2021/09/28		103	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/09/28		96	%	70 - 130
7604113	SPY	Method Blank	Isobutylbenzene - Extractable	2021/09/28		77	%	70 - 130
			n-Dotriacontane - Extractable	2021/09/28		95	%	70 - 130
			>C10-C16 Hydrocarbons	2021/09/28	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/09/28	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/09/28	<0.090		mg/L	
7604113	SPY	RPD	>C10-C16 Hydrocarbons	2021/09/28	NC		%	40
			>C16-C21 Hydrocarbons	2021/09/28	NC		%	40
			>C21-<C32 Hydrocarbons	2021/09/28	NC		%	40
7609715	SHW	Spiked Blank	Conductivity	2021/09/30		103	%	80 - 120
7609715	SHW	Method Blank	Conductivity	2021/09/30	<1.0		uS/cm	
7609715	SHW	RPD	Conductivity	2021/09/30	1.8		%	10
7609717	SHW	Spiked Blank	pH	2021/09/30		100	%	97 - 103
7609717	SHW	RPD	pH	2021/09/30	0.74		%	N/A
7609764	DME	QC Standard	Total Suspended Solids	2021/09/30		98	%	80 - 120
7609764	DME	Method Blank	Total Suspended Solids	2021/09/30	<1.0		mg/L	
7609764	DME	RPD	Total Suspended Solids	2021/09/30	0		%	20
7611940	THL	Matrix Spike [QTA028-06]	Isobutylbenzene - Volatile	2021/10/01		95	%	70 - 130
			Benzene	2021/10/01		94	%	70 - 130
			Toluene	2021/10/01		96	%	70 - 130
			Ethylbenzene	2021/10/01		97	%	70 - 130
			Total Xylenes	2021/10/01		95	%	70 - 130
7611940	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/01		96	%	70 - 130
			Benzene	2021/10/01		92	%	70 - 130
			Toluene	2021/10/01		93	%	70 - 130
			Ethylbenzene	2021/10/01		95	%	70 - 130
			Total Xylenes	2021/10/01		94	%	70 - 130
7611940	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/01		95	%	70 - 130
			Benzene	2021/10/01	<0.0010		mg/L	
			Toluene	2021/10/01	<0.0010		mg/L	
			Ethylbenzene	2021/10/01	<0.0010		mg/L	
			Total Xylenes	2021/10/01	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/01	<0.090		mg/L	
7611940	THL	RPD [QTA027-06]	Benzene	2021/10/01	NC		%	40
			Toluene	2021/10/01	NC		%	40
			Ethylbenzene	2021/10/01	NC		%	40
			Total Xylenes	2021/10/01	NC		%	40
			C6 - C10 (less BTEX)	2021/10/01	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7612042	SHW	Spiked Blank	Conductivity	2021/10/01		103	%	80 - 120
7612042	SHW	Method Blank	Conductivity	2021/10/01	<1.0		uS/cm	
7612042	SHW	RPD	Conductivity	2021/10/01	1.0		%	10
7612046	SHW	Spiked Blank	pH	2021/10/01		100	%	97 - 103
7612046	SHW	RPD	pH	2021/10/01	0.43		%	N/A
7612170	SHW	QC Standard	Turbidity	2021/10/01		98	%	80 - 120
7612170	SHW	Spiked Blank	Turbidity	2021/10/01		103	%	80 - 120
7612170	SHW	Method Blank	Turbidity	2021/10/01	<0.10		NTU	
7612170	SHW	RPD	Turbidity	2021/10/01	4.6		%	20
7615873	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/05		101	%	80 - 120
7615873	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/05		96	%	80 - 120
7615873	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/05		100	%	80 - 120
7615873	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/05	<20		mg/L	
7615873	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/05	NC		%	25
7615928	EMT	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/04		99	%	80 - 120
7615928	EMT	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/04		102	%	80 - 120
7615928	EMT	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/04	<0.050		mg/L	
7615928	EMT	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/04	NC		%	20
7615935	EMT	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/04		95	%	80 - 120
7615935	EMT	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/04		104	%	80 - 120
7615935	EMT	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/04	<0.050		mg/L	
7615935	EMT	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/04	NC		%	20
7618016	MCN	Matrix Spike [QTA027-07]	Total Alkalinity (Total as CaCO3)	2021/10/05		101	%	80 - 120
7618016	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/05		108	%	80 - 120
7618016	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/05	<5.0		mg/L	
7618016	MCN	RPD [QTA027-07]	Total Alkalinity (Total as CaCO3)	2021/10/05	NC		%	20
7618046	MCN	Matrix Spike [QTA027-07]	Dissolved Chloride (Cl-)	2021/10/05		110	%	80 - 120
7618046	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/05		97	%	80 - 120
7618046	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/05	<1.0		mg/L	
7618046	MCN	RPD [QTA027-07]	Dissolved Chloride (Cl-)	2021/10/05	1.5		%	20
7618048	MCN	Matrix Spike [QTA027-07]	Dissolved Sulphate (SO4)	2021/10/05		121 (3)	%	80 - 120
7618048	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/05		101	%	80 - 120
7618048	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/05	<2.0		mg/L	
7618048	MCN	RPD [QTA027-07]	Dissolved Sulphate (SO4)	2021/10/05	9.2		%	20
7618050	MCN	Matrix Spike [QTA027-07]	Reactive Silica (SiO2)	2021/10/05		102	%	80 - 120
7618050	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/05		95	%	80 - 120
7618050	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/05	<0.50		mg/L	
7618050	MCN	RPD [QTA027-07]	Reactive Silica (SiO2)	2021/10/05	0.52		%	20
7618052	MCN	Spiked Blank	Colour	2021/10/05		97	%	80 - 120
7618052	MCN	Method Blank	Colour	2021/10/05	<5.0		TCU	
7618052	MCN	RPD [QTA027-07]	Colour	2021/10/05	2.9		%	20
7618053	MCN	Matrix Spike [QTA027-07]	Orthophosphate (P)	2021/10/05		102	%	80 - 120
7618053	MCN	Spiked Blank	Orthophosphate (P)	2021/10/05		98	%	80 - 120
7618053	MCN	Method Blank	Orthophosphate (P)	2021/10/05	<0.010		mg/L	
7618053	MCN	RPD [QTA027-07]	Orthophosphate (P)	2021/10/05	NC		%	20
7618056	MCN	Matrix Spike [QTA027-07]	Nitrate + Nitrite (N)	2021/10/05		104	%	80 - 120
7618056	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/05		97	%	80 - 120
7618056	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/05	<0.050		mg/L	
7618056	MCN	RPD [QTA027-07]	Nitrate + Nitrite (N)	2021/10/05	NC		%	20
7618057	MCN	Matrix Spike [QTA027-07]	Nitrite (N)	2021/10/05		94	%	80 - 120
7618057	MCN	Spiked Blank	Nitrite (N)	2021/10/05		107	%	80 - 120
7618057	MCN	Method Blank	Nitrite (N)	2021/10/05	<0.010		mg/L	
7618057	MCN	RPD [QTA027-07]	Nitrite (N)	2021/10/05	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7620865	NGI	Matrix Spike [QTA034-10]	Total Organic Carbon (C)	2021/10/06		NC	%	85 - 115
7620865	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/06		102	%	80 - 120
7620865	NGI	Method Blank	Total Organic Carbon (C)	2021/10/06	<0.50		mg/L	
7620865	NGI	RPD [QTA034-10]	Total Organic Carbon (C)	2021/10/06	0.033		%	15
7620876	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/07		96	%	85 - 115
7620876	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/07		100	%	80 - 120
7620876	NGI	Method Blank	Total Organic Carbon (C)	2021/10/07	<0.50		mg/L	
7620876	NGI	RPD	Total Organic Carbon (C)	2021/10/07	0.76		%	15

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference material and second source recovery were high.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) Elevated spike recovery due to probable sample matrix interference.

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BV Labs Job #: C1R6341
Report Date: 2021/10/07

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1R6341	845837
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#845837-01-01	Mario Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	JS/SH		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	2021/09/13	10:30				X		
2		SW2		10:50				X		
3		SW3		11:15				X		
4		SW4		11:25				X		
5		SW13		14:25				X		
6		SW14						X		NO SAMPLE JS
7		SW19-20		14:10				X		
8		Diffuser		11:05				X		
9		DUP1		AM				X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Justin Obey	21/09/23	18:00						SPRACTR	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 848231-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/19
Report #: R6859340
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T1039
Received: 2021/10/06, 16:56

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	2	N/A	2021/10/13	N/A	SM 23 4500-CO2 D
Carbonate, Bicarbonate and Hydroxide	6	N/A	2021/10/14	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/10/14	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/10/08	2021/10/13	ATL SOP 00041	SM 23 5210B m
Chloride	8	N/A	2021/10/15	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/10/08	2021/10/12	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2021/10/14	ATL SOP 00020	SM 23 2120C m
Conductance - water	2	N/A	2021/10/13	ATL SOP 00004	SM 23 2510B m
Conductance - water	6	N/A	2021/10/14	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	8	2021/10/13	2021/10/14	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	2	N/A	2021/10/12	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	6	N/A	2021/10/15	ATL SOP 00048	Auto Calc
Metals Water Total MS	6	2021/10/13	2021/10/14	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/10/08	2021/10/12	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/10/08	2021/10/08	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	8	N/A	2021/10/15	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/10/15	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2021/10/14	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	1	N/A	2021/10/15	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2021/10/15	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2021/10/14	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2021/10/15	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/10/12	CAM SOP-00444	OMOE E3179 m
pH (2)	2	N/A	2021/10/13	ATL SOP 00003	SM 23 4500-H+ B m
pH (2)	6	N/A	2021/10/14	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2021/10/14	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	8	N/A	2021/10/15	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	8	N/A	2021/10/15	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2021/10/15	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2021/10/14	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	8	N/A	2021/10/15	N/A	Auto Calc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 848231-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/19
Report #: R6859340
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T1039
Received: 2021/10/06, 16:56

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Organic carbon - Total (TOC) (3)	2	N/A	2021/10/13	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (3)	6	N/A	2021/10/14	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	8	N/A	2021/10/15	N/A	Atl. RBCA v3 m
Total Suspended Solids	8	2021/10/13	2021/10/19	ATL SOP 00007	SM 23 2540D m
Turbidity	8	N/A	2021/10/13	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	8	N/A	2021/10/08	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 848231-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/10/19
Report #: R6859340
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T1039
Received: 2021/10/06, 16:56

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
19 Oct 2021 16:52:33

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C1T1039
Report Date: 2021/10/19

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QWG504			QWG504			QWG505		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		848231-01-01			848231-01-01			848231-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	SW1	RDL	QC Batch	SW1 Lab-Dup	RDL	QC Batch	SW2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.250	N/A	7623625				0.250	N/A	7623625
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7623614				<1.0	1.0	7623614
Calculated TDS	mg/L	24	1.0	7623635				24	1.0	7623635
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7623614				<1.0	1.0	7623614
Cation Sum	me/L	0.450	N/A	7623625				0.450	N/A	7623625
Hardness (CaCO3)	mg/L	8.4	1.0	7623619				8.5	1.0	7623619
Ion Balance (% Difference)	%	28.6	N/A	7623622				28.6	N/A	7623622
Langelier Index (@ 20C)	N/A	NC		7623631				NC		7623631
Langelier Index (@ 4C)	N/A	NC		7623634				NC		7623634
Nitrate (N)	mg/L	<0.050	0.050	7623627				<0.050	0.050	7623627
Saturation pH (@ 20C)	N/A	NC		7623631				NC		7623631
Saturation pH (@ 4C)	N/A	NC		7623634				NC		7623634
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7635799				<5.0	5.0	7635799
Carbonaceous BOD	mg/L	<5.0	5.0	7626281				<5.0	5.0	7626281
Total Chemical Oxygen Demand	mg/L	76	20	7626568				78	20	7626568
Dissolved Chloride (Cl-)	mg/L	8.9	1.0	7635801				8.7	1.0	7635801
Colour	TCU	230	25	7635806				230	25	7635806
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7635809				<0.050	0.050	7635809
Nitrite (N)	mg/L	<0.010	0.010	7635810				<0.010	0.010	7635810
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7635690				<0.050	0.050	7635690
Total Organic Carbon (C)	mg/L	26	0.50	7635693				28	0.50	7635693
Orthophosphate (P)	mg/L	<0.010	0.010	7635808				<0.010	0.010	7635808
pH	pH	6.09		7632932				5.97		7632932
Phenols-4AAP	mg/L	<0.0010	0.0010	7630767	<0.0010	0.0010	7630767	<0.0010	0.0010	7630728
Reactive Silica (SiO2)	mg/L	5.9	0.50	7635805				6.0	0.50	7635805
Total Suspended Solids	mg/L	<5.0	5.0	7633601				<2.5	2.5	7633601
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7635804				<2.0	2.0	7635804
Turbidity	NTU	3.6	0.10	7633132				3.7	0.10	7633132
Conductivity	uS/cm	44	1.0	7632931				44	1.0	7632931

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1T1039
Report Date: 2021/10/19

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QWG506			QWG507			QWG508		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		848231-01-01			848231-01-01			848231-01-01		
Sample #		SW3			SW4			SW13		
	UNITS	SW3	RDL	QC Batch	SW4	RDL	QC Batch	SW13	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.260	N/A	7623625	0.260	N/A	7623625	1.87	N/A	7623625
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7623614	<1.0	1.0	7623614	30	1.0	7623614
Calculated TDS	mg/L	24	1.0	7623635	25	1.0	7623635	110	1.0	7623635
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7623614	<1.0	1.0	7623614	<1.0	1.0	7623614
Cation Sum	me/L	0.430	N/A	7623625	0.430	N/A	7623625	1.74	N/A	7623625
Hardness (CaCO3)	mg/L	8.2	1.0	7623619	8.1	1.0	7623619	41	1.0	7623619
Ion Balance (% Difference)	%	24.6	N/A	7623622	24.6	N/A	7623622	3.60	N/A	7623622
Langelier Index (@ 20C)	N/A	NC		7623631	NC		7623631	-1.91		7623631
Langelier Index (@ 4C)	N/A	NC		7623634	NC		7623634	-2.16		7623634
Nitrate (N)	mg/L	<0.050	0.050	7623627	<0.050	0.050	7623627	0.067	0.050	7623627
Saturation pH (@ 20C)	N/A	NC		7623631	NC		7623631	8.77		7623631
Saturation pH (@ 4C)	N/A	NC		7623634	NC		7623634	9.03		7623634
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7635799	<5.0	5.0	7635799	30	5.0	7635799
Carbonaceous BOD	mg/L	<5.0	5.0	7626281	<5.0	5.0	7626281	<5.0	5.0	7626281
Total Chemical Oxygen Demand	mg/L	74	20	7626568	76	20	7626568	45	20	7626568
Dissolved Chloride (Cl-)	mg/L	9.1	1.0	7635801	9.2	1.0	7635801	39	1.0	7635801
Colour	TCU	250	25	7635806	240	25	7635806	100	25	7635806
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7635809	<0.050	0.050	7635809	0.067	0.050	7635809
Nitrite (N)	mg/L	<0.010	0.010	7635810	<0.010	0.010	7635810	<0.010	0.010	7635810
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7635690	<0.050	0.050	7635690	0.062	0.050	7635690
Total Organic Carbon (C)	mg/L	26	0.50	7632958	27	0.50	7632958	15	0.50	7635693
Orthophosphate (P)	mg/L	<0.010	0.010	7635808	<0.010	0.010	7635808	0.011	0.010	7635808
pH	pH	5.98		7635658	5.69		7635658	6.86		7635658
Phenols-4AAP	mg/L	<0.0010	0.0010	7630767	<0.0010	0.0010	7630728	<0.0010	0.0010	7630426
Reactive Silica (SiO2)	mg/L	6.0	0.50	7635805	6.0	0.50	7635805	7.0	0.50	7635805
Total Suspended Solids	mg/L	<2.5	2.5	7633601	2.0	2.0	7633601	16	10	7633601
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7635804	<2.0	2.0	7635804	6.7	2.0	7635804
Turbidity	NTU	3.3	0.10	7633132	2.9	0.10	7633132	3.9	0.10	7633132
Conductivity	uS/cm	44	1.0	7635656	43	1.0	7635656	190	1.0	7635656

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C1T1039
Report Date: 2021/10/19

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QWG509			QWG509			QWG510		
Sampling Date		2021/10/06			2021/10/06			2021/10/06		
COC Number		848231-01-01			848231-01-01			848231-01-01		
Sample #		SW19-20			SW19-20			DIFFUSER		
	UNITS	SW19-20	RDL	QC Batch	SW19-20 Lab-Dup	RDL	QC Batch	Diffuser	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	8.54	N/A	7623625				0.250	N/A	7623625
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	280	1.0	7623614				<1.0	1.0	7623614
Calculated TDS	mg/L	500	1.0	7623635				24	1.0	7623635
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.7	1.0	7623614				<1.0	1.0	7623614
Cation Sum	me/L	8.88	N/A	7623625				0.430	N/A	7623625
Hardness (CaCO3)	mg/L	380	1.0	7623619				8.2	1.0	7623619
Ion Balance (% Difference)	%	1.95	N/A	7623622				26.5	N/A	7623622
Langelier Index (@ 20C)	N/A	0.887		7623631				NC		7623631
Langelier Index (@ 4C)	N/A	0.639		7623634				NC		7623634
Nitrate (N)	mg/L	0.12	0.050	7623627				<0.050	0.050	7623627
Saturation pH (@ 20C)	N/A	6.92		7623631				NC		7623631
Saturation pH (@ 4C)	N/A	7.17		7623634				NC		7623634
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	280	25	7635799				<5.0	5.0	7635799
Carbonaceous BOD	mg/L	<5.0	5.0	7626281				<5.0	5.0	7626281
Total Chemical Oxygen Demand	mg/L	43	20	7626568				76	20	7626568
Dissolved Chloride (Cl-)	mg/L	18	1.0	7635801				9.0	1.0	7635801
Colour	TCU	20	5.0	7635806				250	25	7635806
Nitrate + Nitrite (N)	mg/L	0.12	0.050	7635809				<0.050	0.050	7635809
Nitrite (N)	mg/L	<0.010	0.010	7635810				<0.010	0.010	7635810
Nitrogen (Ammonia Nitrogen)	mg/L	0.18	0.050	7635690				<0.050	0.050	7635694
Total Organic Carbon (C)	mg/L	13	0.50	7632938				26	0.50	7632942
Orthophosphate (P)	mg/L	<0.010	0.010	7635808				<0.010	0.010	7635808
pH	pH	7.81		7635658				5.99		7635658
Phenols-4AAP	mg/L	<0.0010	0.0010	7630693	<0.0010	0.0010	7630693	<0.0010	0.0010	7630426
Reactive Silica (SiO2)	mg/L	13	0.50	7635805				6.0	0.50	7635805
Total Suspended Solids	mg/L	1000	17	7633601				7.0	2.5	7633601
Dissolved Sulphate (SO4)	mg/L	110	10	7635804				<2.0	2.0	7635804
Turbidity	NTU	63	0.10	7633132				3.1	0.10	7633132
Conductivity	uS/cm	790	1.0	7635656				44	1.0	7635656

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1T1039
Report Date: 2021/10/19

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QWG510			QWG511		
Sampling Date		2021/10/06			2021/10/06		
COC Number		848231-01-01			848231-01-01		
Sample #		DIFFUSER			DUP1		
	UNITS	Diffuser Lab-Dup	RDL	QC Batch	DUP1	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L				0.250	N/A	7623625
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7623614
Calculated TDS	mg/L				23	1.0	7623635
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7623614
Cation Sum	me/L				0.400	N/A	7623625
Hardness (CaCO3)	mg/L				7.2	1.0	7623619
Ion Balance (% Difference)	%				23.1	N/A	7623622
Langelier Index (@ 20C)	N/A				NC		7623631
Langelier Index (@ 4C)	N/A				NC		7623634
Nitrate (N)	mg/L				<0.050	0.050	7623627
Saturation pH (@ 20C)	N/A				NC		7623631
Saturation pH (@ 4C)	N/A				NC		7623634
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L				<5.0	5.0	7635799
Carbonaceous BOD	mg/L				<5.0	5.0	7626281
Total Chemical Oxygen Demand	mg/L				74	20	7626568
Dissolved Chloride (Cl-)	mg/L				8.9	1.0	7635801
Colour	TCU				230	25	7635806
Nitrate + Nitrite (N)	mg/L				<0.050	0.050	7635809
Nitrite (N)	mg/L				<0.010	0.010	7635810
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7635694
Total Organic Carbon (C)	mg/L	26	0.50	7632942	26	0.50	7632958
Orthophosphate (P)	mg/L				<0.010	0.010	7635808
pH	pH				5.76		7635658
Phenols-4AAP	mg/L				<0.0010	0.0010	7630728
Reactive Silica (SiO2)	mg/L				5.8	0.50	7635805
Total Suspended Solids	mg/L				8.0	5.0	7633601
Dissolved Sulphate (SO4)	mg/L				<2.0	2.0	7635804
Turbidity	NTU				4.2	0.10	7633132
Conductivity	uS/cm				43	1.0	7635656

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
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Bureau Veritas Job #: C1T1039
Report Date: 2021/10/19

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		QWG504	QWG505	QWG506	QWG507	QWG508	QWG509		
Sampling Date		2021/10/06	2021/10/06	2021/10/06	2021/10/06	2021/10/06	2021/10/06		
COC Number		848231-01-01	848231-01-01	848231-01-01	848231-01-01	848231-01-01	848231-01-01		
Sample #		SW1	SW2	SW3	SW4	SW13	SW19-20		
	UNITS	**SW1**	**SW2**	**SW3**	**SW4**	**SW13**	**SW19-20**	**RDL**	**QC Batch**
Metals									
Total Aluminum (Al)	ug/L	800	850	770	810	310	570	5.0	7633242
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7633242
Total Arsenic (As)	ug/L	1.0	1.1	<1.0	1.0	1.3	2.2	1.0	7633242
Total Barium (Ba)	ug/L	6.0	6.0	5.6	5.7	15	34	1.0	7633242
Total Beryllium (Be)	ug/L	<0.10	0.12	0.11	<0.10	<0.10	<0.10	0.10	7633242
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7633242
Total Boron (B)	ug/L	<50	<50	<50	<50	82	490	50	7633242
Total Cadmium (Cd)	ug/L	0.023	0.021	0.015	0.020	0.027	0.018	0.010	7633242
Total Calcium (Ca)	ug/L	2200	2200	2200	2100	12000	130000	100	7633242
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7633242
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	1.3	3.4	0.40	7633242
Total Copper (Cu)	ug/L	<0.50	<0.50	<0.50	<0.50	3.2	2.0	0.50	7633242
Total Iron (Fe)	ug/L	970	1000	930	960	1500	2500	50	7633242
Total Lead (Pb)	ug/L	1.1	1.1	1.0	1.1	4.3	0.99	0.50	7633242
Total Magnesium (Mg)	ug/L	710	730	690	700	2400	16000	100	7633242
Total Manganese (Mn)	ug/L	39	41	39	38	250	5100	2.0	7633242
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	8.8	2.0	7633242
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.7	3.6	2.0	7633242
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7633242
Total Potassium (K)	ug/L	320	320	300	300	1000	11000	100	7633242
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7633242
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7633242
Total Sodium (Na)	ug/L	5400	5400	5000	5300	19000	21000	100	7633242
Total Strontium (Sr)	ug/L	11	11	11	11	41	440	2.0	7633242
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7633242
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7633242
Total Titanium (Ti)	ug/L	9.9	11	9.0	9.5	4.3	25	2.0	7633242
Total Uranium (U)	ug/L	0.35	0.34	0.37	0.35	0.51	28	0.10	7633242
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7633242
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	9.9	5.3	5.0	7633242

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		QWG510	QWG511		
Sampling Date		2021/10/06	2021/10/06		
COC Number		848231-01-01	848231-01-01		
Sample #		DIFFUSER	DUP1		
	UNITS	Diffuser	DUP1	RDL	QC Batch
Metals					
Total Aluminum (Al)	ug/L	850	770	5.0	7626320
Total Antimony (Sb)	ug/L	<1.0	<1.0	1.0	7626320
Total Arsenic (As)	ug/L	1.1	<1.0	1.0	7626320
Total Barium (Ba)	ug/L	6.2	5.8	1.0	7626320
Total Beryllium (Be)	ug/L	0.11	0.11	0.10	7626320
Total Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	7626320
Total Boron (B)	ug/L	<50	<50	50	7626320
Total Cadmium (Cd)	ug/L	0.016	0.022	0.010	7626320
Total Calcium (Ca)	ug/L	2100	1900	100	7626320
Total Chromium (Cr)	ug/L	<1.0	<1.0	1.0	7626320
Total Cobalt (Co)	ug/L	<0.40	<0.40	0.40	7626320
Total Copper (Cu)	ug/L	0.51	<0.50	0.50	7626320
Total Iron (Fe)	ug/L	960	920	50	7626320
Total Lead (Pb)	ug/L	1.2	1.1	0.50	7626320
Total Magnesium (Mg)	ug/L	680	620	100	7626320
Total Manganese (Mn)	ug/L	40	36	2.0	7626320
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	2.0	7626320
Total Nickel (Ni)	ug/L	<2.0	<2.0	2.0	7626320
Total Phosphorus (P)	ug/L	<100	<100	100	7626320
Total Potassium (K)	ug/L	380	350	100	7626320
Total Selenium (Se)	ug/L	<0.50	<0.50	0.50	7626320
Total Silver (Ag)	ug/L	<0.10	<0.10	0.10	7626320
Total Sodium (Na)	ug/L	5000	4900	100	7626320
Total Strontium (Sr)	ug/L	11	9.9	2.0	7626320
Total Thallium (Tl)	ug/L	<0.10	<0.10	0.10	7626320
Total Tin (Sn)	ug/L	<2.0	<2.0	2.0	7626320
Total Titanium (Ti)	ug/L	11	7.3	2.0	7626320
Total Uranium (U)	ug/L	0.37	0.31	0.10	7626320
Total Vanadium (V)	ug/L	<2.0	<2.0	2.0	7626320
Total Zinc (Zn)	ug/L	<5.0	<5.0	5.0	7626320

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		QWG504	QWG505	QWG506			QWG507		
Sampling Date		2021/10/06	2021/10/06	2021/10/06			2021/10/06		
COC Number		848231-01-01	848231-01-01	848231-01-01			848231-01-01		
Sample #		SW1	SW2	SW3			SW4		
	UNITS	**SW1**	**SW2**	**SW3**	**RDL**	**QC Batch**	**SW4**	**RDL**	**QC Batch**
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7626214	<0.0010	0.0010	7626214
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7626214	<0.0010	0.0010	7626214
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	7626214	<0.0010	0.0010	7626214
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	0.0020	7626214	<0.0020	0.0020	7626214
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	0.090	7626214	<0.090	0.090	7626214
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	7633626	<0.057	0.057	7636372
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	0.050	7633626	<0.057	0.057	7636372
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	0.090	7633626	<0.10	0.10	7636372
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	0.090	7623598	<0.10	0.10	7623598
Reached Baseline at C32	mg/L	NA	NA	NA	N/A	7633626	NA	N/A	7636372
Hydrocarbon Resemblance	mg/L	NA	NA	NA	N/A	7633626	NA	N/A	7636372
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	88	90	89		7633626	106		7636372
n-Dotriacontane - Extractable	%	91	84	108		7633626	88 (1)		7636372
Isobutylbenzene - Volatile	%	107	106	107		7626214	106		7626214

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		QWG508	QWG509	QWG510	QWG511		
Sampling Date		2021/10/06	2021/10/06	2021/10/06	2021/10/06		
COC Number		848231-01-01	848231-01-01	848231-01-01	848231-01-01		
Sample #		SW13	SW19-20	DIFFUSER	DUP1		
	UNITS	**SW13**	**SW19-20**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626214
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626214
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7626214
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7626214
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7626214
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	7633626
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	7633626
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7633626
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7623598
Reached Baseline at C32	mg/L	NA	NA	NA	NA	N/A	7633626
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	N/A	7633626
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	92	96	94	88		7633626
n-Dotriacontane - Extractable	%	90	96	90	90		7633626
Isobutylbenzene - Volatile	%	107	108	106	109		7626214

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	13.0°C
Package 2	15.3°C
Package 3	12.7°C
Package 4	15.0°C
Package 5	14.3°C

Sample QWG504 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QWG505 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QWG506 [SW3] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QWG507 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QWG508 [SW13] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QWG510 [Diffuser] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QWG511 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7626214	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/10/08		110	%	70 - 130
			Benzene	2021/10/08		98	%	70 - 130
			Toluene	2021/10/08		102	%	70 - 130
			Ethylbenzene	2021/10/08		103	%	70 - 130
			Total Xylenes	2021/10/08		104	%	70 - 130
7626214	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/08		111	%	70 - 130
			Benzene	2021/10/08		106	%	70 - 130
			Toluene	2021/10/08		104	%	70 - 130
			Ethylbenzene	2021/10/08		105	%	70 - 130
			Total Xylenes	2021/10/08		106	%	70 - 130
7626214	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/08		110	%	70 - 130
			Benzene	2021/10/08	<0.0010		mg/L	
			Toluene	2021/10/08	<0.0010		mg/L	
			Ethylbenzene	2021/10/08	<0.0010		mg/L	
			Total Xylenes	2021/10/08	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/08	<0.090		mg/L	
7626214	THL	RPD	Benzene	2021/10/08	NC		%	40
			Toluene	2021/10/08	NC		%	40
			Ethylbenzene	2021/10/08	NC		%	40
			Total Xylenes	2021/10/08	NC		%	40
			C6 - C10 (less BTEX)	2021/10/08	NC		%	40
7626281	KLE	QC Standard	Carbonaceous BOD	2021/10/13		131 (1)	%	80 - 120
7626281	KLE	Spiked Blank	Carbonaceous BOD	2021/10/13		116	%	80 - 120
7626281	KLE	Method Blank	Carbonaceous BOD	2021/10/13	<2.0		mg/L	
7626281	KLE	RPD	Carbonaceous BOD	2021/10/13	NC		%	25
7626320	BAN	Matrix Spike	Total Aluminum (Al)	2021/10/08		103	%	80 - 120
			Total Antimony (Sb)	2021/10/08		110	%	80 - 120
			Total Arsenic (As)	2021/10/08		97	%	80 - 120
			Total Barium (Ba)	2021/10/08		101	%	80 - 120
			Total Beryllium (Be)	2021/10/08		101	%	80 - 120
			Total Bismuth (Bi)	2021/10/08		102	%	80 - 120
			Total Boron (B)	2021/10/08		99	%	80 - 120
			Total Cadmium (Cd)	2021/10/08		100	%	80 - 120
			Total Calcium (Ca)	2021/10/08		106	%	80 - 120
			Total Chromium (Cr)	2021/10/08		99	%	80 - 120
			Total Cobalt (Co)	2021/10/08		102	%	80 - 120
			Total Copper (Cu)	2021/10/08		101	%	80 - 120
			Total Iron (Fe)	2021/10/08		101	%	80 - 120
			Total Lead (Pb)	2021/10/08		102	%	80 - 120
			Total Magnesium (Mg)	2021/10/08		101	%	80 - 120
			Total Manganese (Mn)	2021/10/08		102	%	80 - 120
			Total Molybdenum (Mo)	2021/10/08		103	%	80 - 120
			Total Nickel (Ni)	2021/10/08		103	%	80 - 120
			Total Phosphorus (P)	2021/10/08		105	%	80 - 120
			Total Potassium (K)	2021/10/08		111	%	80 - 120
			Total Selenium (Se)	2021/10/08		100	%	80 - 120
			Total Silver (Ag)	2021/10/08		100	%	80 - 120
			Total Sodium (Na)	2021/10/08		97	%	80 - 120
			Total Strontium (Sr)	2021/10/08		102	%	80 - 120
			Total Thallium (Tl)	2021/10/08		102	%	80 - 120
			Total Tin (Sn)	2021/10/08		107	%	80 - 120
			Total Titanium (Ti)	2021/10/08		103	%	80 - 120
			Total Uranium (U)	2021/10/08		108	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Vanadium (V)	2021/10/08		101	%	80 - 120
			Total Zinc (Zn)	2021/10/08		101	%	80 - 120
7626320	BAN	Spiked Blank	Total Aluminum (Al)	2021/10/08		101	%	80 - 120
			Total Antimony (Sb)	2021/10/08		110	%	80 - 120
			Total Arsenic (As)	2021/10/08		96	%	80 - 120
			Total Barium (Ba)	2021/10/08		100	%	80 - 120
			Total Beryllium (Be)	2021/10/08		100	%	80 - 120
			Total Bismuth (Bi)	2021/10/08		103	%	80 - 120
			Total Boron (B)	2021/10/08		97	%	80 - 120
			Total Cadmium (Cd)	2021/10/08		99	%	80 - 120
			Total Calcium (Ca)	2021/10/08		106	%	80 - 120
			Total Chromium (Cr)	2021/10/08		100	%	80 - 120
			Total Cobalt (Co)	2021/10/08		102	%	80 - 120
			Total Copper (Cu)	2021/10/08		101	%	80 - 120
			Total Iron (Fe)	2021/10/08		103	%	80 - 120
			Total Lead (Pb)	2021/10/08		103	%	80 - 120
			Total Magnesium (Mg)	2021/10/08		101	%	80 - 120
			Total Manganese (Mn)	2021/10/08		101	%	80 - 120
			Total Molybdenum (Mo)	2021/10/08		104	%	80 - 120
			Total Nickel (Ni)	2021/10/08		101	%	80 - 120
			Total Phosphorus (P)	2021/10/08		104	%	80 - 120
			Total Potassium (K)	2021/10/08		107	%	80 - 120
			Total Selenium (Se)	2021/10/08		100	%	80 - 120
			Total Silver (Ag)	2021/10/08		100	%	80 - 120
			Total Sodium (Na)	2021/10/08		98	%	80 - 120
			Total Strontium (Sr)	2021/10/08		105	%	80 - 120
			Total Thallium (Tl)	2021/10/08		103	%	80 - 120
			Total Tin (Sn)	2021/10/08		101	%	80 - 120
			Total Titanium (Ti)	2021/10/08		102	%	80 - 120
			Total Uranium (U)	2021/10/08		107	%	80 - 120
			Total Vanadium (V)	2021/10/08		101	%	80 - 120
			Total Zinc (Zn)	2021/10/08		101	%	80 - 120
7626320	BAN	Method Blank	Total Aluminum (Al)	2021/10/08	<5.0		ug/L	
			Total Antimony (Sb)	2021/10/08	<1.0		ug/L	
			Total Arsenic (As)	2021/10/08	<1.0		ug/L	
			Total Barium (Ba)	2021/10/08	<1.0		ug/L	
			Total Beryllium (Be)	2021/10/08	<0.10		ug/L	
			Total Bismuth (Bi)	2021/10/08	<2.0		ug/L	
			Total Boron (B)	2021/10/08	<50		ug/L	
			Total Cadmium (Cd)	2021/10/08	<0.010		ug/L	
			Total Calcium (Ca)	2021/10/08	<100		ug/L	
			Total Chromium (Cr)	2021/10/08	<1.0		ug/L	
			Total Cobalt (Co)	2021/10/08	<0.40		ug/L	
			Total Copper (Cu)	2021/10/08	<0.50		ug/L	
			Total Iron (Fe)	2021/10/08	<50		ug/L	
			Total Lead (Pb)	2021/10/08	<0.50		ug/L	
			Total Magnesium (Mg)	2021/10/08	<100		ug/L	
			Total Manganese (Mn)	2021/10/08	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/10/08	<2.0		ug/L	
			Total Nickel (Ni)	2021/10/08	<2.0		ug/L	
			Total Phosphorus (P)	2021/10/08	<100		ug/L	
			Total Potassium (K)	2021/10/08	<100		ug/L	
			Total Selenium (Se)	2021/10/08	<0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Silver (Ag)	2021/10/08	<0.10		ug/L	
			Total Sodium (Na)	2021/10/08	<100		ug/L	
			Total Strontium (Sr)	2021/10/08	<2.0		ug/L	
			Total Thallium (Tl)	2021/10/08	<0.10		ug/L	
			Total Tin (Sn)	2021/10/08	<2.0		ug/L	
			Total Titanium (Ti)	2021/10/08	<2.0		ug/L	
			Total Uranium (U)	2021/10/08	<0.10		ug/L	
			Total Vanadium (V)	2021/10/08	<2.0		ug/L	
			Total Zinc (Zn)	2021/10/08	<5.0		ug/L	
7626320	BAN	RPD	Total Aluminum (Al)	2021/10/08	NC		%	20
			Total Antimony (Sb)	2021/10/08	NC		%	20
			Total Arsenic (As)	2021/10/08	NC		%	20
			Total Barium (Ba)	2021/10/08	8.7		%	20
			Total Beryllium (Be)	2021/10/08	NC		%	20
			Total Bismuth (Bi)	2021/10/08	NC		%	20
			Total Boron (B)	2021/10/08	NC		%	20
			Total Cadmium (Cd)	2021/10/08	NC		%	20
			Total Calcium (Ca)	2021/10/08	NC		%	20
			Total Chromium (Cr)	2021/10/08	NC		%	20
			Total Cobalt (Co)	2021/10/08	NC		%	20
			Total Copper (Cu)	2021/10/08	NC		%	20
			Total Iron (Fe)	2021/10/08	NC		%	20
			Total Lead (Pb)	2021/10/08	NC		%	20
			Total Magnesium (Mg)	2021/10/08	NC		%	20
			Total Manganese (Mn)	2021/10/08	NC		%	20
			Total Molybdenum (Mo)	2021/10/08	NC		%	20
			Total Nickel (Ni)	2021/10/08	NC		%	20
			Total Phosphorus (P)	2021/10/08	NC		%	20
			Total Potassium (K)	2021/10/08	NC		%	20
			Total Selenium (Se)	2021/10/08	NC		%	20
			Total Silver (Ag)	2021/10/08	NC		%	20
			Total Sodium (Na)	2021/10/08	0.45		%	20
			Total Strontium (Sr)	2021/10/08	NC		%	20
			Total Thallium (Tl)	2021/10/08	NC		%	20
			Total Tin (Sn)	2021/10/08	NC		%	20
			Total Titanium (Ti)	2021/10/08	NC		%	20
			Total Uranium (U)	2021/10/08	NC		%	20
			Total Vanadium (V)	2021/10/08	NC		%	20
			Total Zinc (Zn)	2021/10/08	NC		%	20
7626568	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/12		103	%	80 - 120
7626568	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/12		98	%	80 - 120
7626568	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/12		100	%	80 - 120
7626568	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/12	<20		mg/L	
7626568	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/12	NC		%	25
7630426	DRM	Matrix Spike	Phenols-4AAP	2021/10/12		97	%	80 - 120
7630426	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		100	%	80 - 120
7630426	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630426	DRM	RPD	Phenols-4AAP	2021/10/12	NC		%	20
7630693	DRM	Matrix Spike [QWG509-03]	Phenols-4AAP	2021/10/12		100	%	80 - 120
7630693	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		101	%	80 - 120
7630693	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630693	DRM	RPD [QWG509-03]	Phenols-4AAP	2021/10/12	NC		%	20

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7630728	DRM	Matrix Spike	Phenols-4AAP	2021/10/12		97	%	80 - 120
7630728	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		100	%	80 - 120
7630728	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630728	DRM	RPD	Phenols-4AAP	2021/10/12	NC		%	20
7630767	DRM	Matrix Spike [QWG504-03]	Phenols-4AAP	2021/10/12		97	%	80 - 120
7630767	DRM	Spiked Blank	Phenols-4AAP	2021/10/12		98	%	80 - 120
7630767	DRM	Method Blank	Phenols-4AAP	2021/10/12	<0.0010		mg/L	
7630767	DRM	RPD [QWG504-03]	Phenols-4AAP	2021/10/12	NC		%	20
7632931	SHW	Spiked Blank	Conductivity	2021/10/13		101	%	80 - 120
7632931	SHW	Method Blank	Conductivity	2021/10/13	<1.0		uS/cm	
7632931	SHW	RPD	Conductivity	2021/10/13	0.68		%	10
7632932	SHW	Spiked Blank	pH	2021/10/13		100	%	97 - 103
7632932	SHW	RPD	pH	2021/10/13	1.0		%	N/A
7632938	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/13		93	%	85 - 115
7632938	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/13		96	%	80 - 120
7632938	NGI	Method Blank	Total Organic Carbon (C)	2021/10/13	<0.50		mg/L	
7632938	NGI	RPD	Total Organic Carbon (C)	2021/10/13	3.4		%	15
7632942	NGI	Matrix Spike [QWG510-10]	Total Organic Carbon (C)	2021/10/13		NC	%	85 - 115
7632942	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/13		96	%	80 - 120
7632942	NGI	Method Blank	Total Organic Carbon (C)	2021/10/13	<0.50		mg/L	
7632942	NGI	RPD [QWG510-10]	Total Organic Carbon (C)	2021/10/13	1.1		%	15
7632958	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/14		95	%	85 - 115
7632958	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		99	%	80 - 120
7632958	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7632958	NGI	RPD	Total Organic Carbon (C)	2021/10/14	NC (2)		%	15
7633132	SHW	QC Standard	Turbidity	2021/10/13		102	%	80 - 120
7633132	SHW	Spiked Blank	Turbidity	2021/10/13		101	%	80 - 120
7633132	SHW	Method Blank	Turbidity	2021/10/13	<0.10		NTU	
7633132	SHW	RPD	Turbidity	2021/10/13	2.8		%	20
7633242	MLB	Matrix Spike	Total Aluminum (Al)	2021/10/14		106	%	80 - 120
			Total Antimony (Sb)	2021/10/14		100	%	80 - 120
			Total Arsenic (As)	2021/10/14		95	%	80 - 120
			Total Barium (Ba)	2021/10/14		97	%	80 - 120
			Total Beryllium (Be)	2021/10/14		101	%	80 - 120
			Total Bismuth (Bi)	2021/10/14		98	%	80 - 120
			Total Boron (B)	2021/10/14		101	%	80 - 120
			Total Cadmium (Cd)	2021/10/14		99	%	80 - 120
			Total Calcium (Ca)	2021/10/14		105	%	80 - 120
			Total Chromium (Cr)	2021/10/14		100	%	80 - 120
			Total Cobalt (Co)	2021/10/14		101	%	80 - 120
			Total Copper (Cu)	2021/10/14		NC	%	80 - 120
			Total Iron (Fe)	2021/10/14		107	%	80 - 120
			Total Lead (Pb)	2021/10/14		97	%	80 - 120
			Total Magnesium (Mg)	2021/10/14		104	%	80 - 120
			Total Manganese (Mn)	2021/10/14		101	%	80 - 120
			Total Molybdenum (Mo)	2021/10/14		104	%	80 - 120
			Total Nickel (Ni)	2021/10/14		103	%	80 - 120
			Total Phosphorus (P)	2021/10/14		104	%	80 - 120
			Total Potassium (K)	2021/10/14		106	%	80 - 120
			Total Selenium (Se)	2021/10/14		103	%	80 - 120
			Total Silver (Ag)	2021/10/14		100	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Sodium (Na)	2021/10/14		105	%	80 - 120
			Total Strontium (Sr)	2021/10/14		98	%	80 - 120
			Total Thallium (Tl)	2021/10/14		100	%	80 - 120
			Total Tin (Sn)	2021/10/14		101	%	80 - 120
			Total Titanium (Ti)	2021/10/14		103	%	80 - 120
			Total Uranium (U)	2021/10/14		103	%	80 - 120
			Total Vanadium (V)	2021/10/14		101	%	80 - 120
			Total Zinc (Zn)	2021/10/14		104	%	80 - 120
7633242	MLB	Spiked Blank	Total Aluminum (Al)	2021/10/14		99	%	80 - 120
			Total Antimony (Sb)	2021/10/14		97	%	80 - 120
			Total Arsenic (As)	2021/10/14		92	%	80 - 120
			Total Barium (Ba)	2021/10/14		94	%	80 - 120
			Total Beryllium (Be)	2021/10/14		99	%	80 - 120
			Total Bismuth (Bi)	2021/10/14		96	%	80 - 120
			Total Boron (B)	2021/10/14		99	%	80 - 120
			Total Cadmium (Cd)	2021/10/14		96	%	80 - 120
			Total Calcium (Ca)	2021/10/14		103	%	80 - 120
			Total Chromium (Cr)	2021/10/14		96	%	80 - 120
			Total Cobalt (Co)	2021/10/14		97	%	80 - 120
			Total Copper (Cu)	2021/10/14		99	%	80 - 120
			Total Iron (Fe)	2021/10/14		103	%	80 - 120
			Total Lead (Pb)	2021/10/14		96	%	80 - 120
			Total Magnesium (Mg)	2021/10/14		103	%	80 - 120
			Total Manganese (Mn)	2021/10/14		99	%	80 - 120
			Total Molybdenum (Mo)	2021/10/14		100	%	80 - 120
			Total Nickel (Ni)	2021/10/14		98	%	80 - 120
			Total Phosphorus (P)	2021/10/14		101	%	80 - 120
			Total Potassium (K)	2021/10/14		101	%	80 - 120
			Total Selenium (Se)	2021/10/14		101	%	80 - 120
			Total Silver (Ag)	2021/10/14		97	%	80 - 120
			Total Sodium (Na)	2021/10/14		102	%	80 - 120
			Total Strontium (Sr)	2021/10/14		95	%	80 - 120
			Total Thallium (Tl)	2021/10/14		98	%	80 - 120
			Total Tin (Sn)	2021/10/14		97	%	80 - 120
			Total Titanium (Ti)	2021/10/14		99	%	80 - 120
			Total Uranium (U)	2021/10/14		101	%	80 - 120
			Total Vanadium (V)	2021/10/14		98	%	80 - 120
			Total Zinc (Zn)	2021/10/14		99	%	80 - 120
7633242	MLB	Method Blank	Total Aluminum (Al)	2021/10/14	<5.0		ug/L	
			Total Antimony (Sb)	2021/10/14	<1.0		ug/L	
			Total Arsenic (As)	2021/10/14	<1.0		ug/L	
			Total Barium (Ba)	2021/10/14	<1.0		ug/L	
			Total Beryllium (Be)	2021/10/14	<0.10		ug/L	
			Total Bismuth (Bi)	2021/10/14	<2.0		ug/L	
			Total Boron (B)	2021/10/14	<50		ug/L	
			Total Cadmium (Cd)	2021/10/14	<0.010		ug/L	
			Total Calcium (Ca)	2021/10/14	<100		ug/L	
			Total Chromium (Cr)	2021/10/14	<1.0		ug/L	
			Total Cobalt (Co)	2021/10/14	<0.40		ug/L	
			Total Copper (Cu)	2021/10/14	<0.50		ug/L	
			Total Iron (Fe)	2021/10/14	<50		ug/L	
			Total Lead (Pb)	2021/10/14	<0.50		ug/L	
			Total Magnesium (Mg)	2021/10/14	<100		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Manganese (Mn)	2021/10/14	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/10/14	<2.0		ug/L	
			Total Nickel (Ni)	2021/10/14	<2.0		ug/L	
			Total Phosphorus (P)	2021/10/14	<100		ug/L	
			Total Potassium (K)	2021/10/14	<100		ug/L	
			Total Selenium (Se)	2021/10/14	<0.50		ug/L	
			Total Silver (Ag)	2021/10/14	<0.10		ug/L	
			Total Sodium (Na)	2021/10/14	<100		ug/L	
			Total Strontium (Sr)	2021/10/14	<2.0		ug/L	
			Total Thallium (Tl)	2021/10/14	<0.10		ug/L	
			Total Tin (Sn)	2021/10/14	<2.0		ug/L	
			Total Titanium (Ti)	2021/10/14	<2.0		ug/L	
			Total Uranium (U)	2021/10/14	<0.10		ug/L	
			Total Vanadium (V)	2021/10/14	<2.0		ug/L	
			Total Zinc (Zn)	2021/10/14	<5.0		ug/L	
7633242	MLB	RPD	Total Aluminum (Al)	2021/10/14	5.6		%	20
			Total Antimony (Sb)	2021/10/14	NC		%	20
			Total Arsenic (As)	2021/10/14	NC		%	20
			Total Barium (Ba)	2021/10/14	NC		%	20
			Total Beryllium (Be)	2021/10/14	NC		%	20
			Total Bismuth (Bi)	2021/10/14	NC		%	20
			Total Boron (B)	2021/10/14	NC		%	20
			Total Cadmium (Cd)	2021/10/14	2.3		%	20
			Total Calcium (Ca)	2021/10/14	2.4		%	20
			Total Chromium (Cr)	2021/10/14	NC		%	20
			Total Cobalt (Co)	2021/10/14	NC		%	20
			Total Copper (Cu)	2021/10/14	2.7		%	20
			Total Iron (Fe)	2021/10/14	NC		%	20
			Total Lead (Pb)	2021/10/14	NC		%	20
			Total Magnesium (Mg)	2021/10/14	NC		%	20
			Total Manganese (Mn)	2021/10/14	5.7		%	20
			Total Molybdenum (Mo)	2021/10/14	NC		%	20
			Total Nickel (Ni)	2021/10/14	7.0		%	20
			Total Phosphorus (P)	2021/10/14	NC		%	20
			Total Potassium (K)	2021/10/14	9.6		%	20
			Total Selenium (Se)	2021/10/14	NC		%	20
			Total Silver (Ag)	2021/10/14	NC		%	20
			Total Sodium (Na)	2021/10/14	2.0		%	20
			Total Strontium (Sr)	2021/10/14	NC		%	20
			Total Thallium (Tl)	2021/10/14	NC		%	20
			Total Tin (Sn)	2021/10/14	NC		%	20
			Total Titanium (Ti)	2021/10/14	NC		%	20
			Total Uranium (U)	2021/10/14	NC		%	20
			Total Vanadium (V)	2021/10/14	NC		%	20
			Total Zinc (Zn)	2021/10/14	3.3		%	20
7633601	ZZH	QC Standard	Total Suspended Solids	2021/10/19		99	%	80 - 120
7633601	ZZH	Method Blank	Total Suspended Solids	2021/10/19	<1.0		mg/L	
7633601	ZZH	RPD	Total Suspended Solids	2021/10/19	0		%	20
7633626	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/10/14		81	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		82	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14		90	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/14		89	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/14		93	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7633626	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/10/14		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		92	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14		104	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/14		100	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/14		105	%	70 - 130
7633626	MSK	Method Blank	Isobutylbenzene - Extractable	2021/10/14		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/14	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/14	<0.090		mg/L	
7633626	MSK	RPD	>C10-C16 Hydrocarbons	2021/10/14	12		%	40
			>C16-C21 Hydrocarbons	2021/10/14	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/14	NC		%	40
7635656	SHW	Spiked Blank	Conductivity	2021/10/14		102	%	80 - 120
7635656	SHW	Method Blank	Conductivity	2021/10/14	<1.0		uS/cm	
7635656	SHW	RPD	Conductivity	2021/10/14	0.13		%	10
7635658	SHW	Spiked Blank	pH	2021/10/14		100	%	97 - 103
7635658	SHW	RPD	pH	2021/10/14	0.59		%	N/A
7635690	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/14		100	%	80 - 120
7635690	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/14		100	%	80 - 120
7635690	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/14	<0.050		mg/L	
7635690	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/14	14		%	20
7635693	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/14		94	%	85 - 115
7635693	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/14		98	%	80 - 120
7635693	NGI	Method Blank	Total Organic Carbon (C)	2021/10/14	<0.50		mg/L	
7635693	NGI	RPD	Total Organic Carbon (C)	2021/10/14	6.0		%	15
7635694	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/14		100	%	80 - 120
7635694	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/15		100	%	80 - 120
7635694	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/15	<0.050		mg/L	
7635694	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/14	1.1		%	20
7635799	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/10/14		NC	%	80 - 120
7635799	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/14		103	%	80 - 120
7635799	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/14	<5.0		mg/L	
7635799	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/10/14	2.1		%	20
7635801	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/15		NC	%	80 - 120
7635801	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/15		94	%	80 - 120
7635801	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/15	<1.0		mg/L	
7635801	MCN	RPD	Dissolved Chloride (Cl-)	2021/10/15	0.87		%	20
7635804	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/10/14		94	%	80 - 120
7635804	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/14		95	%	80 - 120
7635804	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/14	<2.0		mg/L	
7635804	MCN	RPD	Dissolved Sulphate (SO4)	2021/10/14	1.1		%	20
7635805	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/10/15		95	%	80 - 120
7635805	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/15		93	%	80 - 120
7635805	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/15	<0.50		mg/L	
7635805	MCN	RPD	Reactive Silica (SiO2)	2021/10/15	3.7		%	20
7635806	MCN	Spiked Blank	Colour	2021/10/14		99	%	80 - 120
7635806	MCN	Method Blank	Colour	2021/10/14	<5.0		TCU	
7635806	MCN	RPD	Colour	2021/10/14	4.3		%	20
7635808	MCN	Matrix Spike	Orthophosphate (P)	2021/10/14		88	%	80 - 120
7635808	MCN	Spiked Blank	Orthophosphate (P)	2021/10/14		106	%	80 - 120
7635808	MCN	Method Blank	Orthophosphate (P)	2021/10/14	<0.010		mg/L	
7635808	MCN	RPD	Orthophosphate (P)	2021/10/14	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7635809	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/10/15		90	%	80 - 120
7635809	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/15		102	%	80 - 120
7635809	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/15	<0.050		mg/L	
7635809	MCN	RPD	Nitrate + Nitrite (N)	2021/10/15	0.13		%	20
7635810	MCN	Matrix Spike	Nitrite (N)	2021/10/14		97	%	80 - 120
7635810	MCN	Spiked Blank	Nitrite (N)	2021/10/14		100	%	80 - 120
7635810	MCN	Method Blank	Nitrite (N)	2021/10/14	<0.010		mg/L	
7635810	MCN	RPD	Nitrite (N)	2021/10/14	0		%	20
7636372	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/10/14		90	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		71	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14		NC	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/14		NC	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/14		NC	%	70 - 130
7636372	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/10/14		114	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		87	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14		120	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/14		115	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/14		125	%	70 - 130
7636372	MGN	Method Blank	Isobutylbenzene - Extractable	2021/10/14		97	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/14		83	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/14	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/14	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/14	<0.090		mg/L	
7636372	MGN	RPD	>C10-C16 Hydrocarbons	2021/10/15	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/15	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/15	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

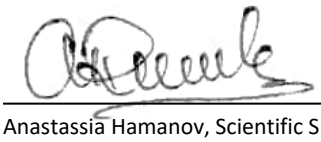
(1) CBOD Analysis: Reference material recovery was high.

(2) Elevated

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VALIDATION SIGNATURE PAGE

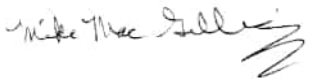
The analytical data and all QC contained in this report were reviewed and validated by:



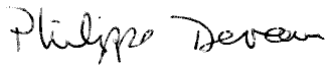
Anastassia Hamanov, Scientific Specialist



Colleen Acker, B.Sc, Scientific Service Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)



Phil Deveau, Scientific Specialist (Organics)

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free 800-563-6266 Fax:(902) 420-8612 www.bvlabs.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	BV Labs Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		CLT1039	848231
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#848231-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	JS/DM		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	20/10/06	PM	SW			X		
2		SW2						X		
3		SW3						X		
4		SW4						X		
5		SW13						X		
6		SW14						X		
7		SW19-20						X		
8		Diffuser						X		
9		DUP1						X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[illegible]	21/10/06	4:40 pm	[illegible]				☐	See ACTR	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: BV Labs Yellow: Client

2021 OCT 6 16:56

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 850306-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/11/02
Report #: R6883507
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1U4014
Received: 2021/10/19, 14:48

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	8	N/A	2021/10/22	N/A	SM 23 4500-CO2 D
Alkalinity	8	N/A	2021/10/27	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/10/20	2021/10/25	ATL SOP 00041	SM 23 5210B m
Chloride	8	N/A	2021/10/28	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/10/20	2021/10/20	ATL SOP 00042	SM 23 5220D m
Colour	8	N/A	2021/10/28	ATL SOP 00020	SM 23 2120C m
Conductance - water	8	N/A	2021/10/22	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	2	2021/10/21	2021/10/21	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	6	2021/10/21	2021/10/22	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2021/10/21	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2021/10/22	ATL SOP 00048	Auto Calc
Metals Water Total MS	7	2021/10/20	2021/10/20	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/10/20	2021/10/21	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	8	N/A	2021/10/28	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/10/28	N/A	Auto Calc.
Nitrogen Ammonia - water	5	N/A	2021/10/27	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	3	N/A	2021/10/28	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	8	N/A	2021/10/28	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	8	N/A	2021/10/28	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	8	N/A	2021/10/29	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/10/22	CAM SOP-00444	OMOE E3179 m
pH (2)	8	N/A	2021/10/22	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	8	N/A	2021/10/27	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	6	N/A	2021/10/28	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	2	N/A	2021/10/29	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	6	N/A	2021/10/28	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	2	N/A	2021/10/29	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2021/10/28	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2021/10/28	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	8	N/A	2021/10/29	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	8	N/A	2021/10/22	ATL SOP 00203	SM 23 5310B m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 850306-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/11/02
Report #: R6883507
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1U4014
Received: 2021/10/19, 14:48

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
ModTPH (T1) Calc. for Water	8	N/A	2021/10/22	N/A	Atl. RBCA v3 m
Total Suspended Solids	8	2021/10/26	2021/11/02	ATL SOP 00007	SM 23 2540D m
Turbidity	8	N/A	2021/10/22	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	8	N/A	2021/10/21	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 850306-01-01

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Report Date: 2021/11/02
Report #: R6883507
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1U4014
Received: 2021/10/19, 14:48

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
02 Nov 2021 17:01:43

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QZA163			QZA163			QZA164		
Sampling Date		2021/10/19 11:10			2021/10/19 11:10			2021/10/19 11:20		
COC Number		850306-01-01			850306-01-01			850306-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	0.410	N/A	7644906				0.250	N/A	7644906
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7644902				<1.0	1.0	7644902
Calculated TDS	mg/L	31	1.0	7644911				24	1.0	7644911
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7644902				<1.0	1.0	7644902
Cation Sum	me/L	0.440	N/A	7644906				0.430	N/A	7644906
Hardness (CaCO3)	mg/L	7.8	1.0	7644904				8.6	1.0	7644904
Ion Balance (% Difference)	%	3.53	N/A	7644905				26.5	N/A	7644905
Langelier Index (@ 20C)	N/A	NC		7644909				NC		7644909
Langelier Index (@ 4C)	N/A	NC		7644910				NC		7644910
Nitrate (N)	mg/L	<0.050	0.050	7644907				<0.050	0.050	7644907
Saturation pH (@ 20C)	N/A	NC		7644909				NC		7644909
Saturation pH (@ 4C)	N/A	NC		7644910				NC		7644910
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7663086				<5.0	5.0	7663086
Carbonaceous BOD	mg/L	3.5	2.4	7648264	<5.0	5.0	7648264	3.0	2.4	7648264
Total Chemical Oxygen Demand	mg/L	63	20	7645308				66	20	7645308
Dissolved Chloride (Cl-)	mg/L	8.6	1.0	7663090				8.7	1.0	7663090
Colour	TCU	200	25	7663098				220	25	7663098
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7663105				<0.050	0.050	7663105
Nitrite (N)	mg/L	<0.010	0.010	7663108				<0.010	0.010	7663108
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7662918				0.052	0.050	7662918
Total Organic Carbon (C)	mg/L	23	0.50	7651040				22	0.50	7653376
Orthophosphate (P)	mg/L	<0.010	0.010	7663103				<0.010	0.010	7663103
pH	pH	4.40		7653384				5.60		7653384
Phenols-4AAP	mg/L	<0.0010	0.0010	7653956				<0.0010	0.0010	7653956
Reactive Silica (SiO2)	mg/L	5.6	0.50	7663094				5.6	0.50	7663094
Total Suspended Solids	mg/L	1.6	1.0	7660374				3.0	1.0	7660374
Dissolved Sulphate (SO4)	mg/L	8.2	2.0	7663092				<2.0	2.0	7663092
Turbidity	NTU	2.6	0.10	7653514				3.7	0.10	7653514
Conductivity	uS/cm	64	1.0	7653382				41	1.0	7653382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QZA165	QZA166			QZA167		
Sampling Date		2021/10/19 11:40	2021/10/19 11:50			2021/10/19 12:20		
COC Number		850306-01-01	850306-01-01			850306-01-01		
Sample #		SW3	SW4			SW13		
	UNITS	**SW3**	**SW4**	**RDL**	**QC Batch**	**SW13**	**RDL**	**QC Batch**
Calculated Parameters								
Anion Sum	me/L	0.320	0.250	N/A	7644906	1.11	N/A	7644906
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	<1.0	1.0	7644902	14	1.0	7644902
Calculated TDS	mg/L	28	24	1.0	7644911	78	1.0	7644911
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	<1.0	1.0	7644902	<1.0	1.0	7644902
Cation Sum	me/L	0.490	0.430	N/A	7644906	1.53	N/A	7644906
Hardness (CaCO3)	mg/L	11	8.5	1.0	7644904	39	1.0	7646579
Ion Balance (% Difference)	%	21.0	26.5	N/A	7644905	15.9	N/A	7644905
Langelier Index (@ 20C)	N/A	NC	NC		7644909	-2.49		7644909
Langelier Index (@ 4C)	N/A	NC	NC		7644910	-2.74		7644910
Nitrate (N)	mg/L	<0.050	<0.050	0.050	7644907	<0.050	0.050	7644907
Saturation pH (@ 20C)	N/A	NC	NC		7644909	9.13		7644909
Saturation pH (@ 4C)	N/A	NC	NC		7644910	9.38		7644910
Inorganics								
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	<5.0	5.0	7663086	14	5.0	7663086
Carbonaceous BOD	mg/L	4.2	2.5	2.4	7648264	<5.0	5.0	7648264
Total Chemical Oxygen Demand	mg/L	68	73	20	7645308	47	20	7645308
Dissolved Chloride (Cl-)	mg/L	9.1	8.9	1.0	7663090	27	1.0	7663090
Colour	TCU	220	220	25	7663098	140	25	7663098
Nitrate + Nitrite (N)	mg/L	<0.050	<0.050	0.050	7663105	<0.050	0.050	7663105
Nitrite (N)	mg/L	<0.010	<0.010	0.010	7663108	<0.010	0.010	7663108
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	<0.050	0.050	7662918	<0.050	0.050	7662918
Total Organic Carbon (C)	mg/L	22	22	0.50	7653376	15	0.50	7653376
Orthophosphate (P)	mg/L	<0.010	<0.010	0.010	7663103	0.014	0.010	7663103
pH	pH	5.85	5.65		7653384	6.64		7653384
Phenols-4AAP	mg/L	<0.0010	<0.0010	0.0010	7653956	<0.0010	0.0010	7654385
Reactive Silica (SiO2)	mg/L	5.6	5.5	0.50	7663094	6.5	0.50	7663094
Total Suspended Solids	mg/L	3.0	2.0	1.0	7660374	4.8	2.0	7660374
Dissolved Sulphate (SO4)	mg/L	3.3	<2.0	2.0	7663092	3.9	2.0	7663092
Turbidity	NTU	4.0	2.9	0.10	7653514	4.7	0.10	7653520
Conductivity	uS/cm	47	42	1.0	7653382	120	1.0	7653382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QZA168			QZA168			QZA169		
Sampling Date		2021/10/19 12:40			2021/10/19 12:40			2021/10/19 11:30		
COC Number		850306-01-01			850306-01-01			850306-01-01		
Sample #		SW19-20			SW19-20			DIFFUSER		
	UNITS	**SW19-20**	**RDL**	**QC Batch**	**SW19-20 Lab-Dup**	**RDL**	**QC Batch**	**Diffuser**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	9.05	N/A	7644906				0.240	N/A	7644906
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	220	1.0	7644902				<1.0	1.0	7644902
Calculated TDS	mg/L	570	1.0	7644911				24	1.0	7644911
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7644902				<1.0	1.0	7644902
Cation Sum	me/L	8.90	N/A	7644906				0.430	N/A	7644906
Hardness (CaCO3)	mg/L	370	1.0	7646580				8.6	1.0	7646580
Ion Balance (% Difference)	%	0.840	N/A	7644905				28.4	N/A	7644905
Langelier Index (@ 20C)	N/A	0.516		7644909				NC		7644909
Langelier Index (@ 4C)	N/A	0.268		7644910				NC		7644910
Nitrate (N)	mg/L	26	1.5	7644907				<0.050	0.050	7646581
Saturation pH (@ 20C)	N/A	7.05		7644909				NC		7644909
Saturation pH (@ 4C)	N/A	7.30		7644910				NC		7644910
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	220	25	7663086				<5.0	5.0	7663086
Carbonaceous BOD	mg/L	32	9.4	7648264				2.6	2.4	7648264
Total Chemical Oxygen Demand	mg/L	92	20	7645308				75	20	7645308
Dissolved Chloride (Cl-)	mg/L	24	1.0	7663090				8.6	1.0	7663090
Colour	TCU	24	5.0	7663098				210	25	7663098
Nitrate + Nitrite (N)	mg/L	28	1.5	7663105				<0.050	0.050	7663105
Nitrite (N)	mg/L	2.1	0.050	7663108				<0.010	0.010	7663108
Nitrogen (Ammonia Nitrogen)	mg/L	0.65	0.050	7662923	0.64	0.050	7662923	0.062	0.050	7662918
Total Organic Carbon (C)	mg/L	24 (1)	5.0	7653376				23	0.50	7653381
Orthophosphate (P)	mg/L	0.010	0.010	7663103				<0.010	0.010	7663103
pH	pH	7.57		7653384				5.90		7653384
Phenols-4AAP	mg/L	<0.0010	0.0010	7653956				<0.0010	0.0010	7653956
Reactive Silica (SiO2)	mg/L	12	0.50	7663094				5.8	0.50	7663094
Total Suspended Solids	mg/L	4.2	1.0	7660374				6.0	2.0	7660374
Dissolved Sulphate (SO4)	mg/L	98	2.0	7663092				<2.0	2.0	7663092
Turbidity	NTU	12	0.10	7653520				3.9	0.10	7653520
Conductivity	uS/cm	850	1.0	7653382				42	1.0	7653382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to sample matrix.

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Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		QZA170		
Sampling Date		2021/10/19		
COC Number		850306-01-01		
Sample #		DUP1		
	UNITS	DUP1	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	0.250	N/A	7644906
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7644902
Calculated TDS	mg/L	23	1.0	7644911
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7644902
Cation Sum	me/L	0.410	N/A	7644906
Hardness (CaCO3)	mg/L	8.2	1.0	7646580
Ion Balance (% Difference)	%	24.2	N/A	7644905
Langelier Index (@ 20C)	N/A	NC		7644909
Langelier Index (@ 4C)	N/A	NC		7644910
Nitrate (N)	mg/L	<0.050	0.050	7646582
Saturation pH (@ 20C)	N/A	NC		7644909
Saturation pH (@ 4C)	N/A	NC		7644910
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7663086
Carbonaceous BOD	mg/L	3.2	2.4	7648264
Total Chemical Oxygen Demand	mg/L	68	20	7645308
Dissolved Chloride (Cl-)	mg/L	8.8	1.0	7663090
Colour	TCU	220	25	7663098
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7663105
Nitrite (N)	mg/L	<0.010	0.010	7663108
Nitrogen (Ammonia Nitrogen)	mg/L	0.065	0.050	7662918
Total Organic Carbon (C)	mg/L	22	0.50	7653381
Orthophosphate (P)	mg/L	<0.010	0.010	7663103
pH	pH	5.71		7653384
Phenols-4AAP	mg/L	<0.0010	0.0010	7654385
Reactive Silica (SiO2)	mg/L	5.6	0.50	7663094
Total Suspended Solids	mg/L	2.4	1.0	7660374
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7663092
Turbidity	NTU	2.9	0.10	7653520
Conductivity	uS/cm	42	1.0	7653382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		QZA163		QZA164		QZA165		QZA166		
Sampling Date		2021/10/19 11:10		2021/10/19 11:20		2021/10/19 11:40		2021/10/19 11:50		
COC Number		850306-01-01		850306-01-01		850306-01-01		850306-01-01		
Sample #		SW1		SW2		SW3		SW4		
	UNITS	**SW1**	**QC Batch**	**SW2**	**QC Batch**	**SW3**	**QC Batch**	**SW4**	**RDL**	**QC Batch**
Metals										
Total Aluminum (Al)	ug/L	670	7648116	750	7647886	740	7648116	770	5.0	7647886
Total Antimony (Sb)	ug/L	<1.0	7648116	<1.0	7647886	<1.0	7648116	<1.0	1.0	7647886
Total Arsenic (As)	ug/L	<1.0	7648116	<1.0	7647886	<1.0	7648116	<1.0	1.0	7647886
Total Barium (Ba)	ug/L	5.2	7648116	6.0	7647886	6.1	7648116	5.8	1.0	7647886
Total Beryllium (Be)	ug/L	<0.10	7648116	<0.10	7647886	<0.10	7648116	<0.10	0.10	7647886
Total Bismuth (Bi)	ug/L	<2.0	7648116	<2.0	7647886	<2.0	7648116	<2.0	2.0	7647886
Total Boron (B)	ug/L	<50	7648116	<50	7647886	<50	7648116	<50	50	7647886
Total Cadmium (Cd)	ug/L	0.016	7648116	0.018	7647886	0.016	7648116	0.016	0.010	7647886
Total Calcium (Ca)	ug/L	2100	7648116	2300	7647886	3100	7648116	2300	100	7647886
Total Chromium (Cr)	ug/L	<1.0	7648116	<1.0	7647886	<1.0	7648116	<1.0	1.0	7647886
Total Cobalt (Co)	ug/L	<0.40	7648116	<0.40	7647886	<0.40	7648116	<0.40	0.40	7647886
Total Copper (Cu)	ug/L	<0.50	7648116	0.67	7647886	0.53	7648116	<0.50	0.50	7647886
Total Iron (Fe)	ug/L	750	7648116	890	7647886	830	7648116	820	50	7647886
Total Lead (Pb)	ug/L	0.93	7648116	1.1	7647886	0.97	7648116	1.0	0.50	7647886
Total Magnesium (Mg)	ug/L	630	7648116	680	7647886	850	7648116	670	100	7647886
Total Manganese (Mn)	ug/L	38	7648116	40	7647886	46	7648116	39	2.0	7647886
Total Molybdenum (Mo)	ug/L	<2.0	7648116	<2.0	7647886	<2.0	7648116	<2.0	2.0	7647886
Total Nickel (Ni)	ug/L	<2.0	7648116	<2.0	7647886	<2.0	7648116	2.2	2.0	7647886
Total Phosphorus (P)	ug/L	<100	7648116	<100	7647886	<100	7648116	<100	100	7647886
Total Potassium (K)	ug/L	350	7648116	370	7647886	380	7648116	350	100	7647886
Total Selenium (Se)	ug/L	<0.50	7648116	<0.50	7647886	<0.50	7648116	<0.50	0.50	7647886
Total Silver (Ag)	ug/L	<0.10	7648116	<0.10	7647886	<0.10	7648116	<0.10	0.10	7647886
Total Sodium (Na)	ug/L	4900	7648116	4900	7647886	5100	7648116	5000	100	7647886
Total Strontium (Sr)	ug/L	11	7648116	12	7647886	14	7648116	11	2.0	7647886
Total Thallium (Tl)	ug/L	<0.10	7648116	<0.10	7647886	<0.10	7648116	<0.10	0.10	7647886
Total Tin (Sn)	ug/L	<2.0	7648116	<2.0	7647886	<2.0	7648116	<2.0	2.0	7647886
Total Titanium (Ti)	ug/L	7.4	7648116	12	7647886	9.6	7648116	9.0	2.0	7647886
Total Uranium (U)	ug/L	0.30	7648116	0.33	7647886	0.55	7648116	0.33	0.10	7647886
Total Vanadium (V)	ug/L	<2.0	7648116	<2.0	7647886	<2.0	7648116	<2.0	2.0	7647886
Total Zinc (Zn)	ug/L	<5.0	7648116	20	7647886	<5.0	7648116	<5.0	5.0	7647886

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		QZA167	QZA168	QZA169		QZA170		
Sampling Date		2021/10/19 12:20	2021/10/19 12:40	2021/10/19 11:30		2021/10/19		
COC Number		850306-01-01	850306-01-01	850306-01-01		850306-01-01		
Sample #		SW13	SW19-20	DIFFUSER		DUP1		
	UNITS	**SW13**	**SW19-20**	**Diffuser**	**QC Batch**	**DUP1**	**RDL**	**QC Batch**
Metals								
Total Aluminum (Al)	ug/L	430	150	740	7647886	700	5.0	7648116
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	7647886	<1.0	1.0	7648116
Total Arsenic (As)	ug/L	1.5	1.7	<1.0	7647886	<1.0	1.0	7648116
Total Barium (Ba)	ug/L	13	46	5.8	7647886	5.5	1.0	7648116
Total Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	7647886	<0.10	0.10	7648116
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	7647886	<2.0	2.0	7648116
Total Boron (B)	ug/L	<50	320	<50	7647886	<50	50	7648116
Total Cadmium (Cd)	ug/L	0.029	0.033	0.017	7647886	0.014	0.010	7648116
Total Calcium (Ca)	ug/L	12000	120000	2300	7647886	2200	100	7648116
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	7647886	<1.0	1.0	7648116
Total Cobalt (Co)	ug/L	0.72	9.7	<0.40	7647886	<0.40	0.40	7648116
Total Copper (Cu)	ug/L	2.0	3.5	<0.50	7647886	<0.50	0.50	7648116
Total Iron (Fe)	ug/L	1900	990	820	7647886	790	50	7648116
Total Lead (Pb)	ug/L	3.2	0.51	2.5	7647886	0.95	0.50	7648116
Total Magnesium (Mg)	ug/L	2500	15000	670	7647886	640	100	7648116
Total Manganese (Mn)	ug/L	180	4200	40	7647886	38	2.0	7648116
Total Molybdenum (Mo)	ug/L	<2.0	8.7	<2.0	7647886	<2.0	2.0	7648116
Total Nickel (Ni)	ug/L	<2.0	2.4	<2.0	7647886	<2.0	2.0	7648116
Total Phosphorus (P)	ug/L	<100	<100	<100	7647886	<100	100	7648116
Total Potassium (K)	ug/L	1200	14000	350	7647886	330	100	7648116
Total Selenium (Se)	ug/L	<0.50	0.67	<0.50	7647886	<0.50	0.50	7648116
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	7647886	<0.10	0.10	7648116
Total Sodium (Na)	ug/L	15000	23000	5000	7647886	4600	100	7648116
Total Strontium (Sr)	ug/L	37	410	12	7647886	12	2.0	7648116
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	7647886	<0.10	0.10	7648116
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	7647886	<2.0	2.0	7648116
Total Titanium (Ti)	ug/L	12	7.5	8.5	7647886	9.3	2.0	7648116
Total Uranium (U)	ug/L	0.95	33	0.34	7647886	0.32	0.10	7648116
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	7647886	<2.0	2.0	7648116
Total Zinc (Zn)	ug/L	8.9	<5.0	<5.0	7647886	<5.0	5.0	7648116

RDL = Reportable Detection Limit
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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		QZA163			QZA163			QZA164		
Sampling Date		2021/10/19 11:10			2021/10/19 11:10			2021/10/19 11:20		
COC Number		850306-01-01			850306-01-01			850306-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579
Toluene	mg/L	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579
Ethylbenzene	mg/L	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579	<0.0010	0.0010	7650579
Total Xylenes	mg/L	<0.0020	0.0020	7650579	<0.0020	0.0020	7650579	<0.0020	0.0020	7650579
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7650579	<0.090	0.090	7650579	<0.090	0.090	7650579
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7651085				<0.050	0.050	7651085
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7651085				<0.050	0.050	7651085
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7651085				<0.090	0.090	7651085
Modified TPH (Tier1)	mg/L	<0.090	0.090	7645671				<0.090	0.090	7645671
Reached Baseline at C32	mg/L	NA	N/A	7651085				NA	N/A	7651085
Hydrocarbon Resemblance	mg/L	NA	N/A	7651085				NA	N/A	7651085
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	89		7651085				86		7651085
n-Dotriacontane - Extractable	%	105		7651085				99		7651085
Isobutylbenzene - Volatile	%	95		7650579	102		7650579	100		7650579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
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Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		QZA165	QZA166			QZA166		
Sampling Date		2021/10/19 11:40	2021/10/19 11:50			2021/10/19 11:50		
COC Number		850306-01-01	850306-01-01			850306-01-01		
Sample #		SW3	SW4			SW4		
	UNITS	SW3	SW4	RDL	QC Batch	SW4 Lab-Dup	RDL	QC Batch
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	0.0010	7650579			
Toluene	mg/L	<0.0010	<0.0010	0.0010	7650579			
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	7650579			
Total Xylenes	mg/L	<0.0020	<0.0020	0.0020	7650579			
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	0.090	7650579			
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	0.050	7651085	<0.050	0.050	7651085
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	0.050	7651085	<0.050	0.050	7651085
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	0.090	7651085	<0.090	0.090	7651085
Modified TPH (Tier1)	mg/L	<0.090	<0.090	0.090	7645671			
Reached Baseline at C32	mg/L	NA	NA	N/A	7651085			
Hydrocarbon Resemblance	mg/L	NA	NA	N/A	7651085			
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	92	96		7651085	96		7651085
n-Dotriacontane - Extractable	%	101	97		7651085	99		7651085
Isobutylbenzene - Volatile	%	101	100		7650579			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		QZA167	QZA168	QZA169	QZA170		
Sampling Date		2021/10/19 12:20	2021/10/19 12:40	2021/10/19 11:30	2021/10/19		
COC Number		850306-01-01	850306-01-01	850306-01-01	850306-01-01		
Sample #		SW13	SW19-20	DIFFUSER	DUP1		
	UNITS	**SW13**	**SW19-20**	**Diffuser**	**DUP1**	**RDL**	**QC Batch**
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7650579
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7650579
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7650579
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7650579
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7650579
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	7651085
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	7651085
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7651085
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	7645671
Reached Baseline at C32	mg/L	NA	NA	NA	NA	N/A	7651085
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	N/A	7651085
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	94	92	92	77		7651085
n-Dotriacontane - Extractable	%	90	95	111	102		7651085
Isobutylbenzene - Volatile	%	101	101	102	94		7650579

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	13.0°C
Package 2	10.3°C

Sample QZA164 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QZA165 [SW3] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QZA166 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QZA167 [SW13] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample QZA168 [SW19-20] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample QZA169 [Diffuser] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample QZA170 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7645308	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/10/20		106	%	80 - 120
7645308	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/10/20		100	%	80 - 120
7645308	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/10/20		101	%	80 - 120
7645308	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/10/20	<20		mg/L	
7645308	ZZH	RPD	Total Chemical Oxygen Demand	2021/10/20	NC		%	25
7647886	BAN	Matrix Spike	Total Aluminum (Al)	2021/10/20		100	%	80 - 120
			Total Antimony (Sb)	2021/10/20		105	%	80 - 120
			Total Arsenic (As)	2021/10/20		97	%	80 - 120
			Total Barium (Ba)	2021/10/20		99	%	80 - 120
			Total Beryllium (Be)	2021/10/20		95	%	80 - 120
			Total Bismuth (Bi)	2021/10/20		100	%	80 - 120
			Total Boron (B)	2021/10/20		94	%	80 - 120
			Total Cadmium (Cd)	2021/10/20		100	%	80 - 120
			Total Calcium (Ca)	2021/10/20		106	%	80 - 120
			Total Chromium (Cr)	2021/10/20		98	%	80 - 120
			Total Cobalt (Co)	2021/10/20		99	%	80 - 120
			Total Copper (Cu)	2021/10/20		99	%	80 - 120
			Total Iron (Fe)	2021/10/20		106	%	80 - 120
			Total Lead (Pb)	2021/10/20		99	%	80 - 120
			Total Magnesium (Mg)	2021/10/20		103	%	80 - 120
			Total Manganese (Mn)	2021/10/20		101	%	80 - 120
			Total Molybdenum (Mo)	2021/10/20		106	%	80 - 120
			Total Nickel (Ni)	2021/10/20		98	%	80 - 120
			Total Phosphorus (P)	2021/10/20		107	%	80 - 120
			Total Potassium (K)	2021/10/20		102	%	80 - 120
			Total Selenium (Se)	2021/10/20		103	%	80 - 120
			Total Silver (Ag)	2021/10/20		101	%	80 - 120
			Total Sodium (Na)	2021/10/20		99	%	80 - 120
			Total Strontium (Sr)	2021/10/20		104	%	80 - 120
			Total Thallium (Tl)	2021/10/20		101	%	80 - 120
			Total Tin (Sn)	2021/10/20		106	%	80 - 120
			Total Titanium (Ti)	2021/10/20		99	%	80 - 120
			Total Uranium (U)	2021/10/20		104	%	80 - 120
			Total Vanadium (V)	2021/10/20		100	%	80 - 120
			Total Zinc (Zn)	2021/10/20		100	%	80 - 120
7647886	BAN	Spiked Blank	Total Aluminum (Al)	2021/10/20		101	%	80 - 120
			Total Antimony (Sb)	2021/10/20		104	%	80 - 120
			Total Arsenic (As)	2021/10/20		95	%	80 - 120
			Total Barium (Ba)	2021/10/20		98	%	80 - 120
			Total Beryllium (Be)	2021/10/20		95	%	80 - 120
			Total Bismuth (Bi)	2021/10/20		101	%	80 - 120
			Total Boron (B)	2021/10/20		94	%	80 - 120
			Total Cadmium (Cd)	2021/10/20		99	%	80 - 120
			Total Calcium (Ca)	2021/10/20		106	%	80 - 120
			Total Chromium (Cr)	2021/10/20		98	%	80 - 120
			Total Cobalt (Co)	2021/10/20		98	%	80 - 120
			Total Copper (Cu)	2021/10/20		99	%	80 - 120
			Total Iron (Fe)	2021/10/20		106	%	80 - 120
			Total Lead (Pb)	2021/10/20		99	%	80 - 120
			Total Magnesium (Mg)	2021/10/20		102	%	80 - 120
			Total Manganese (Mn)	2021/10/20		100	%	80 - 120
			Total Molybdenum (Mo)	2021/10/20		103	%	80 - 120
			Total Nickel (Ni)	2021/10/20		99	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Phosphorus (P)	2021/10/20		105	%	80 - 120
			Total Potassium (K)	2021/10/20		100	%	80 - 120
			Total Selenium (Se)	2021/10/20		102	%	80 - 120
			Total Silver (Ag)	2021/10/20		100	%	80 - 120
			Total Sodium (Na)	2021/10/20		98	%	80 - 120
			Total Strontium (Sr)	2021/10/20		104	%	80 - 120
			Total Thallium (Tl)	2021/10/20		100	%	80 - 120
			Total Tin (Sn)	2021/10/20		104	%	80 - 120
			Total Titanium (Ti)	2021/10/20		103	%	80 - 120
			Total Uranium (U)	2021/10/20		104	%	80 - 120
			Total Vanadium (V)	2021/10/20		100	%	80 - 120
			Total Zinc (Zn)	2021/10/20		100	%	80 - 120
7647886	BAN	Method Blank	Total Aluminum (Al)	2021/10/20	<5.0		ug/L	
			Total Antimony (Sb)	2021/10/20	<1.0		ug/L	
			Total Arsenic (As)	2021/10/20	<1.0		ug/L	
			Total Barium (Ba)	2021/10/20	<1.0		ug/L	
			Total Beryllium (Be)	2021/10/20	<0.10		ug/L	
			Total Bismuth (Bi)	2021/10/20	<2.0		ug/L	
			Total Boron (B)	2021/10/20	<50		ug/L	
			Total Cadmium (Cd)	2021/10/20	<0.010		ug/L	
			Total Calcium (Ca)	2021/10/20	<100		ug/L	
			Total Chromium (Cr)	2021/10/20	<1.0		ug/L	
			Total Cobalt (Co)	2021/10/20	<0.40		ug/L	
			Total Copper (Cu)	2021/10/20	<0.50		ug/L	
			Total Iron (Fe)	2021/10/20	<50		ug/L	
			Total Lead (Pb)	2021/10/20	<0.50		ug/L	
			Total Magnesium (Mg)	2021/10/20	<100		ug/L	
			Total Manganese (Mn)	2021/10/20	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/10/20	<2.0		ug/L	
			Total Nickel (Ni)	2021/10/20	<2.0		ug/L	
			Total Phosphorus (P)	2021/10/20	<100		ug/L	
			Total Potassium (K)	2021/10/20	<100		ug/L	
			Total Selenium (Se)	2021/10/20	<0.50		ug/L	
			Total Silver (Ag)	2021/10/20	<0.10		ug/L	
			Total Sodium (Na)	2021/10/20	<100		ug/L	
			Total Strontium (Sr)	2021/10/20	<2.0		ug/L	
			Total Thallium (Tl)	2021/10/20	<0.10		ug/L	
			Total Tin (Sn)	2021/10/20	<2.0		ug/L	
			Total Titanium (Ti)	2021/10/20	<2.0		ug/L	
			Total Uranium (U)	2021/10/20	<0.10		ug/L	
			Total Vanadium (V)	2021/10/20	<2.0		ug/L	
			Total Zinc (Zn)	2021/10/20	<5.0		ug/L	
7647886	BAN	RPD	Total Aluminum (Al)	2021/10/20	6.3		%	20
			Total Antimony (Sb)	2021/10/20	NC		%	20
			Total Arsenic (As)	2021/10/20	NC		%	20
			Total Barium (Ba)	2021/10/20	3.4		%	20
			Total Boron (B)	2021/10/20	NC		%	20
			Total Cadmium (Cd)	2021/10/20	NC		%	20
			Total Calcium (Ca)	2021/10/20	0.50		%	20
			Total Chromium (Cr)	2021/10/20	NC		%	20
			Total Copper (Cu)	2021/10/20	NC		%	20
			Total Iron (Fe)	2021/10/20	2.3		%	20
			Total Lead (Pb)	2021/10/20	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Magnesium (Mg)	2021/10/20	3.5		%	20
			Total Manganese (Mn)	2021/10/20	4.8		%	20
			Total Nickel (Ni)	2021/10/20	NC		%	20
			Total Phosphorus (P)	2021/10/20	NC		%	20
			Total Potassium (K)	2021/10/20	7.0		%	20
			Total Selenium (Se)	2021/10/20	NC		%	20
			Total Sodium (Na)	2021/10/20	4.1		%	20
			Total Strontium (Sr)	2021/10/20	0.23		%	20
			Total Uranium (U)	2021/10/20	NC		%	20
			Total Zinc (Zn)	2021/10/20	NC		%	20
7648116	MLB	Matrix Spike	Total Aluminum (Al)	2021/10/20		99	%	80 - 120
			Total Antimony (Sb)	2021/10/20		102	%	80 - 120
			Total Arsenic (As)	2021/10/20		93	%	80 - 120
			Total Barium (Ba)	2021/10/20		97	%	80 - 120
			Total Beryllium (Be)	2021/10/20		93	%	80 - 120
			Total Bismuth (Bi)	2021/10/20		99	%	80 - 120
			Total Boron (B)	2021/10/20		92	%	80 - 120
			Total Cadmium (Cd)	2021/10/20		98	%	80 - 120
			Total Calcium (Ca)	2021/10/20		107	%	80 - 120
			Total Chromium (Cr)	2021/10/20		95	%	80 - 120
			Total Cobalt (Co)	2021/10/20		96	%	80 - 120
			Total Copper (Cu)	2021/10/20		97	%	80 - 120
			Total Iron (Fe)	2021/10/20		102	%	80 - 120
			Total Lead (Pb)	2021/10/20		97	%	80 - 120
			Total Magnesium (Mg)	2021/10/20		100	%	80 - 120
			Total Manganese (Mn)	2021/10/20		98	%	80 - 120
			Total Molybdenum (Mo)	2021/10/20		102	%	80 - 120
			Total Nickel (Ni)	2021/10/20		96	%	80 - 120
			Total Phosphorus (P)	2021/10/20		104	%	80 - 120
			Total Potassium (K)	2021/10/20		99	%	80 - 120
			Total Selenium (Se)	2021/10/20		100	%	80 - 120
			Total Silver (Ag)	2021/10/20		99	%	80 - 120
			Total Sodium (Na)	2021/10/20		98	%	80 - 120
			Total Strontium (Sr)	2021/10/20		101	%	80 - 120
			Total Thallium (Tl)	2021/10/20		99	%	80 - 120
			Total Tin (Sn)	2021/10/20		103	%	80 - 120
			Total Titanium (Ti)	2021/10/20		94	%	80 - 120
			Total Uranium (U)	2021/10/20		103	%	80 - 120
			Total Vanadium (V)	2021/10/20		98	%	80 - 120
			Total Zinc (Zn)	2021/10/20		101	%	80 - 120
7648116	MLB	Spiked Blank	Total Aluminum (Al)	2021/10/20		103	%	80 - 120
			Total Antimony (Sb)	2021/10/20		100	%	80 - 120
			Total Arsenic (As)	2021/10/20		92	%	80 - 120
			Total Barium (Ba)	2021/10/20		95	%	80 - 120
			Total Beryllium (Be)	2021/10/20		92	%	80 - 120
			Total Bismuth (Bi)	2021/10/20		96	%	80 - 120
			Total Boron (B)	2021/10/20		92	%	80 - 120
			Total Cadmium (Cd)	2021/10/20		95	%	80 - 120
			Total Calcium (Ca)	2021/10/20		101	%	80 - 120
			Total Chromium (Cr)	2021/10/20		94	%	80 - 120
			Total Cobalt (Co)	2021/10/20		94	%	80 - 120
			Total Copper (Cu)	2021/10/20		94	%	80 - 120
			Total Iron (Fe)	2021/10/20		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Lead (Pb)	2021/10/20		96	%	80 - 120
			Total Magnesium (Mg)	2021/10/20		98	%	80 - 120
			Total Manganese (Mn)	2021/10/20		96	%	80 - 120
			Total Molybdenum (Mo)	2021/10/20		99	%	80 - 120
			Total Nickel (Ni)	2021/10/20		94	%	80 - 120
			Total Phosphorus (P)	2021/10/20		102	%	80 - 120
			Total Potassium (K)	2021/10/20		98	%	80 - 120
			Total Selenium (Se)	2021/10/20		97	%	80 - 120
			Total Silver (Ag)	2021/10/20		96	%	80 - 120
			Total Sodium (Na)	2021/10/20		94	%	80 - 120
			Total Strontium (Sr)	2021/10/20		98	%	80 - 120
			Total Thallium (Tl)	2021/10/20		97	%	80 - 120
			Total Tin (Sn)	2021/10/20		101	%	80 - 120
			Total Titanium (Ti)	2021/10/20		96	%	80 - 120
			Total Uranium (U)	2021/10/20		100	%	80 - 120
			Total Vanadium (V)	2021/10/20		95	%	80 - 120
			Total Zinc (Zn)	2021/10/20		96	%	80 - 120
7648116	MLB	Method Blank	Total Aluminum (Al)	2021/10/20	<5.0		ug/L	
			Total Antimony (Sb)	2021/10/20	<1.0		ug/L	
			Total Arsenic (As)	2021/10/20	<1.0		ug/L	
			Total Barium (Ba)	2021/10/20	<1.0		ug/L	
			Total Beryllium (Be)	2021/10/20	<0.10		ug/L	
			Total Bismuth (Bi)	2021/10/20	<2.0		ug/L	
			Total Boron (B)	2021/10/20	<50		ug/L	
			Total Cadmium (Cd)	2021/10/20	<0.010		ug/L	
			Total Calcium (Ca)	2021/10/20	<100		ug/L	
			Total Chromium (Cr)	2021/10/20	<1.0		ug/L	
			Total Cobalt (Co)	2021/10/20	<0.40		ug/L	
			Total Copper (Cu)	2021/10/20	<0.50		ug/L	
			Total Iron (Fe)	2021/10/20	<50		ug/L	
			Total Lead (Pb)	2021/10/20	<0.50		ug/L	
			Total Magnesium (Mg)	2021/10/20	<100		ug/L	
			Total Manganese (Mn)	2021/10/20	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/10/20	<2.0		ug/L	
			Total Nickel (Ni)	2021/10/20	<2.0		ug/L	
			Total Phosphorus (P)	2021/10/20	<100		ug/L	
			Total Potassium (K)	2021/10/20	<100		ug/L	
			Total Selenium (Se)	2021/10/20	<0.50		ug/L	
			Total Silver (Ag)	2021/10/20	<0.10		ug/L	
			Total Sodium (Na)	2021/10/20	<100		ug/L	
			Total Strontium (Sr)	2021/10/20	<2.0		ug/L	
			Total Thallium (Tl)	2021/10/20	<0.10		ug/L	
			Total Tin (Sn)	2021/10/20	<2.0		ug/L	
			Total Titanium (Ti)	2021/10/20	<2.0		ug/L	
			Total Uranium (U)	2021/10/20	<0.10		ug/L	
			Total Vanadium (V)	2021/10/20	<2.0		ug/L	
			Total Zinc (Zn)	2021/10/20	<5.0		ug/L	
7648116	MLB	RPD	Total Aluminum (Al)	2021/10/20	10		%	20
			Total Iron (Fe)	2021/10/20	NC		%	20
			Total Manganese (Mn)	2021/10/20	2.0		%	20
			Total Zinc (Zn)	2021/10/20	1.3		%	20
7648264	NFS	QC Standard	Carbonaceous BOD	2021/10/25		127 (1)	%	80 - 120
7648264	NFS	Spiked Blank	Carbonaceous BOD	2021/10/25		119	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7648264	NFS	Method Blank	Carbonaceous BOD	2021/10/25	<2.0		mg/L	
7648264	NFS	RPD [QZA163-01]	Carbonaceous BOD	2021/10/25	NC		%	25
7650579	THL	Matrix Spike [QZA164-06]	Isobutylbenzene - Volatile	2021/10/21		90	%	70 - 130
			Benzene	2021/10/21		85	%	70 - 130
			Toluene	2021/10/21		96	%	70 - 130
			Ethylbenzene	2021/10/21		100	%	70 - 130
			Total Xylenes	2021/10/21		99	%	70 - 130
7650579	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/10/21		91	%	70 - 130
			Benzene	2021/10/21		88	%	70 - 130
			Toluene	2021/10/21		101	%	70 - 130
			Ethylbenzene	2021/10/21		105	%	70 - 130
			Total Xylenes	2021/10/21		105	%	70 - 130
7650579	THL	Method Blank	Isobutylbenzene - Volatile	2021/10/21		116	%	70 - 130
			Benzene	2021/10/21	<0.0010		mg/L	
			Toluene	2021/10/21	<0.0010		mg/L	
			Ethylbenzene	2021/10/21	<0.0010		mg/L	
			Total Xylenes	2021/10/21	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/10/21	<0.090		mg/L	
7650579	THL	RPD [QZA163-06]	Benzene	2021/10/21	NC		%	40
			Toluene	2021/10/21	NC		%	40
			Ethylbenzene	2021/10/21	NC		%	40
			Total Xylenes	2021/10/21	NC		%	40
			C6 - C10 (less BTEX)	2021/10/21	NC		%	40
7651040	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/22		92	%	85 - 115
7651040	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/22		103	%	80 - 120
7651040	NGI	Method Blank	Total Organic Carbon (C)	2021/10/22	<0.50		mg/L	
7651040	NGI	RPD	Total Organic Carbon (C)	2021/10/22	0.45		%	15
7651085	BCD	Matrix Spike [QZA167-05]	Isobutylbenzene - Extractable	2021/10/21		99	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/21		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/21		94	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/21		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/21		93	%	70 - 130
7651085	BCD	Spiked Blank	Isobutylbenzene - Extractable	2021/10/21		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/21		98	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/21		101	%	70 - 130
			>C16-C21 Hydrocarbons	2021/10/21		97	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/10/21		103	%	70 - 130
7651085	BCD	Method Blank	Isobutylbenzene - Extractable	2021/10/21		71	%	70 - 130
			n-Dotriacontane - Extractable	2021/10/21		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/10/21	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/10/21	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/10/21	<0.090		mg/L	
7651085	BCD	RPD [QZA166-05]	>C10-C16 Hydrocarbons	2021/10/21	NC		%	40
			>C16-C21 Hydrocarbons	2021/10/21	NC		%	40
			>C21-<C32 Hydrocarbons	2021/10/21	NC		%	40
7653376	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/22		90	%	85 - 115
7653376	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/22		98	%	80 - 120
7653376	NGI	Method Blank	Total Organic Carbon (C)	2021/10/22	<0.50		mg/L	
7653376	NGI	RPD	Total Organic Carbon (C)	2021/10/22	NC		%	15
7653381	NGI	Matrix Spike	Total Organic Carbon (C)	2021/10/22		NC	%	85 - 115
7653381	NGI	Spiked Blank	Total Organic Carbon (C)	2021/10/22		98	%	80 - 120
7653381	NGI	Method Blank	Total Organic Carbon (C)	2021/10/22	<0.50		mg/L	
7653381	NGI	RPD	Total Organic Carbon (C)	2021/10/22	0.28 (2)		%	15

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7653382	SHW	Spiked Blank	Conductivity	2021/10/22		97	%	80 - 120
7653382	SHW	Method Blank	Conductivity	2021/10/22	<1.0		uS/cm	
7653382	SHW	RPD	Conductivity	2021/10/22	1.6		%	10
7653384	SHW	Spiked Blank	pH	2021/10/22		100	%	97 - 103
7653384	SHW	RPD	pH	2021/10/22	0.99		%	N/A
7653514	SHW	QC Standard	Turbidity	2021/10/22		97	%	80 - 120
7653514	SHW	Spiked Blank	Turbidity	2021/10/22		101	%	80 - 120
7653514	SHW	Method Blank	Turbidity	2021/10/22	<0.10		NTU	
7653514	SHW	RPD	Turbidity	2021/10/22	11		%	20
7653520	SHW	QC Standard	Turbidity	2021/10/22		98	%	80 - 120
7653520	SHW	Spiked Blank	Turbidity	2021/10/22		103	%	80 - 120
7653520	SHW	Method Blank	Turbidity	2021/10/22	<0.10		NTU	
7653520	SHW	RPD	Turbidity	2021/10/22	19		%	20
7653956	DRM	Matrix Spike	Phenols-4AAP	2021/10/22		96	%	80 - 120
7653956	DRM	Spiked Blank	Phenols-4AAP	2021/10/22		97	%	80 - 120
7653956	DRM	Method Blank	Phenols-4AAP	2021/10/22	<0.0010		mg/L	
7653956	DRM	RPD	Phenols-4AAP	2021/10/22	NC		%	20
7654385	DRM	Matrix Spike	Phenols-4AAP	2021/10/22		95	%	80 - 120
7654385	DRM	Spiked Blank	Phenols-4AAP	2021/10/22		98	%	80 - 120
7654385	DRM	Method Blank	Phenols-4AAP	2021/10/22	<0.0010		mg/L	
7654385	DRM	RPD	Phenols-4AAP	2021/10/22	NC		%	20
7660374	MKX	QC Standard	Total Suspended Solids	2021/11/02		99	%	80 - 120
7660374	MKX	Method Blank	Total Suspended Solids	2021/11/02	<1.0		mg/L	
7660374	MKX	RPD	Total Suspended Solids	2021/11/02	16		%	20
7662918	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/10/28		103	%	80 - 120
7662918	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/27		100	%	80 - 120
7662918	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/27	<0.050		mg/L	
7662918	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/10/28	NC		%	20
7662923	MCN	Matrix Spike [QZA168-09]	Nitrogen (Ammonia Nitrogen)	2021/10/28		99	%	80 - 120
7662923	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/10/28		101	%	80 - 120
7662923	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/10/28	<0.050		mg/L	
7662923	MCN	RPD [QZA168-09]	Nitrogen (Ammonia Nitrogen)	2021/10/28	0.68		%	20
7663086	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/10/27		NC	%	80 - 120
7663086	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/10/27		97	%	80 - 120
7663086	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/10/27	<5.0		mg/L	
7663086	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/10/27	0.58		%	20
7663090	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/28		86	%	80 - 120
7663090	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/28		97	%	80 - 120
7663090	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/10/28	<1.0		mg/L	
7663090	MCN	RPD	Dissolved Chloride (Cl-)	2021/10/28	0.59		%	20
7663092	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/10/28		NC	%	80 - 120
7663092	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/10/28		97	%	80 - 120
7663092	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/10/28	<2.0		mg/L	
7663092	MCN	RPD	Dissolved Sulphate (SO4)	2021/10/28	1.6		%	20
7663094	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/10/28		NC	%	80 - 120
7663094	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/10/28		95	%	80 - 120
7663094	MCN	Method Blank	Reactive Silica (SiO2)	2021/10/28	<0.50		mg/L	
7663094	MCN	RPD	Reactive Silica (SiO2)	2021/10/28	1.3		%	20
7663098	MCN	Spiked Blank	Colour	2021/10/28		103	%	80 - 120
7663098	MCN	Method Blank	Colour	2021/10/28	<5.0		TCU	
7663098	MCN	RPD	Colour	2021/10/28	5.8		%	20
7663103	MCN	Matrix Spike	Orthophosphate (P)	2021/10/27		53 (3)	%	80 - 120
7663103	MCN	Spiked Blank	Orthophosphate (P)	2021/10/27		104	%	80 - 120

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7663103	MCN	Method Blank	Orthophosphate (P)	2021/10/27	<0.010		mg/L	
7663103	MCN	RPD	Orthophosphate (P)	2021/10/27	NC		%	20
7663105	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/10/28		104	%	80 - 120
7663105	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/10/28		100	%	80 - 120
7663105	MCN	Method Blank	Nitrate + Nitrite (N)	2021/10/28	<0.050		mg/L	
7663105	MCN	RPD	Nitrate + Nitrite (N)	2021/10/28	NC		%	20
7663108	MCN	Matrix Spike	Nitrite (N)	2021/10/28		82	%	80 - 120
7663108	MCN	Spiked Blank	Nitrite (N)	2021/10/28		99	%	80 - 120
7663108	MCN	Method Blank	Nitrite (N)	2021/10/28	<0.010		mg/L	
7663108	MCN	RPD	Nitrite (N)	2021/10/28	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery high. Second source QC recovery and all other QC acceptable.

(2) Elevated reporting limit due to sample matrix.

(3) Poor spike recovery due to probable sample matrix interference.

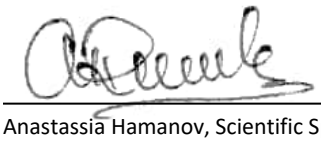
Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1U4014
Report Date: 2021/11/02

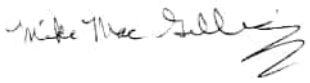
AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

VALIDATION SIGNATURE PAGE

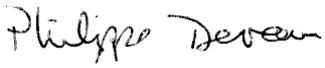
The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)



Phil Deveau, Scientific Specialist (Organics)



Automated Statchk

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1U4014	B50305
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#850305-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	JO/DH		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	Oct 19	11:10	SW			X		
2		SW2		11:20				X		
3		SW3		11:40				X		
4		SW4		11:50				X		
5		SW13		12:20				X		
6		~~SW14~~						~~X~~		
7		SW19-20		12:40				X		
8		Diffuser		11:30				X		
9		DUP1	↓	—	↓			X		
10										

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Derek Heath	21/10/19	14:45	MATT GRACE				☐	13, 13, 13/10, 11, 10	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

2021 OCT 19 14:48

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: C852700-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/11/15
Report #: R6901784
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1W2029
Received: 2021/11/02, 16:29

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	8	N/A	2021/11/05	N/A	SM 23 4500-CO2 D
Alkalinity	2	N/A	2021/11/12	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	6	N/A	2021/11/09	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	8	2021/11/04	2021/11/09	ATL SOP 00041	SM 23 5210B m
Chloride	2	N/A	2021/11/12	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	6	N/A	2021/11/09	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	8	2021/11/04	2021/11/04	ATL SOP 00042	SM 23 5220D m
Colour	2	N/A	2021/11/12	ATL SOP 00020	SM 23 2120C m
Colour	6	N/A	2021/11/09	ATL SOP 00020	SM 23 2120C m
Conductance - water	8	N/A	2021/11/05	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	1	2021/11/08	2021/11/08	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	7	2021/11/08	2021/11/09	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	2	N/A	2021/11/05	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	5	N/A	2021/11/08	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2021/11/09	ATL SOP 00048	Auto Calc
Metals Water Total MS	2	2021/11/04	2021/11/04	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	5	2021/11/04	2021/11/05	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/11/04	2021/11/08	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	6	N/A	2021/11/10	N/A	Auto Calc.
Ion Balance (% Difference)	2	N/A	2021/11/12	N/A	Auto Calc.
Anion and Cation Sum	8	N/A	2021/11/09	N/A	Auto Calc.
Nitrogen Ammonia - water	8	N/A	2021/11/08	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	2	N/A	2021/11/12	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	6	N/A	2021/11/09	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	2	N/A	2021/11/12	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	6	N/A	2021/11/09	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	6	N/A	2021/11/10	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	2	N/A	2021/11/12	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	8	N/A	2021/11/05	CAM SOP-00444	OMOE E3179 m
pH (2)	8	N/A	2021/11/05	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	2	N/A	2021/11/12	ATL SOP 00021	SM 23 4500-P E m

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Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: C852700-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2021/11/15
Report #: R6901784
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1W2029
Received: 2021/11/02, 16:29

Sample Matrix: Surface Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus - ortho	6	N/A	2021/11/09	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	6	N/A	2021/11/10	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	2	N/A	2021/11/12	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	6	N/A	2021/11/10	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	2	N/A	2021/11/12	ATL SOP 00049	Auto Calc.
Reactive Silica	2	N/A	2021/11/12	ATL SOP 00022	EPA 366.0 m
Reactive Silica	6	N/A	2021/11/09	ATL SOP 00022	EPA 366.0 m
Sulphate	2	N/A	2021/11/12	ATL SOP 00023	ASTM D516-16 m
Sulphate	6	N/A	2021/11/09	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	6	N/A	2021/11/10	N/A	Auto Calc.
Total Dissolved Solids (TDS calc)	2	N/A	2021/11/12	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	1	N/A	2021/11/05	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (3)	7	N/A	2021/11/08	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	7	N/A	2021/11/10	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	1	N/A	2021/11/09	N/A	Atl. RBCA v3 m
Total Suspended Solids	1	2021/11/09	2021/11/10	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	7	2021/11/09	2021/11/12	ATL SOP 00007	SM 23 2540D m
Turbidity	8	N/A	2021/11/05	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	8	N/A	2021/11/05	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: C852700-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
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Halifax , NS
CANADA B3J 3M8

Report Date: 2021/11/15
Report #: R6901784
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1W2029

Received: 2021/11/02, 16:29

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
15 Nov 2021 11:31:05

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RCV729			RCV729			RCV730		
Sampling Date		2021/11/02 08:30			2021/11/02 08:30			2021/11/02 08:40		
COC Number		C852700-01-01			C852700-01-01			C852700-01-01		
Sample #		SW1			SW1			SW2		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW1 Lab-Dup**	**RDL**	**QC Batch**	**SW2**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	0.210	N/A	7677094				0.210	N/A	7677094
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7677090				<1.0	1.0	7677090
Calculated TDS	mg/L	20	1.0	7677099				23	1.0	7677099
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7677090				<1.0	1.0	7677090
Cation Sum	me/L	0.350	N/A	7677094				0.450	N/A	7677094
Hardness (CaCO3)	mg/L	4.5	1.0	7677092				9.1	1.0	7677092
Ion Balance (% Difference)	%	25.0	N/A	7677093				36.4	N/A	7677093
Langelier Index (@ 20C)	N/A	NC		7677097				NC		7677097
Langelier Index (@ 4C)	N/A	NC		7677098				NC		7677098
Nitrate (N)	mg/L	<0.050	0.050	7677095				<0.050	0.050	7677095
Saturation pH (@ 20C)	N/A	NC		7677097				NC		7677097
Saturation pH (@ 4C)	N/A	NC		7677098				NC		7677098
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7686499				<5.0	5.0	7686499
Carbonaceous BOD	mg/L	<10	10	7679722	<10	10	7679722	<10	10	7679722
Total Chemical Oxygen Demand	mg/L	92	20	7679737				82	20	7679737
Dissolved Chloride (Cl-)	mg/L	7.6	1.0	7686522				7.6	1.0	7686522
Colour	TCU	270	50	7686525				230	25	7686525
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7686528				<0.050	0.050	7686528
Nitrite (N)	mg/L	<0.010	0.010	7686531				<0.010	0.010	7686531
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7686178				<0.050	0.050	7686178
Total Organic Carbon (C)	mg/L	32	0.50	7682418				28	0.50	7682418
Orthophosphate (P)	mg/L	<0.010	0.010	7686527				<0.010	0.010	7686527
pH	pH	5.30		7682383				5.61		7682383
Phenols-4AAP	mg/L	<0.0010	0.0010	7682473				<0.0010	0.0010	7682473
Reactive Silica (SiO2)	mg/L	5.3	0.50	7686524				6.0	0.50	7686524
Total Suspended Solids	mg/L	1.0	1.0	7689086				3.2	1.0	7689266
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7686523				<2.0	2.0	7686523
Turbidity	NTU	1.4	0.10	7682493				4.1	0.10	7682493
Conductivity	uS/cm	53	1.0	7682380				50	1.0	7682380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RCV731			RCV731			RCV732		
Sampling Date		2021/11/02 08:55			2021/11/02 08:55			2021/11/02 09:05		
COC Number		C852700-01-01			C852700-01-01			C852700-01-01		
Sample #		SW3			SW3			SW4		
	UNITS	**SW3**	**RDL**	**QC Batch**	**SW3 Lab-Dup**	**RDL**	**QC Batch**	**SW4**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	0.250	N/A	7677094				0.210	N/A	7677094
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7677090				<1.0	1.0	7677090
Calculated TDS	mg/L	25	1.0	7677099				24	1.0	7677099
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7677090				<1.0	1.0	7677090
Cation Sum	me/L	0.460	N/A	7677094				0.480	N/A	7677094
Hardness (CaCO3)	mg/L	9.1	1.0	7677092				9.2	1.0	7677092
Ion Balance (% Difference)	%	29.6	N/A	7677093				39.1	N/A	7677093
Langelier Index (@ 20C)	N/A	NC		7677097				NC		7677097
Langelier Index (@ 4C)	N/A	NC		7677098				NC		7677098
Nitrate (N)	mg/L	<0.050	0.050	7677095				<0.050	0.050	7677095
Saturation pH (@ 20C)	N/A	NC		7677097				NC		7677097
Saturation pH (@ 4C)	N/A	NC		7677098				NC		7677098
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7691857	<5.0	5.0	7691857	<5.0	5.0	7686499
Carbonaceous BOD	mg/L	<10	10	7679722				<10	10	7679722
Total Chemical Oxygen Demand	mg/L	85	20	7679737				80	20	7679737
Dissolved Chloride (Cl-)	mg/L	9.0	1.0	7696248	8.6	1.0	7696248	7.6	1.0	7686522
Colour	TCU	230	25	7696251	240	25	7696251	240	25	7686525
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7696253	<0.050	0.050	7696253	<0.050	0.050	7686528
Nitrite (N)	mg/L	<0.010	0.010	7696254	<0.010	0.010	7696254	<0.010	0.010	7686531
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7686178				<0.050	0.050	7686182
Total Organic Carbon (C)	mg/L	28	0.50	7682418				28	0.50	7682418
Orthophosphate (P)	mg/L	<0.010	0.010	7696252	<0.010	0.010	7696252	<0.010	0.010	7686527
pH	pH	5.76		7682383	5.65		7682383	5.56		7682383
Phenols-4AAP	mg/L	<0.0010	0.0010	7682473				0.0010	0.0010	7682473
Reactive Silica (SiO2)	mg/L	6.3	0.50	7696250	6.6	0.50	7696250	5.9	0.50	7686524
Total Suspended Solids	mg/L	1.8	1.0	7689266				2.2	1.0	7689266
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7696249	<2.0	2.0	7696249	<2.0	2.0	7686523
Turbidity	NTU	4.6	0.10	7682493				3.4	0.10	7682493
Conductivity	uS/cm	50	1.0	7682380	50	1.0	7682380	50	1.0	7682380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RCV733			RCV734			RCV734		
Sampling Date		2021/11/02 09:40			2021/11/02 09:30			2021/11/02 09:30		
COC Number		C852700-01-01			C852700-01-01			C852700-01-01		
Sample #		SW13			SW19-20			SW19-20		
	UNITS	**SW13**	**RDL**	**QC Batch**	**SW19-20**	**RDL**	**QC Batch**	**SW19-20 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters										
Anion Sum	me/L	0.600	N/A	7677094	5.54	N/A	7677094			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	7.8	1.0	7677090	170	1.0	7677090			
Calculated TDS	mg/L	43	1.0	7677099	330	1.0	7677099			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7677090	<1.0	1.0	7677090			
Cation Sum	me/L	0.750	N/A	7677094	5.26	N/A	7677094			
Hardness (CaCO3)	mg/L	18	1.0	7677092	210	1.0	7677092			
Ion Balance (% Difference)	%	11.1	N/A	7677093	2.59	N/A	7677093			
Langelier Index (@ 20C)	N/A	-3.30		7677097	0.379		7677097			
Langelier Index (@ 4C)	N/A	-3.55		7677098	0.130		7677098			
Nitrate (N)	mg/L	0.14	0.050	7677095	9.7	0.50	7677095			
Saturation pH (@ 20C)	N/A	9.75		7677097	7.36		7677097			
Saturation pH (@ 4C)	N/A	10.0		7677098	7.61		7677098			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	7.8	5.0	7686499	170	25	7691859	160	25	7691859
Carbonaceous BOD	mg/L	<10	10	7679722	<10	10	7679722			
Total Chemical Oxygen Demand	mg/L	66	20	7679737	21	20	7679737			
Dissolved Chloride (Cl-)	mg/L	14	1.0	7686522	14	1.0	7696255	14	1.0	7696255
Colour	TCU	200	25	7686525	16	5.0	7696258	14	5.0	7696258
Nitrate + Nitrite (N)	mg/L	0.14	0.050	7686528	10	0.50	7696260	9.9	0.50	7696260
Nitrite (N)	mg/L	<0.010	0.010	7686531	0.37	0.010	7696261	0.37	0.010	7696261
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7686182	0.46	0.050	7686182			
Total Organic Carbon (C)	mg/L	24	0.50	7682359	5.8	0.50	7682418			
Orthophosphate (P)	mg/L	0.012	0.010	7686527	0.037	0.010	7696259	0.038	0.010	7696259
pH	pH	6.45		7682383	7.74		7682348	7.80		7682348
Phenols-4AAP	mg/L	<0.0010	0.0010	7682473	<0.0010	0.0010	7682473			
Reactive Silica (SiO2)	mg/L	5.5	0.50	7686524	9.4	0.50	7696257	9.3	0.50	7696257
Total Suspended Solids	mg/L	2.0	1.0	7689266	3.8	1.0	7689266			
Dissolved Sulphate (SO4)	mg/L	2.6	2.0	7686523	52	2.0	7696256	52	2.0	7696256
Turbidity	NTU	3.9	0.10	7682493	5.4	0.10	7682495			
Conductivity	uS/cm	78	1.0	7682380	500	1.0	7682339	510	1.0	7682339

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RCV753		RCV754		
Sampling Date		2021/11/02 08:50		2021/11/02		
COC Number		C852700-01-01		C852700-01-01		
Sample #		DIFFUSER		DUP1		
	UNITS	Diffuser	RDL	DUP1	RDL	QC Batch
Calculated Parameters						
Anion Sum	me/L	0.200	N/A	0.200	N/A	7677094
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	7677090
Calculated TDS	mg/L	23	1.0	20	1.0	7677099
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	7677090
Cation Sum	me/L	0.440	N/A	0.350	N/A	7677094
Hardness (CaCO3)	mg/L	8.2	1.0	4.4	1.0	7677092
Ion Balance (% Difference)	%	37.5	N/A	27.3	N/A	7677093
Langelier Index (@ 20C)	N/A	NC		NC		7677097
Langelier Index (@ 4C)	N/A	NC		NC		7677098
Nitrate (N)	mg/L	<0.050	0.050	<0.050	0.050	7677095
Saturation pH (@ 20C)	N/A	NC		NC		7677097
Saturation pH (@ 4C)	N/A	NC		NC		7677098
Inorganics						
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	<5.0	5.0	7686499
Carbonaceous BOD	mg/L	<10	10	<10	10	7679722
Total Chemical Oxygen Demand	mg/L	75	20	100	20	7679737
Dissolved Chloride (Cl-)	mg/L	7.2	1.0	7.1	1.0	7686522
Colour	TCU	240	25	280	50	7686525
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	<0.050	0.050	7686528
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	7686531
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	<0.050	0.050	7686182
Total Organic Carbon (C)	mg/L	29	0.50	32	0.50	7682418
Orthophosphate (P)	mg/L	<0.010	0.010	<0.010	0.010	7686527
pH	pH	5.60		5.10		7682383
Phenols-4AAP	mg/L	<0.0010	0.0010	<0.0010	0.0010	7682473
Reactive Silica (SiO2)	mg/L	6.0	0.50	5.3	0.50	7686524
Total Suspended Solids	mg/L	2.2	1.0	<1.0	1.0	7689266
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	<2.0	2.0	7686523
Turbidity	NTU	4.2	0.10	1.7	0.10	7682495
Conductivity	uS/cm	49	1.0	52	1.0	7682380

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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		RCV729	RCV730	RCV731	RCV732	RCV733		
Sampling Date		2021/11/02 08:30	2021/11/02 08:40	2021/11/02 08:55	2021/11/02 09:05	2021/11/02 09:40		
COC Number		C852700-01-01	C852700-01-01	C852700-01-01	C852700-01-01	C852700-01-01		
Sample #		SW1	SW2	SW3	SW4	SW13		
	UNITS	**SW1**	**SW2**	**SW3**	**SW4**	**SW13**	**RDL**	**QC Batch**
Metals								
Total Aluminum (Al)	ug/L	900	870	950	950	690	5.0	7679740
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7679740
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7679740
Total Barium (Ba)	ug/L	5.3	6.1	6.3	6.8	8.4	1.0	7679740
Total Beryllium (Be)	ug/L	0.14	0.11	0.12	0.13	<0.10	0.10	7679740
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7679740
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	50	7679740
Total Cadmium (Cd)	ug/L	0.023	0.022	0.022	0.024	0.029	0.010	7679740
Total Calcium (Ca)	ug/L	750	2300	2300	2300	4600	100	7679740
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7679740
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7679740
Total Copper (Cu)	ug/L	<0.50	0.56	0.65	0.53	1.8	0.50	7679740
Total Iron (Fe)	ug/L	780	810	840	870	1100	50	7679740
Total Lead (Pb)	ug/L	1.2	1.2	1.2	1.3	0.96	0.50	7679740
Total Magnesium (Mg)	ug/L	630	790	810	850	1500	100	7679740
Total Manganese (Mn)	ug/L	22	30	31	33	33	2.0	7679740
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7679740
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7679740
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	100	7679740
Total Potassium (K)	ug/L	250	470	460	470	810	100	7679740
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7679740
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7679740
Total Sodium (Na)	ug/L	5200	5300	5400	5700	7800	100	7679740
Total Strontium (Sr)	ug/L	7.1	12	12	12	16	2.0	7679740
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7679740
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7679740
Total Titanium (Ti)	ug/L	8.2	12	13	13	10	2.0	7679740
Total Uranium (U)	ug/L	0.19	0.29	0.37	0.36	0.48	0.10	7679740
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7679740
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	7.1	5.0	7679740

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		RCV734	RCV753	RCV754		
Sampling Date		2021/11/02 09:30	2021/11/02 08:50	2021/11/02		
COC Number		C852700-01-01	C852700-01-01	C852700-01-01		
Sample #		SW19-20	DIFFUSER	DUP1		
	UNITS	SW19-20	Diffuser	DUP1	RDL	QC Batch
Metals						
Total Aluminum (Al)	ug/L	170	890	880	5.0	7679740
Total Antimony (Sb)	ug/L	1.1	<1.0	<1.0	1.0	7679740
Total Arsenic (As)	ug/L	1.8	<1.0	<1.0	1.0	7679740
Total Barium (Ba)	ug/L	29	5.9	5.2	1.0	7679740
Total Beryllium (Be)	ug/L	<0.10	0.11	0.12	0.10	7679740
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	2.0	7679740
Total Boron (B)	ug/L	150	<50	<50	50	7679740
Total Cadmium (Cd)	ug/L	0.018	0.022	0.027	0.010	7679740
Total Calcium (Ca)	ug/L	71000	2000	750	100	7679740
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	1.0	7679740
Total Cobalt (Co)	ug/L	3.4	<0.40	<0.40	0.40	7679740
Total Copper (Cu)	ug/L	3.1	0.62	<0.50	0.50	7679740
Total Iron (Fe)	ug/L	320	820	760	50	7679740
Total Lead (Pb)	ug/L	<0.50	1.2	1.2	0.50	7679740
Total Magnesium (Mg)	ug/L	9000	770	620	100	7679740
Total Manganese (Mn)	ug/L	720	30	22	2.0	7679740
Total Molybdenum (Mo)	ug/L	7.0	<2.0	<2.0	2.0	7679740
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	2.0	7679740
Total Phosphorus (P)	ug/L	<100	<100	<100	100	7679740
Total Potassium (K)	ug/L	11000	440	260	100	7679740
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	0.50	7679740
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	0.10	7679740
Total Sodium (Na)	ug/L	15000	5200	5100	100	7679740
Total Strontium (Sr)	ug/L	210	10	7.1	2.0	7679740
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	0.10	7679740
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	2.0	7679740
Total Titanium (Ti)	ug/L	8.9	10	8.8	2.0	7679740
Total Uranium (U)	ug/L	22	0.30	0.20	0.10	7679740
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	2.0	7679740
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	5.0	7679740

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Bureau Veritas Job #: C1W2029
Report Date: 2021/11/15

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: JO

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		RCV729	RCV730	RCV731	RCV732	RCV733		
Sampling Date		2021/11/02 08:30	2021/11/02 08:40	2021/11/02 08:55	2021/11/02 09:05	2021/11/02 09:40		
COC Number		C852700-01-01	C852700-01-01	C852700-01-01	C852700-01-01	C852700-01-01		
Sample #		SW1	SW2	SW3	SW4	SW13		
	UNITS	**SW1**	**SW2**	**SW3**	**SW4**	**SW13**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7682318
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7682318
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7682318
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7682318
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7682318
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7686841
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7686841
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7686841
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7677227
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA	N/A	7686841
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA	N/A	7686841
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	98	102	96	92	99		7686841
n-Dotriacontane - Extractable	%	96	100	94	92	99		7686841
Isobutylbenzene - Volatile	%	106	108	107	110	108		7682318

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N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		RCV734		RCV753		RCV754		
Sampling Date		2021/11/02 09:30		2021/11/02 08:50		2021/11/02		
COC Number		C852700-01-01		C852700-01-01		C852700-01-01		
Sample #		SW19-20		DIFFUSER		DUP1		
	UNITS	**SW19-20**	**QC Batch**	**Diffuser**	**RDL**	**DUP1**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	7682318	<0.0010	0.0010	<0.0010	0.0010	7682318
Toluene	mg/L	<0.0010	7682318	<0.0010	0.0010	<0.0010	0.0010	7682318
Ethylbenzene	mg/L	<0.0010	7682318	<0.0010	0.0010	<0.0010	0.0010	7682318
Total Xylenes	mg/L	<0.0020	7682318	<0.0020	0.0020	<0.0020	0.0020	7682318
C6 - C10 (less BTEX)	mg/L	<0.090	7682318	<0.090	0.090	<0.090	0.090	7682318
>C10-C16 Hydrocarbons	mg/L	<0.056	7686844	<0.056	0.056	<0.050	0.050	7686841
>C16-C21 Hydrocarbons	mg/L	<0.056	7686844	<0.056	0.056	<0.050	0.050	7686841
>C21-<C32 Hydrocarbons	mg/L	<0.10	7686844	<0.10	0.10	<0.090	0.090	7686841
Modified TPH (Tier1)	mg/L	<0.10	7677227	<0.10	0.10	<0.090	0.090	7677227
Reached Baseline at C32	mg/L	NA	7686844	NA	N/A	NA	N/A	7686841
Hydrocarbon Resemblance	mg/L	NA	7686844	NA	N/A	NA	N/A	7686841
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	104	7686844	89		94		7686841
n-Dotriacontane - Extractable	%	116 (1)	7686844	93 (1)		93		7686841
Isobutylbenzene - Volatile	%	107	7682318	108		105		7682318

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.0°C
Package 2	11.7°C

Sample RCV729 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RCV730 [SW2] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RCV731 [SW3] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RCV732 [SW4] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RCV733 [SW13] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RCV734 [SW19-20] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RCV753 [Diffuser] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RCV754 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7679722	KLE	QC Standard	Carbonaceous BOD	2021/11/09		129 (1)	%	80 - 120
7679722	KLE	Spiked Blank	Carbonaceous BOD	2021/11/09		102	%	80 - 120
7679722	KLE	Method Blank	Carbonaceous BOD	2021/11/09	<2.0		mg/L	
7679722	KLE	RPD [RCV729-01]	Carbonaceous BOD	2021/11/09	NC		%	25
7679737	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/11/04		102	%	80 - 120
7679737	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/11/04		99	%	80 - 120
7679737	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/11/04		102	%	80 - 120
7679737	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/11/04	<20		mg/L	
7679737	ZZH	RPD	Total Chemical Oxygen Demand	2021/11/04	NC		%	25
7679740	BAN	Matrix Spike	Total Aluminum (Al)	2021/11/04		102	%	80 - 120
			Total Antimony (Sb)	2021/11/04		113	%	80 - 120
			Total Arsenic (As)	2021/11/04		97	%	80 - 120
			Total Barium (Ba)	2021/11/04		99	%	80 - 120
			Total Beryllium (Be)	2021/11/04		105	%	80 - 120
			Total Bismuth (Bi)	2021/11/04		101	%	80 - 120
			Total Boron (B)	2021/11/04		105	%	80 - 120
			Total Cadmium (Cd)	2021/11/04		100	%	80 - 120
			Total Calcium (Ca)	2021/11/04		NC	%	80 - 120
			Total Chromium (Cr)	2021/11/04		101	%	80 - 120
			Total Cobalt (Co)	2021/11/04		101	%	80 - 120
			Total Copper (Cu)	2021/11/04		100	%	80 - 120
			Total Iron (Fe)	2021/11/04		103	%	80 - 120
			Total Lead (Pb)	2021/11/04		100	%	80 - 120
			Total Magnesium (Mg)	2021/11/04		NC	%	80 - 120
			Total Manganese (Mn)	2021/11/04		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/11/04		104	%	80 - 120
			Total Nickel (Ni)	2021/11/04		101	%	80 - 120
			Total Phosphorus (P)	2021/11/04		109	%	80 - 120
			Total Potassium (K)	2021/11/04		103	%	80 - 120
			Total Selenium (Se)	2021/11/04		102	%	80 - 120
			Total Silver (Ag)	2021/11/04		98	%	80 - 120
			Total Sodium (Na)	2021/11/04		NC	%	80 - 120
			Total Strontium (Sr)	2021/11/04		NC	%	80 - 120
			Total Thallium (Tl)	2021/11/04		101	%	80 - 120
			Total Tin (Sn)	2021/11/04		103	%	80 - 120
			Total Titanium (Ti)	2021/11/04		105	%	80 - 120
			Total Uranium (U)	2021/11/04		107	%	80 - 120
			Total Vanadium (V)	2021/11/04		104	%	80 - 120
			Total Zinc (Zn)	2021/11/04		98	%	80 - 120
7679740	BAN	Spiked Blank	Total Aluminum (Al)	2021/11/04		101	%	80 - 120
			Total Antimony (Sb)	2021/11/04		114	%	80 - 120
			Total Arsenic (As)	2021/11/04		96	%	80 - 120
			Total Barium (Ba)	2021/11/04		99	%	80 - 120
			Total Beryllium (Be)	2021/11/04		104	%	80 - 120
			Total Bismuth (Bi)	2021/11/04		102	%	80 - 120
			Total Boron (B)	2021/11/04		103	%	80 - 120
			Total Cadmium (Cd)	2021/11/04		100	%	80 - 120
			Total Calcium (Ca)	2021/11/04		106	%	80 - 120
			Total Chromium (Cr)	2021/11/04		102	%	80 - 120
			Total Cobalt (Co)	2021/11/04		101	%	80 - 120
			Total Copper (Cu)	2021/11/04		102	%	80 - 120
			Total Iron (Fe)	2021/11/04		104	%	80 - 120
			Total Lead (Pb)	2021/11/04		101	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Magnesium (Mg)	2021/11/04		106	%	80 - 120
			Total Manganese (Mn)	2021/11/04		104	%	80 - 120
			Total Molybdenum (Mo)	2021/11/04		103	%	80 - 120
			Total Nickel (Ni)	2021/11/04		103	%	80 - 120
			Total Phosphorus (P)	2021/11/04		107	%	80 - 120
			Total Potassium (K)	2021/11/04		102	%	80 - 120
			Total Selenium (Se)	2021/11/04		101	%	80 - 120
			Total Silver (Ag)	2021/11/04		99	%	80 - 120
			Total Sodium (Na)	2021/11/04		102	%	80 - 120
			Total Strontium (Sr)	2021/11/04		101	%	80 - 120
			Total Thallium (Tl)	2021/11/04		103	%	80 - 120
			Total Tin (Sn)	2021/11/04		103	%	80 - 120
			Total Titanium (Ti)	2021/11/04		106	%	80 - 120
			Total Uranium (U)	2021/11/04		106	%	80 - 120
			Total Vanadium (V)	2021/11/04		104	%	80 - 120
			Total Zinc (Zn)	2021/11/04		99	%	80 - 120
7679740	BAN	Method Blank	Total Aluminum (Al)	2021/11/04	<5.0		ug/L	
			Total Antimony (Sb)	2021/11/04	<1.0		ug/L	
			Total Arsenic (As)	2021/11/04	<1.0		ug/L	
			Total Barium (Ba)	2021/11/04	<1.0		ug/L	
			Total Beryllium (Be)	2021/11/04	<0.10		ug/L	
			Total Bismuth (Bi)	2021/11/04	<2.0		ug/L	
			Total Boron (B)	2021/11/04	<50		ug/L	
			Total Cadmium (Cd)	2021/11/04	<0.010		ug/L	
			Total Calcium (Ca)	2021/11/04	<100		ug/L	
			Total Chromium (Cr)	2021/11/04	<1.0		ug/L	
			Total Cobalt (Co)	2021/11/04	<0.40		ug/L	
			Total Copper (Cu)	2021/11/04	<0.50		ug/L	
			Total Iron (Fe)	2021/11/04	<50		ug/L	
			Total Lead (Pb)	2021/11/04	<0.50		ug/L	
			Total Magnesium (Mg)	2021/11/04	<100		ug/L	
			Total Manganese (Mn)	2021/11/04	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/11/04	<2.0		ug/L	
			Total Nickel (Ni)	2021/11/04	<2.0		ug/L	
			Total Phosphorus (P)	2021/11/04	<100		ug/L	
			Total Potassium (K)	2021/11/04	<100		ug/L	
			Total Selenium (Se)	2021/11/04	<0.50		ug/L	
			Total Silver (Ag)	2021/11/04	<0.10		ug/L	
			Total Sodium (Na)	2021/11/04	<100		ug/L	
			Total Strontium (Sr)	2021/11/04	<2.0		ug/L	
			Total Thallium (Tl)	2021/11/04	<0.10		ug/L	
			Total Tin (Sn)	2021/11/04	<2.0		ug/L	
			Total Titanium (Ti)	2021/11/04	<2.0		ug/L	
			Total Uranium (U)	2021/11/04	<0.10		ug/L	
			Total Vanadium (V)	2021/11/04	<2.0		ug/L	
			Total Zinc (Zn)	2021/11/04	<5.0		ug/L	
7679740	BAN	RPD	Total Aluminum (Al)	2021/11/04	1.5		%	20
			Total Iron (Fe)	2021/11/04	NC		%	20
			Total Lead (Pb)	2021/11/04	2.9		%	20
			Total Manganese (Mn)	2021/11/04	11		%	20
7682318	THL	Matrix Spike [RCV729-06]	Isobutylbenzene - Volatile	2021/11/05		111	%	70 - 130
			Benzene	2021/11/05		87	%	70 - 130
			Toluene	2021/11/05		91	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2021/11/05		94	%	70 - 130
			Total Xylenes	2021/11/05		93	%	70 - 130
7682318	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/11/05		113	%	70 - 130
			Benzene	2021/11/05		90	%	70 - 130
			Toluene	2021/11/05		95	%	70 - 130
			Ethylbenzene	2021/11/05		98	%	70 - 130
			Total Xylenes	2021/11/05		98	%	70 - 130
7682318	THL	Method Blank	Isobutylbenzene - Volatile	2021/11/05		109	%	70 - 130
			Benzene	2021/11/05	<0.0010		mg/L	
			Toluene	2021/11/05	<0.0010		mg/L	
			Ethylbenzene	2021/11/05	<0.0010		mg/L	
			Total Xylenes	2021/11/05	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/11/05	<0.090		mg/L	
7682318	THL	RPD	Benzene	2021/11/05	NC		%	40
			Toluene	2021/11/05	NC		%	40
			Ethylbenzene	2021/11/05	NC		%	40
			Total Xylenes	2021/11/05	NC		%	40
			C6 - C10 (less BTEX)	2021/11/05	NC		%	40
7682339	SHW	Spiked Blank	Conductivity	2021/11/05		100	%	80 - 120
7682339	SHW	Method Blank	Conductivity	2021/11/05	<1.0		uS/cm	
7682339	SHW	RPD [RCV734-07]	Conductivity	2021/11/05	1.4		%	10
7682348	SHW	Spiked Blank	pH	2021/11/05		100	%	97 - 103
7682348	SHW	RPD [RCV734-07]	pH	2021/11/05	0.87		%	N/A
7682359	NGI	Matrix Spike	Total Organic Carbon (C)	2021/11/05		94	%	85 - 115
7682359	NGI	Spiked Blank	Total Organic Carbon (C)	2021/11/05		107	%	80 - 120
7682359	NGI	Method Blank	Total Organic Carbon (C)	2021/11/05	<0.50		mg/L	
7682359	NGI	RPD	Total Organic Carbon (C)	2021/11/05	0.16		%	15
7682380	SHW	Spiked Blank	Conductivity	2021/11/05		100	%	80 - 120
7682380	SHW	Method Blank	Conductivity	2021/11/05	1.2, RDL=1.0		uS/cm	
7682380	SHW	RPD [RCV731-07]	Conductivity	2021/11/05	0.77		%	10
7682383	SHW	Spiked Blank	pH	2021/11/05		99	%	97 - 103
7682383	SHW	RPD [RCV731-07]	pH	2021/11/05	1.8		%	N/A
7682418	NGI	Matrix Spike	Total Organic Carbon (C)	2021/11/08		92	%	85 - 115
7682418	NGI	Spiked Blank	Total Organic Carbon (C)	2021/11/08		103	%	80 - 120
7682418	NGI	Method Blank	Total Organic Carbon (C)	2021/11/08	<0.50		mg/L	
7682418	NGI	RPD	Total Organic Carbon (C)	2021/11/08	1.4		%	15
7682473	LHA	Matrix Spike	Phenols-4AAP	2021/11/05		102	%	80 - 120
7682473	LHA	Spiked Blank	Phenols-4AAP	2021/11/05		101	%	80 - 120
7682473	LHA	Method Blank	Phenols-4AAP	2021/11/05	<0.0010		mg/L	
7682473	LHA	RPD	Phenols-4AAP	2021/11/05	NC		%	20
7682493	SHW	QC Standard	Turbidity	2021/11/05		101	%	80 - 120
7682493	SHW	Spiked Blank	Turbidity	2021/11/05		102	%	80 - 120
7682493	SHW	Method Blank	Turbidity	2021/11/05	<0.10		NTU	
7682493	SHW	RPD	Turbidity	2021/11/05	7.0		%	20
7682495	SHW	QC Standard	Turbidity	2021/11/05		100	%	80 - 120
7682495	SHW	Spiked Blank	Turbidity	2021/11/05		101	%	80 - 120
7682495	SHW	Method Blank	Turbidity	2021/11/05	<0.10		NTU	
7682495	SHW	RPD	Turbidity	2021/11/05	3.0		%	20
7686178	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/11/08		98	%	80 - 120
7686178	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/11/08		102	%	80 - 120
7686178	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/11/08	<0.050		mg/L	
7686178	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/11/08	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7686182	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/11/08		103	%	80 - 120
7686182	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/11/08		102	%	80 - 120
7686182	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/11/08	<0.050		mg/L	
7686182	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/11/08	0.46		%	20
7686499	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/11/09		NC	%	80 - 120
7686499	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/11/09		110	%	80 - 120
7686499	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/11/09	<5.0		mg/L	
7686499	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/11/09	5.4		%	20
7686522	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/11/09		95	%	80 - 120
7686522	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/11/09		97	%	80 - 120
7686522	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/11/09	<1.0		mg/L	
7686522	EMT	RPD	Dissolved Chloride (Cl-)	2021/11/09	13		%	20
7686523	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/11/09		100	%	80 - 120
7686523	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/11/09		102	%	80 - 120
7686523	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/11/09	<2.0		mg/L	
7686523	EMT	RPD	Dissolved Sulphate (SO4)	2021/11/09	1.9		%	20
7686524	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/11/09		91	%	80 - 120
7686524	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/11/09		97	%	80 - 120
7686524	EMT	Method Blank	Reactive Silica (SiO2)	2021/11/09	<0.50		mg/L	
7686524	EMT	RPD	Reactive Silica (SiO2)	2021/11/09	3.8		%	20
7686525	EMT	Spiked Blank	Colour	2021/11/09		102	%	80 - 120
7686525	EMT	Method Blank	Colour	2021/11/09	<5.0		TCU	
7686525	EMT	RPD	Colour	2021/11/09	NC		%	20
7686527	EMT	Matrix Spike	Orthophosphate (P)	2021/11/09		99	%	80 - 120
7686527	EMT	Spiked Blank	Orthophosphate (P)	2021/11/09		106	%	80 - 120
7686527	EMT	Method Blank	Orthophosphate (P)	2021/11/09	<0.010		mg/L	
7686527	EMT	RPD	Orthophosphate (P)	2021/11/09	NC		%	20
7686528	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/11/09		95	%	80 - 120
7686528	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/11/09		103	%	80 - 120
7686528	EMT	Method Blank	Nitrate + Nitrite (N)	2021/11/09	<0.050		mg/L	
7686528	EMT	RPD	Nitrate + Nitrite (N)	2021/11/09	18		%	20
7686531	EMT	Matrix Spike	Nitrite (N)	2021/11/09		100	%	80 - 120
7686531	EMT	Spiked Blank	Nitrite (N)	2021/11/09		103	%	80 - 120
7686531	EMT	Method Blank	Nitrite (N)	2021/11/09	<0.010		mg/L	
7686531	EMT	RPD	Nitrite (N)	2021/11/09	NC		%	20
7686841	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/11/09		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/09		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/09		89	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/09		84	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/09		90	%	70 - 130
7686841	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/11/09		100	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/09		100	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/09		102	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/09		99	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/09		104	%	70 - 130
7686841	MSK	Method Blank	Isobutylbenzene - Extractable	2021/11/09		102	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/09		101	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/09	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/11/09	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/11/09	<0.090		mg/L	
7686841	MSK	RPD	>C10-C16 Hydrocarbons	2021/11/09	NC		%	40
			>C16-C21 Hydrocarbons	2021/11/09	NC		%	40
			>C21-<C32 Hydrocarbons	2021/11/09	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7686844	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/11/08		105	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/08		108	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/08		119	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/08		107	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/08		105	%	70 - 130
7686844	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/11/08		99	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/08		96	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/08		100	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/08		87	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/08		84	%	70 - 130
7686844	MSK	Method Blank	Isobutylbenzene - Extractable	2021/11/08		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/08		99	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/08	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/11/08	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/11/08	<0.090		mg/L	
7686844	MSK	RPD	>C10-C16 Hydrocarbons	2021/11/08	NC		%	40
			>C16-C21 Hydrocarbons	2021/11/08	NC		%	40
			>C21-<C32 Hydrocarbons	2021/11/08	NC		%	40
7689086	BBD	QC Standard	Total Suspended Solids	2021/11/10		100	%	80 - 120
7689086	BBD	Method Blank	Total Suspended Solids	2021/11/10	<1.0		mg/L	
7689086	BBD	RPD	Total Suspended Solids	2021/11/10	3.6		%	20
7689266	MKX	QC Standard	Total Suspended Solids	2021/11/12		100	%	80 - 120
7689266	MKX	Method Blank	Total Suspended Solids	2021/11/12	<1.0		mg/L	
7689266	MKX	RPD	Total Suspended Solids	2021/11/12	4.2		%	20
7691857	EMT	Matrix Spike [RCV731-07]	Total Alkalinity (Total as CaCO3)	2021/11/12		100	%	80 - 120
7691857	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/11/12		111	%	80 - 120
7691857	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/11/12	<5.0		mg/L	
7691857	EMT	RPD [RCV731-07]	Total Alkalinity (Total as CaCO3)	2021/11/12	NC		%	20
7691859	EMT	Matrix Spike [RCV734-07]	Total Alkalinity (Total as CaCO3)	2021/11/12		NC	%	80 - 120
7691859	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/11/12		111	%	80 - 120
7691859	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/11/12	<5.0		mg/L	
7691859	EMT	RPD [RCV734-07]	Total Alkalinity (Total as CaCO3)	2021/11/12	2.4		%	20
7696248	EMT	Matrix Spike [RCV731-07]	Dissolved Chloride (Cl-)	2021/11/12		96	%	80 - 120
7696248	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/11/12		97	%	80 - 120
7696248	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/11/12	<1.0		mg/L	
7696248	EMT	RPD [RCV731-07]	Dissolved Chloride (Cl-)	2021/11/12	3.9		%	20
7696249	EMT	Matrix Spike [RCV731-07]	Dissolved Sulphate (SO4)	2021/11/12		113	%	80 - 120
7696249	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/11/12		98	%	80 - 120
7696249	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/11/12	<2.0		mg/L	
7696249	EMT	RPD [RCV731-07]	Dissolved Sulphate (SO4)	2021/11/12	NC		%	20
7696250	EMT	Matrix Spike [RCV731-07]	Reactive Silica (SiO2)	2021/11/12		91	%	80 - 120
7696250	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/11/12		94	%	80 - 120
7696250	EMT	Method Blank	Reactive Silica (SiO2)	2021/11/12	<0.50		mg/L	
7696250	EMT	RPD [RCV731-07]	Reactive Silica (SiO2)	2021/11/12	5.5		%	20
7696251	EMT	Spiked Blank	Colour	2021/11/12		94	%	80 - 120
7696251	EMT	Method Blank	Colour	2021/11/12	<5.0		TCU	
7696251	EMT	RPD [RCV731-07]	Colour	2021/11/12	4.3		%	20
7696252	EMT	Matrix Spike [RCV731-07]	Orthophosphate (P)	2021/11/12		92	%	80 - 120
7696252	EMT	Spiked Blank	Orthophosphate (P)	2021/11/12		96	%	80 - 120
7696252	EMT	Method Blank	Orthophosphate (P)	2021/11/12	<0.010		mg/L	
7696252	EMT	RPD [RCV731-07]	Orthophosphate (P)	2021/11/12	NC		%	20
7696253	EMT	Matrix Spike [RCV731-07]	Nitrate + Nitrite (N)	2021/11/12		90	%	80 - 120
7696253	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/11/12		94	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7696253	EMT	Method Blank	Nitrate + Nitrite (N)	2021/11/12	<0.050		mg/L	
7696253	EMT	RPD [RCV731-07]	Nitrate + Nitrite (N)	2021/11/12	NC		%	20
7696254	EMT	Matrix Spike [RCV731-07]	Nitrite (N)	2021/11/12		91	%	80 - 120
7696254	EMT	Spiked Blank	Nitrite (N)	2021/11/12		103	%	80 - 120
7696254	EMT	Method Blank	Nitrite (N)	2021/11/12	<0.010		mg/L	
7696254	EMT	RPD [RCV731-07]	Nitrite (N)	2021/11/12	NC		%	20
7696255	EMT	Matrix Spike [RCV734-07]	Dissolved Chloride (Cl-)	2021/11/12		96	%	80 - 120
7696255	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/11/12		97	%	80 - 120
7696255	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/11/12	<1.0		mg/L	
7696255	EMT	RPD [RCV734-07]	Dissolved Chloride (Cl-)	2021/11/12	1.5		%	20
7696256	EMT	Matrix Spike [RCV734-07]	Dissolved Sulphate (SO4)	2021/11/12		NC	%	80 - 120
7696256	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/11/12		97	%	80 - 120
7696256	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/11/12	<2.0		mg/L	
7696256	EMT	RPD [RCV734-07]	Dissolved Sulphate (SO4)	2021/11/12	0.81		%	20
7696257	EMT	Matrix Spike [RCV734-07]	Reactive Silica (SiO2)	2021/11/12		88	%	80 - 120
7696257	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/11/12		95	%	80 - 120
7696257	EMT	Method Blank	Reactive Silica (SiO2)	2021/11/12	<0.50		mg/L	
7696257	EMT	RPD [RCV734-07]	Reactive Silica (SiO2)	2021/11/12	1.5		%	20
7696258	EMT	Spiked Blank	Colour	2021/11/12		95	%	80 - 120
7696258	EMT	Method Blank	Colour	2021/11/12	<5.0		TCU	
7696258	EMT	RPD [RCV734-07]	Colour	2021/11/12	11		%	20
7696259	EMT	Matrix Spike [RCV734-07]	Orthophosphate (P)	2021/11/12		87	%	80 - 120
7696259	EMT	Spiked Blank	Orthophosphate (P)	2021/11/12		94	%	80 - 120
7696259	EMT	Method Blank	Orthophosphate (P)	2021/11/12	<0.010		mg/L	
7696259	EMT	RPD [RCV734-07]	Orthophosphate (P)	2021/11/12	2.6		%	20
7696260	EMT	Matrix Spike [RCV734-07]	Nitrate + Nitrite (N)	2021/11/12		NC	%	80 - 120
7696260	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/11/12		96	%	80 - 120
7696260	EMT	Method Blank	Nitrate + Nitrite (N)	2021/11/12	<0.050		mg/L	
7696260	EMT	RPD [RCV734-07]	Nitrate + Nitrite (N)	2021/11/12	0.88		%	20
7696261	EMT	Matrix Spike [RCV734-07]	Nitrite (N)	2021/11/12		NC	%	80 - 120
7696261	EMT	Spiked Blank	Nitrite (N)	2021/11/12		100	%	80 - 120
7696261	EMT	Method Blank	Nitrite (N)	2021/11/12	<0.010		mg/L	
7696261	EMT	RPD [RCV734-07]	Nitrite (N)	2021/11/12	0.54		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

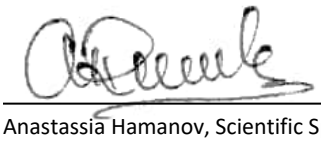
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery high. Second source QC recovery and all other QC acceptable.

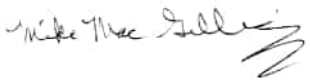
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VALIDATION SIGNATURE PAGE

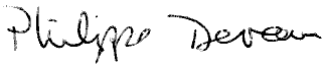
The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)



Phil Deveau, Scientific Specialist (Organics)



Automated Statchk

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel: (902) 420-0203 Toll-free: 800-563-6266 Fax: (902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1N7029	852700
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#852700-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	JS/Rory M.		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	21/11/02	8:30	SW			X		
2		SW2		8:40				X		
3		SW3		8:55				X		Attempt to Cool: Yes insufficient ice
4		SW4		9:05				X		No
5		SW13		9:40				X		
6		SW14						X		20
7		SW19-20		9:30	SW			X		
8		Diffuser		8:50				X		
9		DUP1		AM				X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
JUSTIN LOCKEN	21/11/02		MATT GRACE					12, 12, 12 / 12, 11, 12	Yes / No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

2021 NOV 2 16:29

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 857881-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965246
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z0716
Received: 2021/11/22, 09:19

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2021/12/17	N/A	SM 23 4500-CO2 D
Alkalinity	7	N/A	2021/11/30	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	7	N/A	2021/11/30	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2021/12/14	2021/11/26	ATL SOP 00042	SM 23 5220D m
Colour	7	N/A	2021/11/30	ATL SOP 00020	SM 23 2120C m
Conductance - water	1	N/A	2022/01/14	ATL SOP 00004	SM 23 2510B m
Conductance - water	6	N/A	2021/11/29	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	6	2021/11/26	2021/11/29	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	1	2021/11/29	2021/11/29	ATL SOP 00113	Atl. RBCA v3.1 m
* Carbonaceous BOD (2)	7	2021/11/26	2021/12/01	ATL SOP 00041	SM 23 5210B m
Hardness (calculated as CaCO3)	7	N/A	2021/12/23	ATL SOP 00048	Auto Calc
Metals Water Total MS	7	2021/11/26	2021/12/21	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2021/12/23	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2021/12/23	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2021/11/29	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2021/11/30	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	7	N/A	2021/11/30	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2021/12/21	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2021/12/02	CAM SOP-00444	OMOE E3179 m
pH (3)	7	N/A	2021/11/29	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	7	N/A	2021/11/30	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	7	N/A	2021/12/23	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	7	N/A	2021/12/23	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2021/11/30	ATL SOP 00022	EPA 366.0 m
Sulphate	7	N/A	2021/11/30	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2021/12/23	N/A	Auto Calc.
Organic carbon - Total (TOC) (4)	4	N/A	2021/11/29	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (4)	3	N/A	2021/11/30	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	1	N/A	2022/01/05	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	5	N/A	2021/12/29	N/A	Atl. RBCA v3 m
Total Suspended Solids	7	2021/11/26	2021/12/17	ATL SOP 00007	SM 23 2540D m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 857881-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965246
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z0716
Received: 2021/11/22, 09:19

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Turbidity	7	N/A	2021/11/29	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	6	N/A	2021/11/27	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) * Analysis performed using frozen aliquot due to Hold Time and/or QC issues.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(4) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 857881-01-01

Attention: Janice Shea

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1701 Hollis St
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Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/17
Report #: R6965246
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z0716
Received: 2021/11/22, 09:19

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
17 Jan 2022 14:14:39

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RIY803			RIY803			RIY804		
Sampling Date		2021/11/21			2021/11/21			2021/11/21		
COC Number		857881-01-01			857881-01-01			857881-01-01		
Sample #		EMERG # 763			EMERG # 763			EMERG # 764		
	UNITS	SW1	RDL	QC Batch	SW1 Lab-Dup	RDL	QC Batch	SW2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.220	N/A	7727257				0.220	N/A	7727257
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7727249				<1.0	1.0	7727249
Calculated TDS	mg/L	21	1.0	7727268				23	1.0	7727268
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7727249				<1.0	1.0	7727249
Cation Sum	me/L	0.380	N/A	7727257				0.450	N/A	7727257
Hardness (CaCO3)	mg/L	4.4	1.0	7727253				8.6	1.0	7727253
Ion Balance (% Difference)	%	26.7	N/A	7727254				34.3	N/A	7727254
Langelier Index (@ 20C)	N/A	NC		7727265				NC		7727265
Langelier Index (@ 4C)	N/A	NC		7727266				NC		7727266
Nitrate (N)	mg/L	<0.050	0.050	7727262				<0.050	0.050	7727262
Saturation pH (@ 20C)	N/A	NC		7727265				NC		7727265
Saturation pH (@ 4C)	N/A	NC		7727266				NC		7727266
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7723823				<5.0	5.0	7723823
Carbonaceous BOD	mg/L	<5.0	5.0	7747626	<5.0	5.0	7747626	<5.0	5.0	7747626
Total Chemical Oxygen Demand	mg/L	75	20	7724221				79	20	7724221
Dissolved Chloride (Cl-)	mg/L	7.9	1.0	7723827				7.9	1.0	7723827
Colour	TCU	230	25	7723830				240	25	7723830
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7723832				<0.050	0.050	7723832
Nitrite (N)	mg/L	<0.010	0.010	7723833				<0.010	0.010	7723833
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7743480				<0.050	0.050	7743480
Total Organic Carbon (C)	mg/L	28	0.50	7735835				28	0.50	7721235
Orthophosphate (P)	mg/L	<0.010	0.010	7723831				<0.010	0.010	7723831
pH	pH	4.54		7723929				4.95		7723929
Phenols-4AAP	mg/L	<0.0010	0.0010	7752041				<0.0010	0.0010	7743047
Reactive Silica (SiO2)	mg/L	5.5	0.50	7723829				5.3	0.50	7723829
Total Suspended Solids	mg/L	1.4	1.0	7735384				1.8	1.0	7735384
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7723828				<2.0	2.0	7723828
Turbidity	NTU	1.0	0.10	7724708				2.8	0.10	7724708
Conductivity	uS/cm	51	1.0	7723923				50	1.0	7723923

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RIY805	RIY806		RIY807			RIY808		
Sampling Date		2021/11/21	2021/11/21		2021/11/21			2021/11/21		
COC Number		857881-01-01	857881-01-01		857881-01-01			857881-01-01		
Sample #		EMERG # 765	EMERG # 766		EMERG # 767			EMERG # 768		
	UNITS	SW3	SW4	QC Batch	SW13	RDL	QC Batch	SW19-20	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.220	0.220	7727257	0.650	N/A	7727257	5.50	N/A	7727257
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	<1.0	7727249	8.5	1.0	7727249	180	1.0	7727249
Calculated TDS	mg/L	23	23	7727268	45	1.0	7727268	320	1.0	7727268
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	<1.0	7727249	<1.0	1.0	7727249	<1.0	1.0	7727249
Cation Sum	me/L	0.460	0.470	7727257	0.780	N/A	7727257	5.41	N/A	7727257
Hardness (CaCO3)	mg/L	8.5	8.9	7727253	18	1.0	7727253	230	1.0	7727253
Ion Balance (% Difference)	%	35.3	36.2	7727254	9.09	N/A	7727254	0.820	N/A	7727254
Langelier Index (@ 20C)	N/A	NC	NC	7727265	-3.47		7727265	0.402		7727265
Langelier Index (@ 4C)	N/A	NC	NC	7727266	-3.72		7727266	0.153		7727266
Nitrate (N)	mg/L	<0.050	0.055	7727262	0.19	0.050	7727262	3.7	0.25	7728223
Saturation pH (@ 20C)	N/A	NC	NC	7727265	9.70		7727265	7.29		7727265
Saturation pH (@ 4C)	N/A	NC	NC	7727266	9.95		7727266	7.54		7727266
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	<5.0	7723823	8.5	5.0	7741160	180	25	7741160
Carbonaceous BOD	mg/L	<5.0	<5.0	7747626	<5.0	5.0	7747626	<5.0	5.0	7747626
Total Chemical Oxygen Demand	mg/L	77	91	7724221	55	20	7724221	<20	20	7724221
Dissolved Chloride (Cl-)	mg/L	7.8	7.8	7723827	15	1.0	7741169	11	1.0	7741169
Colour	TCU	250	250	7723830	150	25	7741189	12	5.0	7741189
Nitrate + Nitrite (N)	mg/L	<0.050	0.055	7723832	0.19	0.050	7741194	3.7	0.25	7741194
Nitrite (N)	mg/L	<0.010	<0.010	7723833	<0.010	0.010	7741196	0.010	0.010	7741196
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	<0.050	7743480	<0.050	0.050	7743480	0.066	0.050	7743480
Total Organic Carbon (C)	mg/L	28	28	7735835	20	0.50	7721224	5.7	0.50	7735835
Orthophosphate (P)	mg/L	<0.010	<0.010	7723831	<0.010	0.010	7741191	<0.010	0.010	7741191
pH	pH	5.01	4.91	7723929	6.23		7723929	7.69		7723929
Phenols-4AAP	mg/L	<0.0010	<0.0010	7743047	<0.0010	0.0010	7752041	<0.0010	0.0010	7752041
Reactive Silica (SiO2)	mg/L	5.5	5.4	7723829	5.4	0.50	7741182	8.1	0.50	7741182
Total Suspended Solids	mg/L	2.0	1.4	7735384	2.0	1.0	7735384	4.4	1.0	7735384
Dissolved Sulphate (SO4)	mg/L	<2.0	<2.0	7723828	2.1	2.0	7741180	64	2.0	7741180
Turbidity	NTU	2.4	2.7	7724708	2.6	0.10	7724708	6.0	0.10	7724719
Conductivity	uS/cm	50	50	7723923	82	1.0	7723923	530	1.0	7723923

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RIY809		
Sampling Date		2021/11/21		
COC Number		857881-01-01		
Sample #		EMERG # 769		
	UNITS	DUP1	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	0.220	N/A	7727257
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7727249
Calculated TDS	mg/L	21	1.0	7727268
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7727249
Cation Sum	me/L	0.390	N/A	7727257
Hardness (CaCO3)	mg/L	4.5	1.0	7727253
Ion Balance (% Difference)	%	27.9	N/A	7727254
Langelier Index (@ 20C)	N/A	NC		7727265
Langelier Index (@ 4C)	N/A	NC		7727266
Nitrate (N)	mg/L	<0.050	0.050	7728224
Saturation pH (@ 20C)	N/A	NC		7727265
Saturation pH (@ 4C)	N/A	NC		7727266
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7741160
Carbonaceous BOD	mg/L	<5.0	5.0	7747626
Total Chemical Oxygen Demand	mg/L	77	20	7724221
Dissolved Chloride (Cl-)	mg/L	7.7	1.0	7741169
Colour	TCU	220	25	7741189
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7741194
Nitrite (N)	mg/L	<0.010	0.010	7741196
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7743480
Total Organic Carbon (C)	mg/L	28	0.50	7721224
Orthophosphate (P)	mg/L	<0.010	0.010	7741191
pH	pH	4.58		7723885
Phenols-4AAP	mg/L	<0.0010	0.0010	7752041
Reactive Silica (SiO2)	mg/L	5.7	0.50	7741182
Total Suspended Solids	mg/L	1.2	1.0	7735384
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7741180
Turbidity	NTU	1.9	0.10	7724719
Conductivity	uS/cm	48	1.0	7781432

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RIY803	RIY804	RIY805	RIY806	RIY807	RIY808		
Sampling Date		2021/11/21	2021/11/21	2021/11/21	2021/11/21	2021/11/21	2021/11/21		
COC Number		857881-01-01	857881-01-01	857881-01-01	857881-01-01	857881-01-01	857881-01-01		
Sample #		EMERG # 763	EMERG # 764	EMERG # 765	EMERG # 766	EMERG # 767	EMERG # 768		
	UNITS	SW1	SW2	SW3	SW4	SW13	SW19-20	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	840	850	870	910	580	150	5.0	7742203
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7742203
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	1.0	7742203
Total Barium (Ba)	ug/L	5.0	5.9	5.6	6.2	7.8	26	1.0	7742203
Total Beryllium (Be)	ug/L	0.12	0.13	0.12	0.12	<0.10	<0.10	0.10	7742203
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7742203
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	180	50	7742203
Total Cadmium (Cd)	ug/L	0.020	0.024	0.021	0.024	0.034	0.023	0.010	7742203
Total Calcium (Ca)	ug/L	730	2200	2100	2200	4700	77000	100	7742203
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7742203
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	1.2	0.40	7742203
Total Copper (Cu)	ug/L	<0.50	<0.50	<0.50	<0.50	1.5	21	0.50	7742203
Total Iron (Fe)	ug/L	720	740	740	770	760	700	50	7742203
Total Lead (Pb)	ug/L	1.1	1.1	1.1	1.2	0.64	0.84	0.50	7742203
Total Magnesium (Mg)	ug/L	610	780	780	810	1600	9500	100	7742203
Total Manganese (Mn)	ug/L	21	24	23	25	31	1000	2.0	7742203
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	3.6	2.0	7742203
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7742203
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7742203
Total Potassium (K)	ug/L	220	460	450	470	790	8800	100	7742203
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7742203
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7742203
Total Sodium (Na)	ug/L	5400	5300	5500	5600	8400	13000	100	7742203
Total Strontium (Sr)	ug/L	6.9	11	11	12	16	230	2.0	7742203
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7742203
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7742203
Total Titanium (Ti)	ug/L	8.2	9.2	9.5	8.5	6.6	4.7	2.0	7742203
Total Uranium (U)	ug/L	0.19	0.31	0.32	0.30	0.48	22	0.10	7742203
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7742203
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	6.9	15	5.0	7742203

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RIY809		
Sampling Date		2021/11/21		
COC Number		857881-01-01		
Sample #		EMERG # 769		
	UNITS	DUP1	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	860	5.0	7742203
Total Antimony (Sb)	ug/L	<1.0	1.0	7742203
Total Arsenic (As)	ug/L	<1.0	1.0	7742203
Total Barium (Ba)	ug/L	4.9	1.0	7742203
Total Beryllium (Be)	ug/L	0.11	0.10	7742203
Total Bismuth (Bi)	ug/L	<2.0	2.0	7742203
Total Boron (B)	ug/L	<50	50	7742203
Total Cadmium (Cd)	ug/L	0.029	0.010	7742203
Total Calcium (Ca)	ug/L	740	100	7742203
Total Chromium (Cr)	ug/L	<1.0	1.0	7742203
Total Cobalt (Co)	ug/L	<0.40	0.40	7742203
Total Copper (Cu)	ug/L	<0.50	0.50	7742203
Total Iron (Fe)	ug/L	750	50	7742203
Total Lead (Pb)	ug/L	1.1	0.50	7742203
Total Magnesium (Mg)	ug/L	630	100	7742203
Total Manganese (Mn)	ug/L	21	2.0	7742203
Total Molybdenum (Mo)	ug/L	<2.0	2.0	7742203
Total Nickel (Ni)	ug/L	<2.0	2.0	7742203
Total Phosphorus (P)	ug/L	<100	100	7742203
Total Potassium (K)	ug/L	220	100	7742203
Total Selenium (Se)	ug/L	<0.50	0.50	7742203
Total Silver (Ag)	ug/L	<0.10	0.10	7742203
Total Sodium (Na)	ug/L	5500	100	7742203
Total Strontium (Sr)	ug/L	6.7	2.0	7742203
Total Thallium (Tl)	ug/L	<0.10	0.10	7742203
Total Tin (Sn)	ug/L	<2.0	2.0	7742203
Total Titanium (Ti)	ug/L	8.3	2.0	7742203
Total Uranium (U)	ug/L	0.20	0.10	7742203
Total Vanadium (V)	ug/L	<2.0	2.0	7742203
Total Zinc (Zn)	ug/L	<5.0	5.0	7742203

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RIY803			RIY804			RIY805		
Sampling Date		2021/11/21			2021/11/21			2021/11/21		
COC Number		857881-01-01			857881-01-01			857881-01-01		
Sample #		EMERG # 763			EMERG # 764			EMERG # 765		
	UNITS	SW1	RDL	QC Batch	SW2	RDL	QC Batch	SW3	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	7735928				<0.0010	0.0010	7735928
Toluene	mg/L	<0.0010	0.0010	7735928				<0.0010	0.0010	7735928
Ethylbenzene	mg/L	<0.0010	0.0010	7735928				<0.0010	0.0010	7735928
Total Xylenes	mg/L	<0.0020	0.0020	7735928				<0.0020	0.0020	7735928
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7735928				<0.090	0.090	7735928
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7757119	<0.050	0.050	7757119	<0.055	0.055	7757119
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7757119	<0.050	0.050	7757119	<0.055	0.055	7757119
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7757119	<0.090	0.090	7757119	<0.099	0.099	7757119
Modified TPH (Tier1)	mg/L	<0.090	0.090	7727068				<0.099	0.099	7727068
Reached Baseline at C32	mg/L	NA	N/A	7757119	NA	N/A	7757119	NA	N/A	7757119
Hydrocarbon Resemblance	mg/L	NA	N/A	7757119	NA	N/A	7757119	NA	N/A	7757119
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	102		7757119	98		7757119	92		7757119
n-Dotriacontane - Extractable	%	88		7757119	84		7757119	80 (1)		7757119
Isobutylbenzene - Volatile	%	107		7735928				105		7735928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RIY806		RIY807		RIY808	RIY809		
Sampling Date		2021/11/21		2021/11/21		2021/11/21	2021/11/21		
COC Number		857881-01-01		857881-01-01		857881-01-01	857881-01-01		
Sample #		EMERG # 766		EMERG # 767		EMERG # 768	EMERG # 769		
	UNITS	SW4	QC Batch	SW13	QC Batch	SW19-20	DUP1	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	7735928	<0.0010	7735928	<0.0010	<0.0010	0.0010	7735928
Toluene	mg/L	<0.0010	7735928	<0.0010	7735928	<0.0010	<0.0010	0.0010	7735928
Ethylbenzene	mg/L	<0.0010	7735928	<0.0010	7735928	<0.0010	<0.0010	0.0010	7735928
Total Xylenes	mg/L	<0.0020	7735928	<0.0020	7735928	<0.0020	<0.0020	0.0020	7735928
C6 - C10 (less BTEX)	mg/L	<0.090	7735928	<0.090	7735928	<0.090	<0.090	0.090	7735928
>C10-C16 Hydrocarbons	mg/L	<0.050	7757119	<0.050	7765084	<0.050	<0.050	0.050	7757119
>C16-C21 Hydrocarbons	mg/L	<0.050	7757119	<0.050	7765084	<0.050	<0.050	0.050	7757119
>C21-<C32 Hydrocarbons	mg/L	<0.090	7757119	<0.090	7765084	<0.090	<0.090	0.090	7757119
Modified TPH (Tier1)	mg/L	<0.090	7727068	<0.090	7727068	<0.090	<0.090	0.090	7727068
Reached Baseline at C32	mg/L	NA	7757119	NA	7765084	NA	NA	N/A	7757119
Hydrocarbon Resemblance	mg/L	NA	7757119	NA	7765084	NA	NA	N/A	7757119
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	101	7757119	105	7765084	98	108		7757119
n-Dotriacontane - Extractable	%	88	7757119	96	7765084	87	97		7757119
Isobutylbenzene - Volatile	%	108	7735928	110	7735928	106	105		7735928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	1.7°C

Sample RIY803 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RIY804 [SW2] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RIY805 [SW3] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RIY806 [SW4] : RCAp Ion Balance acceptable. Low ionic strength sample.

Sample RIY807 [SW13] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RIY808 [SW19-20] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample RIY809 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7721224	NGI	Matrix Spike	Total Organic Carbon (C)	2021/11/30		93	%	85 - 115
7721224	NGI	Spiked Blank	Total Organic Carbon (C)	2021/11/30		103	%	80 - 120
7721224	NGI	Method Blank	Total Organic Carbon (C)	2021/11/30	<0.50		mg/L	
7721224	NGI	RPD	Total Organic Carbon (C)	2021/11/30	1.9		%	15
7721235	NGI	Matrix Spike	Total Organic Carbon (C)	2021/11/30		90	%	85 - 115
7721235	NGI	Spiked Blank	Total Organic Carbon (C)	2021/11/30		103	%	80 - 120
7721235	NGI	Method Blank	Total Organic Carbon (C)	2021/11/30	<0.50		mg/L	
7721235	NGI	RPD	Total Organic Carbon (C)	2021/11/30	2.6		%	15
7723823	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/11/30		95	%	80 - 120
7723823	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/11/30		110	%	80 - 120
7723823	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/11/30	<5.0		mg/L	
7723823	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/11/30	1.5		%	20
7723827	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/11/30		94	%	80 - 120
7723827	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/11/30		101	%	80 - 120
7723827	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/11/30	<1.0		mg/L	
7723827	EMT	RPD	Dissolved Chloride (Cl-)	2021/11/30	1.3		%	20
7723828	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/11/30		89	%	80 - 120
7723828	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/11/30		100	%	80 - 120
7723828	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/11/30	<2.0		mg/L	
7723828	EMT	RPD	Dissolved Sulphate (SO4)	2021/11/30	1.6		%	20
7723829	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/11/30		88	%	80 - 120
7723829	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/11/30		90	%	80 - 120
7723829	EMT	Method Blank	Reactive Silica (SiO2)	2021/11/30	<0.50		mg/L	
7723829	EMT	RPD	Reactive Silica (SiO2)	2021/11/30	2.5		%	20
7723830	EMT	Spiked Blank	Colour	2021/11/30		105	%	80 - 120
7723830	EMT	Method Blank	Colour	2021/11/30	<5.0		TCU	
7723830	EMT	RPD	Colour	2021/11/30	12		%	20
7723831	EMT	Matrix Spike	Orthophosphate (P)	2021/11/30		88	%	80 - 120
7723831	EMT	Spiked Blank	Orthophosphate (P)	2021/11/30		93	%	80 - 120
7723831	EMT	Method Blank	Orthophosphate (P)	2021/11/30	<0.010		mg/L	
7723831	EMT	RPD	Orthophosphate (P)	2021/11/30	3.5		%	20
7723832	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/11/30		94	%	80 - 120
7723832	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/11/30		96	%	80 - 120
7723832	EMT	Method Blank	Nitrate + Nitrite (N)	2021/11/30	<0.050		mg/L	
7723832	EMT	RPD	Nitrate + Nitrite (N)	2021/11/30	6.7		%	20
7723833	EMT	Matrix Spike	Nitrite (N)	2021/11/30		94	%	80 - 120
7723833	EMT	Spiked Blank	Nitrite (N)	2021/11/30		102	%	80 - 120
7723833	EMT	Method Blank	Nitrite (N)	2021/11/30	<0.010		mg/L	
7723833	EMT	RPD	Nitrite (N)	2021/11/30	1.6		%	20
7723885	SHW	Spiked Blank	pH	2021/11/29		100	%	97 - 103
7723885	SHW	RPD	pH	2021/11/29	0.68		%	N/A
7723923	SHW	Spiked Blank	Conductivity	2021/11/29		100	%	80 - 120
7723923	SHW	Method Blank	Conductivity	2021/11/29	1.2, RDL=1.0		uS/cm	
7723929	SHW	Spiked Blank	pH	2021/11/29		100	%	97 - 103
7723929	SHW	RPD	pH	2021/11/29	0.48		%	N/A
7724221	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/11/26		NC	%	80 - 120
7724221	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/11/26		104	%	80 - 120
7724221	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/11/26		104	%	80 - 120
7724221	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/11/26	<20		mg/L	
7724221	ZZH	RPD	Total Chemical Oxygen Demand	2021/11/26	1.0		%	25
7724708	SHW	QC Standard	Turbidity	2021/11/29		99	%	80 - 120
7724708	SHW	Spiked Blank	Turbidity	2021/11/29		102	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7724708	SHW	Method Blank	Turbidity	2021/11/29	<0.10		NTU	
7724708	SHW	RPD	Turbidity	2021/11/29	2.6		%	20
7724719	SHW	QC Standard	Turbidity	2021/11/29		99	%	80 - 120
7724719	SHW	Spiked Blank	Turbidity	2021/11/29		103	%	80 - 120
7724719	SHW	Method Blank	Turbidity	2021/11/29	<0.10		NTU	
7724719	SHW	RPD	Turbidity	2021/11/29	NC		%	20
7735384	MKX	QC Standard	Total Suspended Solids	2021/12/17		93	%	80 - 120
7735384	MKX	Method Blank	Total Suspended Solids	2021/12/17	<1.0		mg/L	
7735384	MKX	RPD	Total Suspended Solids	2021/12/17	5.1		%	20
7735835	NGI	Matrix Spike	Total Organic Carbon (C)	2021/11/29		87	%	85 - 115
7735835	NGI	Spiked Blank	Total Organic Carbon (C)	2021/11/29		95	%	80 - 120
7735835	NGI	Method Blank	Total Organic Carbon (C)	2021/11/29	<0.50		mg/L	
7735835	NGI	RPD	Total Organic Carbon (C)	2021/11/29	0.59		%	15
7735928	JPA	Matrix Spike	Isobutylbenzene - Volatile	2021/11/27		109	%	70 - 130
			Benzene	2021/11/27		100	%	70 - 130
			Toluene	2021/11/27		97	%	70 - 130
			Ethylbenzene	2021/11/27		100	%	70 - 130
			Total Xylenes	2021/11/27		103	%	70 - 130
7735928	JPA	Spiked Blank	Isobutylbenzene - Volatile	2021/11/27		111	%	70 - 130
			Benzene	2021/11/27		101	%	70 - 130
			Toluene	2021/11/27		94	%	70 - 130
			Ethylbenzene	2021/11/27		100	%	70 - 130
			Total Xylenes	2021/11/27		104	%	70 - 130
7735928	JPA	Method Blank	Isobutylbenzene - Volatile	2021/11/27		110	%	70 - 130
			Benzene	2021/11/27	<0.0010		mg/L	
			Toluene	2021/11/27	<0.0010		mg/L	
			Ethylbenzene	2021/11/27	<0.0010		mg/L	
			Total Xylenes	2021/11/27	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/11/27	<0.090		mg/L	
7735928	JPA	RPD	Benzene	2021/11/27	NC		%	40
			Toluene	2021/11/27	NC		%	40
			Ethylbenzene	2021/11/27	NC		%	40
			Total Xylenes	2021/11/27	NC		%	40
			C6 - C10 (less BTEX)	2021/11/27	NC		%	40
7741160	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/11/30		NC	%	80 - 120
7741160	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/11/30		101	%	80 - 120
7741160	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/11/30	<5.0		mg/L	
7741160	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/11/30	0.38		%	20
7741169	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/11/30		96	%	80 - 120
7741169	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/11/30		96	%	80 - 120
7741169	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/11/30	<1.0		mg/L	
7741169	EMT	RPD	Dissolved Chloride (Cl-)	2021/11/30	1.1		%	20
7741180	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/11/30		99	%	80 - 120
7741180	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/11/30		98	%	80 - 120
7741180	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/11/30	<2.0		mg/L	
7741180	EMT	RPD	Dissolved Sulphate (SO4)	2021/11/30	1.7		%	20
7741182	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/11/30		NC	%	80 - 120
7741182	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/11/30		93	%	80 - 120
7741182	EMT	Method Blank	Reactive Silica (SiO2)	2021/11/30	<0.50		mg/L	
7741182	EMT	RPD	Reactive Silica (SiO2)	2021/11/30	6.0		%	20
7741189	EMT	Spiked Blank	Colour	2021/11/30		98	%	80 - 120
7741189	EMT	Method Blank	Colour	2021/11/30	<5.0		TCU	
7741189	EMT	RPD	Colour	2021/11/30	0.66		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7741191	EMT	Matrix Spike	Orthophosphate (P)	2021/11/30		91	%	80 - 120
7741191	EMT	Spiked Blank	Orthophosphate (P)	2021/11/30		95	%	80 - 120
7741191	EMT	Method Blank	Orthophosphate (P)	2021/11/30	<0.010		mg/L	
7741191	EMT	RPD	Orthophosphate (P)	2021/11/30	NC		%	20
7741194	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/11/30		92	%	80 - 120
7741194	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/11/30		97	%	80 - 120
7741194	EMT	Method Blank	Nitrate + Nitrite (N)	2021/11/30	<0.050		mg/L	
7741194	EMT	RPD	Nitrate + Nitrite (N)	2021/11/30	2.3		%	20
7741196	EMT	Matrix Spike	Nitrite (N)	2021/11/30		95	%	80 - 120
7741196	EMT	Spiked Blank	Nitrite (N)	2021/11/30		99	%	80 - 120
7741196	EMT	Method Blank	Nitrite (N)	2021/11/30	<0.010		mg/L	
7741196	EMT	RPD	Nitrite (N)	2021/11/30	NC		%	20
7742203	BAN	Matrix Spike [RIY808-08]	Total Aluminum (Al)	2021/12/21		119	%	80 - 120
			Total Antimony (Sb)	2021/12/21		110	%	80 - 120
			Total Arsenic (As)	2021/12/21		96	%	80 - 120
			Total Barium (Ba)	2021/12/21		97	%	80 - 120
			Total Beryllium (Be)	2021/12/21		102	%	80 - 120
			Total Bismuth (Bi)	2021/12/21		98	%	80 - 120
			Total Boron (B)	2021/12/21		108	%	80 - 120
			Total Cadmium (Cd)	2021/12/21		101	%	80 - 120
			Total Calcium (Ca)	2021/12/21		NC	%	80 - 120
			Total Chromium (Cr)	2021/12/21		98	%	80 - 120
			Total Cobalt (Co)	2021/12/21		96	%	80 - 120
			Total Copper (Cu)	2021/12/21		79 (1)	%	80 - 120
			Total Iron (Fe)	2021/12/21		102	%	80 - 120
			Total Lead (Pb)	2021/12/21		100	%	80 - 120
			Total Magnesium (Mg)	2021/12/21		103	%	80 - 120
			Total Manganese (Mn)	2021/12/21		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/12/21		110	%	80 - 120
			Total Nickel (Ni)	2021/12/21		98	%	80 - 120
			Total Phosphorus (P)	2021/12/21		109	%	80 - 120
			Total Potassium (K)	2021/12/21		110	%	80 - 120
			Total Selenium (Se)	2021/12/21		103	%	80 - 120
			Total Silver (Ag)	2021/12/21		101	%	80 - 120
			Total Sodium (Na)	2021/12/21		102	%	80 - 120
			Total Strontium (Sr)	2021/12/21		NC	%	80 - 120
			Total Thallium (Tl)	2021/12/21		101	%	80 - 120
			Total Tin (Sn)	2021/12/21		105	%	80 - 120
			Total Titanium (Ti)	2021/12/21		106	%	80 - 120
			Total Uranium (U)	2021/12/21		106	%	80 - 120
			Total Vanadium (V)	2021/12/21		103	%	80 - 120
			Total Zinc (Zn)	2021/12/21		93	%	80 - 120
7742203	BAN	Spiked Blank	Total Aluminum (Al)	2021/12/21		103	%	80 - 120
			Total Antimony (Sb)	2021/12/21		103	%	80 - 120
			Total Arsenic (As)	2021/12/21		94	%	80 - 120
			Total Barium (Ba)	2021/12/21		95	%	80 - 120
			Total Beryllium (Be)	2021/12/21		97	%	80 - 120
			Total Bismuth (Bi)	2021/12/21		95	%	80 - 120
			Total Boron (B)	2021/12/21		101	%	80 - 120
			Total Cadmium (Cd)	2021/12/21		96	%	80 - 120
			Total Calcium (Ca)	2021/12/21		102	%	80 - 120
			Total Chromium (Cr)	2021/12/21		96	%	80 - 120
			Total Cobalt (Co)	2021/12/21		96	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Copper (Cu)	2021/12/21		98	%	80 - 120
			Total Iron (Fe)	2021/12/21		102	%	80 - 120
			Total Lead (Pb)	2021/12/21		98	%	80 - 120
			Total Magnesium (Mg)	2021/12/21		106	%	80 - 120
			Total Manganese (Mn)	2021/12/21		102	%	80 - 120
			Total Molybdenum (Mo)	2021/12/21		102	%	80 - 120
			Total Nickel (Ni)	2021/12/21		98	%	80 - 120
			Total Phosphorus (P)	2021/12/21		103	%	80 - 120
			Total Potassium (K)	2021/12/21		100	%	80 - 120
			Total Selenium (Se)	2021/12/21		99	%	80 - 120
			Total Silver (Ag)	2021/12/21		97	%	80 - 120
			Total Sodium (Na)	2021/12/21		102	%	80 - 120
			Total Strontium (Sr)	2021/12/21		99	%	80 - 120
			Total Thallium (Tl)	2021/12/21		96	%	80 - 120
			Total Tin (Sn)	2021/12/21		99	%	80 - 120
			Total Titanium (Ti)	2021/12/21		105	%	80 - 120
			Total Uranium (U)	2021/12/21		98	%	80 - 120
			Total Vanadium (V)	2021/12/21		102	%	80 - 120
			Total Zinc (Zn)	2021/12/21		96	%	80 - 120
7742203	BAN	Method Blank	Total Aluminum (Al)	2021/12/21	<5.0		ug/L	
			Total Antimony (Sb)	2021/12/21	<1.0		ug/L	
			Total Arsenic (As)	2021/12/21	<1.0		ug/L	
			Total Barium (Ba)	2021/12/21	<1.0		ug/L	
			Total Beryllium (Be)	2021/12/21	<0.10		ug/L	
			Total Bismuth (Bi)	2021/12/21	<2.0		ug/L	
			Total Boron (B)	2021/12/21	<50		ug/L	
			Total Cadmium (Cd)	2021/12/21	<0.010		ug/L	
			Total Calcium (Ca)	2021/12/21	<100		ug/L	
			Total Chromium (Cr)	2021/12/21	<1.0		ug/L	
			Total Cobalt (Co)	2021/12/21	<0.40		ug/L	
			Total Copper (Cu)	2021/12/21	<0.50		ug/L	
			Total Iron (Fe)	2021/12/21	<50		ug/L	
			Total Lead (Pb)	2021/12/21	<0.50		ug/L	
			Total Magnesium (Mg)	2021/12/21	<100		ug/L	
			Total Manganese (Mn)	2021/12/21	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/12/21	<2.0		ug/L	
			Total Nickel (Ni)	2021/12/21	<2.0		ug/L	
			Total Phosphorus (P)	2021/12/21	<100		ug/L	
			Total Potassium (K)	2021/12/21	<100		ug/L	
			Total Selenium (Se)	2021/12/21	<0.50		ug/L	
			Total Silver (Ag)	2021/12/21	<0.10		ug/L	
			Total Sodium (Na)	2021/12/21	<100		ug/L	
			Total Strontium (Sr)	2021/12/21	<2.0		ug/L	
			Total Thallium (Tl)	2021/12/21	<0.10		ug/L	
			Total Tin (Sn)	2021/12/21	<2.0		ug/L	
			Total Titanium (Ti)	2021/12/21	<2.0		ug/L	
			Total Uranium (U)	2021/12/21	<0.10		ug/L	
			Total Vanadium (V)	2021/12/21	<2.0		ug/L	
			Total Zinc (Zn)	2021/12/21	<5.0		ug/L	
7742203	BAN	RPD	Total Aluminum (Al)	2021/12/21	1.8		%	20
			Total Antimony (Sb)	2021/12/21	NC		%	20
			Total Arsenic (As)	2021/12/21	NC		%	20
			Total Barium (Ba)	2021/12/21	3.5		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Boron (B)	2021/12/21	NC		%	20
			Total Cadmium (Cd)	2021/12/21	11		%	20
			Total Calcium (Ca)	2021/12/21	2.6		%	20
			Total Chromium (Cr)	2021/12/21	NC		%	20
			Total Copper (Cu)	2021/12/21	2.3		%	20
			Total Iron (Fe)	2021/12/21	1.9		%	20
			Total Lead (Pb)	2021/12/21	6.1		%	20
			Total Magnesium (Mg)	2021/12/21	2.0		%	20
			Total Manganese (Mn)	2021/12/21	0.15		%	20
			Total Nickel (Ni)	2021/12/21	NC		%	20
			Total Phosphorus (P)	2021/12/21	NC		%	20
			Total Potassium (K)	2021/12/21	2.5		%	20
			Total Selenium (Se)	2021/12/21	NC		%	20
			Total Sodium (Na)	2021/12/21	2.3		%	20
			Total Strontium (Sr)	2021/12/21	2.2		%	20
			Total Uranium (U)	2021/12/21	NC		%	20
			Total Zinc (Zn)	2021/12/21	2.9		%	20
7743047	DRM	Matrix Spike	Phenols-4AAP	2021/12/02		99	%	80 - 120
7743047	DRM	Spiked Blank	Phenols-4AAP	2021/12/02		100	%	80 - 120
7743047	DRM	Method Blank	Phenols-4AAP	2021/12/02	<0.0010		mg/L	
7743047	DRM	RPD	Phenols-4AAP	2021/12/02	NC		%	20
7743480	MKY	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/11/29		99	%	80 - 120
7743480	MKY	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/11/29		98	%	80 - 120
7743480	MKY	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/11/29	<0.050		mg/L	
7743480	MKY	RPD	Nitrogen (Ammonia Nitrogen)	2021/11/29	NC		%	20
7747626	NFS	QC Standard	Carbonaceous BOD	2021/12/01		134 (2)	%	80 - 120
7747626	NFS	Spiked Blank	Carbonaceous BOD	2021/12/01		136 (3)	%	80 - 120
7747626	NFS	Method Blank	Carbonaceous BOD	2021/12/01	<2.0		mg/L	
7747626	NFS	RPD [RIY803-01]	Carbonaceous BOD	2021/12/01	NC		%	25
7752041	DRM	Matrix Spike	Phenols-4AAP	2021/12/02		99	%	80 - 120
7752041	DRM	Spiked Blank	Phenols-4AAP	2021/12/02		100	%	80 - 120
7752041	DRM	Method Blank	Phenols-4AAP	2021/12/02	<0.0010		mg/L	
7752041	DRM	RPD	Phenols-4AAP	2021/12/02	0		%	20
7757119	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/11/29		113	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/29		99	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/29		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/29		88	%	70 - 130
7757119	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/11/29		92	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		100	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/29		87	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/29		76	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/29		73	%	70 - 130
7757119	MSK	Method Blank	Isobutylbenzene - Extractable	2021/11/29		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		105	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/29	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/11/29	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/11/29	<0.090		mg/L	
7757119	MSK	RPD	>C10-C16 Hydrocarbons	2021/11/29	NC		%	40
			>C16-C21 Hydrocarbons	2021/11/29	NC		%	40
			>C21-<C32 Hydrocarbons	2021/11/29	NC		%	40
7765084	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/11/29		89	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		85	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C10-C16 Hydrocarbons	2021/11/29		87	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/29		86	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/29		90	%	70 - 130
7765084	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/11/29		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		92	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/29		92	%	70 - 130
			>C16-C21 Hydrocarbons	2021/11/29		89	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/11/29		89	%	70 - 130
7765084	MSK	Method Blank	Isobutylbenzene - Extractable	2021/11/29		96	%	70 - 130
			n-Dotriacontane - Extractable	2021/11/29		91	%	70 - 130
			>C10-C16 Hydrocarbons	2021/11/29	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/11/29	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/11/29	<0.090		mg/L	
7765084	MSK	RPD	>C10-C16 Hydrocarbons	2021/11/29	NC		%	40
			>C16-C21 Hydrocarbons	2021/11/29	NC		%	40
			>C21-<C32 Hydrocarbons	2021/11/29	NC		%	40
7781432	SHW	Spiked Blank	Conductivity	2022/01/14		99	%	80 - 120
7781432	SHW	Method Blank	Conductivity	2022/01/14	<1.0		uS/cm	
7781432	SHW	RPD	Conductivity	2022/01/14	0.18		%	10

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery is within QC acceptance limits. < 10 % of compounds in multi-component analysis in violation.

(2) CBOD Analysis: Reference Material recovery and Second source QC recovery high.

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Bureau Veritas Job #: C1Z0716
Report Date: 2022/01/17

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Alan Stewart, Organics Manager, Bedford

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free 800-563-6266 Fax:(902) 420-8612 www.bvna.com

D1122-063

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		
Address	1701 Hollis St SH400	Address	1701 Hollis St SH400	Project #	60639002	Chain Of Custody Record
	Halifax NS B3J 3M8		Halifax NS B3J 3M8	Project Name		C#857881-01-01
Phone	Fax: (902) 428-2031	Phone	Fax:	Site #		
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Sampled By	RM / DH	

Regulatory Criteria

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS.

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) (TAT)

Please provide advance notice for

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as
days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire sub

Date Required: Time

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events → phenols	# of Bottles	Comments / Hazards / Other
1		SW1	21 MAY 21	10-12am	W	X		X		Emery - 76
2		SW2				X		X		Emery - 764
3		SW3				X		X		Emery - 76
4		SW4				X		X		Emery - 76
5		SW13				X		X		Emery - 76
6		SW12				X		X		
7		SW19-20				X		X		Emery - 7
8		Diffuser				X		X		
9		DUP1				X		X		Emery - 76
10										

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt
	21/05/21	1200	RON STEELE				☐	1.2/1.3

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Your C.O.C. #: 858578-01-01

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962683
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1AG897
Received: 2021/12/02, 09:42

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2022/01/02	N/A	SM 23 4500-CO2 D
Alkalinity	6	N/A	2021/12/07	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	1	N/A	2021/12/08	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	7	2021/12/30	2022/01/04	ATL SOP 00041	SM 23 5210B m
Chloride	6	N/A	2021/12/07	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	1	N/A	2021/12/08	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2022/01/12	2021/12/03	ATL SOP 00042	SM 23 5220D m
Colour	6	N/A	2021/12/07	ATL SOP 00020	SM 23 2120C m
Colour	1	N/A	2021/12/08	ATL SOP 00020	SM 23 2120C m
Conductance - water	7	N/A	2021/12/08	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	5	2021/12/06	2021/12/06	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	2	2021/12/06	2021/12/07	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2022/01/12	ATL SOP 00048	Auto Calc
Metals Water Total MS	6	2021/12/03	2021/12/03	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	1	2021/12/03	2021/12/07	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/01/12	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/01/12	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2021/12/07	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	6	N/A	2021/12/07	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	1	N/A	2021/12/08	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	6	N/A	2021/12/07	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	1	N/A	2021/12/08	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	1	N/A	2022/01/10	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	6	N/A	2022/01/06	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2021/12/07	CAM SOP-00444	OMOE E3179 m
pH (2)	7	N/A	2021/12/08	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	6	N/A	2021/12/07	ATL SOP 00021	SM 23 4500-P E m
Phosphorus - ortho	1	N/A	2021/12/08	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	7	N/A	2022/01/12	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	7	N/A	2022/01/12	ATL SOP 00049	Auto Calc.
Reactive Silica	6	N/A	2021/12/07	ATL SOP 00022	EPA 366.0 m

Your Project #: 60639002
Your C.O.C. #: 858578-01-01

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962683
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1AG897
Received: 2021/12/02, 09:42

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Reactive Silica	1	N/A	2021/12/08	ATL SOP 00022	EPA 366.0 m
Sulphate	6	N/A	2021/12/07	ATL SOP 00023	ASTM D516-16 m
Sulphate	1	N/A	2021/12/08	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/01/12	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	7	N/A	2021/12/07	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	7	N/A	2022/01/04	N/A	Atl. RBCA v3 m
Total Suspended Solids	1	2021/12/03	2021/12/07	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	6	2021/12/30	2022/01/04	ATL SOP 00007	SM 23 2540D m
Turbidity	1	N/A	2021/12/06	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	6	N/A	2021/12/07	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	7	N/A	2021/12/04	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: 60639002
Your C.O.C. #: 858578-01-01

Attention: Derek Heath

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962683
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1AG897

Received: 2021/12/02, 09:42

(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key



Bureau Veritas
14 Jan 2022 16:47:52

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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Bureau Veritas Job #: C1AG897
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: KM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RNH005			RNH006		RNH007		
Sampling Date		2021/12/01 14:30			2021/12/01 14:50		2021/12/01 15:10		
COC Number		858578-01-01			858578-01-01		858578-01-01		
Sample #		EMERG-2263			EMERG-2264		EMERG-2265		
	UNITS	**SW1**	**RDL**	**QC Batch**	**SW2**	**QC Batch**	**SW3**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	me/L	0.190	N/A	7759858	0.200	7759858	0.190	N/A	7759858
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7759595	<1.0	7759595	<1.0	1.0	7759595
Calculated TDS	mg/L	18	1.0	7759863	19	7759863	20	1.0	7759863
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7759595	<1.0	7759595	<1.0	1.0	7759595
Cation Sum	me/L	0.320	N/A	7759858	0.370	7759858	0.440	N/A	7759858
Hardness (CaCO3)	mg/L	3.9	1.0	7759856	5.1	7759856	9.5	1.0	7759856
Ion Balance (% Difference)	%	25.5	N/A	7759857	29.8	7759857	39.7	N/A	7759857
Langelier Index (@ 20C)	N/A	NC		7759604	NC	7759604	NC		7759604
Langelier Index (@ 4C)	N/A	NC		7759606	NC	7759606	NC		7759606
Nitrate (N)	mg/L	<0.050	0.050	7759860	<0.050	7759860	<0.050	0.050	7759860
Saturation pH (@ 20C)	N/A	NC		7759604	NC	7759604	NC		7759604
Saturation pH (@ 4C)	N/A	NC		7759606	NC	7759606	NC		7759606
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7760251	<5.0	7760251	<5.0	5.0	7760251
Carbonaceous BOD	mg/L	<5.0	5.0	7760357	<5.0	7760357	<5.0	5.0	7760357
Total Chemical Oxygen Demand	mg/L	85	20	7777459	78	7777459	76	20	7777459
Dissolved Chloride (Cl-)	mg/L	6.8	1.0	7760267	7.1	7760267	6.8	1.0	7760267
Colour	TCU	230	5.0	7760305	240	7760305	240	25	7760305
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7760325	<0.050	7760325	<0.050	0.050	7760325
Nitrite (N)	mg/L	<0.010	0.010	7760337	<0.010	7760337	<0.010	0.010	7760337
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7761645	<0.050	7761622	<0.050	0.050	7761622
Total Organic Carbon (C)	mg/L	26	0.50	7757659	26	7757663	25	0.50	7757678
Orthophosphate (P)	mg/L	<0.010	0.010	7760320	<0.010	7760320	<0.010	0.010	7760320
pH	pH	4.62		7751052	4.50	7751052	4.81		7751052
Phenols-4AAP	mg/L	<0.0010	0.0010	7727163	<0.0010	7727163	<0.0010	0.0010	7727163
Reactive Silica (SiO2)	mg/L	4.5	0.50	7760294	4.0	7760294	4.1	0.50	7760294
Total Suspended Solids	mg/L	<1.0	1.0	7753733	<1.0	7753733	1.8	1.0	7761324
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7760293	<2.0	7760293	<2.0	2.0	7760293
Turbidity	NTU	1.5	0.10	7724846	2.6	7724860	4.0	0.10	7724860
Conductivity	uS/cm	51	1.0	7751055	49	7751055	46	1.0	7751055

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1AG897
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: KM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RNH011			RNH012			RNH012		
Sampling Date		2021/12/01 15:30			2021/12/01			2021/12/01		
COC Number		858578-01-01			858578-01-01			858578-01-01		
Sample #		EMERG-2266			EMERG-2267			EMERG-2267		
	UNITS	SW4	RDL	QC Batch	DUP 1	RDL	QC Batch	DUP 1 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.210	N/A	7759858	0.210	N/A	7759858			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7759595	<1.0	1.0	7759595			
Calculated TDS	mg/L	20	1.0	7759863	18	1.0	7759863			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7759595	<1.0	1.0	7759595			
Cation Sum	me/L	0.420	N/A	7759858	0.340	N/A	7759858			
Hardness (CaCO3)	mg/L	7.8	1.0	7759856	3.9	1.0	7759856			
Ion Balance (% Difference)	%	33.3	N/A	7759857	23.6	N/A	7759857			
Langelier Index (@ 20C)	N/A	NC		7759604	NC		7759604			
Langelier Index (@ 4C)	N/A	NC		7759606	NC		7759606			
Nitrate (N)	mg/L	<0.050	0.050	7759860	<0.050	0.050	7759860			
Saturation pH (@ 20C)	N/A	NC		7759604	NC		7759604			
Saturation pH (@ 4C)	N/A	NC		7759606	NC		7759606			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7760251	<5.0	5.0	7760251			
Carbonaceous BOD	mg/L	<5.0	5.0	7760357	<5.0	5.0	7760357			
Total Chemical Oxygen Demand	mg/L	78	20	7777459	81	20	7777459			
Dissolved Chloride (Cl-)	mg/L	7.4	1.0	7760267	7.3	1.0	7760267			
Colour	TCU	240	50	7760305	240	25	7760305			
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7760325	<0.050	0.050	7760325			
Nitrite (N)	mg/L	<0.010	0.010	7760337	<0.010	0.010	7760337			
Nitrogen (Ammonia Nitrogen)	mg/L	0.055	0.050	7761622	<0.050	0.050	7761645	<0.050	0.050	7761645
Total Organic Carbon (C)	mg/L	25	0.50	7757659	25	0.50	7757678			
Orthophosphate (P)	mg/L	<0.010	0.010	7760320	<0.010	0.010	7760320			
pH	pH	4.78		7751052	4.42		7751052			
Phenols-4AAP	mg/L	<0.0010	0.0010	7727163	<0.0010	0.0010	7727163			
Reactive Silica (SiO2)	mg/L	4.2	0.50	7760294	4.2	0.50	7760294			
Total Suspended Solids	mg/L	3.6	1.0	7753733	<1.0	1.0	7753733			
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7760293	<2.0	2.0	7760293			
Turbidity	NTU	4.5	0.10	7724860	1.8	0.10	7724860			
Conductivity	uS/cm	46	1.0	7751055	49	1.0	7751055			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		RNH013			RNH014		
Sampling Date		2021/12/01 16:00			2021/12/01 16:20		
COC Number		858578-01-01			858578-01-01		
Sample #		EMERG-2268			EMERG-2269		
	UNITS	SW13	RDL	QC Batch	SW19-20	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L	0.450	N/A	7759858	4.71	N/A	7759858
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	5.7	1.0	7759595	170	1.0	7759595
Calculated TDS	mg/L	32	1.0	7759863	260	1.0	7759863
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7759595	1.0	1.0	7759595
Cation Sum	me/L	0.570	N/A	7759858	4.44	N/A	7759858
Hardness (CaCO3)	mg/L	13	1.0	7759856	190	1.0	7759856
Ion Balance (% Difference)	%	11.8	N/A	7759857	2.95	N/A	7759857
Langelier Index (@ 20C)	N/A	-4.08		7759604	0.448		7759604
Langelier Index (@ 4C)	N/A	-4.33		7759606	0.199		7759606
Nitrate (N)	mg/L	0.14	0.050	7759860	1.3	0.050	7759860
Saturation pH (@ 20C)	N/A	10.0		7759604	7.37		7759604
Saturation pH (@ 4C)	N/A	10.3		7759606	7.62		7759606
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	5.7	5.0	7760251	170	25	7765398
Carbonaceous BOD	mg/L	<5.0	5.0	7760357	<5.0	5.0	7760357
Total Chemical Oxygen Demand	mg/L	59	20	7777459	<20	20	7777459
Dissolved Chloride (Cl-)	mg/L	11	1.0	7760267	7.4	1.0	7765426
Colour	TCU	170	25	7760305	11	5.0	7765444
Nitrate + Nitrite (N)	mg/L	0.14	0.050	7760325	1.3	0.050	7765450
Nitrite (N)	mg/L	<0.010	0.010	7760337	<0.010	0.010	7765451
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7761645	<0.050	0.050	7761622
Total Organic Carbon (C)	mg/L	18	0.50	7757678	4.9	0.50	7757678
Orthophosphate (P)	mg/L	<0.010	0.010	7760320	0.011	0.010	7765446
pH	pH	5.95		7751052	7.82		7751052
Phenols-4AAP	mg/L	<0.0010	0.0010	7727163	<0.0010	0.0010	7727163
Reactive Silica (SiO2)	mg/L	4.3	0.50	7760294	7.0	0.50	7765431
Total Suspended Solids	mg/L	2.2	1.0	7753733	4.8	1.0	7753733
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7760293	52	2.0	7765428
Turbidity	NTU	2.6	0.10	7724860	5.1	0.10	7724860
Conductivity	uS/cm	63	1.0	7751055	420	1.0	7751055

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RNH005	RNH006	RNH007	RNH011	RNH012	RNH013		
Sampling Date		2021/12/01 14:30	2021/12/01 14:50	2021/12/01 15:10	2021/12/01 15:30	2021/12/01	2021/12/01 16:00		
COC Number		858578-01-01	858578-01-01	858578-01-01	858578-01-01	858578-01-01	858578-01-01		
Sample #		EMERG-2263	EMERG-2264	EMERG-2265	EMERG-2266	EMERG-2267	EMERG-2268		
	UNITS	SW1	SW2	SW3	SW4	DUP 1	SW13	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	730	820	830	870	730	580	5.0	7772733
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7772733
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7772733
Total Barium (Ba)	ug/L	4.7	5.2	6.1	6.4	4.9	6.7	1.0	7772733
Total Beryllium (Be)	ug/L	0.13	0.12	0.11	0.13	0.12	<0.10	0.10	7772733
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7772733
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	<50	50	7772733
Total Cadmium (Cd)	ug/L	0.024	0.024	0.026	0.027	0.025	0.024	0.010	7772733
Total Calcium (Ca)	ug/L	700	1100	2500	2000	700	3200	100	7772733
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	7772733
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7772733
Total Copper (Cu)	ug/L	<0.50	<0.50	<0.50	0.62	<0.50	1.3	0.50	7772733
Total Iron (Fe)	ug/L	540	600	620	670	560	620	50	7772733
Total Lead (Pb)	ug/L	1.1	1.2	1.2	1.3	1.1	0.65	0.50	7772733
Total Magnesium (Mg)	ug/L	510	590	810	690	530	1100	100	7772733
Total Manganese (Mn)	ug/L	19	20	22	23	19	33	2.0	7772733
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7772733
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7772733
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	<100	100	7772733
Total Potassium (K)	ug/L	250	350	450	450	260	620	100	7772733
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7772733
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7772733
Total Sodium (Na)	ug/L	4500	4800	4700	4900	4600	6300	100	7772733
Total Strontium (Sr)	ug/L	6.0	7.1	12	10	5.9	11	2.0	7772733
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	7772733
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7772733
Total Titanium (Ti)	ug/L	9.6	11	11	13	7.3	7.8	2.0	7772733
Total Uranium (U)	ug/L	0.17	0.21	0.60	0.28	0.19	0.41	0.10	7772733
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	7772733
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	9.6	<5.0	6.2	5.0	7772733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		RNH014		
Sampling Date		2021/12/01 16:20		
COC Number		858578-01-01		
Sample #		EMERG-2269		
	UNITS	SW19-20	RDL	QC Batch
Metals				
Total Aluminum (Al)	ug/L	280	5.0	7772733
Total Antimony (Sb)	ug/L	<1.0	1.0	7772733
Total Arsenic (As)	ug/L	1.4	1.0	7772733
Total Barium (Ba)	ug/L	27	1.0	7772733
Total Beryllium (Be)	ug/L	<0.10	0.10	7772733
Total Bismuth (Bi)	ug/L	<2.0	2.0	7772733
Total Boron (B)	ug/L	110	50	7772733
Total Cadmium (Cd)	ug/L	0.015	0.010	7772733
Total Calcium (Ca)	ug/L	66000	100	7772733
Total Chromium (Cr)	ug/L	<1.0	1.0	7772733
Total Cobalt (Co)	ug/L	0.63	0.40	7772733
Total Copper (Cu)	ug/L	2.3	0.50	7772733
Total Iron (Fe)	ug/L	550	50	7772733
Total Lead (Pb)	ug/L	0.54	0.50	7772733
Total Magnesium (Mg)	ug/L	7400	100	7772733
Total Manganese (Mn)	ug/L	370	2.0	7772733
Total Molybdenum (Mo)	ug/L	2.1	2.0	7772733
Total Nickel (Ni)	ug/L	<2.0	2.0	7772733
Total Phosphorus (P)	ug/L	<100	100	7772733
Total Potassium (K)	ug/L	7300	100	7772733
Total Selenium (Se)	ug/L	<0.50	0.50	7772733
Total Silver (Ag)	ug/L	<0.10	0.10	7772733
Total Sodium (Na)	ug/L	8000	100	7772733
Total Strontium (Sr)	ug/L	170	2.0	7772733
Total Thallium (Tl)	ug/L	<0.10	0.10	7772733
Total Tin (Sn)	ug/L	<2.0	2.0	7772733
Total Titanium (Ti)	ug/L	14	2.0	7772733
Total Uranium (U)	ug/L	15	0.10	7772733
Total Vanadium (V)	ug/L	<2.0	2.0	7772733
Total Zinc (Zn)	ug/L	<5.0	5.0	7772733

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C1AG897
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Sampler Initials: KM

ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RNH005	RNH006	RNH007	RNH011	RNH012	RNH013		
Sampling Date		2021/12/01 14:30	2021/12/01 14:50	2021/12/01 15:10	2021/12/01 15:30	2021/12/01	2021/12/01 16:00		
COC Number		858578-01-01	858578-01-01	858578-01-01	858578-01-01	858578-01-01	858578-01-01		
Sample #		EMERG-2263	EMERG-2264	EMERG-2265	EMERG-2266	EMERG-2267	EMERG-2268		
	UNITS	SW1	SW2	SW3	SW4	DUP 1	SW13	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7747928
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7747928
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7747928
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7747928
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7747928
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7763367
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7763367
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7763367
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7759865
Reached Baseline at C32	mg/L	NA	NA	NA	NA	NA	NA	N/A	7763367
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	NA	NA	N/A	7763367
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	92	89	86	87	87	90		7763367
n-Dotriacontane - Extractable	%	82	100	92	100	99	92		7763367
Isobutylbenzene - Volatile	%	101	101	101	103	102	103		7747928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (WATER)

Bureau Veritas ID		RNH014		
Sampling Date		2021/12/01 16:20		
COC Number		858578-01-01		
Sample #		EMERG-2269		
	UNITS	SW19-20	RDL	QC Batch
Petroleum Hydrocarbons				
Benzene	mg/L	<0.0010	0.0010	7747928
Toluene	mg/L	<0.0010	0.0010	7747928
Ethylbenzene	mg/L	<0.0010	0.0010	7747928
Total Xylenes	mg/L	<0.0020	0.0020	7747928
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7747928
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7763367
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7763367
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7763367
Modified TPH (Tier1)	mg/L	<0.090	0.090	7759865
Reached Baseline at C32	mg/L	NA	N/A	7763367
Hydrocarbon Resemblance	mg/L	NA	N/A	7763367
Surrogate Recovery (%)				
Isobutylbenzene - Extractable	%	86		7763367
n-Dotriacontane - Extractable	%	102		7763367
Isobutylbenzene - Volatile	%	104		7747928

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Sample RNH005 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RNH006 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RNH007 [SW3] : Ion balance acceptable. Low ionic strength sample.

Sample RNH011 [SW4] : Ion balance acceptable. Low ionic strength sample.

Sample RNH012 [DUP 1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RNH013 [SW13] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RNH014 [SW19-20] : ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.
COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7724846	SHW	QC Standard	Turbidity	2021/12/06		104	%	80 - 120
7724846	SHW	Spiked Blank	Turbidity	2021/12/06		106	%	80 - 120
7724846	SHW	Method Blank	Turbidity	2021/12/06	<0.10		NTU	
7724846	SHW	RPD	Turbidity	2021/12/06	5.7		%	20
7724860	SHW	QC Standard	Turbidity	2021/12/07		102	%	80 - 120
7724860	SHW	Spiked Blank	Turbidity	2021/12/07		105	%	80 - 120
7724860	SHW	Method Blank	Turbidity	2021/12/07	<0.10		NTU	
7724860	SHW	RPD	Turbidity	2021/12/07	NC		%	20
7727163	LHA	Matrix Spike	Phenols-4AAP	2021/12/07		101	%	80 - 120
7727163	LHA	Spiked Blank	Phenols-4AAP	2021/12/07		99	%	80 - 120
7727163	LHA	Method Blank	Phenols-4AAP	2021/12/07	<0.0010		mg/L	
7727163	LHA	RPD	Phenols-4AAP	2021/12/07	NC		%	20
7747928	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/12/04		103	%	70 - 130
			Benzene	2021/12/04		97	%	70 - 130
			Toluene	2021/12/04		94	%	70 - 130
			Ethylbenzene	2021/12/04		95	%	70 - 130
			Total Xylenes	2021/12/04		96	%	70 - 130
7747928	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/12/04		105	%	70 - 130
			Benzene	2021/12/04		108	%	70 - 130
			Toluene	2021/12/04		104	%	70 - 130
			Ethylbenzene	2021/12/04		104	%	70 - 130
			Total Xylenes	2021/12/04		106	%	70 - 130
7747928	THL	Method Blank	Isobutylbenzene - Volatile	2021/12/04		105	%	70 - 130
			Benzene	2021/12/04	<0.0010		mg/L	
			Toluene	2021/12/04	<0.0010		mg/L	
			Ethylbenzene	2021/12/04	<0.0010		mg/L	
			Total Xylenes	2021/12/04	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/12/04	<0.090		mg/L	
7747928	THL	RPD	Benzene	2021/12/04	NC		%	40
			Toluene	2021/12/04	NC		%	40
			Ethylbenzene	2021/12/04	NC		%	40
			Total Xylenes	2021/12/04	NC		%	40
			C6 - C10 (less BTEX)	2021/12/04	NC		%	40
7751052	SHW	Spiked Blank	pH	2021/12/08		100	%	97 - 103
7751052	SHW	RPD	pH	2021/12/08	0.65		%	N/A
7751055	SHW	Spiked Blank	Conductivity	2021/12/08		100	%	80 - 120
7751055	SHW	Method Blank	Conductivity	2021/12/08	<1.0		uS/cm	
7751055	SHW	RPD	Conductivity	2021/12/08	0.40		%	10
7753733	MKX	QC Standard	Total Suspended Solids	2021/12/24		99	%	80 - 120
7753733	MKX	Method Blank	Total Suspended Solids	2021/12/24	<1.0		mg/L	
7753733	MKX	RPD	Total Suspended Solids	2022/01/04	3.0		%	20
7757659	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/07		97	%	85 - 115
7757659	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/07		101	%	80 - 120
7757659	NGI	Method Blank	Total Organic Carbon (C)	2021/12/07	<0.50		mg/L	
7757659	NGI	RPD	Total Organic Carbon (C)	2021/12/07	4.1		%	15
7757663	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/07		101	%	80 - 120
7757663	NGI	Method Blank	Total Organic Carbon (C)	2021/12/07	<0.50		mg/L	
7757678	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/07		99	%	85 - 115
7757678	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/07		102	%	80 - 120
7757678	NGI	Method Blank	Total Organic Carbon (C)	2021/12/07	<0.50		mg/L	
7757678	NGI	RPD	Total Organic Carbon (C)	2021/12/07	0.064		%	15
7760251	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/07		96	%	80 - 120
7760251	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/07		109	%	80 - 120
7760251	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/07	<5.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7760251	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/12/07	NC		%	20
7760267	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/07		96	%	80 - 120
7760267	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/07		99	%	80 - 120
7760267	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/12/07	<1.0		mg/L	
7760267	MCN	RPD	Dissolved Chloride (Cl-)	2021/12/07	NC		%	20
7760293	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/07		108	%	80 - 120
7760293	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/07		108	%	80 - 120
7760293	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/12/07	<2.0		mg/L	
7760293	MCN	RPD	Dissolved Sulphate (SO4)	2021/12/07	NC		%	20
7760294	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/12/07		90	%	80 - 120
7760294	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/12/07		95	%	80 - 120
7760294	MCN	Method Blank	Reactive Silica (SiO2)	2021/12/07	<0.50		mg/L	
7760294	MCN	RPD	Reactive Silica (SiO2)	2021/12/07	NC		%	20
7760305	MCN	Spiked Blank	Colour	2021/12/07		101	%	80 - 120
7760305	MCN	Method Blank	Colour	2021/12/07	<5.0		TCU	
7760305	MCN	RPD	Colour	2021/12/07	NC		%	20
7760320	MCN	Matrix Spike	Orthophosphate (P)	2021/12/07		101	%	80 - 120
7760320	MCN	Spiked Blank	Orthophosphate (P)	2021/12/07		104	%	80 - 120
7760320	MCN	Method Blank	Orthophosphate (P)	2021/12/07	<0.010		mg/L	
7760320	MCN	RPD	Orthophosphate (P)	2021/12/07	NC		%	20
7760325	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/12/07		94	%	80 - 120
7760325	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/12/07		98	%	80 - 120
7760325	MCN	Method Blank	Nitrate + Nitrite (N)	2021/12/07	<0.050		mg/L	
7760325	MCN	RPD	Nitrate + Nitrite (N)	2021/12/07	NC		%	20
7760337	MCN	Matrix Spike	Nitrite (N)	2021/12/07		103	%	80 - 120
7760337	MCN	Spiked Blank	Nitrite (N)	2021/12/07		112	%	80 - 120
7760337	MCN	Method Blank	Nitrite (N)	2021/12/07	<0.010		mg/L	
7760337	MCN	RPD	Nitrite (N)	2021/12/07	NC		%	20
7760357	NFS	QC Standard	Carbonaceous BOD	2022/01/04		124 (1)	%	80 - 120
7760357	NFS	Spiked Blank	Carbonaceous BOD	2022/01/04		128 (2)	%	80 - 120
7760357	NFS	Method Blank	Carbonaceous BOD	2022/01/04	<2.0		mg/L	
7760357	NFS	RPD	Carbonaceous BOD	2022/01/04	5.6		%	25
7761324	MKX	QC Standard	Total Suspended Solids	2021/12/07		100	%	80 - 120
7761324	MKX	Method Blank	Total Suspended Solids	2021/12/07	<1.0		mg/L	
7761324	MKX	RPD	Total Suspended Solids	2021/12/07	15		%	20
7761622	MKY	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/12/08		NC	%	80 - 120
7761622	MKY	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/07		107	%	80 - 120
7761622	MKY	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/07	<0.050		mg/L	
7761622	MKY	RPD	Nitrogen (Ammonia Nitrogen)	2021/12/08	0.14		%	20
7761645	MKY	Matrix Spike [RNH012-09]	Nitrogen (Ammonia Nitrogen)	2021/12/07		87	%	80 - 120
7761645	MKY	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/07		97	%	80 - 120
7761645	MKY	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/07	<0.050		mg/L	
7761645	MKY	RPD [RNH012-09]	Nitrogen (Ammonia Nitrogen)	2021/12/07	NC		%	20
7763367	MGN	Matrix Spike	Isobutylbenzene - Extractable	2021/12/06		81	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/06		104	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/06		84	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/06		79	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/06		86	%	70 - 130
7763367	MGN	Spiked Blank	Isobutylbenzene - Extractable	2021/12/06		93	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/06		76	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/06		102	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/06		91	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/06		94	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7763367	MGN	Method Blank	Isobutylbenzene - Extractable	2021/12/06		94	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/06		94	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/06	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/06	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/06	<0.090		mg/L	
7763367	MGN	RPD	>C10-C16 Hydrocarbons	2021/12/06	NC		%	40
			>C16-C21 Hydrocarbons	2021/12/06	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/06	NC		%	40
7765398	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/08		91	%	80 - 120
7765398	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/08		110	%	80 - 120
7765398	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/08	<5.0		mg/L	
7765398	MCN	RPD	Total Alkalinity (Total as CaCO3)	2021/12/08	5.9		%	20
7765426	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/08		NC	%	80 - 120
7765426	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/08		100	%	80 - 120
7765426	MCN	Method Blank	Dissolved Chloride (Cl-)	2021/12/08	<1.0		mg/L	
7765426	MCN	RPD	Dissolved Chloride (Cl-)	2021/12/08	0.16		%	20
7765428	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/08		NC	%	80 - 120
7765428	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/08		105	%	80 - 120
7765428	MCN	Method Blank	Dissolved Sulphate (SO4)	2021/12/08	<2.0		mg/L	
7765428	MCN	RPD	Dissolved Sulphate (SO4)	2021/12/08	0.47		%	20
7765431	MCN	Matrix Spike	Reactive Silica (SiO2)	2021/12/08		93	%	80 - 120
7765431	MCN	Spiked Blank	Reactive Silica (SiO2)	2021/12/08		98	%	80 - 120
7765431	MCN	Method Blank	Reactive Silica (SiO2)	2021/12/08	<0.50		mg/L	
7765431	MCN	RPD	Reactive Silica (SiO2)	2021/12/08	1.8		%	20
7765444	MCN	Spiked Blank	Colour	2021/12/08		90	%	80 - 120
7765444	MCN	Method Blank	Colour	2021/12/08	<5.0		TCU	
7765444	MCN	RPD	Colour	2021/12/08	NC		%	20
7765446	MCN	Matrix Spike	Orthophosphate (P)	2021/12/08		95	%	80 - 120
7765446	MCN	Spiked Blank	Orthophosphate (P)	2021/12/08		101	%	80 - 120
7765446	MCN	Method Blank	Orthophosphate (P)	2021/12/08	<0.010		mg/L	
7765446	MCN	RPD	Orthophosphate (P)	2021/12/08	NC		%	20
7765450	MCN	Matrix Spike	Nitrate + Nitrite (N)	2021/12/08		97	%	80 - 120
7765450	MCN	Spiked Blank	Nitrate + Nitrite (N)	2021/12/08		97	%	80 - 120
7765450	MCN	Method Blank	Nitrate + Nitrite (N)	2021/12/08	<0.050		mg/L	
7765450	MCN	RPD	Nitrate + Nitrite (N)	2021/12/08	3.6		%	20
7765451	MCN	Matrix Spike	Nitrite (N)	2021/12/08		105	%	80 - 120
7765451	MCN	Spiked Blank	Nitrite (N)	2021/12/08		105	%	80 - 120
7765451	MCN	Method Blank	Nitrite (N)	2021/12/08	<0.010		mg/L	
7765451	MCN	RPD	Nitrite (N)	2021/12/08	6.6		%	20
7772733	BAN	Matrix Spike	Total Aluminum (Al)	2021/12/03		98	%	80 - 120
			Total Antimony (Sb)	2021/12/03		104	%	80 - 120
			Total Arsenic (As)	2021/12/03		94	%	80 - 120
			Total Barium (Ba)	2021/12/03		94	%	80 - 120
			Total Beryllium (Be)	2021/12/03		99	%	80 - 120
			Total Bismuth (Bi)	2021/12/03		96	%	80 - 120
			Total Boron (B)	2021/12/03		103	%	80 - 120
			Total Cadmium (Cd)	2021/12/03		97	%	80 - 120
			Total Calcium (Ca)	2021/12/03		102	%	80 - 120
			Total Chromium (Cr)	2021/12/03		96	%	80 - 120
			Total Cobalt (Co)	2021/12/03		97	%	80 - 120
			Total Copper (Cu)	2021/12/03		93	%	80 - 120
			Total Iron (Fe)	2021/12/03		97	%	80 - 120
			Total Lead (Pb)	2021/12/03		101	%	80 - 120
			Total Magnesium (Mg)	2021/12/03		95	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Manganese (Mn)	2021/12/03		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/12/03		102	%	80 - 120
			Total Nickel (Ni)	2021/12/03		97	%	80 - 120
			Total Phosphorus (P)	2021/12/03		100	%	80 - 120
			Total Potassium (K)	2021/12/03		99	%	80 - 120
			Total Selenium (Se)	2021/12/03		98	%	80 - 120
			Total Silver (Ag)	2021/12/03		97	%	80 - 120
			Total Sodium (Na)	2021/12/03		NC	%	80 - 120
			Total Strontium (Sr)	2021/12/03		96	%	80 - 120
			Total Thallium (Tl)	2021/12/03		98	%	80 - 120
			Total Tin (Sn)	2021/12/03		103	%	80 - 120
			Total Titanium (Ti)	2021/12/03		95	%	80 - 120
			Total Uranium (U)	2021/12/03		104	%	80 - 120
			Total Vanadium (V)	2021/12/03		99	%	80 - 120
			Total Zinc (Zn)	2021/12/03		93	%	80 - 120
7772733	BAN	Spiked Blank	Total Aluminum (Al)	2021/12/03		104	%	80 - 120
			Total Antimony (Sb)	2021/12/03		106	%	80 - 120
			Total Arsenic (As)	2021/12/03		94	%	80 - 120
			Total Barium (Ba)	2021/12/03		100	%	80 - 120
			Total Beryllium (Be)	2021/12/03		97	%	80 - 120
			Total Bismuth (Bi)	2021/12/03		101	%	80 - 120
			Total Boron (B)	2021/12/03		100	%	80 - 120
			Total Cadmium (Cd)	2021/12/03		98	%	80 - 120
			Total Calcium (Ca)	2021/12/03		105	%	80 - 120
			Total Chromium (Cr)	2021/12/03		97	%	80 - 120
			Total Cobalt (Co)	2021/12/03		98	%	80 - 120
			Total Copper (Cu)	2021/12/03		98	%	80 - 120
			Total Iron (Fe)	2021/12/03		100	%	80 - 120
			Total Lead (Pb)	2021/12/03		104	%	80 - 120
			Total Magnesium (Mg)	2021/12/03		101	%	80 - 120
			Total Manganese (Mn)	2021/12/03		99	%	80 - 120
			Total Molybdenum (Mo)	2021/12/03		102	%	80 - 120
			Total Nickel (Ni)	2021/12/03		99	%	80 - 120
			Total Phosphorus (P)	2021/12/03		104	%	80 - 120
			Total Potassium (K)	2021/12/03		101	%	80 - 120
			Total Selenium (Se)	2021/12/03		97	%	80 - 120
			Total Silver (Ag)	2021/12/03		99	%	80 - 120
			Total Sodium (Na)	2021/12/03		97	%	80 - 120
			Total Strontium (Sr)	2021/12/03		99	%	80 - 120
			Total Thallium (Tl)	2021/12/03		100	%	80 - 120
			Total Tin (Sn)	2021/12/03		103	%	80 - 120
			Total Titanium (Ti)	2021/12/03		98	%	80 - 120
			Total Uranium (U)	2021/12/03		105	%	80 - 120
			Total Vanadium (V)	2021/12/03		100	%	80 - 120
			Total Zinc (Zn)	2021/12/03		98	%	80 - 120
7772733	BAN	Method Blank	Total Aluminum (Al)	2021/12/03	<5.0		ug/L	
			Total Antimony (Sb)	2021/12/03	<1.0		ug/L	
			Total Arsenic (As)	2021/12/03	<1.0		ug/L	
			Total Barium (Ba)	2021/12/03	<1.0		ug/L	
			Total Beryllium (Be)	2021/12/03	<0.10		ug/L	
			Total Bismuth (Bi)	2021/12/03	<2.0		ug/L	
			Total Boron (B)	2021/12/03	<50		ug/L	
			Total Cadmium (Cd)	2021/12/03	<0.010		ug/L	
			Total Calcium (Ca)	2021/12/03	<100		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2021/12/03	<1.0		ug/L	
			Total Cobalt (Co)	2021/12/03	<0.40		ug/L	
			Total Copper (Cu)	2021/12/03	<0.50		ug/L	
			Total Iron (Fe)	2021/12/03	<50		ug/L	
			Total Lead (Pb)	2021/12/03	<0.50		ug/L	
			Total Magnesium (Mg)	2021/12/03	<100		ug/L	
			Total Manganese (Mn)	2021/12/03	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/12/03	<2.0		ug/L	
			Total Nickel (Ni)	2021/12/03	<2.0		ug/L	
			Total Phosphorus (P)	2021/12/03	<100		ug/L	
			Total Potassium (K)	2021/12/03	<100		ug/L	
			Total Selenium (Se)	2021/12/03	<0.50		ug/L	
			Total Silver (Ag)	2021/12/03	<0.10		ug/L	
			Total Sodium (Na)	2021/12/03	<100		ug/L	
			Total Strontium (Sr)	2021/12/03	<2.0		ug/L	
			Total Thallium (Tl)	2021/12/03	<0.10		ug/L	
			Total Tin (Sn)	2021/12/03	<2.0		ug/L	
			Total Titanium (Ti)	2021/12/03	<2.0		ug/L	
			Total Uranium (U)	2021/12/03	<0.10		ug/L	
			Total Vanadium (V)	2021/12/03	<2.0		ug/L	
			Total Zinc (Zn)	2021/12/03	<5.0		ug/L	
7772733	BAN	RPD	Total Aluminum (Al)	2021/12/07	0.67		%	20
			Total Antimony (Sb)	2021/12/07	0.67		%	20
			Total Arsenic (As)	2021/12/07	4.4		%	20
			Total Barium (Ba)	2021/12/07	4.2		%	20
			Total Beryllium (Be)	2021/12/07	NC		%	20
			Total Bismuth (Bi)	2021/12/07	NC		%	20
			Total Boron (B)	2021/12/07	0.65		%	20
			Total Cadmium (Cd)	2021/12/07	NC		%	20
			Total Calcium (Ca)	2021/12/07	3.9		%	20
			Total Chromium (Cr)	2021/12/07	NC		%	20
			Total Cobalt (Co)	2021/12/07	3.0		%	20
			Total Copper (Cu)	2021/12/07	2.7		%	20
			Total Iron (Fe)	2021/12/07	6.5		%	20
			Total Lead (Pb)	2021/12/07	NC		%	20
			Total Magnesium (Mg)	2021/12/07	3.8		%	20
			Total Manganese (Mn)	2021/12/07	3.6		%	20
			Total Molybdenum (Mo)	2021/12/07	4.4		%	20
			Total Nickel (Ni)	2021/12/07	0.73		%	20
			Total Phosphorus (P)	2021/12/07	NC		%	20
			Total Potassium (K)	2021/12/07	3.4		%	20
			Total Selenium (Se)	2021/12/07	1.1		%	20
			Total Silver (Ag)	2021/12/07	NC		%	20
			Total Sodium (Na)	2021/12/07	3.1		%	20
			Total Strontium (Sr)	2021/12/07	4.4		%	20
			Total Thallium (Tl)	2021/12/07	NC		%	20
			Total Tin (Sn)	2021/12/07	NC		%	20
			Total Titanium (Ti)	2021/12/07	NC		%	20
			Total Uranium (U)	2021/12/07	4.1		%	20
			Total Vanadium (V)	2021/12/07	NC		%	20
			Total Zinc (Zn)	2021/12/07	NC		%	20
7777459	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/12/03		103	%	80 - 120
7777459	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/12/03		103	%	80 - 120
7777459	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/12/03		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7777459	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/12/03	<20		mg/L	
7777459	ZZH	RPD	Total Chemical Oxygen Demand	2021/12/03	0		%	25

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery and Second source QC recovery high. All other QC acceptable.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Phil Deveau, Scientific Specialist (Organics)

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CHAIN OF CUSTODY RECORD

COC #: D 55361 Page ____ of ____

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Aecom Canada Ltd	Company Name: Same	Quotation #: Hackmatts Field SW	X Regular TAT (5 business days) Most analyses
Contact Name: Derek Heath	Contact Name:	Purchase Order#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 170 Hollis St. Suite 400 Hfx PC:	Address: PC:	Project #: 60639002	IF RUSH please specify date (Surcharges will be applied)
Phone: (902) 422-2052	Phone:	Site Location:	DATE REQUIRED:
Email: derek.heath@aecom.com	Email:	Site Province: NS	
Report Copies:	Report Copies:	Site #:	
		Sampled By: KM/DH	

Laboratory Use Only

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COOLER TEMPERATURES
		5, 8, 4	
		7, 7, 7	

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	LAB FILTRATION REQUIRED	RCAP-MS [Total Metals] Well / Surface	RCAP-MS[Dissolved Metals] Ground water	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury (CIRCLE) TOTAL / DISSOLVED	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural/ Landfill)	RBCA Hydrocarbons (BTEX, C6-C32)	CCME Hydrocarbons (CWS-PHC F1/BTEX, F2-F4)	PAHs (Default for water/soil)	PAHs (FWAL/CCME Sediment)	PCBs - Select One: Default or CCME Sediment	VOCs	Total Coliform/E.coli (Presence/Absence)	Total Coliform/E.Coli (Count)			HOLD- DO NOT ANALYZE	Regulatory Requirements (Specify)
1	SW1	2021/12/01	2:30 pm	SW																		✓	SW Package			
2	SW2		2:50 pm																			✓				
3	SW3		3:10 pm																			✓				
4	SW4		3:30 pm																			✓				
5	DUP1		—																			✓				
6	SW13		4:00 pm																			✓				
7	SW19-20		4:20 pm																			✓				
8																										
9																										
10																										

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY:(Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Derek Heath	2021/12/01	5:50 pm	JENNY BERRY		

Job B1202-004
Emerg # -2263
~~CTS~~ -2269
CIAG897

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to BV Labs standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms www.bvna.com

2021 DEC 2 9:42

White: Bureau Veritas Pink: Client

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 858578-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962220
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2434
Received: 2021/12/15, 14:19

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2021/12/31	N/A	SM 23 4500-CO2 D
Alkalinity	3	N/A	2021/12/22	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	4	N/A	2021/12/23	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	7	2021/12/16	2021/12/28	ATL SOP 00041	SM 23 5210B m
Chloride	3	N/A	2021/12/22	ATL SOP 00014	SM 23 4500-Cl- E m
Chloride	4	N/A	2021/12/23	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2021/12/21	2021/12/21	ATL SOP 00042	SM 23 5220D m
Colour	3	N/A	2021/12/22	ATL SOP 00020	SM 23 2120C m
Colour	4	N/A	2021/12/23	ATL SOP 00020	SM 23 2120C m
Conductance - water	7	N/A	2021/12/30	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	6	2021/12/16	2021/12/17	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	1	2021/12/17	2021/12/20	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2021/12/21	ATL SOP 00048	Auto Calc
Metals Water Total MS	1	2021/12/16	2021/12/20	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	6	2021/12/17	2021/12/20	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/01/10	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/01/10	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2021/12/21	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	3	N/A	2021/12/22	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrate + Nitrite	4	N/A	2021/12/23	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	3	N/A	2021/12/22	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrite	4	N/A	2021/12/23	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	3	N/A	2021/12/23	ATL SOP 00018	ASTM D3867-16
Nitrogen - Nitrate (as N)	4	N/A	2021/12/30	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2021/12/20	CAM SOP-00444	OMOE E3179 m
pH (2)	7	N/A	2021/12/30	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	3	N/A	2021/12/22	ATL SOP 00021	SM 23 4500-P E m
Phosphorus - ortho	4	N/A	2021/12/23	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	2	N/A	2022/01/10	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	5	N/A	2021/12/31	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	2	N/A	2022/01/10	ATL SOP 00049	Auto Calc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 858578-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962220
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2434
Received: 2021/12/15, 14:19

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sat. pH and Langelier Index (@ 4C)	5	N/A	2021/12/31	ATL SOP 00049	Auto Calc.
Reactive Silica	3	N/A	2021/12/22	ATL SOP 00022	EPA 366.0 m
Reactive Silica	4	N/A	2021/12/23	ATL SOP 00022	EPA 366.0 m
Sulphate	3	N/A	2021/12/22	ATL SOP 00023	ASTM D516-16 m
Sulphate	4	N/A	2021/12/23	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/01/10	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	7	N/A	2021/12/21	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	6	N/A	2021/12/20	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	1	N/A	2021/12/22	N/A	Atl. RBCA v3 m
Total Suspended Solids	4	2021/12/20	2021/12/22	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	2	2021/12/20	2021/12/24	ATL SOP 00007	SM 23 2540D m
Total Suspended Solids	1	2021/12/21	2021/12/23	ATL SOP 00007	SM 23 2540D m
Turbidity	7	N/A	2021/12/29	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	7	N/A	2021/12/18	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 858578-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/01/14
Report #: R6962220
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1Z2434

Received: 2021/12/15, 14:19

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
14 Jan 2022 13:02:45

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C1Z2434
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RJJ614			RJJ615			RJJ616		
Sampling Date		2021/12/15 11:00			2021/12/15 11:15			2021/12/15 11:30		
COC Number		858578-01-01			858578-01-01			858578-01-01		
	UNITS	SW1	RDL	QC Batch	SW2	RDL	QC Batch	SW3	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.160	N/A	7731142	0.150	N/A	7731142	0.160	N/A	7731142
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7731130	<1.0	1.0	7731130	<1.0	1.0	7731130
Calculated TDS	mg/L	14	1.0	7731158	13	1.0	7731158	16	1.0	7731158
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7731130	<1.0	1.0	7731130	<1.0	1.0	7731130
Cation Sum	me/L	0.270	N/A	7731142	0.280	N/A	7731142	0.350	N/A	7731142
Hardness (CaCO3)	mg/L	3.2	1.0	7731139	3.5	1.0	7731139	7.0	1.0	7731139
Ion Balance (% Difference)	%	25.6	N/A	7731141	30.2	N/A	7731141	37.3	N/A	7731141
Langelier Index (@ 20C)	N/A	NC		7731156	NC		7731156	NC		7731156
Langelier Index (@ 4C)	N/A	NC		7731157	NC		7731157	NC		7731157
Nitrate (N)	mg/L	<0.050	0.050	7731146	<0.050	0.050	7731146	<0.050	0.050	7731146
Saturation pH (@ 20C)	N/A	NC		7731156	NC		7731156	NC		7731156
Saturation pH (@ 4C)	N/A	NC		7731157	NC		7731157	NC		7731157
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7747845	<5.0	5.0	7744961	<5.0	5.0	7747845
Carbonaceous BOD	mg/L	<10	10	7731167	<10	10	7731167	<10	10	7731167
Total Chemical Oxygen Demand	mg/L	49	20	7744447	54	20	7744447	56	20	7744447
Dissolved Chloride (Cl-)	mg/L	5.6 (1)	2.0	7747848	5.2	1.0	7744964	5.6 (1)	2.0	7747848
Colour	TCU	190	25	7747854	190	25	7744978	190	25	7747854
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7747859	<0.050	0.050	7744981	<0.050	0.050	7747859
Nitrite (N)	mg/L	<0.010	0.010	7747861	<0.010	0.010	7744983	<0.010	0.010	7747861
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744511	0.096	0.050	7744511	<0.050	0.050	7744511
Total Organic Carbon (C)	mg/L	18	0.50	7744509	19	0.50	7744519	19	0.50	7744509
Orthophosphate (P)	mg/L	<0.010	0.010	7747856	<0.010	0.010	7744979	<0.010	0.010	7747856
pH	pH	4.51		7759106	4.55		7759106	4.54		7759106
Phenols-4AAP	mg/L	<0.0010	0.0010	7741092	<0.0010	0.0010	7741092	<0.0010	0.0010	7741092
Reactive Silica (SiO2)	mg/L	3.0	0.50	7747852	2.5	0.50	7744971	3.0	0.50	7747852
Total Suspended Solids	mg/L	3.8	1.0	7742562	1.6	1.0	7741650	2.0	1.0	7741650
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7747849	<2.0	2.0	7744969	<2.0	2.0	7747849
Turbidity	NTU	2.1	0.10	7757286	2.6	0.10	7757286	3.2	0.10	7757286
Conductivity	uS/cm	37	1.0	7759105	36	1.0	7759105	36	1.0	7759105

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to blank performance.

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1Z2434
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RJJ617			RJJ618			RJJ619		
Sampling Date		2021/12/15 12:00			2021/12/15 12:30			2021/12/15 12:15		
COC Number		858578-01-01			858578-01-01			858578-01-01		
	UNITS	SW4	RDL	QC Batch	SW13	RDL	QC Batch	SW19-20	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.140	N/A	7731142	0.460	N/A	7731142	9.23	N/A	7731142
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7731130	7.3	1.0	7731130	240	1.0	7731130
Calculated TDS	mg/L	13	1.0	7731158	32	1.0	7731158	570	1.0	7731158
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7731130	<1.0	1.0	7731130	<1.0	1.0	7731130
Cation Sum	me/L	0.280	N/A	7731142	0.600	N/A	7731142	10.4	N/A	7731142
Hardness (CaCO3)	mg/L	3.3	1.0	7731139	13	1.0	7731139	450	1.0	7731139
Ion Balance (% Difference)	%	33.3	N/A	7731141	13.2	N/A	7731141	5.96	N/A	7731141
Langelier Index (@ 20C)	N/A	NC		7731156	-3.63		7731156	0.659		7731156
Langelier Index (@ 4C)	N/A	NC		7731157	-3.89		7731157	0.411		7731157
Nitrate (N)	mg/L	<0.050	0.050	7731146	0.12	0.050	7731146	0.47	0.050	7731146
Saturation pH (@ 20C)	N/A	NC		7731156	9.91		7731156	6.93		7731156
Saturation pH (@ 4C)	N/A	NC		7731157	10.2		7731157	7.18		7731157
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7747845	7.3	5.0	7744961	240	25	7744961
Carbonaceous BOD	mg/L	<10	10	7731167	<10	10	7731167	<10	10	7731167
Total Chemical Oxygen Demand	mg/L	54	20	7744447	37	20	7744447	28	20	7744447
Dissolved Chloride (Cl-)	mg/L	4.9 (1)	2.0	7747848	11	1.0	7744964	16	1.0	7744964
Colour	TCU	190	25	7747854	130	25	7744978	7.0	5.0	7744978
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7747859	0.12	0.050	7744981	0.47	0.050	7744981
Nitrite (N)	mg/L	<0.010	0.010	7747861	<0.010	0.010	7744983	<0.010	0.010	7744983
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7744511	<0.050	0.050	7744514	0.19	0.050	7744514
Total Organic Carbon (C)	mg/L	19	0.50	7744519	14	0.50	7744519	8.5	0.50	7744509
Orthophosphate (P)	mg/L	<0.010	0.010	7747856	<0.010	0.010	7744979	<0.010	0.010	7744979
pH	pH	4.50		7759106	6.27		7759106	7.59		7759106
Phenols-4AAP	mg/L	<0.0010	0.0010	7741092	<0.0010	0.0010	7741092	<0.0010	0.0010	7741092
Reactive Silica (SiO2)	mg/L	2.8	0.50	7747852	3.4	0.50	7744971	6.8	0.50	7744971
Total Suspended Solids	mg/L	1.4	1.0	7742562	1.4	1.0	7741650	9.4	1.0	7741650
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7747849	<2.0	2.0	7744969	190	10	7744969
Turbidity	NTU	3.4	0.10	7757286	2.4	0.10	7757286	11	0.10	7757286
Conductivity	uS/cm	37	1.0	7759105	58	1.0	7759105	810	1.0	7759105

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated reporting limit due to blank performance.

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C1Z2434
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		RJJ619			RJJ620		
Sampling Date		2021/12/15 12:15			2021/12/15		
COC Number		858578-01-01			858578-01-01		
	UNITS	SW19-20 Lab-Dup	RDL	QC Batch	DUP1	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L				0.160	N/A	7731142
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7731130
Calculated TDS	mg/L				14	1.0	7731158
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7731130
Cation Sum	me/L				0.260	N/A	7731142
Hardness (CaCO3)	mg/L				3.3	1.0	7731139
Ion Balance (% Difference)	%				23.8	N/A	7731141
Langelier Index (@ 20C)	N/A				NC		7731156
Langelier Index (@ 4C)	N/A				NC		7731157
Nitrate (N)	mg/L				<0.050	0.050	7731146
Saturation pH (@ 20C)	N/A				NC		7731156
Saturation pH (@ 4C)	N/A				NC		7731157
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L				<5.0	5.0	7747845
Carbonaceous BOD	mg/L				<10	10	7731167
Total Chemical Oxygen Demand	mg/L				54	20	7744447
Dissolved Chloride (Cl-)	mg/L				5.6 (1)	2.0	7747848
Colour	TCU				190	25	7747854
Nitrate + Nitrite (N)	mg/L				<0.050	0.050	7747859
Nitrite (N)	mg/L				<0.010	0.010	7747861
Nitrogen (Ammonia Nitrogen)	mg/L				<0.050	0.050	7744514
Total Organic Carbon (C)	mg/L	8.5	0.50	7744509	20	0.50	7744519
Orthophosphate (P)	mg/L				<0.010	0.010	7747856
pH	pH				4.83		7759109
Phenols-4AAP	mg/L				<0.0010	0.0010	7741092
Reactive Silica (SiO2)	mg/L				2.8	0.50	7747852
Total Suspended Solids	mg/L				2.0	1.0	7744794
Dissolved Sulphate (SO4)	mg/L				<2.0	2.0	7747849
Turbidity	NTU				2.6	0.10	7757286
Conductivity	uS/cm				36	1.0	7759107

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated reporting limit due to blank performance.

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Bureau Veritas Job #: C1Z2434
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		RJJ614	RJJ615	RJJ616	RJJ617		RJJ618		
Sampling Date		2021/12/15 11:00	2021/12/15 11:15	2021/12/15 11:30	2021/12/15 12:00		2021/12/15 12:30		
COC Number		858578-01-01	858578-01-01	858578-01-01	858578-01-01		858578-01-01		
	UNITS	SW1	SW2	SW3	SW4	QC Batch	SW13	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	490	560	560	560	7734566	510	5.0	7731968
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	7734566	<1.0	1.0	7731968
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	7734566	<1.0	1.0	7731968
Total Barium (Ba)	ug/L	3.4	3.6	4.0	3.6	7734566	6.3	1.0	7731968
Total Beryllium (Be)	ug/L	<0.10	<0.10	0.10	<0.10	7734566	<0.10	0.10	7731968
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	7734566	<2.0	2.0	7731968
Total Boron (B)	ug/L	<50	<50	<50	<50	7734566	<50	50	7731968
Total Cadmium (Cd)	ug/L	0.020	0.021	0.023	0.022	7734566	0.030	0.010	7731968
Total Calcium (Ca)	ug/L	620	730	1800	670	7734566	3300	100	7731968
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	7734566	<1.0	1.0	7731968
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	7734566	<0.40	0.40	7731968
Total Copper (Cu)	ug/L	<0.50	<0.50	<0.50	<0.50	7734566	1.3	0.50	7731968
Total Iron (Fe)	ug/L	390	400	430	400	7734566	580	50	7731968
Total Lead (Pb)	ug/L	0.88	0.93	0.88	0.91	7734566	0.88	0.50	7731968
Total Magnesium (Mg)	ug/L	390	410	630	400	7734566	1100	100	7731968
Total Manganese (Mn)	ug/L	17	17	23	17	7734566	40	2.0	7731968
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	7734566	<2.0	2.0	7731968
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	7734566	<2.0	2.0	7731968
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	7734566	<100	100	7731968
Total Potassium (K)	ug/L	300	320	340	310	7734566	590	100	7731968
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	7734566	<0.50	0.50	7731968
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	7734566	<0.10	0.10	7731968
Total Sodium (Na)	ug/L	3600	3500	3700	3600	7734566	6900	100	7731968
Total Strontium (Sr)	ug/L	4.5	4.8	7.5	4.5	7734566	11	2.0	7731968
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	7734566	<0.10	0.10	7731968
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	7734566	<2.0	2.0	7731968
Total Titanium (Ti)	ug/L	6.3	7.3	7.9	9.8	7734566	7.5	2.0	7731968
Total Uranium (U)	ug/L	0.16	0.19	0.49	0.15	7734566	0.47	0.10	7731968
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	7734566	<2.0	2.0	7731968
Total Zinc (Zn)	ug/L	<5.0	<5.0	5.2	<5.0	7734566	7.3	5.0	7731968

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		RJJ619		RJJ620		
Sampling Date		2021/12/15 12:15		2021/12/15		
COC Number		858578-01-01		858578-01-01		
	UNITS	SW19-20	RDL	DUP1	RDL	QC Batch
Metals						
Total Aluminum (Al)	ug/L	120	5.0	530	5.0	7734566
Total Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	7734566
Total Arsenic (As)	ug/L	1.6	1.0	<1.0	1.0	7734566
Total Barium (Ba)	ug/L	64	1.0	3.7	1.0	7734566
Total Beryllium (Be)	ug/L	<0.10	0.10	<0.10	0.10	7734566
Total Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	7734566
Total Boron (B)	ug/L	480	50	<50	50	7734566
Total Cadmium (Cd)	ug/L	0.042	0.010	0.022	0.010	7734566
Total Calcium (Ca)	ug/L	150000	100	660	100	7734566
Total Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	7734566
Total Cobalt (Co)	ug/L	3.8	0.40	<0.40	0.40	7734566
Total Copper (Cu)	ug/L	1.3	0.50	<0.50	0.50	7734566
Total Iron (Fe)	ug/L	2400	50	400	50	7734566
Total Lead (Pb)	ug/L	<0.50	0.50	0.91	0.50	7734566
Total Magnesium (Mg)	ug/L	19000	100	410	100	7734566
Total Manganese (Mn)	ug/L	2700	2.0	17	2.0	7734566
Total Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	7734566
Total Nickel (Ni)	ug/L	3.0	2.0	<2.0	2.0	7734566
Total Phosphorus (P)	ug/L	<100	100	<100	100	7734566
Total Potassium (K)	ug/L	9800	100	300	100	7734566
Total Selenium (Se)	ug/L	<0.50	0.50	<0.50	0.50	7734566
Total Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	7734566
Total Sodium (Na)	ug/L	24000	100	3600	100	7734566
Total Strontium (Sr)	ug/L	470	2.0	4.6	2.0	7734566
Total Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	7734566
Total Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	7734566
Total Titanium (Ti)	ug/L	4.8	2.0	<20 (1)	20	7734566
Total Uranium (U)	ug/L	40	0.10	0.18	0.10	7734566
Total Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	7734566
Total Zinc (Zn)	ug/L	11	5.0	<5.0	5.0	7734566

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Elevated reporting limit due to sample matrix.

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Bureau Veritas Job #: C1Z2434
Report Date: 2022/01/14

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: RM

ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		RJJ614		RJJ615		RJJ616		RJJ617		
Sampling Date		2021/12/15 11:00		2021/12/15 11:15		2021/12/15 11:30		2021/12/15 12:00		
COC Number		858578-01-01		858578-01-01		858578-01-01		858578-01-01		
	UNITS	SW1	RDL	SW2	RDL	SW3	RDL	SW4	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7736458
Toluene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7736458
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	<0.0010	0.0010	7736458
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	<0.0020	0.0020	7736458
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	0.090	<0.090	0.090	<0.090	0.090	7736458
>C10-C16 Hydrocarbons	mg/L	<0.053	0.053	<0.050	0.050	<0.055	0.055	<0.050	0.050	7732064
>C16-C21 Hydrocarbons	mg/L	<0.053	0.053	<0.050	0.050	<0.055	0.055	<0.050	0.050	7732064
>C21-<C32 Hydrocarbons	mg/L	<0.095	0.095	<0.090	0.090	<0.098	0.098	<0.090	0.090	7732064
Modified TPH (Tier1)	mg/L	<0.095	0.095	<0.090	0.090	<0.098	0.098	<0.090	0.090	7730649
Reached Baseline at C32	mg/L	NA	N/A	NA	N/A	NA	N/A	NA	N/A	7732064
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	N/A	NA	N/A	NA	N/A	7732064
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	82		77		89		84		7732064
n-Dotriacontane - Extractable	%	95 (1)		105		118 (1)		107		7732064
Isobutylbenzene - Volatile	%	100		100		101		101		7736458

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		RJJ618	RJJ619		RJJ620		
Sampling Date		2021/12/15 12:30	2021/12/15 12:15		2021/12/15		
COC Number		858578-01-01	858578-01-01		858578-01-01		
	UNITS	SW13	SW19-20	QC Batch	DUP1	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	<0.0010	7736458	<0.0010	0.0010	7736458
Toluene	mg/L	<0.0010	<0.0010	7736458	<0.0010	0.0010	7736458
Ethylbenzene	mg/L	<0.0010	<0.0010	7736458	<0.0010	0.0010	7736458
Total Xylenes	mg/L	<0.0020	<0.0020	7736458	<0.0020	0.0020	7736458
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	7736458	<0.090	0.090	7736458
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	7732064	<0.050	0.050	7734783
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	7732064	<0.050	0.050	7734783
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	7732064	<0.090	0.090	7734783
Modified TPH (Tier1)	mg/L	<0.090	<0.090	7730649	<0.090	0.090	7730649
Reached Baseline at C32	mg/L	NA	NA	7732064	NA	N/A	7734783
Hydrocarbon Resemblance	mg/L	NA	NA	7732064	NA	N/A	7734783
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	78	79	7732064	98		7734783
n-Dotriacontane - Extractable	%	104	111	7732064	91		7734783
Isobutylbenzene - Volatile	%	102	108	7736458	98		7736458

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	1.3°C

Sample RJJ614 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RJJ615 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RJJ616 [SW3] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RJJ617 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RJJ618 [SW13] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample RJJ619 [SW19-20] : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample RJJ620 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7731167	NFS	QC Standard	Carbonaceous BOD	2021/12/28		132 (1)	%	80 - 120
7731167	NFS	Spiked Blank	Carbonaceous BOD	2021/12/28		140 (2)	%	80 - 120
7731167	NFS	Method Blank	Carbonaceous BOD	2021/12/28	<2.0		mg/L	
7731167	NFS	RPD	Carbonaceous BOD	2021/12/28	NC		%	25
7731968	MLB	Matrix Spike	Total Aluminum (Al)	2021/12/18		NC	%	80 - 120
			Total Antimony (Sb)	2021/12/18		114	%	80 - 120
			Total Arsenic (As)	2021/12/18		96	%	80 - 120
			Total Barium (Ba)	2021/12/18		104	%	80 - 120
			Total Beryllium (Be)	2021/12/18		102	%	80 - 120
			Total Bismuth (Bi)	2021/12/18		98	%	80 - 120
			Total Boron (B)	2021/12/18		109	%	80 - 120
			Total Cadmium (Cd)	2021/12/18		101	%	80 - 120
			Total Calcium (Ca)	2021/12/18		NC	%	80 - 120
			Total Chromium (Cr)	2021/12/18		98	%	80 - 120
			Total Cobalt (Co)	2021/12/18		93	%	80 - 120
			Total Copper (Cu)	2021/12/18		94	%	80 - 120
			Total Iron (Fe)	2021/12/18		NC	%	80 - 120
			Total Lead (Pb)	2021/12/18		101	%	80 - 120
			Total Magnesium (Mg)	2021/12/18		NC	%	80 - 120
			Total Manganese (Mn)	2021/12/18		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/12/18		112	%	80 - 120
			Total Nickel (Ni)	2021/12/18		95	%	80 - 120
			Total Phosphorus (P)	2021/12/18		103	%	80 - 120
			Total Potassium (K)	2021/12/18		106	%	80 - 120
			Total Selenium (Se)	2021/12/18		95	%	80 - 120
			Total Silver (Ag)	2021/12/18		100	%	80 - 120
			Total Sodium (Na)	2021/12/18		NC	%	80 - 120
			Total Strontium (Sr)	2021/12/18		NC	%	80 - 120
			Total Thallium (Tl)	2021/12/18		101	%	80 - 120
			Total Tin (Sn)	2021/12/18		112	%	80 - 120
			Total Titanium (Ti)	2021/12/18		94	%	80 - 120
			Total Uranium (U)	2021/12/18		108	%	80 - 120
			Total Vanadium (V)	2021/12/18		104	%	80 - 120
			Total Zinc (Zn)	2021/12/18		94	%	80 - 120
7731968	MLB	Spiked Blank	Total Aluminum (Al)	2021/12/18		98	%	80 - 120
			Total Antimony (Sb)	2021/12/18		106	%	80 - 120
			Total Arsenic (As)	2021/12/18		93	%	80 - 120
			Total Barium (Ba)	2021/12/18		100	%	80 - 120
			Total Beryllium (Be)	2021/12/18		99	%	80 - 120
			Total Bismuth (Bi)	2021/12/18		101	%	80 - 120
			Total Boron (B)	2021/12/18		102	%	80 - 120
			Total Cadmium (Cd)	2021/12/18		100	%	80 - 120
			Total Calcium (Ca)	2021/12/18		104	%	80 - 120
			Total Chromium (Cr)	2021/12/18		99	%	80 - 120
			Total Cobalt (Co)	2021/12/18		96	%	80 - 120
			Total Copper (Cu)	2021/12/18		98	%	80 - 120
			Total Iron (Fe)	2021/12/18		99	%	80 - 120
			Total Lead (Pb)	2021/12/18		101	%	80 - 120
			Total Magnesium (Mg)	2021/12/18		98	%	80 - 120
			Total Manganese (Mn)	2021/12/18		101	%	80 - 120
			Total Molybdenum (Mo)	2021/12/18		103	%	80 - 120
			Total Nickel (Ni)	2021/12/18		99	%	80 - 120
			Total Phosphorus (P)	2021/12/18		99	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Potassium (K)	2021/12/18		101	%	80 - 120
			Total Selenium (Se)	2021/12/18		98	%	80 - 120
			Total Silver (Ag)	2021/12/18		98	%	80 - 120
			Total Sodium (Na)	2021/12/18		94	%	80 - 120
			Total Strontium (Sr)	2021/12/18		99	%	80 - 120
			Total Thallium (Tl)	2021/12/18		100	%	80 - 120
			Total Tin (Sn)	2021/12/18		102	%	80 - 120
			Total Titanium (Ti)	2021/12/18		101	%	80 - 120
			Total Uranium (U)	2021/12/18		104	%	80 - 120
			Total Vanadium (V)	2021/12/18		101	%	80 - 120
			Total Zinc (Zn)	2021/12/18		97	%	80 - 120
7731968	MLB	Method Blank	Total Aluminum (Al)	2021/12/18	<5.0		ug/L	
			Total Antimony (Sb)	2021/12/18	<1.0		ug/L	
			Total Arsenic (As)	2021/12/18	<1.0		ug/L	
			Total Barium (Ba)	2021/12/18	<1.0		ug/L	
			Total Beryllium (Be)	2021/12/18	<0.10		ug/L	
			Total Bismuth (Bi)	2021/12/18	<2.0		ug/L	
			Total Boron (B)	2021/12/18	<50		ug/L	
			Total Cadmium (Cd)	2021/12/18	<0.010		ug/L	
			Total Calcium (Ca)	2021/12/18	<100		ug/L	
			Total Chromium (Cr)	2021/12/18	<1.0		ug/L	
			Total Cobalt (Co)	2021/12/18	<0.40		ug/L	
			Total Copper (Cu)	2021/12/18	<0.50		ug/L	
			Total Iron (Fe)	2021/12/18	<50		ug/L	
			Total Lead (Pb)	2021/12/18	<0.50		ug/L	
			Total Magnesium (Mg)	2021/12/18	<100		ug/L	
			Total Manganese (Mn)	2021/12/18	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/12/18	<2.0		ug/L	
			Total Nickel (Ni)	2021/12/18	<2.0		ug/L	
			Total Phosphorus (P)	2021/12/18	<100		ug/L	
			Total Potassium (K)	2021/12/18	<100		ug/L	
			Total Selenium (Se)	2021/12/18	<0.50		ug/L	
			Total Silver (Ag)	2021/12/18	<0.10		ug/L	
			Total Sodium (Na)	2021/12/18	<100		ug/L	
			Total Strontium (Sr)	2021/12/18	<2.0		ug/L	
			Total Thallium (Tl)	2021/12/18	<0.10		ug/L	
			Total Tin (Sn)	2021/12/18	<2.0		ug/L	
			Total Titanium (Ti)	2021/12/18	<2.0		ug/L	
			Total Uranium (U)	2021/12/18	<0.10		ug/L	
			Total Vanadium (V)	2021/12/18	<2.0		ug/L	
			Total Zinc (Zn)	2021/12/18	<5.0		ug/L	
7731968	MLB	RPD	Total Calcium (Ca)	2021/12/18	3.9		%	20
			Total Copper (Cu)	2021/12/18	NC		%	20
			Total Iron (Fe)	2021/12/18	5.5		%	20
			Total Magnesium (Mg)	2021/12/18	5.5		%	20
			Total Manganese (Mn)	2021/12/18	5.7		%	20
			Total Potassium (K)	2021/12/18	5.9		%	20
			Total Sodium (Na)	2021/12/18	5.2		%	20
			Total Zinc (Zn)	2021/12/18	NC		%	20
7732064	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/12/21		74	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/21		102	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/21		83	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/21		83	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C21-<C32 Hydrocarbons	2021/12/21		86	%	70 - 130
7732064	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/12/17		85	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/17		88	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/17		110	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/17		100	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/17		100	%	70 - 130
7732064	MSK	Method Blank	Isobutylbenzene - Extractable	2021/12/17		86	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/17		98	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/17	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/17	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/17	<0.090		mg/L	
7732064	MSK	RPD	>C10-C16 Hydrocarbons	2021/12/17	30		%	40
			>C16-C21 Hydrocarbons	2021/12/17	20		%	40
			>C21-<C32 Hydrocarbons	2021/12/17	22		%	40
7734566	MLB	Matrix Spike	Total Aluminum (Al)	2021/12/17		100	%	80 - 120
			Total Antimony (Sb)	2021/12/17		112	%	80 - 120
			Total Arsenic (As)	2021/12/17		98	%	80 - 120
			Total Barium (Ba)	2021/12/17		103	%	80 - 120
			Total Beryllium (Be)	2021/12/17		103	%	80 - 120
			Total Bismuth (Bi)	2021/12/17		102	%	80 - 120
			Total Boron (B)	2021/12/17		106	%	80 - 120
			Total Cadmium (Cd)	2021/12/17		105	%	80 - 120
			Total Calcium (Ca)	2021/12/17		NC	%	80 - 120
			Total Chromium (Cr)	2021/12/17		100	%	80 - 120
			Total Cobalt (Co)	2021/12/17		99	%	80 - 120
			Total Copper (Cu)	2021/12/17		100	%	80 - 120
			Total Iron (Fe)	2021/12/17		101	%	80 - 120
			Total Lead (Pb)	2021/12/17		104	%	80 - 120
			Total Magnesium (Mg)	2021/12/17		101	%	80 - 120
			Total Manganese (Mn)	2021/12/17		NC	%	80 - 120
			Total Molybdenum (Mo)	2021/12/17		108	%	80 - 120
			Total Nickel (Ni)	2021/12/17		101	%	80 - 120
			Total Phosphorus (P)	2021/12/17		103	%	80 - 120
			Total Potassium (K)	2021/12/17		103	%	80 - 120
			Total Selenium (Se)	2021/12/17		102	%	80 - 120
			Total Silver (Ag)	2021/12/17		103	%	80 - 120
			Total Sodium (Na)	2021/12/17		96	%	80 - 120
			Total Strontium (Sr)	2021/12/17		106	%	80 - 120
			Total Thallium (Tl)	2021/12/17		103	%	80 - 120
			Total Tin (Sn)	2021/12/17		108	%	80 - 120
			Total Titanium (Ti)	2021/12/17		101	%	80 - 120
			Total Uranium (U)	2021/12/17		108	%	80 - 120
			Total Vanadium (V)	2021/12/17		105	%	80 - 120
			Total Zinc (Zn)	2021/12/17		99	%	80 - 120
7734566	MLB	Spiked Blank	Total Aluminum (Al)	2021/12/17		101	%	80 - 120
			Total Antimony (Sb)	2021/12/17		109	%	80 - 120
			Total Arsenic (As)	2021/12/17		96	%	80 - 120
			Total Barium (Ba)	2021/12/17		101	%	80 - 120
			Total Beryllium (Be)	2021/12/17		100	%	80 - 120
			Total Bismuth (Bi)	2021/12/17		101	%	80 - 120
			Total Boron (B)	2021/12/17		103	%	80 - 120
			Total Cadmium (Cd)	2021/12/17		102	%	80 - 120
			Total Calcium (Ca)	2021/12/17		105	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Chromium (Cr)	2021/12/17		100	%	80 - 120
			Total Cobalt (Co)	2021/12/17		99	%	80 - 120
			Total Copper (Cu)	2021/12/17		102	%	80 - 120
			Total Iron (Fe)	2021/12/17		101	%	80 - 120
			Total Lead (Pb)	2021/12/17		103	%	80 - 120
			Total Magnesium (Mg)	2021/12/17		101	%	80 - 120
			Total Manganese (Mn)	2021/12/17		104	%	80 - 120
			Total Molybdenum (Mo)	2021/12/17		105	%	80 - 120
			Total Nickel (Ni)	2021/12/17		102	%	80 - 120
			Total Phosphorus (P)	2021/12/17		102	%	80 - 120
			Total Potassium (K)	2021/12/17		102	%	80 - 120
			Total Selenium (Se)	2021/12/17		98	%	80 - 120
			Total Silver (Ag)	2021/12/17		100	%	80 - 120
			Total Sodium (Na)	2021/12/17		96	%	80 - 120
			Total Strontium (Sr)	2021/12/17		104	%	80 - 120
			Total Thallium (Tl)	2021/12/17		103	%	80 - 120
			Total Tin (Sn)	2021/12/17		105	%	80 - 120
			Total Titanium (Ti)	2021/12/17		104	%	80 - 120
			Total Uranium (U)	2021/12/17		106	%	80 - 120
			Total Vanadium (V)	2021/12/17		103	%	80 - 120
			Total Zinc (Zn)	2021/12/17		100	%	80 - 120
7734566	MLB	Method Blank	Total Aluminum (Al)	2021/12/17	<5.0		ug/L	
			Total Antimony (Sb)	2021/12/17	<1.0		ug/L	
			Total Arsenic (As)	2021/12/17	<1.0		ug/L	
			Total Barium (Ba)	2021/12/17	<1.0		ug/L	
			Total Beryllium (Be)	2021/12/17	<0.10		ug/L	
			Total Bismuth (Bi)	2021/12/17	<2.0		ug/L	
			Total Boron (B)	2021/12/17	<50		ug/L	
			Total Cadmium (Cd)	2021/12/17	<0.010		ug/L	
			Total Calcium (Ca)	2021/12/17	<100		ug/L	
			Total Chromium (Cr)	2021/12/17	<1.0		ug/L	
			Total Cobalt (Co)	2021/12/17	<0.40		ug/L	
			Total Copper (Cu)	2021/12/17	<0.50		ug/L	
			Total Iron (Fe)	2021/12/17	<50		ug/L	
			Total Lead (Pb)	2021/12/17	<0.50		ug/L	
			Total Magnesium (Mg)	2021/12/17	<100		ug/L	
			Total Manganese (Mn)	2021/12/17	<2.0		ug/L	
			Total Molybdenum (Mo)	2021/12/17	<2.0		ug/L	
			Total Nickel (Ni)	2021/12/17	<2.0		ug/L	
			Total Phosphorus (P)	2021/12/17	<100		ug/L	
			Total Potassium (K)	2021/12/17	<100		ug/L	
			Total Selenium (Se)	2021/12/17	<0.50		ug/L	
			Total Silver (Ag)	2021/12/17	<0.10		ug/L	
			Total Sodium (Na)	2021/12/17	<100		ug/L	
			Total Strontium (Sr)	2021/12/17	<2.0		ug/L	
			Total Thallium (Tl)	2021/12/17	<0.10		ug/L	
			Total Tin (Sn)	2021/12/17	<2.0		ug/L	
			Total Titanium (Ti)	2021/12/17	<2.0		ug/L	
			Total Uranium (U)	2021/12/17	<0.10		ug/L	
			Total Vanadium (V)	2021/12/17	<2.0		ug/L	
			Total Zinc (Zn)	2021/12/17	<5.0		ug/L	
7734566	MLB	RPD	Total Aluminum (Al)	2021/12/17	0.40		%	20
			Total Antimony (Sb)	2021/12/17	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Arsenic (As)	2021/12/17	2.2		%	20
			Total Barium (Ba)	2021/12/17	5.5		%	20
			Total Beryllium (Be)	2021/12/17	8.4		%	20
			Total Bismuth (Bi)	2021/12/17	NC		%	20
			Total Boron (B)	2021/12/17	NC		%	20
			Total Cadmium (Cd)	2021/12/17	1.9		%	20
			Total Calcium (Ca)	2021/12/17	0.96		%	20
			Total Chromium (Cr)	2021/12/17	NC		%	20
			Total Cobalt (Co)	2021/12/17	NC		%	20
			Total Copper (Cu)	2021/12/17	3.6		%	20
			Total Iron (Fe)	2021/12/17	1.9		%	20
			Total Lead (Pb)	2021/12/17	NC		%	20
			Total Magnesium (Mg)	2021/12/17	1.7		%	20
			Total Manganese (Mn)	2021/12/17	2.3		%	20
			Total Molybdenum (Mo)	2021/12/17	NC		%	20
			Total Nickel (Ni)	2021/12/17	NC		%	20
			Total Phosphorus (P)	2021/12/17	NC		%	20
			Total Potassium (K)	2021/12/17	0.89		%	20
			Total Selenium (Se)	2021/12/17	NC		%	20
			Total Silver (Ag)	2021/12/17	NC		%	20
			Total Sodium (Na)	2021/12/17	0.90		%	20
			Total Strontium (Sr)	2021/12/17	1.7		%	20
			Total Thallium (Tl)	2021/12/17	NC		%	20
			Total Tin (Sn)	2021/12/17	NC		%	20
			Total Titanium (Ti)	2021/12/17	NC		%	20
			Total Uranium (U)	2021/12/17	0.87		%	20
			Total Vanadium (V)	2021/12/17	NC		%	20
			Total Zinc (Zn)	2021/12/17	1.0		%	20
7734783	MSK	Matrix Spike	Isobutylbenzene - Extractable	2021/12/17		87	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/17		110	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/17		79	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/17		75	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/17		78	%	70 - 130
7734783	MSK	Spiked Blank	Isobutylbenzene - Extractable	2021/12/20		71	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		95	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20		92	%	70 - 130
			>C16-C21 Hydrocarbons	2021/12/20		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2021/12/20		97	%	70 - 130
7734783	MSK	Method Blank	Isobutylbenzene - Extractable	2021/12/20		49 (3)	%	70 - 130
			n-Dotriacontane - Extractable	2021/12/20		106	%	70 - 130
			>C10-C16 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2021/12/20	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2021/12/20	<0.090		mg/L	
7734783	MSK	RPD	>C10-C16 Hydrocarbons	2021/12/17	NC		%	40
			>C16-C21 Hydrocarbons	2021/12/17	NC		%	40
			>C21-<C32 Hydrocarbons	2021/12/17	NC		%	40
7736458	THL	Matrix Spike	Isobutylbenzene - Volatile	2021/12/18		102	%	70 - 130
			Benzene	2021/12/18		101	%	70 - 130
			Toluene	2021/12/18		99	%	70 - 130
			Ethylbenzene	2021/12/18		103	%	70 - 130
			Total Xylenes	2021/12/18		101	%	70 - 130
7736458	THL	Spiked Blank	Isobutylbenzene - Volatile	2021/12/18		104	%	70 - 130
			Benzene	2021/12/18		97	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Toluene	2021/12/18		98	%	70 - 130
			Ethylbenzene	2021/12/18		103	%	70 - 130
			Total Xylenes	2021/12/18		101	%	70 - 130
7736458	THL	Method Blank	Isobutylbenzene - Volatile	2021/12/18		106	%	70 - 130
			Benzene	2021/12/18	<0.0010		mg/L	
			Toluene	2021/12/18	<0.0010		mg/L	
			Ethylbenzene	2021/12/18	<0.0010		mg/L	
			Total Xylenes	2021/12/18	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2021/12/18	<0.090		mg/L	
7736458	THL	RPD	Benzene	2021/12/18	4.1		%	40
			Toluene	2021/12/18	0		%	40
			Ethylbenzene	2021/12/18	5.9		%	40
			Total Xylenes	2021/12/18	3.8		%	40
			C6 - C10 (less BTEX)	2021/12/18	5.2		%	40
7741092	LHA	Matrix Spike	Phenols-4AAP	2021/12/20		100	%	80 - 120
7741092	LHA	Spiked Blank	Phenols-4AAP	2021/12/20		98	%	80 - 120
7741092	LHA	Method Blank	Phenols-4AAP	2021/12/20	<0.0010		mg/L	
7741092	LHA	RPD	Phenols-4AAP	2021/12/20	4.9		%	20
7741650	MKX	QC Standard	Total Suspended Solids	2021/12/22		101	%	80 - 120
7741650	MKX	Method Blank	Total Suspended Solids	2021/12/22	<1.0		mg/L	
7741650	MKX	RPD	Total Suspended Solids	2021/12/22	15		%	20
7742562	MKX	QC Standard	Total Suspended Solids	2021/12/24		100	%	80 - 120
7742562	MKX	Method Blank	Total Suspended Solids	2021/12/24	<1.0		mg/L	
7742562	MKX	RPD	Total Suspended Solids	2021/12/24	NC		%	20
7744447	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2021/12/21		102	%	80 - 120
7744447	ZZH	QC Standard	Total Chemical Oxygen Demand	2021/12/21		100	%	80 - 120
7744447	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2021/12/21		102	%	80 - 120
7744447	ZZH	Method Blank	Total Chemical Oxygen Demand	2021/12/21	<20		mg/L	
7744447	ZZH	RPD	Total Chemical Oxygen Demand	2021/12/21	NC		%	25
7744509	NGI	Matrix Spike [RJJ619-10]	Total Organic Carbon (C)	2021/12/21		97	%	85 - 115
7744509	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/21		99	%	80 - 120
7744509	NGI	Method Blank	Total Organic Carbon (C)	2021/12/21	<0.50		mg/L	
7744509	NGI	RPD [RJJ619-10]	Total Organic Carbon (C)	2021/12/21	0.45		%	15
7744511	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/12/21		105	%	80 - 120
7744511	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21		106	%	80 - 120
7744511	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21	<0.050		mg/L	
7744511	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/12/21	NC		%	20
7744514	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2021/12/21		95	%	80 - 120
7744514	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21		108	%	80 - 120
7744514	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2021/12/21	<0.050		mg/L	
7744514	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2021/12/21	NC		%	20
7744519	NGI	Matrix Spike	Total Organic Carbon (C)	2021/12/21		97	%	85 - 115
7744519	NGI	Spiked Blank	Total Organic Carbon (C)	2021/12/21		100	%	80 - 120
7744519	NGI	Method Blank	Total Organic Carbon (C)	2021/12/21	<0.50		mg/L	
7744519	NGI	RPD	Total Organic Carbon (C)	2021/12/21	1.2		%	15
7744794	MKX	QC Standard	Total Suspended Solids	2021/12/23		100	%	80 - 120
7744794	MKX	Method Blank	Total Suspended Solids	2021/12/23	<1.0		mg/L	
7744794	MKX	RPD	Total Suspended Solids	2021/12/23	1.4		%	20
7744961	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/22		95	%	80 - 120
7744961	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/22		106	%	80 - 120
7744961	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/22	<5.0		mg/L	
7744961	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/12/22	NC		%	20
7744964	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/22		91	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7744964	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/22		92	%	80 - 120
7744964	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/12/22	<1.0		mg/L	
7744964	EMT	RPD	Dissolved Chloride (Cl-)	2021/12/22	NC		%	20
7744969	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/22		94	%	80 - 120
7744969	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/22		95	%	80 - 120
7744969	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/12/22	<2.0		mg/L	
7744969	EMT	RPD	Dissolved Sulphate (SO4)	2021/12/22	NC		%	20
7744971	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/12/22		87	%	80 - 120
7744971	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/12/22		91	%	80 - 120
7744971	EMT	Method Blank	Reactive Silica (SiO2)	2021/12/22	<0.50		mg/L	
7744971	EMT	RPD	Reactive Silica (SiO2)	2021/12/22	NC		%	20
7744978	EMT	Spiked Blank	Colour	2021/12/22		100	%	80 - 120
7744978	EMT	Method Blank	Colour	2021/12/22	<5.0		TCU	
7744978	EMT	RPD	Colour	2021/12/22	NC		%	20
7744979	EMT	Matrix Spike	Orthophosphate (P)	2021/12/22		101	%	80 - 120
7744979	EMT	Spiked Blank	Orthophosphate (P)	2021/12/22		101	%	80 - 120
7744979	EMT	Method Blank	Orthophosphate (P)	2021/12/22	<0.010		mg/L	
7744979	EMT	RPD	Orthophosphate (P)	2021/12/22	NC		%	20
7744981	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/22		98	%	80 - 120
7744981	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/22		98	%	80 - 120
7744981	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/22	<0.050		mg/L	
7744981	EMT	RPD	Nitrate + Nitrite (N)	2021/12/22	NC		%	20
7744983	EMT	Matrix Spike	Nitrite (N)	2021/12/22		100	%	80 - 120
7744983	EMT	Spiked Blank	Nitrite (N)	2021/12/22		103	%	80 - 120
7744983	EMT	Method Blank	Nitrite (N)	2021/12/22	<0.010		mg/L	
7744983	EMT	RPD	Nitrite (N)	2021/12/22	NC		%	20
7747845	EMT	Matrix Spike	Total Alkalinity (Total as CaCO3)	2021/12/23		NC	%	80 - 120
7747845	EMT	Spiked Blank	Total Alkalinity (Total as CaCO3)	2021/12/23		112	%	80 - 120
7747845	EMT	Method Blank	Total Alkalinity (Total as CaCO3)	2021/12/23	<5.0		mg/L	
7747845	EMT	RPD	Total Alkalinity (Total as CaCO3)	2021/12/23	0.61		%	20
7747848	EMT	Matrix Spike	Dissolved Chloride (Cl-)	2021/12/23		NC	%	80 - 120
7747848	EMT	Spiked Blank	Dissolved Chloride (Cl-)	2021/12/23		95	%	80 - 120
7747848	EMT	Method Blank	Dissolved Chloride (Cl-)	2021/12/23	1.1, RDL=1.0		mg/L	
7747848	EMT	RPD	Dissolved Chloride (Cl-)	2021/12/23	0.71 (4)		%	20
7747849	EMT	Matrix Spike	Dissolved Sulphate (SO4)	2021/12/23		95	%	80 - 120
7747849	EMT	Spiked Blank	Dissolved Sulphate (SO4)	2021/12/23		94	%	80 - 120
7747849	EMT	Method Blank	Dissolved Sulphate (SO4)	2021/12/23	<2.0		mg/L	
7747849	EMT	RPD	Dissolved Sulphate (SO4)	2021/12/23	5.2		%	20
7747852	EMT	Matrix Spike	Reactive Silica (SiO2)	2021/12/23		NC	%	80 - 120
7747852	EMT	Spiked Blank	Reactive Silica (SiO2)	2021/12/23		94	%	80 - 120
7747852	EMT	Method Blank	Reactive Silica (SiO2)	2021/12/23	<0.50		mg/L	
7747852	EMT	RPD	Reactive Silica (SiO2)	2021/12/23	2.5		%	20
7747854	EMT	Spiked Blank	Colour	2021/12/23		96	%	80 - 120
7747854	EMT	Method Blank	Colour	2021/12/23	<5.0		TCU	
7747854	EMT	RPD	Colour	2021/12/23	NC		%	20
7747856	EMT	Matrix Spike	Orthophosphate (P)	2021/12/23		101	%	80 - 120
7747856	EMT	Spiked Blank	Orthophosphate (P)	2021/12/23		103	%	80 - 120
7747856	EMT	Method Blank	Orthophosphate (P)	2021/12/23	<0.010		mg/L	
7747856	EMT	RPD	Orthophosphate (P)	2021/12/23	1.1		%	20
7747859	EMT	Matrix Spike	Nitrate + Nitrite (N)	2021/12/23		97	%	80 - 120
7747859	EMT	Spiked Blank	Nitrate + Nitrite (N)	2021/12/23		99	%	80 - 120
7747859	EMT	Method Blank	Nitrate + Nitrite (N)	2021/12/23	<0.050		mg/L	

Bureau Veritas Laboratories 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7747859	EMT	RPD	Nitrate + Nitrite (N)	2021/12/23	2.0		%	20
7747861	EMT	Matrix Spike	Nitrite (N)	2021/12/23		102	%	80 - 120
7747861	EMT	Spiked Blank	Nitrite (N)	2021/12/23		105	%	80 - 120
7747861	EMT	Method Blank	Nitrite (N)	2021/12/23	<0.010		mg/L	
7747861	EMT	RPD	Nitrite (N)	2021/12/23	NC		%	20
7757286	SHW	QC Standard	Turbidity	2021/12/29		102	%	80 - 120
7757286	SHW	Spiked Blank	Turbidity	2021/12/29		101	%	80 - 120
7757286	SHW	Method Blank	Turbidity	2021/12/29	<0.10		NTU	
7757286	SHW	RPD	Turbidity	2021/12/29	NC		%	20
7759105	SHW	Spiked Blank	Conductivity	2021/12/30		99	%	80 - 120
7759105	SHW	Method Blank	Conductivity	2021/12/30	1.1, RDL=1.0		uS/cm	
7759105	SHW	RPD	Conductivity	2021/12/30	1.4		%	10
7759106	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759106	SHW	RPD	pH	2021/12/30	1.6		%	N/A
7759107	SHW	Spiked Blank	Conductivity	2021/12/30		98	%	80 - 120
7759107	SHW	Method Blank	Conductivity	2021/12/30	1.2, RDL=1.0		uS/cm	
7759107	SHW	RPD	Conductivity	2021/12/30	0.81		%	10
7759109	SHW	Spiked Blank	pH	2021/12/30		100	%	97 - 103
7759109	SHW	RPD	pH	2021/12/30	0.81		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery and Second source QC recovery high. All other QC acceptable.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) TEH surrogate(s) not within acceptance limits. Samples tested had insufficient volume to repeat the analytical run.

(4) Elevated reporting limit due to blank performance.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Rosemarie MacDonald, Scientific Specialist (Organics)

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C1Z2434	858578
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#858578-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	RM/JH		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required: [ ]

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1	SID#564076	SW1	15 Dec	11:00	SW			X		
2	SID#564077	SW2	"	11:15	"			X		
3	SID#564078	SW3	"	11:30	"			X		
4	SID#564079	SW4	"	12:00	"			X		
5	SID#564080	SW13	"	12:30	"			X		
6	SID#564081	~~SW14~~						X		
7	SID#564082	SW19-20	15 Dec	12:15	SW			X		
8	SID#564083	~~Diffuser~~						X		
9	SID#564084	DUP1	15 Dec	—	SW			X		
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Heath / Heath	21/12/15	1:40pm	Ron Steele RON STEELE				[ ]	1,2,1 / 1,1,2	[ ] Yes [ ] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

2021 DEC 15 14:19

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 860651-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/01
Report #: R7068828
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277826
Received: 2022/03/24, 14:22

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2022/03/30	N/A	SM 23 4500-CO2 D
Alkalinity	5	N/A	2022/03/30	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	2	N/A	2022/03/31	ATL SOP 00013	EPA 310.2 R1974 m
Carbonaceous BOD	7	2022/03/25	2022/03/30	ATL SOP 00041	SM 23 5210B m
Chloride	7	N/A	2022/03/31	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2022/03/29	2022/03/30	ATL SOP 00042	SM 23 5220D m
Colour	7	N/A	2022/03/31	ATL SOP 00020	SM 23 2120C m
Conductance - water	7	N/A	2022/03/30	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	7	2022/03/25	2022/03/25	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2022/03/29	ATL SOP 00048	Auto Calc
Metals Water Total MS	7	2022/03/25	2022/03/28	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/04/01	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/04/01	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2022/03/31	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2022/03/31	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	7	N/A	2022/03/31	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2022/03/31	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2022/03/30	CAM SOP-00444	OMOE E3179 m
pH (2)	7	N/A	2022/03/30	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	7	N/A	2022/03/31	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	2	N/A	2022/03/31	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	5	N/A	2022/04/01	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	2	N/A	2022/03/31	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	5	N/A	2022/04/01	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2022/03/31	ATL SOP 00022	EPA 366.0 m
Sulphate	7	N/A	2022/03/31	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/04/01	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	7	N/A	2022/03/30	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	7	N/A	2022/03/28	N/A	Atl. RBCA v3 m
Total Suspended Solids	7	2022/03/29	2022/04/01	ATL SOP 00007	SM 23 2540D m
Turbidity	7	N/A	2022/03/30	ATL SOP 00011	EPA 180.1 R2 m

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 860651-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/01
Report #: R7068828
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277826
Received: 2022/03/24, 14:22

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
VPH in Water (PIRI)	7	N/A	2022/03/25	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 860651-01-01

Attention: Janice Shea

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1701 Hollis St
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Halifax , NS
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Report Date: 2022/04/01
Report #: R7068828
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277826
Received: 2022/03/24, 14:22

Encryption Key



Bureau Veritas
01 Apr 2022 15:28:31

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C277826
Report Date: 2022/04/01

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SEH099		SEH100	SEH101	SEH102		
Sampling Date		2022/03/24		2022/03/24	2022/03/24	2022/03/24		
COC Number		860651-01-01		860651-01-01	860651-01-01	860651-01-01		
	UNITS	SW1	QC Batch	SW2	SW3	SW4	RDL	QC Batch
Calculated Parameters								
Anion Sum	me/L	0.220	7901932	0.340	0.380	0.420	N/A	7901932
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7901928	7.1	7.4	6.8	1.0	7901928
Calculated TDS	mg/L	17	7901937	23	24	26	1.0	7901937
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7901928	<1.0	<1.0	<1.0	1.0	7901928
Cation Sum	me/L	0.220	7901932	0.380	0.370	0.350	N/A	7901932
Hardness (CaCO3)	mg/L	2.4	7901929	10	9.8	8.9	1.0	7901929
Ion Balance (% Difference)	%	0.00	7901930	5.56	1.33	9.09	N/A	7901930
Langelier Index (@ 20C)	N/A	NC	7901933	-3.65	-3.64	-3.74		7901933
Langelier Index (@ 4C)	N/A	NC	7901935	-3.90	-3.90	-3.99		7901935
Nitrate (N)	mg/L	<0.050	7901634	<0.050	<0.050	<0.050	0.050	7901634
Saturation pH (@ 20C)	N/A	NC	7901933	9.97	9.96	10.0		7901933
Saturation pH (@ 4C)	N/A	NC	7901935	10.2	10.2	10.3		7901935
Inorganics								
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	7911338	7.1	7.4	6.8	5.0	7911338
Carbonaceous BOD	mg/L	<10	7903226	<10	<10	<10	10	7903226
Total Chemical Oxygen Demand	mg/L	33	7909347	30	35	33	20	7909347
Dissolved Chloride (Cl-)	mg/L	4.8	7911341	4.8	4.7	4.9	1.0	7911341
Colour	TCU	150	7911345	140	140	140	25	7911345
Nitrate + Nitrite (N)	mg/L	<0.050	7911348	<0.050	<0.050	<0.050	0.050	7911348
Nitrite (N)	mg/L	<0.010	7911352	<0.010	<0.010	<0.010	0.010	7911352
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7913730	<0.050	<0.050	<0.050	0.050	7913730
Total Organic Carbon (C)	mg/L	12	7911136	11	11	12	0.50	7911128
Orthophosphate (P)	mg/L	<0.010	7911347	<0.010	<0.010	<0.010	0.010	7911347
pH	pH	4.95	7911090	6.32	6.32	6.30		7911090
Phenols-4AAP	mg/L	<0.0010	7911981	<0.0010	<0.0010	<0.0010	0.0010	7911981
Reactive Silica (SiO2)	mg/L	2.8	7911344	2.6	2.4	2.7	0.50	7911344
Total Suspended Solids	mg/L	<1.0	7909101	1.8	2.0	1.2	1.0	7909101
Dissolved Sulphate (SO4)	mg/L	4.2	7911342	3.3	4.7	7.0	2.0	7911342
Turbidity	NTU	0.79	7911138	4.3	5.3	4.1	0.10	7911138
Conductivity	uS/cm	37	7911089	39	39	39	1.0	7911089

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C277826
Report Date: 2022/04/01

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SEH103			SEH103			SEH104		
Sampling Date		2022/03/24			2022/03/24			2022/03/24		
COC Number		860651-01-01			860651-01-01			860651-01-01		
	UNITS	SW13	RDL	QC Batch	SW13 Lab-Dup	RDL	QC Batch	SW19-20	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.680	N/A	7901932				11.1	N/A	7901932
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	8.7	1.0	7901928				240	1.0	7901928
Calculated TDS	mg/L	42	1.0	7901937				670	1.0	7901937
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7901928				1.6	1.0	7901928
Cation Sum	me/L	0.700	N/A	7901932				11.2	N/A	7901932
Hardness (CaCO3)	mg/L	13	1.0	7901929				500	1.0	7901929
Ion Balance (% Difference)	%	1.45	N/A	7901930				0.360	N/A	7901930
Langelier Index (@ 20C)	N/A	-3.18		7901933				0.960		7901933
Langelier Index (@ 4C)	N/A	-3.43		7901935				0.713		7901935
Nitrate (N)	mg/L	0.15	0.050	7901634				0.35	0.050	7901634
Saturation pH (@ 20C)	N/A	9.82		7901933				6.89		7901933
Saturation pH (@ 4C)	N/A	10.1		7901935				7.14		7901935
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	8.7	5.0	7911379	9.2	5.0	7911379	240	25	7911338
Carbonaceous BOD	mg/L	<10	10	7903226				<10	10	7903226
Total Chemical Oxygen Demand	mg/L	26	20	7909347				<20	20	7909347
Dissolved Chloride (Cl-)	mg/L	15	1.0	7913690	15	1.0	7913690	15	1.0	7911341
Colour	TCU	100	25	7913695	93	25	7913695	7.3	5.0	7911345
Nitrate + Nitrite (N)	mg/L	0.15	0.050	7913699	0.14	0.050	7913699	0.35	0.050	7911348
Nitrite (N)	mg/L	<0.010	0.010	7913700	<0.010	0.010	7913700	<0.010	0.010	7911352
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7913732	<0.050	0.050	7913732	0.089	0.050	7913730
Total Organic Carbon (C)	mg/L	9.3	0.50	7911128				6.3	0.50	7911128
Orthophosphate (P)	mg/L	<0.010	0.010	7913697	<0.010	0.010	7913697	<0.010	0.010	7911347
pH	pH	6.64		7911090				7.85		7911090
Phenols-4AAP	mg/L	<0.0010	0.0010	7911981				<0.0010	0.0010	7911981
Reactive Silica (SiO2)	mg/L	2.8	0.50	7913692	2.8	0.50	7913692	7.0	0.50	7911344
Total Suspended Solids	mg/L	1.0	1.0	7909101				12	1.0	7909101
Dissolved Sulphate (SO4)	mg/L	3.8	2.0	7913691	3.6	2.0	7913691	280	10	7911342
Turbidity	NTU	4.5	0.10	7911138				5.2	0.10	7911138
Conductivity	uS/cm	79	1.0	7911089				1000	1.0	7911089

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SEH105		
Sampling Date		2022/03/24		
COC Number		860651-01-01		
	UNITS	DUP1	RDL	QC Batch
Calculated Parameters				
Anion Sum	me/L	0.190	N/A	7901932
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7901928
Calculated TDS	mg/L	15	1.0	7901937
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7901928
Cation Sum	me/L	0.220	N/A	7901932
Hardness (CaCO3)	mg/L	2.3	1.0	7901929
Ion Balance (% Difference)	%	7.32	N/A	7901930
Langelier Index (@ 20C)	N/A	NC		7901933
Langelier Index (@ 4C)	N/A	NC		7901935
Nitrate (N)	mg/L	0.12	0.050	7901634
Saturation pH (@ 20C)	N/A	NC		7901933
Saturation pH (@ 4C)	N/A	NC		7901935
Inorganics				
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	7911338
Carbonaceous BOD	mg/L	<10	10	7903226
Total Chemical Oxygen Demand	mg/L	35	20	7909347
Dissolved Chloride (Cl-)	mg/L	4.7	1.0	7911341
Colour	TCU	140	25	7911345
Nitrate + Nitrite (N)	mg/L	0.12	0.050	7911348
Nitrite (N)	mg/L	<0.010	0.010	7911352
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7913730
Total Organic Carbon (C)	mg/L	13	0.50	7911136
Orthophosphate (P)	mg/L	<0.010	0.010	7911347
pH	pH	4.85		7911090
Phenols-4AAP	mg/L	<0.0010	0.0010	7911981
Reactive Silica (SiO2)	mg/L	2.9	0.50	7911344
Total Suspended Solids	mg/L	<1.0	1.0	7909524
Dissolved Sulphate (SO4)	mg/L	2.2	2.0	7911342
Turbidity	NTU	0.97	0.10	7911138
Conductivity	uS/cm	37	1.0	7911089

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SEH099	SEH100	SEH101	SEH102		SEH103		
Sampling Date		2022/03/24	2022/03/24	2022/03/24	2022/03/24		2022/03/24		
COC Number		860651-01-01	860651-01-01	860651-01-01	860651-01-01		860651-01-01		
	UNITS	SW1	SW2	SW3	SW4	QC Batch	SW13	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	370	480	510	450	7904004	460	5.0	7903994
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	7904004	<1.0	1.0	7903994
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	7904004	<1.0	1.0	7903994
Total Barium (Ba)	ug/L	2.5	4.3	4.3	3.9	7904004	6.3	1.0	7903994
Total Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	<0.10	7904004	<0.10	0.10	7903994
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	7904004	<2.0	2.0	7903994
Total Boron (B)	ug/L	<50	<50	<50	<50	7904004	<50	50	7903994
Total Cadmium (Cd)	ug/L	0.015	0.016	0.020	0.014	7904004	0.017	0.010	7903994
Total Calcium (Ca)	ug/L	400	2900	2900	2600	7904004	3500	100	7903994
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	7904004	<1.0	1.0	7903994
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	7904004	<0.40	0.40	7903994
Total Copper (Cu)	ug/L	<0.50	0.59	0.53	<0.50	7904004	1.3	0.50	7903994
Total Iron (Fe)	ug/L	290	380	440	350	7904004	440	50	7903994
Total Lead (Pb)	ug/L	0.59	0.71	0.72	0.74	7904004	0.56	0.50	7903994
Total Magnesium (Mg)	ug/L	330	650	640	590	7904004	1100	100	7903994
Total Manganese (Mn)	ug/L	13	17	19	16	7904004	21	2.0	7903994
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	7904004	<2.0	2.0	7903994
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	7904004	<2.0	2.0	7903994
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	7904004	<100	100	7903994
Total Potassium (K)	ug/L	210	420	420	380	7904004	600	100	7903994
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	<0.50	7904004	<0.50	0.50	7903994
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	7904004	<0.10	0.10	7903994
Total Sodium (Na)	ug/L	3400	3600	3500	3400	7904004	9300	100	7903994
Total Strontium (Sr)	ug/L	3.2	11	11	10	7904004	12	2.0	7903994
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	7904004	<0.10	0.10	7903994
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	7904004	<2.0	2.0	7903994
Total Titanium (Ti)	ug/L	4.7	10	11	9.9	7904004	12	2.0	7903994
Total Uranium (U)	ug/L	0.12	0.40	0.45	0.37	7904004	0.60	0.10	7903994
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	7904004	<2.0	2.0	7903994
Total Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	7904004	8.0	5.0	7903994

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SEH104	SEH105		
Sampling Date		2022/03/24	2022/03/24		
COC Number		860651-01-01	860651-01-01		
	UNITS	SW19-20	DUP1	RDL	QC Batch
Metals					
Total Aluminum (Al)	ug/L	23	370	5.0	7903994
Total Antimony (Sb)	ug/L	<1.0	<1.0	1.0	7903994
Total Arsenic (As)	ug/L	<1.0	<1.0	1.0	7903994
Total Barium (Ba)	ug/L	45	2.4	1.0	7903994
Total Beryllium (Be)	ug/L	<0.10	<0.10	0.10	7903994
Total Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	7903994
Total Boron (B)	ug/L	440	<50	50	7903994
Total Cadmium (Cd)	ug/L	0.021	0.017	0.010	7903994
Total Calcium (Ca)	ug/L	170000	400	100	7903994
Total Chromium (Cr)	ug/L	<1.0	<1.0	1.0	7903994
Total Cobalt (Co)	ug/L	0.95	<0.40	0.40	7903994
Total Copper (Cu)	ug/L	1.5	<0.50	0.50	7903994
Total Iron (Fe)	ug/L	550	280	50	7903994
Total Lead (Pb)	ug/L	<0.50	0.56	0.50	7903994
Total Magnesium (Mg)	ug/L	19000	320	100	7903994
Total Manganese (Mn)	ug/L	810	13	2.0	7903994
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	2.0	7903994
Total Nickel (Ni)	ug/L	2.0	<2.0	2.0	7903994
Total Phosphorus (P)	ug/L	<100	<100	100	7903994
Total Potassium (K)	ug/L	8800	200	100	7903994
Total Selenium (Se)	ug/L	<0.50	<0.50	0.50	7903994
Total Silver (Ag)	ug/L	<0.10	<0.10	0.10	7903994
Total Sodium (Na)	ug/L	20000	3400	100	7903994
Total Strontium (Sr)	ug/L	530	3.2	2.0	7903994
Total Thallium (Tl)	ug/L	<0.10	<0.10	0.10	7903994
Total Tin (Sn)	ug/L	<2.0	<2.0	2.0	7903994
Total Titanium (Ti)	ug/L	<2.0	4.5	2.0	7903994
Total Uranium (U)	ug/L	84	0.13	0.10	7903994
Total Vanadium (V)	ug/L	<2.0	<2.0	2.0	7903994
Total Zinc (Zn)	ug/L	5.2	<5.0	5.0	7903994

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SEH099	SEH100	SEH101	SEH102		SEH103		
Sampling Date		2022/03/24	2022/03/24	2022/03/24	2022/03/24		2022/03/24		
COC Number		860651-01-01	860651-01-01	860651-01-01	860651-01-01		860651-01-01		
	UNITS	SW1	SW2	SW3	SW4	RDL	SW13	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	7903220
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	7903220
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010	7903220
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	0.0020	7903220
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	<0.090	0.090	7903220
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.054	0.054	7903515
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.054	0.054	7903515
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	<0.097	0.097	7903515
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	0.090	<0.097	0.097	7900864
Reached Baseline at C32	mg/L	NA	NA	NA	NA	N/A	NA	N/A	7903515
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	N/A	NA	N/A	7903515
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	96	100	96	91		83		7903515
n-Dotriacontane - Extractable	%	85	95	95	88		83 (1)		7903515
Isobutylbenzene - Volatile	%	103	106	101	100		101		7903220

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SEH104	SEH105		
Sampling Date		2022/03/24	2022/03/24		
COC Number		860651-01-01	860651-01-01		
	UNITS	SW19-20	DUP1	RDL	QC Batch
Petroleum Hydrocarbons					
Benzene	mg/L	<0.0010	<0.0010	0.0010	7903220
Toluene	mg/L	<0.0010	<0.0010	0.0010	7903220
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	7903220
Total Xylenes	mg/L	<0.0020	<0.0020	0.0020	7903220
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	0.090	7903220
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	0.050	7903515
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	0.050	7903515
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	0.090	7903515
Modified TPH (Tier1)	mg/L	<0.090	<0.090	0.090	7900864
Reached Baseline at C32	mg/L	NA	NA	N/A	7903515
Hydrocarbon Resemblance	mg/L	NA	NA	N/A	7903515
Surrogate Recovery (%)					
Isobutylbenzene - Extractable	%	95	98		7903515
n-Dotriacontane - Extractable	%	91	87		7903515
Isobutylbenzene - Volatile	%	102	102		7903220

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C
Package 2	3.3°C

Sample SEH100 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SEH102 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SEH104 [SW19-20] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SEH105 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7903220	JPA	Matrix Spike	Isobutylbenzene - Volatile	2022/03/25		100	%	70 - 130
			Benzene	2022/03/25		100	%	70 - 130
			Toluene	2022/03/25		102	%	70 - 130
			Ethylbenzene	2022/03/25		103	%	70 - 130
			Total Xylenes	2022/03/25		101	%	70 - 130
7903220	JPA	Spiked Blank	Isobutylbenzene - Volatile	2022/03/25		104	%	70 - 130
			Benzene	2022/03/25		98	%	70 - 130
			Toluene	2022/03/25		99	%	70 - 130
			Ethylbenzene	2022/03/25		96	%	70 - 130
			Total Xylenes	2022/03/25		101	%	70 - 130
7903220	JPA	Method Blank	Isobutylbenzene - Volatile	2022/03/25		107	%	70 - 130
			Benzene	2022/03/25	<0.0010		mg/L	
			Toluene	2022/03/25	<0.0010		mg/L	
			Ethylbenzene	2022/03/25	<0.0010		mg/L	
			Total Xylenes	2022/03/25	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/03/25	<0.090		mg/L	
7903220	JPA	RPD	Benzene	2022/03/25	NC		%	40
			Toluene	2022/03/25	NC		%	40
			Ethylbenzene	2022/03/25	NC		%	40
			Total Xylenes	2022/03/25	NC		%	40
			C6 - C10 (less BTEX)	2022/03/25	NC		%	40
7903226	MNC	QC Standard	Carbonaceous BOD	2022/03/30		126 (1)	%	80 - 120
7903226	MNC	Spiked Blank	Carbonaceous BOD	2022/03/30		126 (2)	%	80 - 120
7903226	MNC	Method Blank	Carbonaceous BOD	2022/03/30	<2.0		mg/L	
7903226	MNC	RPD	Carbonaceous BOD	2022/03/30	NC		%	25
7903515	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/03/25		100	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/25		88	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/25		90	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/25		91	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/25		93	%	70 - 130
7903515	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/03/25		102	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/25		88	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/25		97	%	70 - 130
			>C16-C21 Hydrocarbons	2022/03/25		97	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/03/25		98	%	70 - 130
7903515	MGN	Method Blank	Isobutylbenzene - Extractable	2022/03/25		101	%	70 - 130
			n-Dotriacontane - Extractable	2022/03/25		89	%	70 - 130
			>C10-C16 Hydrocarbons	2022/03/25	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/03/25	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/03/25	<0.090		mg/L	
7903515	MGN	RPD	>C10-C16 Hydrocarbons	2022/03/25	NC		%	40
			>C16-C21 Hydrocarbons	2022/03/25	NC		%	40
			>C21-<C32 Hydrocarbons	2022/03/25	NC		%	40
7903994	BAN	Matrix Spike	Total Aluminum (Al)	2022/03/28		101	%	80 - 120
			Total Antimony (Sb)	2022/03/28		100	%	80 - 120
			Total Arsenic (As)	2022/03/28		91	%	80 - 120
			Total Barium (Ba)	2022/03/28		93	%	80 - 120
			Total Beryllium (Be)	2022/03/28		92	%	80 - 120
			Total Bismuth (Bi)	2022/03/28		101	%	80 - 120
			Total Boron (B)	2022/03/28		NC	%	80 - 120
			Total Cadmium (Cd)	2022/03/28		96	%	80 - 120
			Total Calcium (Ca)	2022/03/28		104	%	80 - 120
			Total Chromium (Cr)	2022/03/28		93	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Cobalt (Co)	2022/03/28		94	%	80 - 120
			Total Copper (Cu)	2022/03/28		94	%	80 - 120
			Total Iron (Fe)	2022/03/28		103	%	80 - 120
			Total Lead (Pb)	2022/03/28		98	%	80 - 120
			Total Magnesium (Mg)	2022/03/28		103	%	80 - 120
			Total Manganese (Mn)	2022/03/28		95	%	80 - 120
			Total Molybdenum (Mo)	2022/03/28		104	%	80 - 120
			Total Nickel (Ni)	2022/03/28		93	%	80 - 120
			Total Phosphorus (P)	2022/03/28		104	%	80 - 120
			Total Potassium (K)	2022/03/28		102	%	80 - 120
			Total Selenium (Se)	2022/03/28		93	%	80 - 120
			Total Silver (Ag)	2022/03/28		97	%	80 - 120
			Total Sodium (Na)	2022/03/28		NC	%	80 - 120
			Total Strontium (Sr)	2022/03/28		95	%	80 - 120
			Total Thallium (Tl)	2022/03/28		101	%	80 - 120
			Total Tin (Sn)	2022/03/28		99	%	80 - 120
			Total Titanium (Ti)	2022/03/28		95	%	80 - 120
			Total Uranium (U)	2022/03/28		103	%	80 - 120
			Total Vanadium (V)	2022/03/28		95	%	80 - 120
			Total Zinc (Zn)	2022/03/28		96	%	80 - 120
7903994	BAN	Spiked Blank	Total Aluminum (Al)	2022/03/28		107	%	80 - 120
			Total Antimony (Sb)	2022/03/28		96	%	80 - 120
			Total Arsenic (As)	2022/03/28		92	%	80 - 120
			Total Barium (Ba)	2022/03/28		94	%	80 - 120
			Total Beryllium (Be)	2022/03/28		94	%	80 - 120
			Total Bismuth (Bi)	2022/03/28		99	%	80 - 120
			Total Boron (B)	2022/03/28		95	%	80 - 120
			Total Cadmium (Cd)	2022/03/28		96	%	80 - 120
			Total Calcium (Ca)	2022/03/28		110	%	80 - 120
			Total Chromium (Cr)	2022/03/28		97	%	80 - 120
			Total Cobalt (Co)	2022/03/28		98	%	80 - 120
			Total Copper (Cu)	2022/03/28		98	%	80 - 120
			Total Iron (Fe)	2022/03/28		110	%	80 - 120
			Total Lead (Pb)	2022/03/28		100	%	80 - 120
			Total Magnesium (Mg)	2022/03/28		110	%	80 - 120
			Total Manganese (Mn)	2022/03/28		100	%	80 - 120
			Total Molybdenum (Mo)	2022/03/28		100	%	80 - 120
			Total Nickel (Ni)	2022/03/28		99	%	80 - 120
			Total Phosphorus (P)	2022/03/28		109	%	80 - 120
			Total Potassium (K)	2022/03/28		105	%	80 - 120
			Total Selenium (Se)	2022/03/28		96	%	80 - 120
			Total Silver (Ag)	2022/03/28		96	%	80 - 120
			Total Sodium (Na)	2022/03/28		105	%	80 - 120
			Total Strontium (Sr)	2022/03/28		99	%	80 - 120
			Total Thallium (Tl)	2022/03/28		100	%	80 - 120
			Total Tin (Sn)	2022/03/28		94	%	80 - 120
			Total Titanium (Ti)	2022/03/28		99	%	80 - 120
			Total Uranium (U)	2022/03/28		103	%	80 - 120
			Total Vanadium (V)	2022/03/28		98	%	80 - 120
			Total Zinc (Zn)	2022/03/28		98	%	80 - 120
7903994	BAN	Method Blank	Total Aluminum (Al)	2022/03/28	<5.0		ug/L	
			Total Antimony (Sb)	2022/03/28	<1.0		ug/L	
			Total Arsenic (As)	2022/03/28	<1.0		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Barium (Ba)	2022/03/28	<1.0		ug/L	
			Total Beryllium (Be)	2022/03/28	<0.10		ug/L	
			Total Bismuth (Bi)	2022/03/28	<2.0		ug/L	
			Total Boron (B)	2022/03/28	<50		ug/L	
			Total Cadmium (Cd)	2022/03/28	<0.010		ug/L	
			Total Calcium (Ca)	2022/03/28	<100		ug/L	
			Total Chromium (Cr)	2022/03/28	<1.0		ug/L	
			Total Cobalt (Co)	2022/03/28	<0.40		ug/L	
			Total Copper (Cu)	2022/03/28	<0.50		ug/L	
			Total Iron (Fe)	2022/03/28	<50		ug/L	
			Total Lead (Pb)	2022/03/28	<0.50		ug/L	
			Total Magnesium (Mg)	2022/03/28	<100		ug/L	
			Total Manganese (Mn)	2022/03/28	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/03/28	<2.0		ug/L	
			Total Nickel (Ni)	2022/03/28	<2.0		ug/L	
			Total Phosphorus (P)	2022/03/28	<100		ug/L	
			Total Potassium (K)	2022/03/28	<100		ug/L	
			Total Selenium (Se)	2022/03/28	<0.50		ug/L	
			Total Silver (Ag)	2022/03/28	<0.10		ug/L	
			Total Sodium (Na)	2022/03/28	<100		ug/L	
			Total Strontium (Sr)	2022/03/28	<2.0		ug/L	
			Total Thallium (Tl)	2022/03/28	<0.10		ug/L	
			Total Tin (Sn)	2022/03/28	<2.0		ug/L	
			Total Titanium (Ti)	2022/03/28	<2.0		ug/L	
			Total Uranium (U)	2022/03/28	<0.10		ug/L	
			Total Vanadium (V)	2022/03/28	<2.0		ug/L	
			Total Zinc (Zn)	2022/03/28	<5.0		ug/L	
7903994	BAN	RPD	Total Aluminum (Al)	2022/03/28	NC		%	20
			Total Antimony (Sb)	2022/03/28	NC		%	20
			Total Arsenic (As)	2022/03/28	3.3		%	20
			Total Barium (Ba)	2022/03/28	NC		%	20
			Total Beryllium (Be)	2022/03/28	NC		%	20
			Total Bismuth (Bi)	2022/03/28	NC		%	20
			Total Boron (B)	2022/03/28	4.3		%	20
			Total Cadmium (Cd)	2022/03/28	NC		%	20
			Total Calcium (Ca)	2022/03/28	2.6		%	20
			Total Chromium (Cr)	2022/03/28	NC		%	20
			Total Cobalt (Co)	2022/03/28	NC		%	20
			Total Copper (Cu)	2022/03/28	NC		%	20
			Total Iron (Fe)	2022/03/28	NC		%	20
			Total Lead (Pb)	2022/03/28	NC		%	20
			Total Magnesium (Mg)	2022/03/28	NC		%	20
			Total Manganese (Mn)	2022/03/28	NC		%	20
			Total Molybdenum (Mo)	2022/03/28	9.4		%	20
			Total Nickel (Ni)	2022/03/28	NC		%	20
			Total Phosphorus (P)	2022/03/28	NC		%	20
			Total Potassium (K)	2022/03/28	1.2		%	20
			Total Selenium (Se)	2022/03/28	NC		%	20
			Total Silver (Ag)	2022/03/28	NC		%	20
			Total Sodium (Na)	2022/03/28	1.6		%	20
			Total Strontium (Sr)	2022/03/28	NC		%	20
			Total Thallium (Tl)	2022/03/28	NC		%	20
			Total Tin (Sn)	2022/03/28	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Titanium (Ti)	2022/03/28	NC		%	20
			Total Uranium (U)	2022/03/28	0.075		%	20
			Total Vanadium (V)	2022/03/28	NC		%	20
			Total Zinc (Zn)	2022/03/28	NC		%	20
7904004	BAN	Matrix Spike	Total Aluminum (Al)	2022/03/28		100	%	80 - 120
			Total Antimony (Sb)	2022/03/28		101	%	80 - 120
			Total Arsenic (As)	2022/03/28		95	%	80 - 120
			Total Barium (Ba)	2022/03/28		95	%	80 - 120
			Total Beryllium (Be)	2022/03/28		99	%	80 - 120
			Total Bismuth (Bi)	2022/03/28		98	%	80 - 120
			Total Boron (B)	2022/03/28		100	%	80 - 120
			Total Cadmium (Cd)	2022/03/28		96	%	80 - 120
			Total Calcium (Ca)	2022/03/28		101	%	80 - 120
			Total Chromium (Cr)	2022/03/28		97	%	80 - 120
			Total Cobalt (Co)	2022/03/28		98	%	80 - 120
			Total Copper (Cu)	2022/03/28		96	%	80 - 120
			Total Iron (Fe)	2022/03/28		103	%	80 - 120
			Total Lead (Pb)	2022/03/28		100	%	80 - 120
			Total Magnesium (Mg)	2022/03/28		100	%	80 - 120
			Total Manganese (Mn)	2022/03/28		99	%	80 - 120
			Total Molybdenum (Mo)	2022/03/28		102	%	80 - 120
			Total Nickel (Ni)	2022/03/28		98	%	80 - 120
			Total Phosphorus (P)	2022/03/28		104	%	80 - 120
			Total Potassium (K)	2022/03/28		99	%	80 - 120
			Total Selenium (Se)	2022/03/28		97	%	80 - 120
			Total Silver (Ag)	2022/03/28		98	%	80 - 120
			Total Sodium (Na)	2022/03/28		NC	%	80 - 120
			Total Strontium (Sr)	2022/03/28		96	%	80 - 120
			Total Thallium (Tl)	2022/03/28		100	%	80 - 120
			Total Tin (Sn)	2022/03/28		97	%	80 - 120
			Total Titanium (Ti)	2022/03/28		98	%	80 - 120
			Total Uranium (U)	2022/03/28		105	%	80 - 120
			Total Vanadium (V)	2022/03/28		98	%	80 - 120
			Total Zinc (Zn)	2022/03/28		97	%	80 - 120
7904004	BAN	Spiked Blank	Total Aluminum (Al)	2022/03/28		101	%	80 - 120
			Total Antimony (Sb)	2022/03/28		99	%	80 - 120
			Total Arsenic (As)	2022/03/28		95	%	80 - 120
			Total Barium (Ba)	2022/03/28		97	%	80 - 120
			Total Beryllium (Be)	2022/03/28		96	%	80 - 120
			Total Bismuth (Bi)	2022/03/28		104	%	80 - 120
			Total Boron (B)	2022/03/28		99	%	80 - 120
			Total Cadmium (Cd)	2022/03/28		97	%	80 - 120
			Total Calcium (Ca)	2022/03/28		104	%	80 - 120
			Total Chromium (Cr)	2022/03/28		100	%	80 - 120
			Total Cobalt (Co)	2022/03/28		100	%	80 - 120
			Total Copper (Cu)	2022/03/28		100	%	80 - 120
			Total Iron (Fe)	2022/03/28		105	%	80 - 120
			Total Lead (Pb)	2022/03/28		104	%	80 - 120
			Total Magnesium (Mg)	2022/03/28		105	%	80 - 120
			Total Manganese (Mn)	2022/03/28		101	%	80 - 120
			Total Molybdenum (Mo)	2022/03/28		100	%	80 - 120
			Total Nickel (Ni)	2022/03/28		100	%	80 - 120
			Total Phosphorus (P)	2022/03/28		104	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Potassium (K)	2022/03/28		101	%	80 - 120
			Total Selenium (Se)	2022/03/28		99	%	80 - 120
			Total Silver (Ag)	2022/03/28		98	%	80 - 120
			Total Sodium (Na)	2022/03/28		101	%	80 - 120
			Total Strontium (Sr)	2022/03/28		100	%	80 - 120
			Total Thallium (Tl)	2022/03/28		103	%	80 - 120
			Total Tin (Sn)	2022/03/28		98	%	80 - 120
			Total Titanium (Ti)	2022/03/28		105	%	80 - 120
			Total Uranium (U)	2022/03/28		107	%	80 - 120
			Total Vanadium (V)	2022/03/28		99	%	80 - 120
			Total Zinc (Zn)	2022/03/28		98	%	80 - 120
7904004	BAN	Method Blank	Total Aluminum (Al)	2022/03/28	<5.0		ug/L	
			Total Antimony (Sb)	2022/03/28	<1.0		ug/L	
			Total Arsenic (As)	2022/03/28	<1.0		ug/L	
			Total Barium (Ba)	2022/03/28	<1.0		ug/L	
			Total Beryllium (Be)	2022/03/28	<0.10		ug/L	
			Total Bismuth (Bi)	2022/03/28	<2.0		ug/L	
			Total Boron (B)	2022/03/28	<50		ug/L	
			Total Cadmium (Cd)	2022/03/28	<0.010		ug/L	
			Total Calcium (Ca)	2022/03/28	<100		ug/L	
			Total Chromium (Cr)	2022/03/28	<1.0		ug/L	
			Total Cobalt (Co)	2022/03/28	<0.40		ug/L	
			Total Copper (Cu)	2022/03/28	<0.50		ug/L	
			Total Iron (Fe)	2022/03/28	<50		ug/L	
			Total Lead (Pb)	2022/03/28	<0.50		ug/L	
			Total Magnesium (Mg)	2022/03/28	<100		ug/L	
			Total Manganese (Mn)	2022/03/28	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/03/28	<2.0		ug/L	
			Total Nickel (Ni)	2022/03/28	<2.0		ug/L	
			Total Phosphorus (P)	2022/03/28	<100		ug/L	
			Total Potassium (K)	2022/03/28	<100		ug/L	
			Total Selenium (Se)	2022/03/28	<0.50		ug/L	
			Total Silver (Ag)	2022/03/28	<0.10		ug/L	
			Total Sodium (Na)	2022/03/28	<100		ug/L	
			Total Strontium (Sr)	2022/03/28	<2.0		ug/L	
			Total Thallium (Tl)	2022/03/28	<0.10		ug/L	
			Total Tin (Sn)	2022/03/28	<2.0		ug/L	
			Total Titanium (Ti)	2022/03/28	<2.0		ug/L	
			Total Uranium (U)	2022/03/28	<0.10		ug/L	
			Total Vanadium (V)	2022/03/28	<2.0		ug/L	
			Total Zinc (Zn)	2022/03/28	<5.0		ug/L	
7904004	BAN	RPD	Total Arsenic (As)	2022/03/28	1.6 (3)		%	20
			Total Manganese (Mn)	2022/03/28	2.6 (3)		%	20
7909101	RMK	QC Standard	Total Suspended Solids	2022/04/01		100	%	80 - 120
7909101	RMK	Method Blank	Total Suspended Solids	2022/04/01	<1.0		mg/L	
7909101	RMK	RPD	Total Suspended Solids	2022/04/01	4.9		%	20
7909347	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2022/03/30		101	%	80 - 120
7909347	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/03/30		100	%	80 - 120
7909347	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/03/30		103	%	80 - 120
7909347	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/03/30	<20		mg/L	
7909347	ZZH	RPD	Total Chemical Oxygen Demand	2022/03/30	NC		%	25
7909524	RMK	QC Standard	Total Suspended Solids	2022/04/01		99	%	80 - 120
7909524	RMK	Method Blank	Total Suspended Solids	2022/04/01	<1.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7909524	RMK	RPD	Total Suspended Solids	2022/04/01	5.3		%	20
7911089	SHW	Spiked Blank	Conductivity	2022/03/30		100	%	80 - 120
7911089	SHW	Method Blank	Conductivity	2022/03/30	1.5, RDL=1.0		uS/cm	
7911089	SHW	RPD	Conductivity	2022/03/30	6.5		%	10
7911090	SHW	Spiked Blank	pH	2022/03/30		100	%	97 - 103
7911090	SHW	RPD	pH	2022/03/30	1.7		%	N/A
7911128	NGI	Matrix Spike	Total Organic Carbon (C)	2022/03/30		97	%	85 - 115
7911128	NGI	Spiked Blank	Total Organic Carbon (C)	2022/03/30		98	%	80 - 120
7911128	NGI	Method Blank	Total Organic Carbon (C)	2022/03/30	<0.50		mg/L	
7911128	NGI	RPD	Total Organic Carbon (C)	2022/03/30	0.60		%	15
7911136	NGI	Matrix Spike	Total Organic Carbon (C)	2022/03/30		104	%	85 - 115
7911136	NGI	Spiked Blank	Total Organic Carbon (C)	2022/03/30		99	%	80 - 120
7911136	NGI	Method Blank	Total Organic Carbon (C)	2022/03/30	<0.50		mg/L	
7911136	NGI	RPD	Total Organic Carbon (C)	2022/03/30	NC		%	15
7911138	SHW	QC Standard	Turbidity	2022/03/30		99	%	80 - 120
7911138	SHW	Spiked Blank	Turbidity	2022/03/30		100	%	80 - 120
7911138	SHW	Method Blank	Turbidity	2022/03/30	<0.10		NTU	
7911138	SHW	RPD	Turbidity	2022/03/30	6.7		%	20
7911338	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2022/03/31		NC	%	80 - 120
7911338	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/03/31		104	%	80 - 120
7911338	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/03/31	<5.0		mg/L	
7911338	MCN	RPD	Total Alkalinity (Total as CaCO3)	2022/03/30	0.0072		%	20
7911341	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2022/03/31		NC	%	80 - 120
7911341	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/03/31		93	%	80 - 120
7911341	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/03/31	<1.0		mg/L	
7911341	MCN	RPD	Dissolved Chloride (Cl-)	2022/03/31	0.020		%	20
7911342	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2022/03/31		NC	%	80 - 120
7911342	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/03/31		95	%	80 - 120
7911342	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/03/31	<2.0		mg/L	
7911342	MCN	RPD	Dissolved Sulphate (SO4)	2022/03/31	0.39		%	20
7911344	MCN	Matrix Spike	Reactive Silica (SiO2)	2022/03/31		87	%	80 - 120
7911344	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/03/31		90	%	80 - 120
7911344	MCN	Method Blank	Reactive Silica (SiO2)	2022/03/31	<0.50		mg/L	
7911344	MCN	RPD	Reactive Silica (SiO2)	2022/03/31	3.2		%	20
7911345	MCN	Spiked Blank	Colour	2022/03/31		102	%	80 - 120
7911345	MCN	Method Blank	Colour	2022/03/31	<5.0		TCU	
7911345	MCN	RPD	Colour	2022/03/31	NC		%	20
7911347	MCN	Matrix Spike	Orthophosphate (P)	2022/03/31		85	%	80 - 120
7911347	MCN	Spiked Blank	Orthophosphate (P)	2022/03/31		95	%	80 - 120
7911347	MCN	Method Blank	Orthophosphate (P)	2022/03/31	<0.010		mg/L	
7911347	MCN	RPD	Orthophosphate (P)	2022/03/31	13		%	20
7911348	MCN	Matrix Spike	Nitrate + Nitrite (N)	2022/03/31		16 (4)	%	80 - 120
7911348	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/03/31		103	%	80 - 120
7911348	MCN	Method Blank	Nitrate + Nitrite (N)	2022/03/31	<0.050		mg/L	
7911348	MCN	RPD	Nitrate + Nitrite (N)	2022/03/31	14		%	20
7911352	MCN	Matrix Spike	Nitrite (N)	2022/03/31		98	%	80 - 120
7911352	MCN	Spiked Blank	Nitrite (N)	2022/03/31		104	%	80 - 120
7911352	MCN	Method Blank	Nitrite (N)	2022/03/31	<0.010		mg/L	
7911352	MCN	RPD	Nitrite (N)	2022/03/31	1.3		%	20
7911379	MCN	Matrix Spike [SEH103-07]	Total Alkalinity (Total as CaCO3)	2022/03/31		97	%	80 - 120
7911379	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/03/31		103	%	80 - 120
7911379	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2022/03/31	<5.0		mg/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7911379	MCN	RPD [SEH103-07]	Total Alkalinity (Total as CaCO3)	2022/03/31	5.2		%	20
7911981	SSV	Matrix Spike	Phenols-4AAP	2022/03/30		96	%	80 - 120
7911981	SSV	Spiked Blank	Phenols-4AAP	2022/03/30		98	%	80 - 120
7911981	SSV	Method Blank	Phenols-4AAP	2022/03/30	<0.0010		mg/L	
7911981	SSV	RPD	Phenols-4AAP	2022/03/30	NC		%	20
7913690	MCN	Matrix Spike [SEH103-07]	Dissolved Chloride (Cl-)	2022/03/31		94	%	80 - 120
7913690	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/03/31		93	%	80 - 120
7913690	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/03/31	<1.0		mg/L	
7913690	MCN	RPD [SEH103-07]	Dissolved Chloride (Cl-)	2022/03/31	0.75		%	20
7913691	MCN	Matrix Spike [SEH103-07]	Dissolved Sulphate (SO4)	2022/03/31		100	%	80 - 120
7913691	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/03/31		96	%	80 - 120
7913691	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/03/31	<2.0		mg/L	
7913691	MCN	RPD [SEH103-07]	Dissolved Sulphate (SO4)	2022/03/31	4.4		%	20
7913692	MCN	Matrix Spike [SEH103-07]	Reactive Silica (SiO2)	2022/03/31		89	%	80 - 120
7913692	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/03/31		91	%	80 - 120
7913692	MCN	Method Blank	Reactive Silica (SiO2)	2022/03/31	<0.50		mg/L	
7913692	MCN	RPD [SEH103-07]	Reactive Silica (SiO2)	2022/03/31	1.2		%	20
7913695	MCN	Spiked Blank	Colour	2022/03/31		99	%	80 - 120
7913695	MCN	Method Blank	Colour	2022/03/31	<5.0		TCU	
7913695	MCN	RPD [SEH103-07]	Colour	2022/03/31	7.0		%	20
7913697	MCN	Matrix Spike [SEH103-07]	Orthophosphate (P)	2022/03/31		90	%	80 - 120
7913697	MCN	Spiked Blank	Orthophosphate (P)	2022/03/31		91	%	80 - 120
7913697	MCN	Method Blank	Orthophosphate (P)	2022/03/31	<0.010		mg/L	
7913697	MCN	RPD [SEH103-07]	Orthophosphate (P)	2022/03/31	NC		%	20
7913699	MCN	Matrix Spike [SEH103-07]	Nitrate + Nitrite (N)	2022/03/31		91	%	80 - 120
7913699	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/03/31		97	%	80 - 120
7913699	MCN	Method Blank	Nitrate + Nitrite (N)	2022/03/31	<0.050		mg/L	
7913699	MCN	RPD [SEH103-07]	Nitrate + Nitrite (N)	2022/03/31	7.0		%	20
7913700	MCN	Matrix Spike [SEH103-07]	Nitrite (N)	2022/03/31		94	%	80 - 120
7913700	MCN	Spiked Blank	Nitrite (N)	2022/03/31		104	%	80 - 120
7913700	MCN	Method Blank	Nitrite (N)	2022/03/31	<0.010		mg/L	
7913700	MCN	RPD [SEH103-07]	Nitrite (N)	2022/03/31	NC		%	20
7913730	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2022/03/31		95	%	80 - 120
7913730	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/03/31		97	%	80 - 120
7913730	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/03/31	<0.050		mg/L	
7913730	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2022/03/31	NC		%	20
7913732	MCN	Matrix Spike [SEH103-09]	Nitrogen (Ammonia Nitrogen)	2022/03/31		95	%	80 - 120
7913732	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/03/31		97	%	80 - 120
7913732	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/03/31	<0.050		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7913732	MCN	RPD [SEH103-09]	Nitrogen (Ammonia Nitrogen)	2022/03/31	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery and Second source QC recovery high. All other QC acceptable.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) POTENTIAL EXCEEDANCE FOR PARAMETER

(4) Poor spike recovery due to sample matrix, recovery confirmed by repeat analysis.

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Bureau Veritas Job #: C277826
Report Date: 2022/04/01

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: DB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau, Scientific Specialist (Organics)

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel (902) 420-0203 Toll-free 800-563-6266 Fax (902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C277826	860651
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#860651-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	DR/mm		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seewater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

X

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	Mar 24/22	AM	SW			X	Various	
2		SW2	"	"	"			X	"	
3		SW3	"	"	"			X	"	
4		SW4	"	"	"			X	"	
5		SW13	Mar 24/22	PM	"			X	"	
6		~~SW14~~						~~X~~		
7		SW19-20	Mar 24/22	PM	SW			X	"	
8		~~Diffuser~~						~~X~~		
9		DUP1	Mar 24/22	AM	SW			X	"	
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	Mar 24/22	14:19	MATT GRACE				☐	3, 3, 4 / 3, 3, 4	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

2022 MAR 24 14:22

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 OLD SAMBRO ROAD, HARRIETSFIELD, NS
Your C.O.C. #: 859813-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/12
Report #: R7083130
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C290667
Received: 2022/04/06, 14:39

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2022/04/12	N/A	SM 23 4500-CO2 D
Alkalinity	7	N/A	2022/04/11	ATL SOP 00142	SM 23 2320 B
Carbonaceous BOD	7	2022/04/07	2022/04/12	ATL SOP 00041	SM 23 5210B m
Chloride	7	N/A	2022/04/12	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2022/04/11	2022/04/11	ATL SOP 00042	SM 23 5220D m
Colour	7	N/A	2022/04/12	ATL SOP 00020	SM 23 2120C m
Conductance - water	7	N/A	2022/04/11	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	7	2022/04/07	2022/04/07	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	7	N/A	2022/04/08	ATL SOP 00048	Auto Calc
Metals Water Total MS	7	2022/04/07	2022/04/07	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/04/12	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/04/12	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2022/04/11	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2022/04/12	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	7	N/A	2022/04/12	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2022/04/12	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2022/04/11	CAM SOP-00444	OMOE E3179 m
pH (2)	7	N/A	2022/04/11	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	7	N/A	2022/04/12	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	7	N/A	2022/04/12	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	7	N/A	2022/04/12	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2022/04/12	ATL SOP 00022	EPA 366.0 m
Sulphate	7	N/A	2022/04/12	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/04/12	N/A	Auto Calc.
Organic carbon - Total (TOC) (3)	7	N/A	2022/04/08	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	7	N/A	2022/04/08	N/A	Atl. RBCA v3 m
Total Suspended Solids	7	2022/04/07	2022/04/12	ATL SOP 00007	SM 23 2540D m
Turbidity	7	N/A	2022/04/08	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	5	N/A	2022/04/07	ATL SOP 00130	Atl. RBCA v3.1 m
VPH in Water (PIRI)	2	N/A	2022/04/08	ATL SOP 00130	Atl. RBCA v3.1 m

Your Project #: 60639002
Site Location: 1275 OLD SAMBRO ROAD, HARRIETSFIELD, NS
Your C.O.C. #: 859813-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/12
Report #: R7083130
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C290667
Received: 2022/04/06, 14:39

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key



Bureau Veritas
12 Apr 2022 16:48:09

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

==========

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For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C290667
Report Date: 2022/04/12

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 OLD SAMBRO ROAD, HARRIETSFIELD, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SHG304		SHG305			SHG305		
Sampling Date		2022/04/06 11:02		2022/04/06 11:16			2022/04/06 11:16		
COC Number		859813-01-01		859813-01-01			859813-01-01		
	UNITS	SW1	QC Batch	SW2	RDL	QC Batch	SW2 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	0.160	7925616	0.160	N/A	7925616			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7925614	<1.0	1.0	7925614			
Calculated TDS	mg/L	13	7925621	14	1.0	7925621			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7925614	<1.0	1.0	7925614			
Cation Sum	me/L	0.230	7925616	0.280	N/A	7925616			
Hardness (CaCO3)	mg/L	3.0	7925565	5.3	1.0	7925565			
Ion Balance (% Difference)	%	18.0	7925615	27.3	N/A	7925615			
Langelier Index (@ 20C)	N/A	NC	7925619	NC		7925619			
Langelier Index (@ 4C)	N/A	NC	7925620	NC		7925620			
Nitrate (N)	mg/L	<0.050	7925213	<0.050	0.050	7925213			
Saturation pH (@ 20C)	N/A	NC	7925619	NC		7925619			
Saturation pH (@ 4C)	N/A	NC	7925620	NC		7925620			
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	<2.0	7932720	<2.0	2.0	7932720			
Carbonaceous BOD	mg/L	<5.0	7926704	<5.0	5.0	7926724	<5.0	5.0	7926724
Total Chemical Oxygen Demand	mg/L	36	7932814	27	20	7932814			
Dissolved Chloride (Cl-)	mg/L	5.6	7932959	5.7	1.0	7932959			
Colour	TCU	150	7932982	150	25	7932982			
Nitrate + Nitrite (N)	mg/L	<0.050	7932988	<0.050	0.050	7932988			
Nitrite (N)	mg/L	<0.010	7932990	<0.010	0.010	7932990			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7932750	<0.050	0.050	7932750			
Total Organic Carbon (C)	mg/L	12	7929242	11	0.50	7929242			
Orthophosphate (P)	mg/L	<0.010	7932983	<0.010	0.010	7932983			
pH	pH	5.09	7932719	5.39		7932719			
Phenols-4AAP	mg/L	<0.0010	7932761	<0.0010	0.0010	7932761			
Reactive Silica (SiO2)	mg/L	2.8	7932981	2.3	0.50	7932981			
Total Suspended Solids	mg/L	1.0	7927703	1.0	1.0	7927703			
Dissolved Sulphate (SO4)	mg/L	<2.0	7932979	<2.0	2.0	7932979			
Turbidity	NTU	1.5	7929418	2.7	0.10	7929418			
Conductivity	uS/cm	34	7932718	31	1.0	7932718			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C290667
Report Date: 2022/04/12

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 OLD SAMBRO ROAD, HARRIETSFIELD, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SHG306		SHG307		SHG308		
Sampling Date		2022/04/06 11:27		2022/04/06 11:34		2022/04/06 12:35		
COC Number		859813-01-01		859813-01-01		859813-01-01		
	UNITS	SW3	QC Batch	SW4	QC Batch	SW13	RDL	QC Batch
Calculated Parameters								
Anion Sum	me/L	0.160	7925616	0.160	7925616	0.290	N/A	7925616
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7925614	<1.0	7925614	<1.0	1.0	7925614
Calculated TDS	mg/L	14	7925621	14	7925621	25	1.0	7925621
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7925614	<1.0	7925614	<1.0	1.0	7925614
Cation Sum	me/L	0.260	7925616	0.270	7925616	0.520	N/A	7925616
Hardness (CaCO3)	mg/L	5.1	7925565	5.2	7925565	11	1.0	7925565
Ion Balance (% Difference)	%	23.8	7925615	25.6	7925615	28.4	N/A	7925615
Langelier Index (@ 20C)	N/A	NC	7925619	NC	7925619	NC		7925619
Langelier Index (@ 4C)	N/A	NC	7925620	NC	7925620	NC		7925620
Nitrate (N)	mg/L	<0.050	7925213	<0.050	7925213	0.13	0.050	7925213
Saturation pH (@ 20C)	N/A	NC	7925619	NC	7925619	NC		7925619
Saturation pH (@ 4C)	N/A	NC	7925620	NC	7925620	NC		7925620
Inorganics								
Total Alkalinity (Total as CaCO3)	mg/L	<2.0	7932720	<2.0	7932720	<2.0	2.0	7932720
Carbonaceous BOD	mg/L	<5.0	7926724	<5.0	7926724	<5.0	5.0	7926724
Total Chemical Oxygen Demand	mg/L	34	7932814	36	7932814	32	20	7932814
Dissolved Chloride (Cl-)	mg/L	5.5	7932959	5.6	7932994	10	1.0	7932994
Colour	TCU	150	7932982	140	7933044	120	25	7933044
Nitrate + Nitrite (N)	mg/L	<0.050	7932988	<0.050	7933061	0.13	0.050	7933061
Nitrite (N)	mg/L	<0.010	7932990	<0.010	7933068	<0.010	0.010	7933068
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7932750	<0.050	7932750	<0.050	0.050	7932750
Total Organic Carbon (C)	mg/L	11	7929242	12	7929243	11	0.50	7929242
Orthophosphate (P)	mg/L	<0.010	7932983	<0.010	7933056	<0.010	0.010	7933056
pH	pH	5.32	7932719	5.32	7932719	6.48		7932719
Phenols-4AAP	mg/L	<0.0010	7932761	<0.0010	7932761	<0.0010	0.0010	7932761
Reactive Silica (SiO2)	mg/L	2.4	7932981	2.3	7933034	2.9	0.50	7933034
Total Suspended Solids	mg/L	1.2	7927703	1.2	7927703	2.2	1.0	7927703
Dissolved Sulphate (SO4)	mg/L	<2.0	7932979	<2.0	7933022	<2.0	2.0	7933022
Turbidity	NTU	2.4	7929418	2.5	7929418	8.7	0.10	7929418
Conductivity	uS/cm	31	7932718	31	7932718	55	1.0	7932718

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C290667
Report Date: 2022/04/12

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 OLD SAMBRO ROAD, HARRIETSFIELD, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SHG309		SHG310		
Sampling Date		2022/04/06 12:14		2022/04/06		
COC Number		859813-01-01		859813-01-01		
	UNITS	SW19-20	RDL	DUP1	RDL	QC Batch
Calculated Parameters						
Anion Sum	me/L	6.92	N/A	0.160	N/A	7925616
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	150	1.0	<1.0	1.0	7925614
Calculated TDS	mg/L	430	1.0	14	1.0	7925621
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	7925614
Cation Sum	me/L	7.39	N/A	0.240	N/A	7925616
Hardness (CaCO3)	mg/L	330	1.0	3.2	1.0	7925565
Ion Balance (% Difference)	%	3.28	N/A	20.0	N/A	7925615
Langelier Index (@ 20C)	N/A	0.615		NC		7925619
Langelier Index (@ 4C)	N/A	0.367		NC		7925620
Nitrate (N)	mg/L	0.69	0.050	<0.050	0.050	7925213
Saturation pH (@ 20C)	N/A	7.23		NC		7925619
Saturation pH (@ 4C)	N/A	7.48		NC		7925620
Inorganics						
Total Alkalinity (Total as CaCO3)	mg/L	150	2.0	<2.0	2.0	7932720
Carbonaceous BOD	mg/L	<5.0	5.0	<5.0	5.0	7926724
Total Chemical Oxygen Demand	mg/L	<20	20	34	20	7932814
Dissolved Chloride (Cl-)	mg/L	8.4	1.0	5.6	1.0	7932994
Colour	TCU	10	5.0	160	25	7933044
Nitrate + Nitrite (N)	mg/L	0.69	0.050	<0.050	0.050	7933061
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	7933068
Nitrogen (Ammonia Nitrogen)	mg/L	0.099	0.050	<0.050	0.050	7932750
Total Organic Carbon (C)	mg/L	5.0	0.50	13	0.50	7929242
Orthophosphate (P)	mg/L	<0.010	0.010	<0.010	0.010	7933056
pH	pH	7.85		5.09		7932719
Phenols-4AAP	mg/L	<0.0010	0.0010	<0.0010	0.0010	7932761
Reactive Silica (SiO2)	mg/L	6.3	0.50	2.8	0.50	7933034
Total Suspended Solids	mg/L	4.0	1.0	<1.0	1.0	7927703
Dissolved Sulphate (SO4)	mg/L	180	10	<2.0	2.0	7933022
Turbidity	NTU	2.5	0.10	1.7	0.10	7929421
Conductivity	uS/cm	690	1.0	35	1.0	7932718

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SHG304	SHG305	SHG306		SHG307	SHG308		
Sampling Date		2022/04/06 11:02	2022/04/06 11:16	2022/04/06 11:27		2022/04/06 11:34	2022/04/06 12:35		
COC Number		859813-01-01	859813-01-01	859813-01-01		859813-01-01	859813-01-01		
	UNITS	SW1	SW2	SW3	QC Batch	SW4	SW13	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	420	430	410	7926830	450	700	5.0	7926741
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	7926830	<1.0	<1.0	1.0	7926741
Total Arsenic (As)	ug/L	<1.0	<1.0	<1.0	7926830	<1.0	<1.0	1.0	7926741
Total Barium (Ba)	ug/L	2.7	3.1	3.1	7926830	3.1	6.2	1.0	7926741
Total Beryllium (Be)	ug/L	<0.10	<0.10	<0.10	7926830	<0.10	<0.10	0.10	7926741
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	7926830	<2.0	<2.0	2.0	7926741
Total Boron (B)	ug/L	<50	<50	<50	7926830	<50	<50	50	7926741
Total Cadmium (Cd)	ug/L	0.013	0.018	0.016	7926830	0.016	0.016	0.010	7926741
Total Calcium (Ca)	ug/L	670	1400	1400	7926830	1400	3000	100	7926741
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	7926830	<1.0	<1.0	1.0	7926741
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	7926830	<0.40	<0.40	0.40	7926741
Total Copper (Cu)	ug/L	<0.50	<0.50	<0.50	7926830	<0.50	1.6	0.50	7926741
Total Iron (Fe)	ug/L	320	330	310	7926830	310	580	50	7926741
Total Lead (Pb)	ug/L	0.66	0.64	0.61	7926830	0.64	0.68	0.50	7926741
Total Magnesium (Mg)	ug/L	330	410	400	7926830	400	950	100	7926741
Total Manganese (Mn)	ug/L	13	13	13	7926830	14	14	2.0	7926741
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	7926830	<2.0	<2.0	2.0	7926741
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	7926830	<2.0	<2.0	2.0	7926741
Total Phosphorus (P)	ug/L	<100	<100	<100	7926830	<100	<100	100	7926741
Total Potassium (K)	ug/L	240	300	280	7926830	310	680	100	7926741
Total Selenium (Se)	ug/L	<0.50	<0.50	<0.50	7926830	<0.50	<0.50	0.50	7926741
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	7926830	<0.10	<0.10	0.10	7926741
Total Sodium (Na)	ug/L	3400	3400	3200	7926830	3400	5700	100	7926741
Total Strontium (Sr)	ug/L	4.3	6.5	6.2	7926830	6.6	11	2.0	7926741
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	7926830	<0.10	<0.10	0.10	7926741
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	7926830	<2.0	<2.0	2.0	7926741
Total Titanium (Ti)	ug/L	4.9	5.8	5.8	7926830	6.1	19	2.0	7926741
Total Uranium (U)	ug/L	0.18	0.29	0.27	7926830	0.26	0.57	0.10	7926741
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	7926830	<2.0	<2.0	2.0	7926741
Total Zinc (Zn)	ug/L	<5.0	5.2	<5.0	7926830	<5.0	7.0	5.0	7926741

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SHG309	SHG310		
Sampling Date		2022/04/06 12:14	2022/04/06		
COC Number		859813-01-01	859813-01-01		
	UNITS	SW19-20	DUP1	RDL	QC Batch
Metals					
Total Aluminum (Al)	ug/L	50	430	5.0	7926830
Total Antimony (Sb)	ug/L	<1.0	<1.0	1.0	7926830
Total Arsenic (As)	ug/L	<1.0	<1.0	1.0	7926830
Total Barium (Ba)	ug/L	33	2.8	1.0	7926830
Total Beryllium (Be)	ug/L	<0.10	<0.10	0.10	7926830
Total Bismuth (Bi)	ug/L	<2.0	<2.0	2.0	7926830
Total Boron (B)	ug/L	260	<50	50	7926830
Total Cadmium (Cd)	ug/L	0.013	0.018	0.010	7926830
Total Calcium (Ca)	ug/L	110000	700	100	7926830
Total Chromium (Cr)	ug/L	<1.0	<1.0	1.0	7926830
Total Cobalt (Co)	ug/L	0.62	<0.40	0.40	7926830
Total Copper (Cu)	ug/L	1.6	<0.50	0.50	7926830
Total Iron (Fe)	ug/L	320	330	50	7926830
Total Lead (Pb)	ug/L	<0.50	0.69	0.50	7926830
Total Magnesium (Mg)	ug/L	12000	350	100	7926830
Total Manganese (Mn)	ug/L	540	14	2.0	7926830
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	2.0	7926830
Total Nickel (Ni)	ug/L	<2.0	<2.0	2.0	7926830
Total Phosphorus (P)	ug/L	<100	<100	100	7926830
Total Potassium (K)	ug/L	7900	250	100	7926830
Total Selenium (Se)	ug/L	<0.50	<0.50	0.50	7926830
Total Silver (Ag)	ug/L	<0.10	<0.10	0.10	7926830
Total Sodium (Na)	ug/L	12000	3500	100	7926830
Total Strontium (Sr)	ug/L	360	4.4	2.0	7926830
Total Thallium (Tl)	ug/L	<0.10	<0.10	0.10	7926830
Total Tin (Sn)	ug/L	<2.0	<2.0	2.0	7926830
Total Titanium (Ti)	ug/L	<2.0	5.4	2.0	7926830
Total Uranium (U)	ug/L	38	0.20	0.10	7926830
Total Vanadium (V)	ug/L	<2.0	<2.0	2.0	7926830
Total Zinc (Zn)	ug/L	<5.0	<5.0	5.0	7926830

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SHG304		SHG305		SHG306	SHG307	SHG308		
Sampling Date		2022/04/06 11:02		2022/04/06 11:16		2022/04/06 11:27	2022/04/06 11:34	2022/04/06 12:35		
COC Number		859813-01-01		859813-01-01		859813-01-01	859813-01-01	859813-01-01		
	UNITS	SW1	RDL	SW2	RDL	SW3	SW4	SW13	RDL	QC Batch
Petroleum Hydrocarbons										
Benzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7926685
Toluene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7926685
Ethylbenzene	mg/L	<0.0010	0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	0.0010	7926685
Total Xylenes	mg/L	<0.0020	0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	0.0020	7926685
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	<0.090	0.090	<0.090	<0.090	<0.090	0.090	7926685
>C10-C16 Hydrocarbons	mg/L	<0.053	0.053	<0.055	0.055	<0.053	<0.053	<0.053	0.053	7927229
>C16-C21 Hydrocarbons	mg/L	<0.053	0.053	<0.055	0.055	<0.053	<0.053	<0.053	0.053	7927229
>C21-<C32 Hydrocarbons	mg/L	<0.096	0.096	<0.098	0.098	<0.096	<0.096	<0.096	0.096	7927229
Modified TPH (Tier1)	mg/L	<0.096	0.096	<0.098	0.098	<0.096	<0.096	<0.096	0.096	7924374
Reached Baseline at C32	mg/L	NA	N/A	NA	N/A	NA	NA	NA	N/A	7927229
Hydrocarbon Resemblance	mg/L	NA	N/A	NA	N/A	NA	NA	NA	N/A	7927229
Surrogate Recovery (%)										
Isobutylbenzene - Extractable	%	86		80		84	87	85		7927229
n-Dotriacontane - Extractable	%	91 (1)		88 (1)		86 (1)	91 (1)	94 (1)		7927229
Isobutylbenzene - Volatile	%	94		94		94	95	95		7926685

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SHG309			SHG310		
Sampling Date		2022/04/06 12:14			2022/04/06		
COC Number		859813-01-01			859813-01-01		
	UNITS	SW19-20	RDL	QC Batch	DUP1	RDL	QC Batch
Petroleum Hydrocarbons							
Benzene	mg/L	<0.0010	0.0010	7926685	<0.0010	0.0010	7926685
Toluene	mg/L	<0.0010	0.0010	7926685	<0.0010	0.0010	7926685
Ethylbenzene	mg/L	<0.0010	0.0010	7926685	<0.0010	0.0010	7926685
Total Xylenes	mg/L	<0.0020	0.0020	7926685	<0.0020	0.0020	7926685
C6 - C10 (less BTEX)	mg/L	<0.090	0.090	7926685	<0.090	0.090	7926685
>C10-C16 Hydrocarbons	mg/L	<0.050	0.050	7927229	<0.055	0.055	7927229
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	7927229	<0.055	0.055	7927229
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	7927229	<0.099	0.099	7927229
Modified TPH (Tier1)	mg/L	<0.090	0.090	7924374	<0.099	0.099	7925681
Reached Baseline at C32	mg/L	NA	N/A	7927229	NA	N/A	7927229
Hydrocarbon Resemblance	mg/L	NA	N/A	7927229	NA	N/A	7927229
Surrogate Recovery (%)							
Isobutylbenzene - Extractable	%	86		7927229	89		7927229
n-Dotriacontane - Extractable	%	91		7927229	95 (1)		7927229
Isobutylbenzene - Volatile	%	96		7926685	95		7926685

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated TEH RDL(s) due to limited sample.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.7°C
Package 2	4.3°C

Sample SHG304 [SW1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SHG305 [SW2] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SHG306 [SW3] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SHG307 [SW4] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SHG308 [SW13] : Ion balance acceptable. Low ionic strength sample.

Sample SHG309 [SW19-20] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SHG310 [DUP1] : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7926685	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/04/07		98	%	70 - 130
			Benzene	2022/04/07		95	%	70 - 130
			Toluene	2022/04/07		94	%	70 - 130
			Ethylbenzene	2022/04/07		98	%	70 - 130
			Total Xylenes	2022/04/07		96	%	70 - 130
7926685	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/04/07		98	%	70 - 130
			Benzene	2022/04/07		99	%	70 - 130
			Toluene	2022/04/07		94	%	70 - 130
			Ethylbenzene	2022/04/07		98	%	70 - 130
			Total Xylenes	2022/04/07		94	%	70 - 130
7926685	THL	Method Blank	Isobutylbenzene - Volatile	2022/04/07		98	%	70 - 130
			Benzene	2022/04/07	<0.0010		mg/L	
			Toluene	2022/04/07	<0.0010		mg/L	
			Ethylbenzene	2022/04/07	<0.0010		mg/L	
			Total Xylenes	2022/04/07	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/04/07	<0.090		mg/L	
7926685	THL	RPD	Benzene	2022/04/07	NC		%	40
			Toluene	2022/04/07	NC		%	40
			Ethylbenzene	2022/04/07	NC		%	40
			Total Xylenes	2022/04/07	NC		%	40
			C6 - C10 (less BTEX)	2022/04/07	NC		%	40
7926704	MNC	QC Standard	Carbonaceous BOD	2022/04/12		123 (1)	%	80 - 120
7926704	MNC	Spiked Blank	Carbonaceous BOD	2022/04/12		118	%	80 - 120
7926704	MNC	Method Blank	Carbonaceous BOD	2022/04/12	<2.0		mg/L	
7926704	MNC	RPD	Carbonaceous BOD	2022/04/12	NC		%	25
7926724	MNC	QC Standard	Carbonaceous BOD	2022/04/12		129 (1)	%	80 - 120
7926724	MNC	Spiked Blank	Carbonaceous BOD	2022/04/12		117	%	80 - 120
7926724	MNC	Method Blank	Carbonaceous BOD	2022/04/12	<2.0		mg/L	
7926724	MNC	RPD [SHG305-01]	Carbonaceous BOD	2022/04/12	NC		%	25
7926741	BAN	Matrix Spike	Total Aluminum (Al)	2022/04/08		116	%	80 - 120
			Total Antimony (Sb)	2022/04/08		106	%	80 - 120
			Total Arsenic (As)	2022/04/08		96	%	80 - 120
			Total Barium (Ba)	2022/04/08		99	%	80 - 120
			Total Beryllium (Be)	2022/04/08		91	%	80 - 120
			Total Bismuth (Bi)	2022/04/08		104	%	80 - 120
			Total Boron (B)	2022/04/08		91	%	80 - 120
			Total Cadmium (Cd)	2022/04/08		96	%	80 - 120
			Total Calcium (Ca)	2022/04/08		106	%	80 - 120
			Total Chromium (Cr)	2022/04/08		104	%	80 - 120
			Total Cobalt (Co)	2022/04/08		101	%	80 - 120
			Total Copper (Cu)	2022/04/08		100	%	80 - 120
			Total Iron (Fe)	2022/04/08		117	%	80 - 120
			Total Lead (Pb)	2022/04/08		104	%	80 - 120
			Total Magnesium (Mg)	2022/04/08		101	%	80 - 120
			Total Manganese (Mn)	2022/04/08		103	%	80 - 120
			Total Molybdenum (Mo)	2022/04/08		111	%	80 - 120
			Total Nickel (Ni)	2022/04/08		102	%	80 - 120
			Total Phosphorus (P)	2022/04/08		104	%	80 - 120
			Total Potassium (K)	2022/04/08		104	%	80 - 120
			Total Selenium (Se)	2022/04/08		99	%	80 - 120
			Total Silver (Ag)	2022/04/08		100	%	80 - 120
			Total Sodium (Na)	2022/04/08		NC	%	80 - 120
			Total Strontium (Sr)	2022/04/08		100	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Thallium (Tl)	2022/04/08		103	%	80 - 120
			Total Tin (Sn)	2022/04/08		103	%	80 - 120
			Total Titanium (Ti)	2022/04/08		101	%	80 - 120
			Total Uranium (U)	2022/04/08		108	%	80 - 120
			Total Vanadium (V)	2022/04/08		101	%	80 - 120
			Total Zinc (Zn)	2022/04/08		103	%	80 - 120
7926741	BAN	Spiked Blank	Total Aluminum (Al)	2022/04/07		103	%	80 - 120
			Total Antimony (Sb)	2022/04/07		102	%	80 - 120
			Total Arsenic (As)	2022/04/07		95	%	80 - 120
			Total Barium (Ba)	2022/04/07		97	%	80 - 120
			Total Beryllium (Be)	2022/04/07		88	%	80 - 120
			Total Bismuth (Bi)	2022/04/07		103	%	80 - 120
			Total Boron (B)	2022/04/07		91	%	80 - 120
			Total Cadmium (Cd)	2022/04/07		96	%	80 - 120
			Total Calcium (Ca)	2022/04/07		106	%	80 - 120
			Total Chromium (Cr)	2022/04/07		98	%	80 - 120
			Total Cobalt (Co)	2022/04/07		100	%	80 - 120
			Total Copper (Cu)	2022/04/07		100	%	80 - 120
			Total Iron (Fe)	2022/04/07		102	%	80 - 120
			Total Lead (Pb)	2022/04/07		103	%	80 - 120
			Total Magnesium (Mg)	2022/04/07		99	%	80 - 120
			Total Manganese (Mn)	2022/04/07		102	%	80 - 120
			Total Molybdenum (Mo)	2022/04/07		103	%	80 - 120
			Total Nickel (Ni)	2022/04/07		101	%	80 - 120
			Total Phosphorus (P)	2022/04/07		103	%	80 - 120
			Total Potassium (K)	2022/04/07		104	%	80 - 120
			Total Selenium (Se)	2022/04/07		99	%	80 - 120
			Total Silver (Ag)	2022/04/07		99	%	80 - 120
			Total Sodium (Na)	2022/04/07		99	%	80 - 120
			Total Strontium (Sr)	2022/04/07		101	%	80 - 120
			Total Thallium (Tl)	2022/04/07		101	%	80 - 120
			Total Tin (Sn)	2022/04/07		100	%	80 - 120
			Total Titanium (Ti)	2022/04/07		100	%	80 - 120
			Total Uranium (U)	2022/04/07		105	%	80 - 120
			Total Vanadium (V)	2022/04/07		100	%	80 - 120
			Total Zinc (Zn)	2022/04/07		100	%	80 - 120
7926741	BAN	Method Blank	Total Aluminum (Al)	2022/04/07	<5.0		ug/L	
			Total Antimony (Sb)	2022/04/07	<1.0		ug/L	
			Total Arsenic (As)	2022/04/07	<1.0		ug/L	
			Total Barium (Ba)	2022/04/07	<1.0		ug/L	
			Total Beryllium (Be)	2022/04/07	<0.10		ug/L	
			Total Bismuth (Bi)	2022/04/07	<2.0		ug/L	
			Total Boron (B)	2022/04/07	<50		ug/L	
			Total Cadmium (Cd)	2022/04/07	<0.010		ug/L	
			Total Calcium (Ca)	2022/04/07	<100		ug/L	
			Total Chromium (Cr)	2022/04/07	<1.0		ug/L	
			Total Cobalt (Co)	2022/04/07	<0.40		ug/L	
			Total Copper (Cu)	2022/04/07	<0.50		ug/L	
			Total Iron (Fe)	2022/04/07	<50		ug/L	
			Total Lead (Pb)	2022/04/07	<0.50		ug/L	
			Total Magnesium (Mg)	2022/04/07	<100		ug/L	
			Total Manganese (Mn)	2022/04/07	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/04/07	<2.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Nickel (Ni)	2022/04/07	<2.0		ug/L	
			Total Phosphorus (P)	2022/04/07	<100		ug/L	
			Total Potassium (K)	2022/04/07	<100		ug/L	
			Total Selenium (Se)	2022/04/07	<0.50		ug/L	
			Total Silver (Ag)	2022/04/07	<0.10		ug/L	
			Total Sodium (Na)	2022/04/07	<100		ug/L	
			Total Strontium (Sr)	2022/04/07	<2.0		ug/L	
			Total Thallium (Tl)	2022/04/07	<0.10		ug/L	
			Total Tin (Sn)	2022/04/07	<2.0		ug/L	
			Total Titanium (Ti)	2022/04/07	<2.0		ug/L	
			Total Uranium (U)	2022/04/07	<0.10		ug/L	
			Total Vanadium (V)	2022/04/07	<2.0		ug/L	
			Total Zinc (Zn)	2022/04/07	<5.0		ug/L	
7926741	BAN	RPD	Total Aluminum (Al)	2022/04/08	NC		%	20
			Total Antimony (Sb)	2022/04/08	NC		%	20
			Total Arsenic (As)	2022/04/08	1.1		%	20
			Total Barium (Ba)	2022/04/08	2.8		%	20
			Total Beryllium (Be)	2022/04/08	NC		%	20
			Total Bismuth (Bi)	2022/04/08	NC		%	20
			Total Boron (B)	2022/04/08	6.2		%	20
			Total Cadmium (Cd)	2022/04/08	NC		%	20
			Total Calcium (Ca)	2022/04/08	3.5		%	20
			Total Chromium (Cr)	2022/04/08	NC		%	20
			Total Cobalt (Co)	2022/04/08	NC		%	20
			Total Copper (Cu)	2022/04/08	3.3		%	20
			Total Iron (Fe)	2022/04/08	NC		%	20
			Total Lead (Pb)	2022/04/08	NC		%	20
			Total Magnesium (Mg)	2022/04/08	1.7		%	20
			Total Manganese (Mn)	2022/04/08	NC		%	20
			Total Molybdenum (Mo)	2022/04/08	9.5		%	20
			Total Nickel (Ni)	2022/04/08	NC		%	20
			Total Phosphorus (P)	2022/04/08	NC		%	20
			Total Potassium (K)	2022/04/08	2.3		%	20
			Total Selenium (Se)	2022/04/08	6.3		%	20
			Total Silver (Ag)	2022/04/08	NC		%	20
			Total Sodium (Na)	2022/04/08	3.9		%	20
			Total Strontium (Sr)	2022/04/08	5.1		%	20
			Total Thallium (Tl)	2022/04/08	NC		%	20
			Total Tin (Sn)	2022/04/08	NC		%	20
			Total Titanium (Ti)	2022/04/08	NC		%	20
			Total Uranium (U)	2022/04/08	0.69		%	20
			Total Vanadium (V)	2022/04/08	3.1		%	20
			Total Zinc (Zn)	2022/04/08	7.4		%	20
7926830	BAN	Matrix Spike	Total Aluminum (Al)	2022/04/07		104	%	80 - 120
			Total Antimony (Sb)	2022/04/07		101	%	80 - 120
			Total Arsenic (As)	2022/04/07		92	%	80 - 120
			Total Barium (Ba)	2022/04/07		94	%	80 - 120
			Total Beryllium (Be)	2022/04/07		89	%	80 - 120
			Total Bismuth (Bi)	2022/04/07		100	%	80 - 120
			Total Boron (B)	2022/04/07		91	%	80 - 120
			Total Cadmium (Cd)	2022/04/07		96	%	80 - 120
			Total Calcium (Ca)	2022/04/07		100	%	80 - 120
			Total Chromium (Cr)	2022/04/07		94	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Cobalt (Co)	2022/04/07		97	%	80 - 120
			Total Copper (Cu)	2022/04/07		96	%	80 - 120
			Total Iron (Fe)	2022/04/07		100	%	80 - 120
			Total Lead (Pb)	2022/04/07		99	%	80 - 120
			Total Magnesium (Mg)	2022/04/07		93	%	80 - 120
			Total Manganese (Mn)	2022/04/07		98	%	80 - 120
			Total Molybdenum (Mo)	2022/04/07		98	%	80 - 120
			Total Nickel (Ni)	2022/04/07		97	%	80 - 120
			Total Phosphorus (P)	2022/04/07		99	%	80 - 120
			Total Potassium (K)	2022/04/07		98	%	80 - 120
			Total Selenium (Se)	2022/04/07		96	%	80 - 120
			Total Silver (Ag)	2022/04/07		96	%	80 - 120
			Total Sodium (Na)	2022/04/07		93	%	80 - 120
			Total Strontium (Sr)	2022/04/07		96	%	80 - 120
			Total Thallium (Tl)	2022/04/07		98	%	80 - 120
			Total Tin (Sn)	2022/04/07		97	%	80 - 120
			Total Titanium (Ti)	2022/04/07		94	%	80 - 120
			Total Uranium (U)	2022/04/07		101	%	80 - 120
			Total Vanadium (V)	2022/04/07		95	%	80 - 120
			Total Zinc (Zn)	2022/04/07		98	%	80 - 120
7926830	BAN	Spiked Blank	Total Aluminum (Al)	2022/04/07		98	%	80 - 120
			Total Antimony (Sb)	2022/04/07		100	%	80 - 120
			Total Arsenic (As)	2022/04/07		92	%	80 - 120
			Total Barium (Ba)	2022/04/07		95	%	80 - 120
			Total Beryllium (Be)	2022/04/07		86	%	80 - 120
			Total Bismuth (Bi)	2022/04/07		100	%	80 - 120
			Total Boron (B)	2022/04/07		88	%	80 - 120
			Total Cadmium (Cd)	2022/04/07		95	%	80 - 120
			Total Calcium (Ca)	2022/04/07		101	%	80 - 120
			Total Chromium (Cr)	2022/04/07		95	%	80 - 120
			Total Cobalt (Co)	2022/04/07		96	%	80 - 120
			Total Copper (Cu)	2022/04/07		97	%	80 - 120
			Total Iron (Fe)	2022/04/07		100	%	80 - 120
			Total Lead (Pb)	2022/04/07		101	%	80 - 120
			Total Magnesium (Mg)	2022/04/07		96	%	80 - 120
			Total Manganese (Mn)	2022/04/07		98	%	80 - 120
			Total Molybdenum (Mo)	2022/04/07		100	%	80 - 120
			Total Nickel (Ni)	2022/04/07		97	%	80 - 120
			Total Phosphorus (P)	2022/04/07		100	%	80 - 120
			Total Potassium (K)	2022/04/07		100	%	80 - 120
			Total Selenium (Se)	2022/04/07		96	%	80 - 120
			Total Silver (Ag)	2022/04/07		96	%	80 - 120
			Total Sodium (Na)	2022/04/07		96	%	80 - 120
			Total Strontium (Sr)	2022/04/07		96	%	80 - 120
			Total Thallium (Tl)	2022/04/07		99	%	80 - 120
			Total Tin (Sn)	2022/04/07		98	%	80 - 120
			Total Titanium (Ti)	2022/04/07		97	%	80 - 120
			Total Uranium (U)	2022/04/07		102	%	80 - 120
			Total Vanadium (V)	2022/04/07		97	%	80 - 120
			Total Zinc (Zn)	2022/04/07		98	%	80 - 120
7926830	BAN	Method Blank	Total Aluminum (Al)	2022/04/07	<5.0		ug/L	
			Total Antimony (Sb)	2022/04/07	<1.0		ug/L	
			Total Arsenic (As)	2022/04/07	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Barium (Ba)	2022/04/07	<1.0		ug/L	
			Total Beryllium (Be)	2022/04/07	<0.10		ug/L	
			Total Bismuth (Bi)	2022/04/07	<2.0		ug/L	
			Total Boron (B)	2022/04/07	<50		ug/L	
			Total Cadmium (Cd)	2022/04/07	<0.010		ug/L	
			Total Calcium (Ca)	2022/04/07	<100		ug/L	
			Total Chromium (Cr)	2022/04/07	<1.0		ug/L	
			Total Cobalt (Co)	2022/04/07	<0.40		ug/L	
			Total Copper (Cu)	2022/04/07	<0.50		ug/L	
			Total Iron (Fe)	2022/04/07	<50		ug/L	
			Total Lead (Pb)	2022/04/07	<0.50		ug/L	
			Total Magnesium (Mg)	2022/04/07	<100		ug/L	
			Total Manganese (Mn)	2022/04/07	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/04/07	<2.0		ug/L	
			Total Nickel (Ni)	2022/04/07	<2.0		ug/L	
			Total Phosphorus (P)	2022/04/07	<100		ug/L	
			Total Potassium (K)	2022/04/07	<100		ug/L	
			Total Selenium (Se)	2022/04/07	<0.50		ug/L	
			Total Silver (Ag)	2022/04/07	<0.10		ug/L	
			Total Sodium (Na)	2022/04/07	<100		ug/L	
			Total Strontium (Sr)	2022/04/07	<2.0		ug/L	
			Total Thallium (Tl)	2022/04/07	<0.10		ug/L	
			Total Tin (Sn)	2022/04/07	<2.0		ug/L	
			Total Titanium (Ti)	2022/04/07	<2.0		ug/L	
			Total Uranium (U)	2022/04/07	<0.10		ug/L	
			Total Vanadium (V)	2022/04/07	<2.0		ug/L	
			Total Zinc (Zn)	2022/04/07	<5.0		ug/L	
7926830	BAN	RPD	Total Aluminum (Al)	2022/04/07	4.7		%	20
			Total Antimony (Sb)	2022/04/07	NC		%	20
			Total Arsenic (As)	2022/04/07	NC		%	20
			Total Barium (Ba)	2022/04/07	2.5		%	20
			Total Beryllium (Be)	2022/04/07	NC		%	20
			Total Bismuth (Bi)	2022/04/07	NC		%	20
			Total Boron (B)	2022/04/07	NC		%	20
			Total Cadmium (Cd)	2022/04/07	NC		%	20
			Total Calcium (Ca)	2022/04/07	0.0035		%	20
			Total Chromium (Cr)	2022/04/07	NC		%	20
			Total Cobalt (Co)	2022/04/07	NC		%	20
			Total Copper (Cu)	2022/04/07	NC		%	20
			Total Iron (Fe)	2022/04/07	11		%	20
			Total Lead (Pb)	2022/04/07	NC		%	20
			Total Magnesium (Mg)	2022/04/07	3.5		%	20
			Total Manganese (Mn)	2022/04/07	13		%	20
			Total Molybdenum (Mo)	2022/04/07	NC		%	20
			Total Nickel (Ni)	2022/04/07	NC		%	20
			Total Phosphorus (P)	2022/04/07	NC		%	20
			Total Potassium (K)	2022/04/07	4.6		%	20
			Total Selenium (Se)	2022/04/07	NC		%	20
			Total Silver (Ag)	2022/04/07	NC		%	20
			Total Sodium (Na)	2022/04/07	4.7		%	20
			Total Strontium (Sr)	2022/04/07	2.3		%	20
			Total Thallium (Tl)	2022/04/07	NC		%	20
			Total Tin (Sn)	2022/04/07	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Titanium (Ti)	2022/04/07	NC		%	20
			Total Uranium (U)	2022/04/07	NC		%	20
			Total Vanadium (V)	2022/04/07	NC		%	20
			Total Zinc (Zn)	2022/04/07	0.069		%	20
7927229	MSK	Matrix Spike	Isobutylbenzene - Extractable	2022/04/07		85	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/07		86	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/07		91	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/07		85	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/07		87	%	70 - 130
7927229	MSK	Spiked Blank	Isobutylbenzene - Extractable	2022/04/07		93	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/07		88	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/07		107	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/07		96	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/07		97	%	70 - 130
7927229	MSK	Method Blank	Isobutylbenzene - Extractable	2022/04/07		93	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/07		89	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/07	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/04/07	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/04/07	<0.090		mg/L	
7927229	MSK	RPD	>C10-C16 Hydrocarbons	2022/04/07	NC		%	40
			>C16-C21 Hydrocarbons	2022/04/07	NC		%	40
			>C21-<C32 Hydrocarbons	2022/04/07	NC		%	40
7927703	RMK	QC Standard	Total Suspended Solids	2022/04/12		98	%	80 - 120
7927703	RMK	Method Blank	Total Suspended Solids	2022/04/12	<1.0		mg/L	
7927703	RMK	RPD	Total Suspended Solids	2022/04/12	7.6		%	20
7929242	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/08		97	%	85 - 115
7929242	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/08		99	%	80 - 120
7929242	NGI	Method Blank	Total Organic Carbon (C)	2022/04/08	<0.50		mg/L	
7929242	NGI	RPD	Total Organic Carbon (C)	2022/04/08	0.56		%	15
7929243	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/08		94	%	85 - 115
7929243	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/08		98	%	80 - 120
7929243	NGI	Method Blank	Total Organic Carbon (C)	2022/04/08	<0.50		mg/L	
7929243	NGI	RPD	Total Organic Carbon (C)	2022/04/08	0.95		%	15
7929418	SHW	QC Standard	Turbidity	2022/04/08		101	%	80 - 120
7929418	SHW	Spiked Blank	Turbidity	2022/04/08		105	%	80 - 120
7929418	SHW	Method Blank	Turbidity	2022/04/08	<0.10		NTU	
7929418	SHW	RPD	Turbidity	2022/04/08	17		%	20
7929421	SHW	QC Standard	Turbidity	2022/04/08		100	%	80 - 120
7929421	SHW	Spiked Blank	Turbidity	2022/04/08		103	%	80 - 120
7929421	SHW	Method Blank	Turbidity	2022/04/08	<0.10		NTU	
7929421	SHW	RPD	Turbidity	2022/04/08	2.9		%	20
7932718	SHW	Spiked Blank	Conductivity	2022/04/11		101	%	80 - 120
7932718	SHW	Method Blank	Conductivity	2022/04/11	1.1, RDL=1.0		uS/cm	
7932718	SHW	RPD	Conductivity	2022/04/11	0.85		%	10
7932719	SHW	Spiked Blank	pH	2022/04/11		100	%	97 - 103
7932719	SHW	RPD	pH	2022/04/11	0.21		%	N/A
7932720	SHW	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/11		92	%	80 - 120
7932720	SHW	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/11	<2.0		mg/L	
7932720	SHW	RPD	Total Alkalinity (Total as CaCO3)	2022/04/11	0.22		%	20
7932750	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2022/04/11		24 (2)	%	80 - 120
7932750	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/11		103	%	80 - 120
7932750	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/11	<0.050		mg/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7932750	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2022/04/11	16		%	20
7932761	LHA	Matrix Spike	Phenols-4AAP	2022/04/11		101	%	80 - 120
7932761	LHA	Spiked Blank	Phenols-4AAP	2022/04/11		100	%	80 - 120
7932761	LHA	Method Blank	Phenols-4AAP	2022/04/11	<0.0010		mg/L	
7932761	LHA	RPD	Phenols-4AAP	2022/04/11	NC		%	20
7932814	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2022/04/11		104	%	80 - 120
7932814	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/04/11		100	%	80 - 120
7932814	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/04/11		102	%	80 - 120
7932814	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/04/11	<20		mg/L	
7932814	ZZH	RPD	Total Chemical Oxygen Demand	2022/04/11	NC		%	25
7932959	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2022/04/12		102	%	80 - 120
7932959	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/12		101	%	80 - 120
7932959	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/12	<1.0		mg/L	
7932959	MCN	RPD	Dissolved Chloride (Cl-)	2022/04/12	0.54		%	20
7932979	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2022/04/12		104	%	80 - 120
7932979	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/12		101	%	80 - 120
7932979	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/12	<2.0		mg/L	
7932979	MCN	RPD	Dissolved Sulphate (SO4)	2022/04/12	0.91		%	20
7932981	MCN	Matrix Spike	Reactive Silica (SiO2)	2022/04/12		92	%	80 - 120
7932981	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/12		95	%	80 - 120
7932981	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/12	<0.50		mg/L	
7932981	MCN	RPD	Reactive Silica (SiO2)	2022/04/12	5.9		%	20
7932982	MCN	Spiked Blank	Colour	2022/04/12		97	%	80 - 120
7932982	MCN	Method Blank	Colour	2022/04/12	<5.0		TCU	
7932982	MCN	RPD	Colour	2022/04/12	NC		%	20
7932983	MCN	Matrix Spike	Orthophosphate (P)	2022/04/12		NC	%	80 - 120
7932983	MCN	Spiked Blank	Orthophosphate (P)	2022/04/12		101	%	80 - 120
7932983	MCN	Method Blank	Orthophosphate (P)	2022/04/12	<0.010		mg/L	
7932983	MCN	RPD	Orthophosphate (P)	2022/04/12	6.4		%	20
7932988	MCN	Matrix Spike	Nitrate + Nitrite (N)	2022/04/12		99	%	80 - 120
7932988	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/12		100	%	80 - 120
7932988	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/12	<0.050		mg/L	
7932988	MCN	RPD	Nitrate + Nitrite (N)	2022/04/12	NC		%	20
7932990	MCN	Matrix Spike	Nitrite (N)	2022/04/12		52 (2)	%	80 - 120
7932990	MCN	Spiked Blank	Nitrite (N)	2022/04/12		103	%	80 - 120
7932990	MCN	Method Blank	Nitrite (N)	2022/04/12	<0.010		mg/L	
7932990	MCN	RPD	Nitrite (N)	2022/04/12	NC		%	20
7932994	MCN	Matrix Spike	Dissolved Chloride (Cl-)	2022/04/12		98	%	80 - 120
7932994	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/12		100	%	80 - 120
7932994	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/12	<1.0		mg/L	
7932994	MCN	RPD	Dissolved Chloride (Cl-)	2022/04/12	0.58		%	20
7933022	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2022/04/12		102	%	80 - 120
7933022	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/12		102	%	80 - 120
7933022	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/12	<2.0		mg/L	
7933022	MCN	RPD	Dissolved Sulphate (SO4)	2022/04/12	2.2		%	20
7933034	MCN	Matrix Spike	Reactive Silica (SiO2)	2022/04/12		NC	%	80 - 120
7933034	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/12		94	%	80 - 120
7933034	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/12	<0.50		mg/L	
7933034	MCN	RPD	Reactive Silica (SiO2)	2022/04/12	0.89		%	20
7933044	MCN	Spiked Blank	Colour	2022/04/12		94	%	80 - 120
7933044	MCN	Method Blank	Colour	2022/04/12	<5.0		TCU	
7933044	MCN	RPD	Colour	2022/04/12	NC		%	20
7933056	MCN	Matrix Spike	Orthophosphate (P)	2022/04/12		97	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7933056	MCN	Spiked Blank	Orthophosphate (P)	2022/04/12		102	%	80 - 120
7933056	MCN	Method Blank	Orthophosphate (P)	2022/04/12	<0.010		mg/L	
7933056	MCN	RPD	Orthophosphate (P)	2022/04/12	NC		%	20
7933061	MCN	Matrix Spike	Nitrate + Nitrite (N)	2022/04/12		96	%	80 - 120
7933061	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/12		101	%	80 - 120
7933061	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/12	<0.050		mg/L	
7933061	MCN	RPD	Nitrate + Nitrite (N)	2022/04/12	NC		%	20
7933068	MCN	Matrix Spike	Nitrite (N)	2022/04/12		99	%	80 - 120
7933068	MCN	Spiked Blank	Nitrite (N)	2022/04/12		102	%	80 - 120
7933068	MCN	Method Blank	Nitrite (N)	2022/04/12	<0.010		mg/L	
7933068	MCN	RPD	Nitrite (N)	2022/04/12	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) CBOD Analysis: Reference Material recovery high. Second source QC recovery and all other QC acceptable.

(2) Poor spike recovery due to probable sample matrix interference.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas Proprietary Software
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Automated Statchk

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Bureau Veritas Laboratories
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel (902) 420-0203 Toll-free 800-563-6266 Fax (902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C02660	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C290667	859813
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#859813-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	MM/BD		

Regulatory Criteria:

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	April 6	AM1102	SW			X	9	
2		SW2		11:16				X		
3		SW3		11:27				X		
4		SW4		11:34				X		
5		SW13		12:35				X		
6		~~SW14~~		14				X	X	
7		SW19-20	APRIL6	12:00	SW			X		
8		Diffuser						X	X	
9		DUP1	[redacted]	[redacted]	SW			X	9	
10				[redacted]					9	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Michael MacIntosh	22/04/06	13:30	Pam Stuart CONSTEELE				☐	8, 8, 4/7.5, 1	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 873946-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/27
Report #: R7101883
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2A2126
Received: 2022/04/19, 10:58

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Carbonate, Bicarbonate and Hydroxide	7	N/A	2022/04/21	N/A	SM 23 4500-CO2 D
Alkalinity	7	N/A	2022/04/21	ATL SOP 00142	SM 23 2320 B
Carbonaceous BOD	7	2022/04/20	2022/04/25	ATL SOP 00041	SM 23 5210B m
Chloride	7	N/A	2022/04/26	ATL SOP 00014	SM 23 4500-Cl- E m
Chemical Oxygen Demand (COD)	7	2022/04/19	2022/04/20	ATL SOP 00042	SM 23 5220D m
Colour	7	N/A	2022/04/27	ATL SOP 00020	SM 23 2120C m
Conductance - water	7	N/A	2022/04/21	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	6	2022/04/25	2022/04/25	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	1	2022/04/26	2022/04/26	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	4	N/A	2022/04/21	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2022/04/22	ATL SOP 00048	Auto Calc
Metals Water Total MS	4	2022/04/20	2022/04/20	ATL SOP 00058	EPA 6020B R2 m
Metals Water Total MS	3	2022/04/22	2022/04/22	ATL SOP 00058	EPA 6020B R2 m
Ion Balance (% Difference)	7	N/A	2022/04/27	N/A	Auto Calc.
Anion and Cation Sum	7	N/A	2022/04/26	N/A	Auto Calc.
Nitrogen Ammonia - water	7	N/A	2022/04/25	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2022/04/27	ATL SOP 00016	USGS I-2547-11m
Nitrogen - Nitrite	7	N/A	2022/04/26	ATL SOP 00017	SM 23 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2022/04/27	ATL SOP 00018	ASTM D3867-16
Phenols (4AAP) (1)	7	N/A	2022/04/22	CAM SOP-00444	OMOE E3179 m
pH (2)	7	N/A	2022/04/21	ATL SOP 00003	SM 23 4500-H+ B m
Phosphorus - ortho	7	N/A	2022/04/26	ATL SOP 00021	SM 23 4500-P E m
Sat. pH and Langelier Index (@ 20C)	3	N/A	2022/04/21	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	1	N/A	2022/04/22	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	3	N/A	2022/04/27	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	3	N/A	2022/04/21	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	1	N/A	2022/04/22	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	3	N/A	2022/04/27	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2022/04/26	ATL SOP 00022	EPA 366.0 m
Sulphate	7	N/A	2022/04/26	ATL SOP 00023	ASTM D516-16 m
Total Dissolved Solids (TDS calc)	7	N/A	2022/04/27	N/A	Auto Calc.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 873946-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/27
Report #: R7101883
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2A2126
Received: 2022/04/19, 10:58

Sample Matrix: Surface Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Organic carbon - Total (TOC) (3)	1	N/A	2022/04/25	ATL SOP 00203	SM 23 5310B m
Organic carbon - Total (TOC) (3)	6	N/A	2022/04/26	ATL SOP 00203	SM 23 5310B m
ModTPH (T1) Calc. for Water	6	N/A	2022/04/26	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	1	N/A	2022/04/27	N/A	Atl. RBCA v3 m
Total Suspended Solids	7	2022/04/19	2022/04/20	ATL SOP 00007	SM 23 2540D m
Turbidity	7	N/A	2022/04/21	ATL SOP 00011	EPA 180.1 R2 m
VPH in Water (PIRI)	7	N/A	2022/04/20	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Your Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Your C.O.C. #: 873946-01-01

Attention: Janice Shea

AECOM Canada Ltd
1701 Hollis St
SH400
Halifax , NS
CANADA B3J 3M8

Report Date: 2022/04/27
Report #: R7101883
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2A2126
Received: 2022/04/19, 10:58

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas
27 Apr 2022 16:43:47

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marie Muise, Key Account Specialist
Email: Marie.MUISE@bureauveritas.com
Phone# (902)420-0203 Ext:253

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Bureau Veritas Job #: C2A2126
Report Date: 2022/04/27

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SJT836			SJT836			SJT837		
Sampling Date		2022/04/19			2022/04/19			2022/04/19		
COC Number		873946-01-01			873946-01-01			873946-01-01		
	UNITS	SW1	RDL	QC Batch	SW1 Lab-Dup	RDL	QC Batch	SW2	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L	0.170	N/A	7946139				0.160	N/A	7946139
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7946135				<1.0	1.0	7946135
Calculated TDS	mg/L	14	1.0	7946145				15	1.0	7946145
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7946135				<1.0	1.0	7946135
Cation Sum	me/L	0.240	N/A	7946139				0.340	N/A	7946139
Hardness (CaCO3)	mg/L	3.0	1.0	7946137				5.9	1.0	7946137
Ion Balance (% Difference)	%	17.1	N/A	7946138				36.0	N/A	7946138
Langelier Index (@ 20C)	N/A	NC		7946142				NC		7946142
Langelier Index (@ 4C)	N/A	NC		7946143				NC		7946143
Nitrate (N)	mg/L	<0.050	0.050	7946140				<0.050	0.050	7946140
Saturation pH (@ 20C)	N/A	NC		7946142				NC		7946142
Saturation pH (@ 4C)	N/A	NC		7946143				NC		7946143
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	<2.0	2.0	7950978				<2.0	2.0	7950978
Carbonaceous BOD	mg/L	<5.0	5.0	7948378				<5.0	5.0	7948378
Total Chemical Oxygen Demand	mg/L	<20	20	7946584				<20	20	7946584
Dissolved Chloride (Cl-)	mg/L	6.0	1.0	7958895	5.7	1.0	7958895	5.7	1.0	7958904
Colour	TCU	150	25	7958900	150	25	7958900	150	25	7958910
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7958902	<0.050	0.050	7958902	<0.050	0.050	7958913
Nitrite (N)	mg/L	<0.010	0.010	7958903	<0.010	0.010	7958903	<0.010	0.010	7958914
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	7956721				0.15	0.050	7956721
Total Organic Carbon (C)	mg/L	13	0.50	7956789				12	0.50	7956789
Orthophosphate (P)	mg/L	<0.010	0.010	7958901	0.013	0.010	7958901	<0.010	0.010	7958912
pH	pH	5.03		7950977				5.40		7950977
Phenols-4AAP	mg/L	<0.0010	0.0010	7953975				<0.0010	0.0010	7953975
Reactive Silica (SiO2)	mg/L	2.9	0.50	7958899	2.8	0.50	7958899	2.4	0.50	7958907
Total Suspended Solids	mg/L	2.0	1.0	7946832				3.4	1.0	7946832
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7958897	<2.0	2.0	7958897	<2.0	2.0	7958906
Turbidity	NTU	2.4	0.10	7951055				2.5	0.10	7951060
Conductivity	uS/cm	35	1.0	7950975				33	1.0	7950975

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C2A2126
Report Date: 2022/04/27

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SJT837			SJT838			SJT838		
Sampling Date		2022/04/19			2022/04/19			2022/04/19		
COC Number		873946-01-01			873946-01-01			873946-01-01		
	UNITS	SW2 Lab-Dup	RDL	QC Batch	SW3	RDL	QC Batch	SW3 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Anion Sum	me/L				0.230	N/A	7946139			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7946135			
Calculated TDS	mg/L				18	1.0	7946145			
Carb. Alkalinity (calc. as CaCO3)	mg/L				<1.0	1.0	7946135			
Cation Sum	me/L				0.310	N/A	7946139			
Hardness (CaCO3)	mg/L				6.1	1.0	7946137			
Ion Balance (% Difference)	%				14.8	N/A	7946138			
Langelier Index (@ 20C)	N/A				NC		7946142			
Langelier Index (@ 4C)	N/A				NC		7946143			
Nitrate (N)	mg/L				<0.050	0.050	7946140			
Saturation pH (@ 20C)	N/A				NC		7946142			
Saturation pH (@ 4C)	N/A				NC		7946143			
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L				<2.0	2.0	7950978			
Carbonaceous BOD	mg/L				<5.0	5.0	7948378			
Total Chemical Oxygen Demand	mg/L				<20	20	7946584			
Dissolved Chloride (Cl-)	mg/L	5.8	1.0	7958904	5.6	1.0	7958915	5.6	1.0	7958915
Colour	TCU	150	25	7958910	150	25	7958918	140	25	7958918
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	7958913	<0.050	0.050	7958922	<0.050	0.050	7958922
Nitrite (N)	mg/L	<0.010	0.010	7958914	<0.010	0.010	7958923	<0.010	0.010	7958923
Nitrogen (Ammonia Nitrogen)	mg/L				0.16	0.050	7956721			
Total Organic Carbon (C)	mg/L				12	0.50	7956789			
Orthophosphate (P)	mg/L	<0.010	0.010	7958912	<0.010	0.010	7958921	<0.010	0.010	7958921
pH	pH				5.40		7950977			
Phenols-4AAP	mg/L				<0.0010	0.0010	7953975			
Reactive Silica (SiO2)	mg/L	2.3	0.50	7958907	2.4	0.50	7958917	2.3	0.50	7958917
Total Suspended Solids	mg/L				2.0	1.0	7946832			
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	7958906	3.2	2.0	7958916	2.7	2.0	7958916
Turbidity	NTU	2.3	0.10	7951060	2.6	0.10	7951055			
Conductivity	uS/cm				35	1.0	7950975			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C2A2126
Report Date: 2022/04/27

AECOM Canada Ltd
Client Project #: 60639002
Site Location: 1275 Old Sambro Road, Harrietsfield, NS
Sampler Initials: MM

RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SJT839		SJT840			SJT840		
Sampling Date		2022/04/19		2022/04/19			2022/04/19		
COC Number		873946-01-01		873946-01-01			873946-01-01		
	UNITS	SW4	QC Batch	SW13	RDL	QC Batch	SW13 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Anion Sum	me/L	0.200	7946139	0.650	N/A	7946139			
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7946135	8.9	1.0	7946135			
Calculated TDS	mg/L	16	7946145	41	1.0	7946145			
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	7946135	<1.0	1.0	7946135			
Cation Sum	me/L	0.300	7946139	0.730	N/A	7946139			
Hardness (CaCO3)	mg/L	6.1	7946137	17	1.0	7946137			
Ion Balance (% Difference)	%	20.0	7946138	5.80	N/A	7946138			
Langelier Index (@ 20C)	N/A	NC	7946142	-3.07		7946142			
Langelier Index (@ 4C)	N/A	NC	7946143	-3.32		7946143			
Nitrate (N)	mg/L	<0.050	7946140	0.15	0.050	7946140			
Saturation pH (@ 20C)	N/A	NC	7946142	9.72		7946142			
Saturation pH (@ 4C)	N/A	NC	7946143	9.97		7946143			
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	<2.0	7950978	8.9	2.0	7950978			
Carbonaceous BOD	mg/L	<5.0	7948378	<5.0	5.0	7948378			
Total Chemical Oxygen Demand	mg/L	<20	7946584	<20	20	7946584			
Dissolved Chloride (Cl-)	mg/L	5.7	7958895	14	1.0	7958895			
Colour	TCU	150	7958900	120	25	7958900			
Nitrate + Nitrite (N)	mg/L	<0.050	7958902	0.15	0.050	7958902			
Nitrite (N)	mg/L	<0.010	7958903	<0.010	0.010	7958903			
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	7956721	<0.050	0.050	7956721			
Total Organic Carbon (C)	mg/L	12	7956789	12	0.50	7956790	11	0.50	7956790
Orthophosphate (P)	mg/L	<0.010	7958901	0.010	0.010	7958901			
pH	pH	5.57	7950977	6.65		7950977			
Phenols-4AAP	mg/L	<0.0010	7953975	<0.0010	0.0010	7953975			
Reactive Silica (SiO2)	mg/L	2.4	7958899	2.8	0.50	7958899			
Total Suspended Solids	mg/L	2.0	7946832	1.6	1.0	7946832			
Dissolved Sulphate (SO4)	mg/L	2.1	7958897	3.5	2.0	7958897			
Turbidity	NTU	2.4	7951055	4.1	0.10	7951055			
Conductivity	uS/cm	33	7950975	72	1.0	7950975			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF ANALYSES OF SURFACE WATER

Bureau Veritas ID		SJT841			SJT842		
Sampling Date		2022/04/19			2022/04/19		
COC Number		873946-01-01			873946-01-01		
	UNITS	SW19-20	RDL	QC Batch	DUP1	RDL	QC Batch
Calculated Parameters							
Anion Sum	me/L	12.0	N/A	7946139	0.580	N/A	7946139
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	230	1.0	7946135	6.1	1.0	7946135
Calculated TDS	mg/L	740	1.0	7946145	38	1.0	7946145
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	7946135	<1.0	1.0	7946135
Cation Sum	me/L	12.4	N/A	7946139	0.670	N/A	7946139
Hardness (CaCO3)	mg/L	530	1.0	7946137	15	1.0	7946137
Ion Balance (% Difference)	%	1.43	N/A	7946138	7.20	N/A	7946138
Langelier Index (@ 20C)	N/A	0.283		7946142	-3.18		7946142
Langelier Index (@ 4C)	N/A	0.0360		7946143	-3.43		7946143
Nitrate (N)	mg/L	0.15	0.050	7946140	0.15	0.050	7946140
Saturation pH (@ 20C)	N/A	6.91		7946142	9.90		7946142
Saturation pH (@ 4C)	N/A	7.16		7946143	10.2		7946143
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	230	2.0	7950978	6.1	2.0	7950978
Carbonaceous BOD	mg/L	<5.0	5.0	7948378	<5.0	5.0	7948378
Total Chemical Oxygen Demand	mg/L	<20	20	7946584	<20	20	7946584
Dissolved Chloride (Cl-)	mg/L	20	1.0	7958895	14	1.0	7958895
Colour	TCU	17	5.0	7958900	120	25	7958900
Nitrate + Nitrite (N)	mg/L	0.15	0.050	7958902	0.15	0.050	7958902
Nitrite (N)	mg/L	<0.010	0.010	7958903	<0.010	0.010	7958903
Nitrogen (Ammonia Nitrogen)	mg/L	0.32	0.050	7956721	<0.050	0.050	7956721
Total Organic Carbon (C)	mg/L	10	0.50	7956789	12	0.50	7956789
Orthophosphate (P)	mg/L	<0.010	0.010	7958901	<0.010	0.010	7958901
pH	pH	7.19		7950977	6.72		7950977
Phenols-4AAP	mg/L	<0.0010	0.0010	7953975	<0.0010	0.0010	7953975
Reactive Silica (SiO2)	mg/L	5.7	0.50	7958899	2.9	0.50	7958899
Total Suspended Solids	mg/L	3.0	1.0	7946832	1.6	1.0	7946832
Dissolved Sulphate (SO4)	mg/L	330	10	7958897	3.1	2.0	7958897
Turbidity	NTU	38	0.10	7951055	4.7	0.10	7951060
Conductivity	uS/cm	1100	1.0	7950975	75	1.0	7950975

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SJT836		SJT837		SJT838	SJT839		
Sampling Date		2022/04/19		2022/04/19		2022/04/19	2022/04/19		
COC Number		873946-01-01		873946-01-01		873946-01-01	873946-01-01		
	UNITS	SW1	QC Batch	SW2	QC Batch	SW3	SW4	RDL	QC Batch
Metals									
Total Aluminum (Al)	ug/L	440	7948537	500	7953332	430	430	5.0	7948537
Total Antimony (Sb)	ug/L	<1.0	7948537	<1.0	7953332	<1.0	<1.0	1.0	7948537
Total Arsenic (As)	ug/L	<1.0	7948537	<1.0	7953332	<1.0	<1.0	1.0	7948537
Total Barium (Ba)	ug/L	2.7	7948537	3.5	7953332	3.3	3.4	1.0	7948537
Total Beryllium (Be)	ug/L	<0.10	7948537	<0.10	7953332	<0.10	<0.10	0.10	7948537
Total Bismuth (Bi)	ug/L	<2.0	7948537	<2.0	7953332	<2.0	<2.0	2.0	7948537
Total Boron (B)	ug/L	<50	7948537	<50	7953332	<50	<50	50	7948537
Total Cadmium (Cd)	ug/L	0.014	7948537	0.015	7953332	0.013	0.012	0.010	7948537
Total Calcium (Ca)	ug/L	620	7948537	1500	7953332	1700	1700	100	7948537
Total Chromium (Cr)	ug/L	<1.0	7948537	1.0	7953332	<1.0	<1.0	1.0	7948537
Total Cobalt (Co)	ug/L	<0.40	7948537	<0.40	7953332	<0.40	<0.40	0.40	7948537
Total Copper (Cu)	ug/L	<0.50	7948537	1.8	7953332	<0.50	<0.50	0.50	7948537
Total Iron (Fe)	ug/L	330	7948537	800	7953332	340	340	50	7948537
Total Lead (Pb)	ug/L	0.62	7948537	0.98	7953332	0.62	0.63	0.50	7948537
Total Magnesium (Mg)	ug/L	350	7948537	490	7953332	470	470	100	7948537
Total Manganese (Mn)	ug/L	15	7948537	19	7953332	15	14	2.0	7948537
Total Molybdenum (Mo)	ug/L	<2.0	7948537	<2.0	7953332	<2.0	<2.0	2.0	7948537
Total Nickel (Ni)	ug/L	<2.0	7948537	<2.0	7953332	<2.0	<2.0	2.0	7948537
Total Phosphorus (P)	ug/L	<100	7948537	<100	7953332	<100	<100	100	7948537
Total Potassium (K)	ug/L	230	7948537	340	7953332	300	310	100	7948537
Total Selenium (Se)	ug/L	<0.50	7948537	<0.50	7953332	<0.50	<0.50	0.50	7948537
Total Silver (Ag)	ug/L	<0.10	7948537	<0.10	7953332	<0.10	<0.10	0.10	7948537
Total Sodium (Na)	ug/L	3600	7948537	3900	7953332	3500	3500	100	7948537
Total Strontium (Sr)	ug/L	4.1	7948537	6.8	7953332	7.2	7.3	2.0	7948537
Total Thallium (Tl)	ug/L	<0.10	7948537	<0.10	7953332	<0.10	<0.10	0.10	7948537
Total Tin (Sn)	ug/L	<2.0	7948537	3.9	7953332	<2.0	<2.0	2.0	7948537
Total Titanium (Ti)	ug/L	4.0	7948537	7.4	7953332	5.9	6.8	2.0	7948537
Total Uranium (U)	ug/L	0.21	7948537	0.28	7953332	0.31	0.31	0.10	7948537
Total Vanadium (V)	ug/L	<2.0	7948537	<2.0	7953332	<2.0	<2.0	2.0	7948537
Total Zinc (Zn)	ug/L	<5.0	7948537	18	7953332	<5.0	<5.0	5.0	7948537

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ELEMENTS BY ICP/MS (SURFACE WATER)

Bureau Veritas ID		SJT840	SJT841		SJT842		
Sampling Date		2022/04/19	2022/04/19		2022/04/19		
COC Number		873946-01-01	873946-01-01		873946-01-01		
	UNITS	SW13	SW19-20	QC Batch	DUP1	RDL	QC Batch
Metals							
Total Aluminum (Al)	ug/L	520	150	7953332	470	5.0	7948537
Total Antimony (Sb)	ug/L	<1.0	<1.0	7953332	<1.0	1.0	7948537
Total Arsenic (As)	ug/L	<1.0	1.7	7953332	<1.0	1.0	7948537
Total Barium (Ba)	ug/L	6.4	47	7953332	6.1	1.0	7948537
Total Beryllium (Be)	ug/L	<0.10	<0.10	7953332	<0.10	0.10	7948537
Total Bismuth (Bi)	ug/L	<2.0	<2.0	7953332	<2.0	2.0	7948537
Total Boron (B)	ug/L	<50	730	7953332	<50	50	7948537
Total Cadmium (Cd)	ug/L	0.017	0.027	7953332	0.013	0.010	7948537
Total Calcium (Ca)	ug/L	4300	180000	7953332	4100	100	7948537
Total Chromium (Cr)	ug/L	<1.0	<1.0	7953332	<1.0	1.0	7948537
Total Cobalt (Co)	ug/L	<0.40	4.5	7953332	<0.40	0.40	7948537
Total Copper (Cu)	ug/L	2.3	1.2	7953332	1.7	0.50	7953331
Total Iron (Fe)	ug/L	670	4800	7953332	600	50	7948537
Total Lead (Pb)	ug/L	0.90	<0.50	7953332	0.97	0.50	7948537
Total Magnesium (Mg)	ug/L	1400	23000	7953332	1200	100	7948537
Total Manganese (Mn)	ug/L	27	2800	7953332	25	2.0	7948537
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	7953332	<2.0	2.0	7948537
Total Nickel (Ni)	ug/L	<2.0	3.4	7953332	<2.0	2.0	7948537
Total Phosphorus (P)	ug/L	<100	<100	7953332	<100	100	7948537
Total Potassium (K)	ug/L	710	10000	7953332	630	100	7948537
Total Selenium (Se)	ug/L	<0.50	<0.50	7953332	<0.50	0.50	7948537
Total Silver (Ag)	ug/L	<0.10	<0.10	7953332	<0.10	0.10	7948537
Total Sodium (Na)	ug/L	8200	29000	7953332	7500	100	7948537
Total Strontium (Sr)	ug/L	13	590	7953332	13	2.0	7948537
Total Thallium (Tl)	ug/L	<0.10	<0.10	7953332	<0.10	0.10	7948537
Total Tin (Sn)	ug/L	<2.0	<2.0	7953332	<2.0	2.0	7948537
Total Titanium (Ti)	ug/L	11	7.7	7953332	12	2.0	7948537
Total Uranium (U)	ug/L	0.83	72	7953332	0.77	0.10	7948537
Total Vanadium (V)	ug/L	<2.0	<2.0	7953332	<2.0	2.0	7948537
Total Zinc (Zn)	ug/L	13	7.7	7953332	6.6	5.0	7953331

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SJT836	SJT837	SJT838	SJT839		SJT840		
Sampling Date		2022/04/19	2022/04/19	2022/04/19	2022/04/19		2022/04/19		
COC Number		873946-01-01	873946-01-01	873946-01-01	873946-01-01		873946-01-01		
	UNITS	SW1	SW2	SW3	SW4	QC Batch	SW13	RDL	QC Batch
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7948350	<0.0010	0.0010	7948361
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7948350	<0.0010	0.0010	7948361
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	7948350	<0.0010	0.0010	7948361
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	7948350	<0.0020	0.0020	7948361
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	7948350	<0.090	0.090	7948361
>C10-C16 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	7956734	<0.050	0.050	7956734
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	<0.050	<0.050	7956734	<0.050	0.050	7956734
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	<0.090	<0.090	7956734	<0.090	0.090	7956734
Modified TPH (Tier1)	mg/L	<0.090	<0.090	<0.090	<0.090	7946166	<0.090	0.090	7946166
Reached Baseline at C32	mg/L	NA	NA	NA	NA	7956734	NA	N/A	7956734
Hydrocarbon Resemblance	mg/L	NA	NA	NA	NA	7956734	NA	N/A	7956734
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	97	100	97	110	7956734	118		7956734
n-Dotriacontane - Extractable	%	82	88	89	98	7956734	110		7956734
Isobutylbenzene - Volatile	%	99	102	102	101	7948350	99		7948361

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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ATLANTIC RBCA HYDROCARBONS (SURFACE WATER)

Bureau Veritas ID		SJT841		SJT842		
Sampling Date		2022/04/19		2022/04/19		
COC Number		873946-01-01		873946-01-01		
	UNITS	SW19-20	QC Batch	DUP1	RDL	QC Batch
Petroleum Hydrocarbons						
Benzene	mg/L	<0.0010	7948350	<0.0010	0.0010	7948350
Toluene	mg/L	<0.0010	7948350	<0.0010	0.0010	7948350
Ethylbenzene	mg/L	<0.0010	7948350	<0.0010	0.0010	7948350
Total Xylenes	mg/L	<0.0020	7948350	<0.0020	0.0020	7948350
C6 - C10 (less BTEX)	mg/L	<0.090	7948350	<0.090	0.090	7948350
>C10-C16 Hydrocarbons	mg/L	<0.050	7959096	<0.050	0.050	7956734
>C16-C21 Hydrocarbons	mg/L	<0.050	7959096	<0.050	0.050	7956734
>C21-<C32 Hydrocarbons	mg/L	<0.090	7959096	<0.090	0.090	7956734
Modified TPH (Tier1)	mg/L	<0.090	7946166	<0.090	0.090	7946166
Reached Baseline at C32	mg/L	NA	7959096	NA	N/A	7956734
Hydrocarbon Resemblance	mg/L	NA	7959096	NA	N/A	7956734
Surrogate Recovery (%)						
Isobutylbenzene - Extractable	%	95	7959096	103		7956734
n-Dotriacontane - Extractable	%	94	7959096	97		7956734
Isobutylbenzene - Volatile	%	102	7948350	103		7948350

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	5.7°C

Sample SJT836 [SW1] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SJT837 [SW2] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SJT838 [SW3] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SJT839 [SW4] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SJT840 [SW13] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L. ortho-Phosphate > Phosphorus: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SJT841 [SW19-20] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent.

Sample SJT842 [DUP1] : COD < TOC: Both values fall within the method uncertainty for duplicates and are likely equivalent. RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample SJT842, Metals Water Total MS: Test repeated.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7946584	ZZH	Matrix Spike	Total Chemical Oxygen Demand	2022/04/20		103	%	80 - 120
7946584	ZZH	QC Standard	Total Chemical Oxygen Demand	2022/04/20		96	%	80 - 120
7946584	ZZH	Spiked Blank	Total Chemical Oxygen Demand	2022/04/20		93	%	80 - 120
7946584	ZZH	Method Blank	Total Chemical Oxygen Demand	2022/04/20	<20		mg/L	
7946584	ZZH	RPD	Total Chemical Oxygen Demand	2022/04/20	NC		%	25
7946832	MKX	QC Standard	Total Suspended Solids	2022/04/20		101	%	80 - 120
7946832	MKX	Method Blank	Total Suspended Solids	2022/04/20	<1.0		mg/L	
7946832	MKX	RPD	Total Suspended Solids	2022/04/20	NC		%	20
7948350	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/04/20		101	%	70 - 130
			Benzene	2022/04/20		93	%	70 - 130
			Toluene	2022/04/20		102	%	70 - 130
			Ethylbenzene	2022/04/20		105	%	70 - 130
			Total Xylenes	2022/04/20		105	%	70 - 130
7948350	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/04/20		107	%	70 - 130
			Benzene	2022/04/20		90	%	70 - 130
			Toluene	2022/04/20		97	%	70 - 130
			Ethylbenzene	2022/04/20		104	%	70 - 130
			Total Xylenes	2022/04/20		99	%	70 - 130
7948350	THL	Method Blank	Isobutylbenzene - Volatile	2022/04/20		102	%	70 - 130
			Benzene	2022/04/20	<0.0010		mg/L	
			Toluene	2022/04/20	<0.0010		mg/L	
			Ethylbenzene	2022/04/20	<0.0010		mg/L	
			Total Xylenes	2022/04/20	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/04/20	<0.090		mg/L	
7948350	THL	RPD	Benzene	2022/04/20	NC		%	40
			Toluene	2022/04/20	NC		%	40
			Ethylbenzene	2022/04/20	NC		%	40
			Total Xylenes	2022/04/20	NC		%	40
			C6 - C10 (less BTEX)	2022/04/20	NC		%	40
7948361	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/04/20		100	%	70 - 130
			Benzene	2022/04/20		91	%	70 - 130
			Toluene	2022/04/20		99	%	70 - 130
			Ethylbenzene	2022/04/20		105	%	70 - 130
			Total Xylenes	2022/04/20		105	%	70 - 130
7948361	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/04/20		106	%	70 - 130
			Benzene	2022/04/20		90	%	70 - 130
			Toluene	2022/04/20		96	%	70 - 130
			Ethylbenzene	2022/04/20		106	%	70 - 130
			Total Xylenes	2022/04/20		103	%	70 - 130
7948361	THL	Method Blank	Isobutylbenzene - Volatile	2022/04/20		103	%	70 - 130
			Benzene	2022/04/20	<0.0010		mg/L	
			Toluene	2022/04/20	<0.0010		mg/L	
			Ethylbenzene	2022/04/20	<0.0010		mg/L	
			Total Xylenes	2022/04/20	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/04/20	<0.090		mg/L	
7948361	THL	RPD	Benzene	2022/04/20	NC		%	40
			Toluene	2022/04/20	NC		%	40
			Ethylbenzene	2022/04/20	NC		%	40
			Total Xylenes	2022/04/20	NC		%	40
			C6 - C10 (less BTEX)	2022/04/20	NC		%	40
7948378	MNC	QC Standard	Carbonaceous BOD	2022/04/25		119	%	80 - 120
7948378	MNC	Spiked Blank	Carbonaceous BOD	2022/04/25		120	%	80 - 120
7948378	MNC	Method Blank	Carbonaceous BOD	2022/04/25	<2.0		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7948378	MNC	RPD	Carbonaceous BOD	2022/04/25	NC		%	25
7948537	JHY	Matrix Spike	Total Aluminum (Al)	2022/04/20		104	%	80 - 120
			Total Antimony (Sb)	2022/04/20		103	%	80 - 120
			Total Arsenic (As)	2022/04/20		95	%	80 - 120
			Total Barium (Ba)	2022/04/20		94	%	80 - 120
			Total Beryllium (Be)	2022/04/20		96	%	80 - 120
			Total Bismuth (Bi)	2022/04/20		97	%	80 - 120
			Total Boron (B)	2022/04/20		100	%	80 - 120
			Total Cadmium (Cd)	2022/04/20		98	%	80 - 120
			Total Calcium (Ca)	2022/04/20		104	%	80 - 120
			Total Chromium (Cr)	2022/04/20		99	%	80 - 120
			Total Cobalt (Co)	2022/04/20		98	%	80 - 120
			Total Copper (Cu)	2022/04/20		98	%	80 - 120
			Total Iron (Fe)	2022/04/20		NC	%	80 - 120
			Total Lead (Pb)	2022/04/20		96	%	80 - 120
			Total Magnesium (Mg)	2022/04/20		100	%	80 - 120
			Total Manganese (Mn)	2022/04/20		NC	%	80 - 120
			Total Molybdenum (Mo)	2022/04/20		102	%	80 - 120
			Total Nickel (Ni)	2022/04/20		98	%	80 - 120
			Total Phosphorus (P)	2022/04/20		103	%	80 - 120
			Total Potassium (K)	2022/04/20		97	%	80 - 120
			Total Selenium (Se)	2022/04/20		100	%	80 - 120
			Total Silver (Ag)	2022/04/20		97	%	80 - 120
			Total Sodium (Na)	2022/04/20		NC	%	80 - 120
			Total Strontium (Sr)	2022/04/20		94	%	80 - 120
			Total Thallium (Tl)	2022/04/20		99	%	80 - 120
			Total Tin (Sn)	2022/04/20		99	%	80 - 120
			Total Titanium (Ti)	2022/04/20		97	%	80 - 120
			Total Uranium (U)	2022/04/20		102	%	80 - 120
			Total Vanadium (V)	2022/04/20		100	%	80 - 120
			Total Zinc (Zn)	2022/04/20		98	%	80 - 120
7948537	JHY	Spiked Blank	Total Aluminum (Al)	2022/04/20		102	%	80 - 120
			Total Antimony (Sb)	2022/04/20		103	%	80 - 120
			Total Arsenic (As)	2022/04/20		94	%	80 - 120
			Total Barium (Ba)	2022/04/20		96	%	80 - 120
			Total Beryllium (Be)	2022/04/20		96	%	80 - 120
			Total Bismuth (Bi)	2022/04/20		98	%	80 - 120
			Total Boron (B)	2022/04/20		99	%	80 - 120
			Total Cadmium (Cd)	2022/04/20		98	%	80 - 120
			Total Calcium (Ca)	2022/04/20		102	%	80 - 120
			Total Chromium (Cr)	2022/04/20		100	%	80 - 120
			Total Cobalt (Co)	2022/04/20		98	%	80 - 120
			Total Copper (Cu)	2022/04/20		99	%	80 - 120
			Total Iron (Fe)	2022/04/20		102	%	80 - 120
			Total Lead (Pb)	2022/04/20		96	%	80 - 120
			Total Magnesium (Mg)	2022/04/20		102	%	80 - 120
			Total Manganese (Mn)	2022/04/20		100	%	80 - 120
			Total Molybdenum (Mo)	2022/04/20		100	%	80 - 120
			Total Nickel (Ni)	2022/04/20		98	%	80 - 120
			Total Phosphorus (P)	2022/04/20		102	%	80 - 120
			Total Potassium (K)	2022/04/20		100	%	80 - 120
			Total Selenium (Se)	2022/04/20		98	%	80 - 120
			Total Silver (Ag)	2022/04/20		97	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Sodium (Na)	2022/04/20		100	%	80 - 120
			Total Strontium (Sr)	2022/04/20		97	%	80 - 120
			Total Thallium (Tl)	2022/04/20		98	%	80 - 120
			Total Tin (Sn)	2022/04/20		99	%	80 - 120
			Total Titanium (Ti)	2022/04/20		100	%	80 - 120
			Total Uranium (U)	2022/04/20		100	%	80 - 120
			Total Vanadium (V)	2022/04/20		100	%	80 - 120
			Total Zinc (Zn)	2022/04/20		99	%	80 - 120
7948537	JHY	Method Blank	Total Aluminum (Al)	2022/04/20	<5.0		ug/L	
			Total Antimony (Sb)	2022/04/20	<1.0		ug/L	
			Total Arsenic (As)	2022/04/20	<1.0		ug/L	
			Total Barium (Ba)	2022/04/20	<1.0		ug/L	
			Total Beryllium (Be)	2022/04/20	<0.10		ug/L	
			Total Bismuth (Bi)	2022/04/20	<2.0		ug/L	
			Total Boron (B)	2022/04/20	<50		ug/L	
			Total Cadmium (Cd)	2022/04/20	<0.010		ug/L	
			Total Calcium (Ca)	2022/04/20	<100		ug/L	
			Total Chromium (Cr)	2022/04/20	<1.0		ug/L	
			Total Cobalt (Co)	2022/04/20	<0.40		ug/L	
			Total Copper (Cu)	2022/04/20	3.0, RDL=0.50 (1)		ug/L	
			Total Iron (Fe)	2022/04/20	<50		ug/L	
			Total Lead (Pb)	2022/04/20	<0.50		ug/L	
			Total Magnesium (Mg)	2022/04/20	<100		ug/L	
			Total Manganese (Mn)	2022/04/20	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/04/20	<2.0		ug/L	
			Total Nickel (Ni)	2022/04/20	<2.0		ug/L	
			Total Phosphorus (P)	2022/04/20	<100		ug/L	
			Total Potassium (K)	2022/04/20	<100		ug/L	
			Total Selenium (Se)	2022/04/20	<0.50		ug/L	
			Total Silver (Ag)	2022/04/20	<0.10		ug/L	
			Total Sodium (Na)	2022/04/20	<100		ug/L	
			Total Strontium (Sr)	2022/04/20	<2.0		ug/L	
			Total Thallium (Tl)	2022/04/20	<0.10		ug/L	
			Total Tin (Sn)	2022/04/20	<2.0		ug/L	
			Total Titanium (Ti)	2022/04/20	<2.0		ug/L	
			Total Uranium (U)	2022/04/20	<0.10		ug/L	
			Total Vanadium (V)	2022/04/20	<2.0		ug/L	
			Total Zinc (Zn)	2022/04/20	10, RDL=5.0 (1)		ug/L	
7948537	JHY	RPD	Total Aluminum (Al)	2022/04/20	0.16		%	20
			Total Antimony (Sb)	2022/04/20	NC		%	20
			Total Arsenic (As)	2022/04/20	NC		%	20
			Total Barium (Ba)	2022/04/20	1.6		%	20
			Total Beryllium (Be)	2022/04/20	20		%	20
			Total Bismuth (Bi)	2022/04/20	NC		%	20
			Total Boron (B)	2022/04/20	NC		%	20
			Total Cadmium (Cd)	2022/04/20	NC		%	20
			Total Calcium (Ca)	2022/04/20	2.3		%	20
			Total Chromium (Cr)	2022/04/20	NC		%	20
			Total Cobalt (Co)	2022/04/20	NC		%	20
			Total Iron (Fe)	2022/04/20	2.7		%	20
			Total Lead (Pb)	2022/04/20	4.6		%	20

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Magnesium (Mg)	2022/04/20	3.7		%	20
			Total Manganese (Mn)	2022/04/20	0.048		%	20
			Total Molybdenum (Mo)	2022/04/20	NC		%	20
			Total Nickel (Ni)	2022/04/20	NC		%	20
			Total Phosphorus (P)	2022/04/20	NC		%	20
			Total Potassium (K)	2022/04/20	2.2		%	20
			Total Selenium (Se)	2022/04/20	NC		%	20
			Total Silver (Ag)	2022/04/20	NC		%	20
			Total Sodium (Na)	2022/04/20	3.3		%	20
			Total Strontium (Sr)	2022/04/20	4.0		%	20
			Total Thallium (Tl)	2022/04/20	NC		%	20
			Total Tin (Sn)	2022/04/20	NC		%	20
			Total Titanium (Ti)	2022/04/20	1.6		%	20
			Total Uranium (U)	2022/04/20	NC		%	20
			Total Vanadium (V)	2022/04/20	NC		%	20
7950975	SHW	Spiked Blank	Conductivity	2022/04/21		102	%	80 - 120
7950975	SHW	Method Blank	Conductivity	2022/04/21	<1.0		uS/cm	
7950975	SHW	RPD	Conductivity	2022/04/21	0.76		%	10
7950977	SHW	Spiked Blank	pH	2022/04/21		100	%	97 - 103
7950977	SHW	RPD	pH	2022/04/21	0.026		%	N/A
7950978	SHW	Spiked Blank	Total Alkalinity (Total as CaCO3)	2022/04/21		92	%	80 - 120
7950978	SHW	Method Blank	Total Alkalinity (Total as CaCO3)	2022/04/21	<2.0		mg/L	
7950978	SHW	RPD	Total Alkalinity (Total as CaCO3)	2022/04/21	0.85		%	20
7951055	SHW	QC Standard	Turbidity	2022/04/21		100	%	80 - 120
7951055	SHW	Spiked Blank	Turbidity	2022/04/21		102	%	80 - 120
7951055	SHW	Method Blank	Turbidity	2022/04/21	<0.10		NTU	
7951055	SHW	RPD	Turbidity	2022/04/21	12		%	20
7951060	SHW	QC Standard	Turbidity	2022/04/21		101	%	80 - 120
7951060	SHW	Spiked Blank	Turbidity	2022/04/21		102	%	80 - 120
7951060	SHW	Method Blank	Turbidity	2022/04/21	<0.10		NTU	
7951060	SHW	RPD [SJT837-01]	Turbidity	2022/04/21	11		%	20
7953331	JHY	Matrix Spike	Total Copper (Cu)	2022/04/22		100	%	80 - 120
			Total Zinc (Zn)	2022/04/22		102	%	80 - 120
7953331	JHY	Spiked Blank	Total Copper (Cu)	2022/04/22		102	%	80 - 120
			Total Zinc (Zn)	2022/04/22		104	%	80 - 120
7953331	JHY	Method Blank	Total Copper (Cu)	2022/04/22	<0.50		ug/L	
			Total Zinc (Zn)	2022/04/22	<5.0		ug/L	
7953331	JHY	RPD	Total Copper (Cu)	2022/04/22	3.9		%	20
7953332	JHY	Matrix Spike	Total Aluminum (Al)	2022/04/22		100	%	80 - 120
			Total Antimony (Sb)	2022/04/22		98	%	80 - 120
			Total Arsenic (As)	2022/04/22		93	%	80 - 120
			Total Barium (Ba)	2022/04/22		93	%	80 - 120
			Total Beryllium (Be)	2022/04/22		92	%	80 - 120
			Total Bismuth (Bi)	2022/04/22		95	%	80 - 120
			Total Boron (B)	2022/04/22		95	%	80 - 120
			Total Cadmium (Cd)	2022/04/22		94	%	80 - 120
			Total Calcium (Ca)	2022/04/22		100	%	80 - 120
			Total Chromium (Cr)	2022/04/22		97	%	80 - 120
			Total Cobalt (Co)	2022/04/22		96	%	80 - 120
			Total Copper (Cu)	2022/04/22		98	%	80 - 120
			Total Iron (Fe)	2022/04/22		101	%	80 - 120
			Total Lead (Pb)	2022/04/22		94	%	80 - 120
			Total Magnesium (Mg)	2022/04/22		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Manganese (Mn)	2022/04/22		100	%	80 - 120
			Total Molybdenum (Mo)	2022/04/22		100	%	80 - 120
			Total Nickel (Ni)	2022/04/22		97	%	80 - 120
			Total Phosphorus (P)	2022/04/22		104	%	80 - 120
			Total Potassium (K)	2022/04/22		97	%	80 - 120
			Total Selenium (Se)	2022/04/22		99	%	80 - 120
			Total Silver (Ag)	2022/04/22		96	%	80 - 120
			Total Sodium (Na)	2022/04/22		102	%	80 - 120
			Total Strontium (Sr)	2022/04/22		94	%	80 - 120
			Total Thallium (Tl)	2022/04/22		96	%	80 - 120
			Total Tin (Sn)	2022/04/22		95	%	80 - 120
			Total Titanium (Ti)	2022/04/22		100	%	80 - 120
			Total Uranium (U)	2022/04/22		100	%	80 - 120
			Total Vanadium (V)	2022/04/22		97	%	80 - 120
			Total Zinc (Zn)	2022/04/22		97	%	80 - 120
7953332	JHY	Spiked Blank	Total Aluminum (Al)	2022/04/22		102	%	80 - 120
			Total Antimony (Sb)	2022/04/22		99	%	80 - 120
			Total Arsenic (As)	2022/04/22		95	%	80 - 120
			Total Barium (Ba)	2022/04/22		95	%	80 - 120
			Total Beryllium (Be)	2022/04/22		94	%	80 - 120
			Total Bismuth (Bi)	2022/04/22		97	%	80 - 120
			Total Boron (B)	2022/04/22		97	%	80 - 120
			Total Cadmium (Cd)	2022/04/22		96	%	80 - 120
			Total Calcium (Ca)	2022/04/22		104	%	80 - 120
			Total Chromium (Cr)	2022/04/22		100	%	80 - 120
			Total Cobalt (Co)	2022/04/22		99	%	80 - 120
			Total Copper (Cu)	2022/04/22		102	%	80 - 120
			Total Iron (Fe)	2022/04/22		103	%	80 - 120
			Total Lead (Pb)	2022/04/22		96	%	80 - 120
			Total Magnesium (Mg)	2022/04/22		106	%	80 - 120
			Total Manganese (Mn)	2022/04/22		102	%	80 - 120
			Total Molybdenum (Mo)	2022/04/22		100	%	80 - 120
			Total Nickel (Ni)	2022/04/22		100	%	80 - 120
			Total Phosphorus (P)	2022/04/22		104	%	80 - 120
			Total Potassium (K)	2022/04/22		100	%	80 - 120
			Total Selenium (Se)	2022/04/22		99	%	80 - 120
			Total Silver (Ag)	2022/04/22		97	%	80 - 120
			Total Sodium (Na)	2022/04/22		104	%	80 - 120
			Total Strontium (Sr)	2022/04/22		96	%	80 - 120
			Total Thallium (Tl)	2022/04/22		98	%	80 - 120
			Total Tin (Sn)	2022/04/22		97	%	80 - 120
			Total Titanium (Ti)	2022/04/22		101	%	80 - 120
			Total Uranium (U)	2022/04/22		101	%	80 - 120
			Total Vanadium (V)	2022/04/22		100	%	80 - 120
			Total Zinc (Zn)	2022/04/22		101	%	80 - 120
7953332	JHY	Method Blank	Total Aluminum (Al)	2022/04/22	<5.0		ug/L	
			Total Antimony (Sb)	2022/04/22	<1.0		ug/L	
			Total Arsenic (As)	2022/04/22	<1.0		ug/L	
			Total Barium (Ba)	2022/04/22	<1.0		ug/L	
			Total Beryllium (Be)	2022/04/22	<0.10		ug/L	
			Total Bismuth (Bi)	2022/04/22	<2.0		ug/L	
			Total Boron (B)	2022/04/22	<50		ug/L	
			Total Cadmium (Cd)	2022/04/22	<0.010		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Calcium (Ca)	2022/04/22	<100		ug/L	
			Total Chromium (Cr)	2022/04/22	<1.0		ug/L	
			Total Cobalt (Co)	2022/04/22	<0.40		ug/L	
			Total Copper (Cu)	2022/04/22	<0.50		ug/L	
			Total Iron (Fe)	2022/04/22	<50		ug/L	
			Total Lead (Pb)	2022/04/22	<0.50		ug/L	
			Total Magnesium (Mg)	2022/04/22	<100		ug/L	
			Total Manganese (Mn)	2022/04/22	<2.0		ug/L	
			Total Molybdenum (Mo)	2022/04/22	<2.0		ug/L	
			Total Nickel (Ni)	2022/04/22	<2.0		ug/L	
			Total Phosphorus (P)	2022/04/22	<100		ug/L	
			Total Potassium (K)	2022/04/22	<100		ug/L	
			Total Selenium (Se)	2022/04/22	<0.50		ug/L	
			Total Silver (Ag)	2022/04/22	<0.10		ug/L	
			Total Sodium (Na)	2022/04/22	<100		ug/L	
			Total Strontium (Sr)	2022/04/22	<2.0		ug/L	
			Total Thallium (Tl)	2022/04/22	<0.10		ug/L	
			Total Tin (Sn)	2022/04/22	<2.0		ug/L	
			Total Titanium (Ti)	2022/04/22	<2.0		ug/L	
			Total Uranium (U)	2022/04/22	<0.10		ug/L	
			Total Vanadium (V)	2022/04/22	<2.0		ug/L	
			Total Zinc (Zn)	2022/04/22	<5.0		ug/L	
7953332	JHY	RPD	Total Aluminum (Al)	2022/04/22	9.2		%	20
			Total Antimony (Sb)	2022/04/22	NC		%	20
			Total Arsenic (As)	2022/04/22	NC		%	20
			Total Barium (Ba)	2022/04/22	3.9		%	20
			Total Beryllium (Be)	2022/04/22	NC		%	20
			Total Bismuth (Bi)	2022/04/22	NC		%	20
			Total Boron (B)	2022/04/22	NC		%	20
			Total Cadmium (Cd)	2022/04/22	NC		%	20
			Total Calcium (Ca)	2022/04/22	5.6		%	20
			Total Chromium (Cr)	2022/04/22	NC		%	20
			Total Cobalt (Co)	2022/04/22	NC		%	20
			Total Copper (Cu)	2022/04/22	NC		%	20
			Total Iron (Fe)	2022/04/22	3.3		%	20
			Total Lead (Pb)	2022/04/22	NC		%	20
			Total Magnesium (Mg)	2022/04/22	2.7		%	20
			Total Manganese (Mn)	2022/04/22	1.9		%	20
			Total Molybdenum (Mo)	2022/04/22	NC		%	20
			Total Nickel (Ni)	2022/04/22	NC		%	20
			Total Phosphorus (P)	2022/04/22	NC		%	20
			Total Potassium (K)	2022/04/22	3.9		%	20
			Total Selenium (Se)	2022/04/22	NC		%	20
			Total Silver (Ag)	2022/04/22	NC		%	20
			Total Sodium (Na)	2022/04/22	4.7		%	20
			Total Strontium (Sr)	2022/04/22	3.4		%	20
			Total Thallium (Tl)	2022/04/22	NC		%	20
			Total Tin (Sn)	2022/04/22	NC		%	20
			Total Titanium (Ti)	2022/04/22	6.5		%	20
			Total Uranium (U)	2022/04/22	NC		%	20
			Total Vanadium (V)	2022/04/22	NC		%	20
			Total Zinc (Zn)	2022/04/22	NC		%	20
7953975	LHA	Matrix Spike	Phenols-4AAP	2022/04/22		104	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7953975	LHA	Spiked Blank	Phenols-4AAP	2022/04/22		105	%	80 - 120
7953975	LHA	Method Blank	Phenols-4AAP	2022/04/22	<0.0010		mg/L	
7953975	LHA	RPD	Phenols-4AAP	2022/04/22	NC		%	20
7956721	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2022/04/25		92	%	80 - 120
7956721	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2022/04/25		97	%	80 - 120
7956721	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2022/04/25	<0.050		mg/L	
7956721	MCN	RPD	Nitrogen (Ammonia Nitrogen)	2022/04/25	NC		%	20
7956734	MSK	Matrix Spike	Isobutylbenzene - Extractable	2022/04/25		100	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/25		97	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/25		85	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/25		84	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/25		80	%	70 - 130
7956734	MSK	Spiked Blank	Isobutylbenzene - Extractable	2022/04/25		101	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/25		100	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/25		87	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/25		84	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/25		81	%	70 - 130
7956734	MSK	Method Blank	Isobutylbenzene - Extractable	2022/04/25		102	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/25		102	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/25	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/04/25	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/04/25	<0.090		mg/L	
7956734	MSK	RPD	>C10-C16 Hydrocarbons	2022/04/25	NC		%	40
			>C16-C21 Hydrocarbons	2022/04/25	NC		%	40
			>C21-<C32 Hydrocarbons	2022/04/25	NC		%	40
7956789	NGI	Matrix Spike	Total Organic Carbon (C)	2022/04/25		93	%	85 - 115
7956789	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/25		101	%	80 - 120
7956789	NGI	Method Blank	Total Organic Carbon (C)	2022/04/25	<0.50		mg/L	
7956789	NGI	RPD	Total Organic Carbon (C)	2022/04/25	2.8		%	15
7956790	NGI	Matrix Spike [SJT840-08]	Total Organic Carbon (C)	2022/04/26		94	%	85 - 115
7956790	NGI	Spiked Blank	Total Organic Carbon (C)	2022/04/26		99	%	80 - 120
7956790	NGI	Method Blank	Total Organic Carbon (C)	2022/04/26	<0.50		mg/L	
7956790	NGI	RPD [SJT840-08]	Total Organic Carbon (C)	2022/04/26	3.7		%	15
7958895	MCN	Matrix Spike [SJT836-01]	Dissolved Chloride (Cl-)	2022/04/26		92	%	80 - 120
7958895	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/26		95	%	80 - 120
7958895	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/26	<1.0		mg/L	
7958895	MCN	RPD [SJT836-01]	Dissolved Chloride (Cl-)	2022/04/26	5.8		%	20
7958897	MCN	Matrix Spike [SJT836-01]	Dissolved Sulphate (SO4)	2022/04/26		107	%	80 - 120
7958897	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/26		99	%	80 - 120
7958897	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/26	<2.0		mg/L	
7958897	MCN	RPD [SJT836-01]	Dissolved Sulphate (SO4)	2022/04/26	NC		%	20
7958899	MCN	Matrix Spike [SJT836-01]	Reactive Silica (SiO2)	2022/04/26		90	%	80 - 120
7958899	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/26		94	%	80 - 120
7958899	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/26	<0.50		mg/L	
7958899	MCN	RPD [SJT836-01]	Reactive Silica (SiO2)	2022/04/26	3.6		%	20
7958900	MCN	Spiked Blank	Colour	2022/04/27		91	%	80 - 120
7958900	MCN	Method Blank	Colour	2022/04/27	<5.0		TCU	
7958900	MCN	RPD [SJT836-01]	Colour	2022/04/27	0.29		%	20
7958901	MCN	Matrix Spike [SJT836-01]	Orthophosphate (P)	2022/04/26		90	%	80 - 120
7958901	MCN	Spiked Blank	Orthophosphate (P)	2022/04/26		97	%	80 - 120
7958901	MCN	Method Blank	Orthophosphate (P)	2022/04/26	<0.010		mg/L	
7958901	MCN	RPD [SJT836-01]	Orthophosphate (P)	2022/04/26	NC		%	20
7958902	MCN	Matrix Spike [SJT836-01]	Nitrate + Nitrite (N)	2022/04/27		94	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7958902	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/27		93	%	80 - 120
7958902	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/27	<0.050		mg/L	
7958902	MCN	RPD [SJT836-01]	Nitrate + Nitrite (N)	2022/04/27	NC		%	20
7958903	MCN	Matrix Spike [SJT836-01]	Nitrite (N)	2022/04/26		85	%	80 - 120
7958903	MCN	Spiked Blank	Nitrite (N)	2022/04/26		98	%	80 - 120
7958903	MCN	Method Blank	Nitrite (N)	2022/04/26	<0.010		mg/L	
7958903	MCN	RPD [SJT836-01]	Nitrite (N)	2022/04/26	NC		%	20
7958904	MCN	Matrix Spike [SJT837-01]	Dissolved Chloride (Cl-)	2022/04/26		92	%	80 - 120
7958904	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/26		94	%	80 - 120
7958904	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/26	<1.0		mg/L	
7958904	MCN	RPD [SJT837-01]	Dissolved Chloride (Cl-)	2022/04/26	1.1		%	20
7958906	MCN	Matrix Spike [SJT837-01]	Dissolved Sulphate (SO4)	2022/04/26		106	%	80 - 120
7958906	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/26		98	%	80 - 120
7958906	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/26	<2.0		mg/L	
7958906	MCN	RPD [SJT837-01]	Dissolved Sulphate (SO4)	2022/04/26	NC		%	20
7958907	MCN	Matrix Spike [SJT837-01]	Reactive Silica (SiO2)	2022/04/26		89	%	80 - 120
7958907	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/26		95	%	80 - 120
7958907	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/26	<0.50		mg/L	
7958907	MCN	RPD [SJT837-01]	Reactive Silica (SiO2)	2022/04/26	6.6		%	20
7958910	MCN	Spiked Blank	Colour	2022/04/27		93	%	80 - 120
7958910	MCN	Method Blank	Colour	2022/04/27	<5.0		TCU	
7958910	MCN	RPD [SJT837-01]	Colour	2022/04/27	2.3		%	20
7958912	MCN	Matrix Spike [SJT837-01]	Orthophosphate (P)	2022/04/26		91	%	80 - 120
7958912	MCN	Spiked Blank	Orthophosphate (P)	2022/04/26		95	%	80 - 120
7958912	MCN	Method Blank	Orthophosphate (P)	2022/04/26	<0.010		mg/L	
7958912	MCN	RPD [SJT837-01]	Orthophosphate (P)	2022/04/26	NC		%	20
7958913	MCN	Matrix Spike [SJT837-01]	Nitrate + Nitrite (N)	2022/04/27		92	%	80 - 120
7958913	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/27		95	%	80 - 120
7958913	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/27	<0.050		mg/L	
7958913	MCN	RPD [SJT837-01]	Nitrate + Nitrite (N)	2022/04/27	NC		%	20
7958914	MCN	Matrix Spike [SJT837-01]	Nitrite (N)	2022/04/26		88	%	80 - 120
7958914	MCN	Spiked Blank	Nitrite (N)	2022/04/26		99	%	80 - 120
7958914	MCN	Method Blank	Nitrite (N)	2022/04/26	<0.010		mg/L	
7958914	MCN	RPD [SJT837-01]	Nitrite (N)	2022/04/26	NC		%	20
7958915	MCN	Matrix Spike [SJT838-01]	Dissolved Chloride (Cl-)	2022/04/26		93	%	80 - 120
7958915	MCN	Spiked Blank	Dissolved Chloride (Cl-)	2022/04/26		94	%	80 - 120
7958915	MCN	Method Blank	Dissolved Chloride (Cl-)	2022/04/26	<1.0		mg/L	
7958915	MCN	RPD [SJT838-01]	Dissolved Chloride (Cl-)	2022/04/26	0.47		%	20
7958916	MCN	Matrix Spike [SJT838-01]	Dissolved Sulphate (SO4)	2022/04/26		105	%	80 - 120
7958916	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2022/04/26		96	%	80 - 120
7958916	MCN	Method Blank	Dissolved Sulphate (SO4)	2022/04/26	<2.0		mg/L	
7958916	MCN	RPD [SJT838-01]	Dissolved Sulphate (SO4)	2022/04/26	16		%	20
7958917	MCN	Matrix Spike [SJT838-01]	Reactive Silica (SiO2)	2022/04/26		88	%	80 - 120
7958917	MCN	Spiked Blank	Reactive Silica (SiO2)	2022/04/26		94	%	80 - 120
7958917	MCN	Method Blank	Reactive Silica (SiO2)	2022/04/26	<0.50		mg/L	
7958917	MCN	RPD [SJT838-01]	Reactive Silica (SiO2)	2022/04/26	5.1		%	20
7958918	MCN	Spiked Blank	Colour	2022/04/27		97	%	80 - 120
7958918	MCN	Method Blank	Colour	2022/04/27	<5.0		TCU	
7958918	MCN	RPD [SJT838-01]	Colour	2022/04/27	6.0		%	20
7958921	MCN	Matrix Spike [SJT838-01]	Orthophosphate (P)	2022/04/26		89	%	80 - 120
7958921	MCN	Spiked Blank	Orthophosphate (P)	2022/04/26		94	%	80 - 120
7958921	MCN	Method Blank	Orthophosphate (P)	2022/04/26	<0.010		mg/L	
7958921	MCN	RPD [SJT838-01]	Orthophosphate (P)	2022/04/26	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7958922	MCN	Matrix Spike [SJT838-01]	Nitrate + Nitrite (N)	2022/04/27		89	%	80 - 120
7958922	MCN	Spiked Blank	Nitrate + Nitrite (N)	2022/04/27		95	%	80 - 120
7958922	MCN	Method Blank	Nitrate + Nitrite (N)	2022/04/27	<0.050		mg/L	
7958922	MCN	RPD [SJT838-01]	Nitrate + Nitrite (N)	2022/04/27	NC		%	20
7958923	MCN	Matrix Spike [SJT838-01]	Nitrite (N)	2022/04/26		88	%	80 - 120
7958923	MCN	Spiked Blank	Nitrite (N)	2022/04/26		100	%	80 - 120
7958923	MCN	Method Blank	Nitrite (N)	2022/04/26	<0.010		mg/L	
7958923	MCN	RPD [SJT838-01]	Nitrite (N)	2022/04/26	NC		%	20
7959096	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/04/26		94	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/26		103	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/26		94	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/26		93	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/26		96	%	70 - 130
7959096	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/04/26		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/26		109	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/26		101	%	70 - 130
			>C16-C21 Hydrocarbons	2022/04/26		95	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/04/26		98	%	70 - 130
7959096	MGN	Method Blank	Isobutylbenzene - Extractable	2022/04/26		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/04/26		105	%	70 - 130
			>C10-C16 Hydrocarbons	2022/04/26	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/04/26	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/04/26	<0.090		mg/L	
7959096	MGN	RPD	>C10-C16 Hydrocarbons	2022/04/26	NC		%	40
			>C16-C21 Hydrocarbons	2022/04/26	NC		%	40
			>C21-<C32 Hydrocarbons	2022/04/26	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Lab contamination.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Colleen Acker, B.Sc, Scientific Service Specialist

Janah Rhyno, Metals Supervisor-Bedford

Phil Deveau, Scientific Specialist (Organics)

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#25656 AECOM Canada Ltd	Company Name		Quotation #	C21451	Bureau Veritas Job #	Bottle Order #:
Contact Name	Rory McNeil	Contact Name	Janice Shea	P.O. #		C3A2126	873946
Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Address	1701 Hollis St SH400 Halifax NS B3J 3M8	Project #	60639002	Chain Of Custody Record	Project Manager
Phone	Fax: (902) 428-2031	Phone	Fax:	Project Name		C#873946-01-01	Marie Muise
Email	rory.mcneil@aecom.com	Email	Janice.shea@aecom.com	Site #			
				Sampled By	MM/DB		

Regulatory Criteria

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required: ☐

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Surface Water Bi-Weekly Events (Includes BOD)	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	April 19	AM	SW			X	Various	
2		SW2	Apr 19	AM	SW			X		
3		SW3						X		
4		SW4						X		
5		SW13						X		
6		SW14						X		
7		SW19-20	Apr 19	AM	SW			X	Various	
8		Diffuser						X		
9		DUP1	April 19		SW			X	Various	
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Michael MacGregor	2022/04/19	10:55					☐	5,5,3/5,6,6	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Appendix E. Outlier Summary

Outlier Selection:

Data was plotted on time-series graphs to assess the temporal variability of the data and to visually screen for potential outliers. Any suspected outliers identified were reviewed before removal from the dataset. If the suspected outliers were from the historical dataset, the original data was reviewed to ensure no transcription errors. If outliers were identified in the current data, the analytical report, lab narrative, and/or field notes were reviewed to see if any anomalies.

Below outlines the on-site groundwater locations that contained outliers, what the total count was and how many of these outliers were from the current data. As MW19-10S, MW19-12S and MW20-15S contain 4 timepoints at present, outlier identification is susceptible to change, at more data points are collected.

Sample Location	# Total Outliers	# Current Outliers
MW19-03D	8	0
MW1-D	79	0
MW1-S	85	0
MW20-17D	1	0
MW2-D	25	0
MW2-M	30	0
MW2-S	29	0
MW3	54	1
MW5-D	56	0
MW5-S	48	0
MW6-D	126	0
MW6-S	147	0
MW7-D	152	0
MW7-S	111	0
MW8-D	21	0
MW8-S	16	0
MW19-09S	6	6
MW19-10S	2	2
MW19-12S	1	1
MW20-14S	2	2
MW20-15S	1	1
MW20-16	1	1
TOTAL	**1001**	**14**

No transcription errors were found in the historic data outliers. No anomalies were seen with the current data outliers.

The following table summarizes the outliers and indicates the reason (i.e. High Result, High RDL, Low Result or Low RDL).

Sample Location	Sample Date	Outliers	Reason
MW19-03D	2/11/2019	Aluminum: 152 ug/l	High Result
		Iron: 91 ug/l	High Result
		Molybdenum: 94 ug/l	High Result
		Titanium: 4 ug/l	High Result
		Cadmium: 0.10 ug/l	High Result
		Vanadium: 3 ug/l	High Result
		Ammonia-N: 0.41 mg/l	High Result
	5/27/2020	Nickel: 3 ug/l	High Result
	3/25/2021	Aluminum: 1700 ug/l	High Result
		Iron: 1700 ug/l	High Result
MW1-D	10/1/2001	Orthophosphate(as P): 0.13 mg/l	High Result
		Total Organic Carbon: < 99999 mg/l	High RDL
	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	12/22/2003	Copper: 37 ug/l	High Result
	6/28/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	9/29/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	4/11/2007	Sulphate: 13 mg/l	Low Result
		Chloride ion: 8 mg/l	Low Result
		Iron: 82 ug/l	Low Result
		Manganese: 290 ug/l	Low Result
		Nickel: < 2 ug/l	Low RDL
		Strontium: 71 ug/l	Low Result
		Cobalt: 0.75 ug/l	Low Result
		Electrical Conductivity: 190 umhos/cm	Low Result
		Total Dissolved Solids (Calculated): 128 mg/l	Low Result
	10/2/2007	Chloride ion: 26.4 mg/l	Low Result
		Aluminum: 3570 ug/l	High Result
		Lead: 16.7 ug/l	High Result
		Potassium: 14100 ug/l	High Result
		Ammonia-N: 2.80 mg/l	High Result
	3/24/2011	Total Organic Carbon: < 0.5 mg/l	Low RDL
		Total Organic Carbon: < 0.5 mg/l	Low RDL
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Electrical Conductivity: 200 umhos/cm	Low Result
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): 0.38 mg/l	High Result
	9/18/2012	Nitrite (as N): < 0.25 mg/l	High RDL
	12/3/2012	Nitrite (as N): < 0.25 mg/l	High RDL
	9/16/2013	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Arsenic: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Chromium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Phosphorus: < 1000 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	6/10/2014	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Arsenic: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Chromium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	4/28/2015	Nitrate (as N): 0.41 mg/l	High Result
	11/7/2018	Nitrate (as N): 0.59 mg/l	High Result
		Nitrate plus Nitrite (N): 0.74 mg/l	High Result
	5/28/2020	Copper: 15 ug/l	High Result
	10/1/2001	Nitrate (as N): 1.02 mg/l	High Result
		Nitrate plus Nitrite (N): 1.04 mg/l	High Result
		Total Organic Carbon: < 99999 mg/l	High RDL
	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	12/22/2003	Manganese: 14000 ug/l	High Result
		Barium: 82 ug/l	High Result
		Cobalt: 42 ug/l	High Result

Sample Location	Sample Date	Outliers	Reason
MW6-S	12/9/2004	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Cadmium: < 3 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: 25 ug/l	High Result
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	6/1/2005	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Cadmium: < 3 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	3/30/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	6/28/2006	Aluminum: 6.3 ug/l	Low Result
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	9/29/2006	Nitrite (as N): < 0.1 mg/l	High RDL
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	12/11/2006	Aluminum: 5.7 ug/l	Low Result
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
		Lead: < 5 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
MW1-S	3/29/2004	Manganese: 12000 ug/l	High Result
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Cadmium: < 3 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Cobalt: 30 ug/l	High Result
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	12/9/2004	Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Cadmium: < 3 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	6/28/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	9/29/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Strontium: 3856 ug/l	High Result
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Reactive Silica (SiO2): 28 mg/l	High Result
		Selenium: < 10 ug/l	High RDL
	4/11/2007	Sulphate: 11 mg/l	Low Result
		Electrical Conductivity: 120 umhos/cm	Low Result
		Hardness (as CaCO3): 45 mg/l	Low Result
	7/5/2007	Lead: < 50 ug/l	High RDL
		Manganese: 10100 ug/l	High Result
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Sodium: 100000 ug/l	High Result
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: 88 ug/l	High Result
		Beryllium: < 20 ug/l	High RDL
		Cadmium: 2.49 ug/l	High Result
		Chromium: < 20 ug/l	High RDL
		Uranium: 163 ug/l	High Result
		Vanadium: < 20 ug/l	High RDL
		Zinc: 174 ug/l	High Result
		Bismuth: < 20 ug/l	High RDL
		Ammonia-N: 4.9 mg/l	High Result
		Selenium: < 10 ug/l	High RDL
		Alkalinity, Total (As CaCO3): 320 mg/l	High Result
		Alkalinity, Bicarbonate (as CaCO3): 319 mg/l	High Result
		Alkalinity, Carbonate (as CaCO3): 1140 mg/l	High Result
	10/2/2007	Nitrate (as N): 1.5 mg/l	High Result
		Aluminum: 8350 ug/l	High Result
		Iron: 5820 ug/l	High Result
		Potassium: 19700 ug/l	High Result
		Titanium: 27 ug/l	High Result
		Copper: 43 ug/l	High Result
		Phosphorus: 560 ug/l	High Result
		Nitrate plus Nitrite (N): 1.5 mg/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): 0.08 mg/l	High Result
	6/10/2014	Benzene: < 0.0013 mg/l	High RDL
	9/9/2015	Total Organic Carbon: < 500 mg/l	High RDL
	11/8/2018	Uranium: 290 ug/l	High Result
MW20-17D	5/27/2020	Sodium: 39600 ug/l	High Result
MW2-D	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	12/22/2003	Sulphate: 24 mg/l	Low Result
		Nickel: 4 ug/l	High Result
		Cobalt: 2 ug/l	High Result
	3/29/2004	Total Organic Carbon: < 50 mg/l	High RDL
	6/28/2004	Molybdenum: 35 ug/l	High Result
	9/9/2004	Orthophosphate(as P): 0.13 mg/l	High Result
	12/9/2004	Total Organic Carbon: < 50 mg/l	High RDL
	6/1/2005	Manganese: 80 ug/l	High Result
	12/12/2005	Aluminum: 118 ug/l	High Result
	10/2/2007	Titanium: < 1 ug/l	Low RDL
	12/5/2007	Titanium: < 1 ug/l	Low RDL
	3/24/2008	Potassium: 10900 ug/l	High Result
		Silver: < 0.01 ug/l	Low RDL
	6/30/2010	Lead: 5.7 ug/l	High Result
	10/21/2010	Boron: 99 ug/l	High Result
	3/24/2011	Alkalinity, Total (As CaCO3): 91 mg/l	Low Result
		Alkalinity, Bicarbonate (as CaCO3): 91 mg/l	Low Result

Sample Location	Sample Date	Outliers	Reason
	4/11/2007	Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	6/29/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	9/18/2012	Reactive Silica (SiO2): 14.5 mg/l	High Result
	9/16/2013	Iron: 4000 ug/l	High Result
		Potassium: 7500 ug/l	High Result
		Sodium: 61000 ug/l	High Result
		Strontium: 580 ug/l	High Result
		Boron: 3700 ug/l	High Result
		Cobalt: 12 ug/l	High Result
		Uranium: 31 ug/l	High Result
		Alkalinity, Total (As CaCO3): 310 mg/l	High Result
		Alkalinity, Bicarbonate (as CaCO3): 310 mg/l	High Result
	12/10/2013	Ammonia-N: 3.5 mg/l	High Result
	12/9/2004	Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	2/2/2005	Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	6/1/2005	Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
	3/30/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
		Electrical Conductivity: 405 umhos/cm	Low Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	12/10/2013	Ammonia-N: 0.22 mg/l	High Result
	9/19/2014	Tin: 9.4 ug/l	High Result
	4/28/2015	Ammonia-N: 0.19 mg/l	High Result
	11/8/2018	Boron: 76 ug/l	High Result
	6/1/2020	Nickel: 4 ug/l	High Result
		Nickel: 5 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
		PHC (>C16-C21): < 0.10 mg/l	High RDL
MW2-M	5/1/2002	Zinc: 140 ug/l	High Result
		Phosphorus: 200 ug/l	High Result
		Total Organic Carbon: < 99999 mg/l	High RDL
	7/18/2003	Phosphorus: 500 ug/l	High Result
	3/29/2004	Manganese: 300 ug/l	High Result
		Total Organic Carbon: < 100 mg/l	High RDL
	6/28/2004	Molybdenum: 10 ug/l	High Result
		Cadmium: 0.5 ug/l	High Result
		Total Organic Carbon: < 100 mg/l	High RDL
	9/9/2004	Lead: 1.7 ug/l	High Result
		Nickel: 3 ug/l	High Result
		Ammonia-N: 0.1 mg/l	High Result
	12/9/2004	Total Organic Carbon: < 50 mg/l	High RDL
	10/3/2005	Manganese: 206 ug/l	High Result
	3/30/2006	Total Organic Carbon: < 50 mg/l	High RDL
	12/11/2006	Total Organic Carbon: < 50 mg/l	High RDL
	4/11/2007	Iron: 338 ug/l	High Result
	4/2/2009	Nitrate (as N): 0.25 mg/l	High Result
		Copper: 6 ug/l	High Result
		Nitrate plus Nitrite (N): 0.25 mg/l	High Result
	6/30/2010	Lead: 4.7 ug/l	High Result
		Ammonia-N: 0.11 mg/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	12/13/2011	Aluminum: 70 ug/l	High Result
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): 0.07 mg/l	High Result
	12/10/2013	Ammonia-N: 0.23 mg/l	High Result
	4/28/2015	Ammonia-N: 0.20 mg/l	High Result
	9/9/2015	Ammonia-N: 0.14 mg/l	High Result
	11/8/2018	Uranium: 15.8 ug/l	LOW RESULT
	6/1/2020	Nickel: 3 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
MW2-S	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	7/18/2003	Phosphorus: 700 ug/l	High Result
	6/28/2004	Molybdenum: 9 ug/l	High Result
		Cadmium: 0.4 ug/l	High Result
		Ammonia-N: 0.12 mg/l	High Result
	9/9/2004	Total Organic Carbon: < 200 mg/l	High RDL
	12/9/2004	Aluminum: 130 ug/l	High Result
		Titanium: 11 ug/l	High Result
	3/30/2005	Uranium: 36.2 ug/l	High Result
	10/2/2007	Tin: < 0.1 ug/l	Low RDL
		Vanadium: 1 ug/l	Low Result
	12/5/2007	Manganese: 564 ug/l	High Result
		Tin: < 0.1 ug/l	Low RDL
		Vanadium: < 1 ug/l	Low RDL
	3/24/2008	Tin: < 0.1 ug/l	Low RDL
		Vanadium: < 1 ug/l	Low RDL
	6/18/2008	Tin: < 0.1 ug/l	Low RDL
		Vanadium: < 1 ug/l	Low RDL
	9/17/2008	Tin: < 0.1 ug/l	Low RDL
		Vanadium: < 1 ug/l	Low RDL
	6/30/2010	Lead: 4.6 ug/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): 0.08 mg/l	High Result
	9/19/2014	Zinc: 410 ug/l	High Result
	9/9/2015	Manganese: 1700 ug/l	High Result
		Cobalt: 2.2 ug/l	High Result
		Total Organic Carbon: < 500 mg/l	High RDL
MW3	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
		Nitrate (as N): 0.42 mg/l	High Result
		Sulphate: 36 mg/l	High Result
		Nitrate plus Nitrite (N): 0.44 mg/l	High Result
	7/18/2003	Sulphate: 37 mg/l	High Result
		Aluminum: 80 ug/l	High Result
		Iron: 80 ug/l	High Result
		Magnesium: 76300 ug/l	High Result
		Potassium: 39900 ug/l	High Result
		Sodium: 46900 ug/l	High Result
		Titanium: 4 ug/l	High Result
		Vanadium: 3 ug/l	High Result
		Calcium: 207000 ug/l	High Result
		Phosphorus: 5200 ug/l	High Result
		Hardness (as CaCO3): 831 mg/l	High Result
		Orthophosphate(as P): 0.16 mg/l	High Result
		Total Dissolved Solids (Calculated): 494 mg/l	High Result
	3/29/2004	Iron: 80 ug/l	High Result
		Zinc: 14 ug/l	High Result
		Total Organic Carbon: < 500 mg/l	High RDL
	6/28/2004	Orthophosphate(as P): 0.13 mg/l	High Result
		Total Organic Carbon: < 200 mg/l	High RDL

Sample Location	Sample Date	Outliers	Reason
MW7-D		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	6/28/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	9/29/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	12/11/2006	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	4/11/2007	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	6/29/2007	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	10/2/2007	Iron: 13200 ug/l	High Result
		Barium: 53 ug/l	High Result
		Cobalt: 35.4 ug/l	High Result
	12/5/2007	Bismuth: < 5 ug/l	High RDL
	9/17/2008	Bismuth: < 5 ug/l	High RDL
	12/19/2008	Nitrate (as N): 0.73 mg/l	High Result
		Nitrate plus Nitrite (N): 0.73 mg/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): < 0.1 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrite (as N): < 0.1 mg/l	High RDL
	12/3/2012	Nitrite (as N): < 0.25 mg/l	High RDL
	9/16/2013	Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Chromium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
	9/9/2004	Lead: 2.8 ug/l	High Result
		Zinc: 16 ug/l	High Result
		Orthophosphate(as P): 0.1 mg/l	High Result
		Total Organic Carbon: < 200 mg/l	High RDL
	12/9/2004	Total Organic Carbon: < 200 mg/l	High RDL
	3/30/2005	Aluminum: 52.7 ug/l	High Result
	6/1/2005	Lead: 3.8 ug/l	High Result
	10/3/2005	Lead: 2.63 ug/l	High Result
		Nickel: 3.3 ug/l	High Result
		Zinc: 23.9 ug/l	High Result
	12/12/2005	Selenium: 2 ug/l	High Result
	3/30/2006	Zinc: 19.5 ug/l	High Result
	6/29/2007	Zinc: 33.8 ug/l	High Result
	12/5/2007	Cadmium: < 0.1 ug/l	High RDL
		Copper: 14 ug/l	High Result
		Zinc: 14 ug/l	High Result
	3/24/2008	Cadmium: < 0.1 ug/l	High RDL
	9/17/2008	Iron: 100 ug/l	High Result
	4/2/2009	Manganese: 79 ug/l	High Result
	12/16/2009	Manganese: 82 ug/l	High Result
	6/30/2010	Lead: 3.3 ug/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	12/10/2013	Ammonia-N: 0.18 mg/l	High Result
	11/8/2018	Cadmium: < 0.09 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
		Phosphorus: < 1000 ug/l	High RDL
		Selenium: < 10 ug/l	High RDL
	5/28/2020	Cadmium: 4.63 ug/l	High Result
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
	12/9/2004	Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
		Iron: < 5000 ug/l	High RDL
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
	2/2/2005	Arsenic: < 20 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
	4/1/2020	Aluminum: 48 ug/l	High Result
		Manganese: 88 ug/l	High Result
		Barium: 31 ug/l	High Result
		Turbidity: 73400 ntu	High Result
	5/27/2020	Turbidity: 77600 ntu	High Result
	12/16/2020	Aluminum: 290 ug/l	High Result
	4/1/2020	Uranium: 18.8 ug/l	High Result
	5/27/2020	Chromium: 3 ug/l	High Result
	12/16/2020	Aluminum: 290 ug/l	High Result
MW5-D	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	7/18/2003	Potassium: 7400 ug/l	High Result
		Phosphorus: 1500 ug/l	High Result
	12/22/2003	Lead: 53 ug/l	High Result
		Barium: 90 ug/l	High Result
		Beryllium: 13 ug/l	High Result
		Cadmium: 1 ug/l	High Result
		Cobalt: 13 ug/l	High Result
		Copper: 190 ug/l	High Result
		Uranium: 69 ug/l	High Result
		Phosphorus: 1500 ug/l	High Result
	3/29/2004	Aluminum: 27000 ug/l	High Result
		Iron: 27000 ug/l	High Result
		Lead: 110 ug/l	High Result
		Nickel: 18 ug/l	High Result
		Potassium: 11700 ug/l	High Result
		Silver: 180 ug/l	High Result
		Thallium: 1 ug/l	High Result
		Titanium: 410 ug/l	High Result
		Arsenic: 82 ug/l	High Result
		Barium: 340 ug/l	High Result
		Beryllium: 21 ug/l	High Result
		Cadmium: 1.2 ug/l	High Result
		Chromium: 20 ug/l	High Result
		Cobalt: 26 ug/l	High Result
		Copper: 290 ug/l	High Result
		Uranium: 100 ug/l	High Result
		Vanadium: 36 ug/l	High Result
		Zinc: 270 ug/l	High Result
		Bismuth: 16 ug/l	High Result
		Phosphorus: 2100 ug/l	High Result
		Selenium: 2 ug/l	High Result
	6/28/2004	Molybdenum: 13 ug/l	High Result
		Total Organic Carbon: < 500 mg/l	High RDL
	12/9/2004	Orthophosphate(as P): 0.15 mg/l	High Result
	4/11/2007	Sulphate: 400 mg/l	High Result
		Chloride ion: 82 mg/l	High Result
		Iron: 9470 ug/l	High Result
		Magnesium: 44000 ug/l	High Result
		Manganese: 4500 ug/l	High Result
		Nickel: 24.6 ug/l	High Result
		Sodium: 54000 ug/l	High Result
		Strontium: 569 ug/l	High Result
		Boron: 1910 ug/l	High Result
		Cadmium: 3.41 ug/l	High Result
		Cobalt: 28.3 ug/l	High Result
		Zinc: 593 ug/l	High Result
		Calcium: 140000 ug/l	High Result
		Electrical Conductivity: 1100 umhos/cm	High Result
		Hardness (as CaCO3): 530 mg/l	High Result
		Total Dissolved Solids (Calculated): 811 mg/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	9/18/2012	Reactive Silica (SiO2): 4.4 mg/l	Low Result
	6/5/2015	Ammonia-N: 0.50 mg/l	High Result
	11/8/2018	Cadmium: 0.62 ug/l	High Result
	5/27/2020	Chromium: 3 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
	3/30/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	6/28/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	9/29/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	12/11/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL

Sample Location	Sample Date	Outliers	Reason
MW7-S		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Selenium: < 20 ug/l	High RDL
		Orthophosphate(as P): 0.03 mg/l	High Result
	10/3/2005	Ammonia-N: 16 mg/l	High Result
	3/30/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	6/28/2006	Nitrite (as N): 0.47 mg/l	High Result
		Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	9/29/2006	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	4/11/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	4/11/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	6/29/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	6/18/2008	Cobalt: 35.5 ug/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	11/7/2018	Aluminum: 3520 ug/l	High Result
		Titanium: 30 ug/l	High Result
MW8-D	5/6/2011	Chloride ion: 246 mg/l	High Result
		Arsenic: 4 ug/l	Low Result
		Barium: 26 ug/l	High Result
		Electrical Conductivity: 1120 umhos/cm	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Ammonia-N: 0.61 mg/l	High Result
		Orthophosphate(as P): 0.2 mg/l	High Result
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Aluminum: 359 ug/l	High Result
		Iron: 478 ug/l	High Result

Sample Location	Sample Date	Outliers	Reason
MW6-D		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	4/11/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	6/29/2007	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	12/5/2007	Silver: < 0.5 ug/l	High RDL
		Copper: < 5 ug/l	High RDL
		Bismuth: < 5 ug/l	High RDL
	3/24/2008	Silver: < 0.5 ug/l	High RDL
		Copper: < 5 ug/l	High RDL
		Bismuth: < 5 ug/l	High RDL
	6/18/2008	Silver: < 0.5 ug/l	High RDL
		Copper: < 5 ug/l	High RDL
		Bismuth: < 5 ug/l	High RDL
	9/17/2008	Silver: < 1 ug/l	High RDL
		Copper: < 10 ug/l	High RDL
		Bismuth: < 10 ug/l	High RDL
	12/19/2008	Silver: < 1 ug/l	High RDL
		Copper: < 10 ug/l	High RDL
		Bismuth: < 10 ug/l	High RDL
		Orthophosphate(as P): 0.02 mg/l	High Result
	4/2/2009	Calcium: 34800 ug/l	Low Result
		Hardness (as CaCO3): 536 mg/l	Low Result
	6/23/2009	Sulphate: 1860 mg/l	High Result
		Nickel: 58 ug/l	High Result
		Beryllium: < 20 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		PHC (>C16-C21): < 0.125 mg/l	High RDL
		PHC F1 (C6-C10) minus BTEX: 0.1 mg/l	High Result
		PHC F2 (>C10-C16): < 0.125 mg/l	High RDL
	3/6/2012	Arsenic: 138 ug/l	High Result
		Arsenic: 136 ug/l	High Result
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Arsenic: 138 ug/l	High Result
		Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Arsenic: 143 ug/l	High Result
	9/18/2012	Nitrate (as N): < 1 mg/l	High RDL
		Nitrite (as N): < 1 mg/l	High RDL
		Arsenic: 131 ug/l	High Result
		Reactive Silica (SiO2): 6.5 mg/l	Low Result
	12/3/2012	Ammonia-N: 76.8 mg/l	High Result
	3/28/2013	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Phosphorus: < 1000 ug/l	High RDL
	6/13/2013	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Phosphorus: < 1000 ug/l	High RDL
	6/10/2014	Lead: < 5 ug/l	High RDL
		Molybdenum: < 20 ug/l	High RDL
		Silver: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Antimony: < 10 ug/l	High RDL
		Beryllium: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Phosphorus: < 1000 ug/l	High RDL
	12/1/2015	Orthophosphate(as P): 0.037 mg/l	High Result
	11/7/2018	Nitrate (as N): < 1.0 mg/l	High RDL
		Nitrite (as N): < 1.0 mg/l	High RDL
		Nitrate plus Nitrite (N): < 1.0 mg/l	High RDL
	4/1/2020	Manganese: 13100 ug/l	Low Result
		Potassium: 9900 ug/l	Low Result
		Total Organic Carbon: < 0.5 mg/l	Low RDL
	5/28/2020	Cadmium: 1.91 ug/l	High Result
		Chromium: 39 ug/l	High Result
		Copper: 12 ug/l	High Result
		Iron: 123 ug/l	LOW RESULT

Sample Location	Sample Date	Outliers	Reason
[illegible]	6/13/2013	Lead: 1.43 ug/l	High Result
		Titanium: 41.9 ug/l	High Result
		Copper: 5.1 ug/l	High Result
	6/10/2014	Modified TPH Tier 1: 0.11 mg/l	High Result
		Modified TPH Tier 1: 0.11 mg/l	High Result
	4/28/2015	Zinc: 7.5 ug/l	High Result
	6/5/2015	Barium: 25 ug/l	High Result
		Barium: 25 ug/l	High Result
	11/7/2018	Cadmium: < 0.09 ug/l	High RDL
		Chloride ion: 119 mg/l	High Result
	6/1/2020	Nickel: 5 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
MW8-S	5/6/2011	Cobalt: 2 ug/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Silver: 0.5 ug/l	High Result
	12/13/2011	Nitrate (as N): < 0.25 mg/l	High RDL
	3/6/2012	Nitrate (as N): < 0.25 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
		Nitrate (as N): 0.29 mg/l	High Result
		Nitrate plus Nitrite (N): 0.29 mg/l	High Result
	9/18/2012	Orthophosphate(as P): 0.09 mg/l	High Result
	12/3/2012	Nitrate (as N): < 0.25 mg/l	High RDL
	12/1/2015	Thallium: 0.22 ug/l	High Result
		Cadmium: 1.1 ug/l	High Result
		Vanadium: 3.6 ug/l	High Result
		Zinc: 12 ug/l	High Result
	11/7/2018	Sulphate: 447 mg/l	High Result
	6/1/2020	Nickel: 16 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
MW5-S	5/1/2002	Copper: 6 ug/l	High Result
	5/1/2002	Total Organic Carbon: < 99999 mg/l	High RDL
	7/18/2003	Potassium: 4100 ug/l	High Result
		Phosphorus: 700 ug/l	High Result
		Orthophosphate(as P): 0.21 mg/l	High Result
	3/29/2004	Aluminum: 2400 ug/l	High Result
		Iron: 1600 ug/l	High Result
		Lead: 4.1 ug/l	High Result
		Silver: 0.6 ug/l	High Result
		Titanium: 72 ug/l	High Result
		Barium: 29 ug/l	High Result
		Copper: 6 ug/l	High Result
	6/28/2004	Lead: 2.5 ug/l	High Result
	9/9/2004	Iron: 2400 ug/l	High Result
		Total Organic Carbon: < 500 mg/l	High RDL
	12/9/2004	Orthophosphate(as P): 0.17 mg/l	High Result
	6/28/2006	Manganese: 4590 ug/l	High Result
		Molybdenum: 21.8 ug/l	High Result
		Phosphorus: < 1000 ug/l	High RDL
	9/29/2006	Nitrate (as N): 0.74 mg/l	High Result
		Phosphorus: < 1000 ug/l	High RDL
		Nitrate plus Nitrite (N): 0.75 mg/l	High Result
	4/11/2007	Sulphate: 350 mg/l	High Result
		Chloride ion: 30 mg/l	High Result
		Magnesium: 24000 ug/l	High Result
		Nickel: 8.2 ug/l	High Result
		Potassium: 3900 ug/l	High Result
		Sodium: 32000 ug/l	High Result
		Strontium: 374 ug/l	High Result
		Barium: 32 ug/l	High Result
		Boron: 835 ug/l	High Result
		Calcium: 120000 ug/l	High Result
		Selenium: 1.5 ug/l	High Result
		Electrical Conductivity: 860 umhos/cm	High Result
		Hardness (as CaCO3): 390 mg/l	High Result
		Total Dissolved Solids (Calculated): 603 mg/l	High Result
	10/2/2007	Sodium: 19600 ug/l	High Result
	6/30/2010	Nitrate (as N): 0.54 mg/l	High Result
		Lead: 1.6 ug/l	High Result
		Nitrate plus Nitrite (N): 0.54 mg/l	High Result
	11/7/2011	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/5/2012	Ethylbenzene: < 0.002 mg/l	High RDL
		Toluene: < 0.002 mg/l	High RDL
	6/13/2013	Arsenic: 11.4 ug/l	High Result
		Cobalt: 5.59 ug/l	High Result
	6/10/2014	Cadmium: 1.8 ug/l	High Result
	9/9/2015	Ammonia-N: 0.47 mg/l	High Result
	11/22/2018	Ammonia-N: 0.31 mg/l	High Result
		Aluminum: 145 ug/l	High Result
		Aluminum: 155 ug/l	High Result
	5/27/2020	PHC (>C16-C21): < 0.10 mg/l	High RDL
MW19-09S	12/16/2020	Total Organic Carbon: < 50 mg/l $DF = 100, High RDL	High RDL
	3/25/2021	Aluminum: 1700 ug/l $High Result	High Result
		Iron: 1700 ug/l $High Result	High Result
		Total Organic Carbon: < 50 mg/l DF = 100, High RDL	High RDL
		Total Organic Carbon: < 50 mg/l DF = 100, High RDL	High RDL
MW19-10S	12/16/2020	Total Organic Carbon: < 5.0 mg/l DF = 10, High RL	High RDL
	3/29/2022	Total Organic Carbon: < 5.0 mg/l DF = 10, High RL	High RDL
MW19-12S	12/16/2020	Total Organic Carbon: < 50 mg/l 100 DF, High RDL	High RDL
MW20-14S	12/16/2020	Total Organic Carbon: < 50 mg/l High RDL	High RDL
	3/23/2021	Total Organic Carbon: < 50 mg/l High RDL	High RDL
MW20-15S	12/16/2020	Total Organic Carbon: < 50 mg/l High RDL	High RDL
MW20-16	3/25/2021	Total Organic Carbon: < 50 mg/l High RDL	High RDL

Sample Location	Sample Date	Outliers	Reason
		Nickel: 53 ug/l	High Result
	9/15/2020	Nickel: 52 ug/l	High Result
		Orthophosphate(as P): 0.032 mg/l	High Result

Sample Location	Sample Date	Outliers	Reason

Outlier Selection:

Data was plotted on time-series graphs to assess the temporal variability of the data and to visually screen for potential outliers. Any suspected outliers identified were reviewed before removal from the dataset, the analytical report, lab narrative, and/or field notes were reviewed to see if any anomalies.

Below outlines the on-site surface water locations that contained outliers and the number of outliers identified. As SW14 contain only 3 timepoints at present, there were too few data points to identify outliers.

Sample Location	# Total Outliers	# Current Outliers
DIFFUSER	25	2
SW01	35	0
SW02	47	0
SW03	34	0
SW04	69	0
SW13	22	0
SW19-20	10	1
TOTAL	**242**	**3**

No transcription errors were found in the historic data outliers. No anomalies were seen with the current data outliers.

The following table summarizes the outliers and indicates the reason (i.e. High Result, High RDL, Low Result or Low RDL).

Sample Location	Sample Date	Outliers	Reason
DIFFUSER	6/1/2020	Nitrite (as N): < 0.05 mg/l	High RDL
		Sulphate: 7 mg/l	High Result
		Antimony: < 2 ug/l	High RDL
		Arsenic: < 2 ug/l	High RDL
		Beryllium: < 2 ug/l	High RDL
		Boron: 11 ug/l	Low Result
		Cobalt: < 1 ug/l	High RDL
		Selenium: < 1 ug/l	High RDL
		Alkalinity, Bicarbonate (as CaCO3): < 5 mg/l	High RDL
		Alkalinity, Carbonate (as CaCO3): < 10 mg/l	High RDL
		PHC (>C16-C21): < 0.10 mg/l	High RDL
		PHC (>C21-C32): < 0.1 mg/l	High RDL
		PHC F1 (C6-C10) minus BTEX: < 0.01 mg/l	Low RDL
		Modified TPH Tier 1: < 0.1 mg/l	High RDL
		Saturation pH (at 20 C): 10.7 none	High Result
	6/1/2020	Saturation pH (at 4 C): 11.0 none	High Result
	7/17/2020	Phenol: 0.037 mg/l	High Result
	7/29/2020	Vanadium: 2.4 ug/l	High Result
	8/24/2020	Nitrate (as N): 0.14 mg/l	High Result
		Nitrate plus Nitrite (N): 0.14 mg/l	High Result
	10/23/2020	BOD Carbonaceous: < 10 mg/l	High RDL
	3/25/2021	BOD Carbonaceous: < 10 mg/l	High RDL
	11/2/2021	BOD Carbonaceous: < 10 mg/l	High RDL
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High Result
	4/21/2021	Zinc: 170 ug/l	High RDL
SW01	6/24/2003	Lead: 4.3 ug/l	High RDL
		Silver: < 0.5 ug/l	High Result
		Cadmium: < 0.3 ug/l	High RDL
		Copper: 13 ug/l	High Result
		Selenium: < 2 ug/l	High Result
	3/29/2004	Lead: 3.8 ug/l	High RDL
		Alkalinity, Bicarbonate (as CaCO3): 16 mg/l	High Result
	9/9/2004	Nitrate plus Nitrite (N): < 0.2 mg/l	High RDL
	12/11/2006	Uranium: 1.28 ug/l	High RDL
	10/2/2007	Phosphorus: < 20000 ug/l	High RDL
		Nitrate plus Nitrite (N): < 0.25 mg/l	High Result
	12/5/2007	Phosphorus: < 20000 ug/l	High RDL
	9/17/2008	Iron: 1200 ug/l	High RDL
		Nitrate plus Nitrite (N): < 0.25 mg/l	High Result
	12/19/2008	Nitrate plus Nitrite (N): < 0.25 mg/l	High Result
	4/15/2010	Boron: 148 ug/l	High Result
	11/1/2010	Lead: 9.5 ug/l	High Result
	11/7/2011	Orthophosphate(as P): 0.16 mg/l	High Result
	9/18/2012	Chromium: 4 ug/l	Low RDL
	6/1/2020	PHC (>C16-C21): < 0.10 mg/l	High Result
		PHC F1 (C6-C10) minus BTEX: < 0.01 mg/l	High Result
		Saturation pH (at 20 C): 11.1 none	High Result
		Saturation pH (at 4 C): 11.4 none	High Result
	7/17/2020	Phenol: 0.020 mg/l	High Result
	8/24/2020	Boron: 78 ug/l	High Result
		Boron: 89 ug/l	High Result

	9/8/2020	PHC (>C21-C32): 0.31 mg/l	High Result
		Modified TPH Tier 1: 0.31 mg/l	High RDL
	9/24/2020	Turbidity: 3.7 ntu	High RDL
	10/23/2020	BOD Carbonaceous: < 10 mg/l	High Result
		PHC F2 (>C10-C16): < 0.057 mg/l	High RDL
		Turbidity: 2.8 ntu	High Result
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High Result
	11/30/2020	Turbidity: 6.7 ntu	High Result
	12/14/2020	Cadmium: 0.97 ug/l	High Result
SW02	12/22/2003	Copper: 4 ug/l	High Result
	3/30/2006	Hardness (as CaCO3): 54 mg/l	High RDL
	10/2/2007	Iron: 2270 ug/l	High Result
	6/24/2003	Cadmium: < 0.3 ug/l	High RDL
	9/9/2004	Manganese: 54 ug/l	High RDL
		Nitrate (as N): < 0.2 mg/l	High RDL
	10/2/2007	Nitrate (as N): < 0.25 mg/l	High RDL
	9/17/2008	Nitrate (as N): < 0.25 mg/l	High RDL
	9/9/2004	Nitrate plus Nitrite (N): < 0.2 mg/l	High RDL
	10/2/2007	Nitrate plus Nitrite (N): < 0.25 mg/l	High RDL
	9/17/2008	Nitrate plus Nitrite (N): < 0.25 mg/l	High RDL
	10/2/2007	Nitrite (as N): < 0.25 mg/l	High Result
	9/17/2008	Nitrite (as N): < 0.25 mg/l	High Result
	3/30/2006	Calcium: 18000 ug/l	High Result
	12/11/2006	Orthophosphate(as P): 0.11 mg/l	High Result
	10/2/2007	Phosphorus: 80000 ug/l	High Result
	9/17/2008	Reactive Silica (SiO2): 6.5 mg/l	High RDL
	12/11/2006	Reactive Silica (SiO2): 7 mg/l	High RDL
	6/24/2003	Selenium: < 2 ug/l	High RDL
		Silver: < 3 ug/l	High Result
		Thallium: < 5 ug/l	High RDL
	10/2/2007	Aluminum: 1400 ug/l	High Result
	6/24/2003	Tin: < 6 ug/l	High RDL
	10/2/2007	Barium: 24 ug/l	High Result
		Ammonia-N: < 0.25 mg/l	High RDL
	12/22/2003	Titanium: 15 ug/l	High Result
	10/2/2007	Alkalinity, Total (As CaCO3): < 20 mg/l	High Result
	12/11/2006	Total Dissolved Solids (Lab): 67 mg/l	High Result
	9/9/2004	Total Dissolved Solids (Lab): 70 mg/l	High RDL
	3/30/2006	Total Dissolved Solids (Lab): 88 mg/l	High RDL
	6/24/2003	Uranium: < 8 ug/l	High RDL
	9/17/2008	Ammonia-N: < 0.25 mg/l	High RDL
	6/24/2003	Vanadium: < 9 ug/l	High Result
	12/19/2008	Ammonia-N: < 0.25 mg/l	High RDL
	9/9/2015	Ammonia-N: 0.27 mg/l	High Result
	11/8/2018	Cadmium: < 0.09 ug/l	High Result
	4/1/2020	Turbidity: 272 ntu	High Result
	6/1/2020	Nickel: 6 ug/l	High Result
	7/17/2020	Phenol: 0.057 mg/l	High Result
	10/23/2020	Manganese: 170 ug/l	High RDL
		Barium: 11 ug/l	High RDL
		BOD Carbonaceous: < 10 mg/l	High Result
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High RDL
		PHC (>C21-C32): 0.17 mg/l	High Result

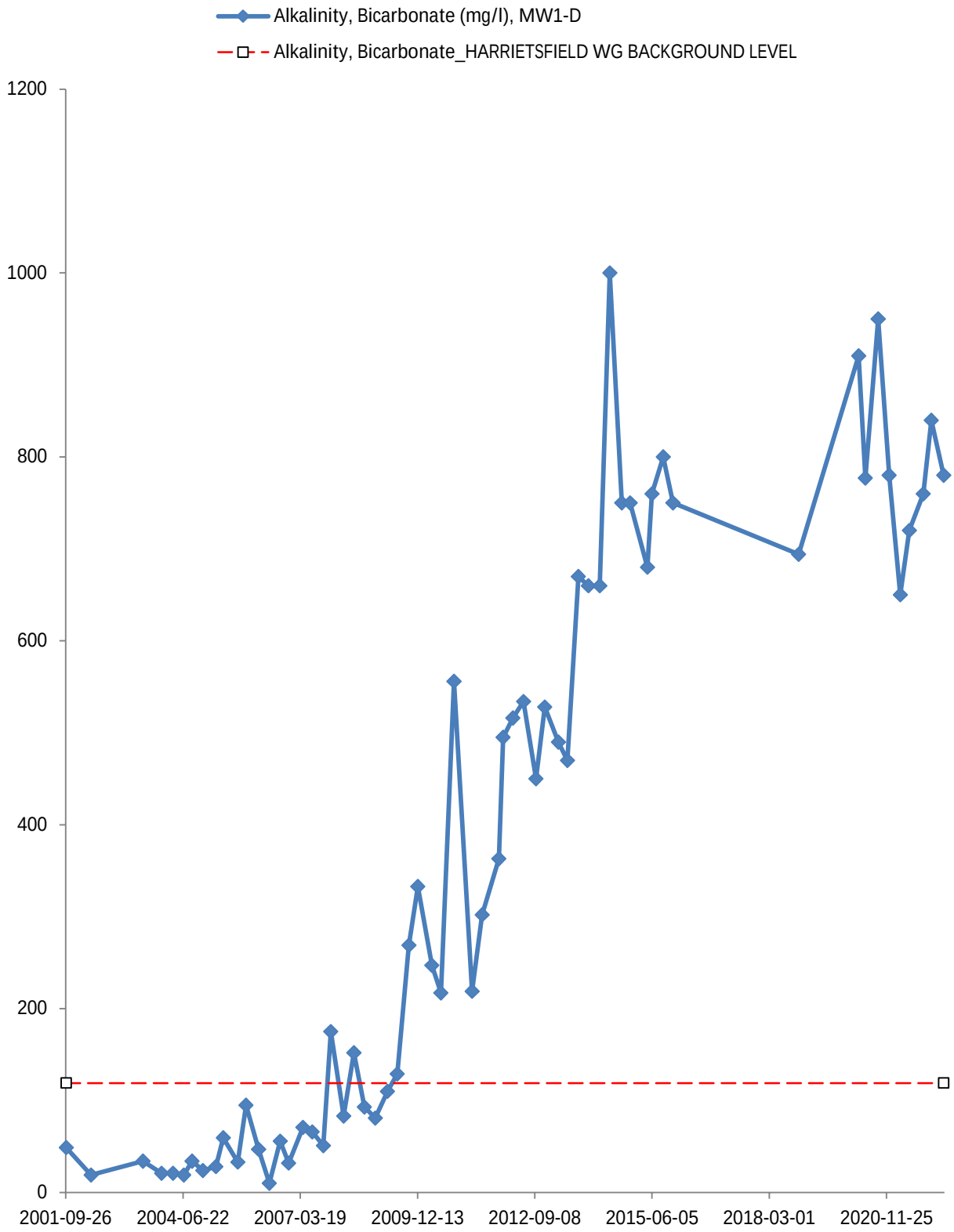
	11/20/2020	PHC F2 (>C10-C16): < 0.058 mg/l	High Result
		Modified TPH Tier 1: 0.17 mg/l	High Result
	11/30/2020	Titanium: 25 ug/l	High Result
SW03	12/3/2012	Alkalinity, Bicarbonate (as CaCO3): 15 mg/l	High Result
	12/16/2009	Alkalinity, Bicarbonate (as CaCO3): 24 mg/l	High Result
	4/28/2015	Ammonia-N: 0.38 mg/l	High RDL
	12/3/2012	Barium: 17 ug/l	High Result
	6/24/2003	Cadmium: < 0.3 ug/l	High Result
	12/16/2009	Calcium: 27500 ug/l	High Result
	12/22/2003	Copper: 6 ug/l	High Result
	12/16/2009	Hardness (as CaCO3): 84.3 mg/l	High Result
	11/1/2010	Lead: 9.9 ug/l	High Result
	12/16/2009	Nitrate (as N): 0.96 mg/l	High RDL
		Nitrate plus Nitrite (N): 0.96 mg/l	High RDL
	10/2/2007	Nitrite (as N): < 0.25 mg/l	High Result
	9/17/2008	Nitrite (as N): < 0.25 mg/l	High Result
	11/7/2011	Orthophosphate(as P): 0.14 mg/l	High Result
	10/2/2007	Phosphorus: 20000 ug/l	High Result
	12/11/2006	Potassium: 2500 ug/l	High RDL
	10/2/2007	Reactive Silica (SiO2): 8.0 mg/l	High RDL
	6/24/2003	Selenium: < 2 ug/l	High Result
		Silver: < 0.5 ug/l	High RDL
	12/3/2012	Sodium: 12500 ug/l	High Result
	11/8/2018	Cadmium: < 0.09 ug/l	High Result
	4/1/2020	Nickel: 3 ug/l	High Result
	8/24/2020	PHC (>C21-C32): 0.12 mg/l	High Result
		Modified TPH Tier 1: 0.12 mg/l	High RDL
	9/24/2020	Copper: 2.1 ug/l	High RDL
	10/23/2020	BOD Carbonaceous: < 10 mg/l	High Result
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High Result
	11/20/2020	Aluminum: 1600 ug/l	High Result
		Iron: 1600 ug/l	High Result
		Manganese: 61 ug/l	High Result
		Titanium: 37 ug/l	High RDL
		Uranium: 2.6 ug/l	High RDL
		PHC F2 (>C10-C16): < 0.058 mg/l	
	11/30/2020	PHC F2 (>C10-C16): < 0.057 mg/l	

Sample Location	Sample Date	Outliers	Reason
SW04	6/24/2003	Manganese: 160 ug/l	High Result
		Molybdenum: < 20 ug/l	High RDL
		Nickel: < 20 ug/l	High RDL
		Silver: < 5 ug/l	High RDL
		Sodium: 19800 ug/l	High Result
		Strontium: 270 ug/l	High Result
		Thallium: < 1 ug/l	High RDL
		Tin: < 20 ug/l	High RDL
		Titanium: < 20 ug/l	High RDL
		Antimony: < 20 ug/l	High RDL
		Arsenic: < 20 ug/l	High RDL
		Barium: < 50 ug/l	High RDL
		Beryllium: < 20 ug/l	High RDL
		Boron: 990 ug/l	High Result
		Cadmium: < 3 ug/l	High RDL
		Chromium: < 20 ug/l	High RDL
		Cobalt: < 10 ug/l	High RDL
		Copper: < 20 ug/l	High RDL
		Uranium: < 1 ug/l	High RDL
		Vanadium: < 20 ug/l	High RDL
		Zinc: < 50 ug/l	High RDL
		Bismuth: < 20 ug/l	High RDL
		Calcium: 44200 ug/l	High Result
		Selenium: < 20 ug/l	High RDL
		Total Dissolved Solids (Lab): 183 mg/l	High Result
	9/9/2004	Titanium: 30 ug/l	High Result
		Nitrate plus Nitrite (N): < 0.2 mg/l	High RDL
	12/11/2006	Sulphate: 180 mg/l	High Result
		Chloride ion: 17 mg/l	High Result
		Magnesium: 11000 ug/l	High Result
		Potassium: 5000 ug/l	High Result
		Sodium: 19000 ug/l	High Result
		Strontium: 260 ug/l	High Result
		Barium: 29 ug/l	High Result
		Boron: 438 ug/l	High Result
		Uranium: 0.89 ug/l	High Result
		Calcium: 79000 ug/l	High Result
		Reactive Silica (SiO2): 7 mg/l	High Result
		Alkalinity, Total (As CaCO3): 59 mg/l	High Result
		Alkalinity, Bicarbonate (as CaCO3): 59 mg/l	High Result
		Electrical Conductivity: 520 umhos/cm	High Result
		Hardness (as CaCO3): 240 mg/l	High Result
		Nitrate plus Nitrite (N): 0.2 mg/l	High Result
		Total Dissolved Solids (Lab): 355 mg/l	High Result
	10/2/2007	Nitrite (as N): < 0.25 mg/l	High RDL
		Phosphorus: < 20000 ug/l	High RDL
		Nitrate plus Nitrite (N): < 0.25 mg/l	High RDL
		Orthophosphate(as P): 0.10 mg/l	High Result
	9/17/2008	Nitrite (as N): < 0.25 mg/l	High RDL
		Reactive Silica (SiO2): 6.5 mg/l	High Result
		Nitrate plus Nitrite (N): < 0.25 mg/l	High RDL

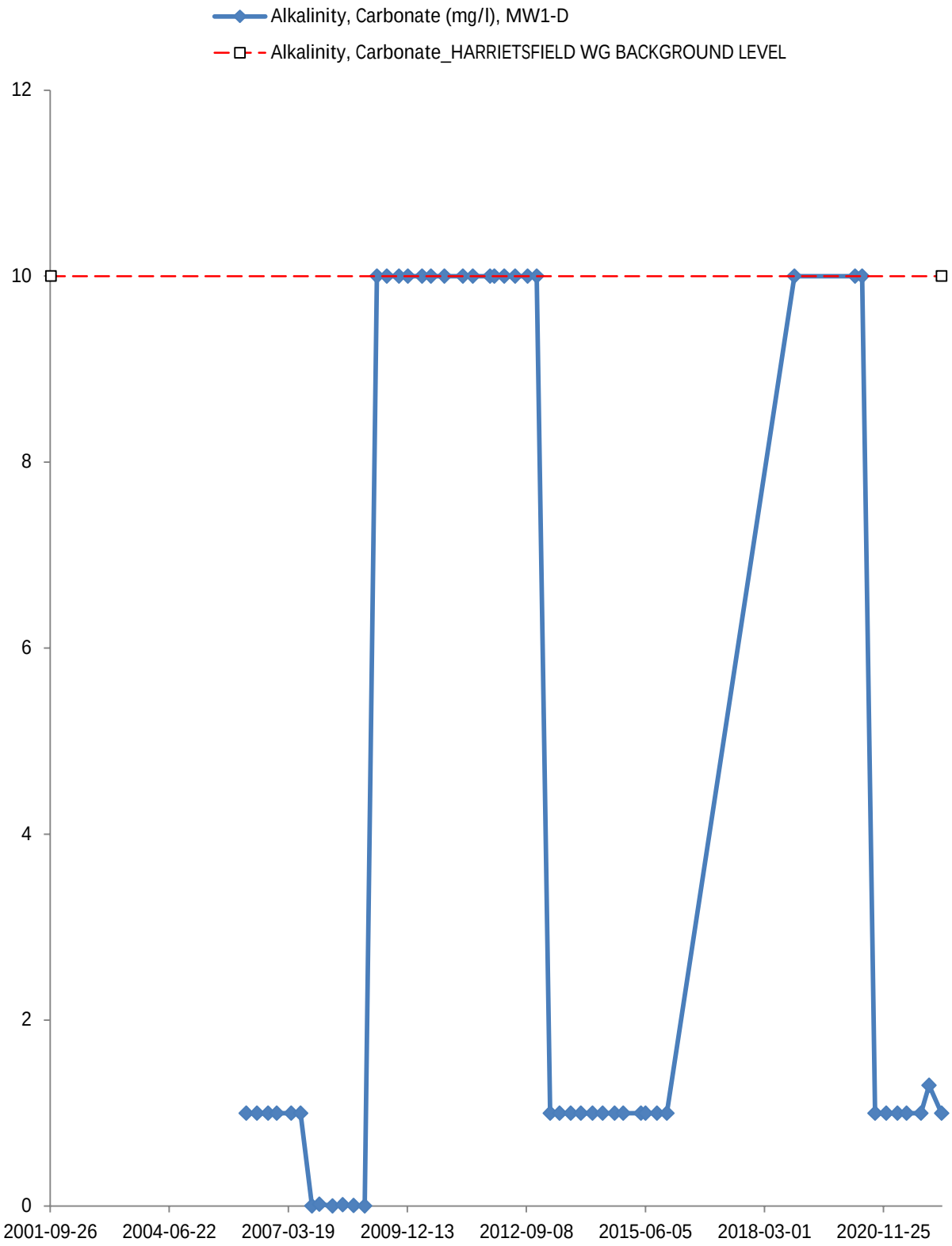
	11/1/2010	Lead: 8.8 ug/l	High Result
	9/19/2014	Turbidity: 9.7 ntu	High Result
	4/28/2015	Ammonia-N: 0.44 mg/l	High Result
	9/9/2015	Uranium: 1.0 ug/l	High Result
	6/1/2020	Phenol: < 0.004 mg/l	High RDL
		PHC (>C16-C21): < 0.10 mg/l	High RDL
		PHC (>C21-C32): < 0.1 mg/l	High RDL
		PHC F1 (C6-C10) minus BTEX: < 0.01 mg/l	Low RDL
		Modified TPH Tier 1: < 0.1 mg/l	High RDL
		Saturation pH (at 20 C): 10.7 none	High Result
		Saturation pH (at 4 C): 11.0 none	High Result
	7/17/2020	Phenol: 0.12 mg/l	High Result
	10/23/2020	BOD Carbonaceous: < 10 mg/l	High RDL
	11/5/2020	Nitrate (as N): 0.83 mg/l	High Result
		Titanium: 32 ug/l	High Result
		BOD Carbonaceous: < 10 mg/l	High RDL
		Nitrate plus Nitrite (N): 0.83 mg/l	High Result
	11/20/2020	PHC F2 (>C10-C16): < 0.058 mg/l	High RDL
SW13	6/1/2020	Phenol: < 0.004 mg/l	High RDL
		Lead: 12.4 ug/l	High Result
		Nickel: 5 ug/l	High Result
		Cobalt: 2 ug/l	High Result
		Copper: 12 ug/l	High Result
		PHC (>C16-C21): < 0.10 mg/l	High RDL
		PHC (>C21-C32): < 0.1 mg/l	High Result
		PHC F1 (C6-C10) minus BTEX: < 0.01 mg/l	Low RDL
		Modified TPH Tier 1: < 0.1 mg/l	High RDL
	9/23/2020	Aluminum: 1100 ug/l	High Result
		Titanium: 24 ug/l	High RDL
		Chemical Oxygen Demand: 88 mg/l	High Result
		Turbidity: 18 ntu	High Result
	10/6/2020	Sulphate: 26 mg/l	High Result
		Lead: 3.5 ug/l	High Result
		Strontium: 52 ug/l	High Result
		Barium: 21 ug/l	High RDL
		Calcium: 15000 ug/l	High Result
		Hardness (as CaCO3): 45 mg/l	High Result
		Total Dissolved Solids (Lab): 100 mg/l	High Result
	10/23/2020	BOD Carbonaceous: < 10 mg/l	High RDL
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High RDL
SW19-20	6/1/2020	PHC (>C16-C21): < 0.10 mg/l	High RDL
		PHC F1 (C6-C10) minus BTEX: < 0.01 mg/l	Low RDL
	10/23/2020	Manganese: 2700 ug/l	High Result
		BOD Carbonaceous: < 10 mg/l	High RDL
		PHC (>C21-C32): < 0.25 mg/l	High RDL
		Modified TPH Tier 1: < 0.25 mg/l	High RDL
	11/5/2020	BOD Carbonaceous: < 10 mg/l	High RDL
	11/30/2020	Molybdenum: 11 ug/l	High Result
		Uranium: 110 ug/l	High Result
	12/28/2020	Total Organic Carbon: < 50 mg/l High RDL	High RDL

Appendix F. Time Series Plots

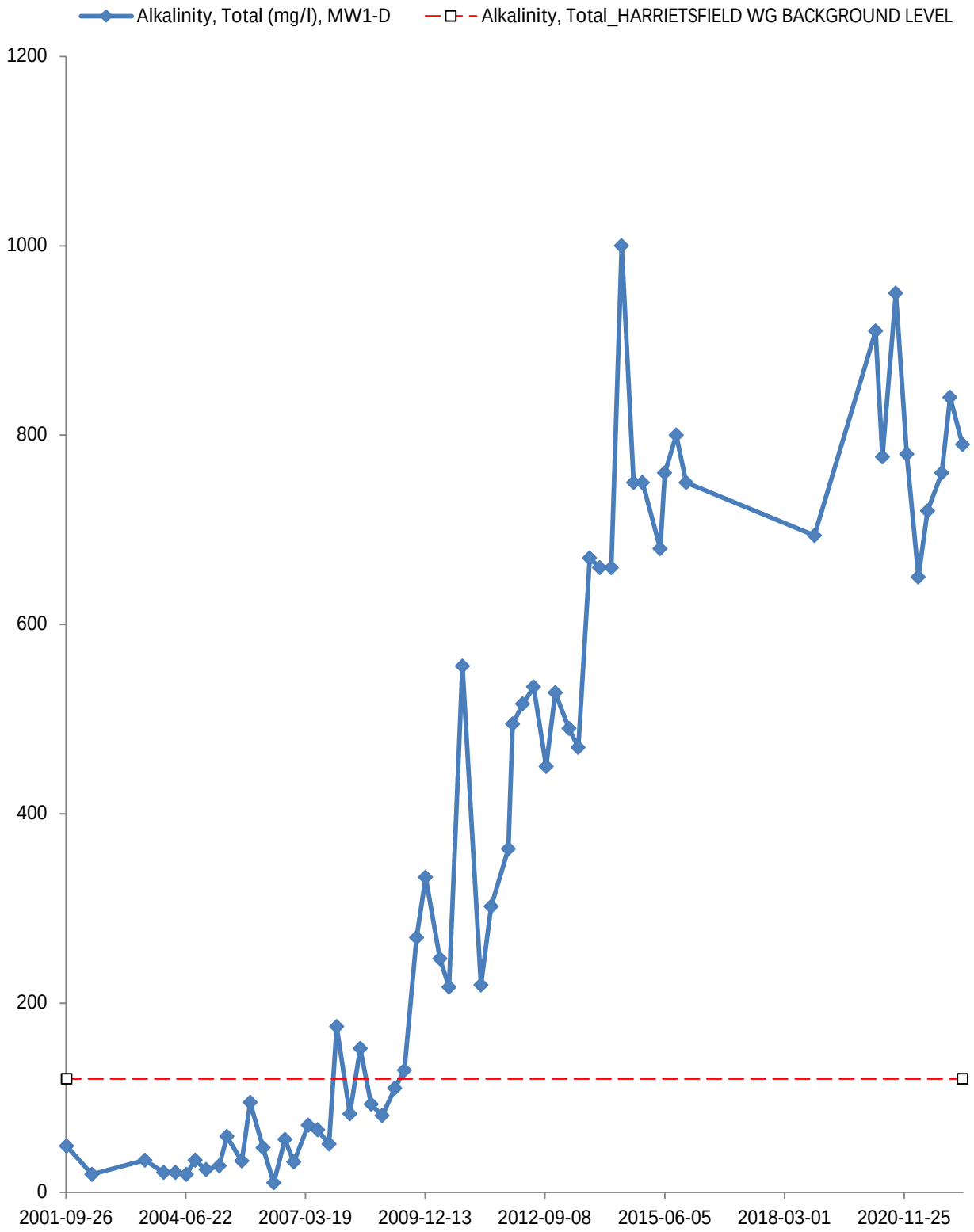
MW1-D - Alkalinity, Bicarbonate



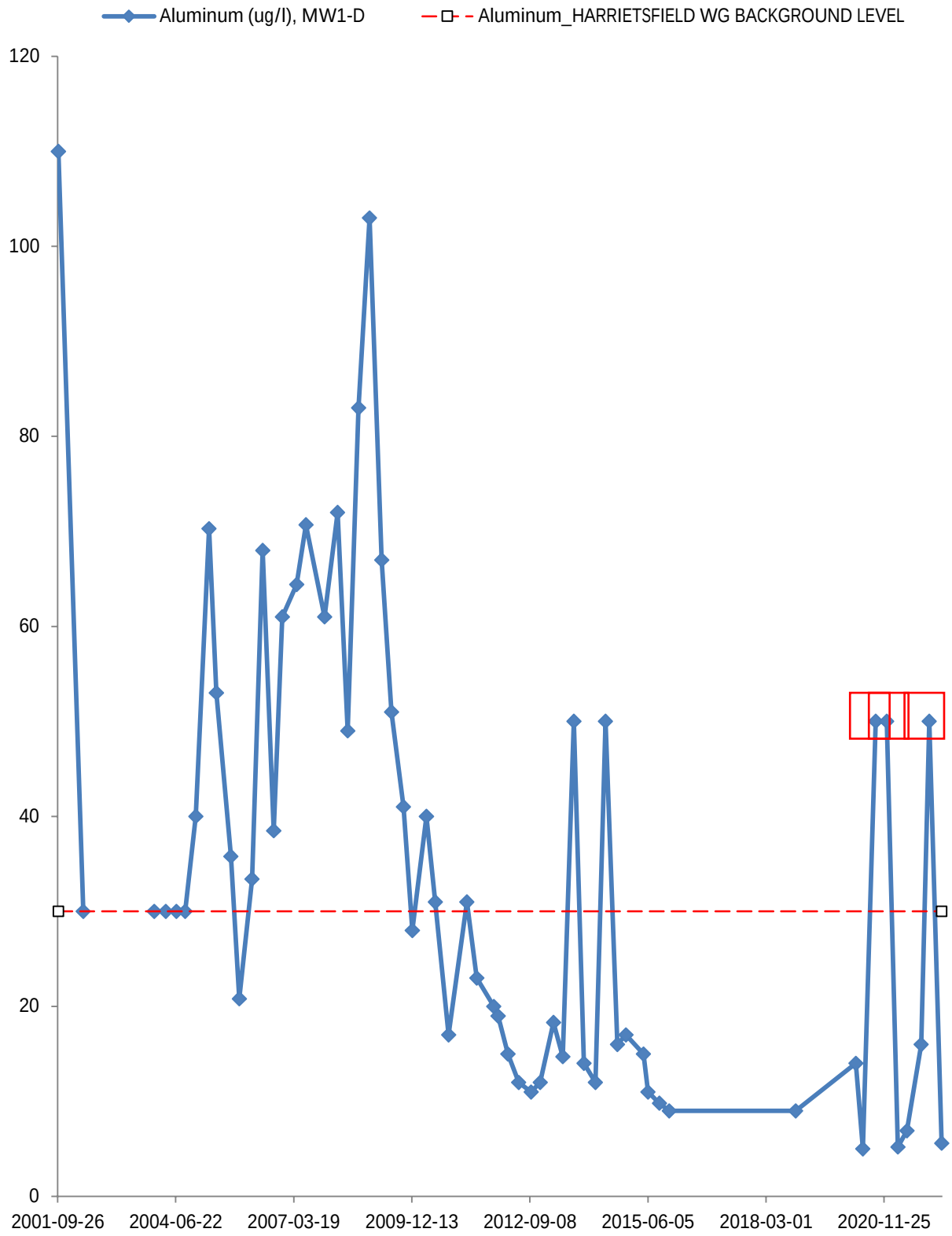
MW1-D - Alkalinity, Carbonate



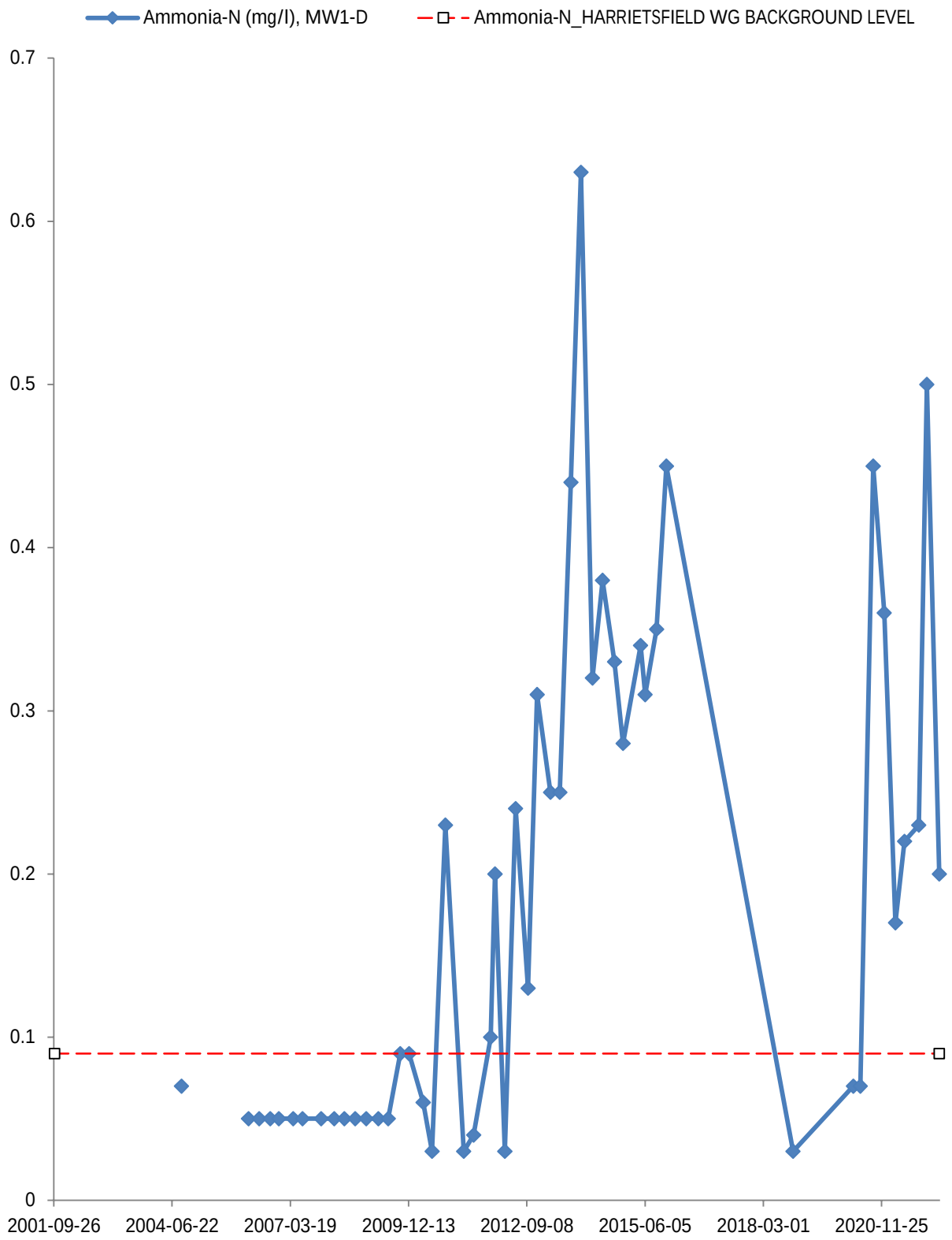
MW1-D - Alkalinity, Total



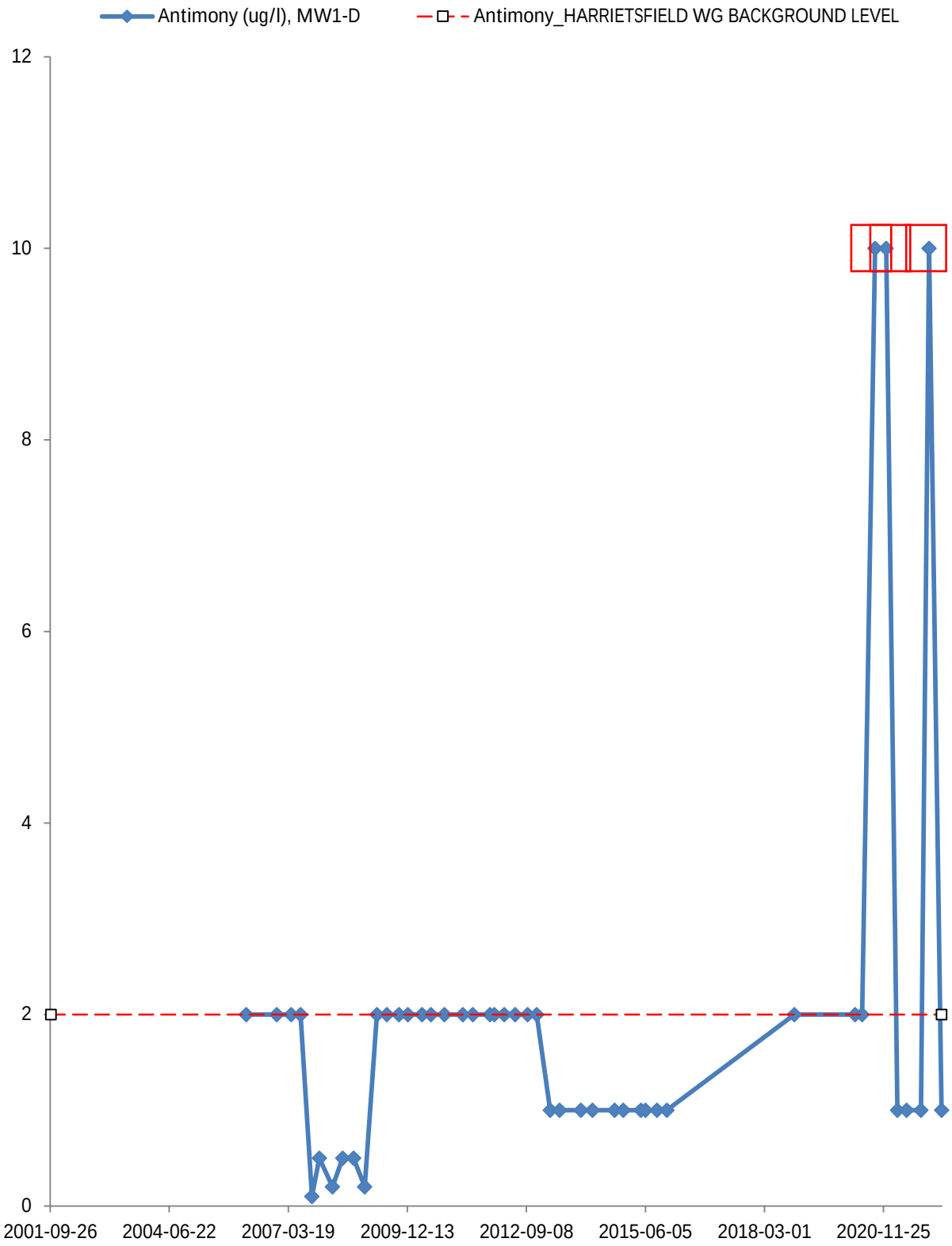
MW1-D - Aluminum



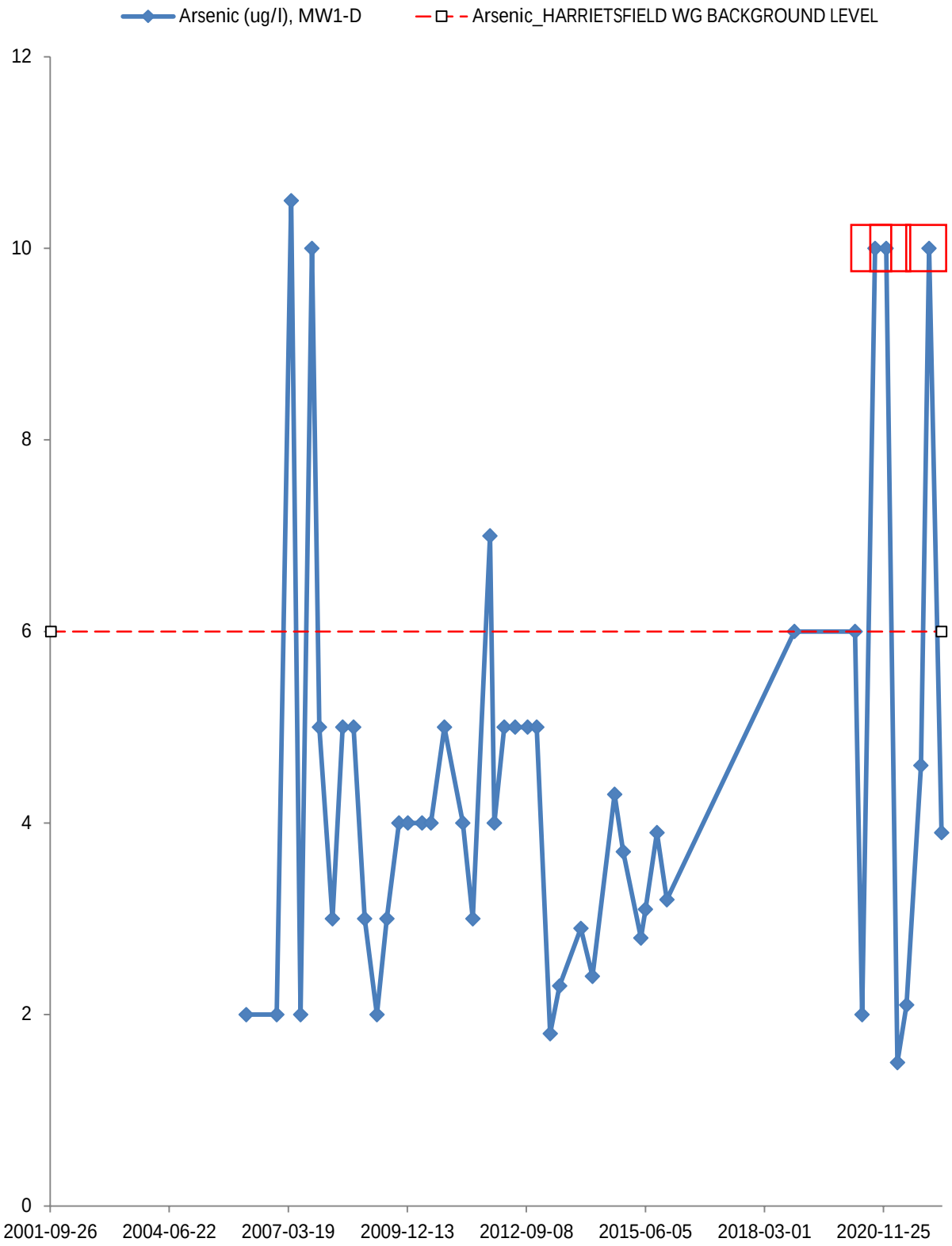
MW1-D - Ammonia-N



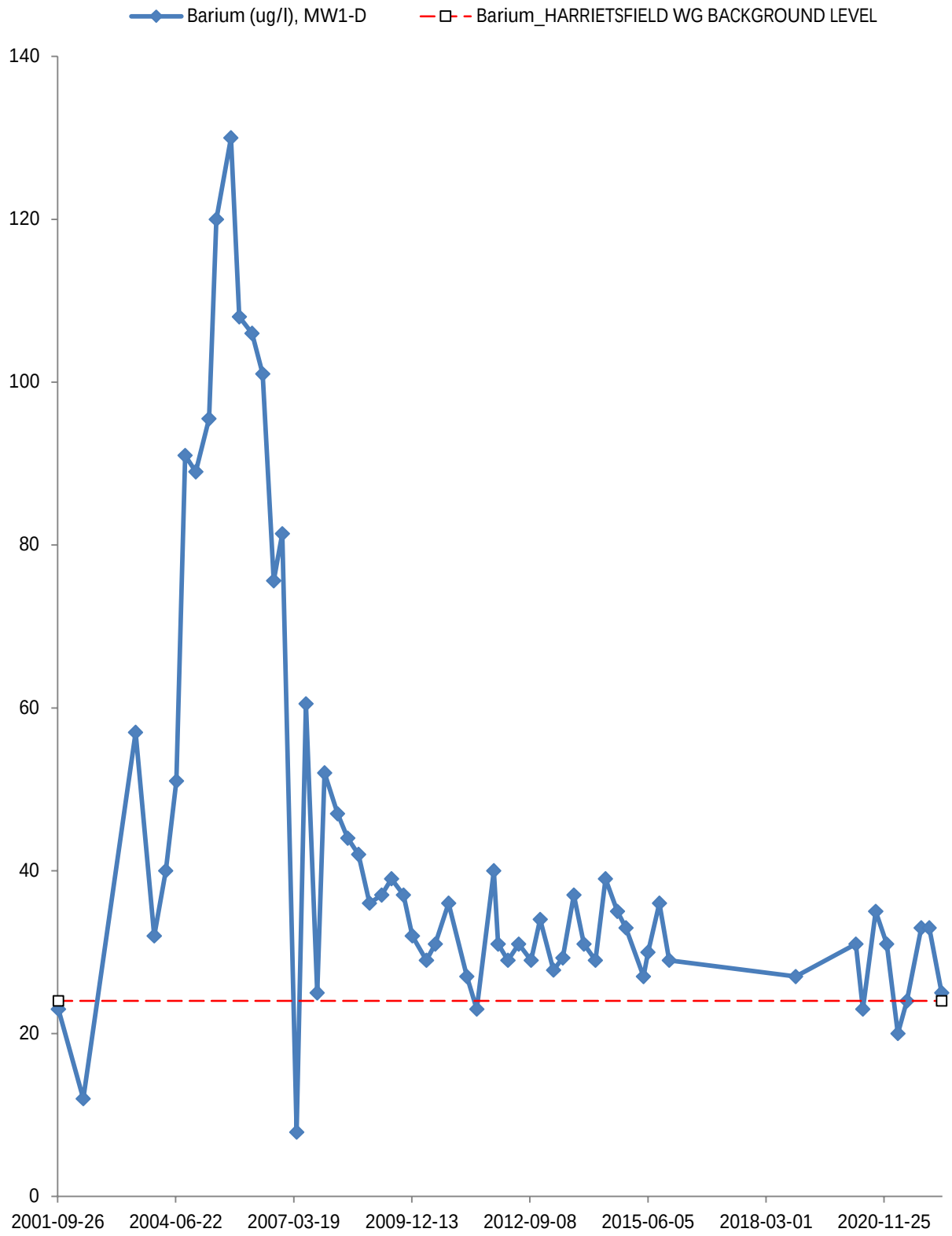
MW1-D - Antimony



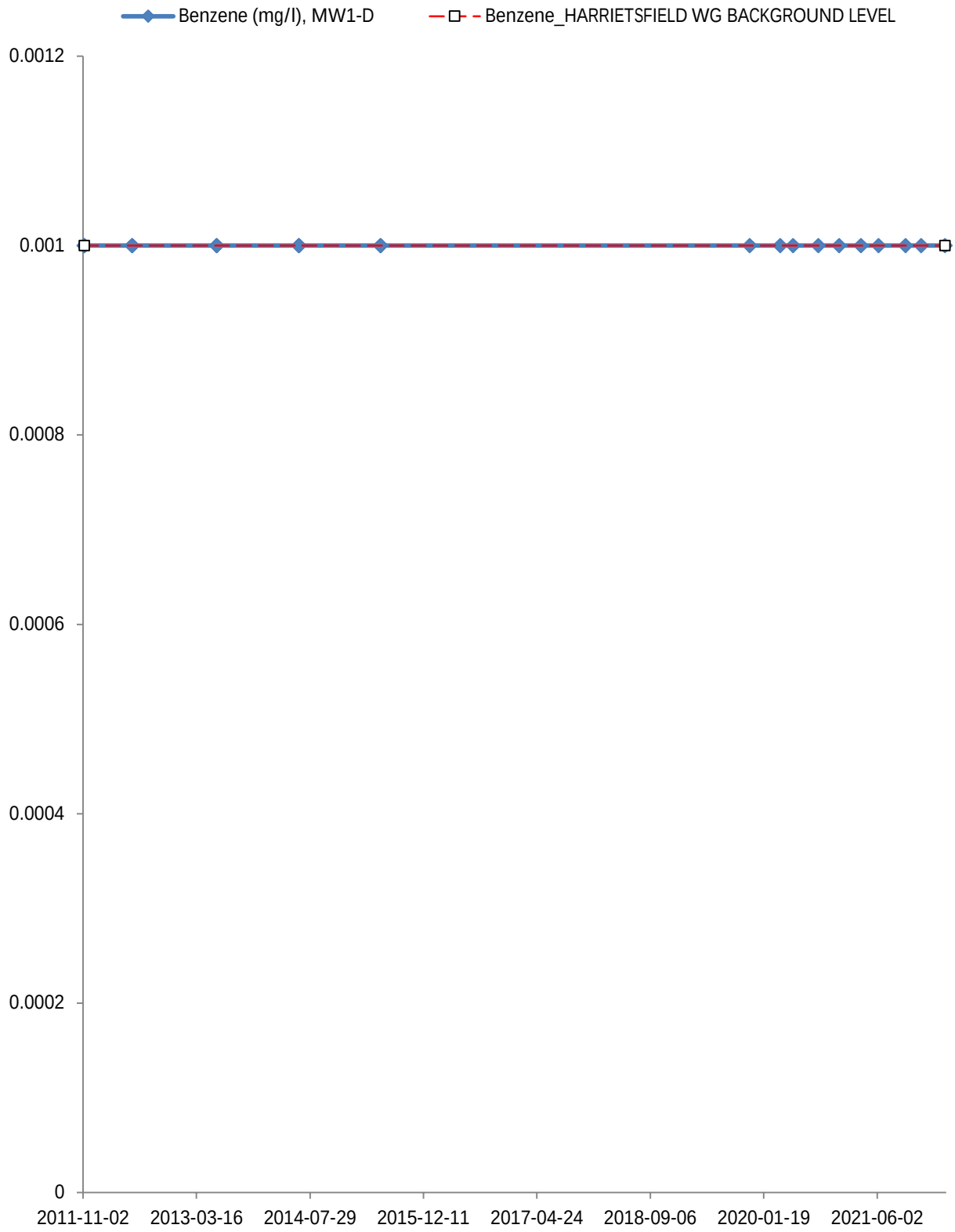
MW1-D - Arsenic



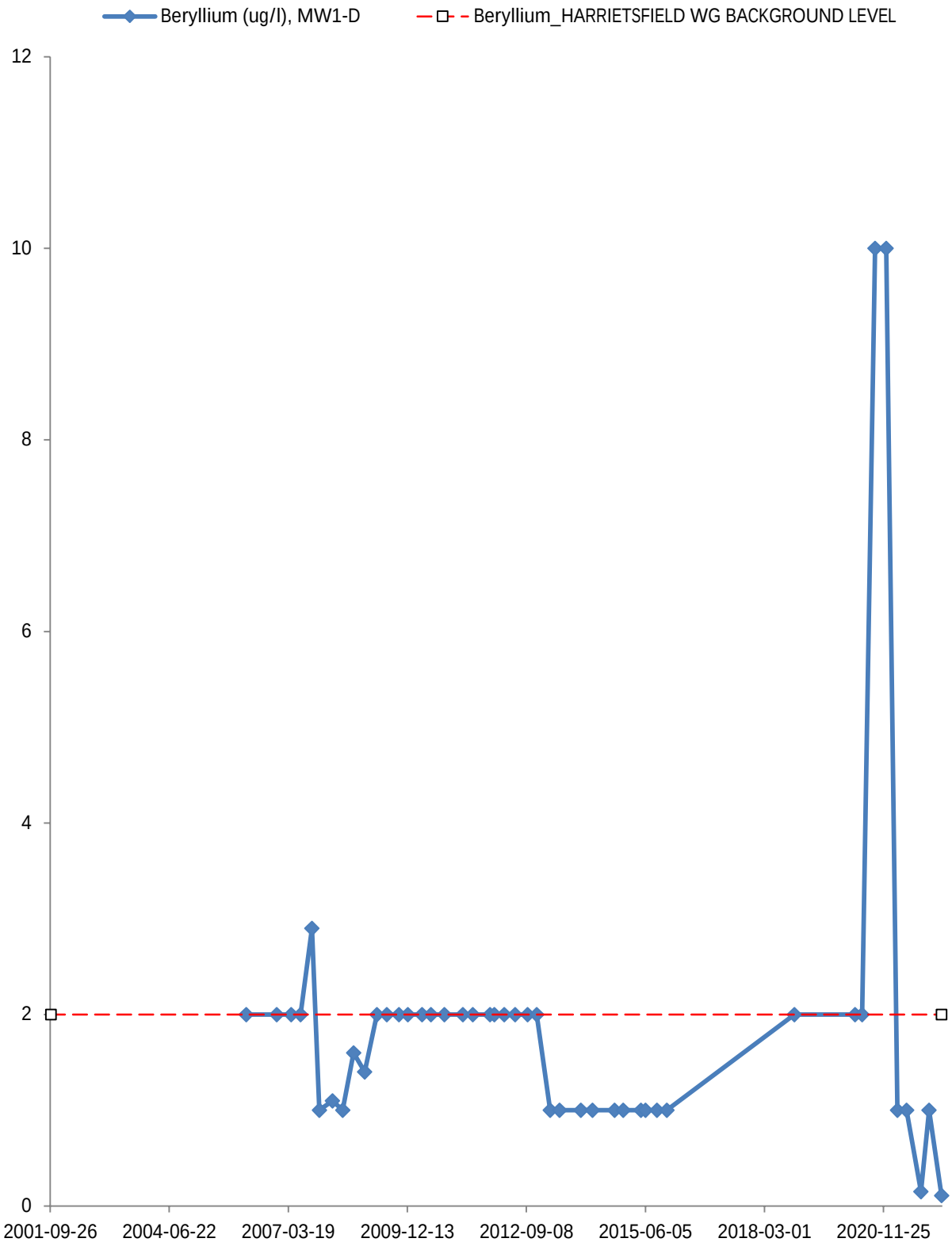
MW1-D - Barium


Barium (ug/l), MW1-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
140
120
100
80
60
40
20
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

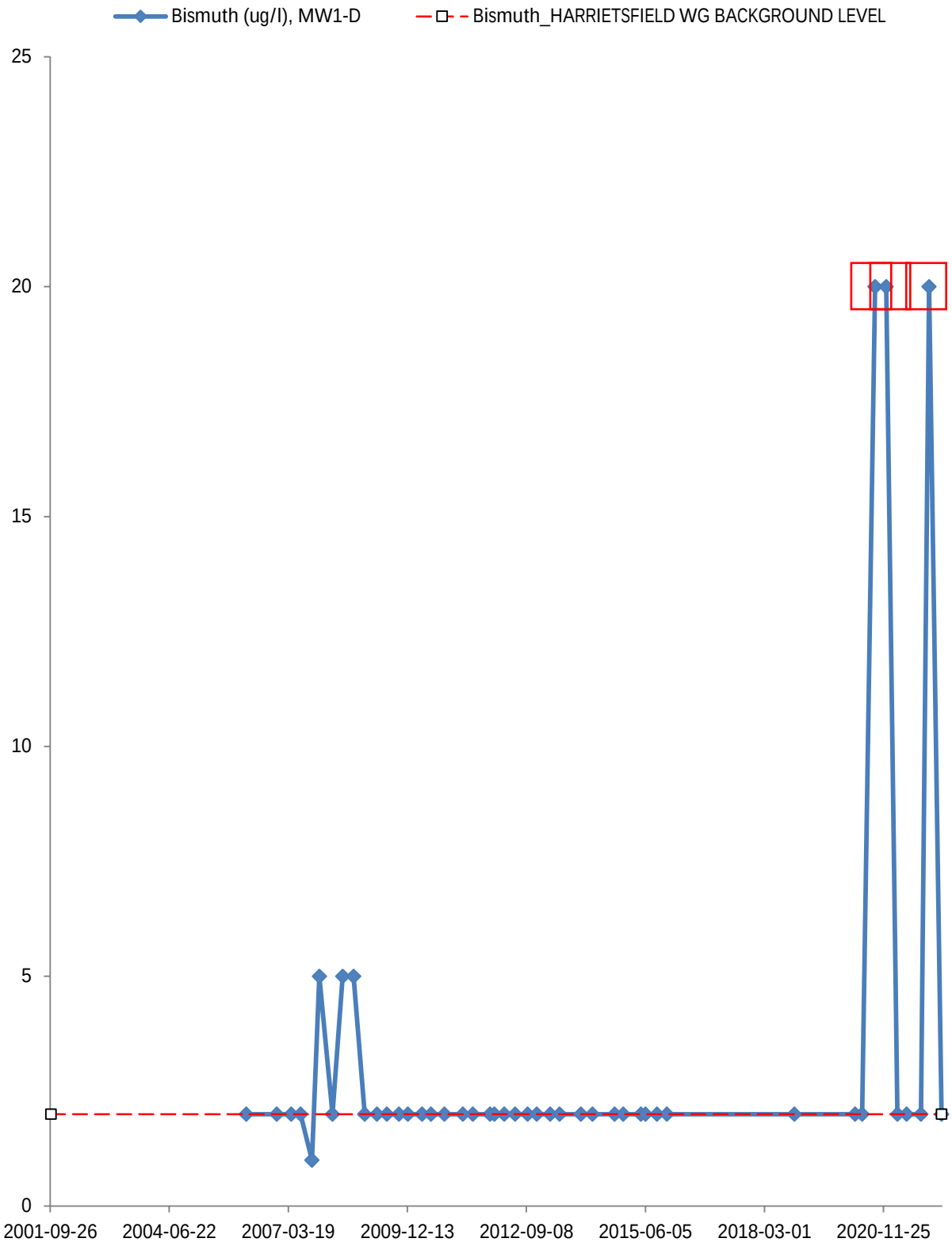
MW1-D - Benzene



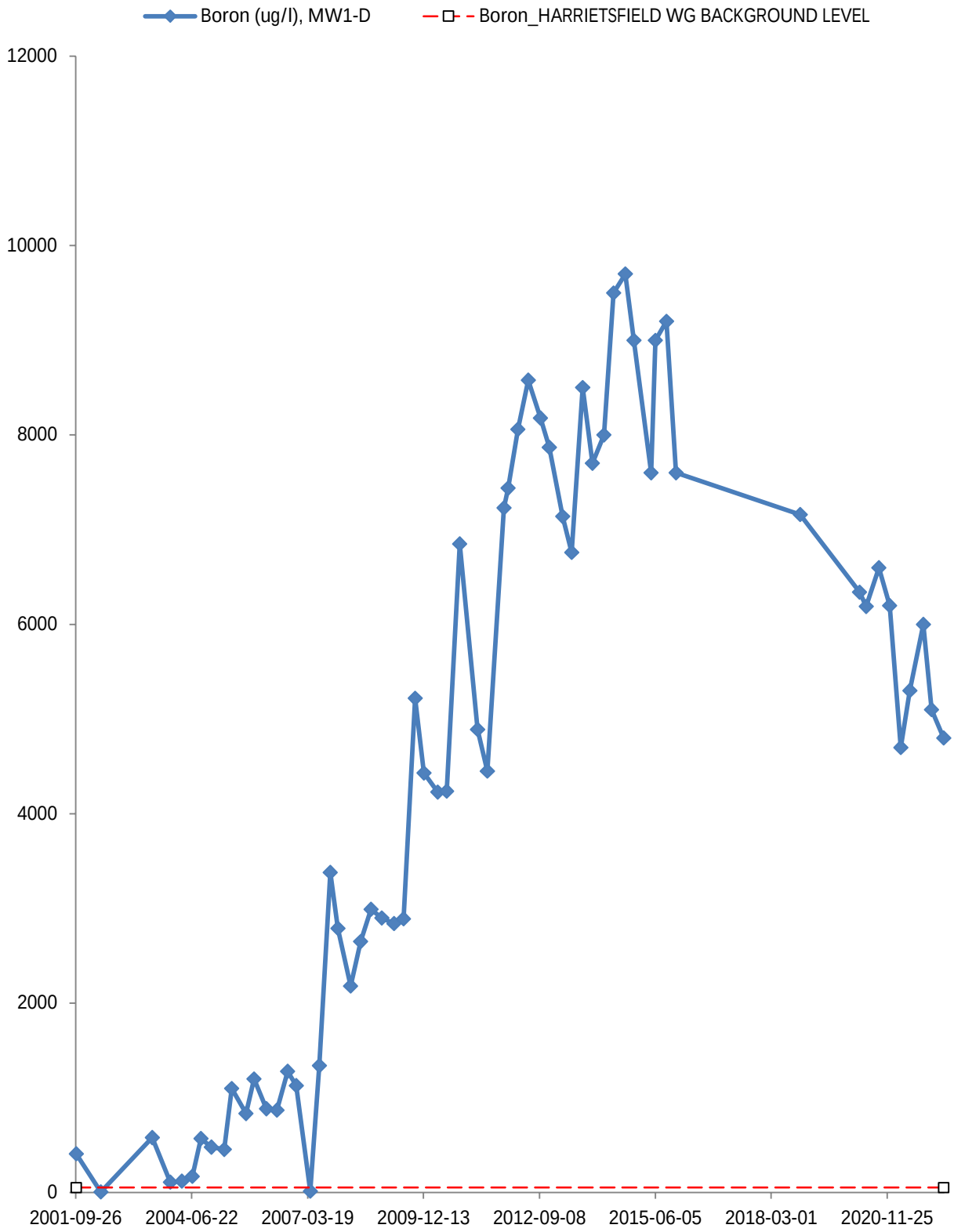
MW1-D - Beryllium



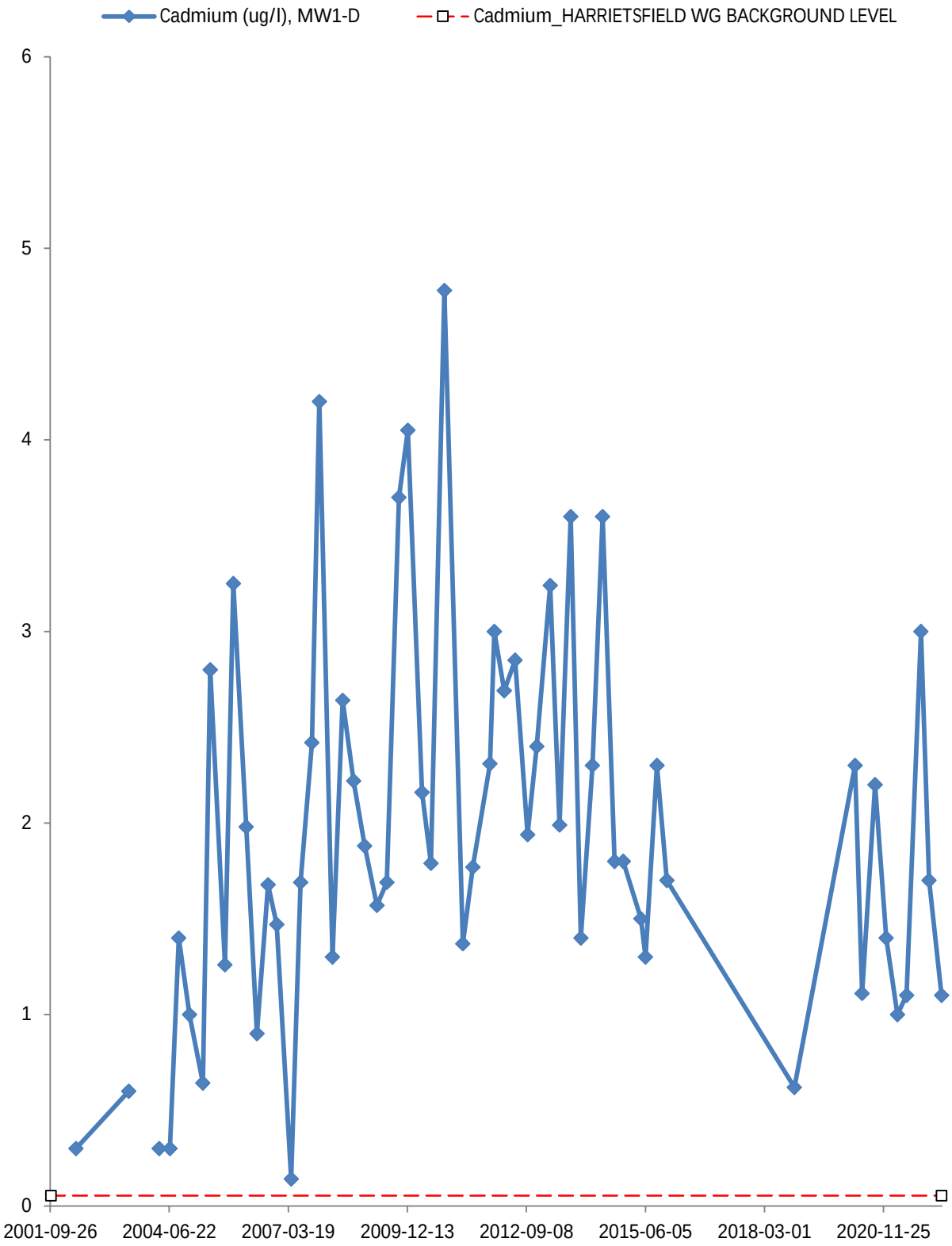
MW1-D - Bismuth



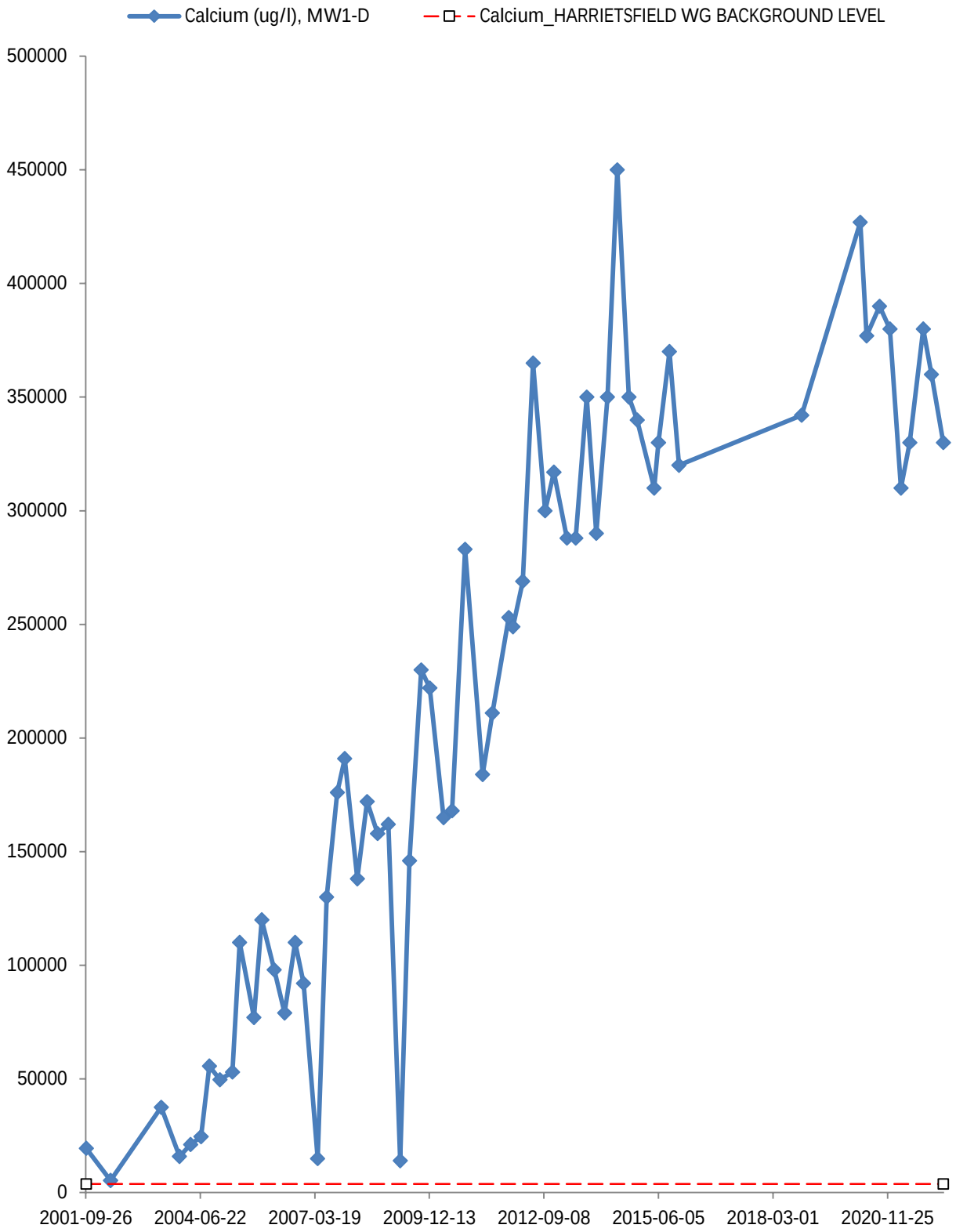
MW1-D - Boron


Boron (ug/l), MW1-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
12000
10000
8000
6000
4000
2000
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

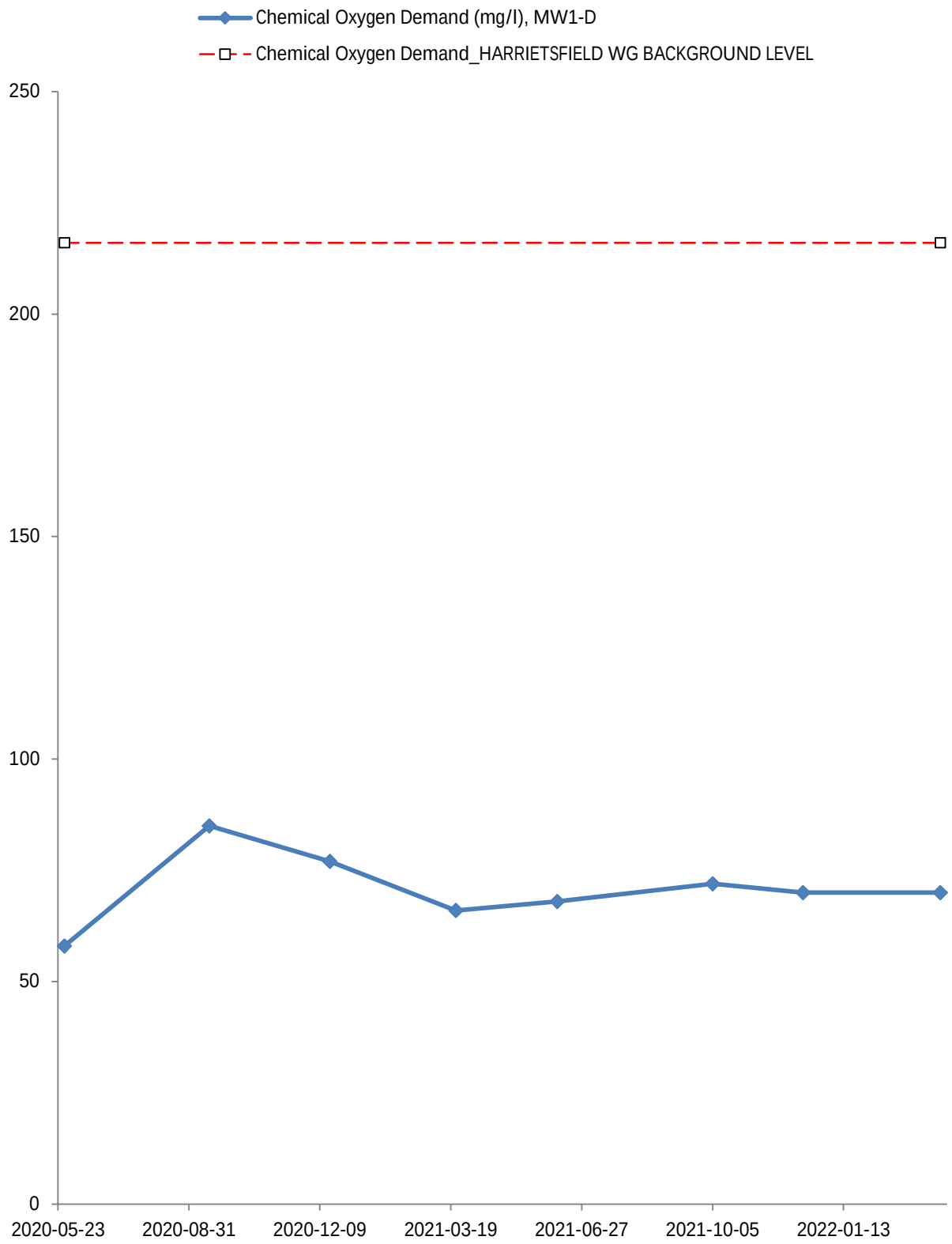
MW1-D - Cadmium



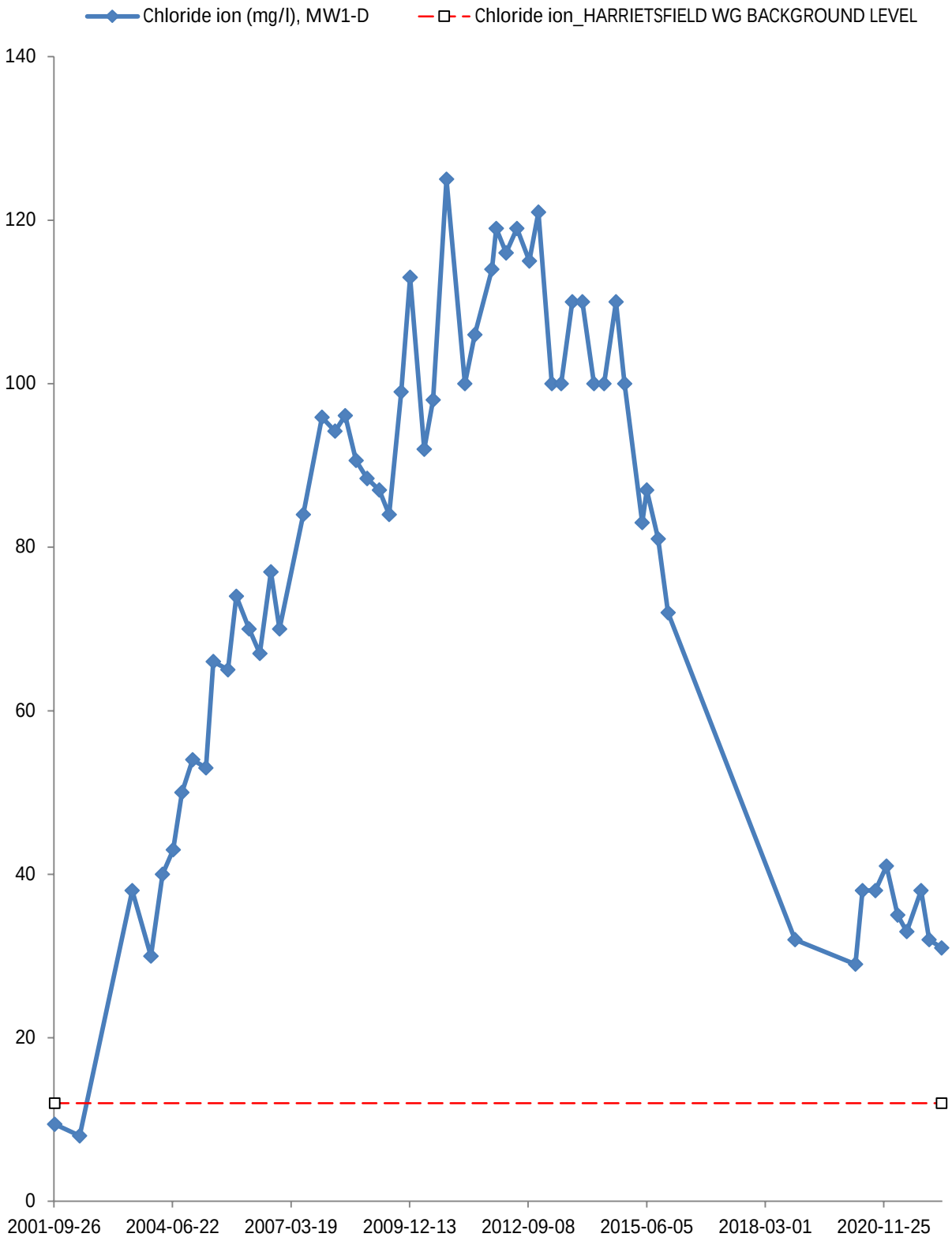
MW1-D - Calcium



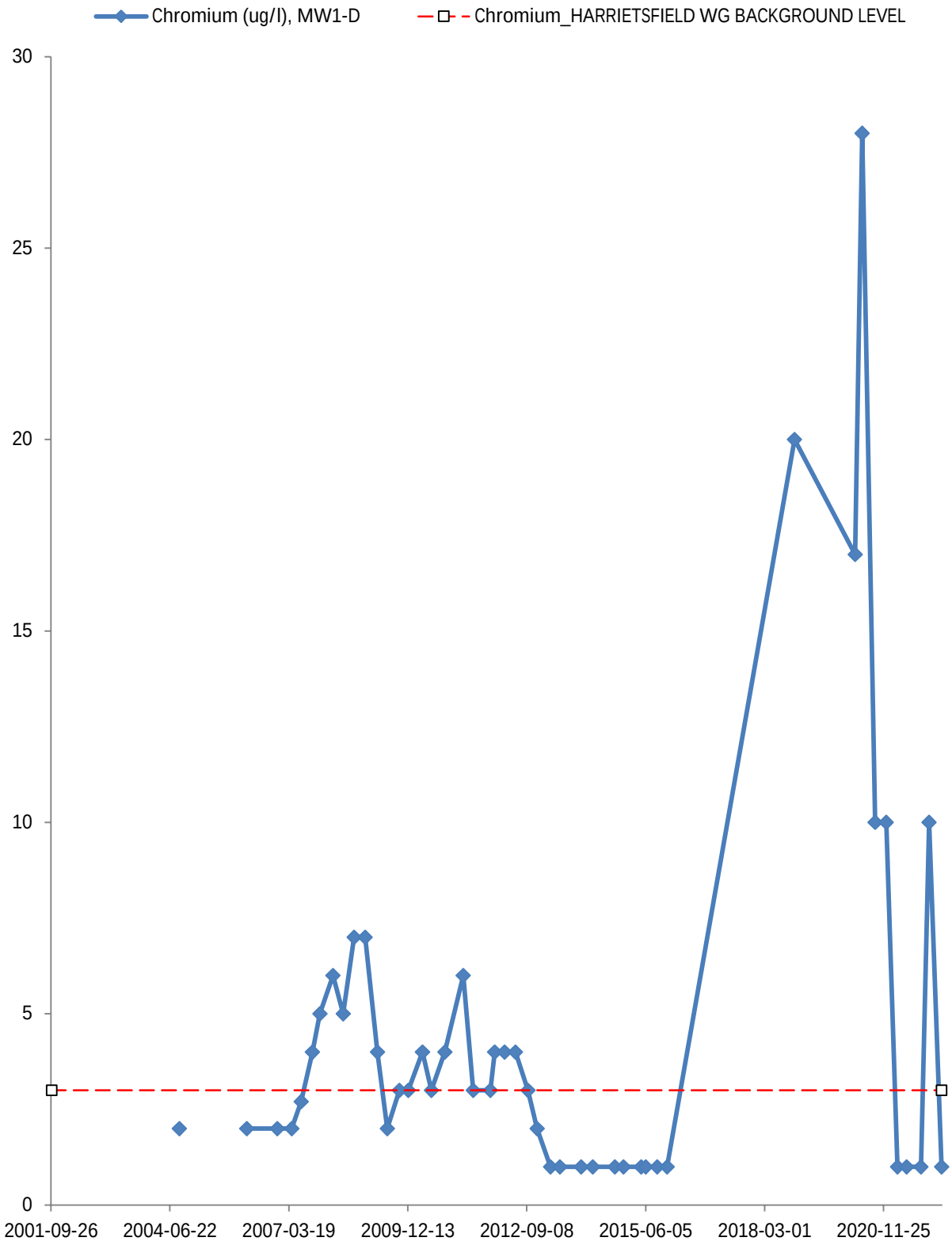
MW1-D - Chemical Oxygen Demand



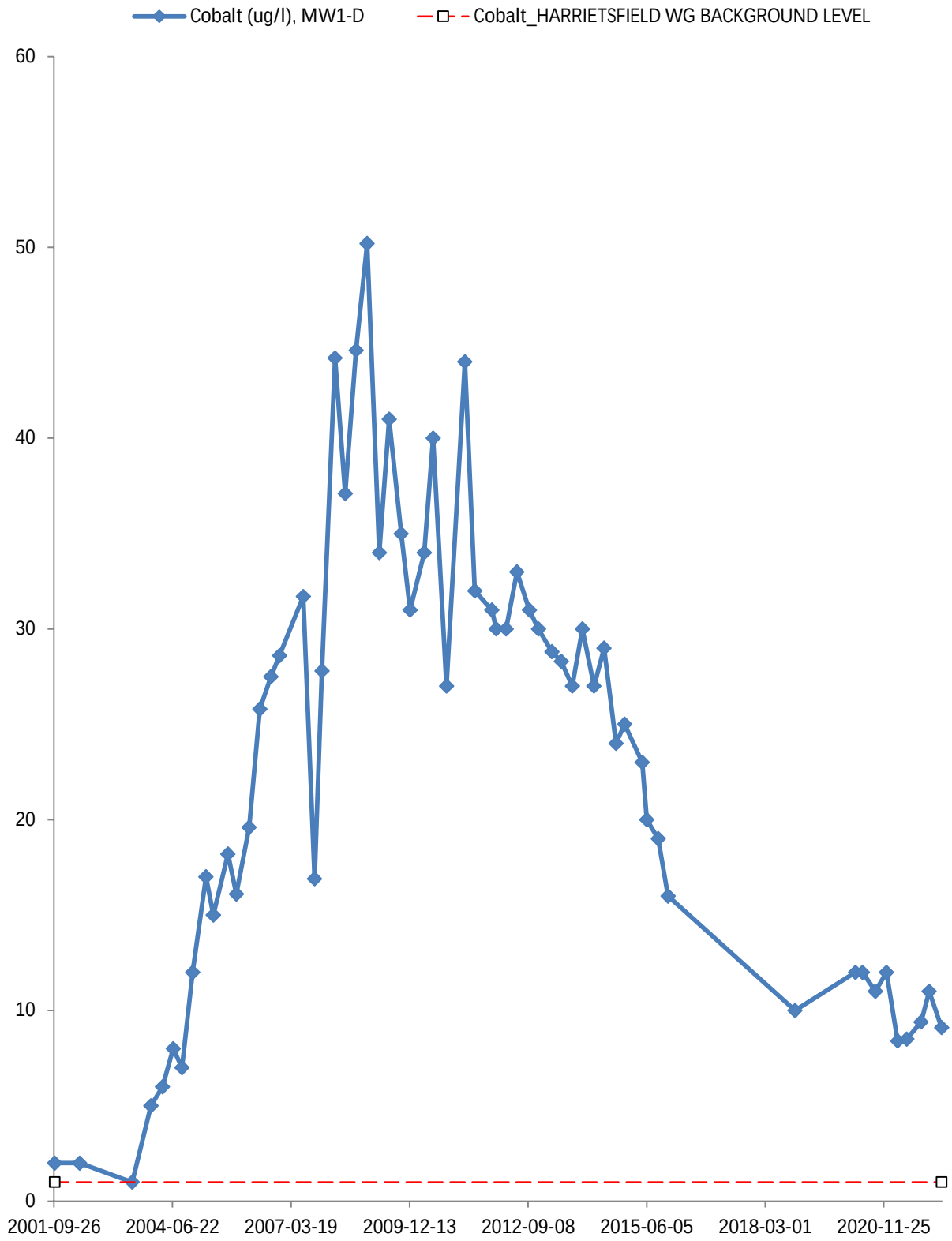
MW1-D - Chloride ion



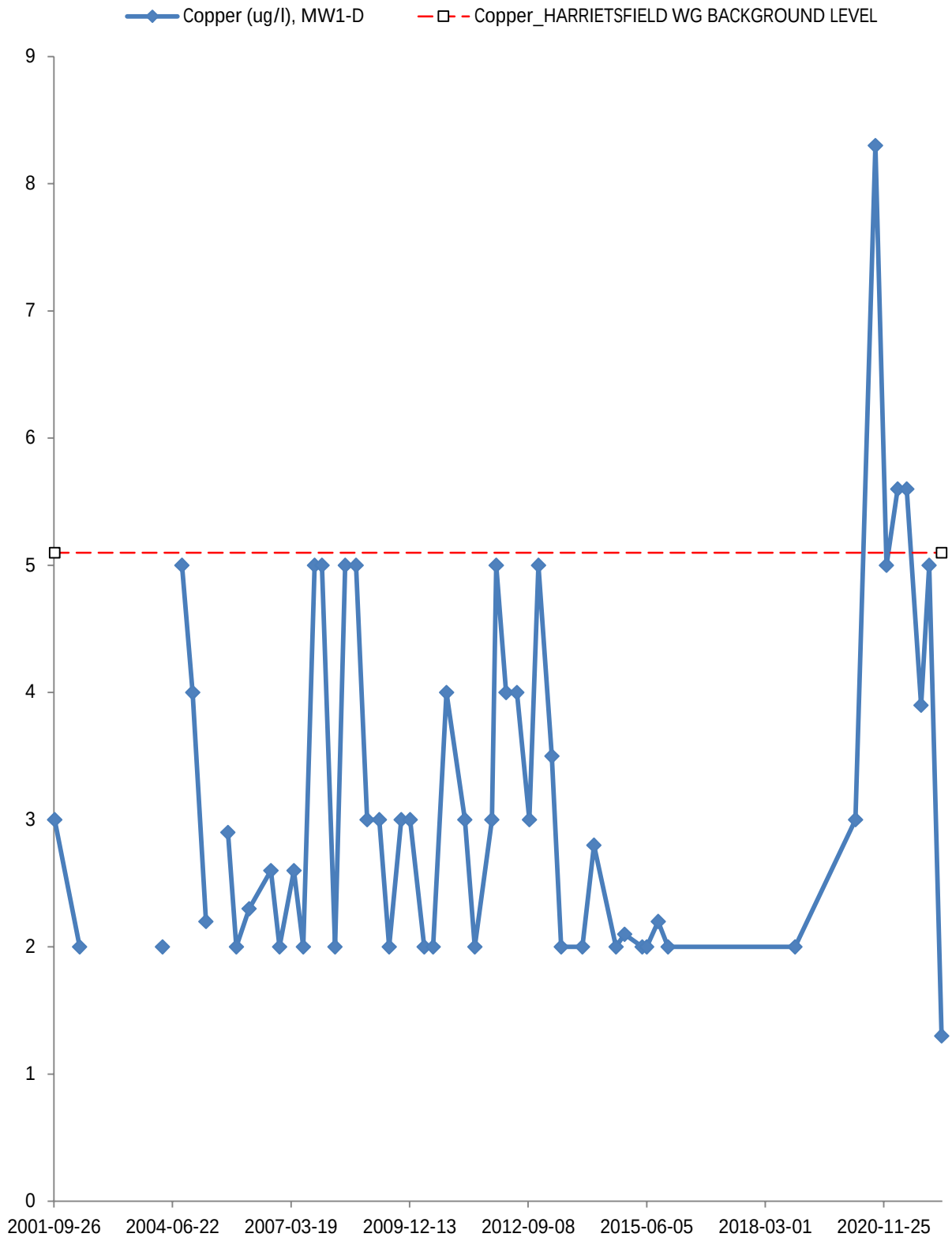
MW1-D - Chromium



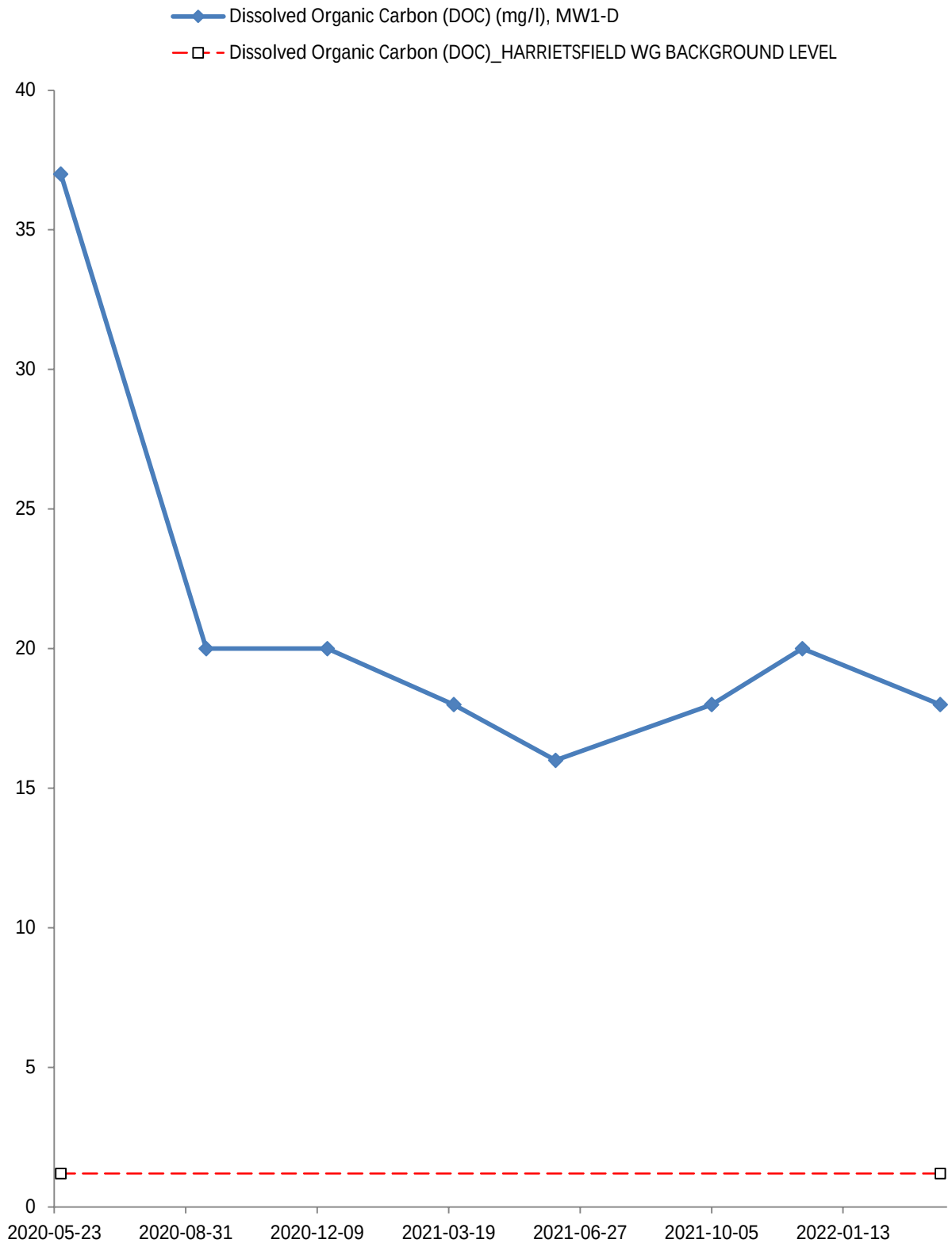
MW1-D - Cobalt


Cobalt (ug/l), MW1-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
60
50
40
30
20
10
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

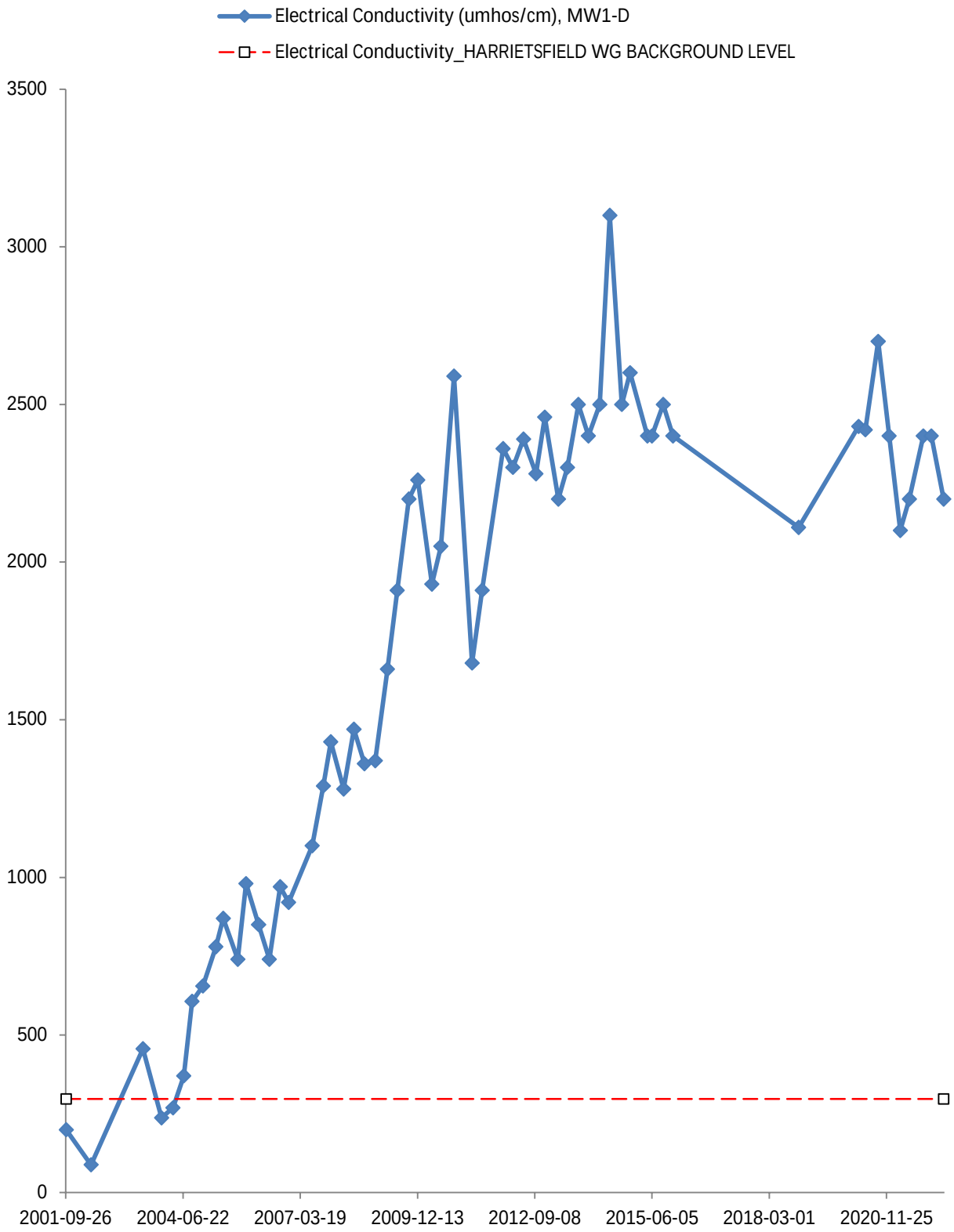
MW1-D - Copper


Copper (ug/l), MW1-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

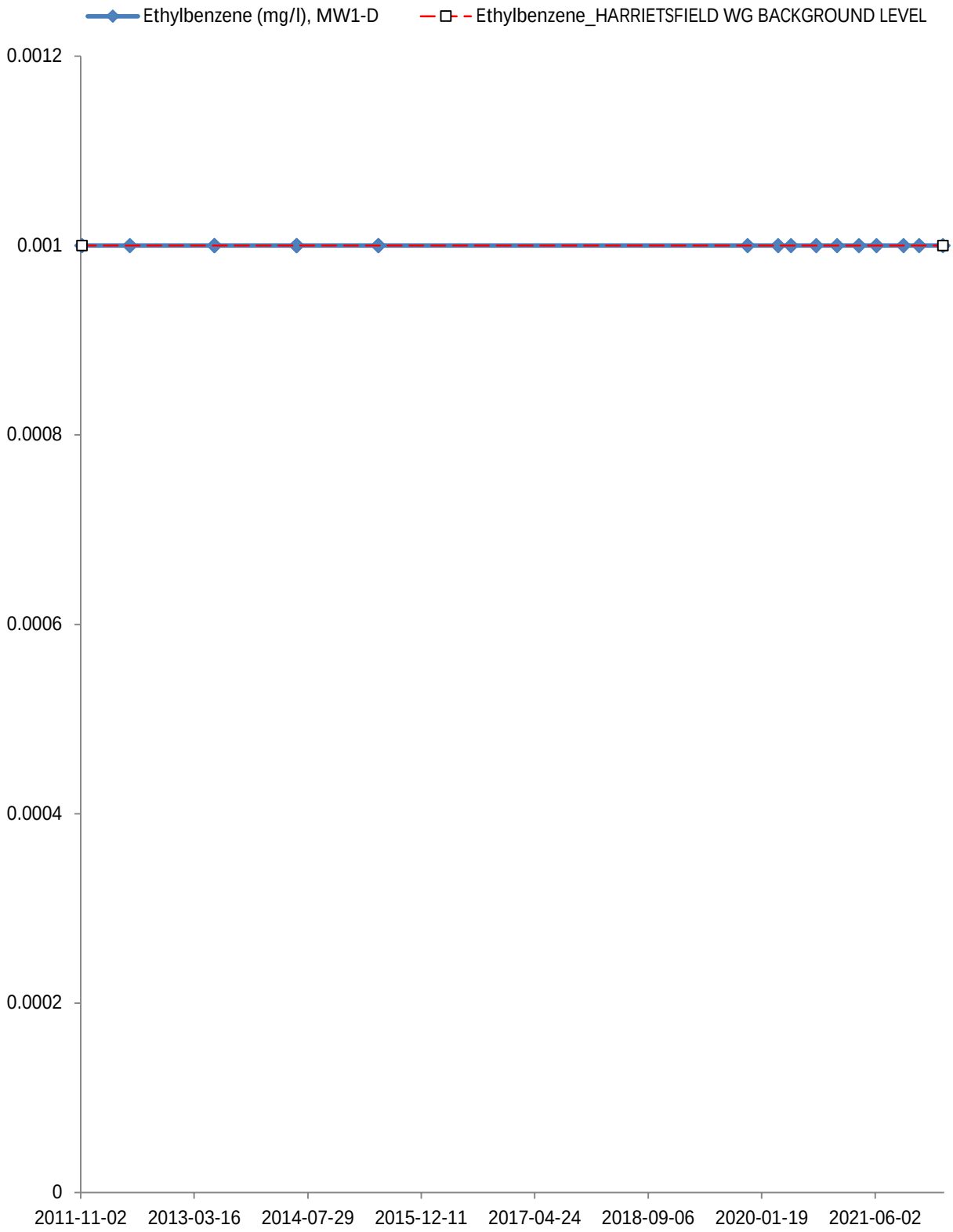
MW1-D - Dissolved Organic Carbon7



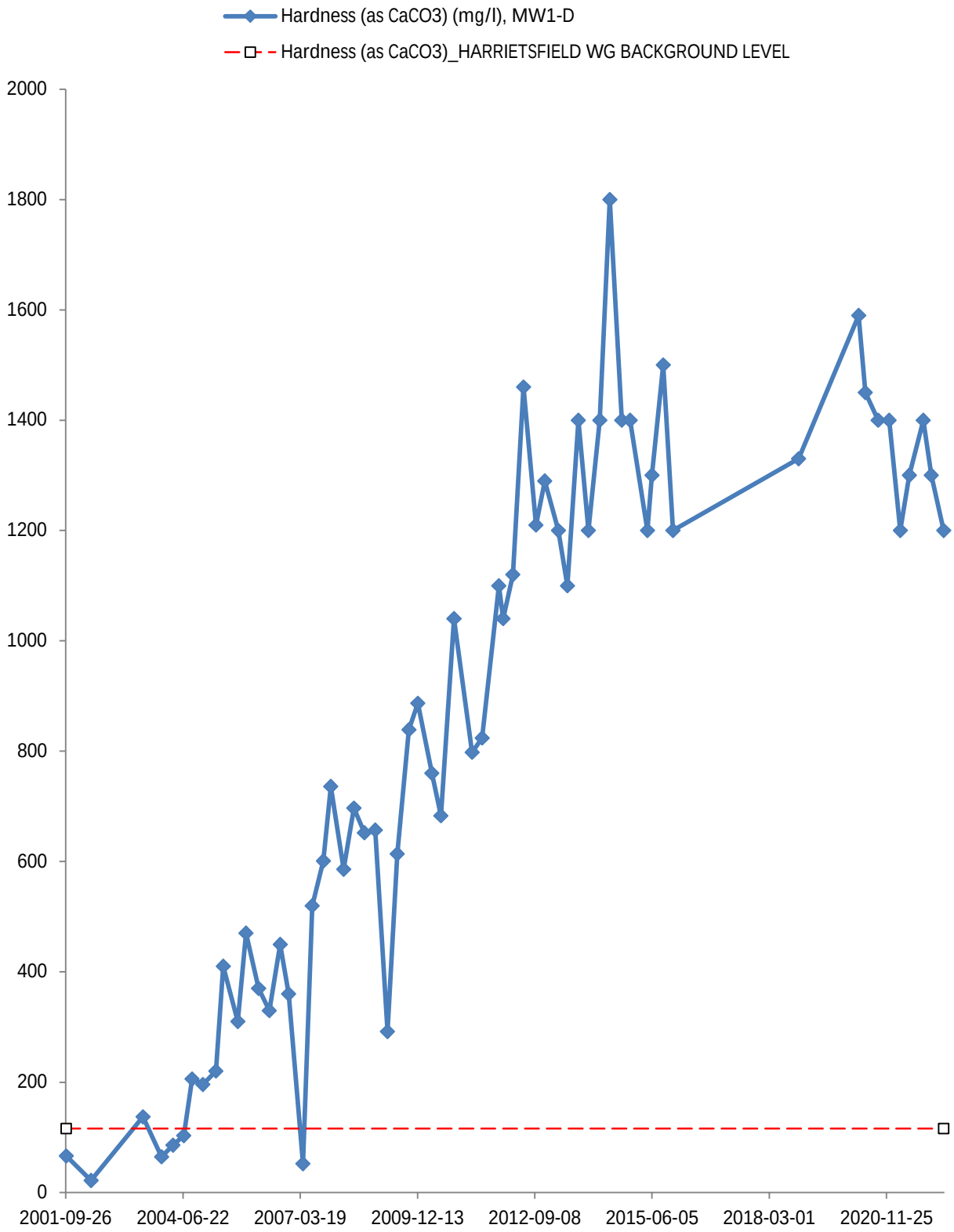
MW1-D - Electrical Conductivity



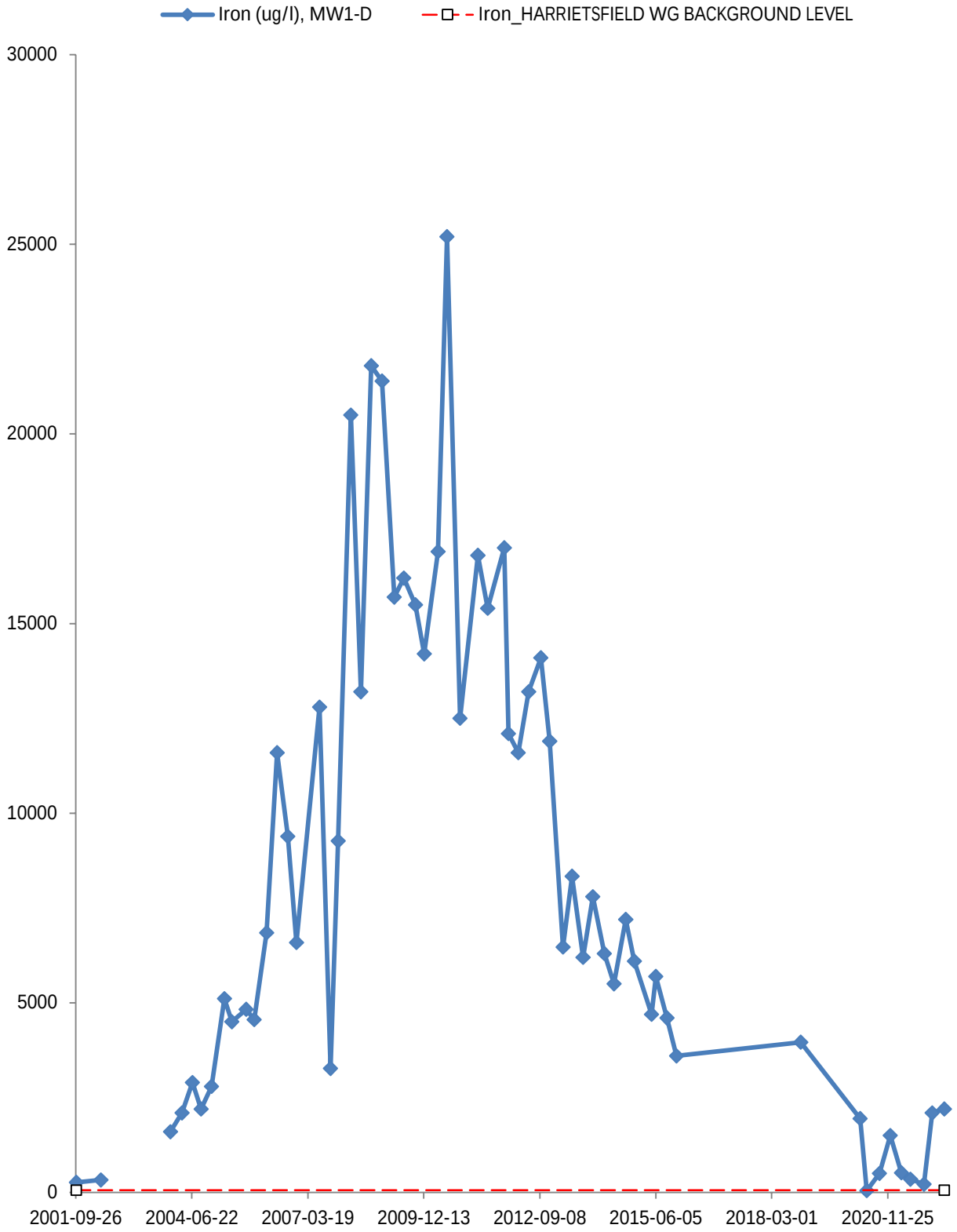
MW1-D - Ethylbenzene



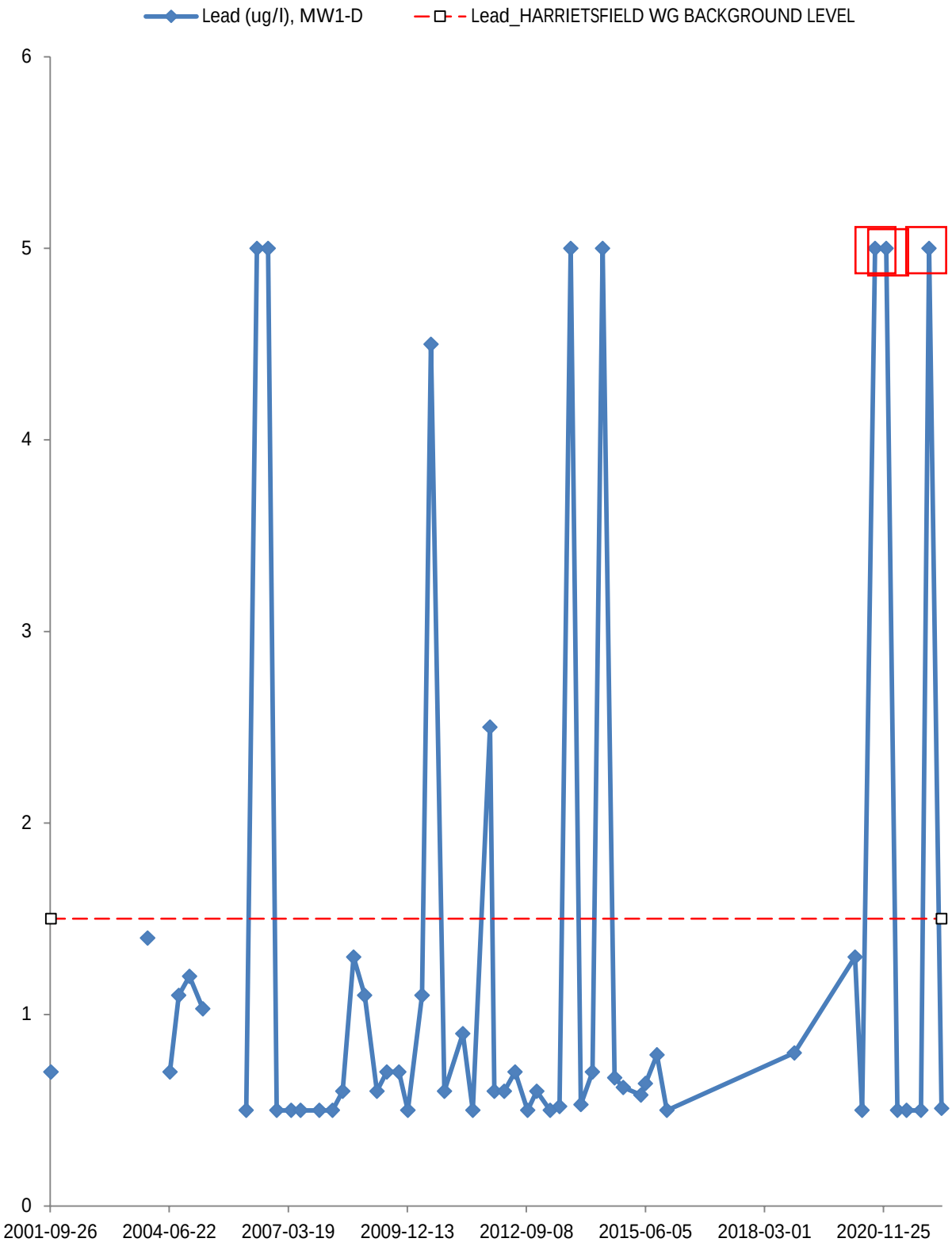
MW1-D - Hardness (as CaCO3)



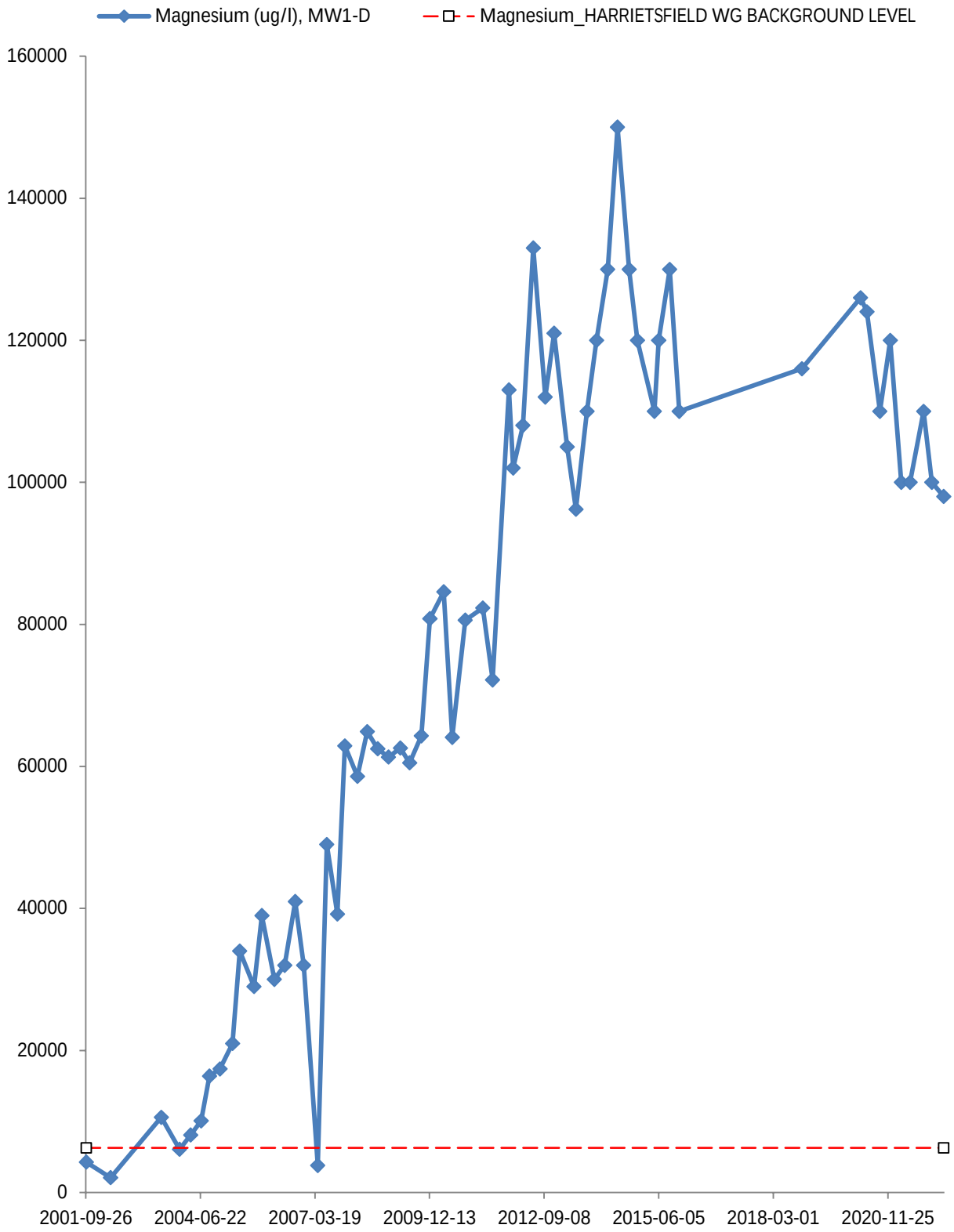
MW1-D - Iron


Iron (ug/l), MW1-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
30000
25000
20000
15000
10000
5000
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

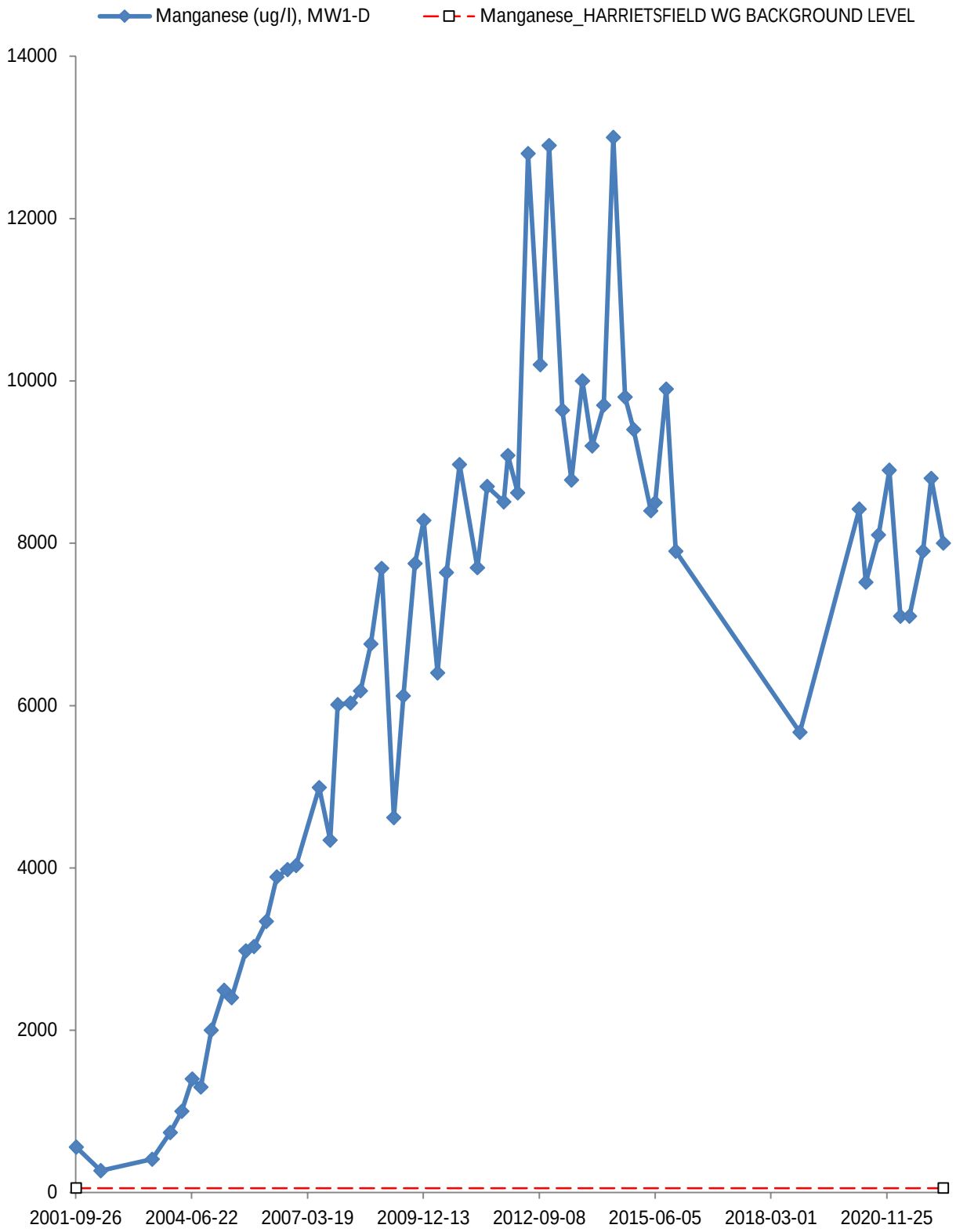
MW1-D - Lead


Lead (ug/l), MW1-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

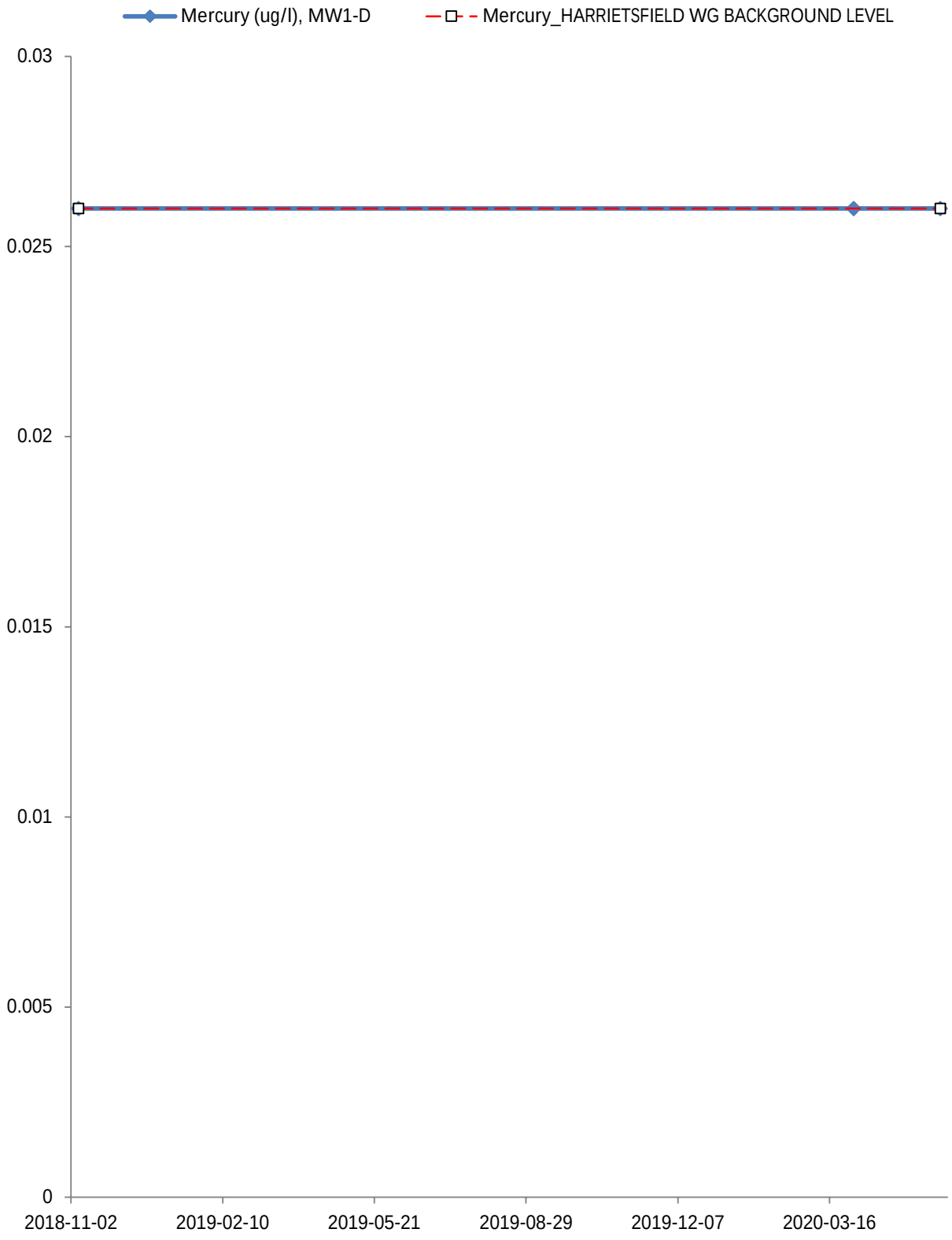
MW1-D - Magnesium



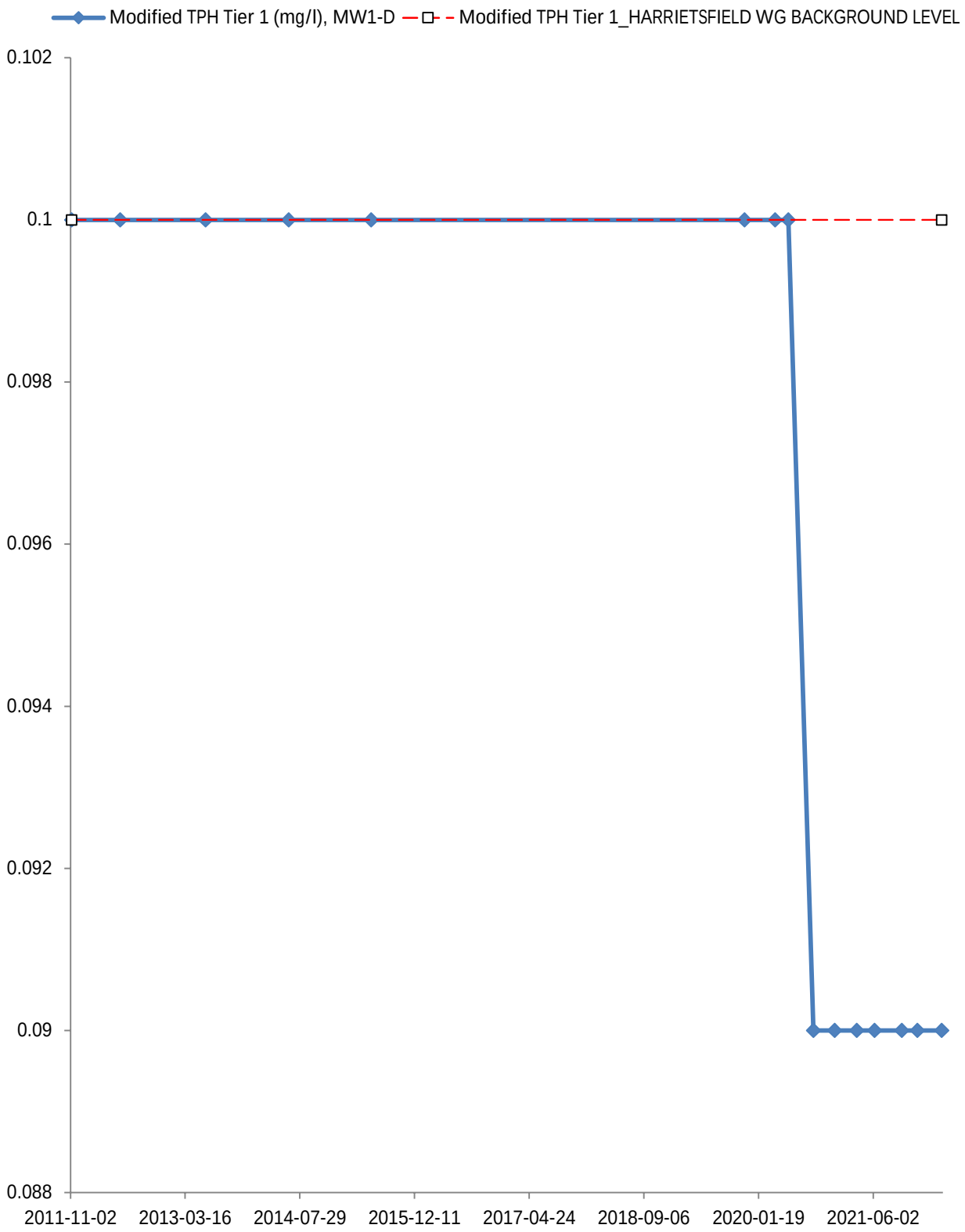
MW1-D - Manganese



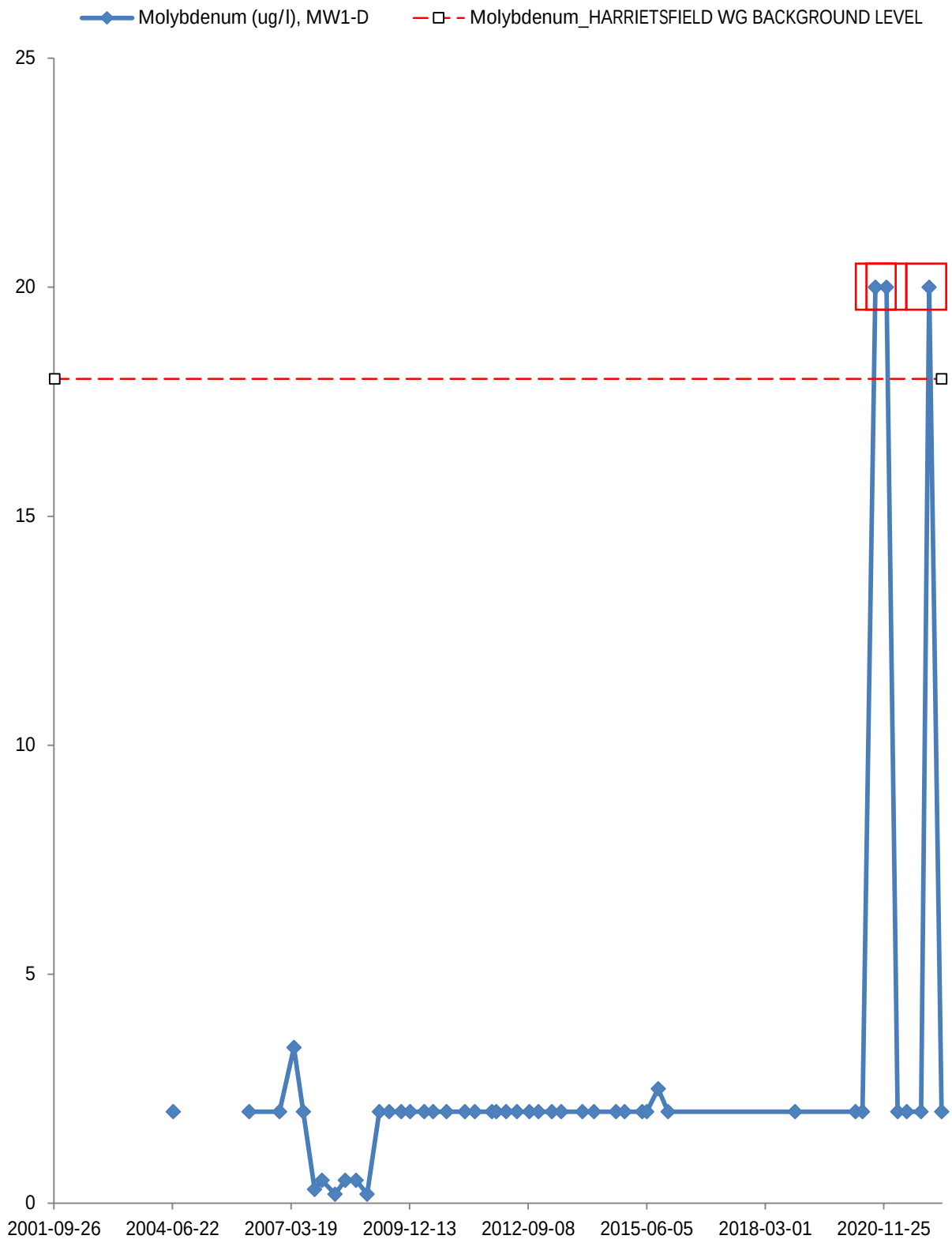
MW1-D - Mercury



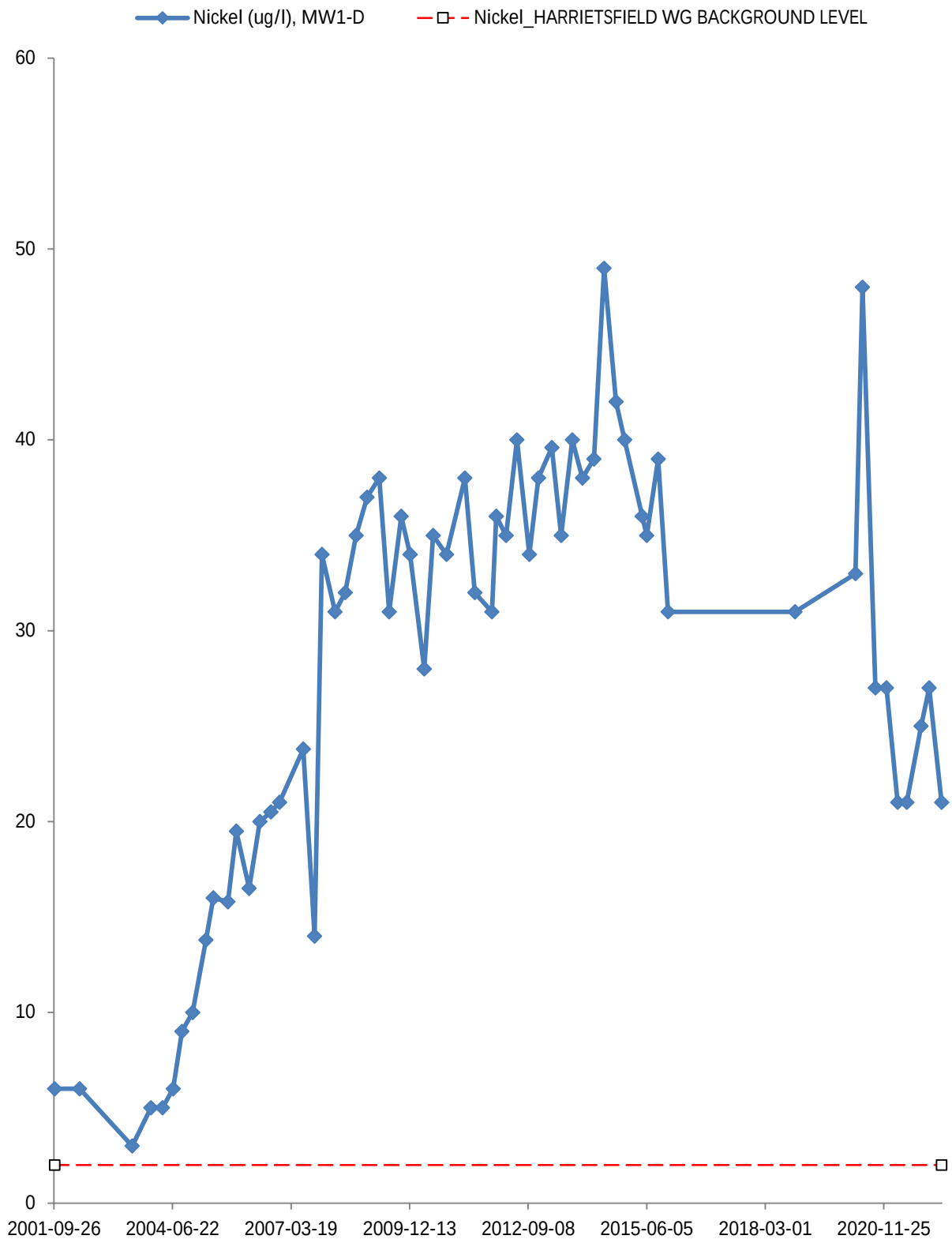
MW1-D - Modified TPH Tier 1



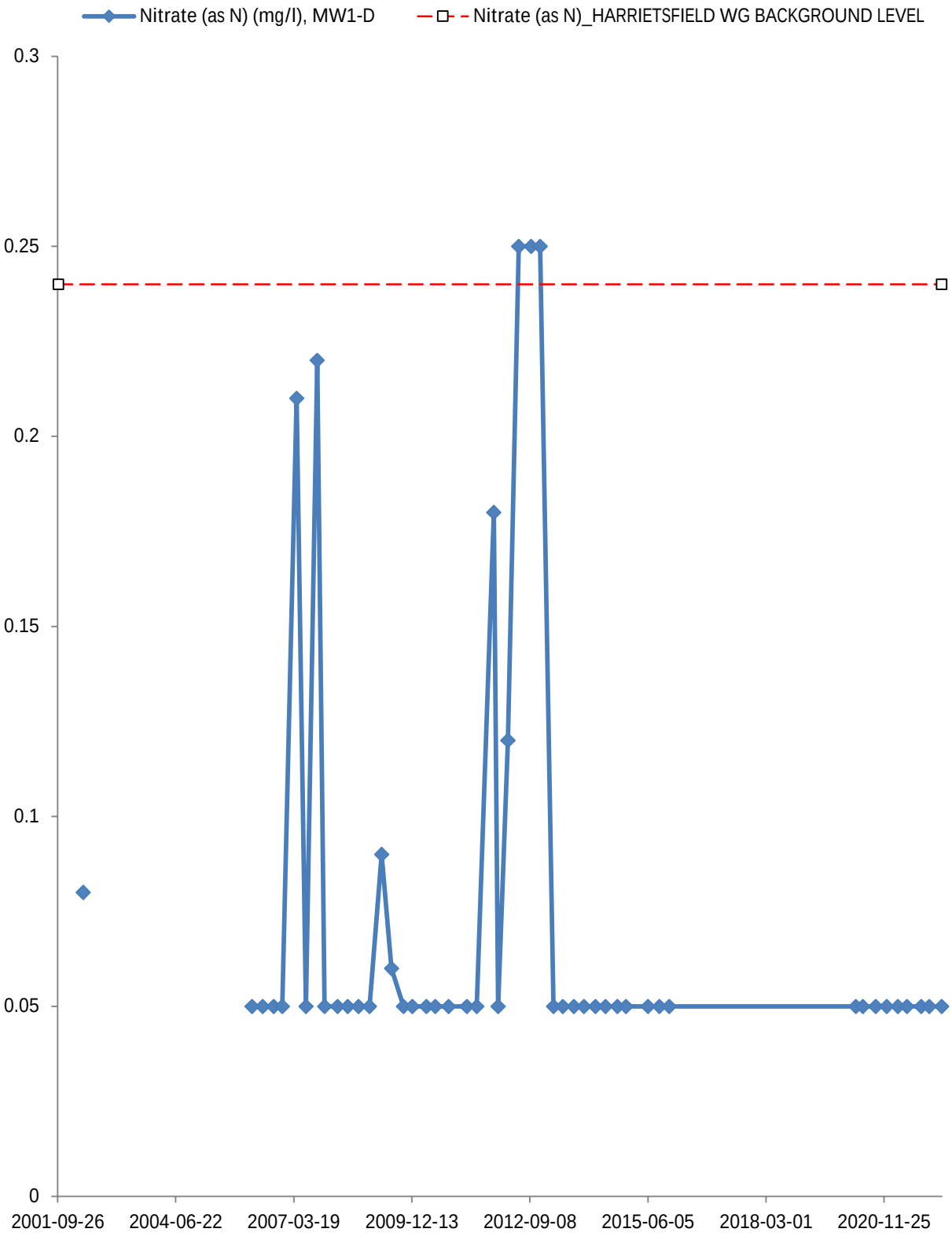
MW1-D - Molybdenum



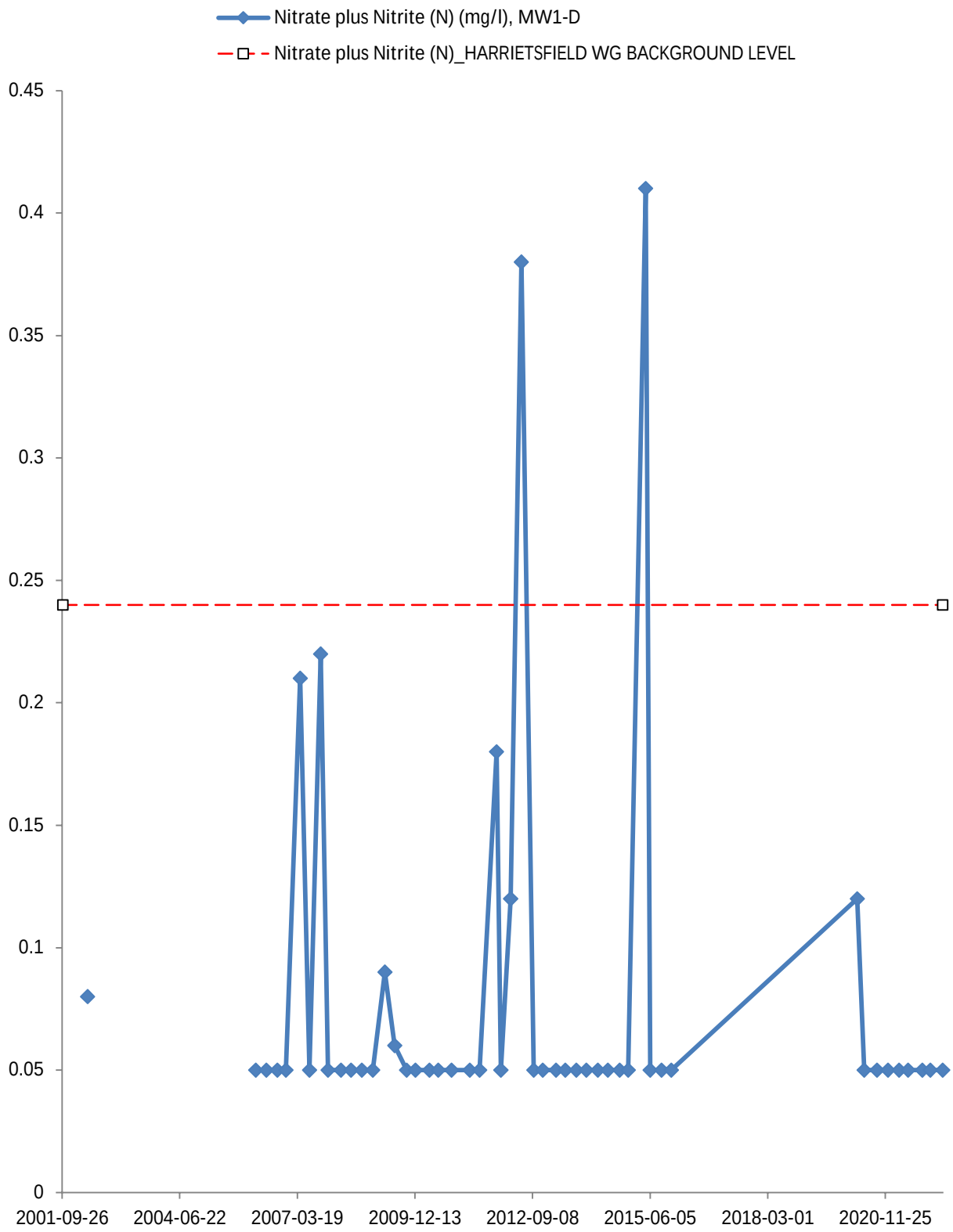
MW1-D - Nickel


Nickel (ug/l), MW1-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
60
50
40
30
20
10
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

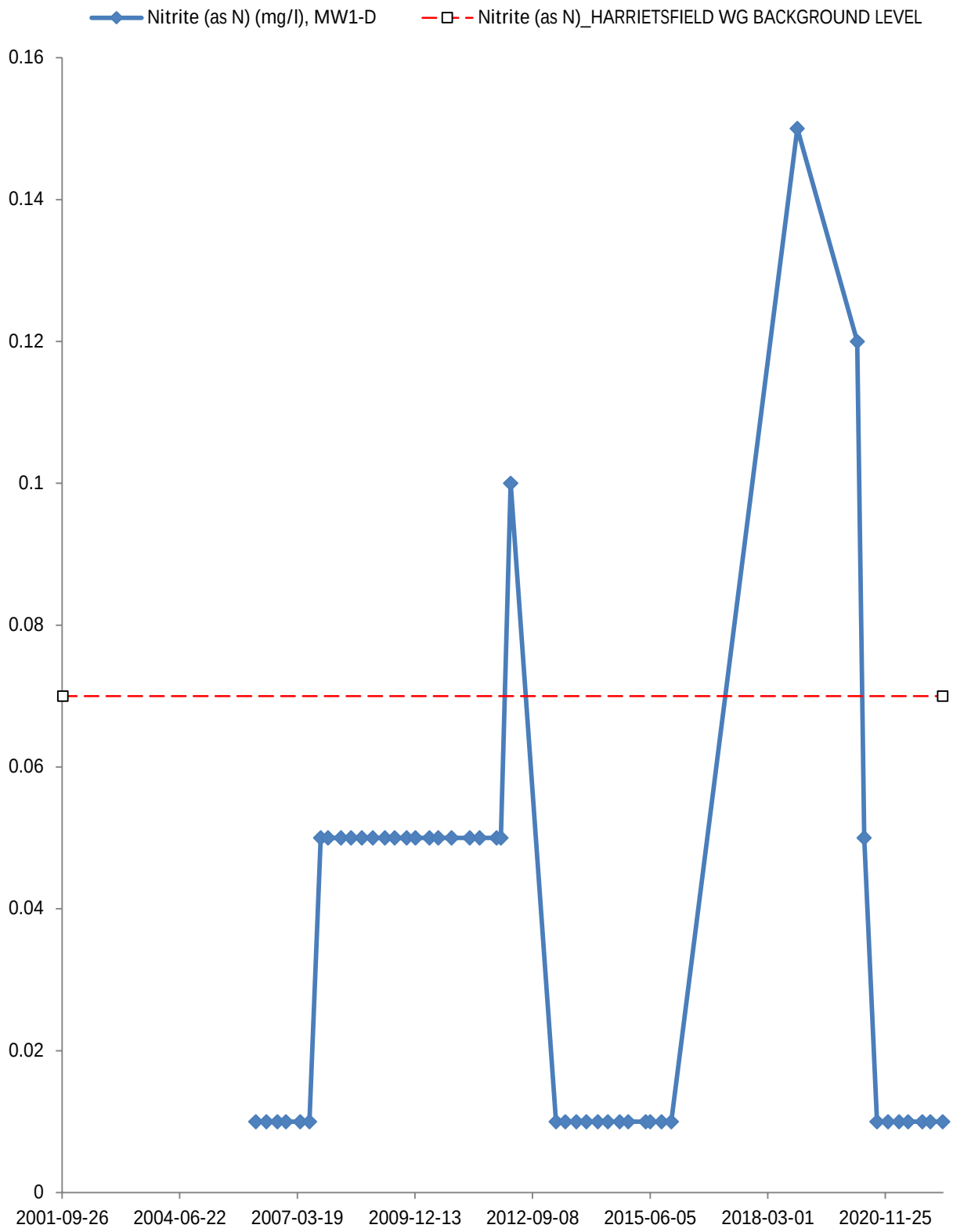
MW1-D - Nitrate (as N)



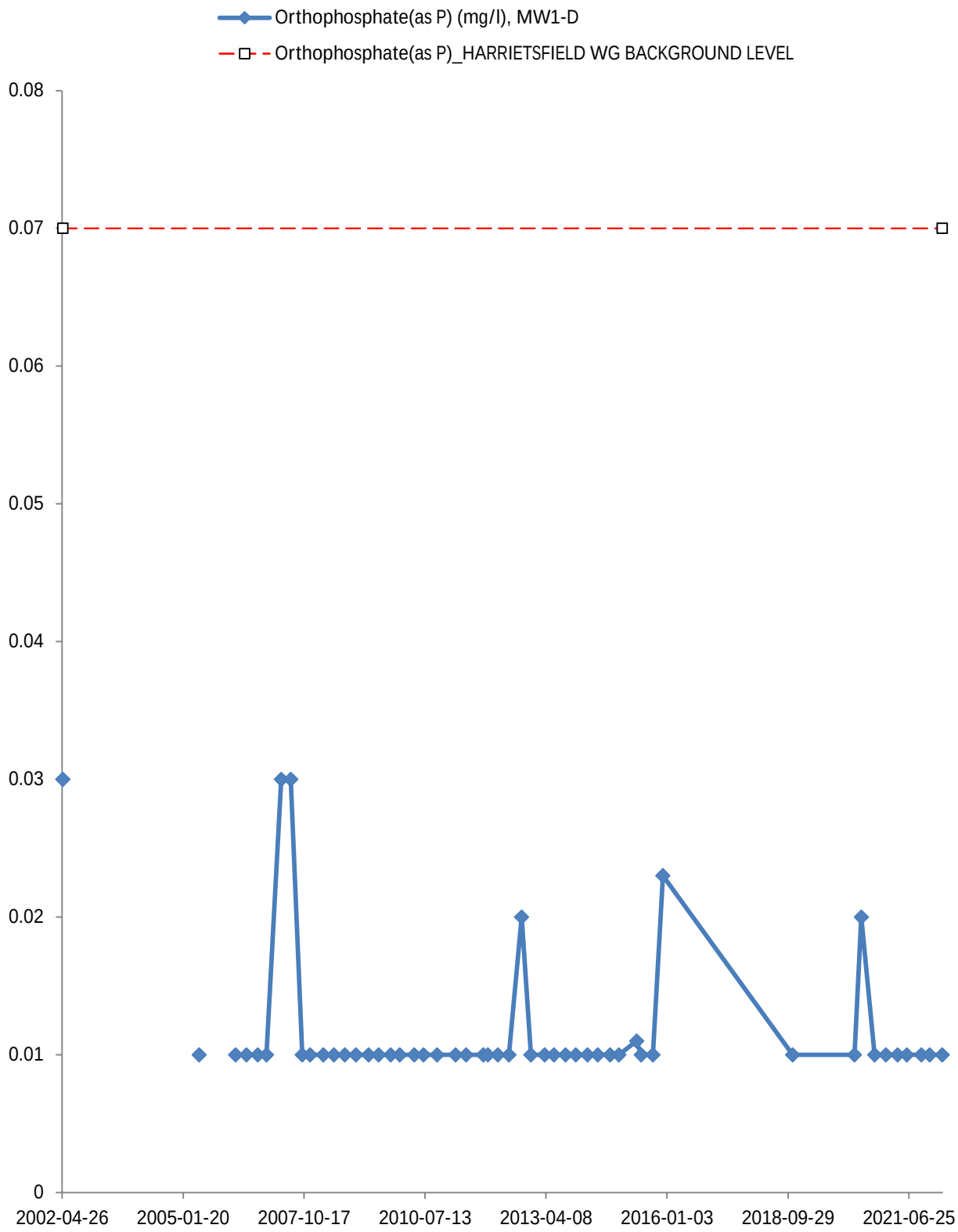
MW1-D - Nitrate plus Nitrite (N)



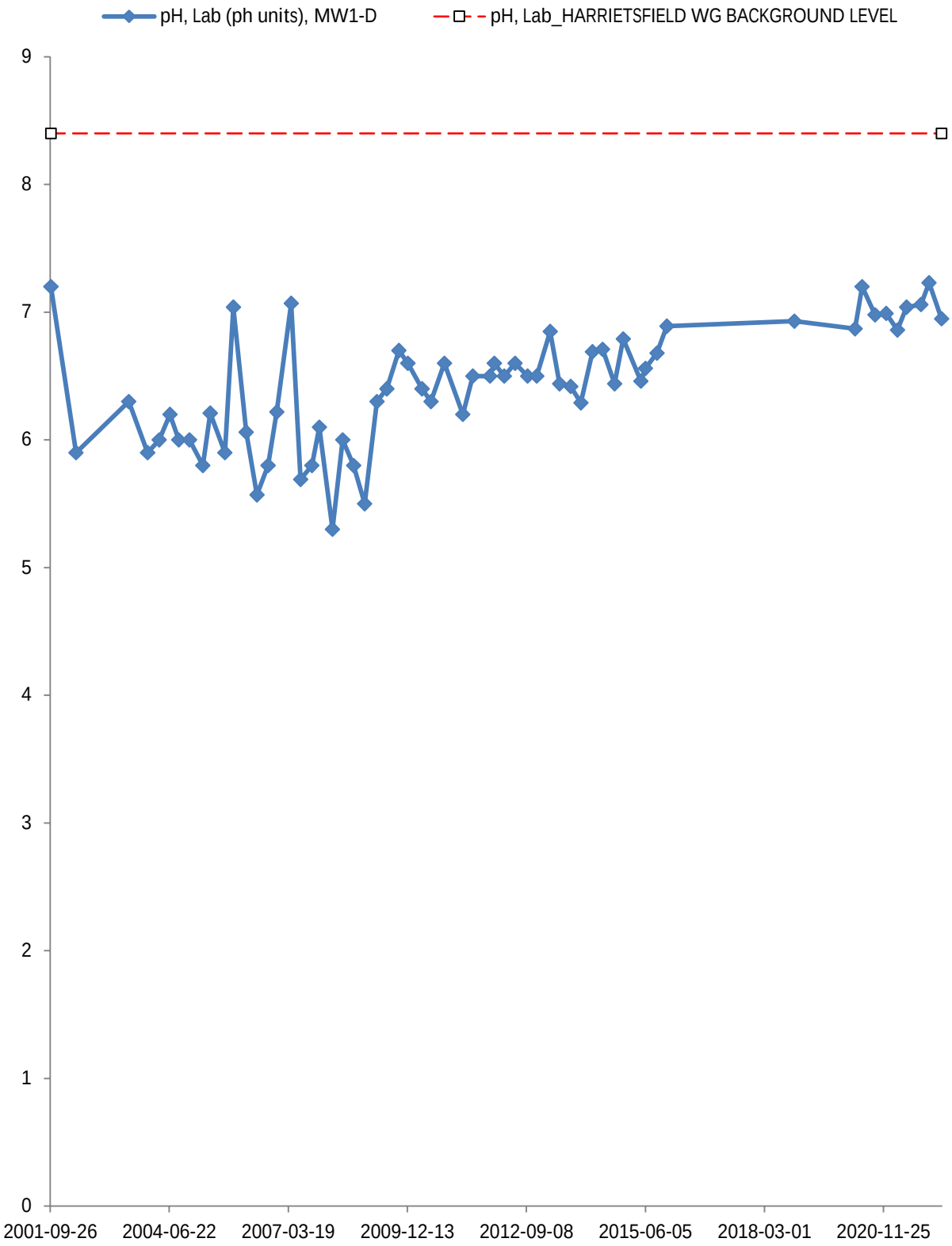
MW1-D - Nitrite (as N)



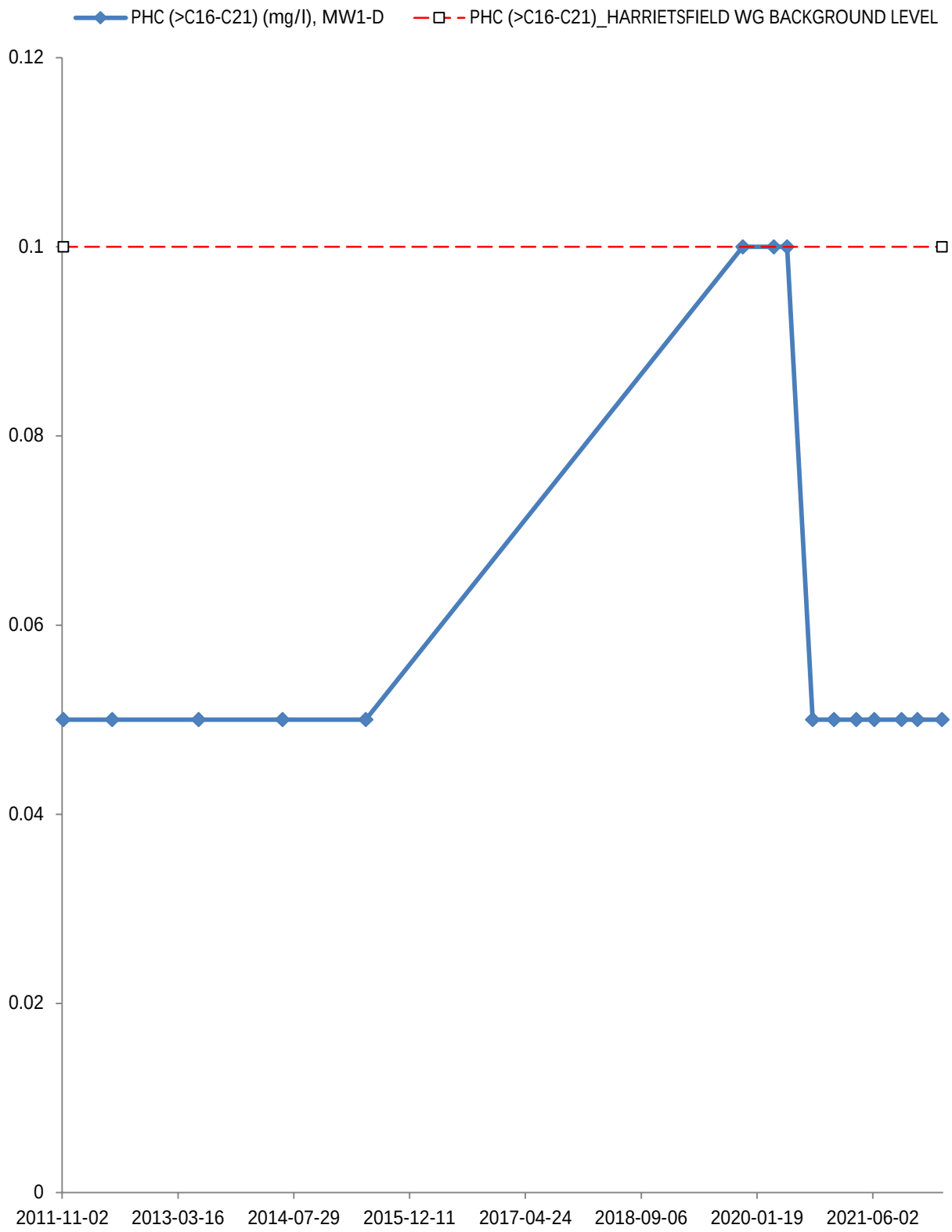
MW1-D - Orthophosphate(as P)



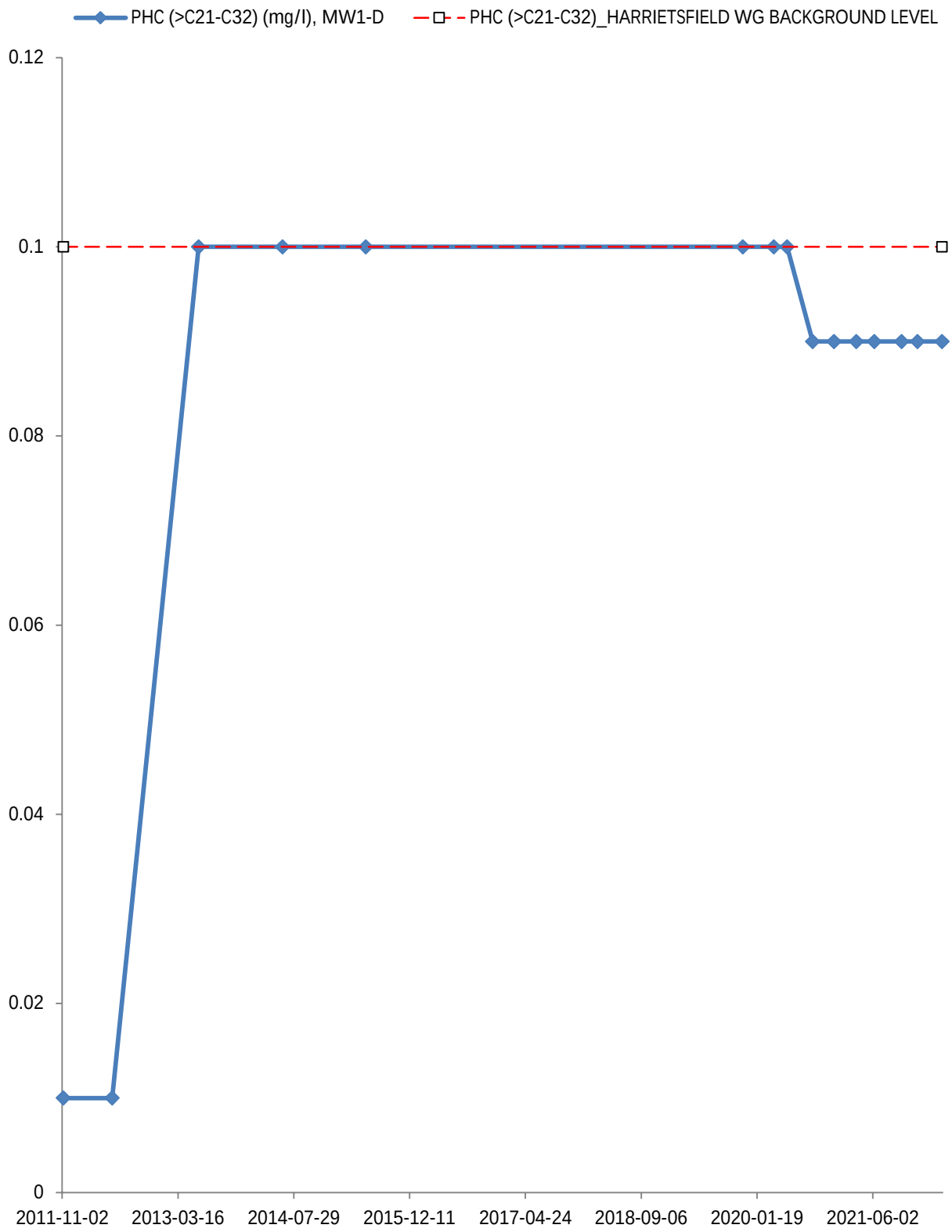
MW1-D - pH, Lab


pH, Lab (ph units), MW1-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

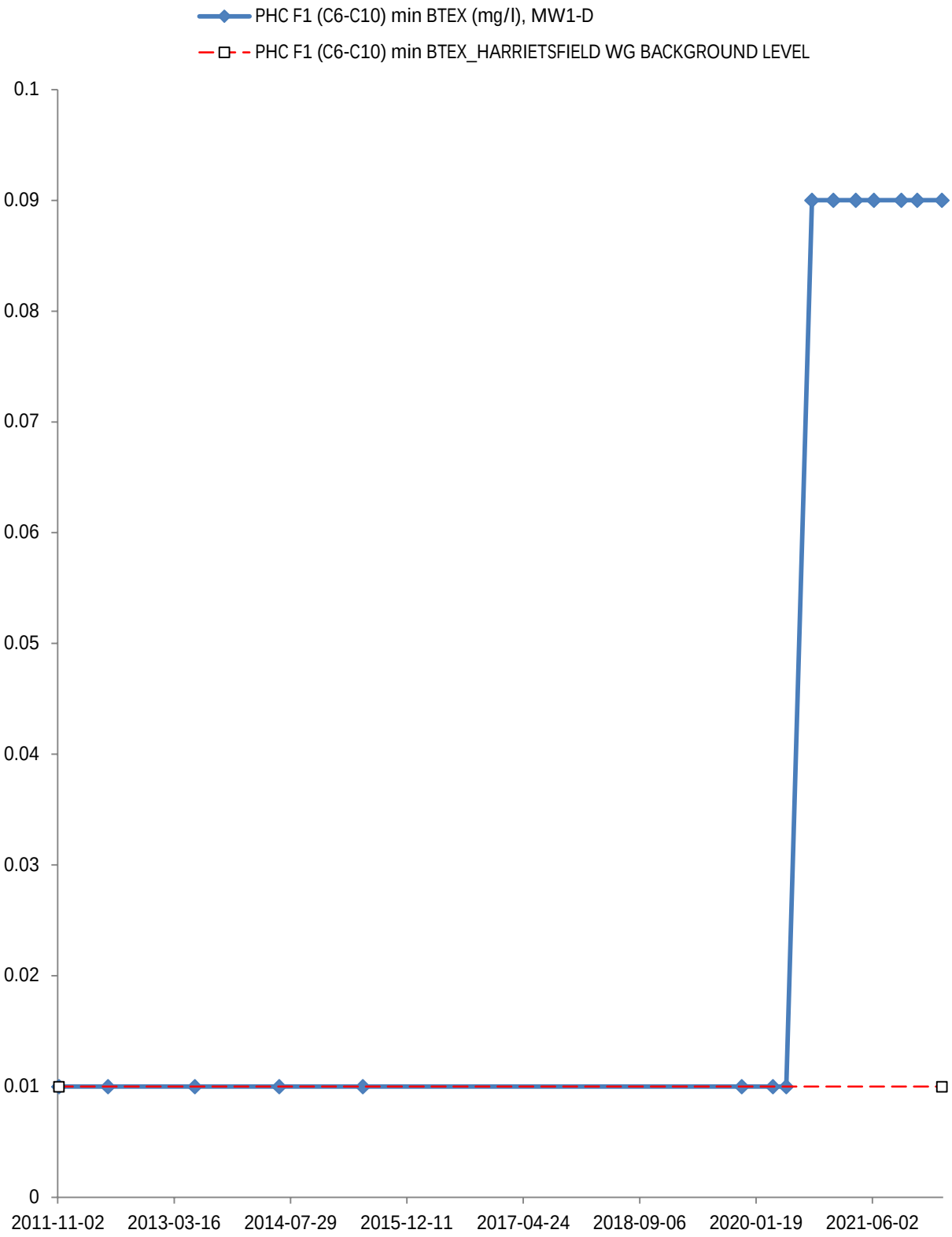
MW1-D - PHC (>C16-C21)



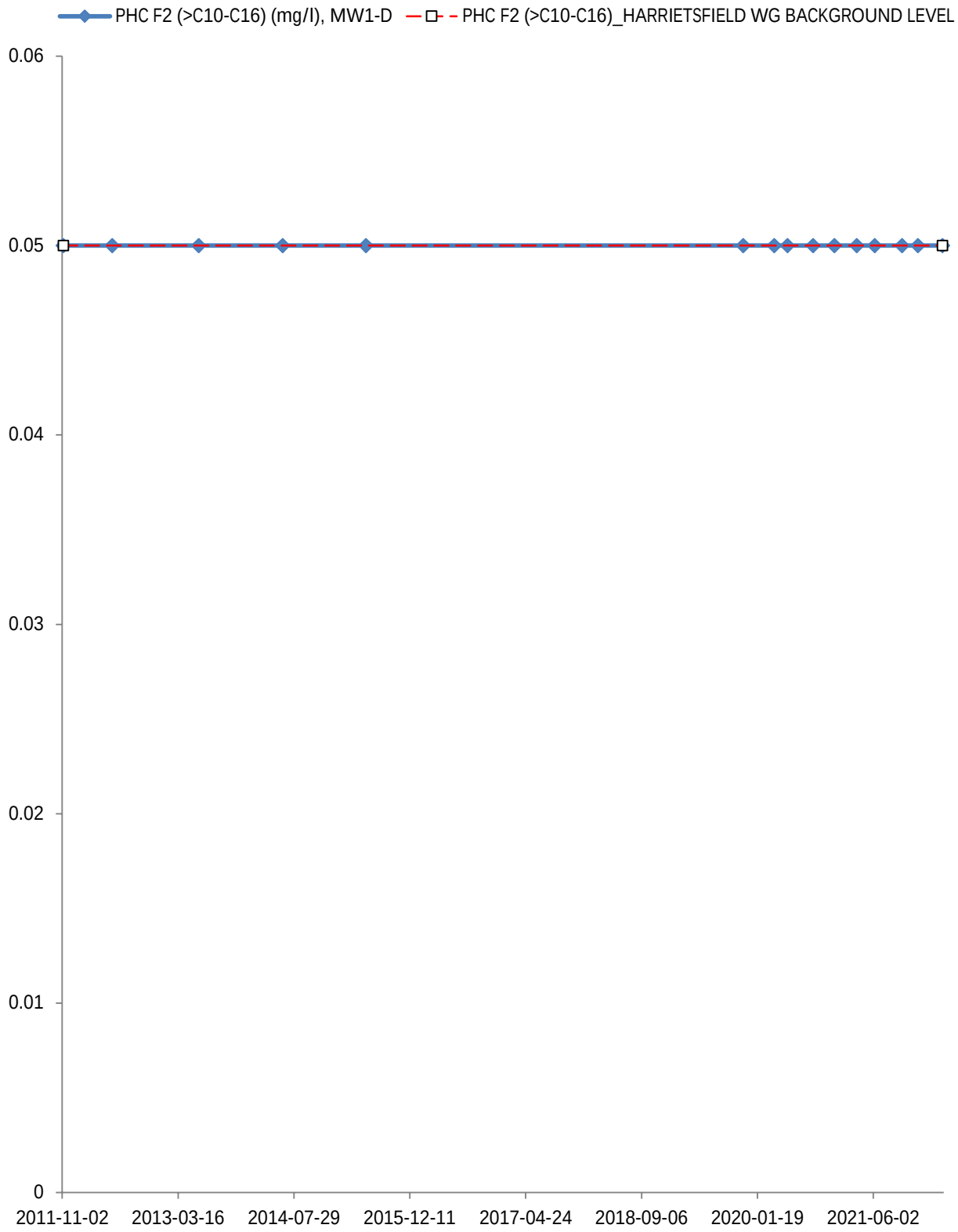
MW1-D - PHC (>C21-C32)



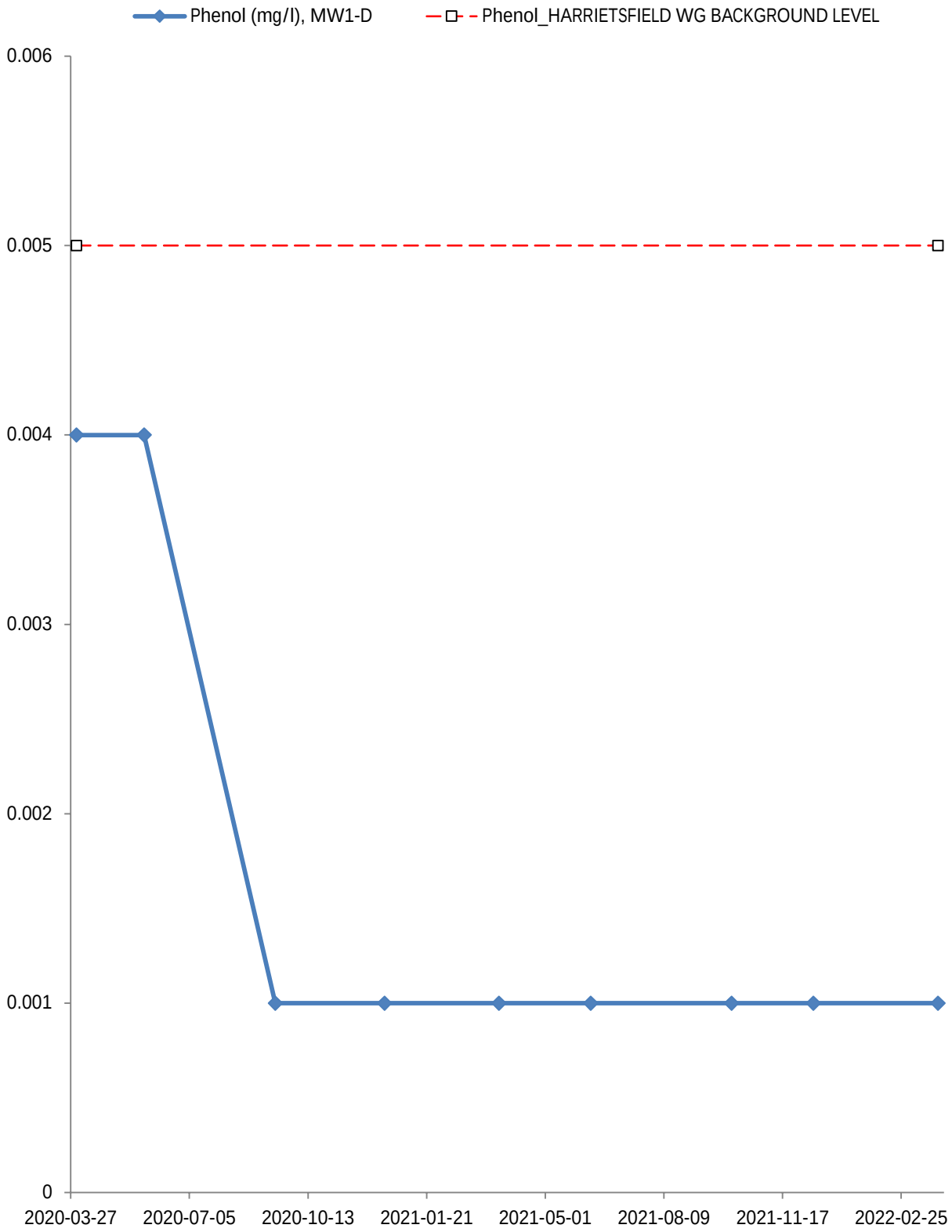
MW1-D - PHC F1 (C6-C10) min BTEX



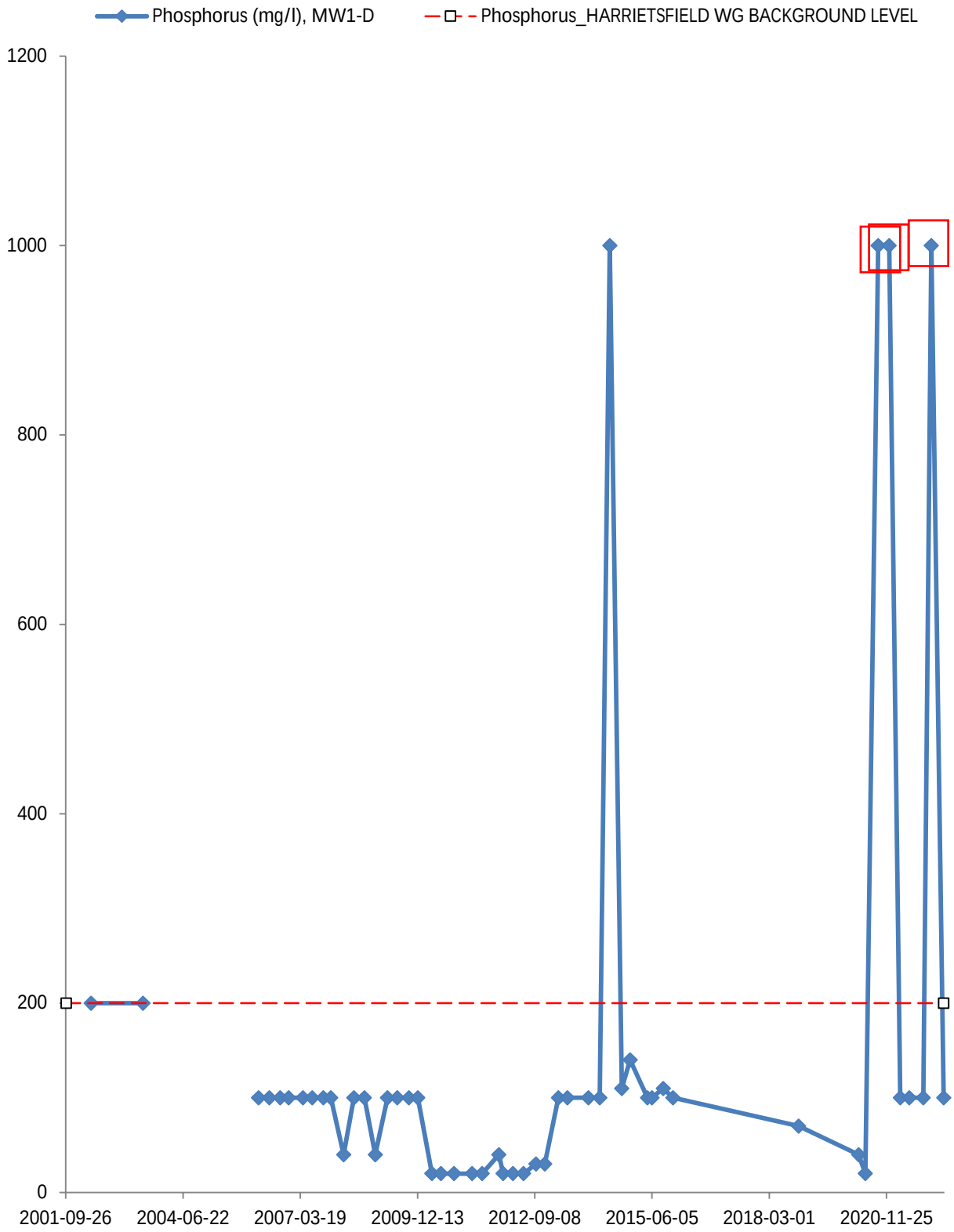
MW1-D - PHC F2 (>C10-C16)



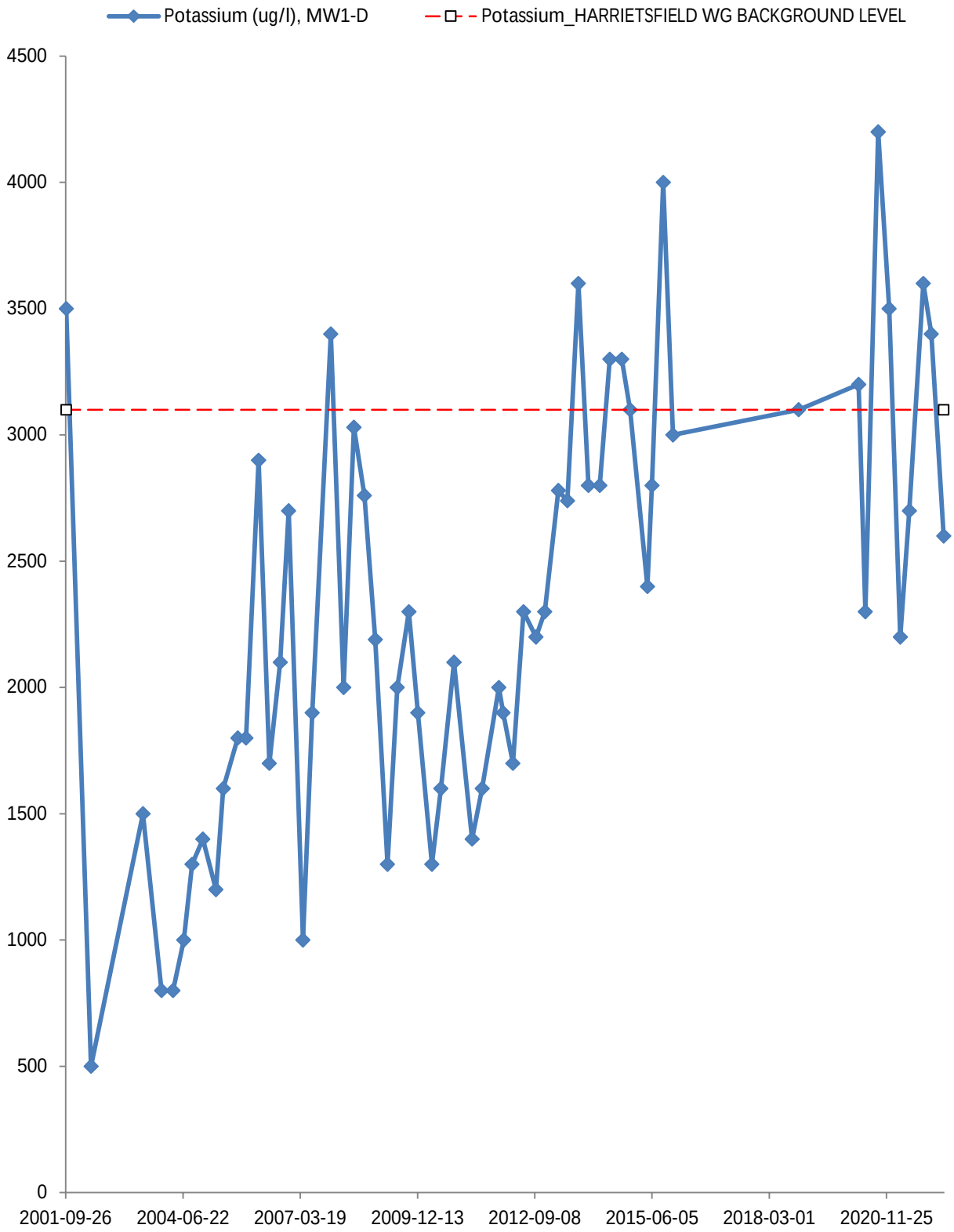
MW1-D - Phenol


Phenol (mg/l), MW1-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

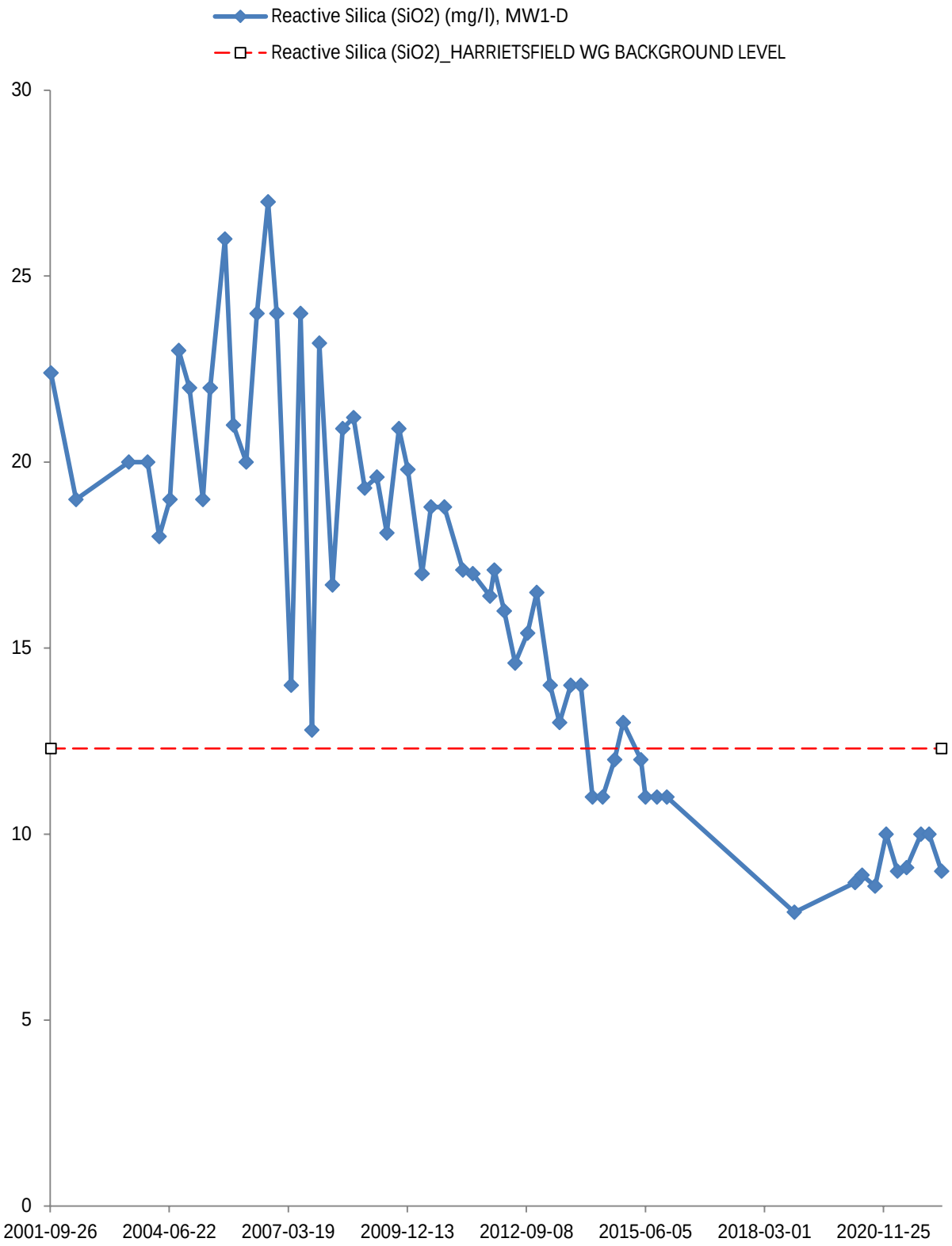
MW1-D - Phosphorus



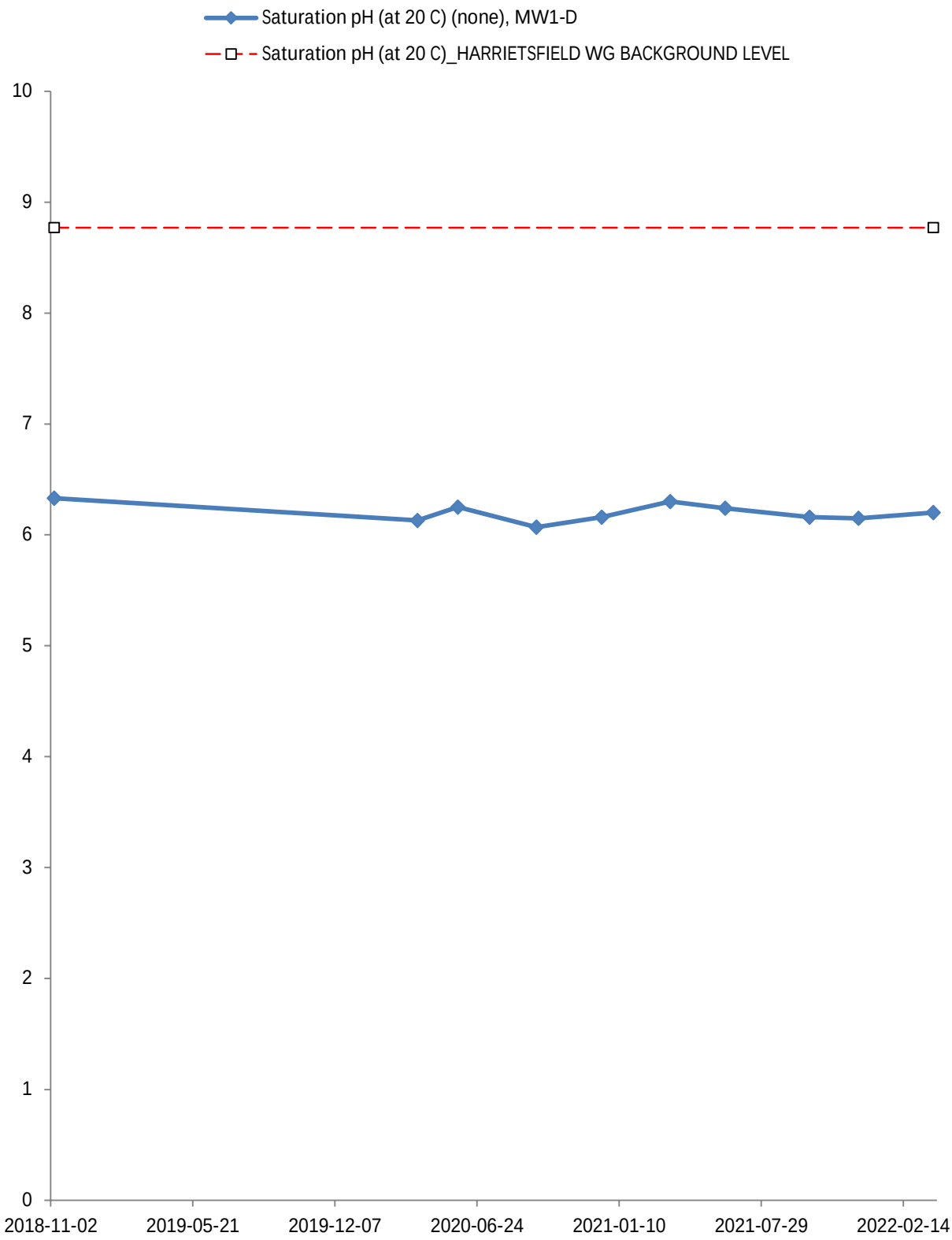
MW1-D - Potassium



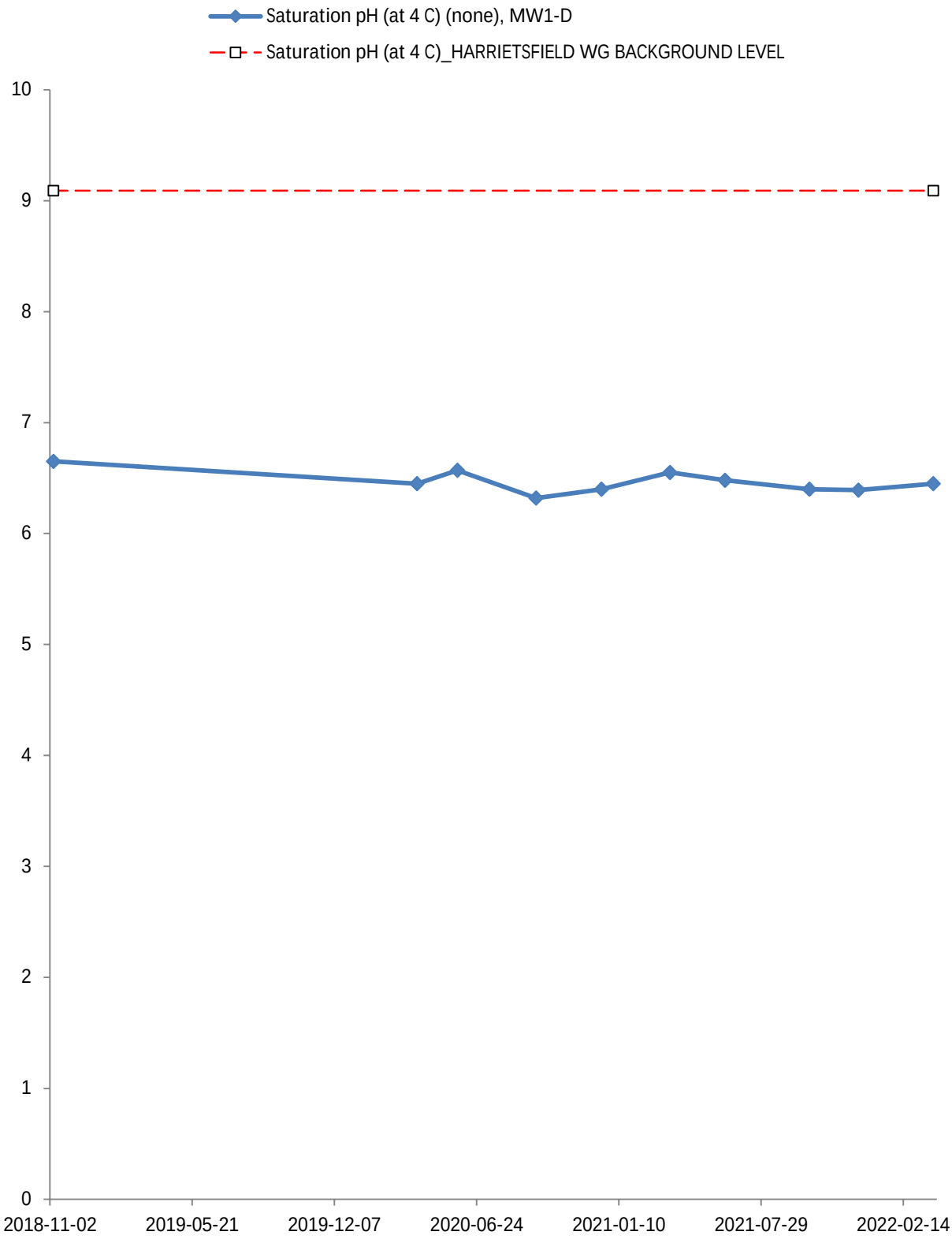
MW1-D - Reactive Silica (SiO2)



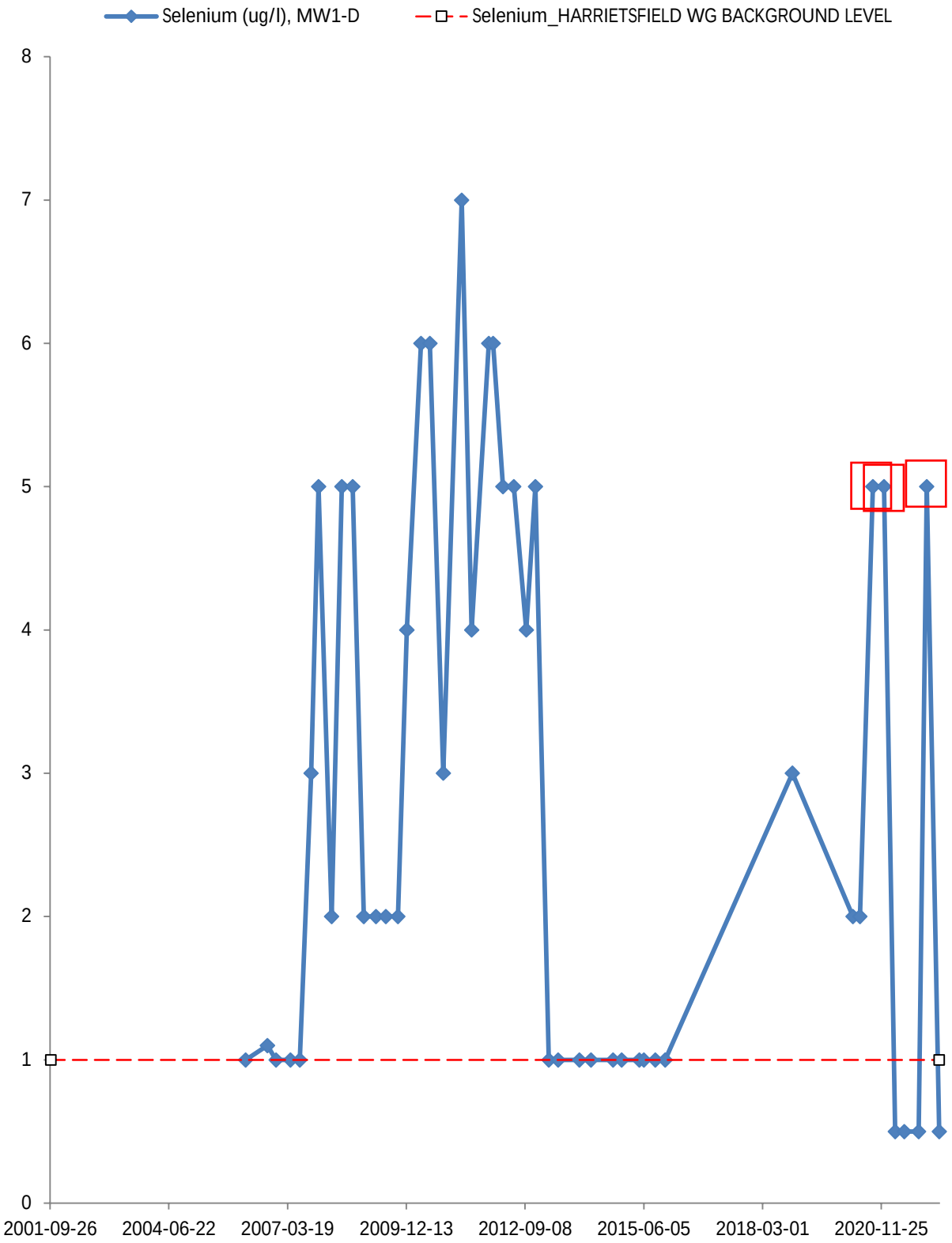
MW1-D - Saturation pH (at 20 C)



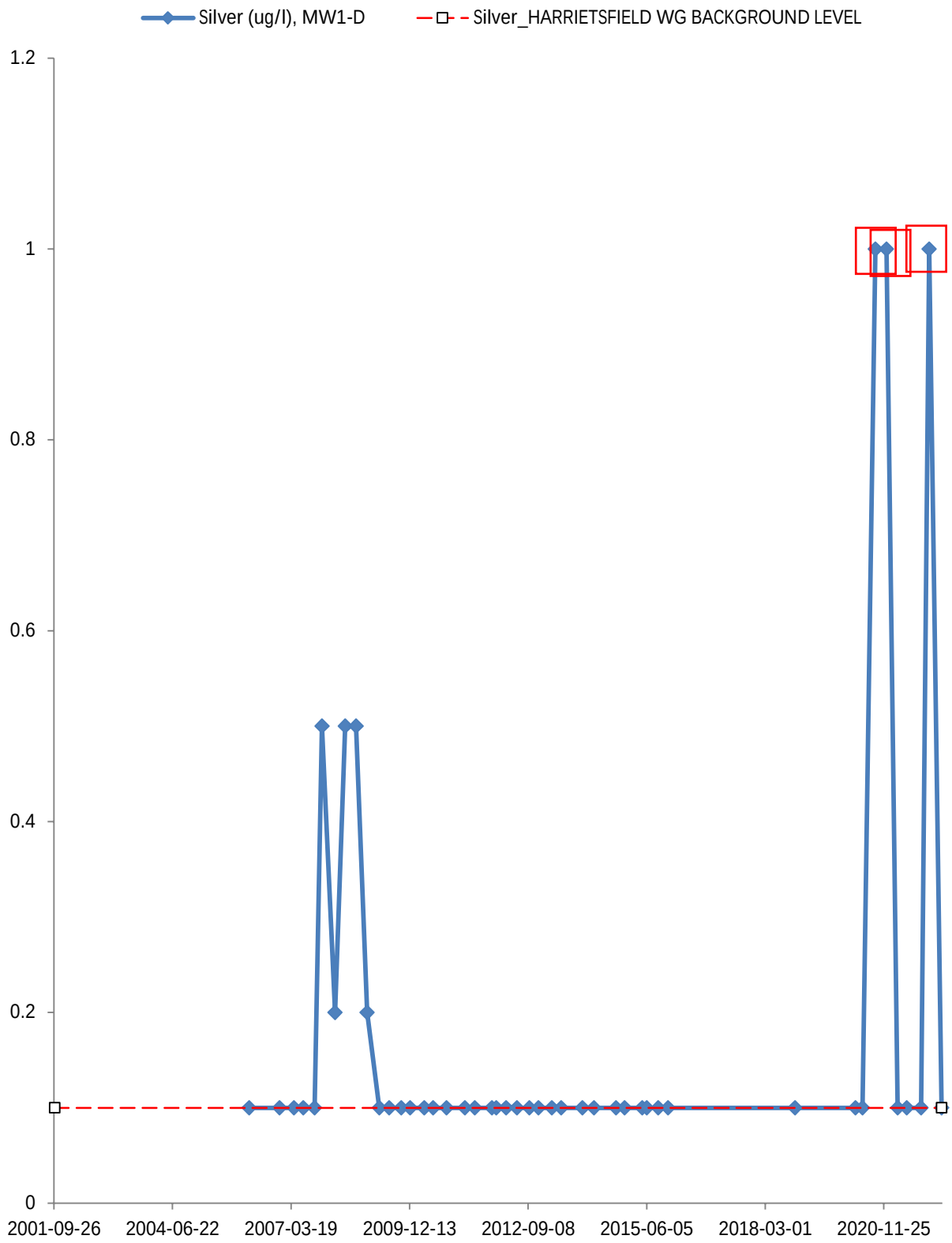
MW1-D - Saturation pH (at 4 C)



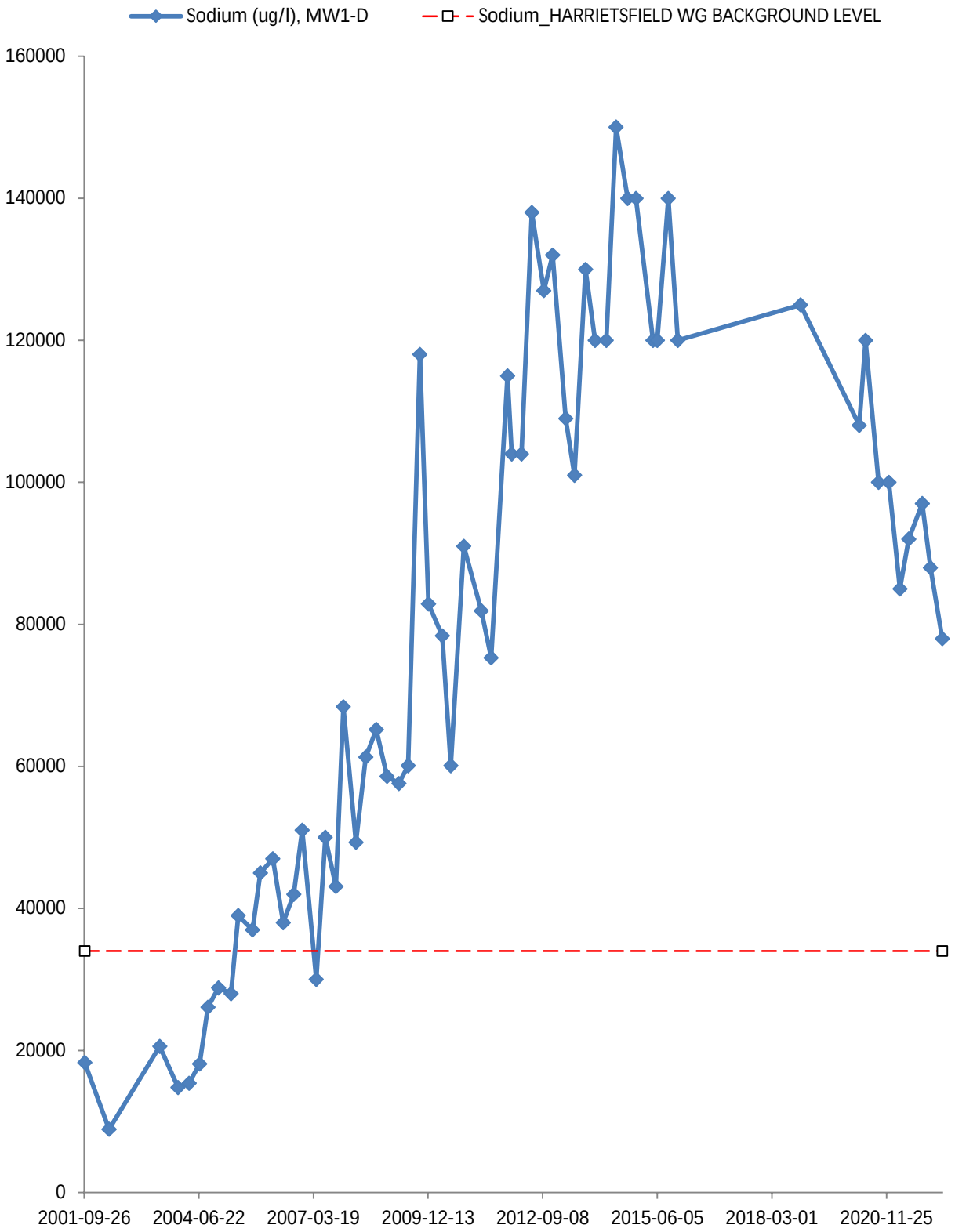
MW1-D - Selenium



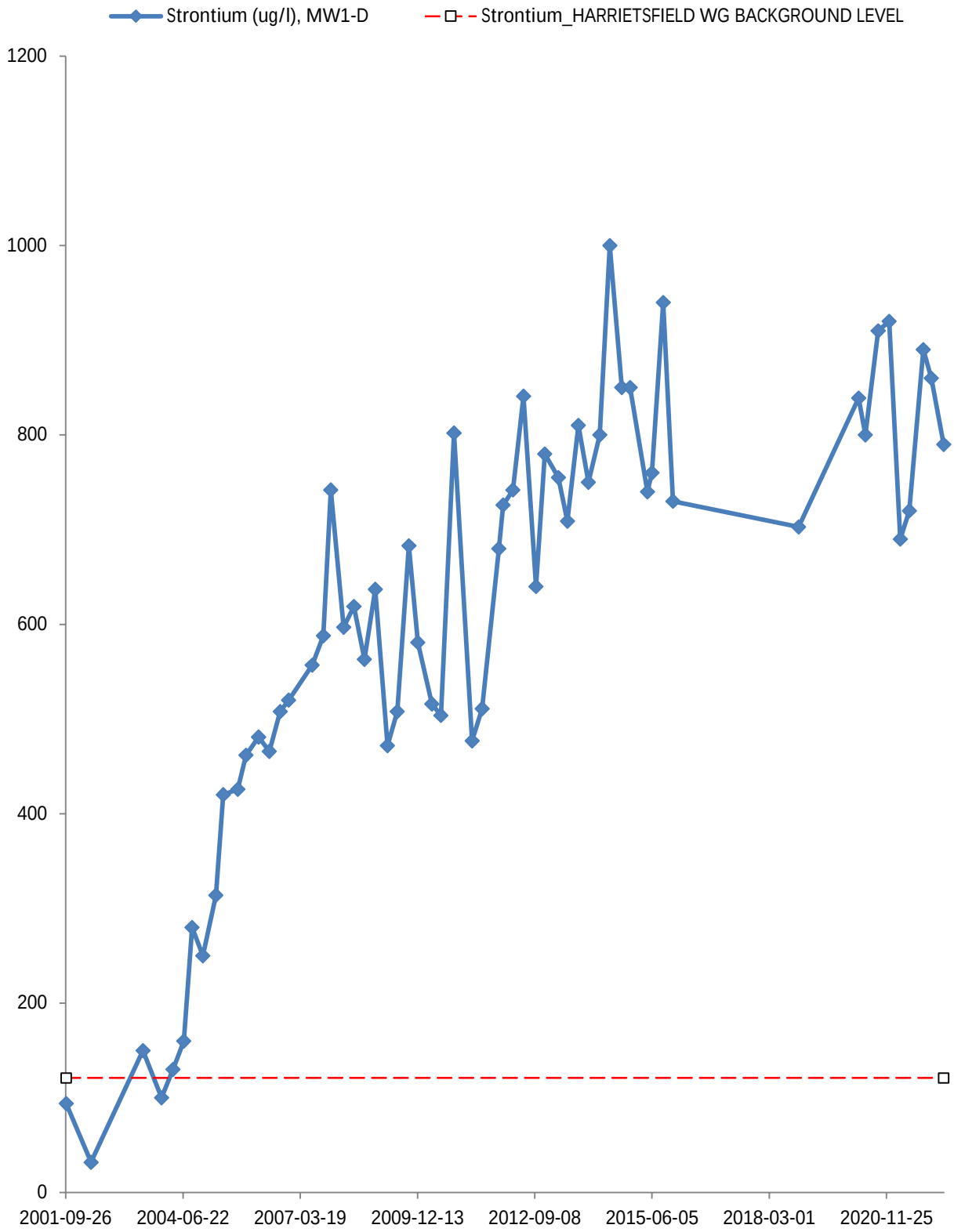
MW1-D - Silver


Silver (ug/l), MW1-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

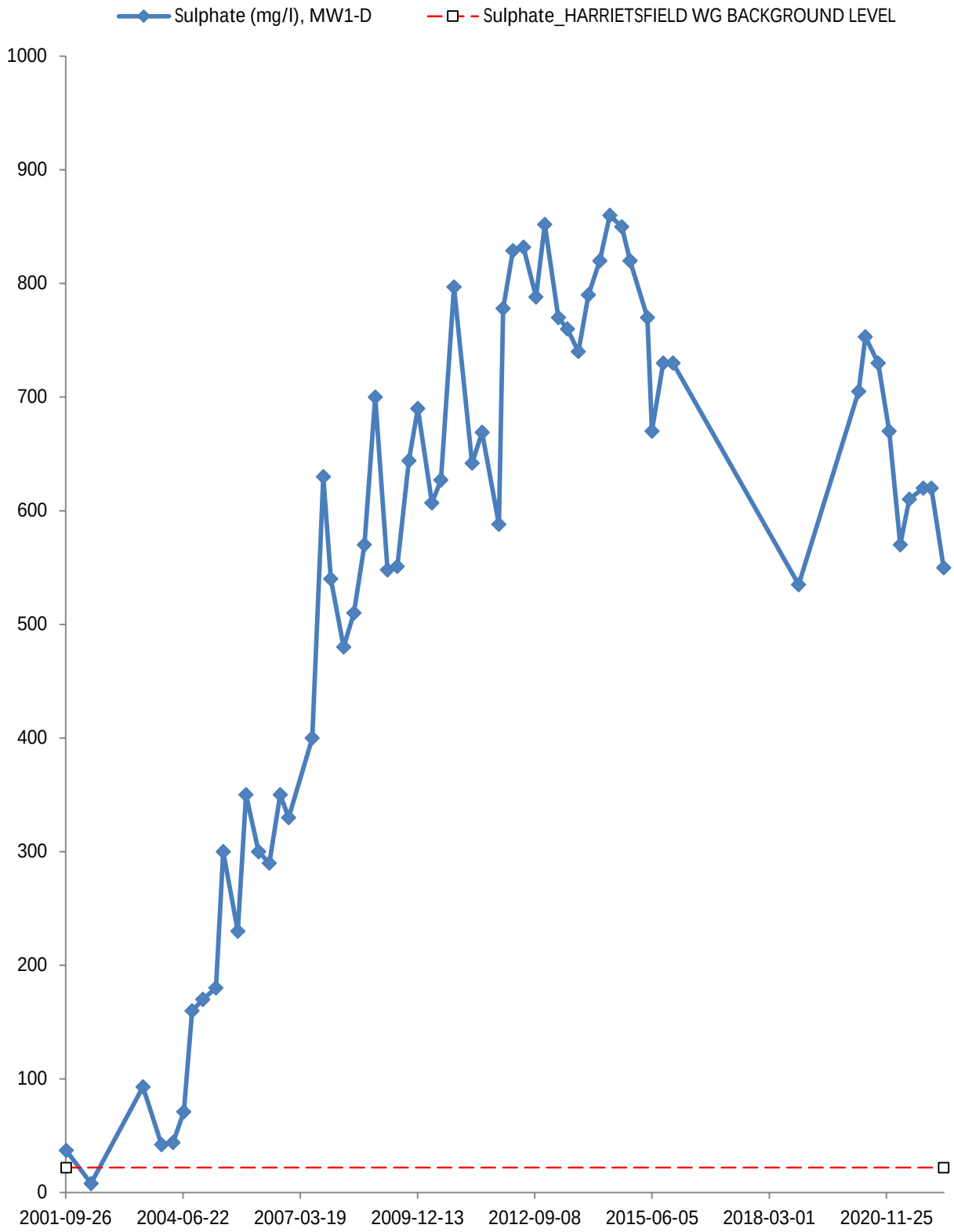
MW1-D - Sodium


Sodium (ug/l), MW1-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
160000
140000
120000
100000
80000
60000
40000
20000
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

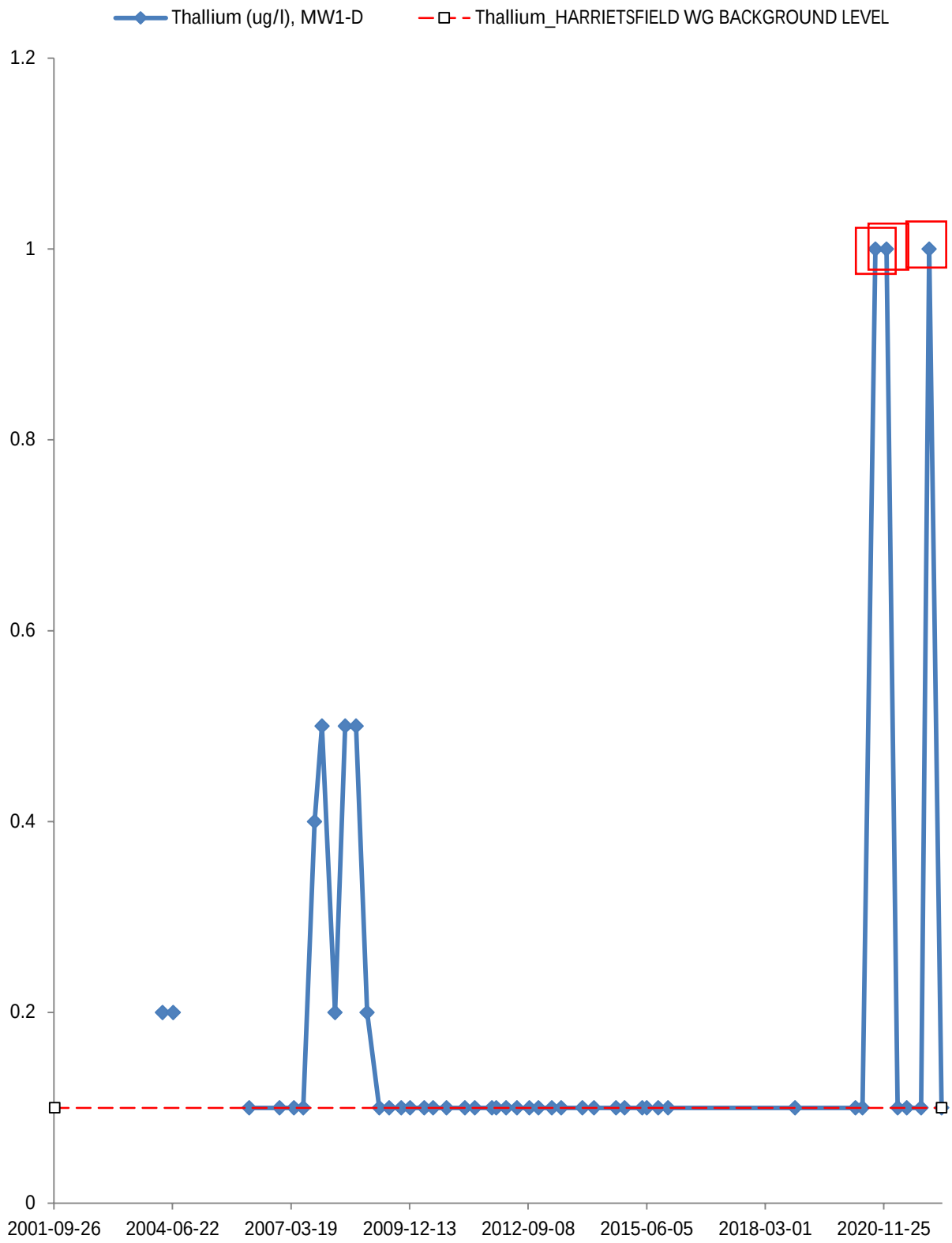
MW1-D - Strontium



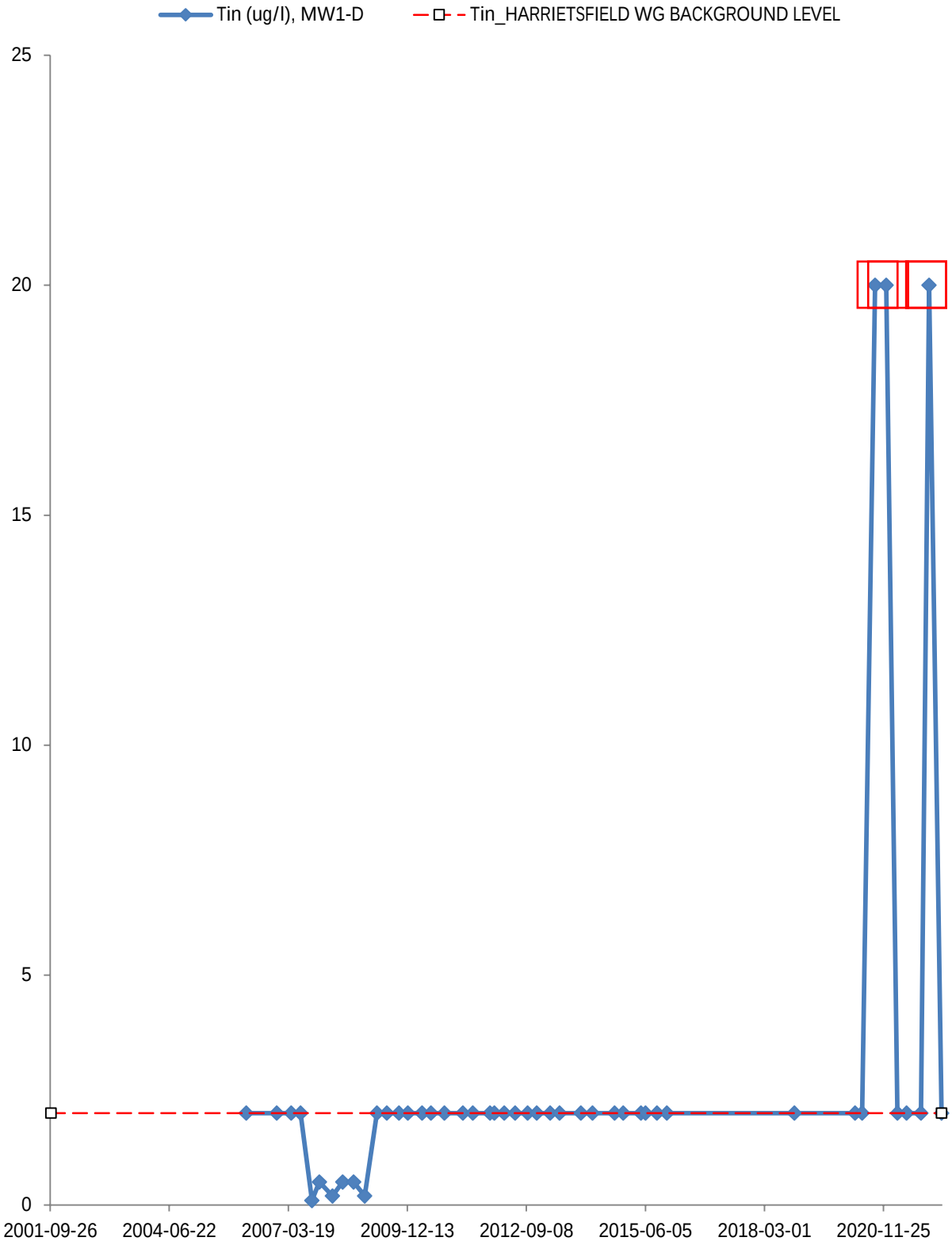
MW1-D - Sulphate



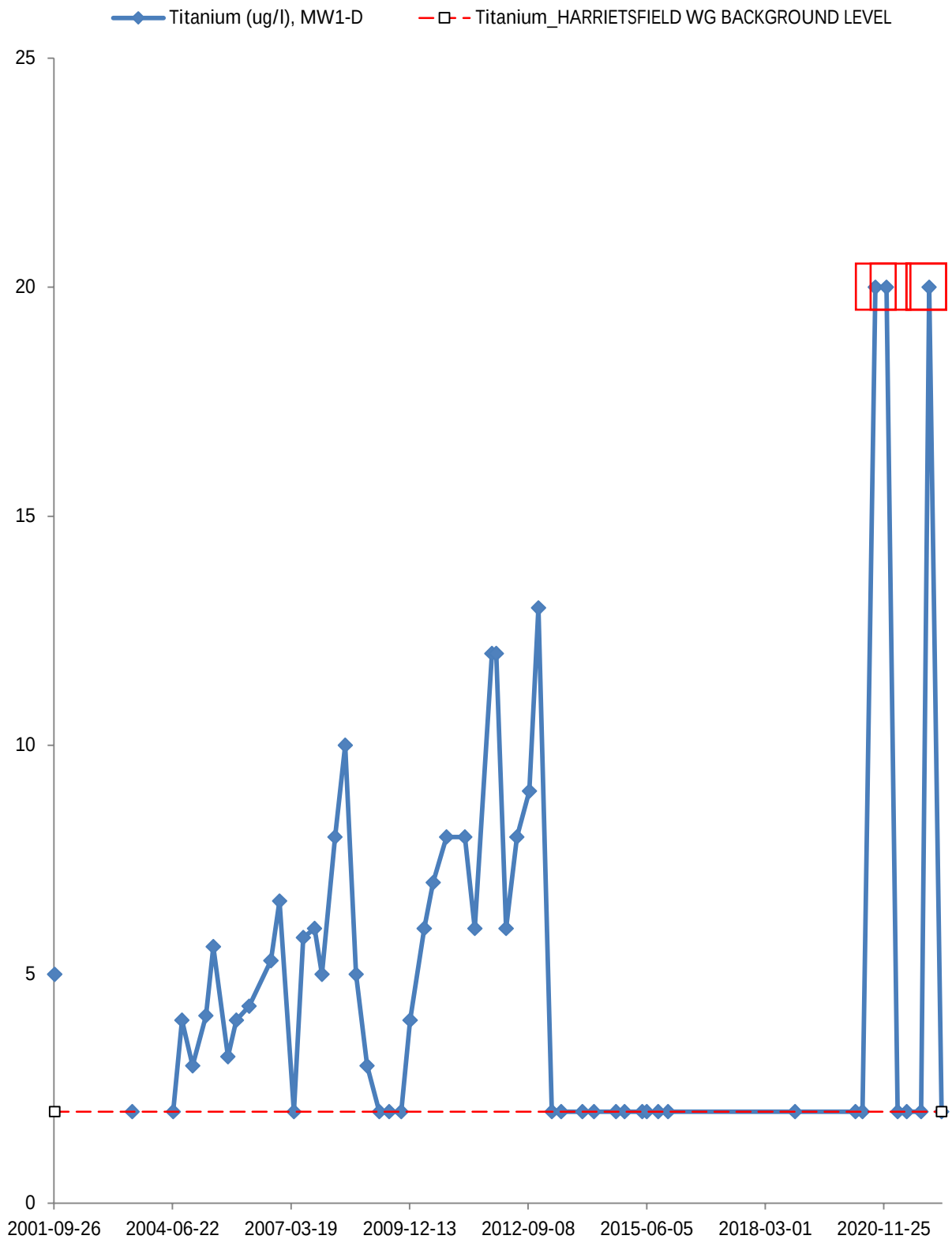
MW1-D - Thallium



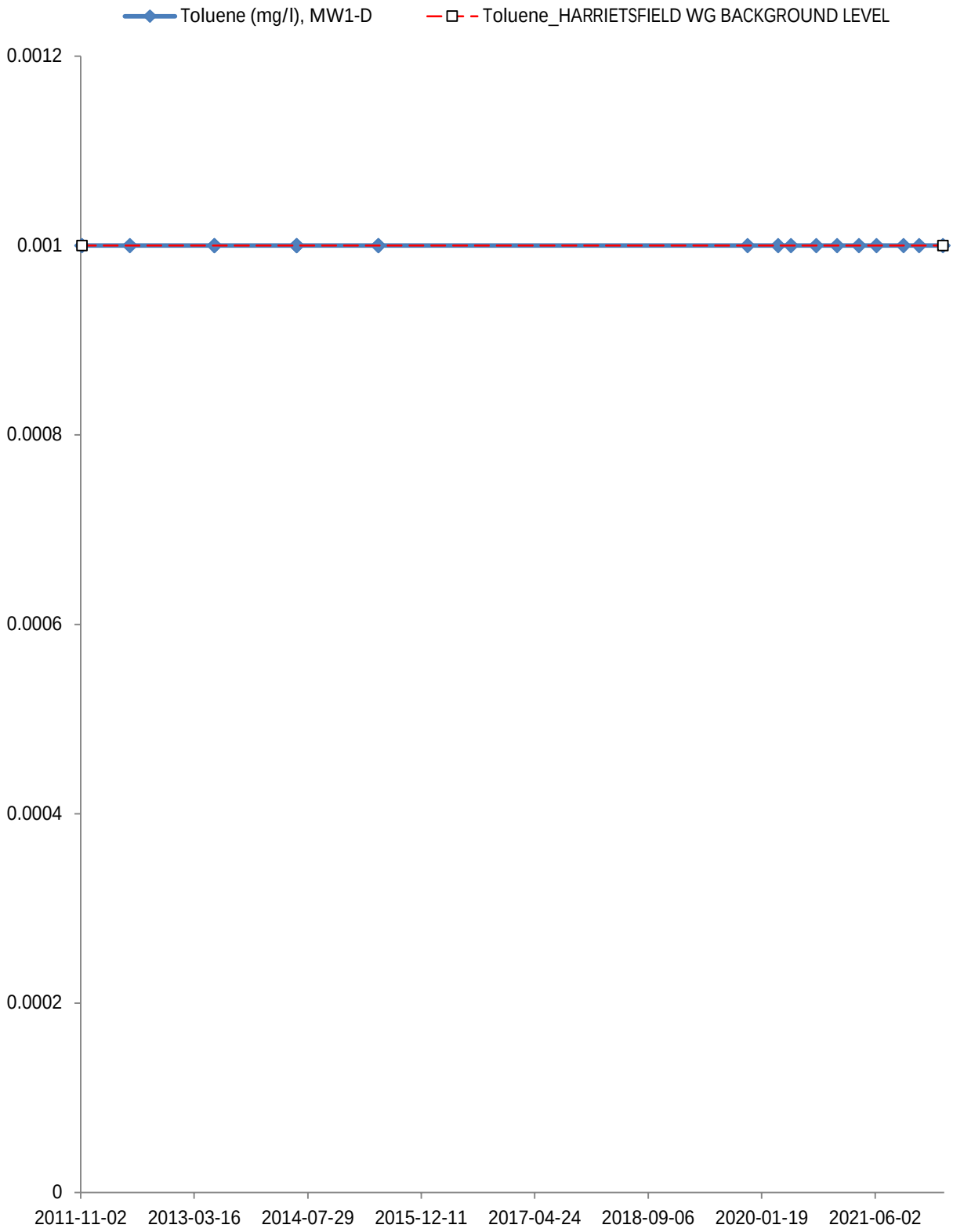
MW1-D - Tin


Tin (ug/l), MW1-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

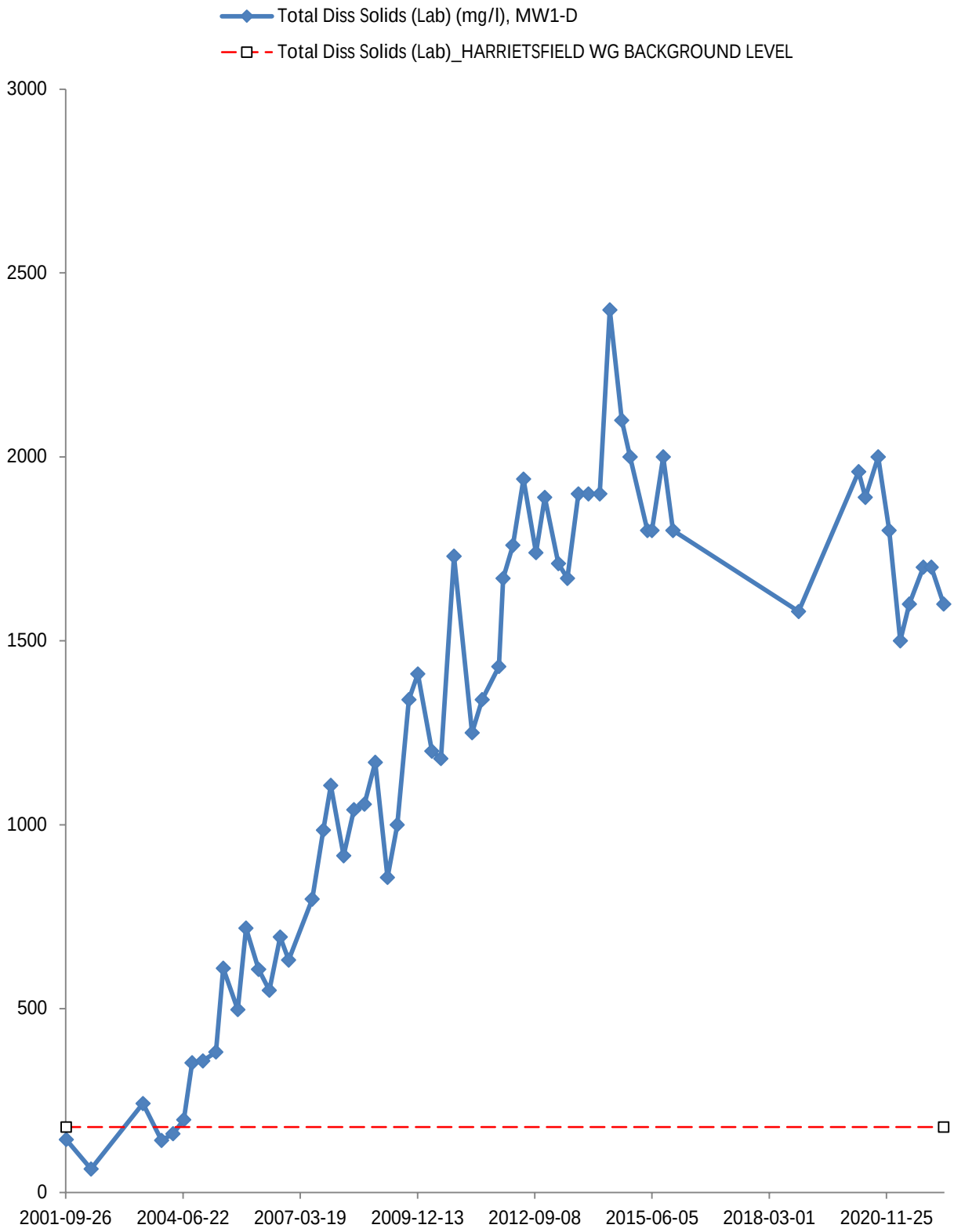
MW1-D - Titanium



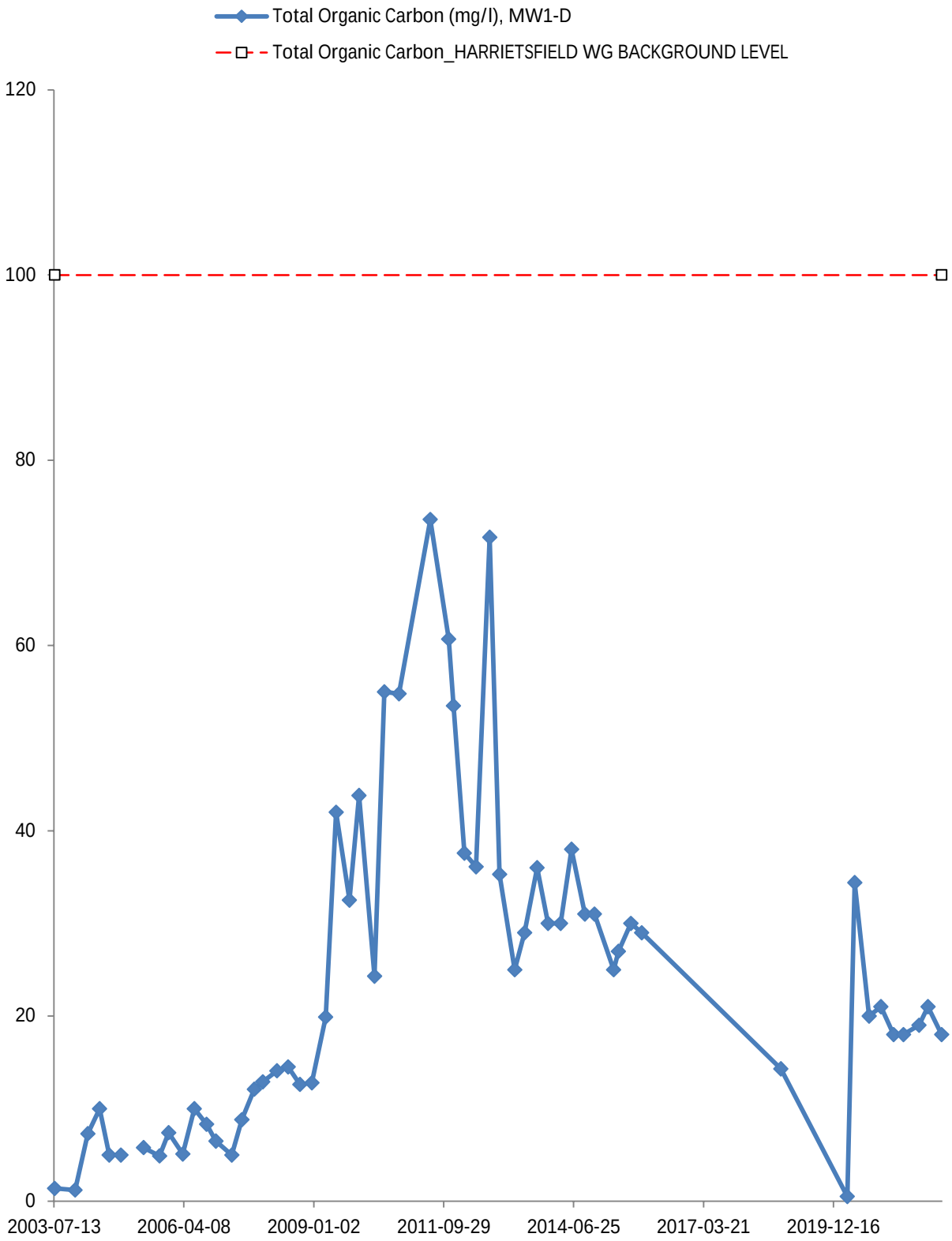
MW1-D - Toluene



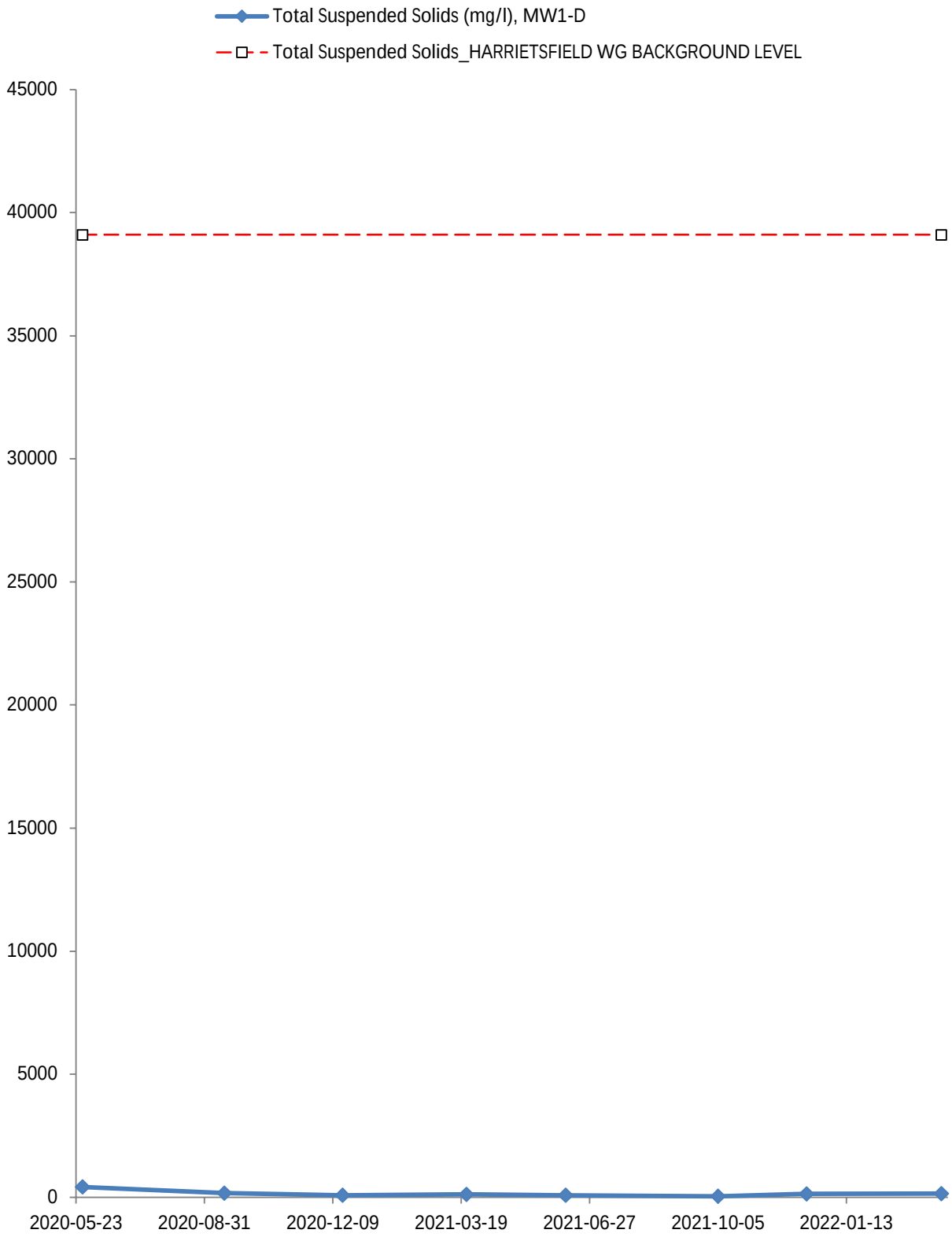
MW1-D - Total Diss Solids (Lab)



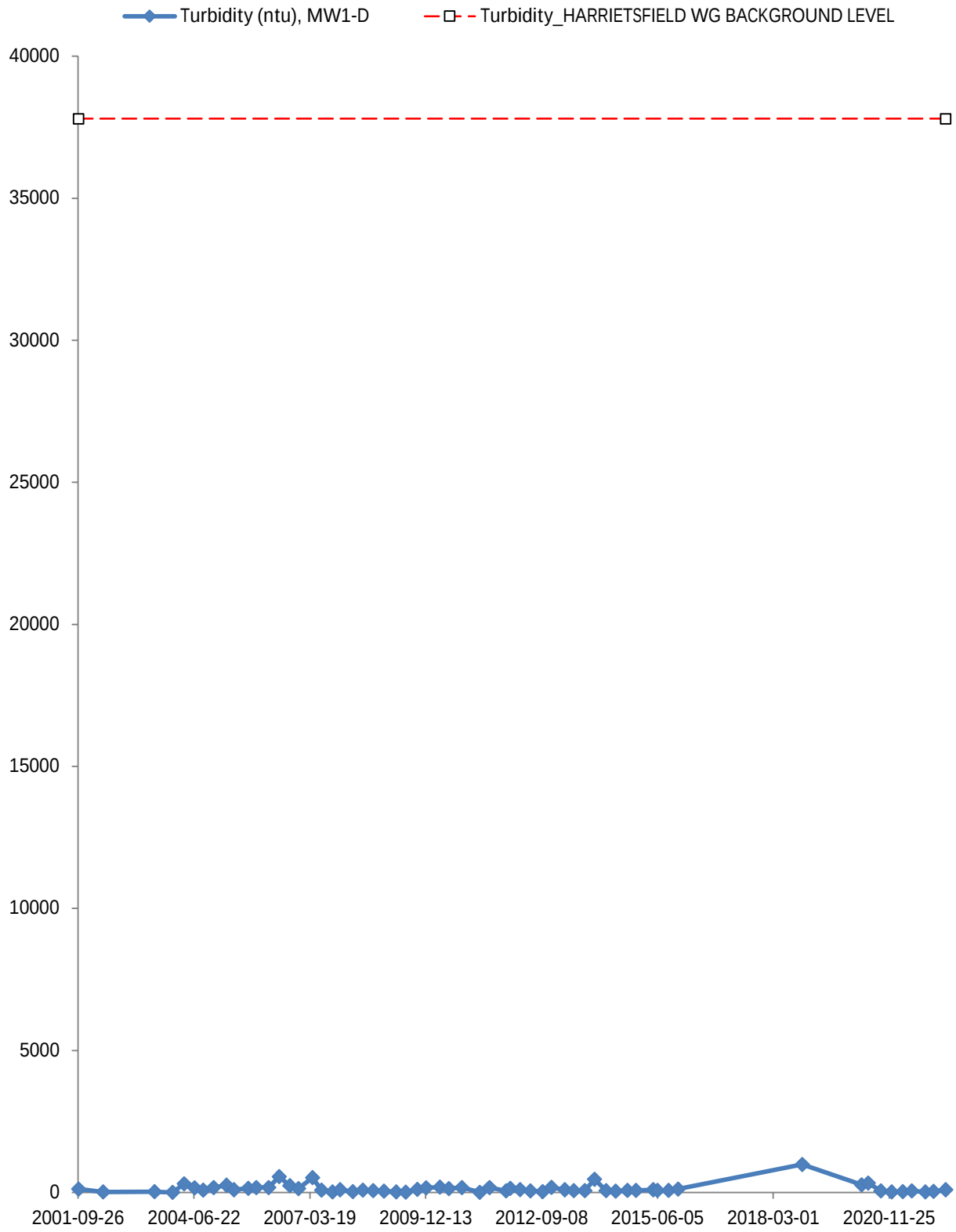
MW1-D - Total Organic Carbon



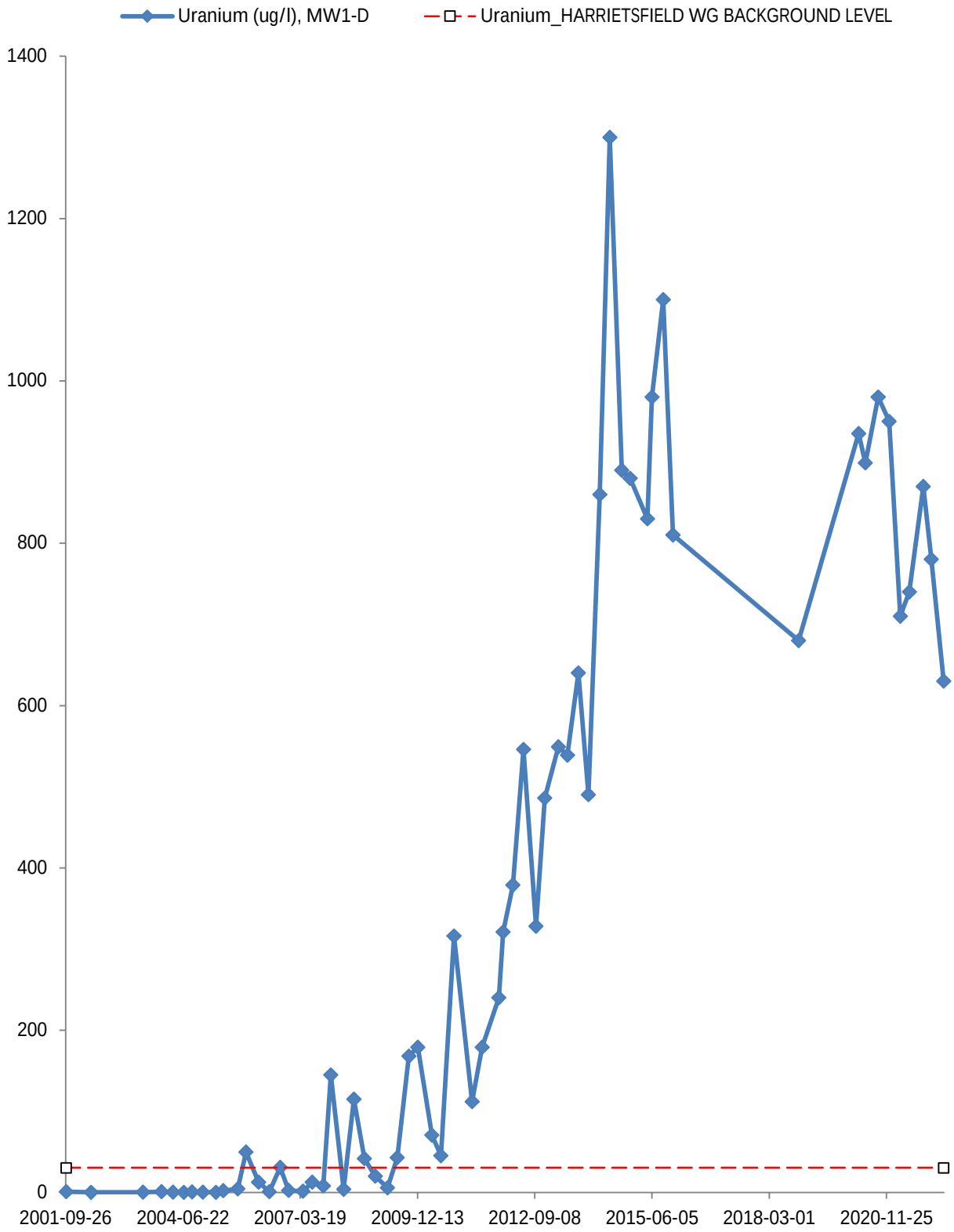
MW1-D - Total Suspended Solids



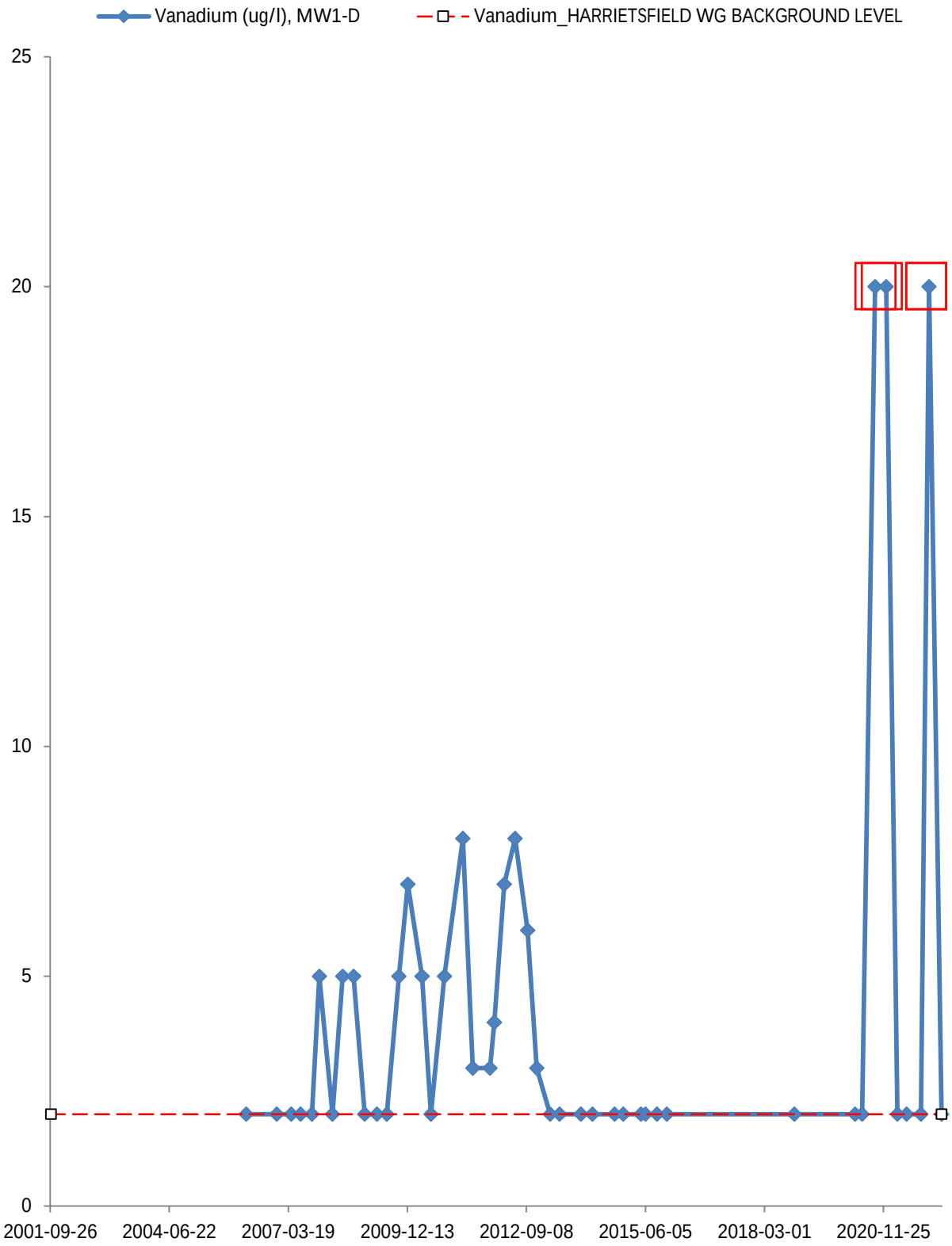
MW1-D - Turbidity



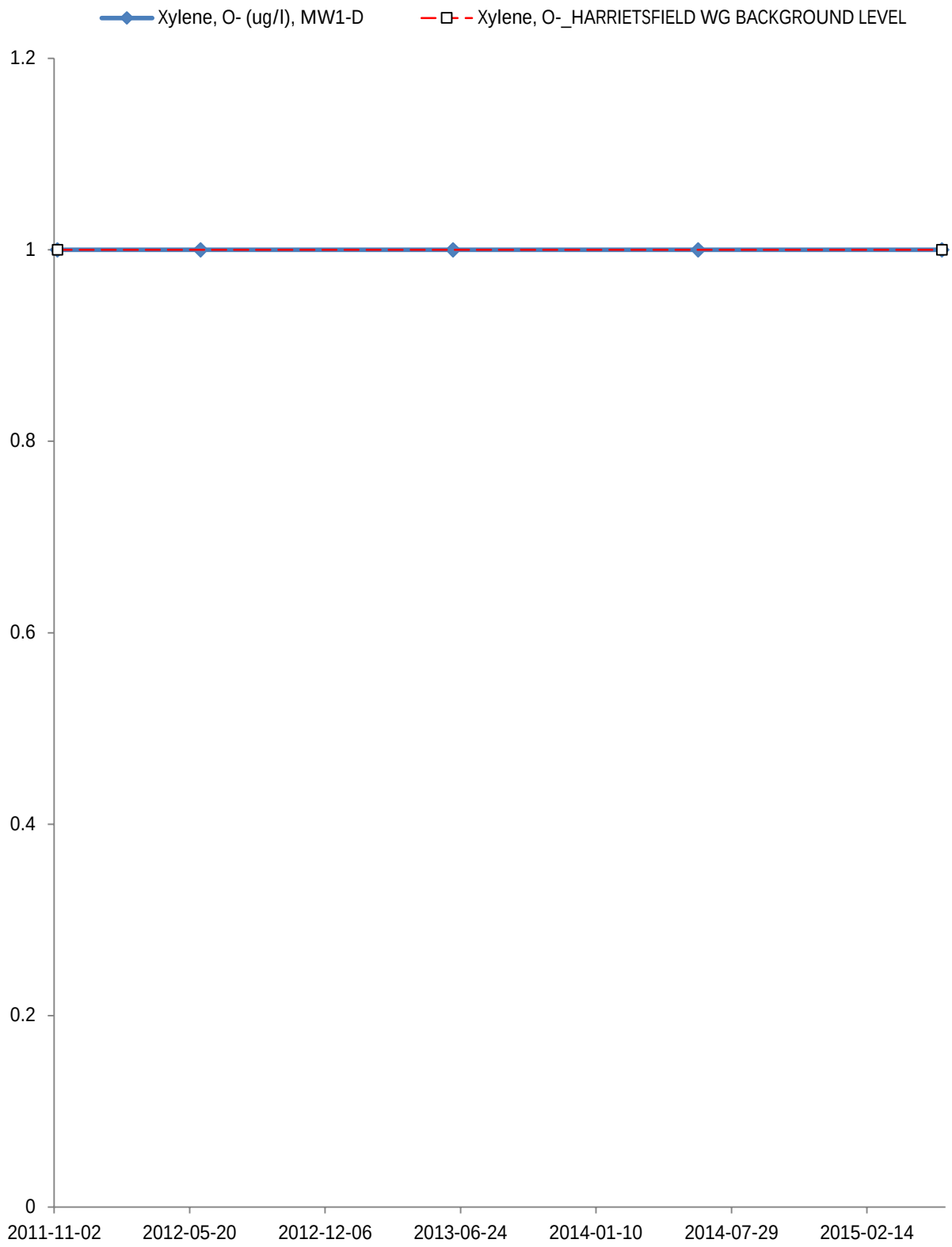
MW1-D - Uranium



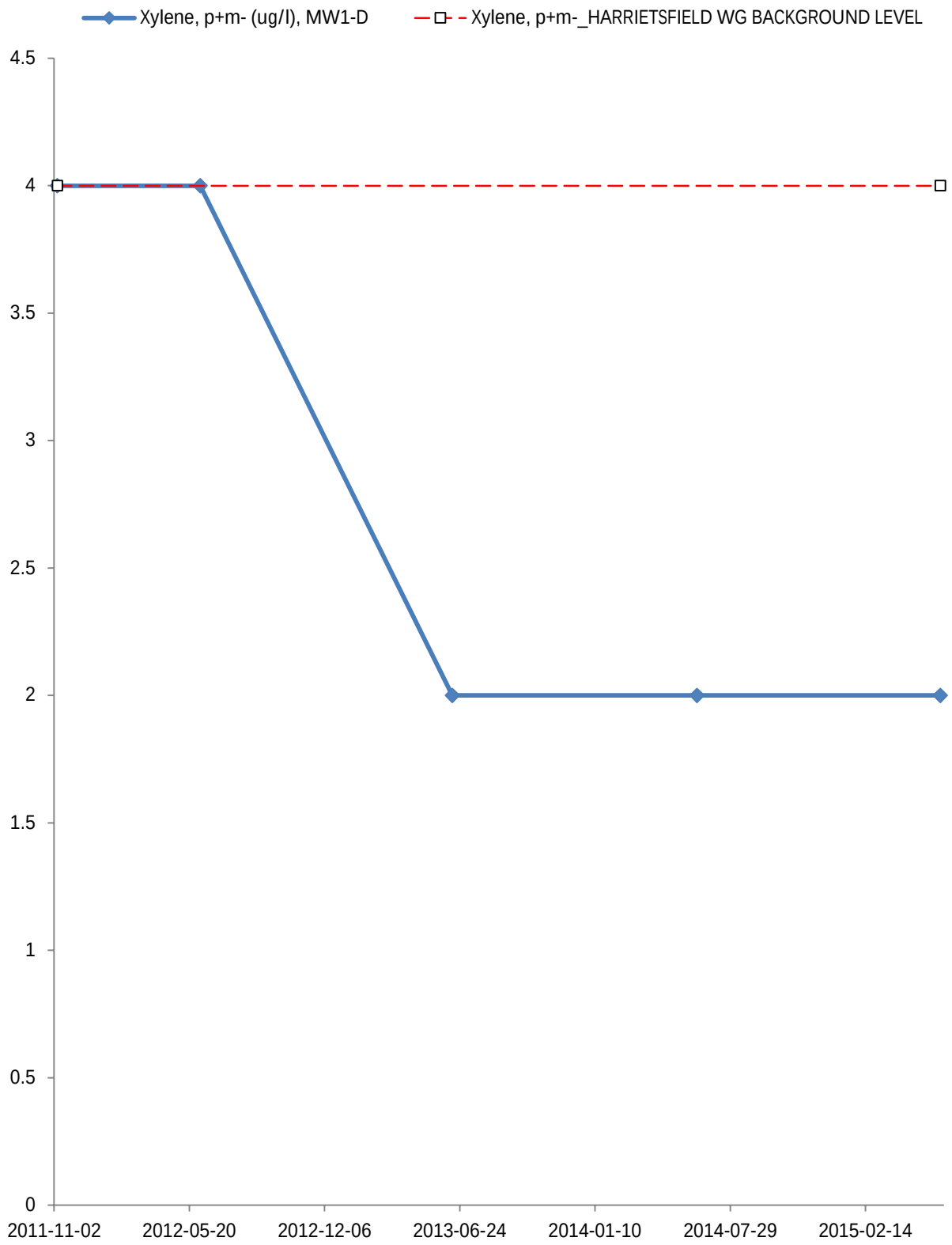
MW1-D - Vanadium



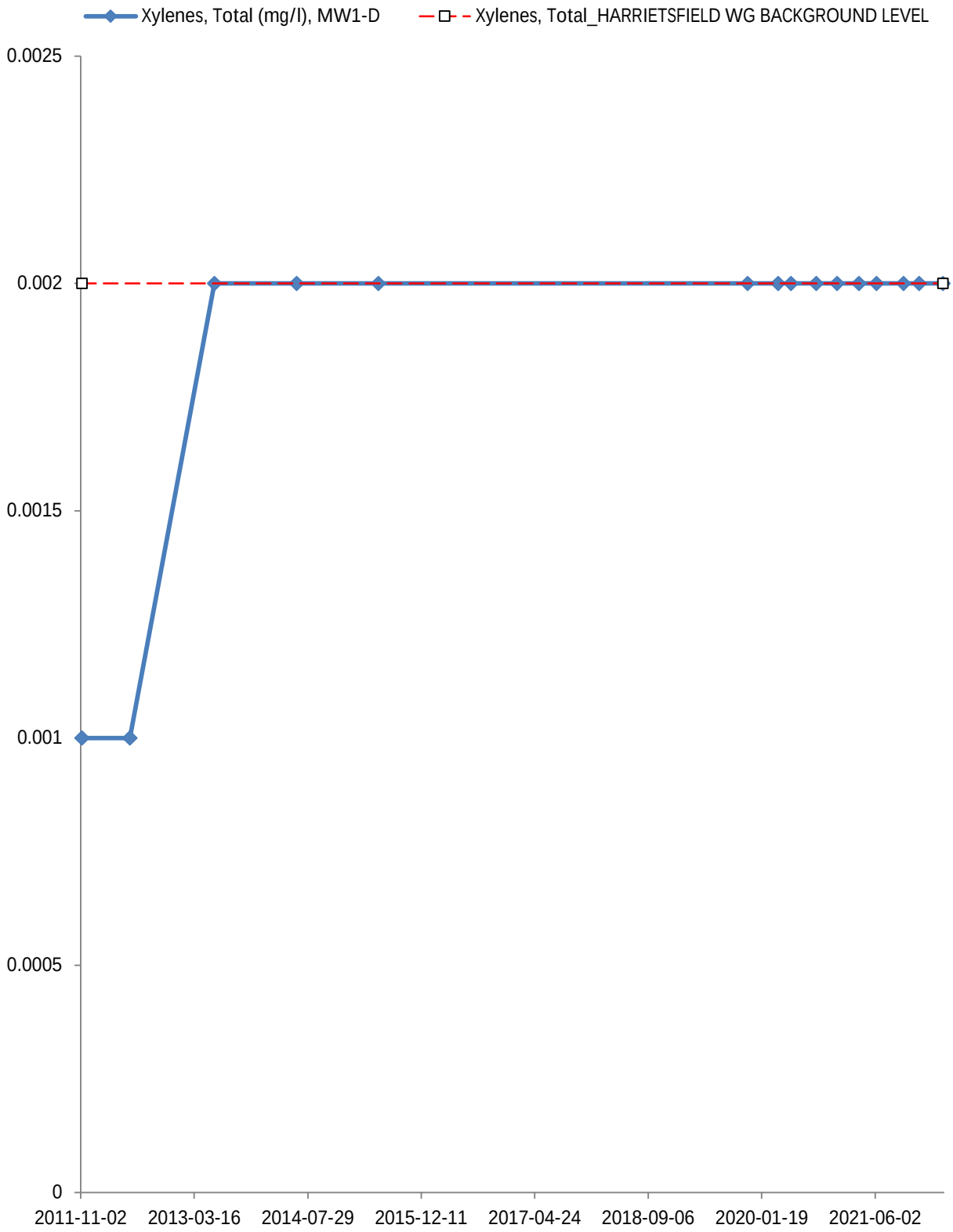
MW1-D - Xylene, O-



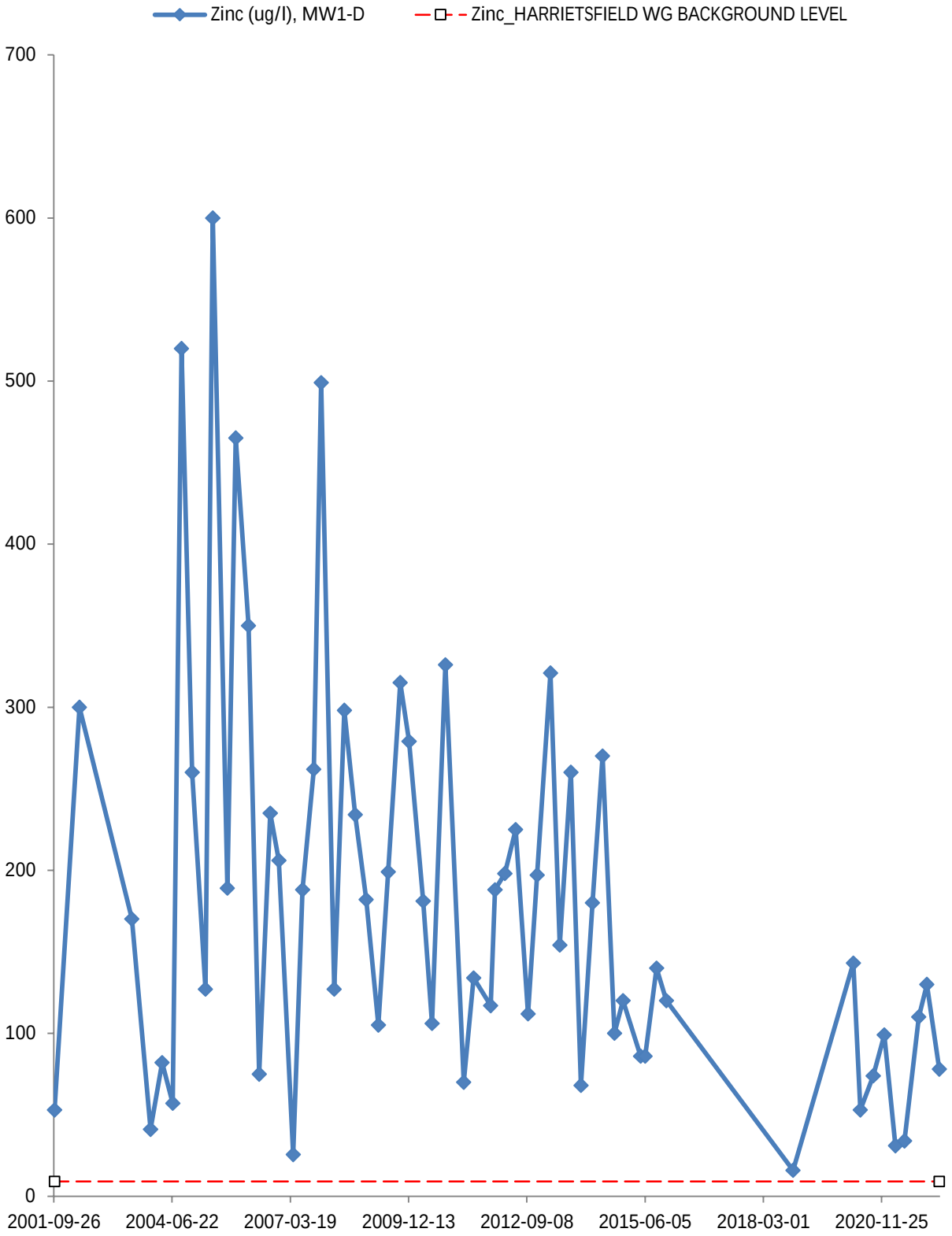
MW1-D - Xylene, p+m-



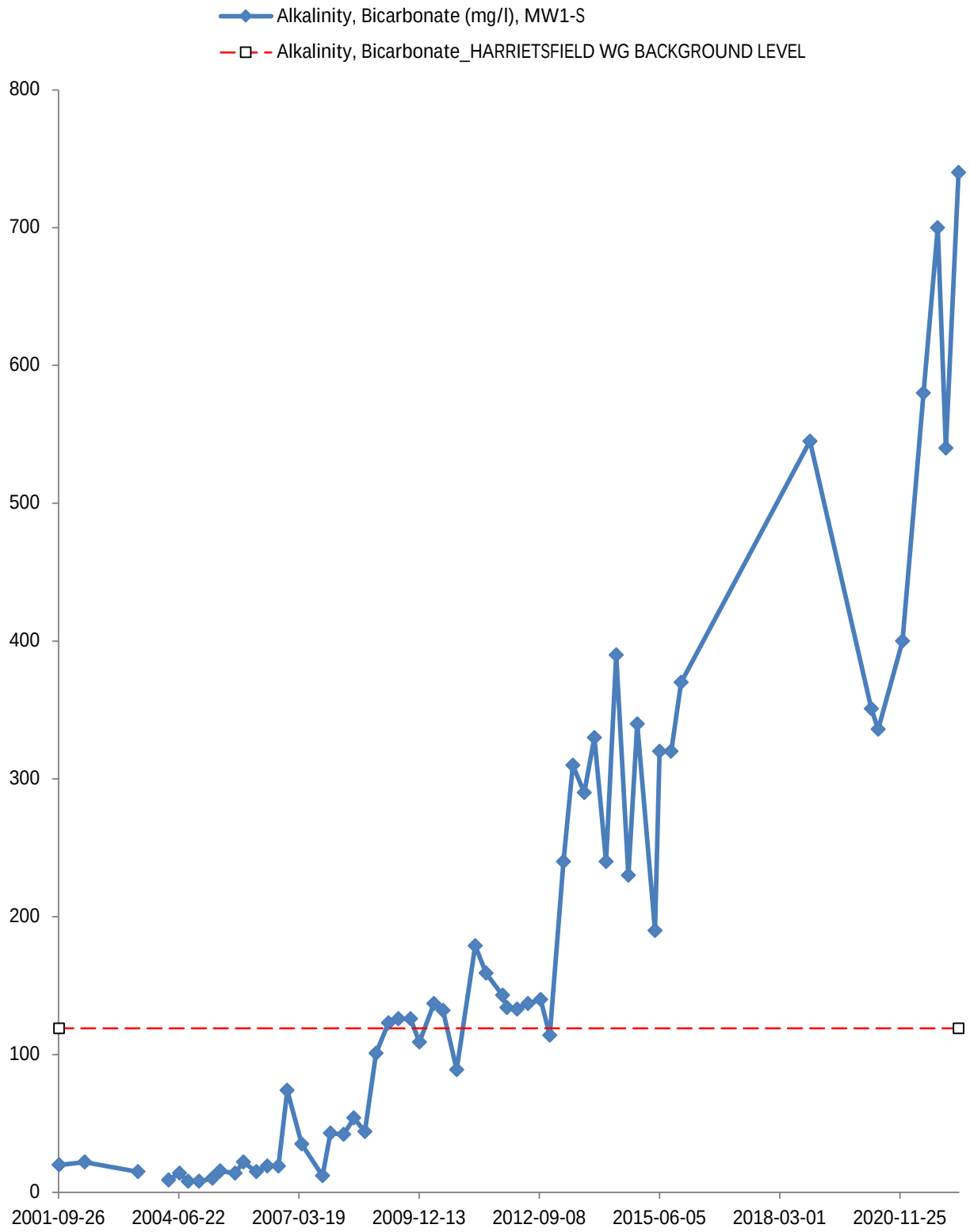
MW1-D - Xylenes, Total



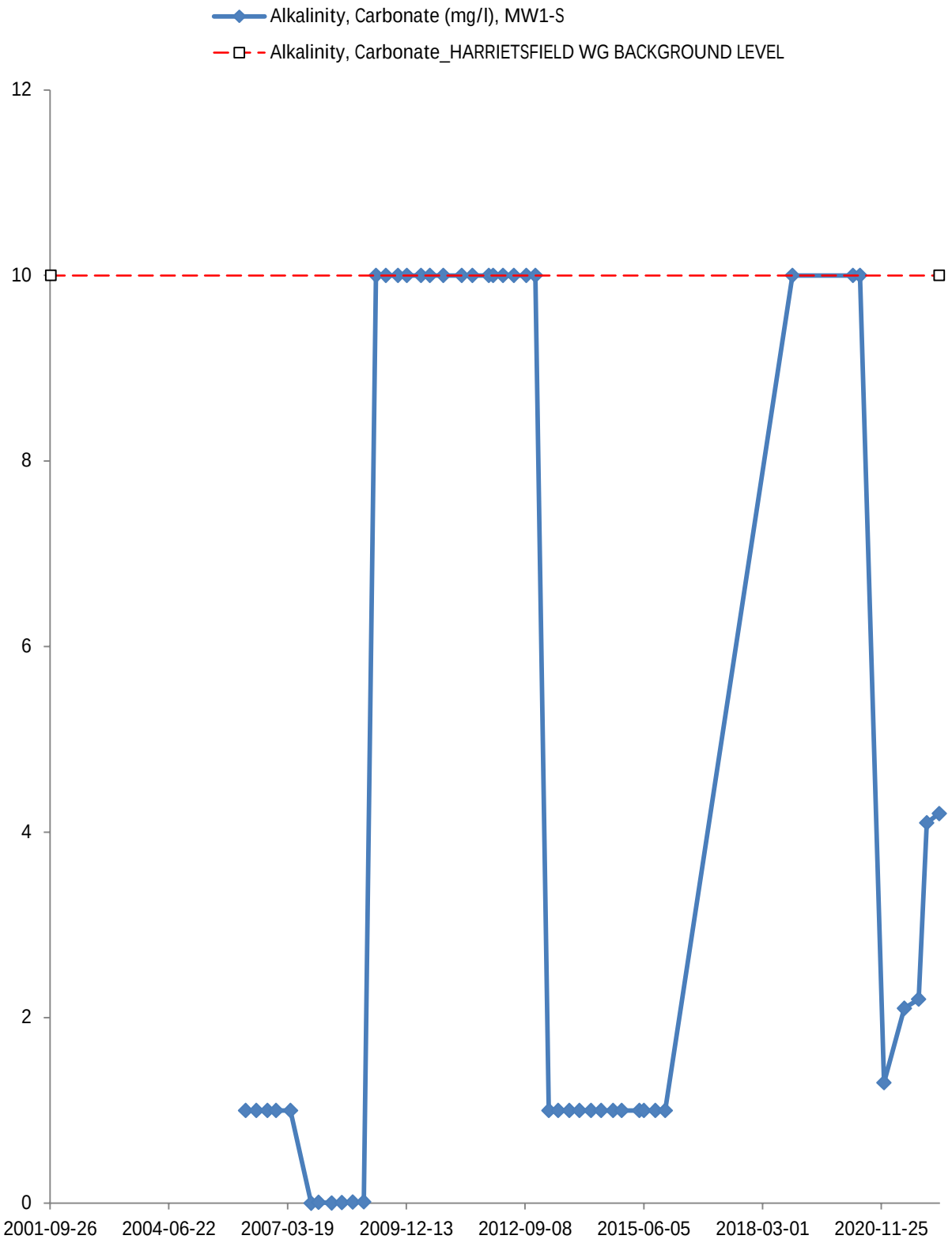
MW1-D - Zinc


Zinc (ug/l), MW1-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
700
600
500
400
300
200
100
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

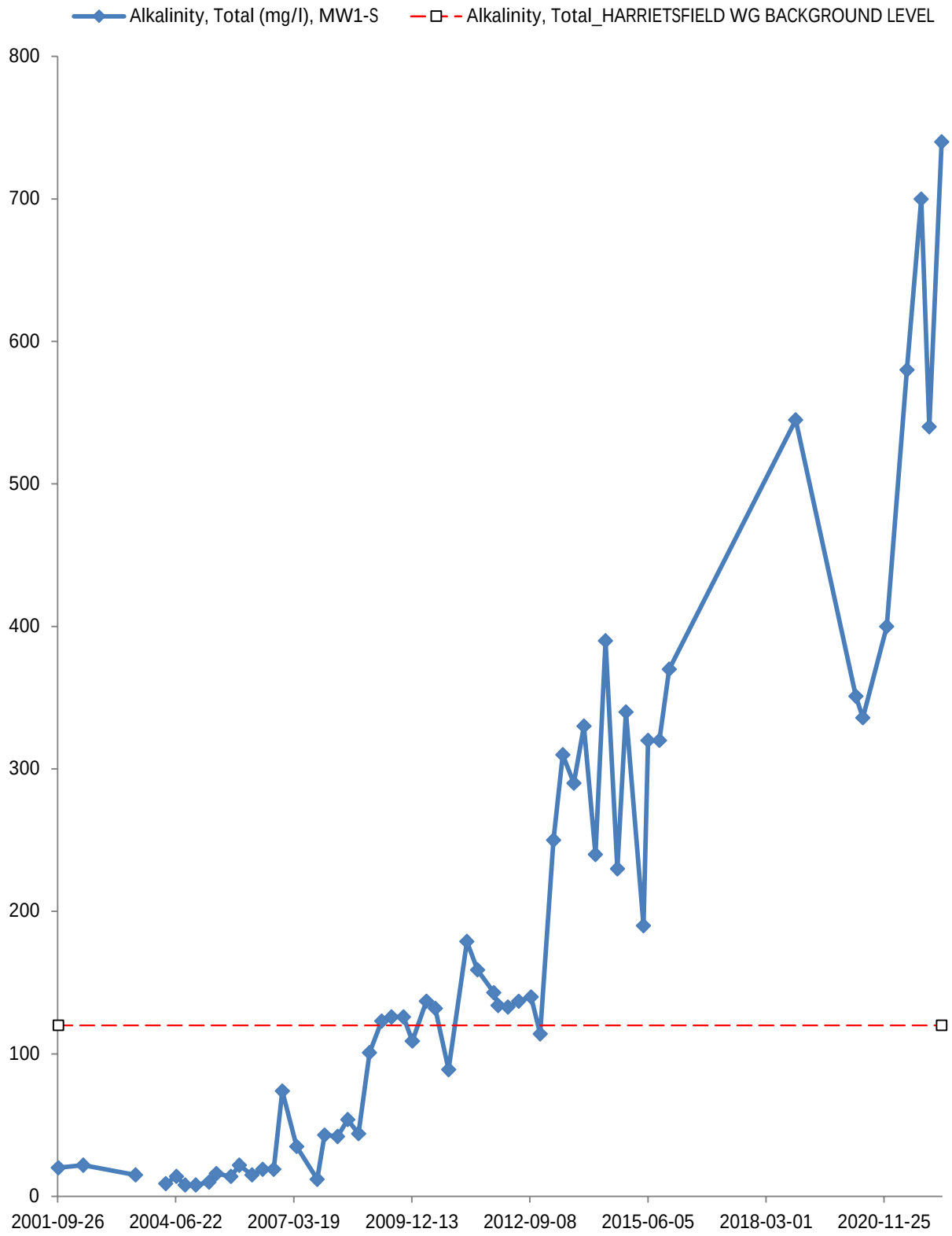
MW1-S - Alkalinity, Bicarbonate



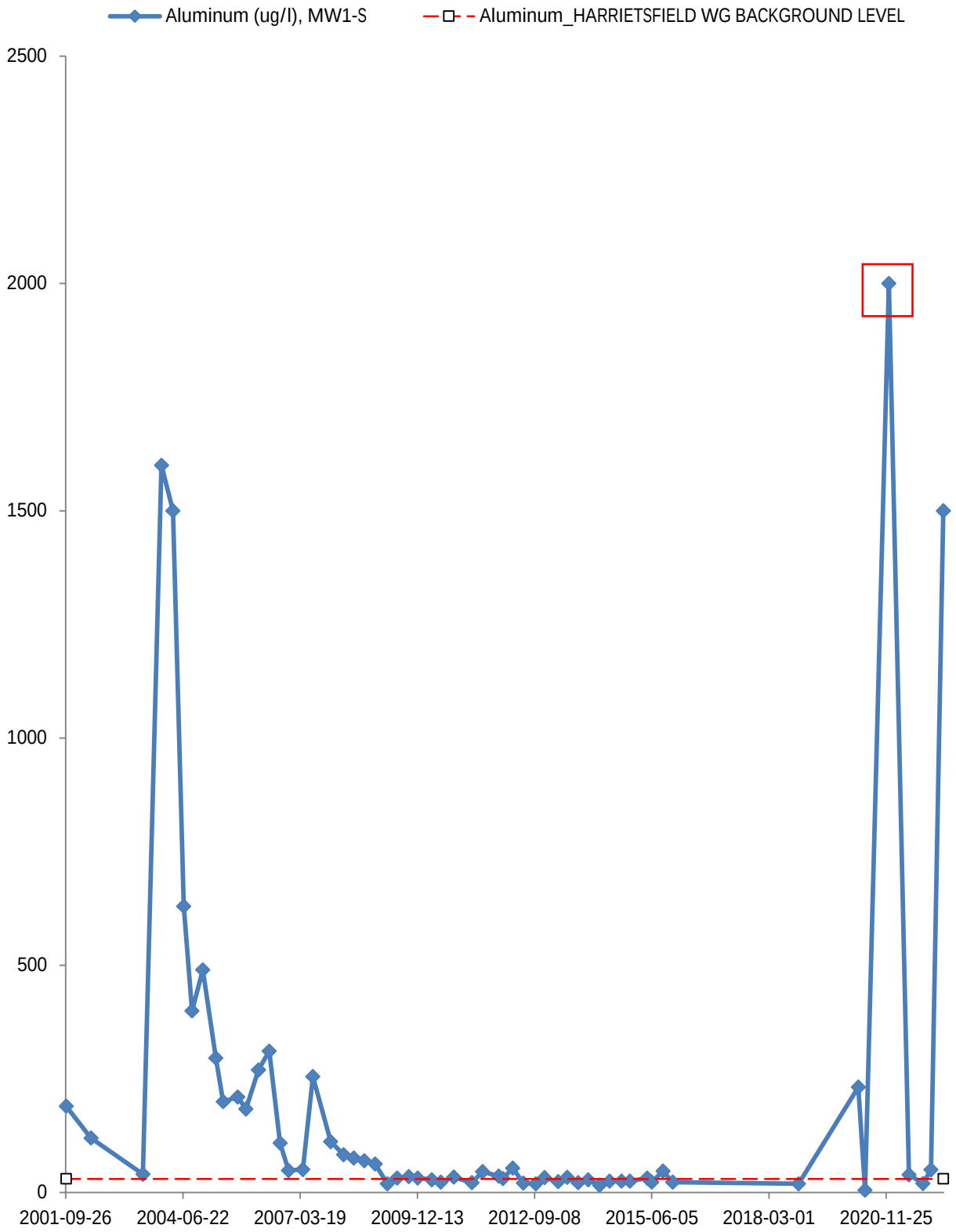
MW1-S - Alkalinity, Carbonate



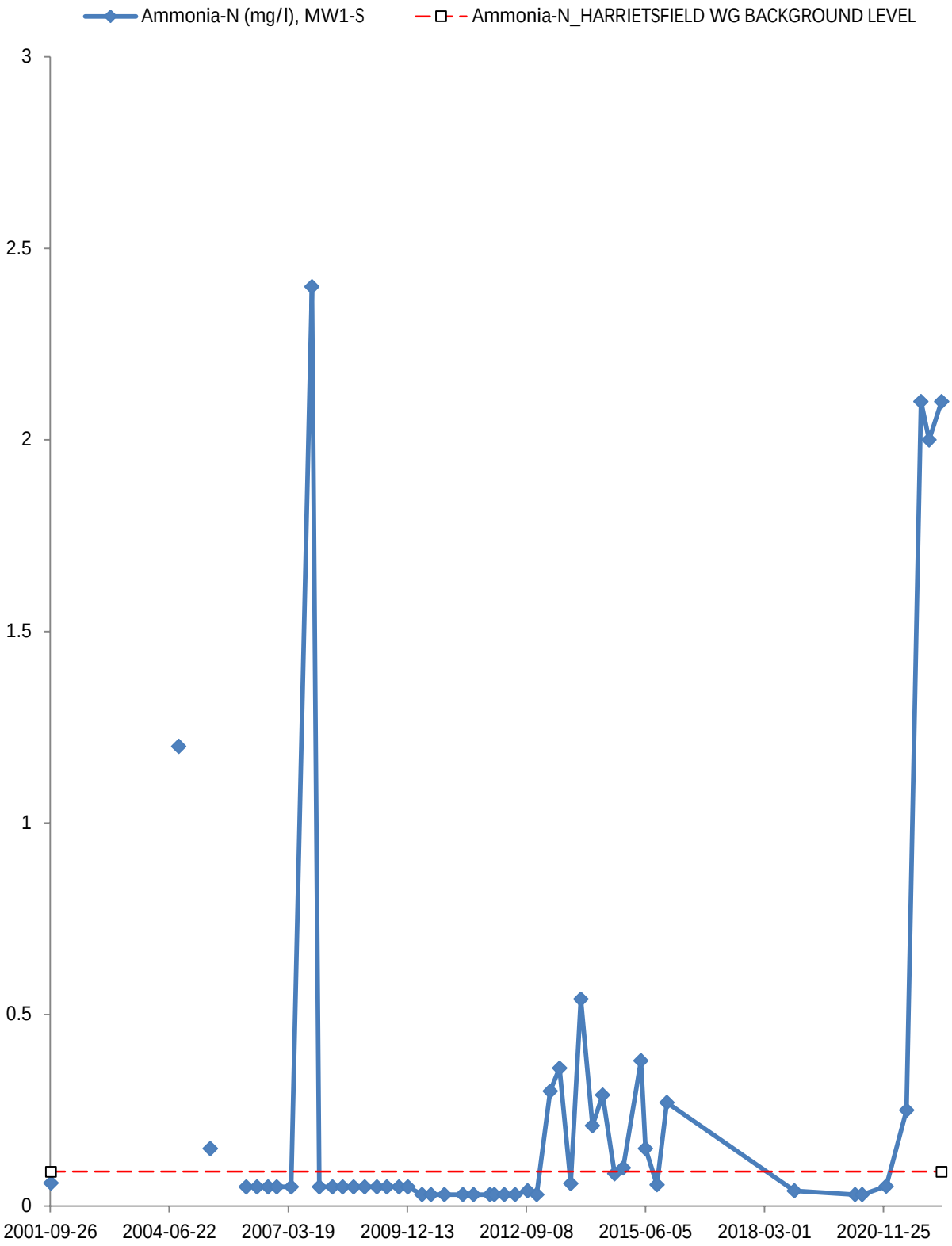
MW1-S - Alkalinity, Total



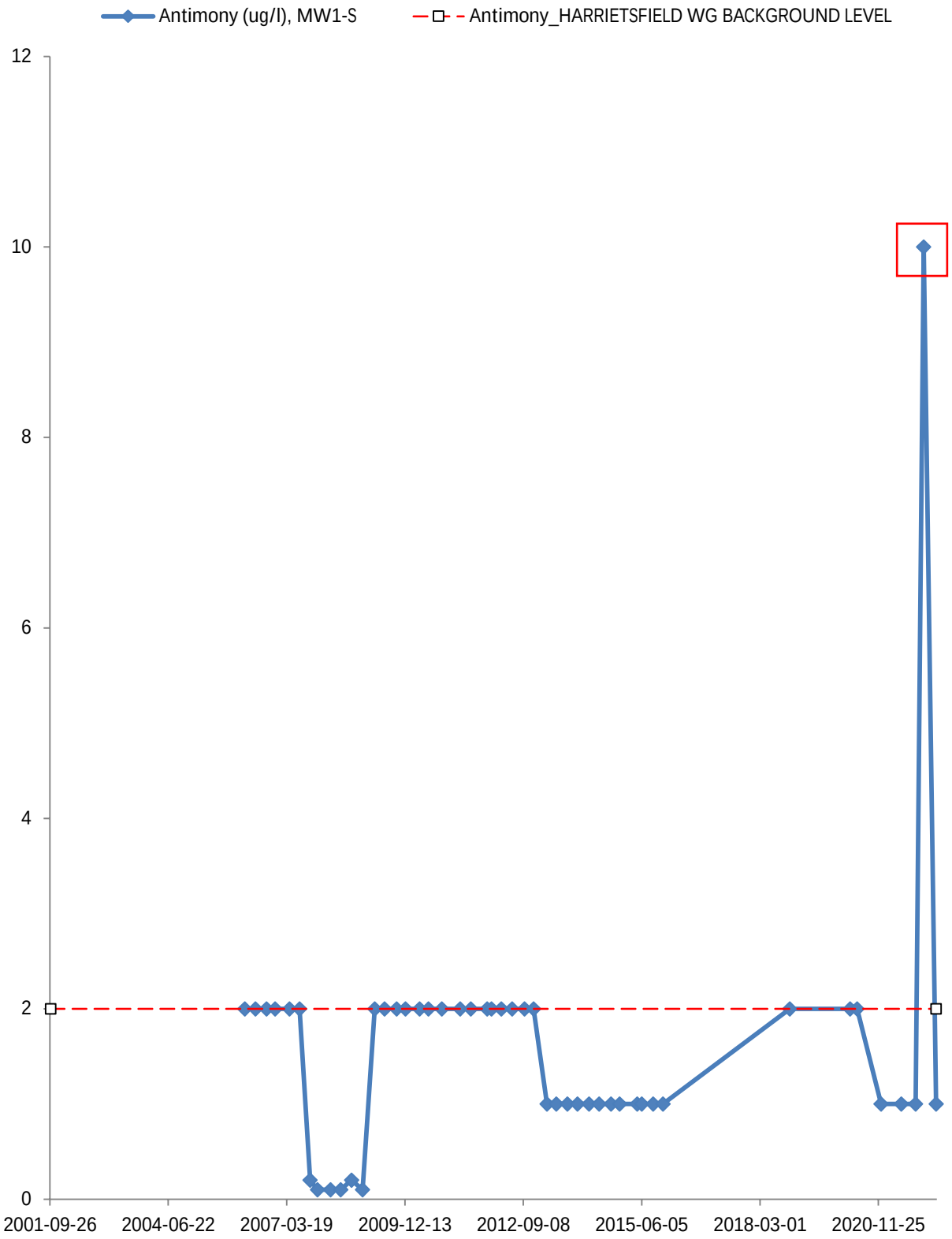
MW1-S - Aluminum



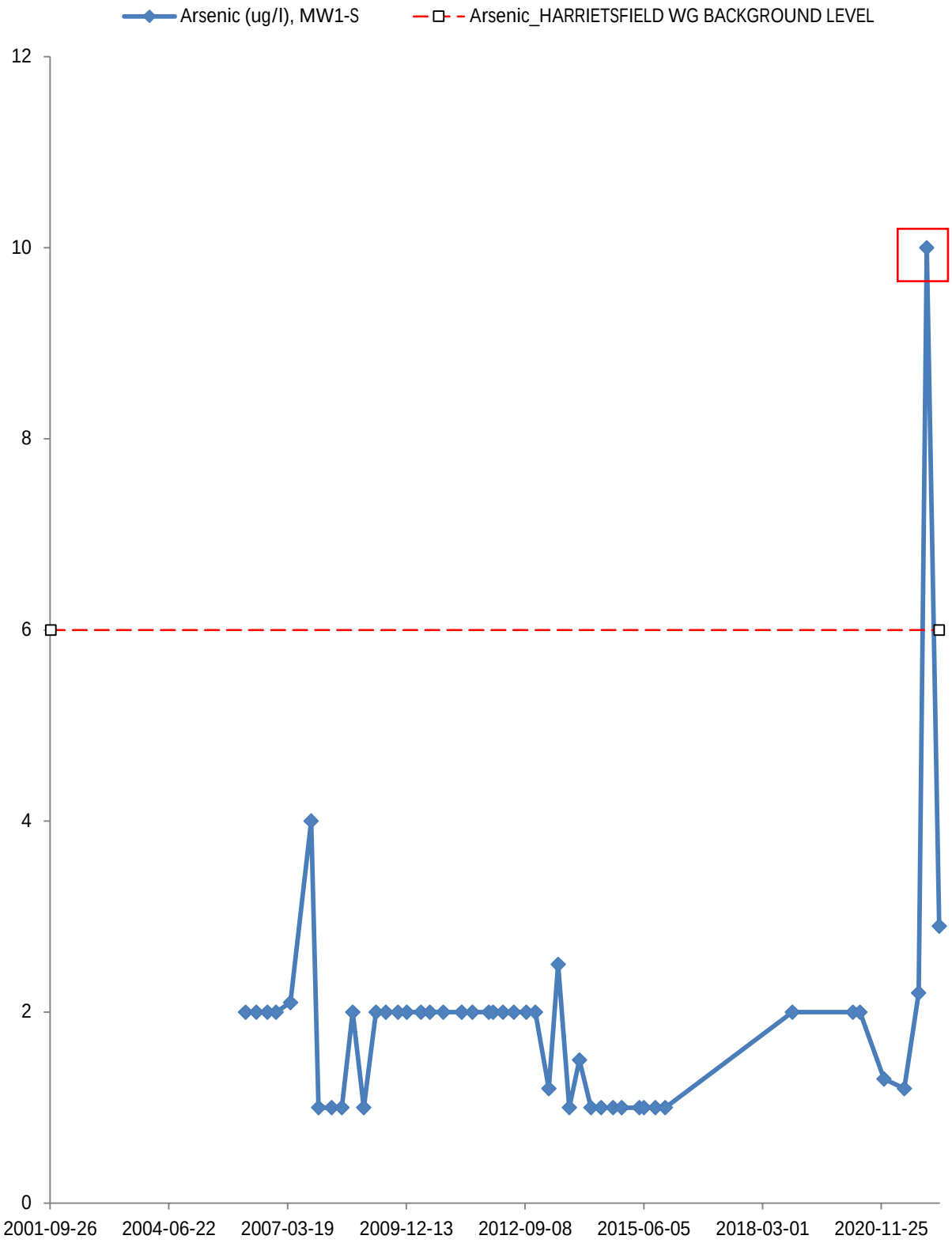
MW1-S - Ammonia-N



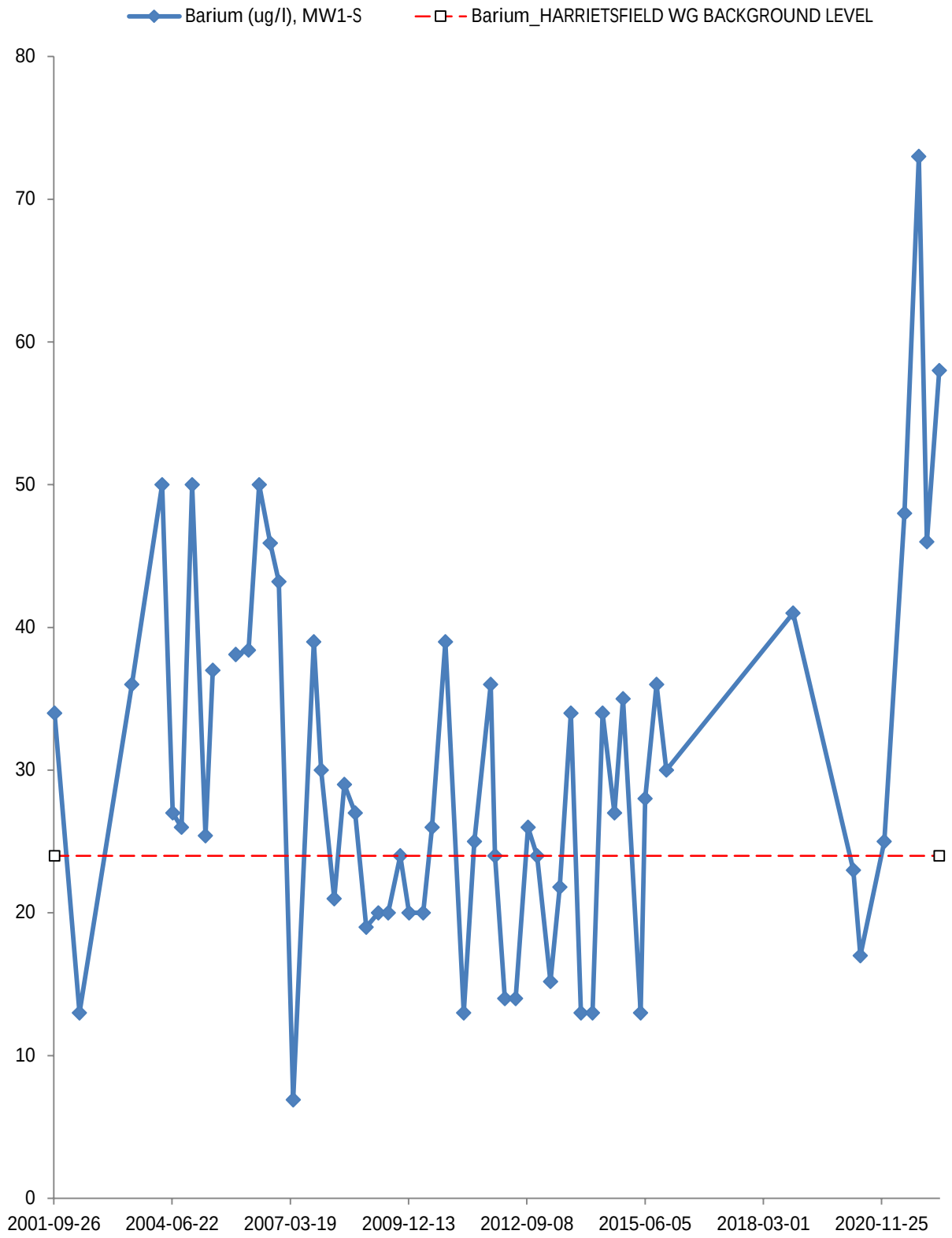
MW1-S - Antimony



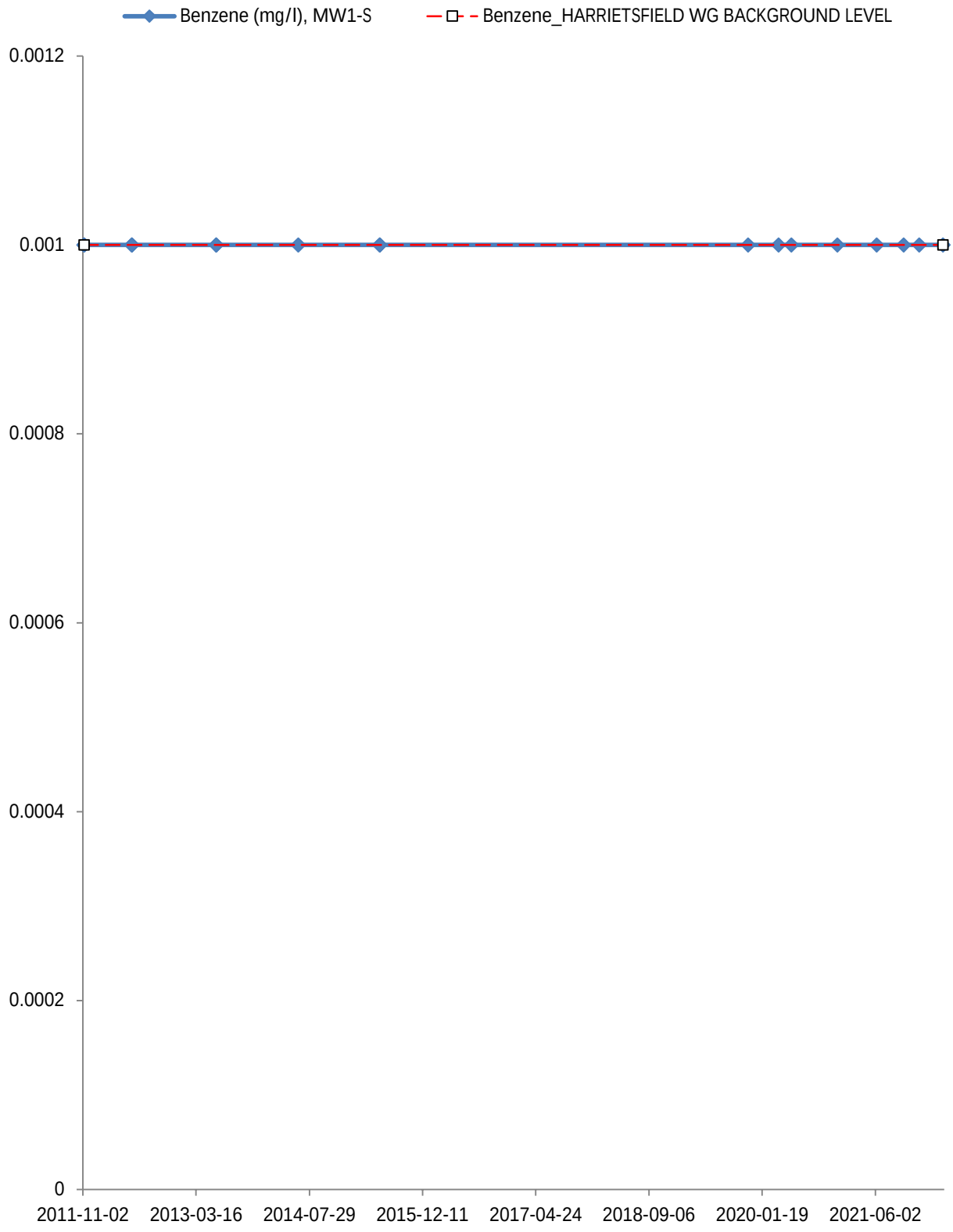
MW1-S - Arsenic



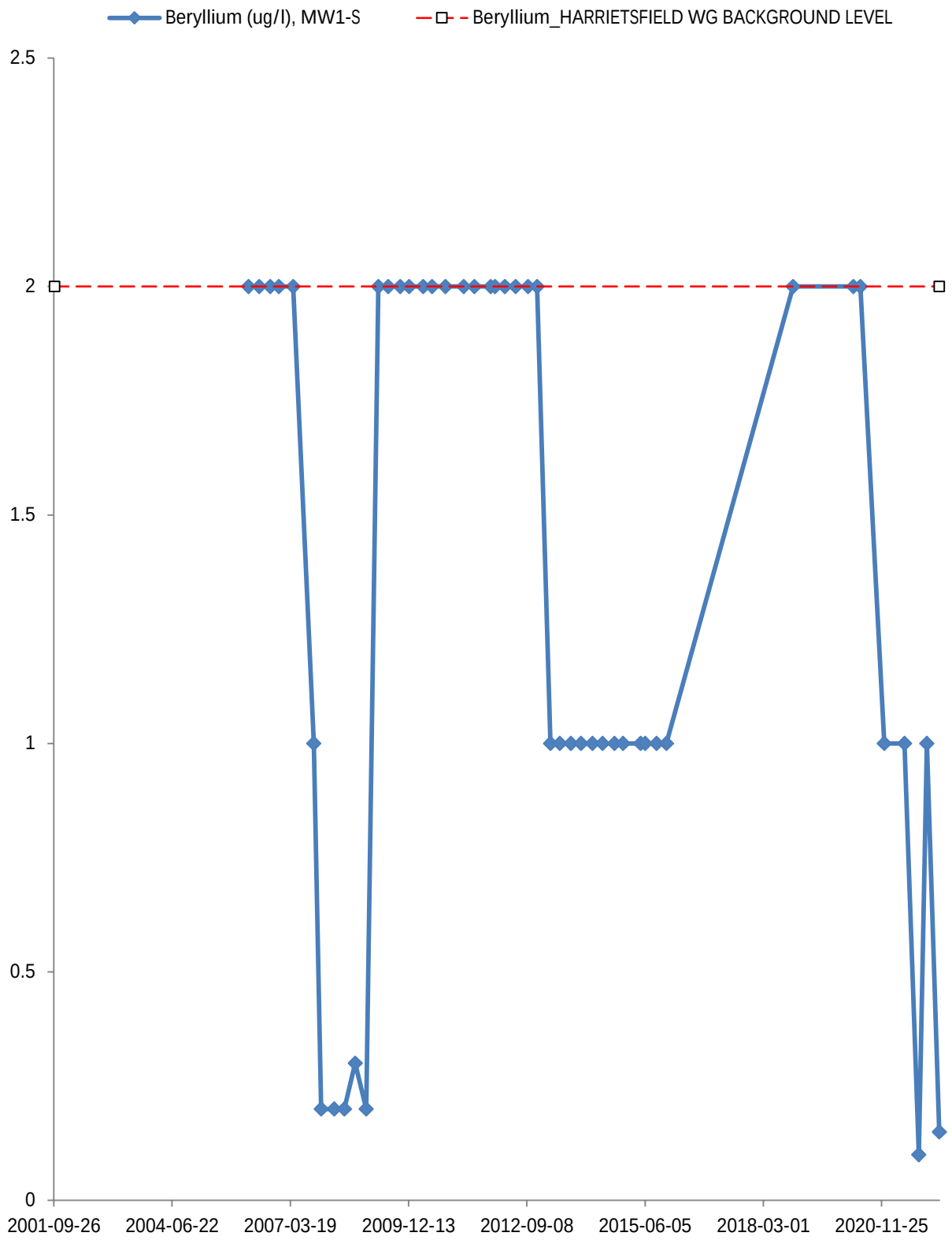
MW1-S - Barium


Barium (ug/l), MW1-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

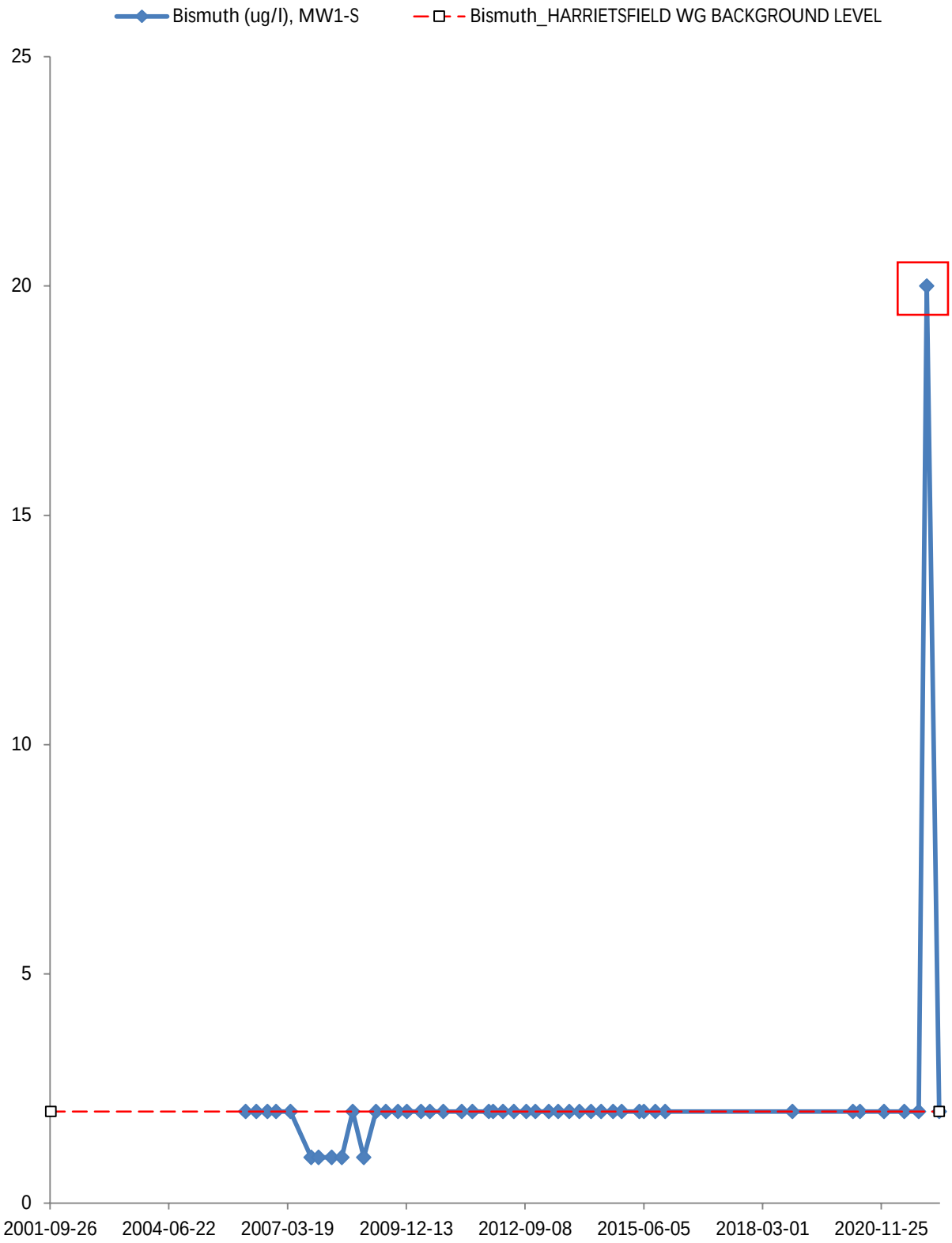
MW1-S - Benzene



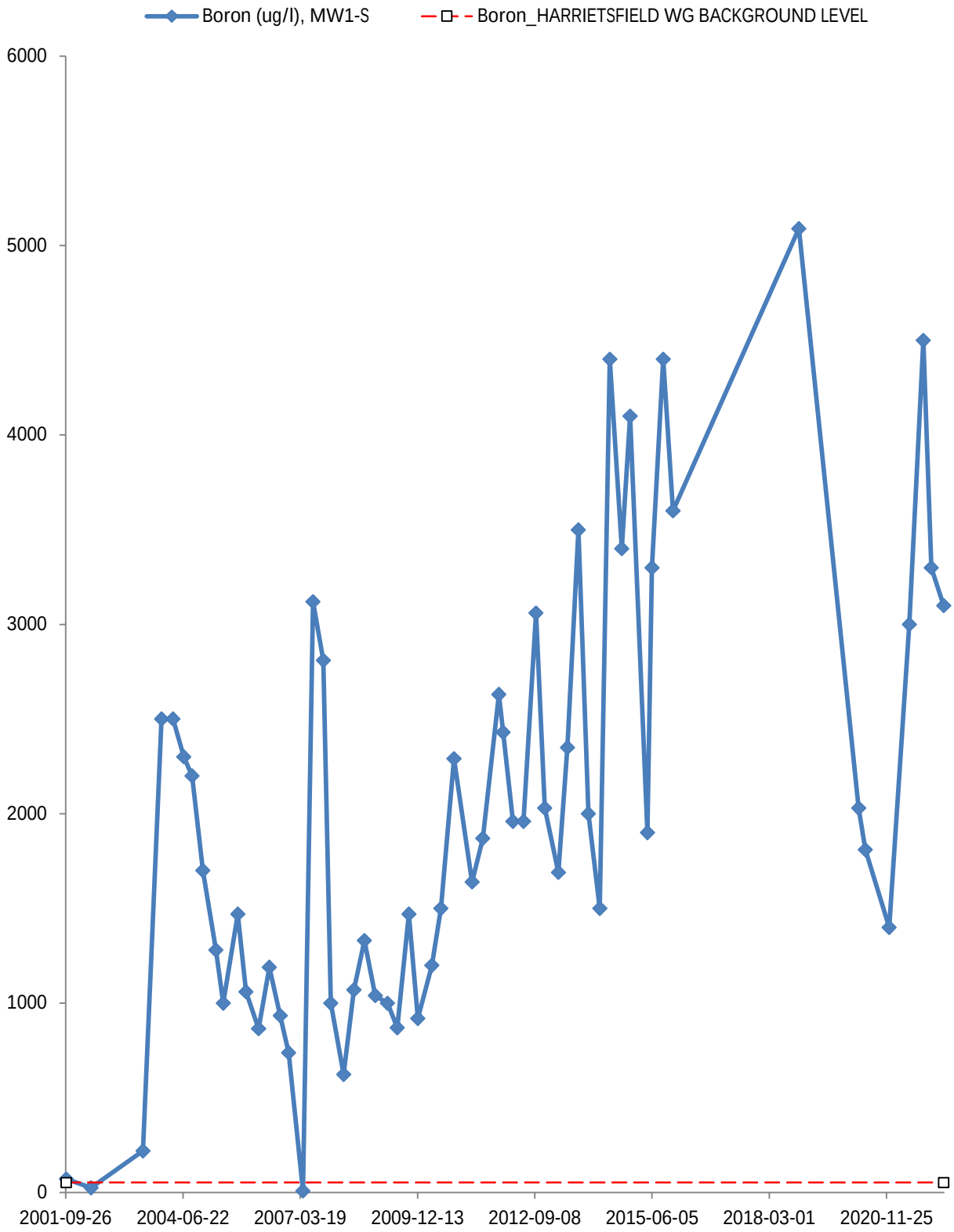
MW1-S - Beryllium



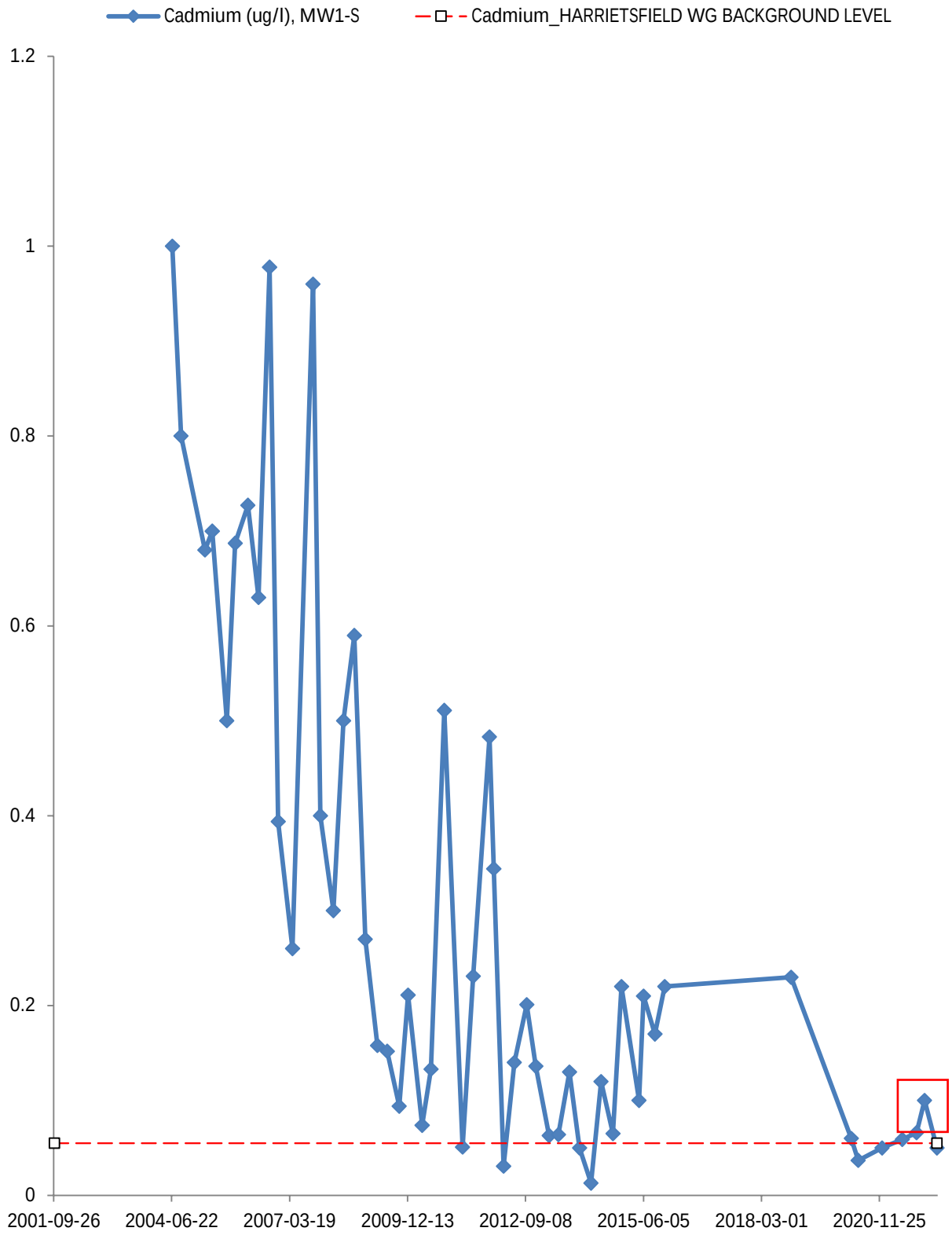
MW1-S - Bismuth



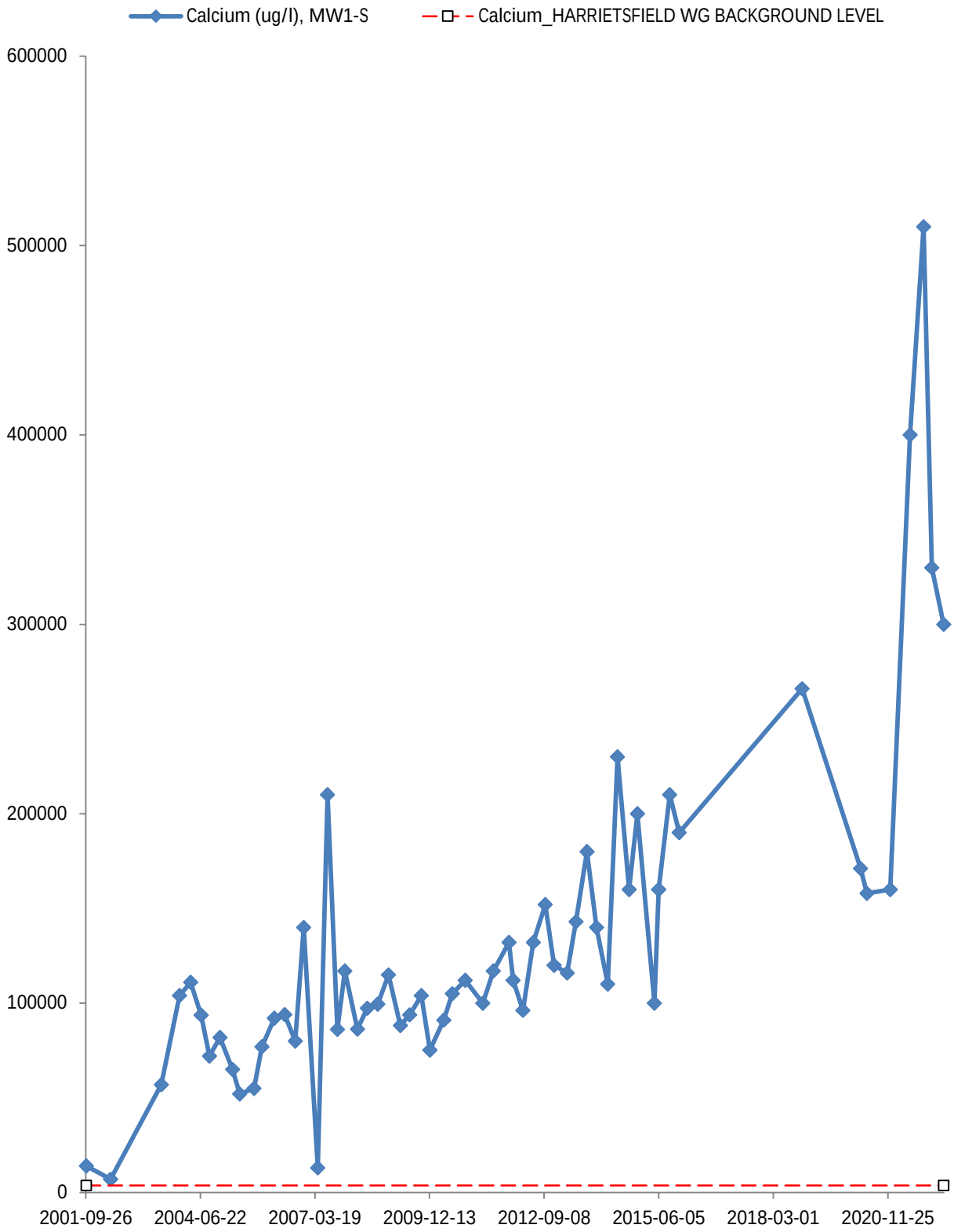
MW1-S - Boron


Boron (ug/l), MW1-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
6000
5000
4000
3000
2000
1000
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

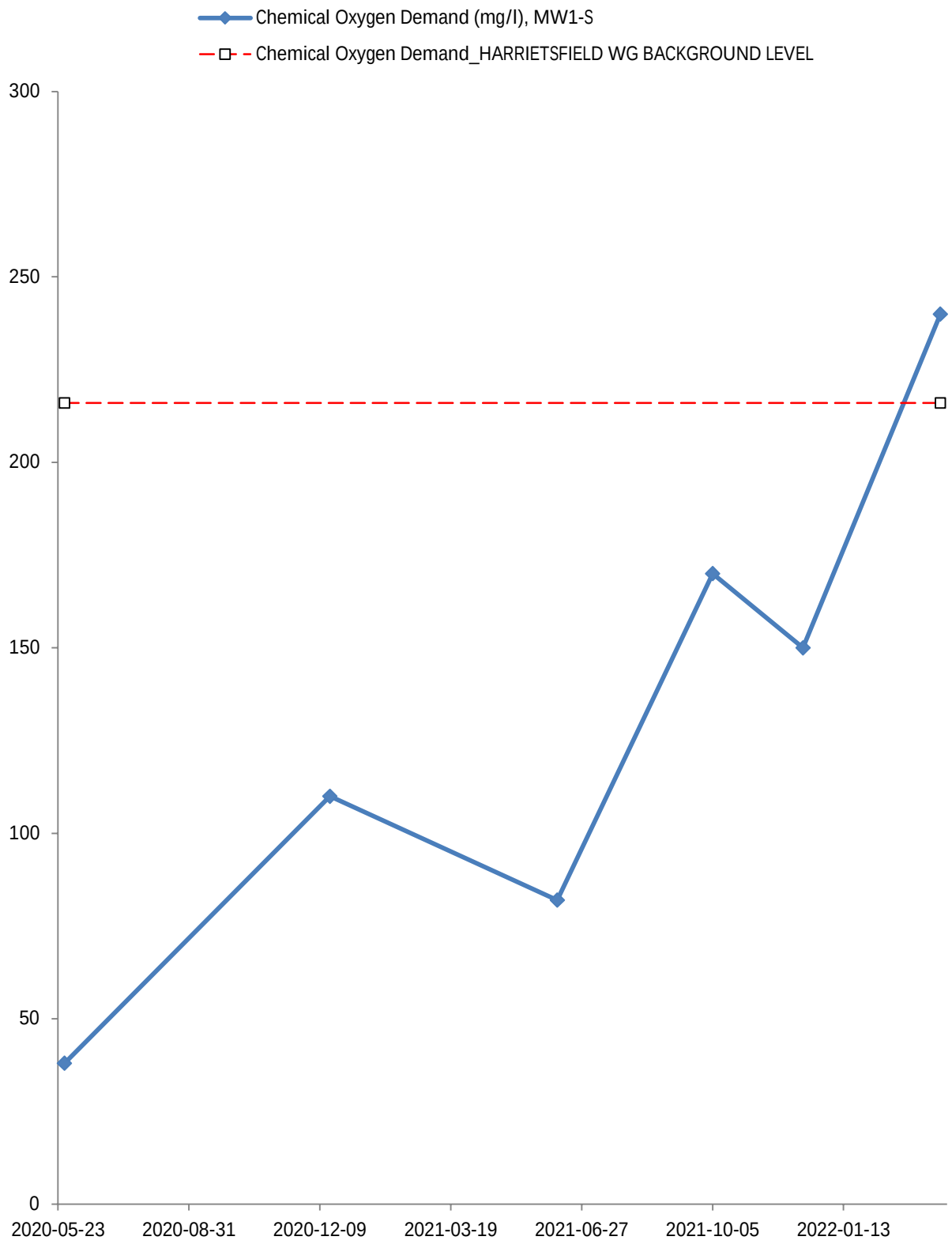
MW1-S - Cadmium



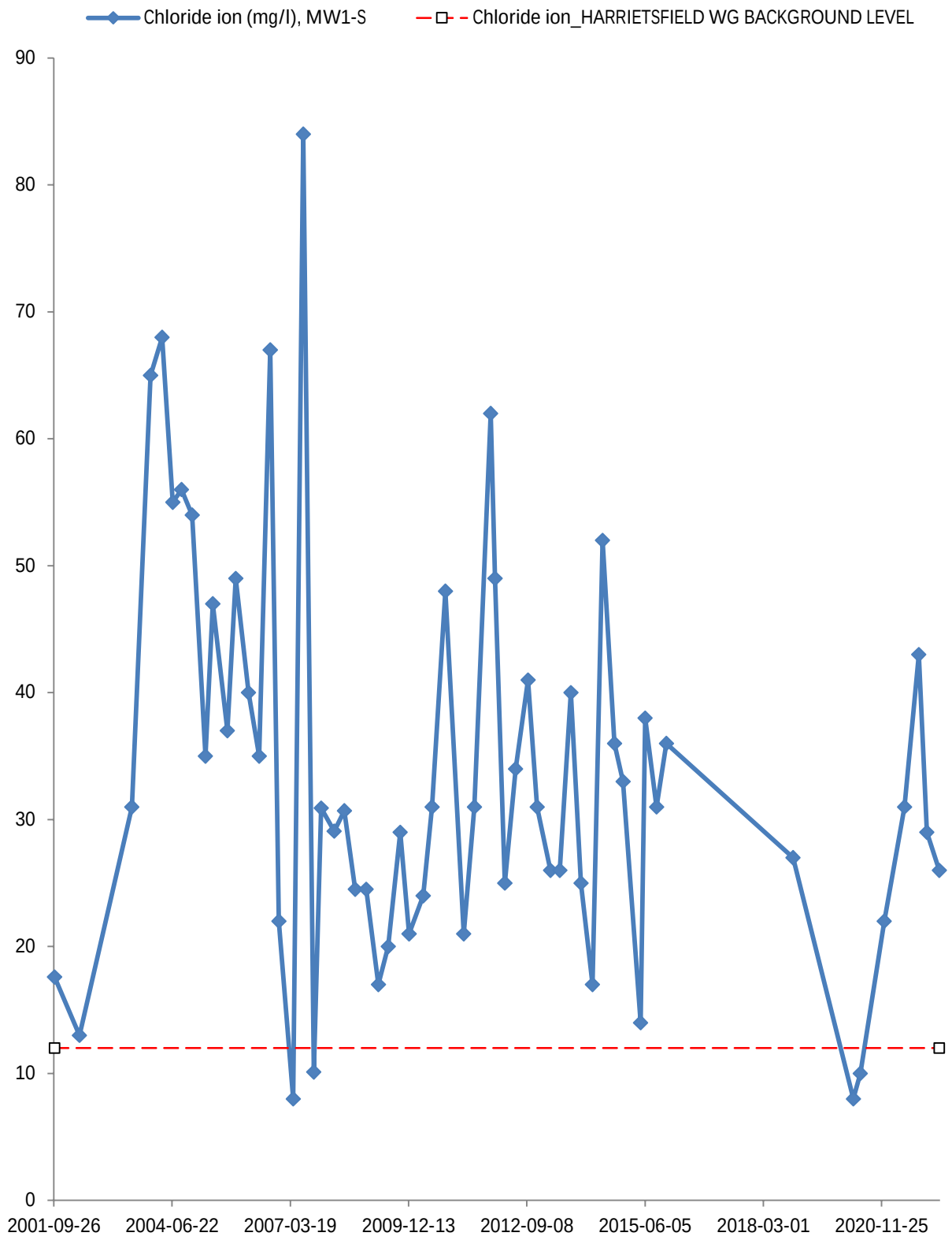
MW1-S - Calcium



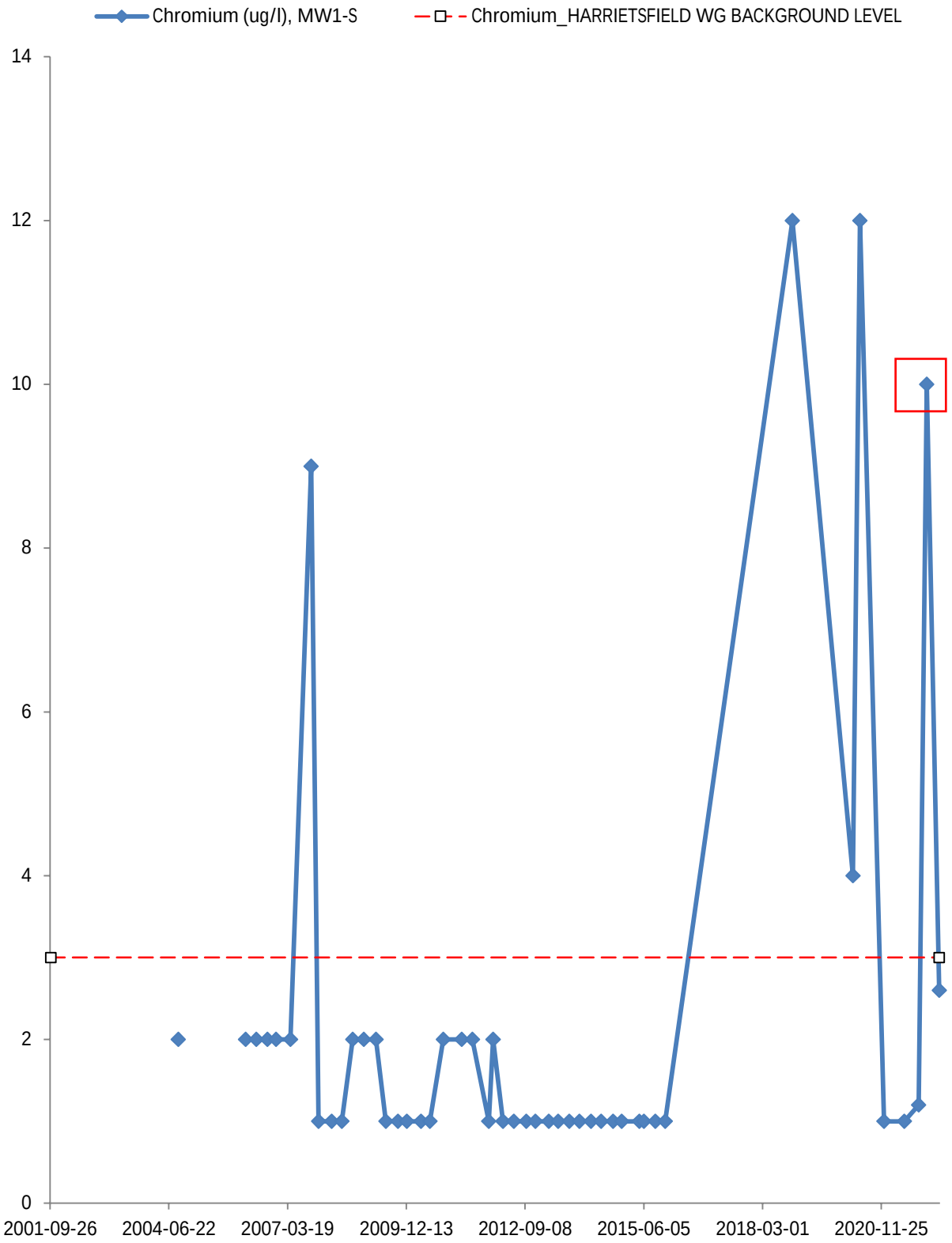
MW1-S - Chemical Oxygen Demand



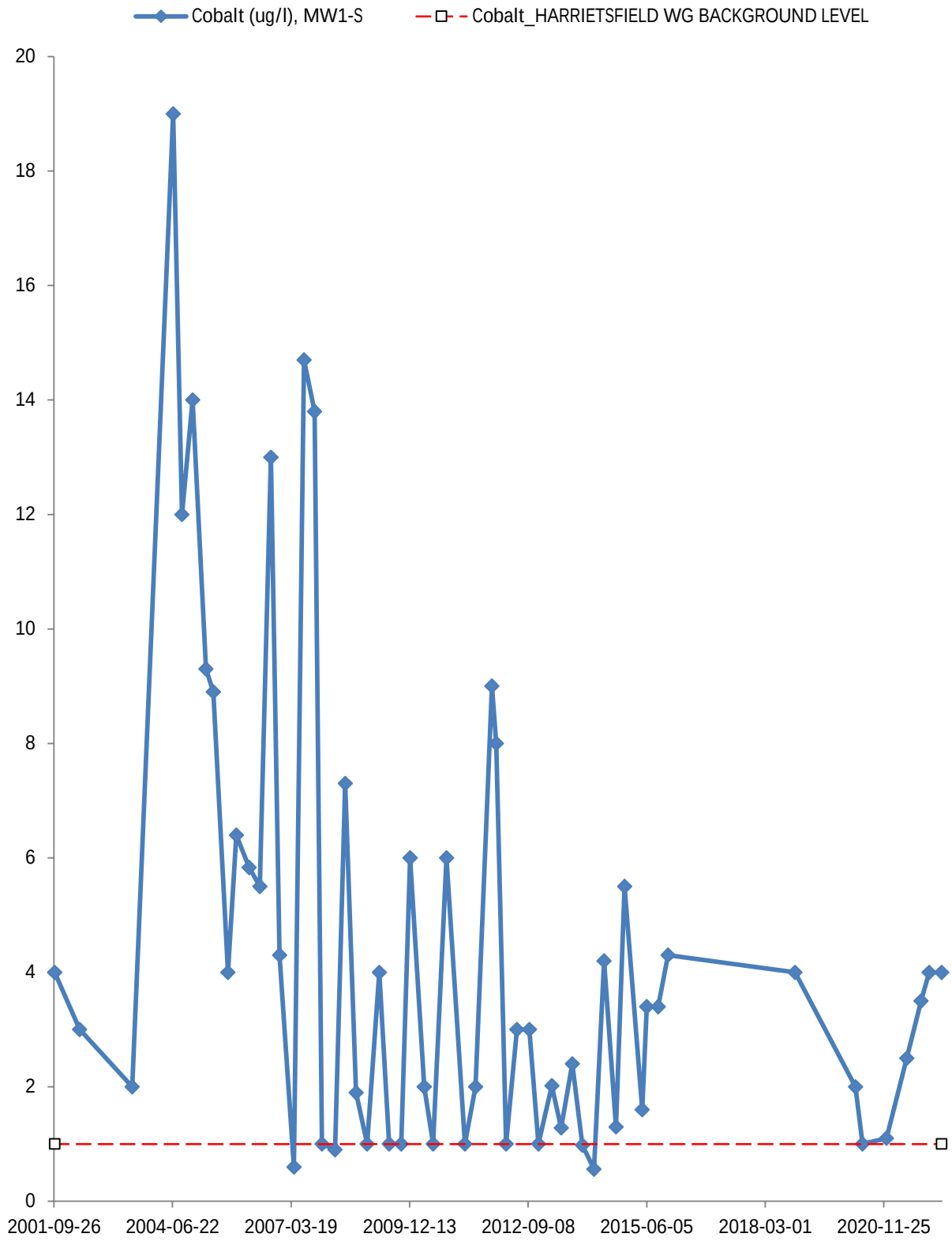
MW1-S - Chloride ion



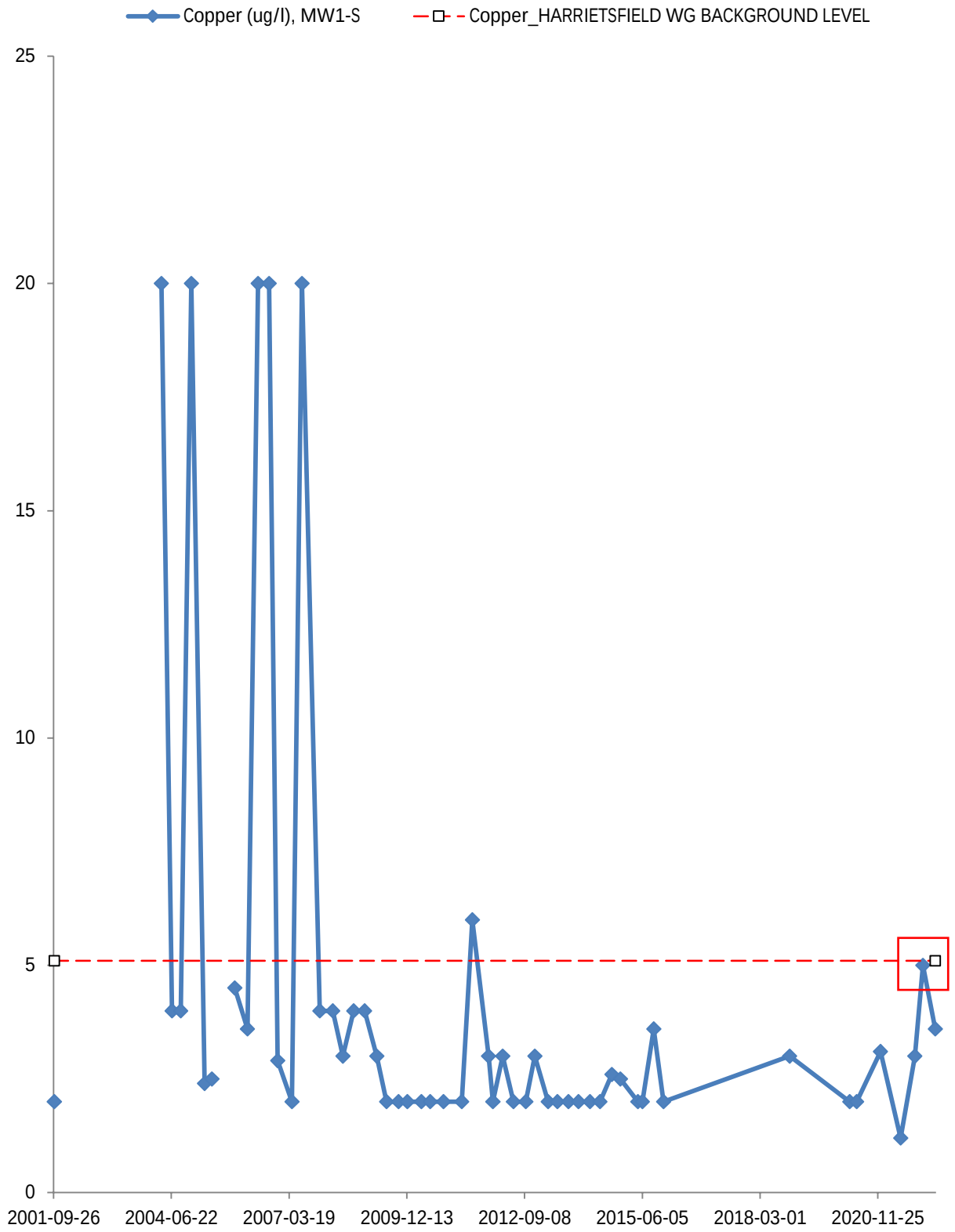
MW1-S - Chromium



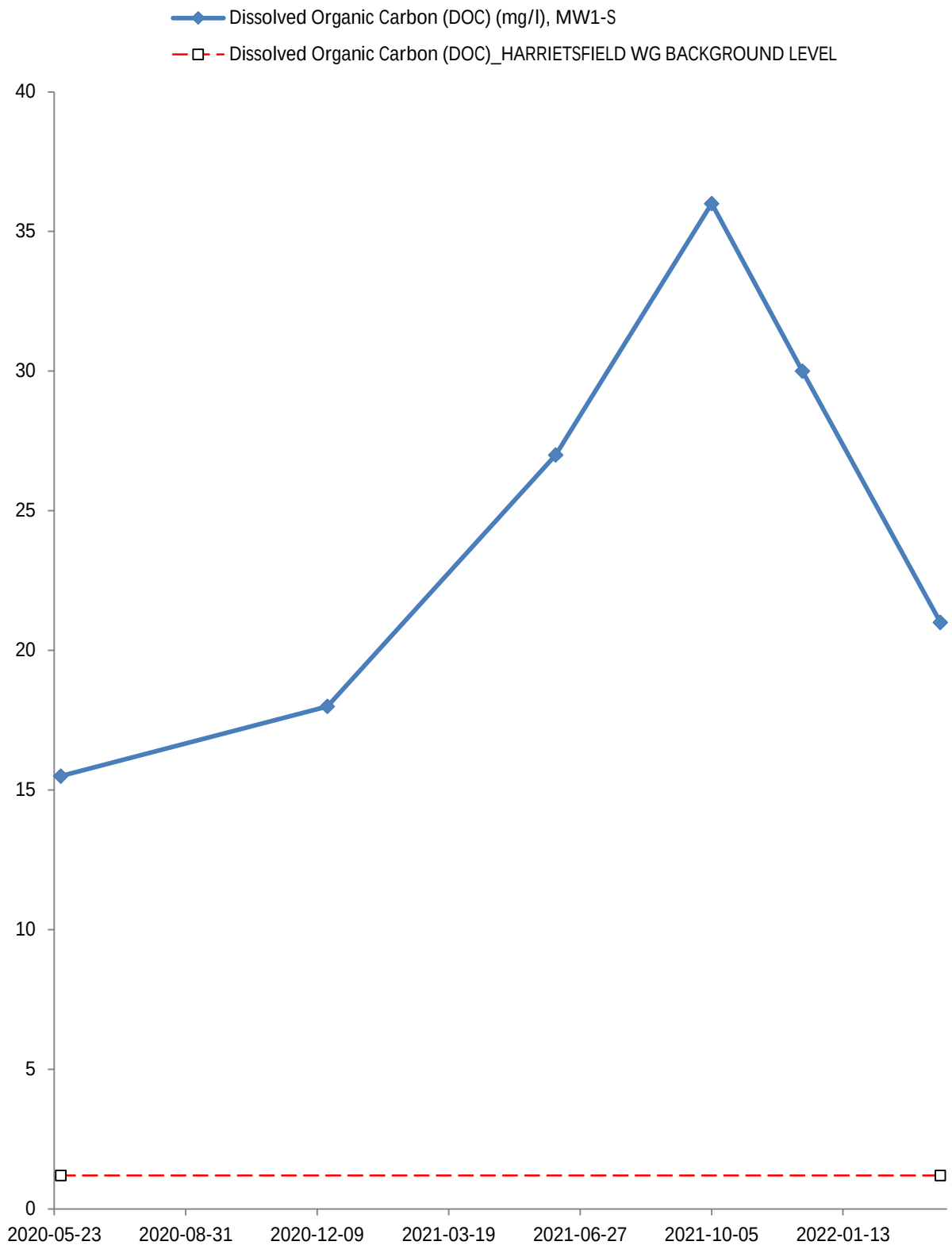
MW1-S - Cobalt


Cobalt (ug/l), MW1-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
20
18
16
14
12
10
8
6
4
2
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

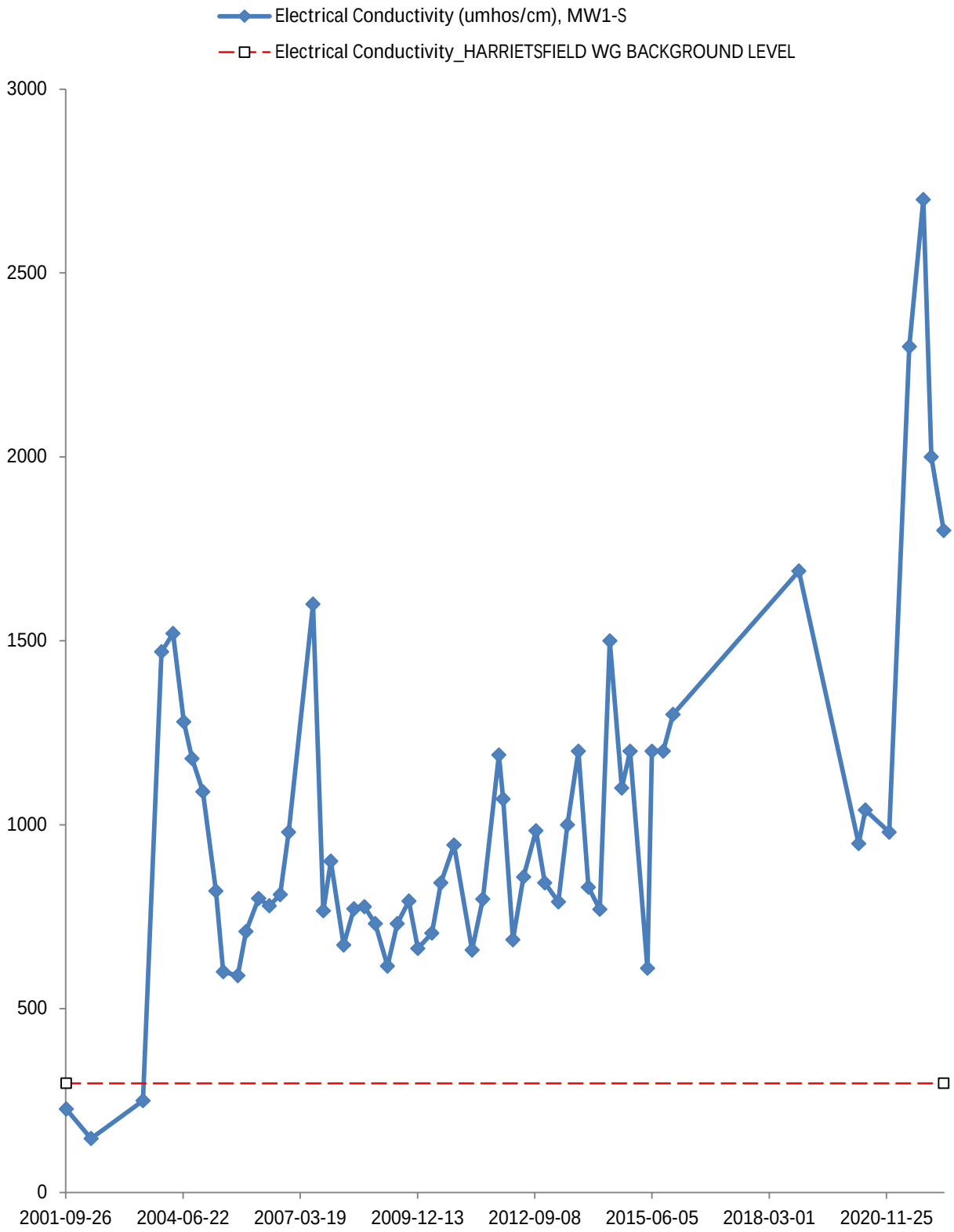
MW1-S - Copper


Copper (ug/l), MW1-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

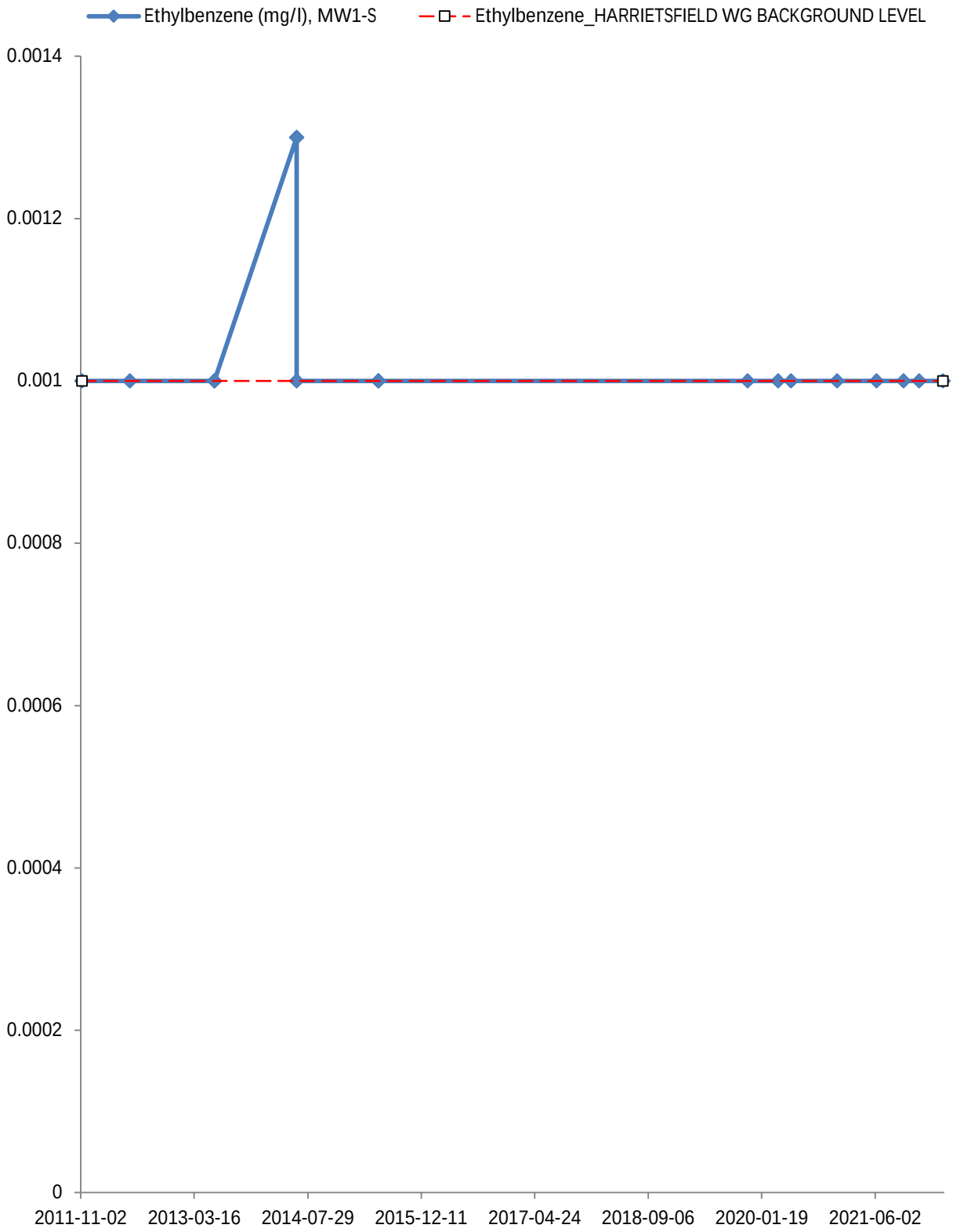
MW1-S - Dissolved Organic Carbon7



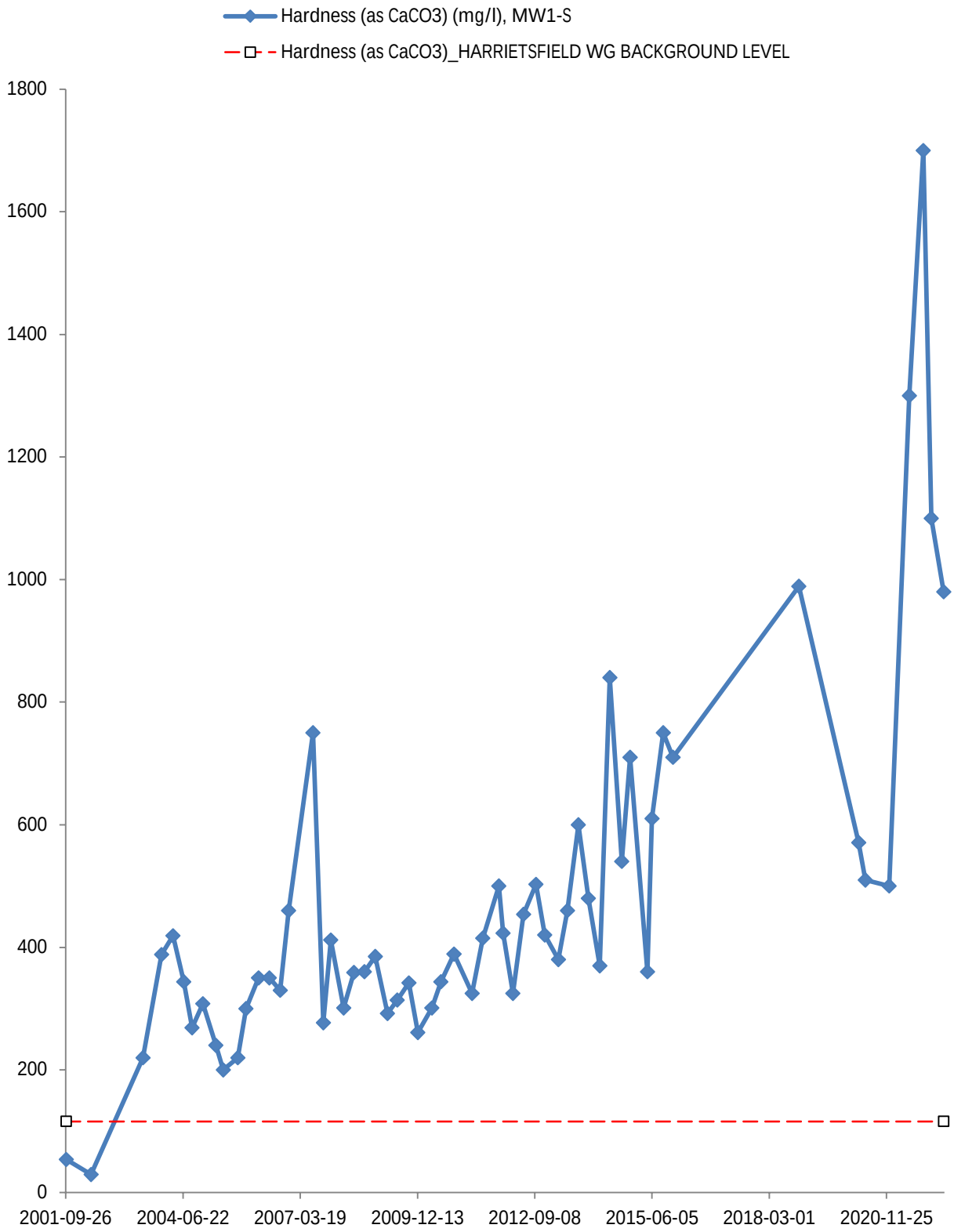
MW1-S - Electrical Conductivity



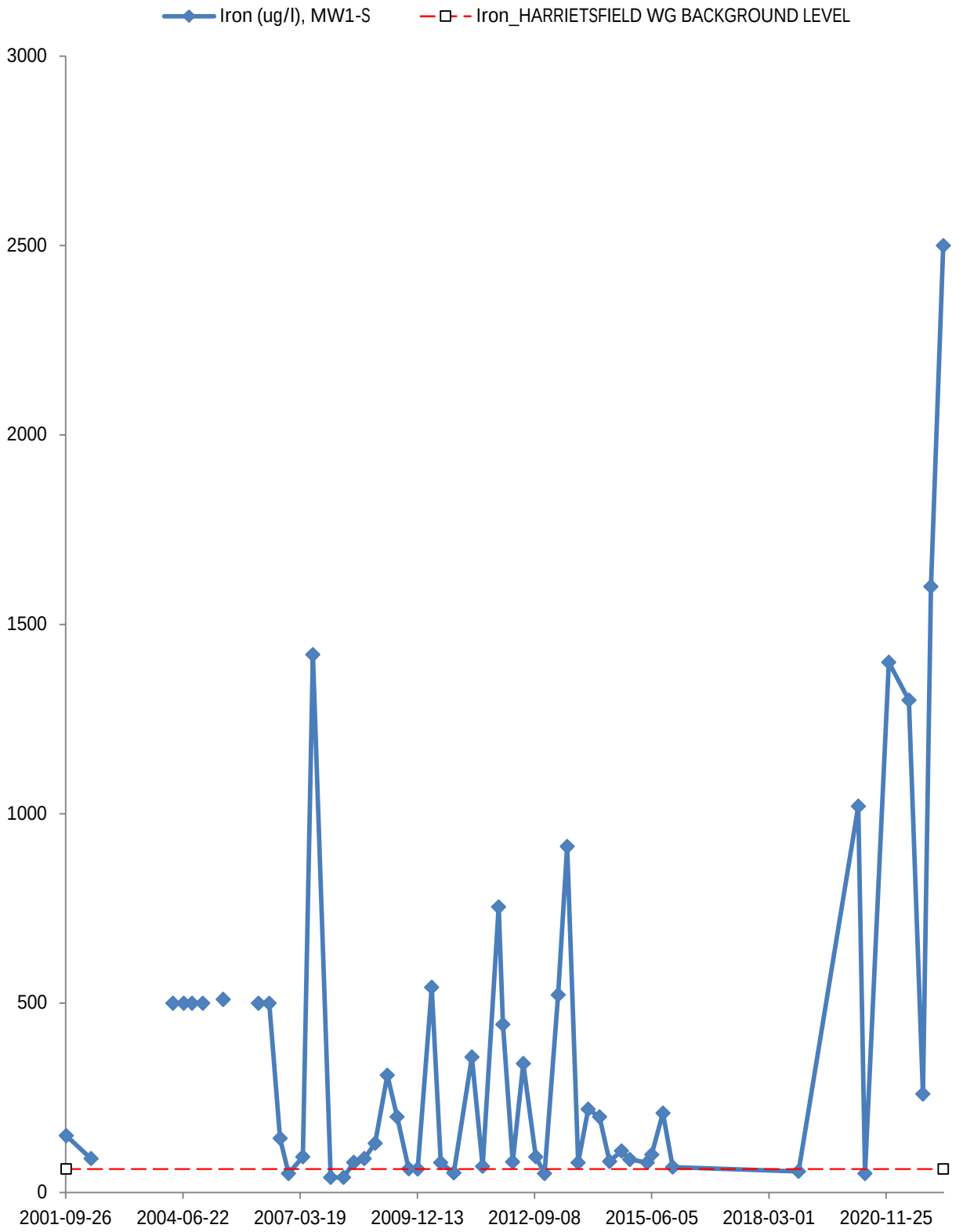
MW1-S - Ethylbenzene



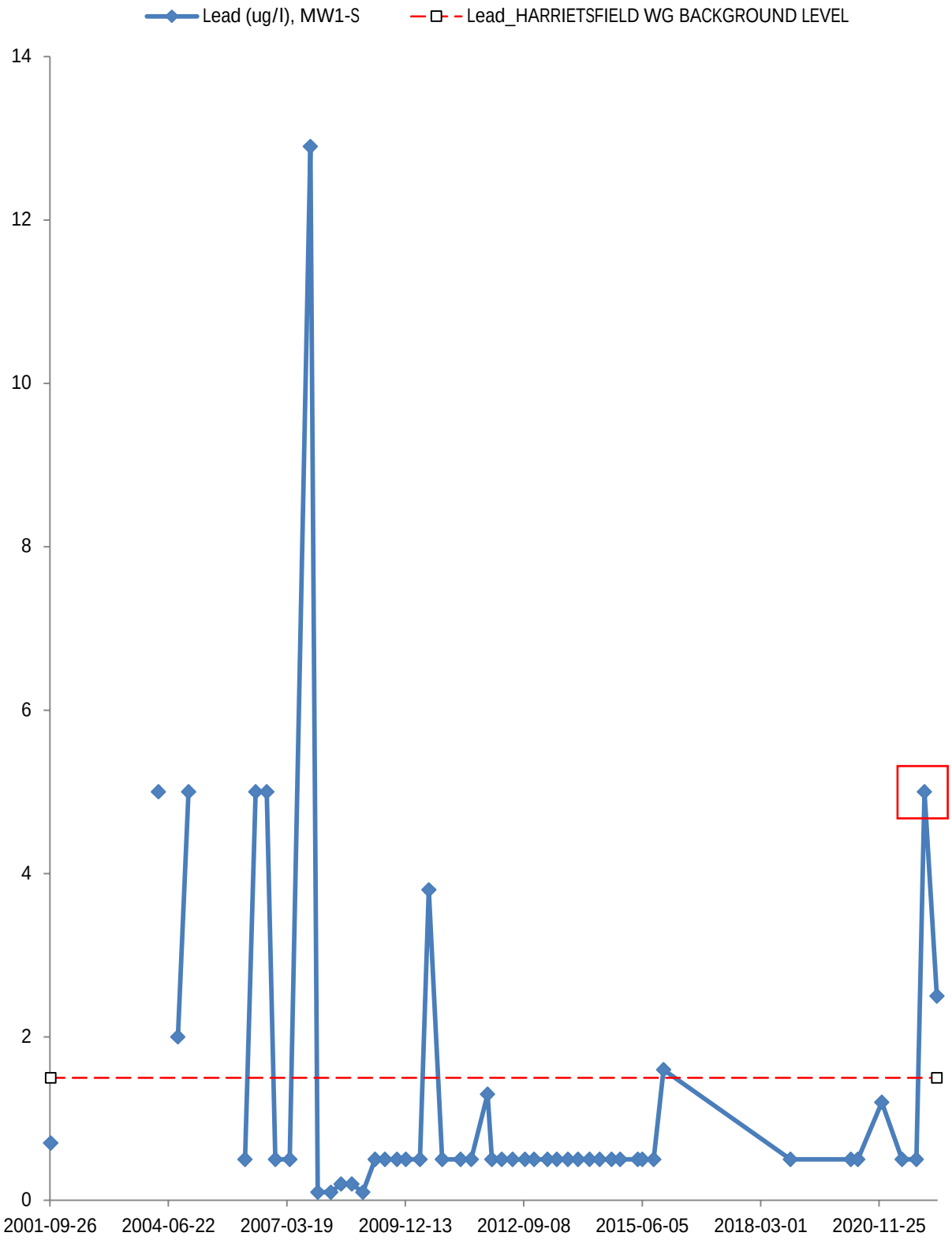
MW1-S - Hardness (as CaCO3)



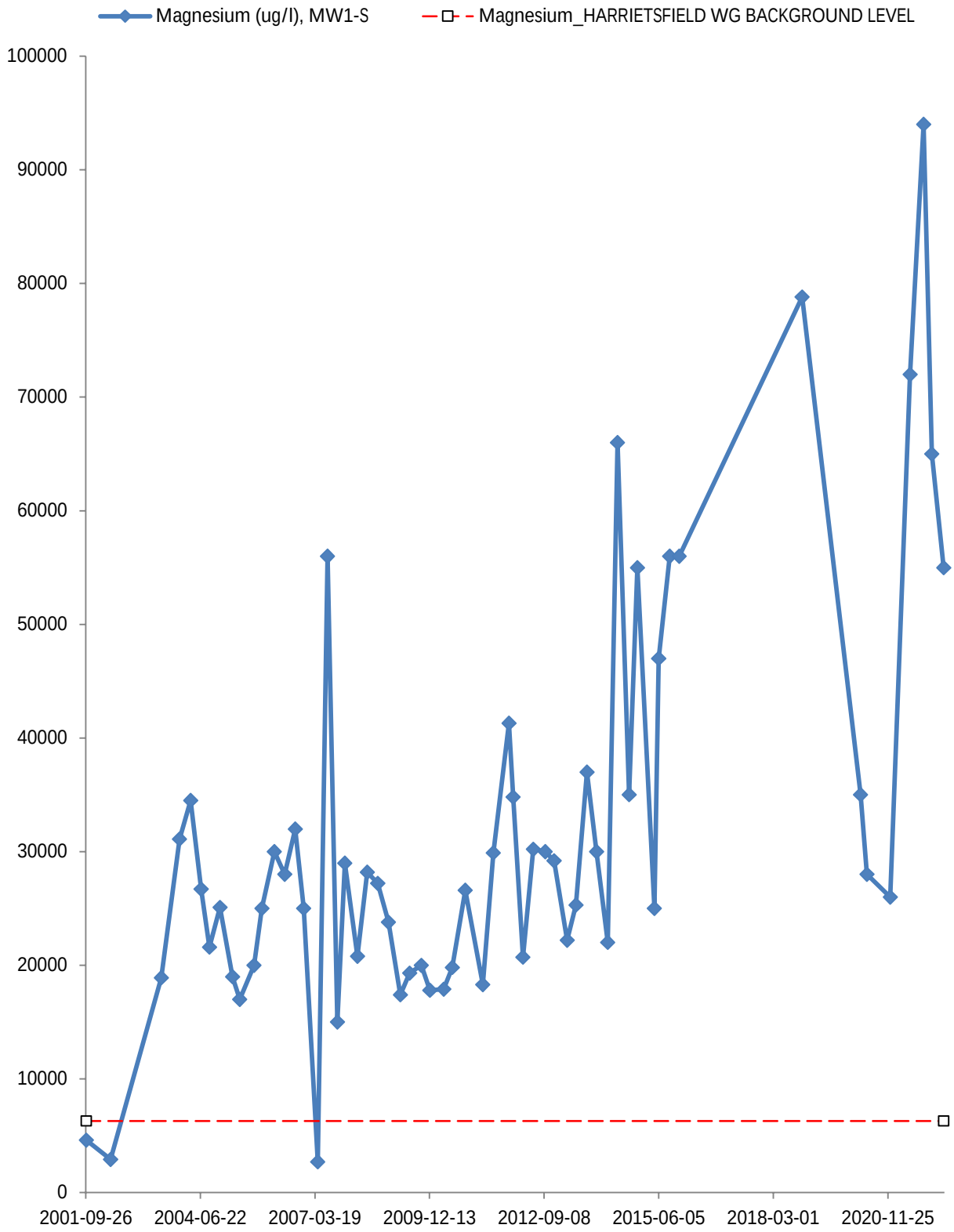
MW1-S - Iron


Iron (ug/l), MW1-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
3000
2500
2000
1500
1000
500
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

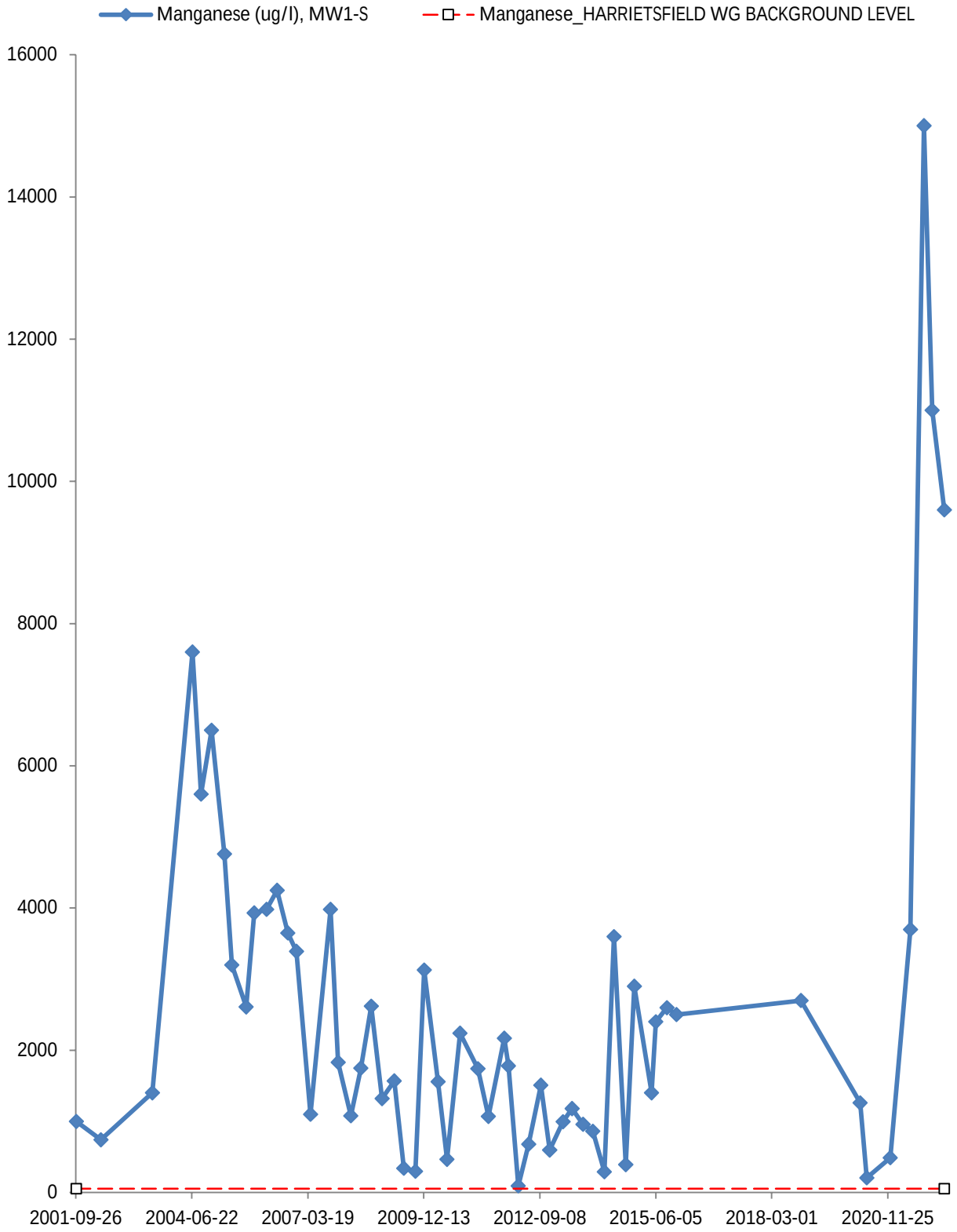
MW1-S - Lead


Lead (ug/l), MW1-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
14
12
10
8
6
4
2
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

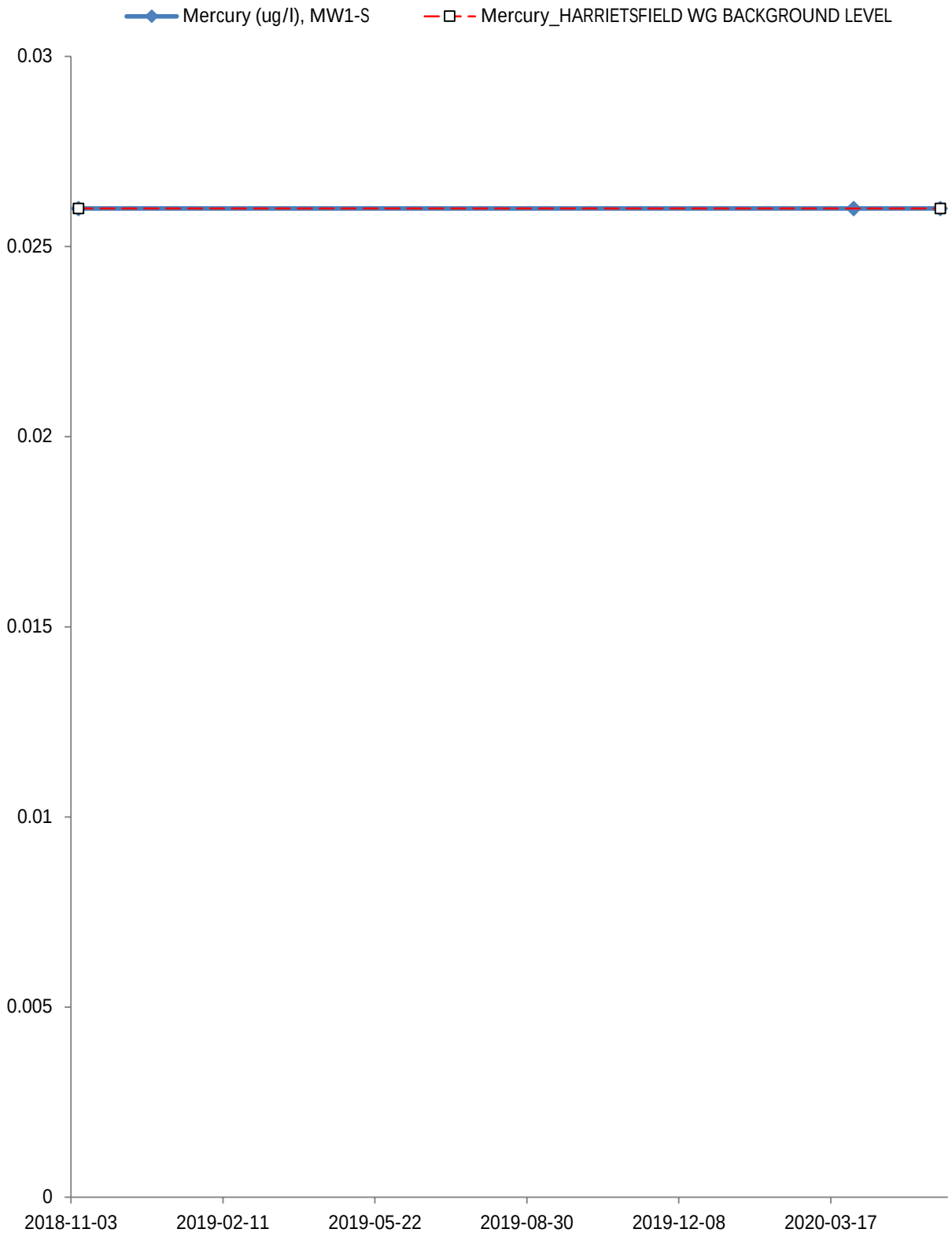
MW1-S - Magnesium



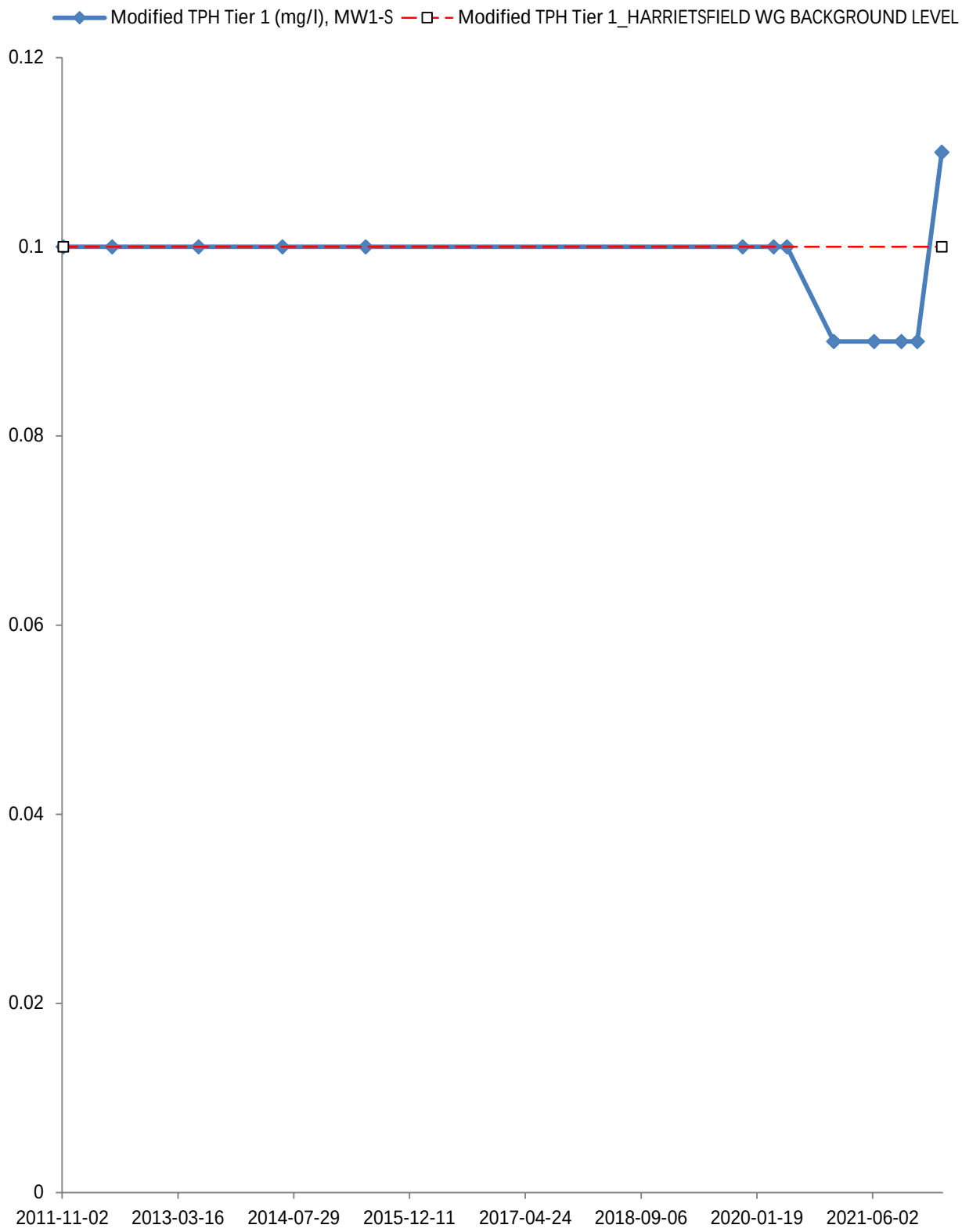
MW1-S - Manganese



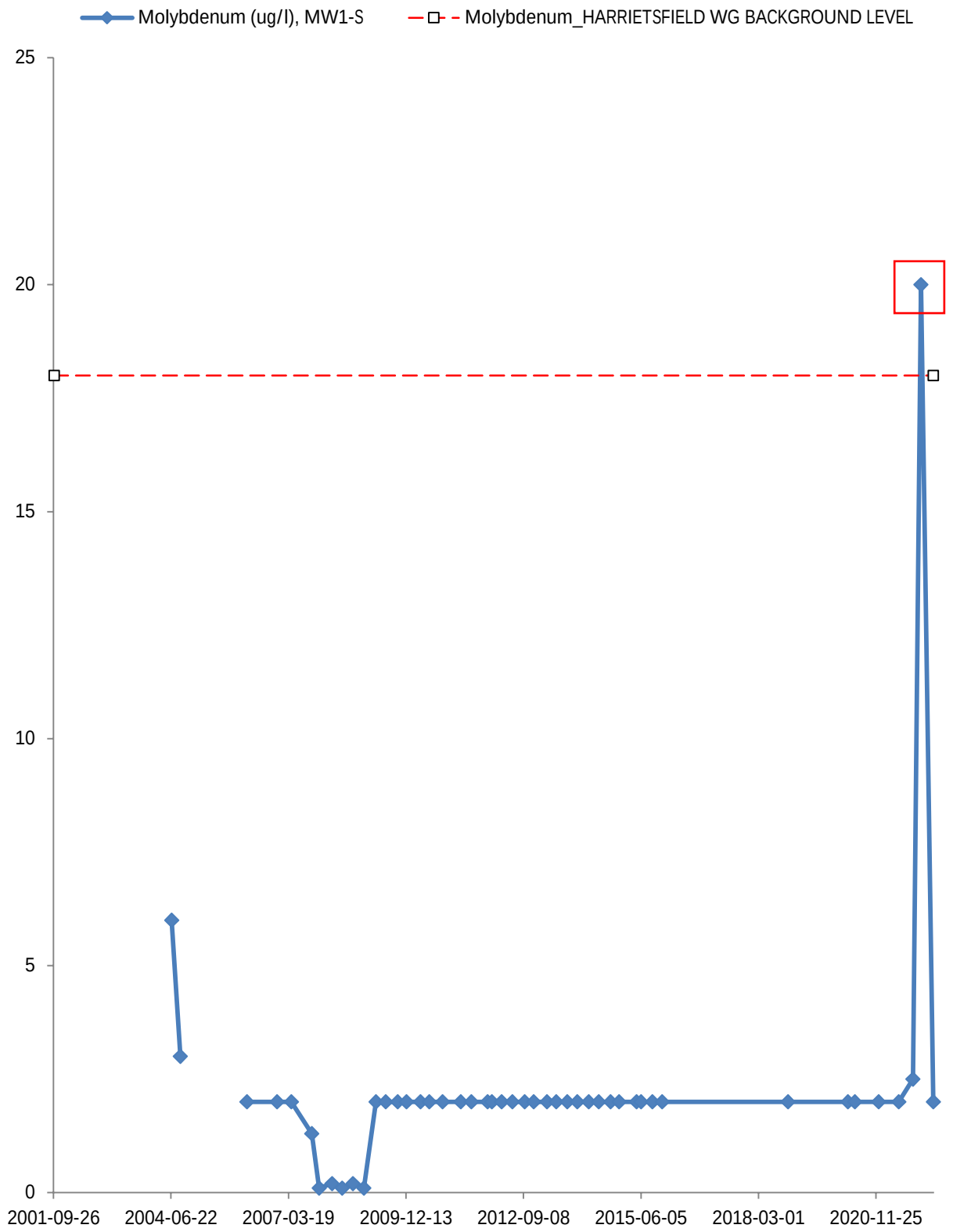
MW1-S - Mercury



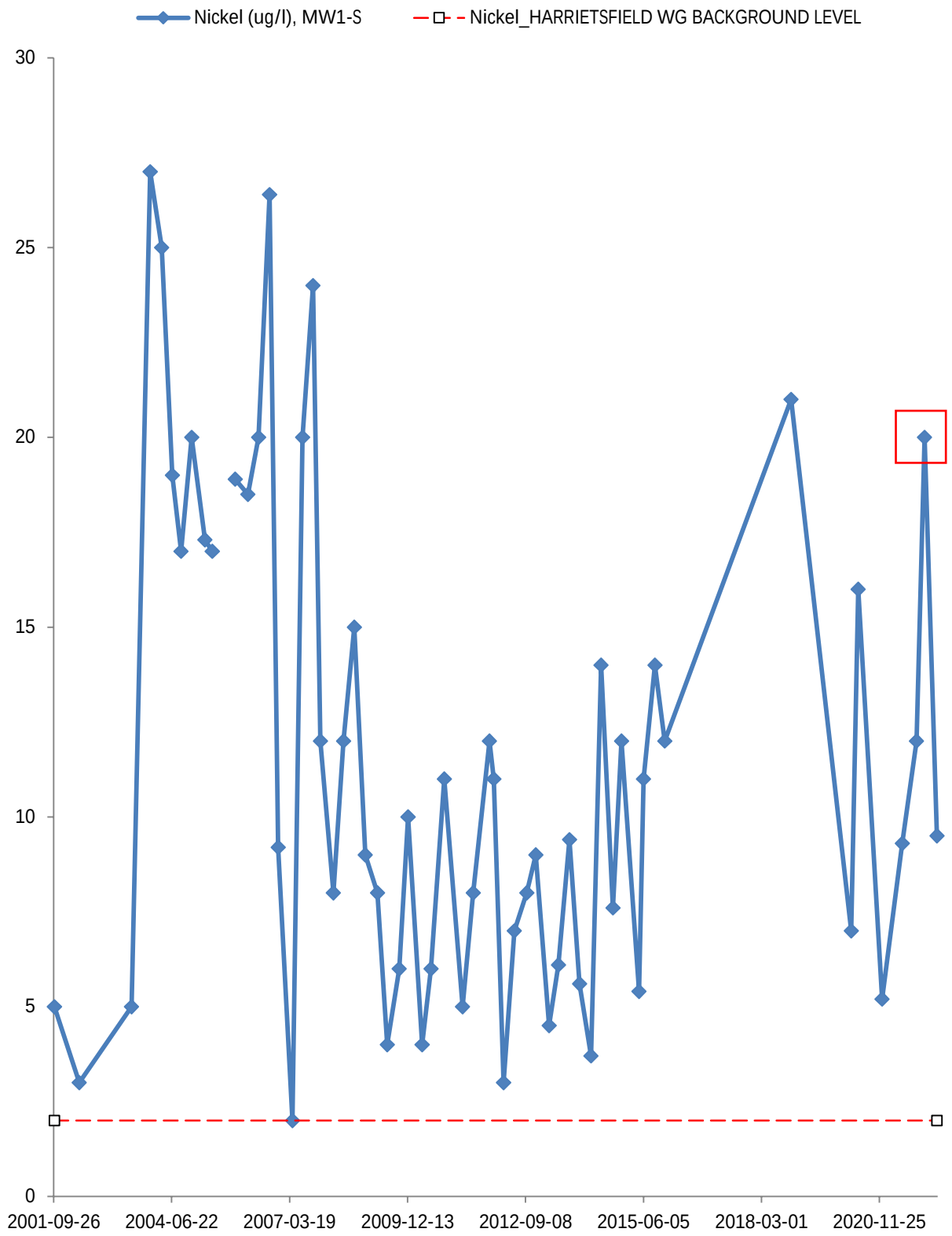
MW1-S - Modified TPH Tier 1



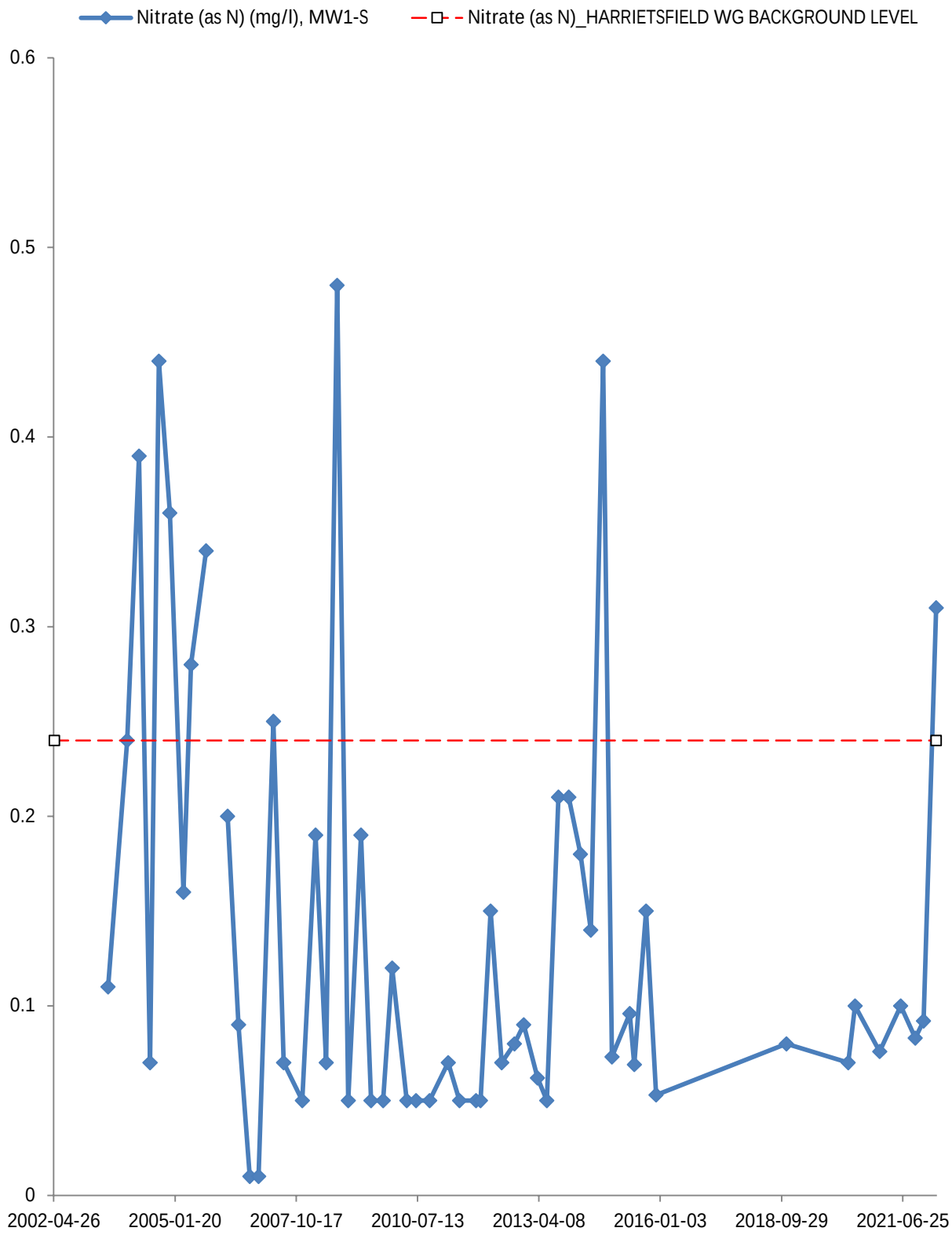
MW1-S - Molybdenum



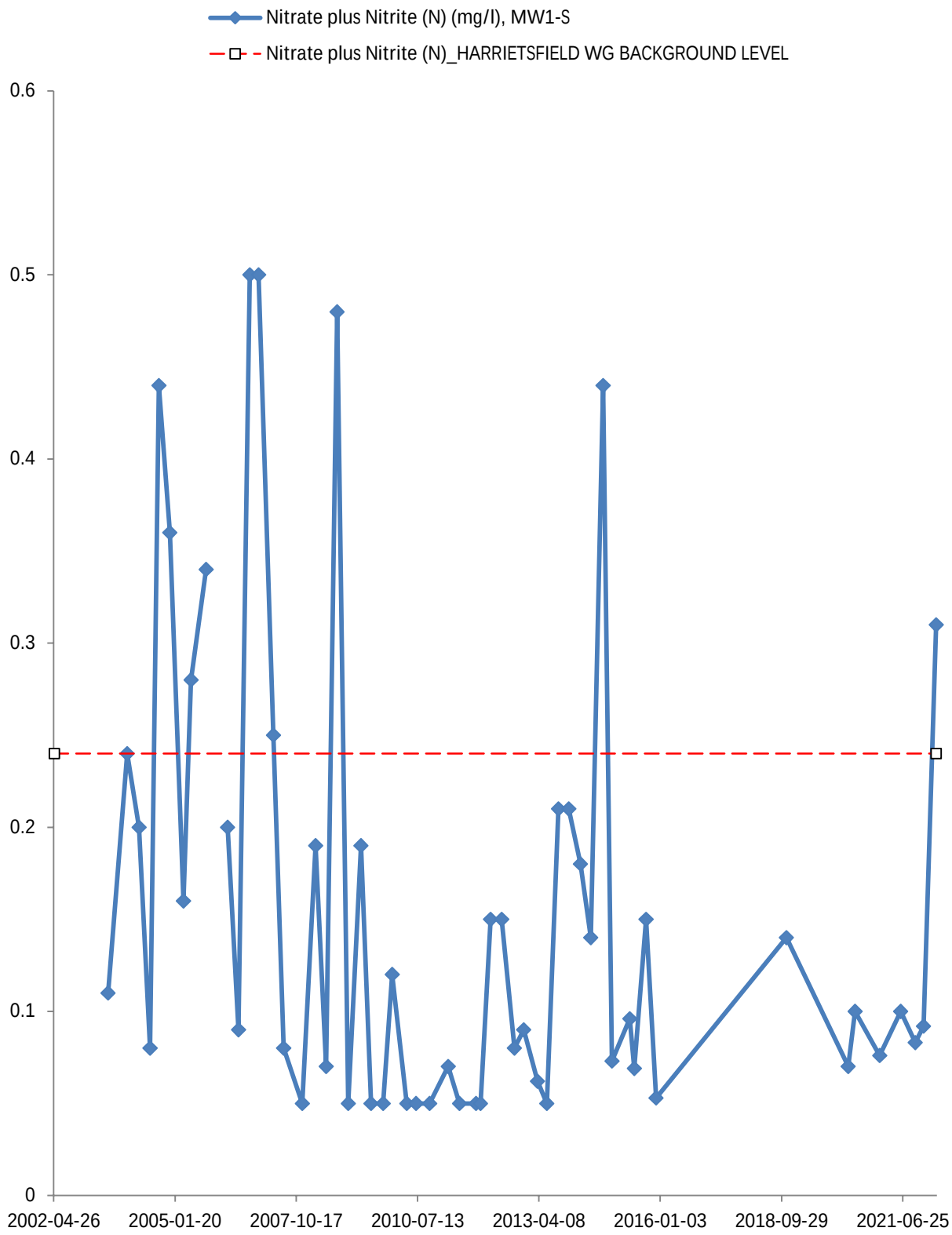
MW1-S - Nickel


Nickel (ug/l), MW1-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
30
25
20
15
10
5
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

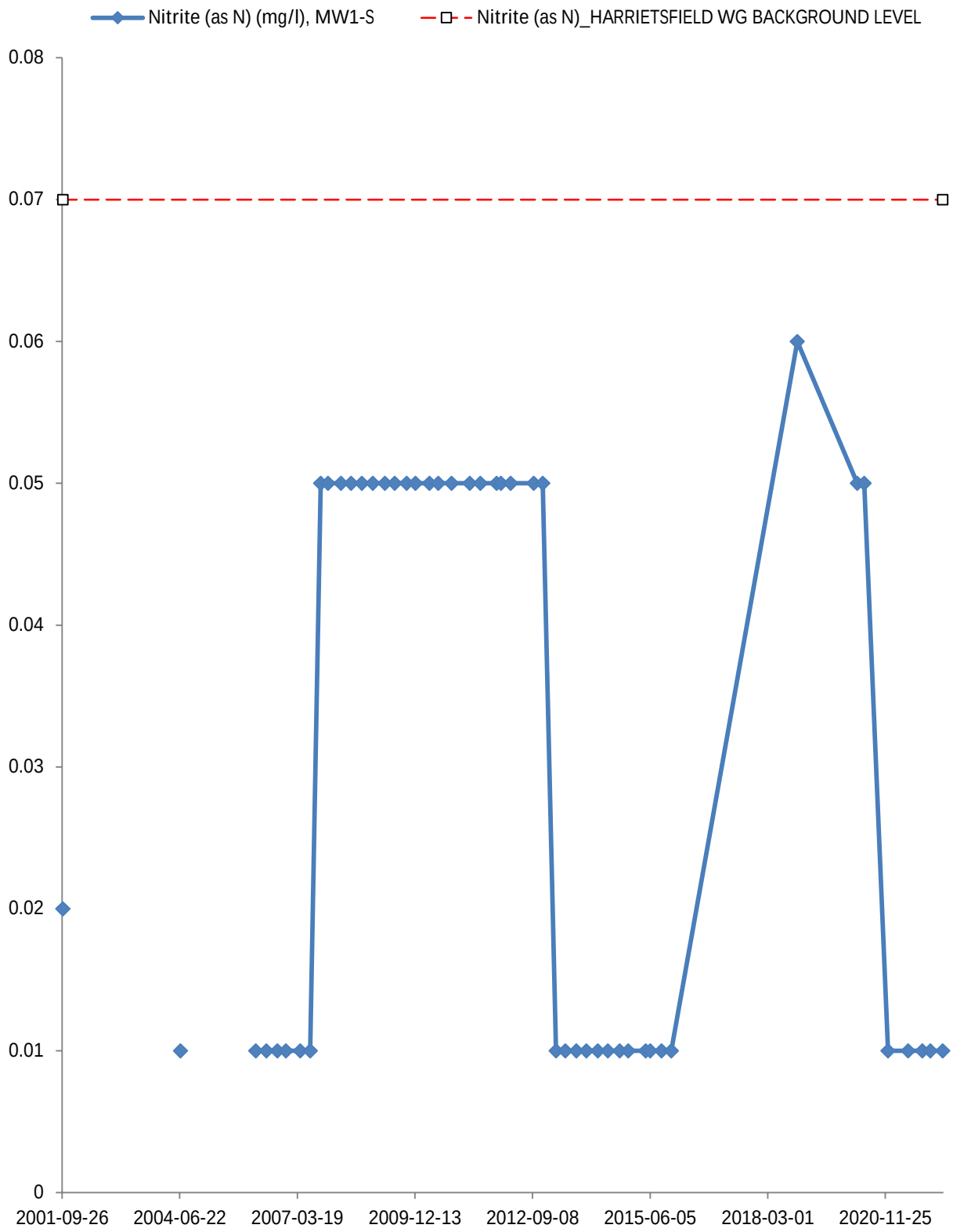
MW1-S - Nitrate (as N)



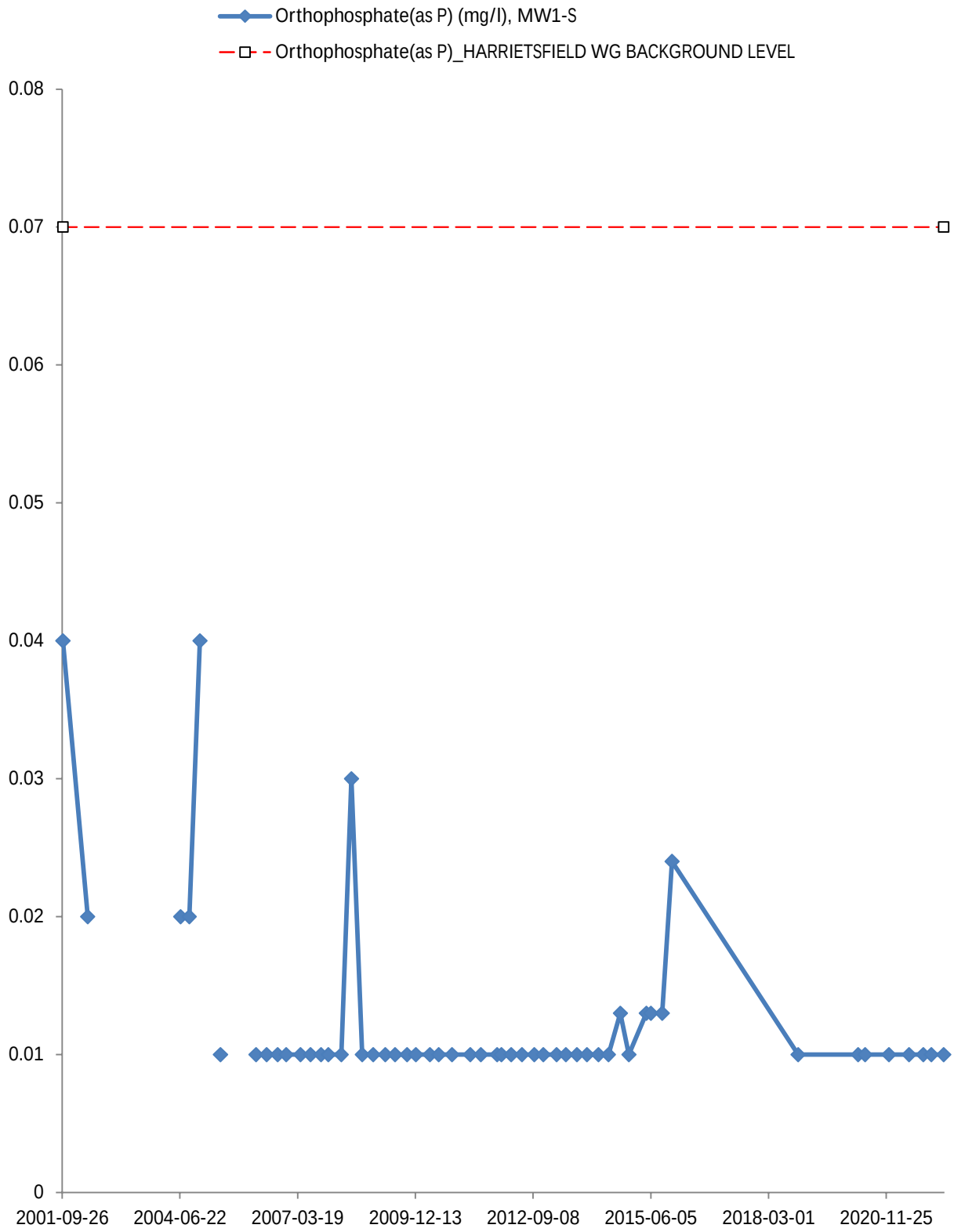
MW1-S - Nitrate plus Nitrite (N)



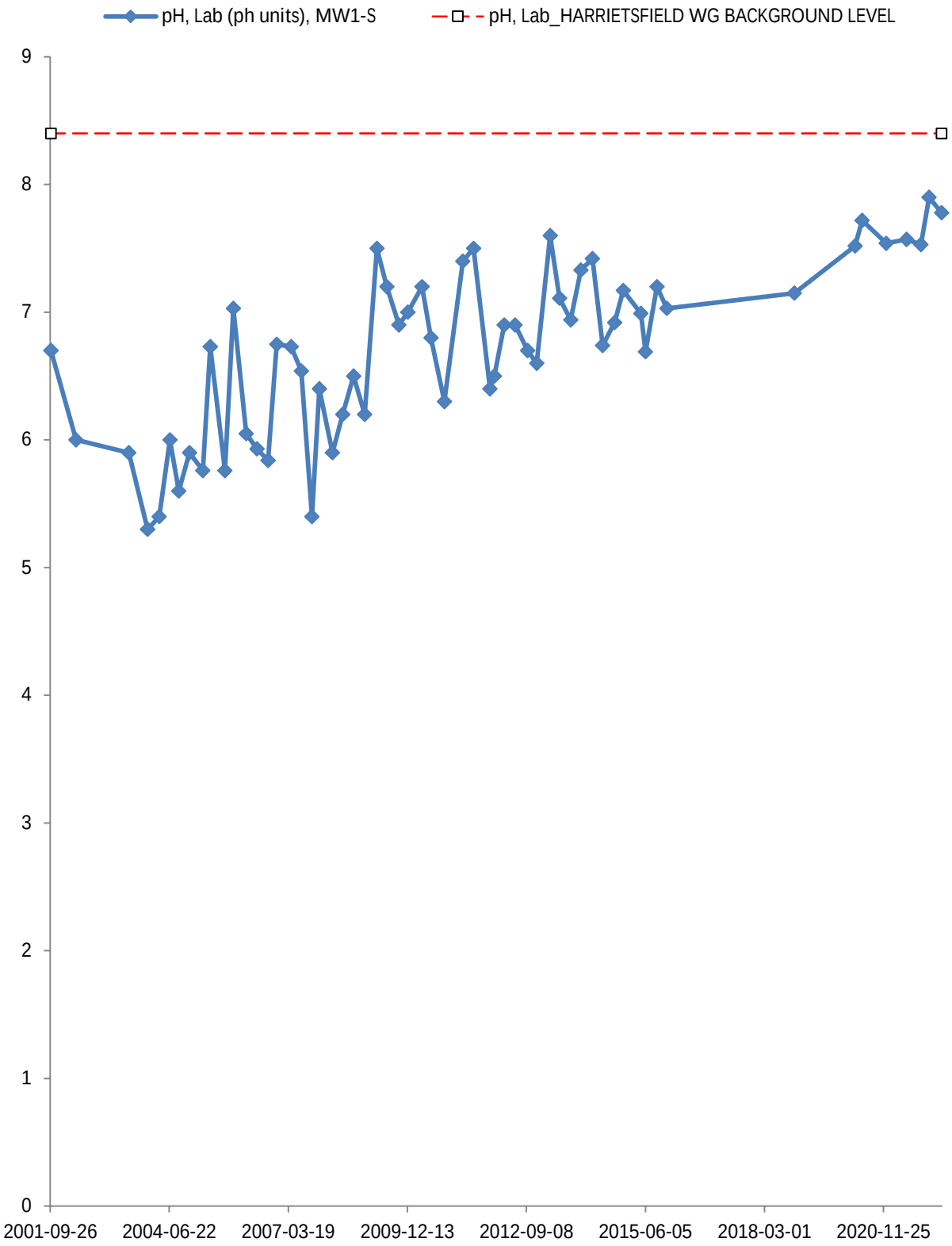
MW1-S - Nitrite (as N)



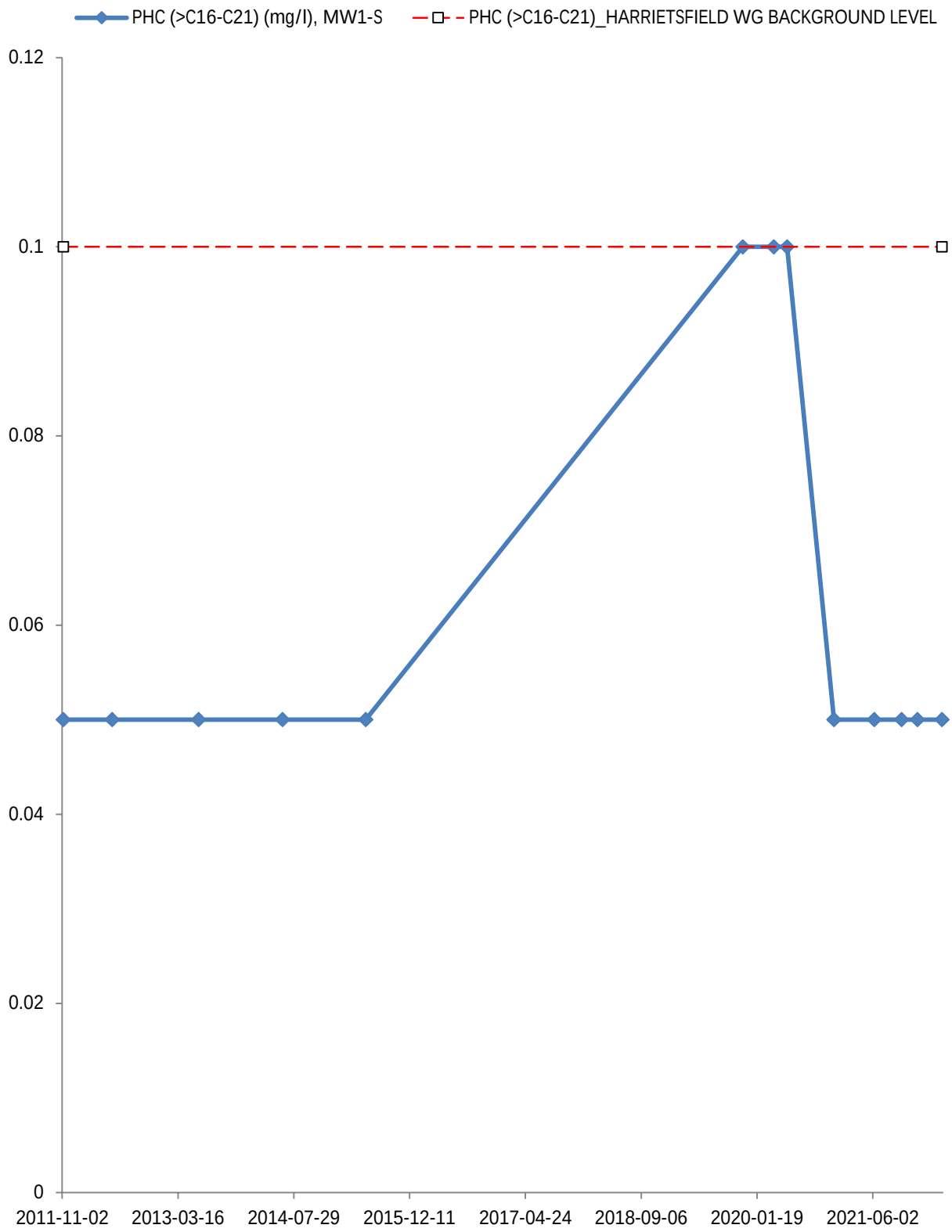
MW1-S - Orthophosphate(as P)



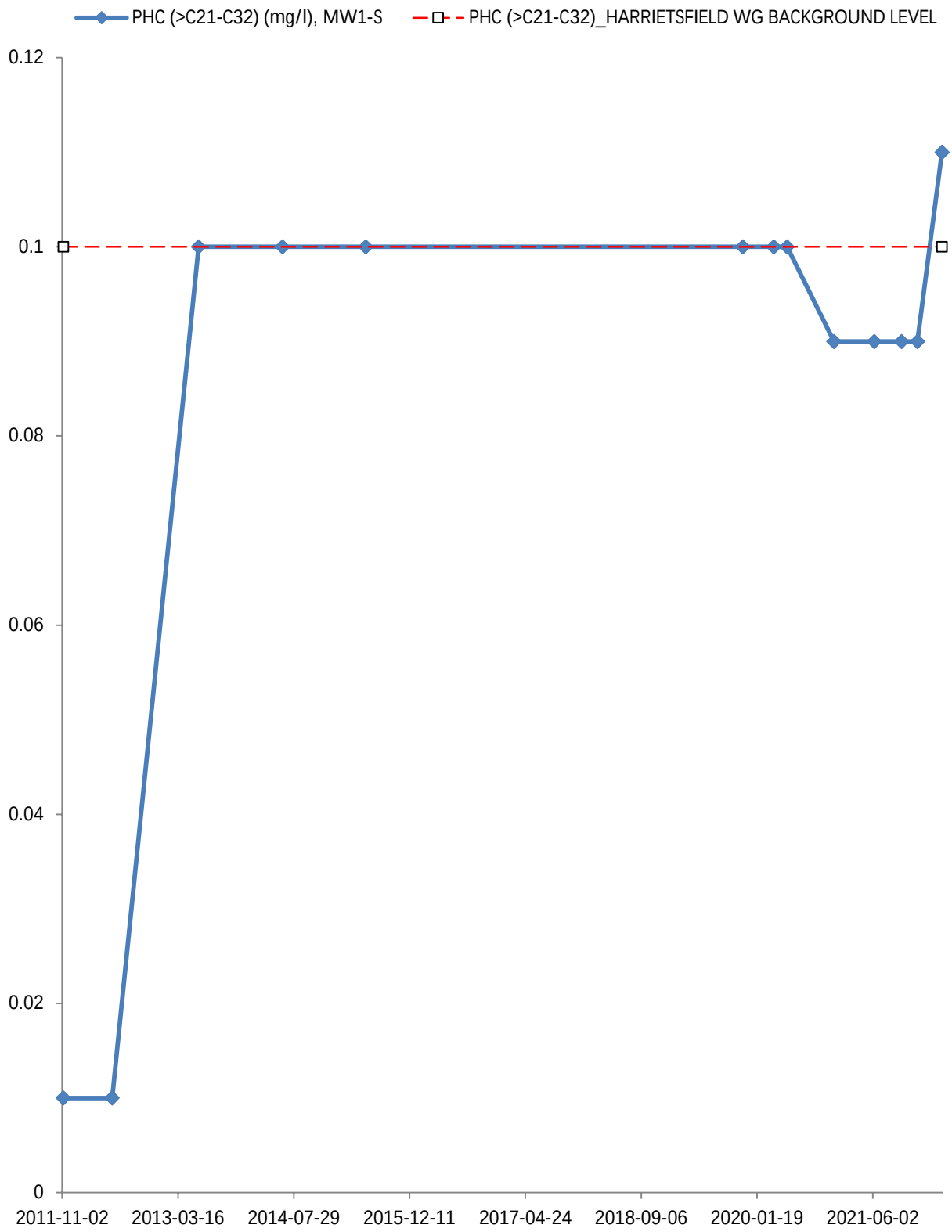
MW1-S - pH, Lab


pH, Lab (ph units), MW1-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

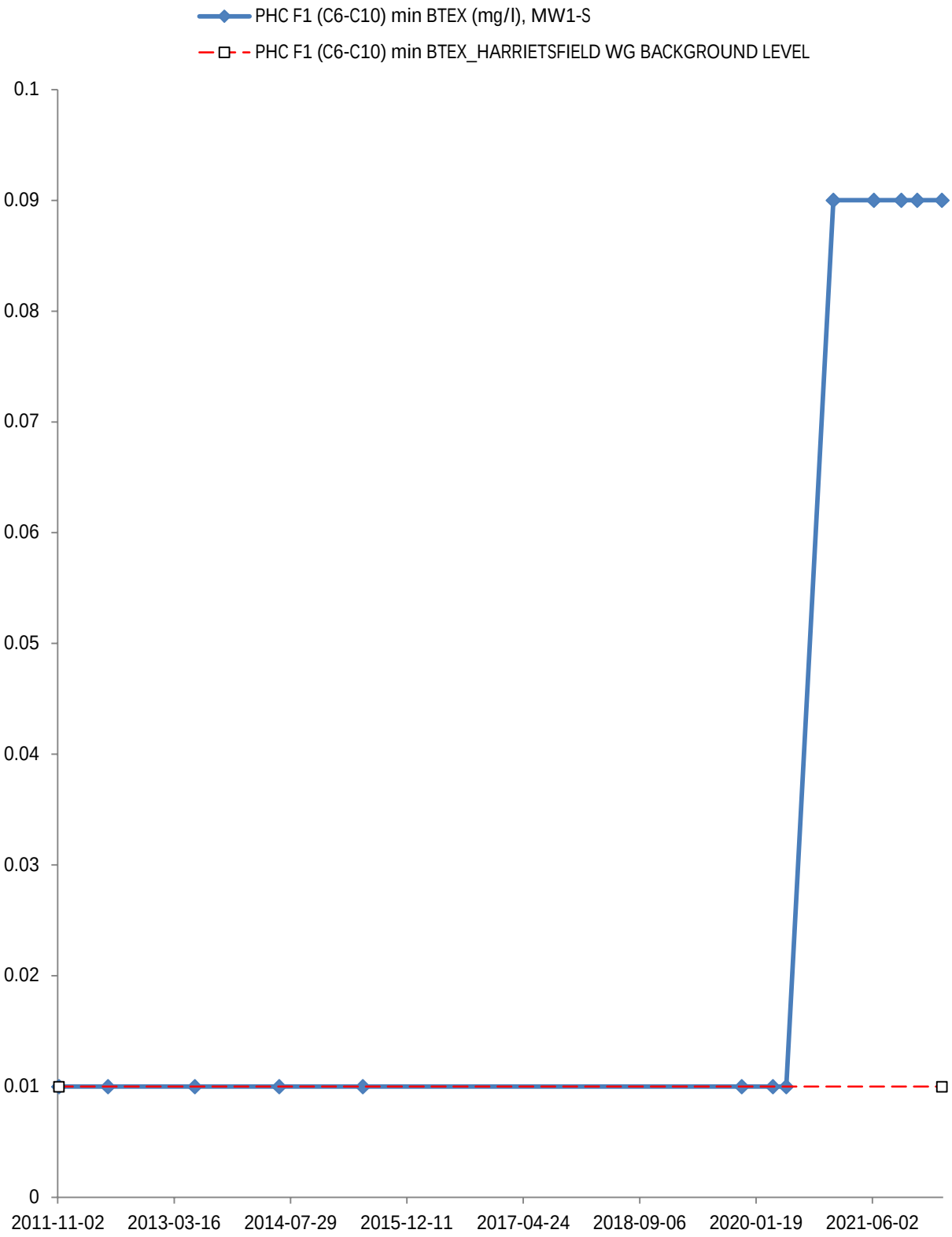
MW1-S - PHC (>C16-C21)



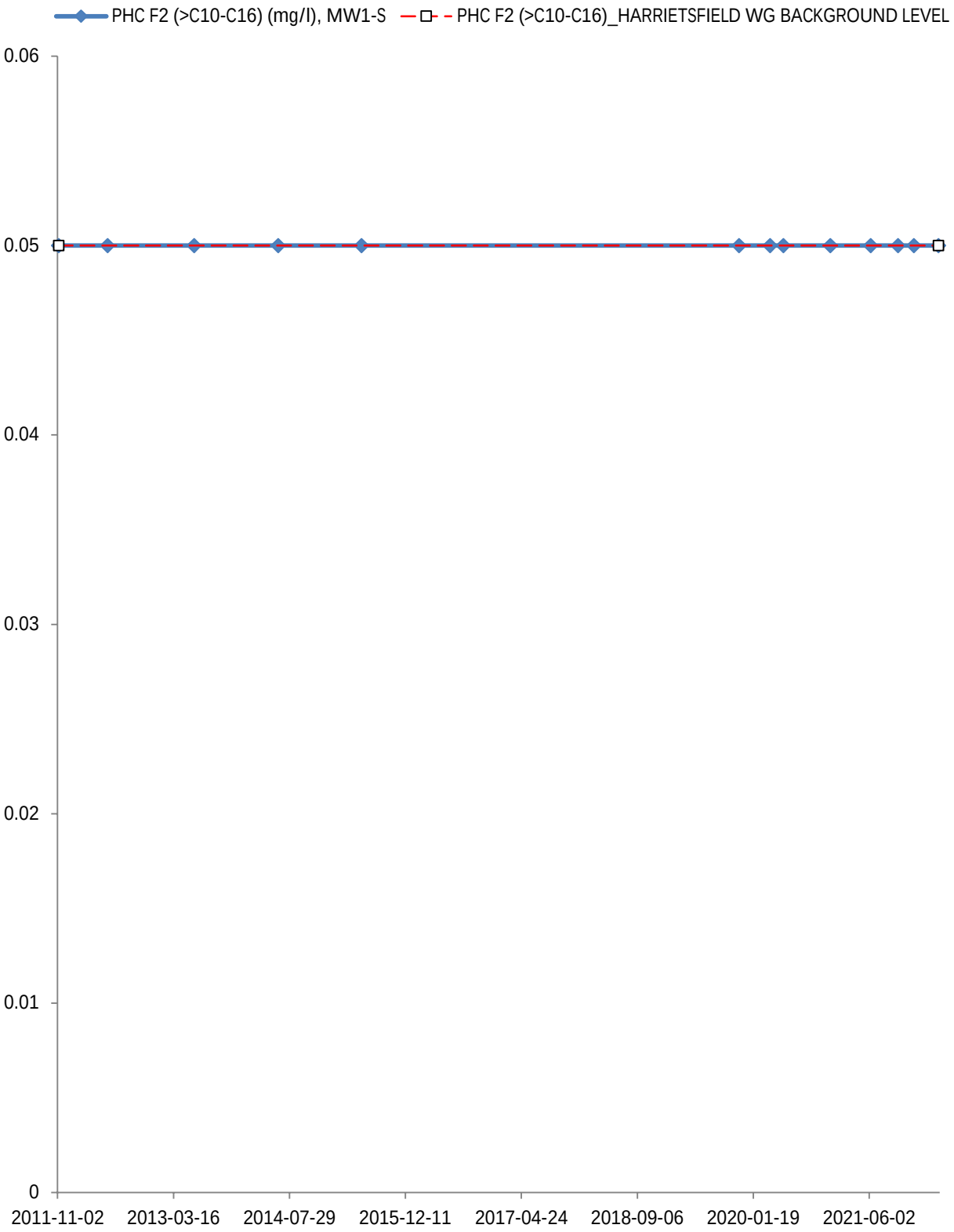
MW1-S - PHC (>C21-C32)



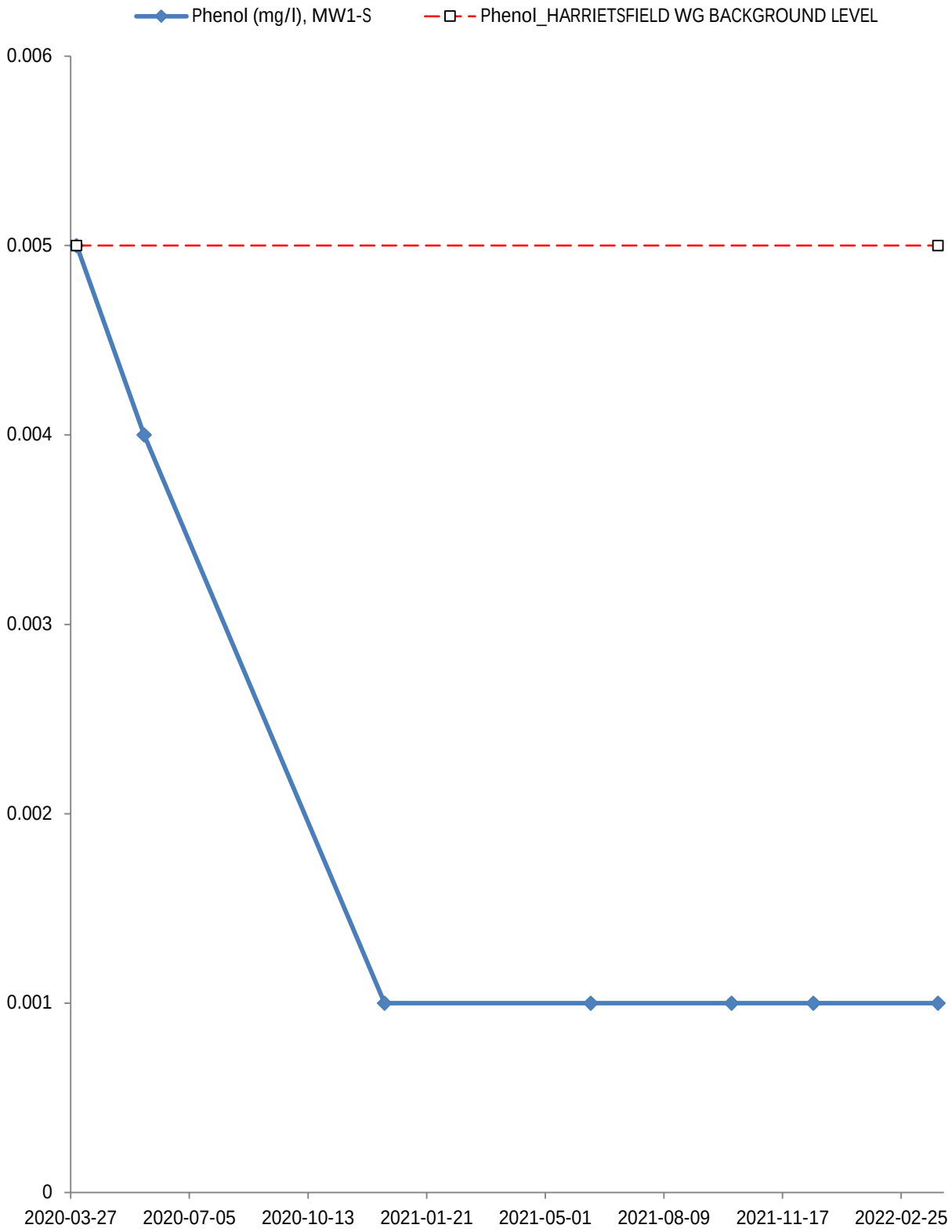
MW1-S - PHC F1 (C6-C10) min BTEX



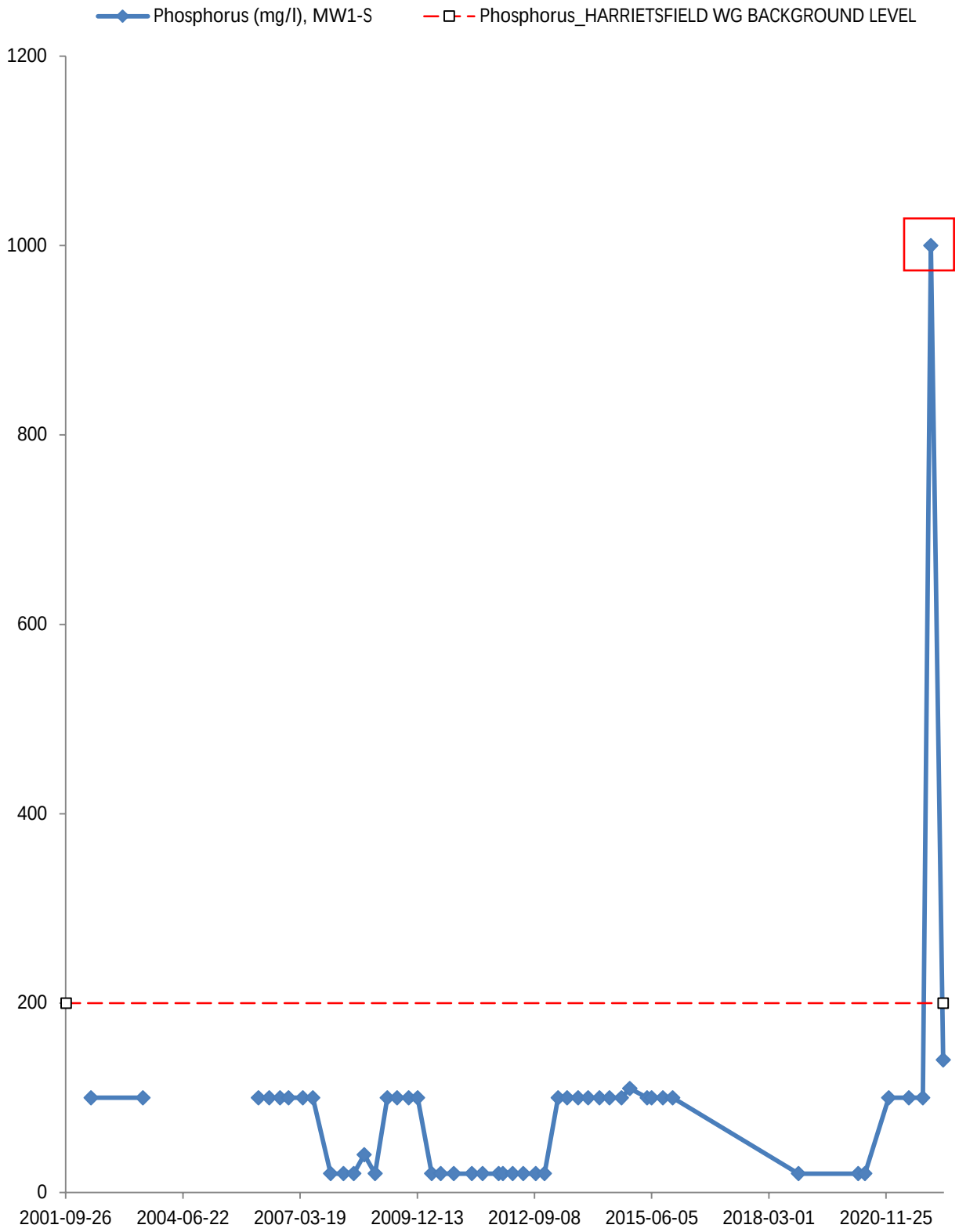
MW1-S - PHC F2 (>C10-C16)



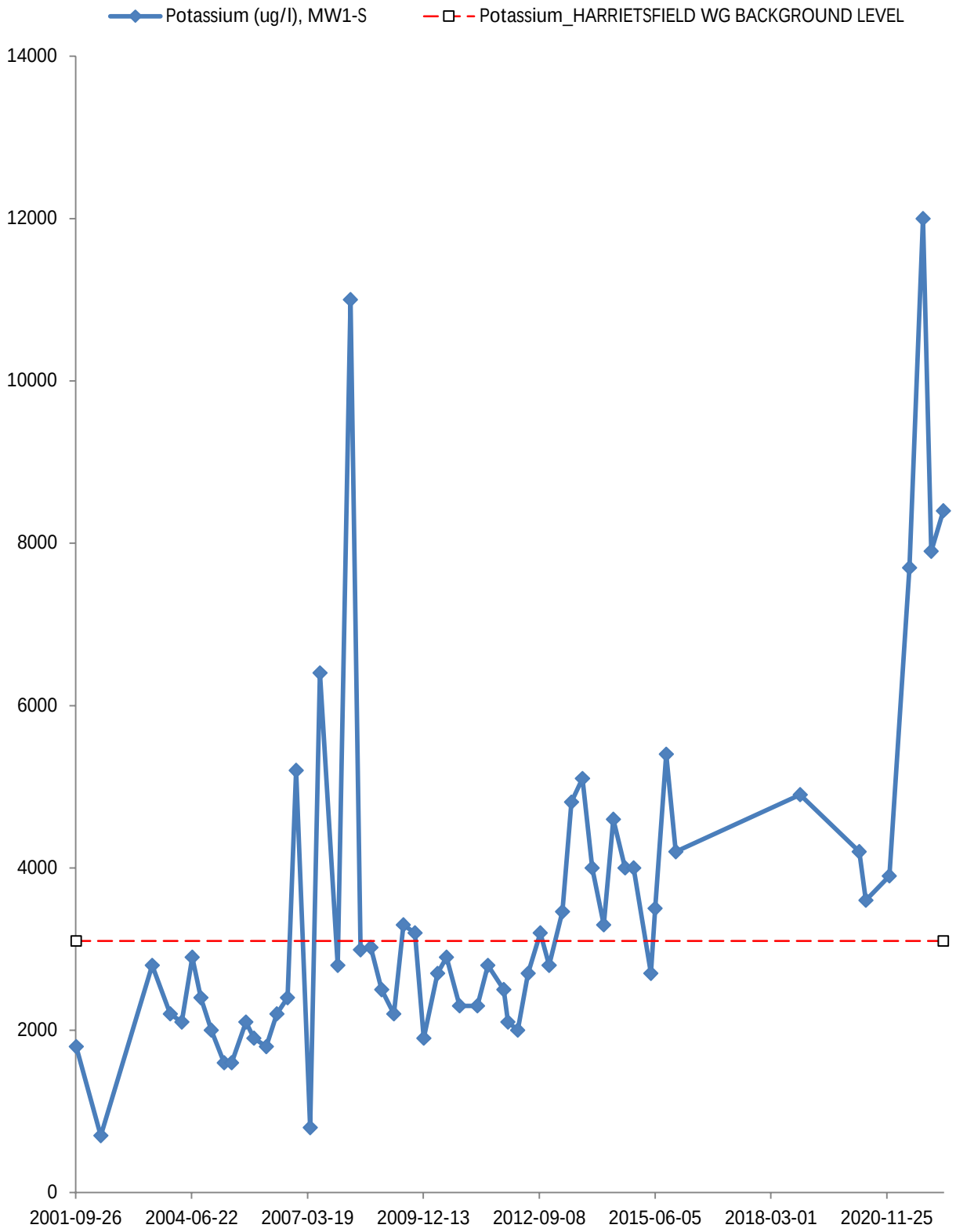
MW1-S - Phenol


Phenol (mg/l), MW1-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

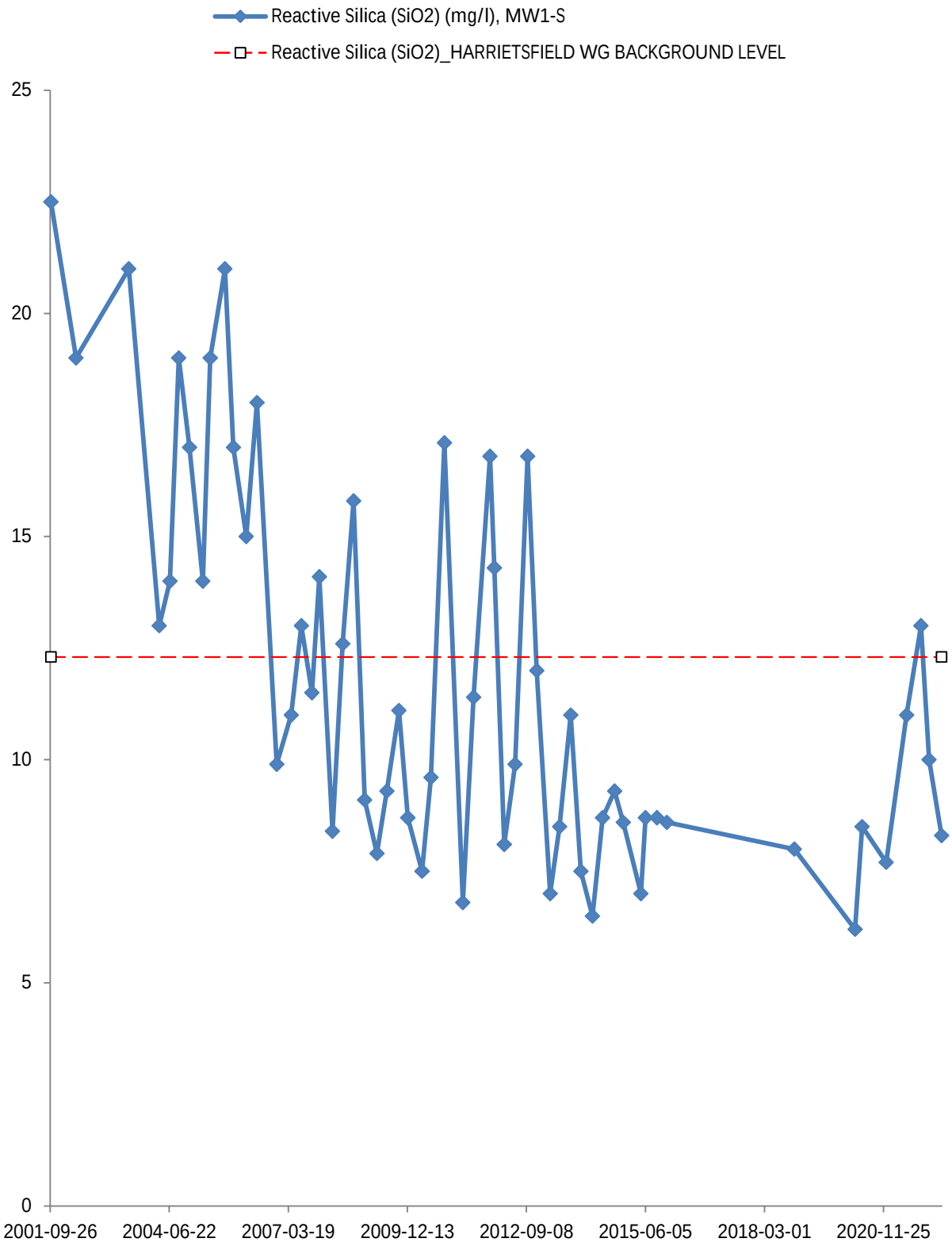
MW1-S - Phosphorus



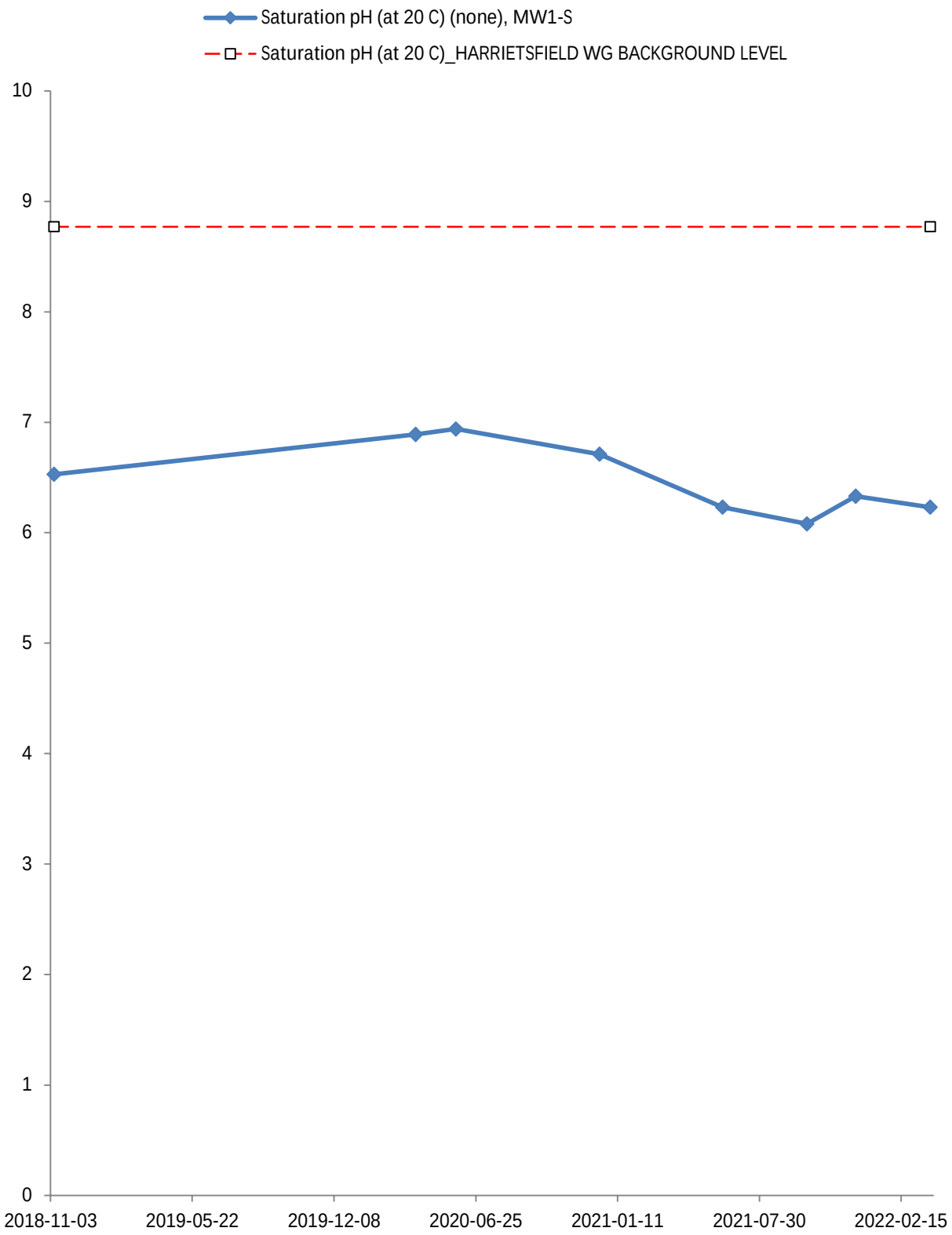
MW1-S - Potassium



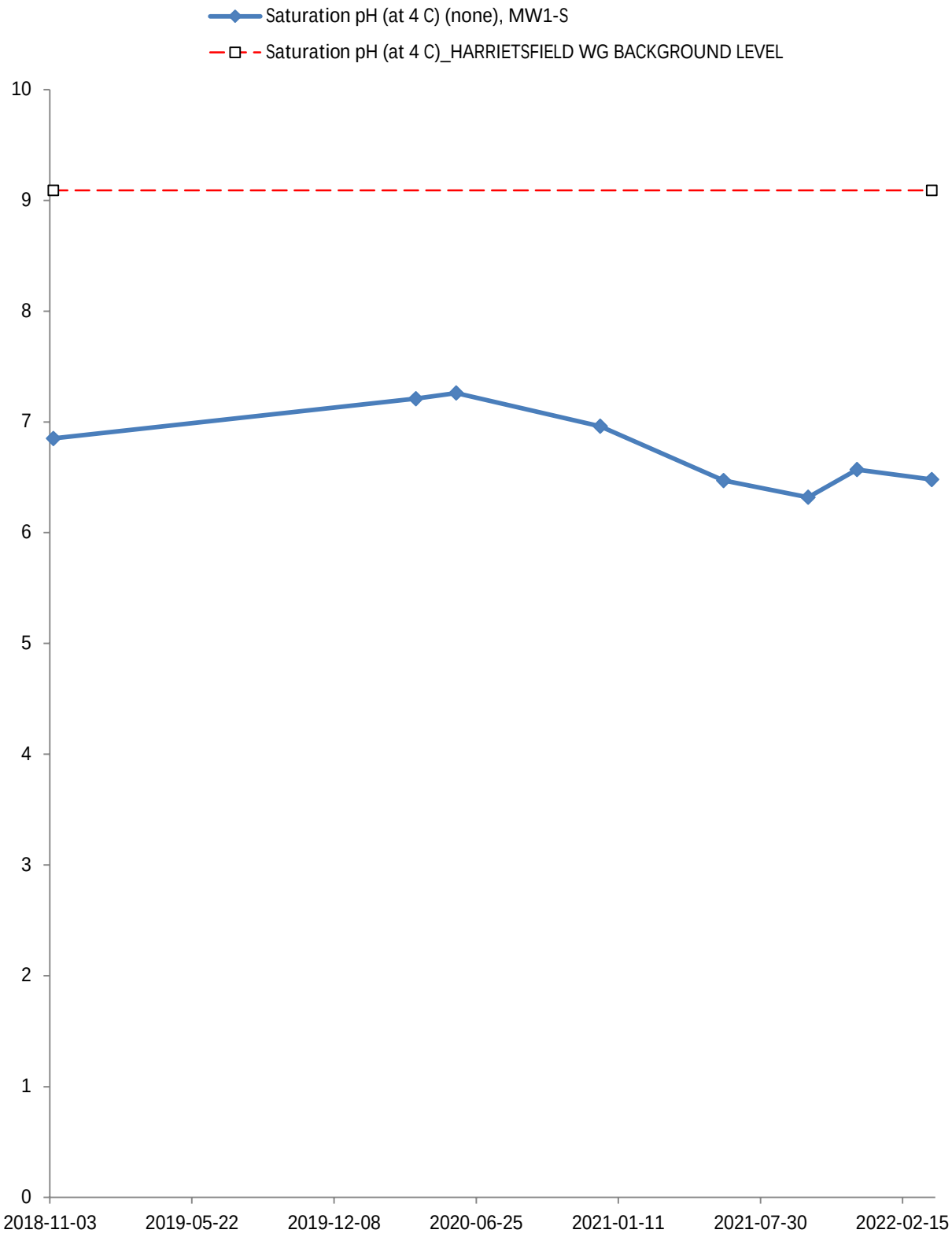
MW1-S - Reactive Silica (SiO2)



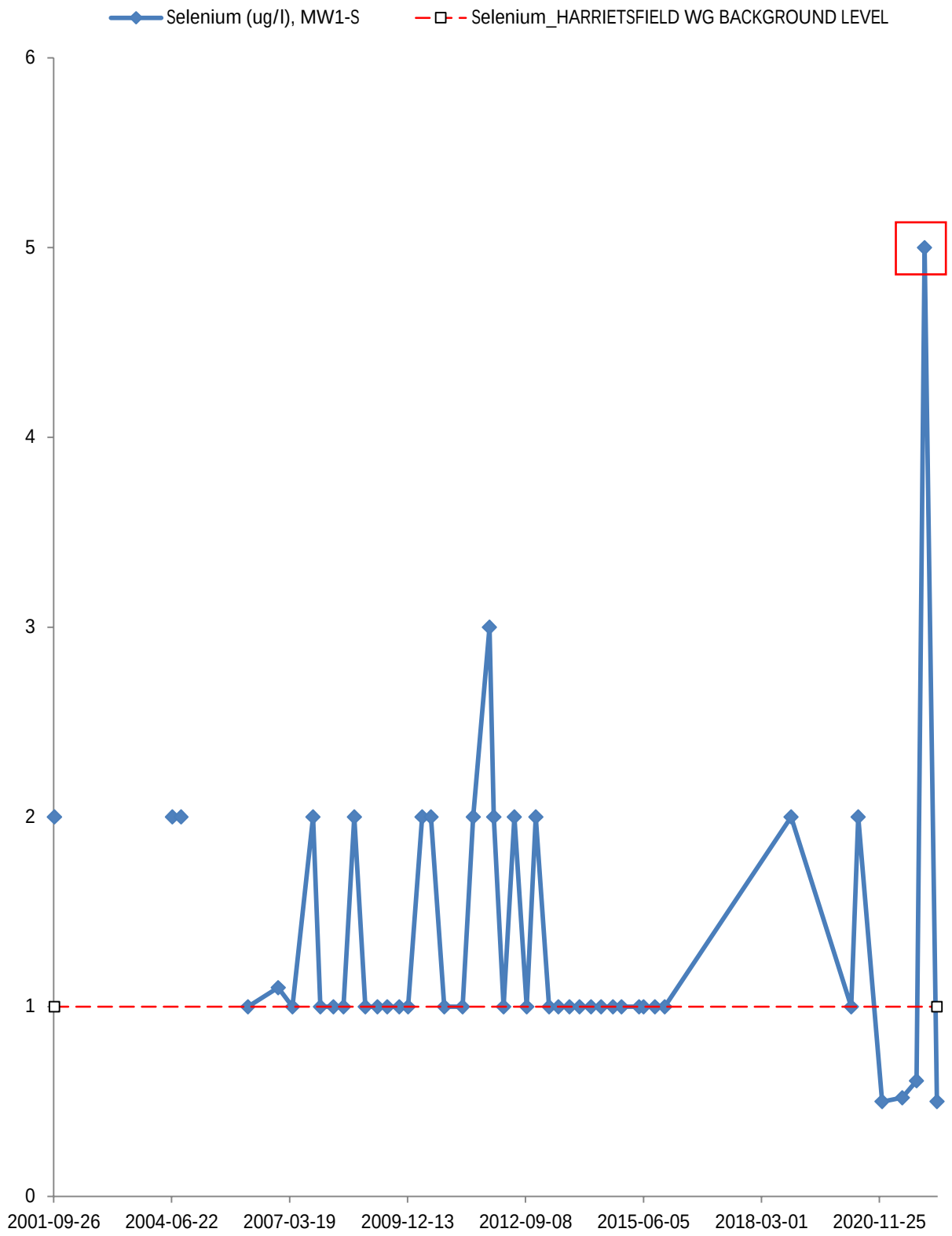
MW1-S - Saturation pH (at 20 C)



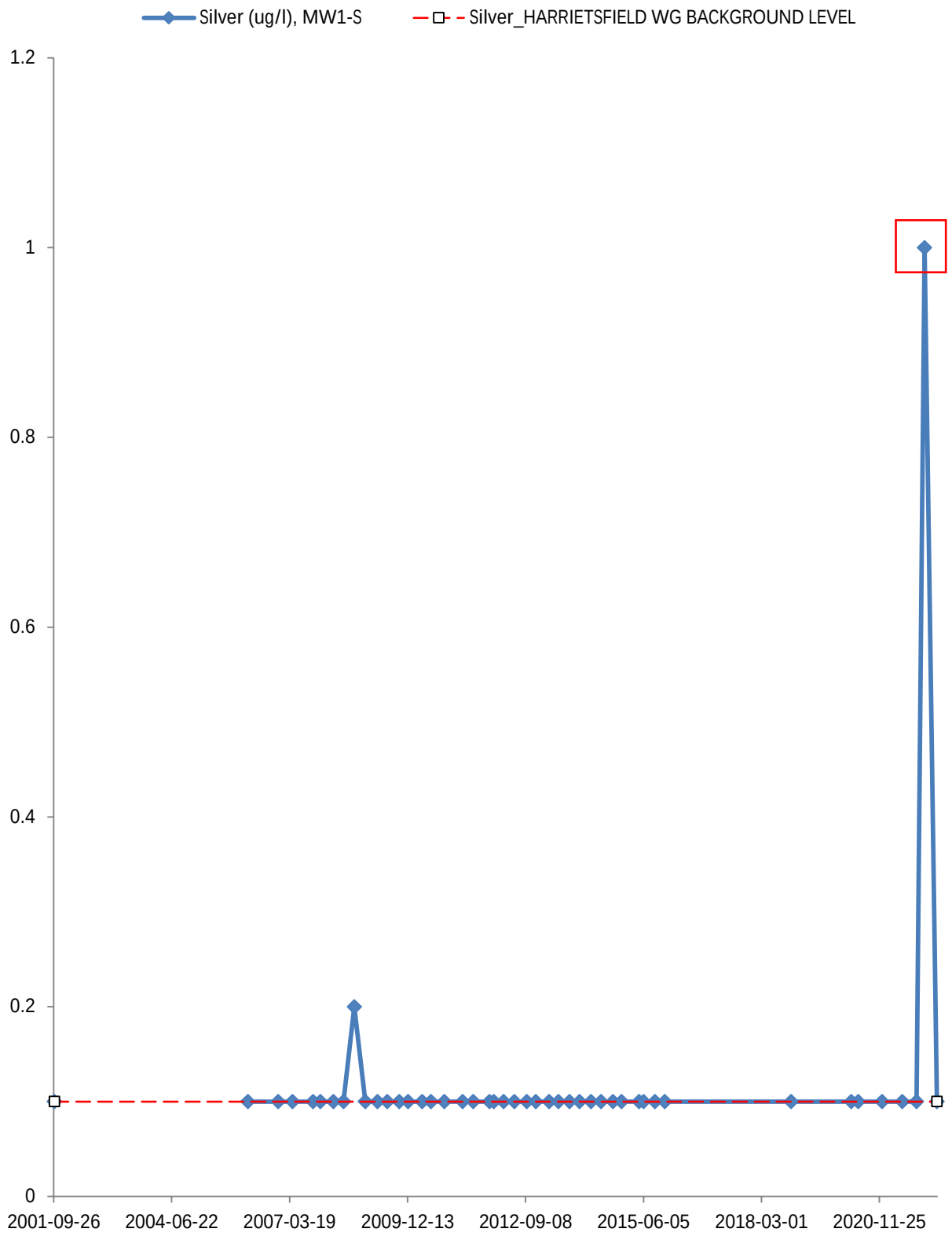
MW1-S - Saturation pH (at 4 C)



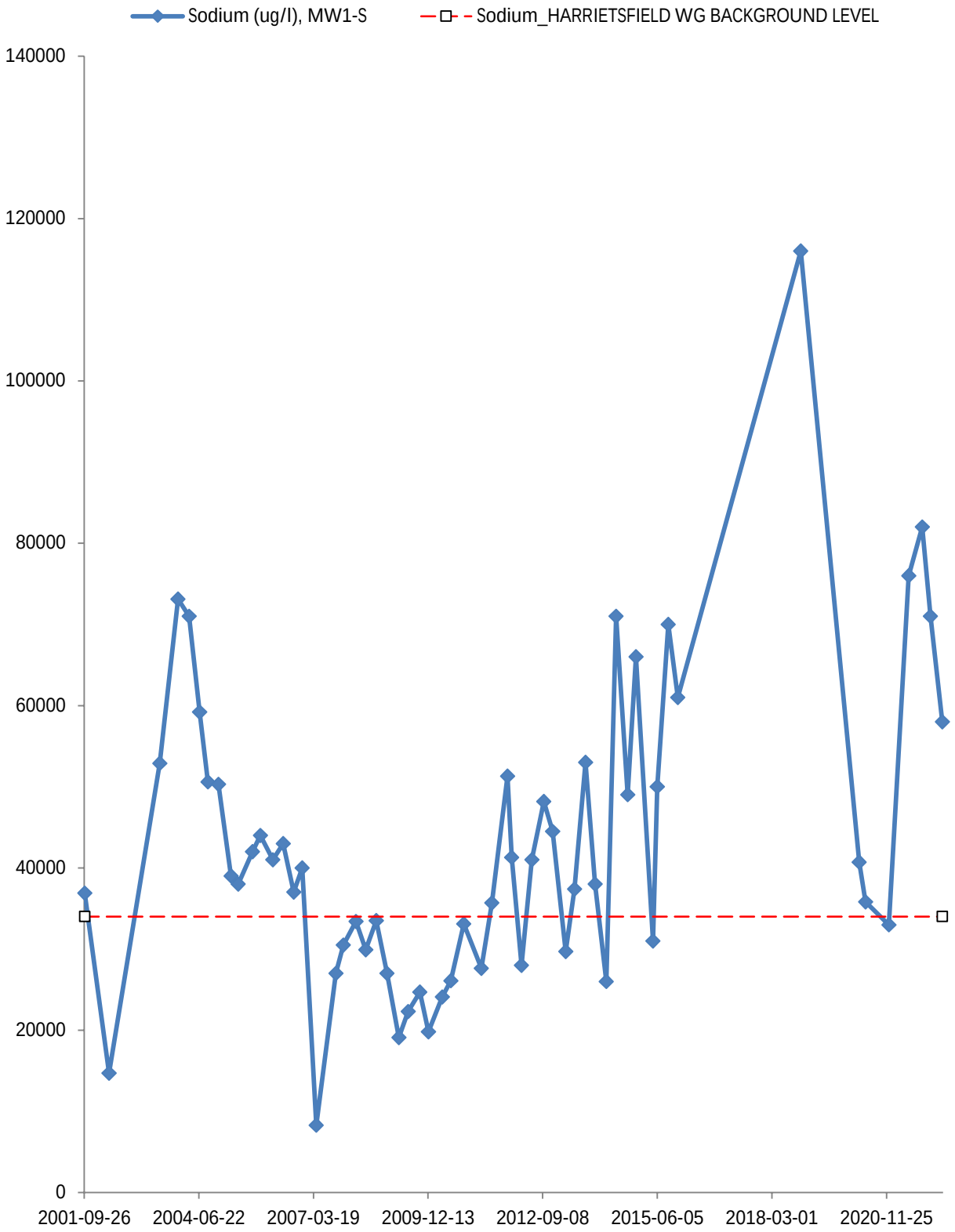
MW1-S - Selenium



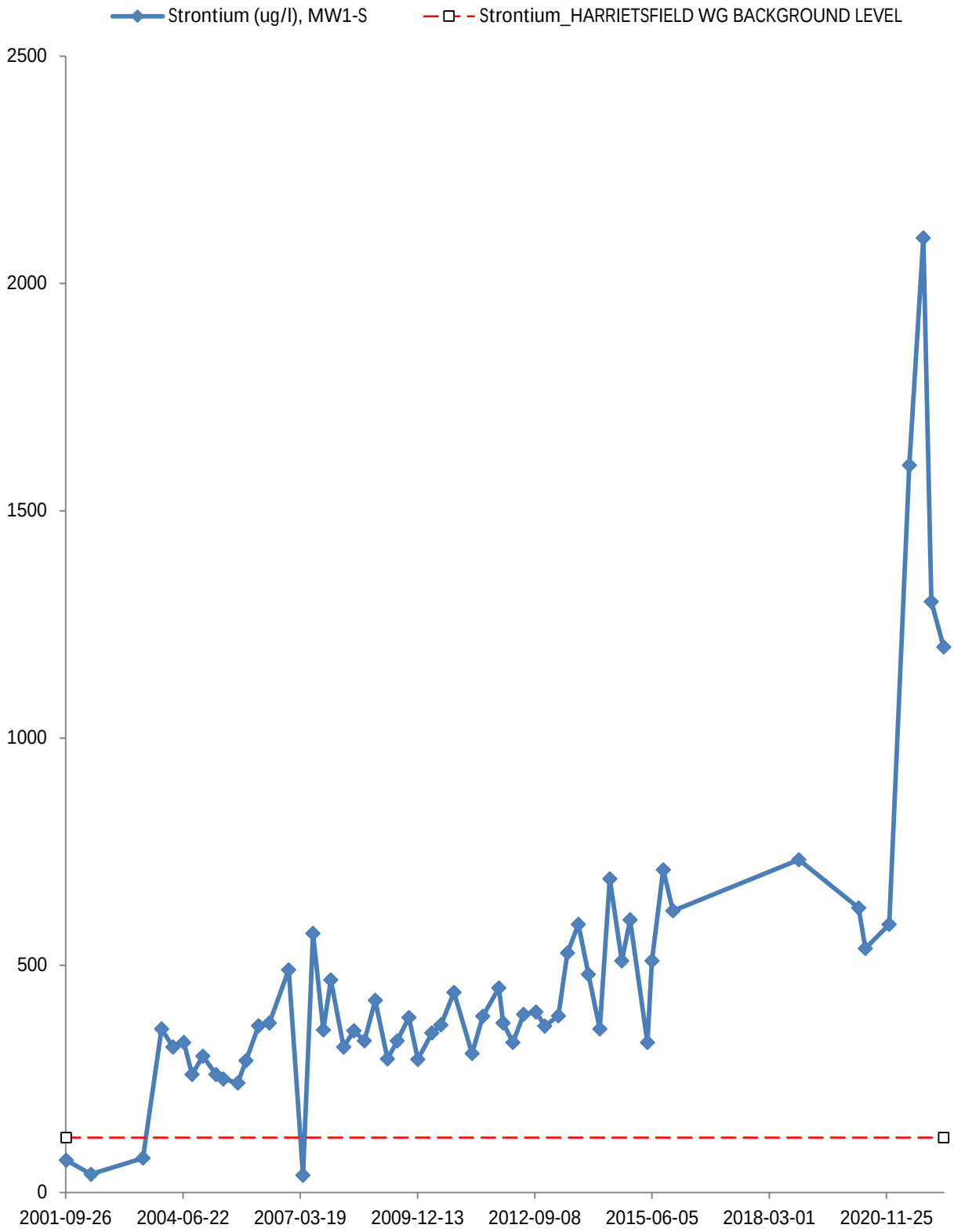
MW1-S - Silver


Silver (ug/l), MW1-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

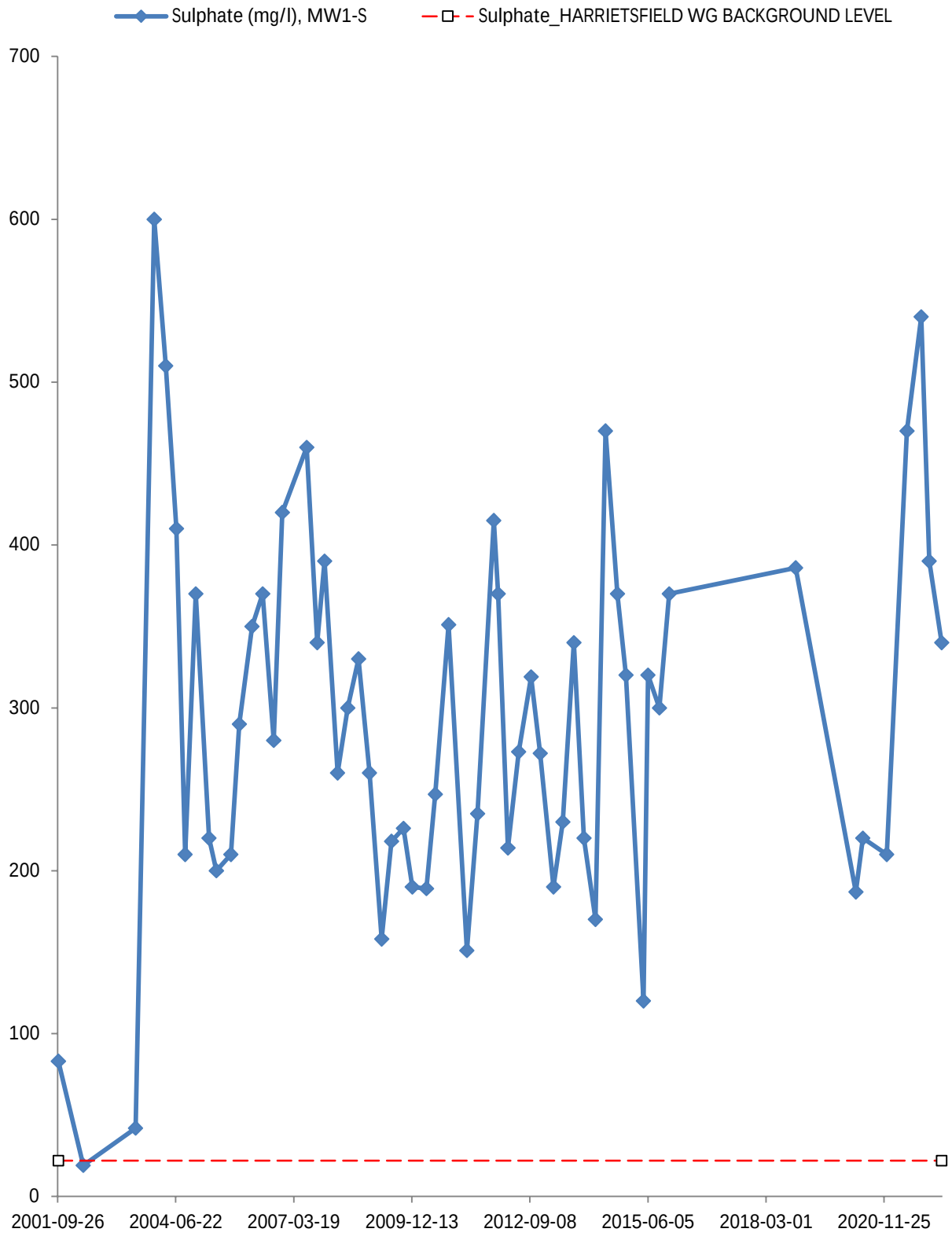
MW1-S - Sodium


Sodium (ug/l), MW1-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
140000
120000
100000
80000
60000
40000
20000
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

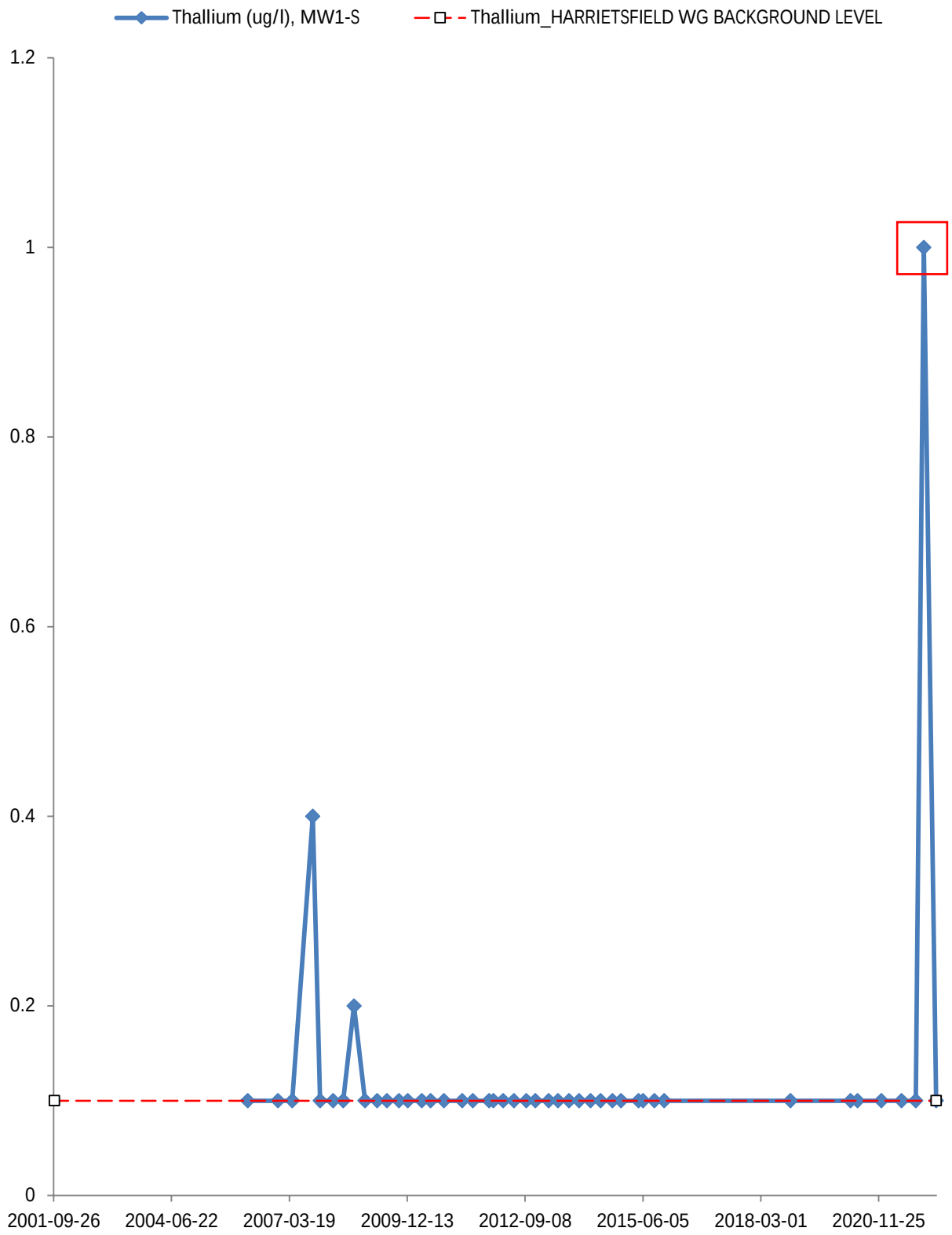
MW1-S - Strontium



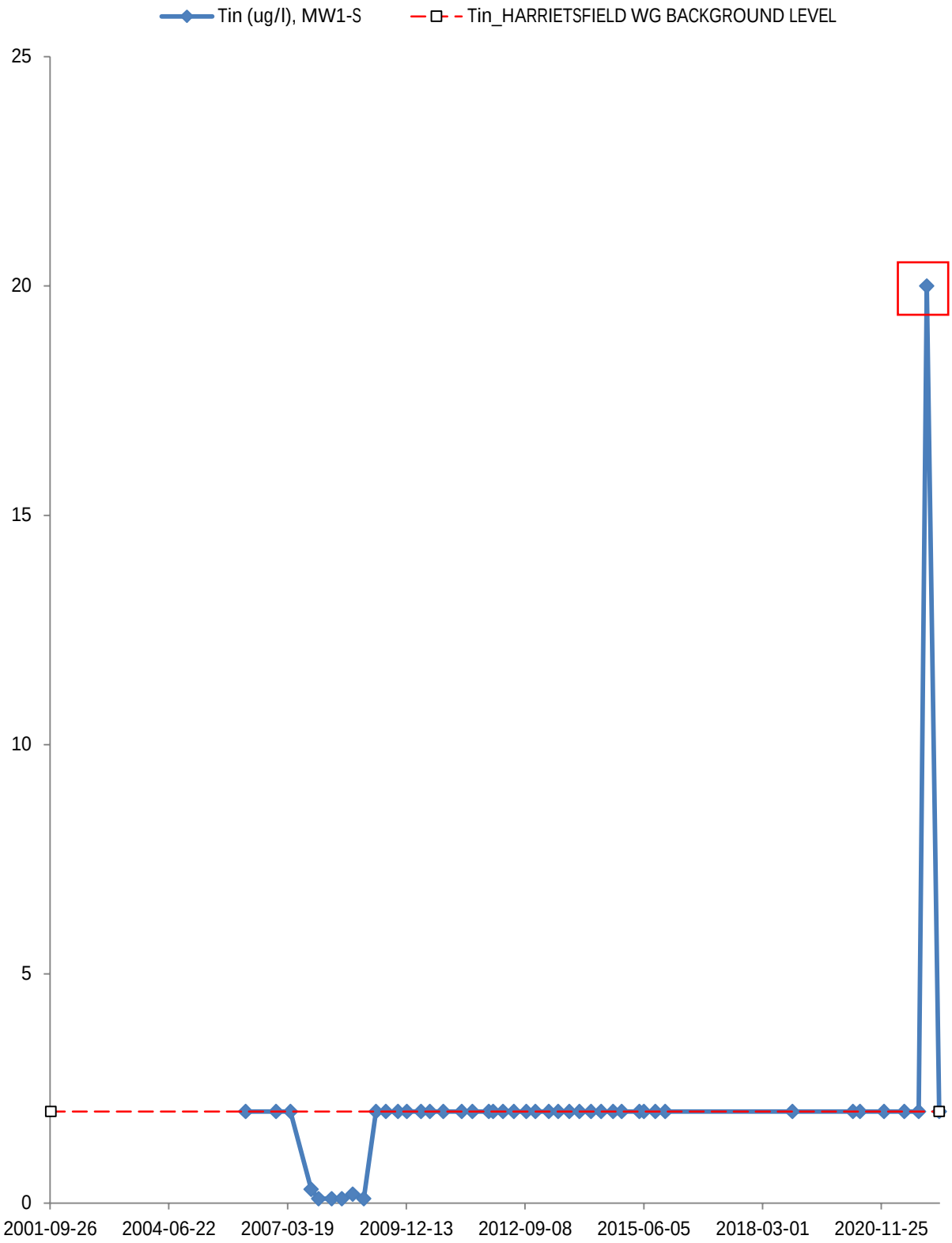
MW1-S - Sulphate



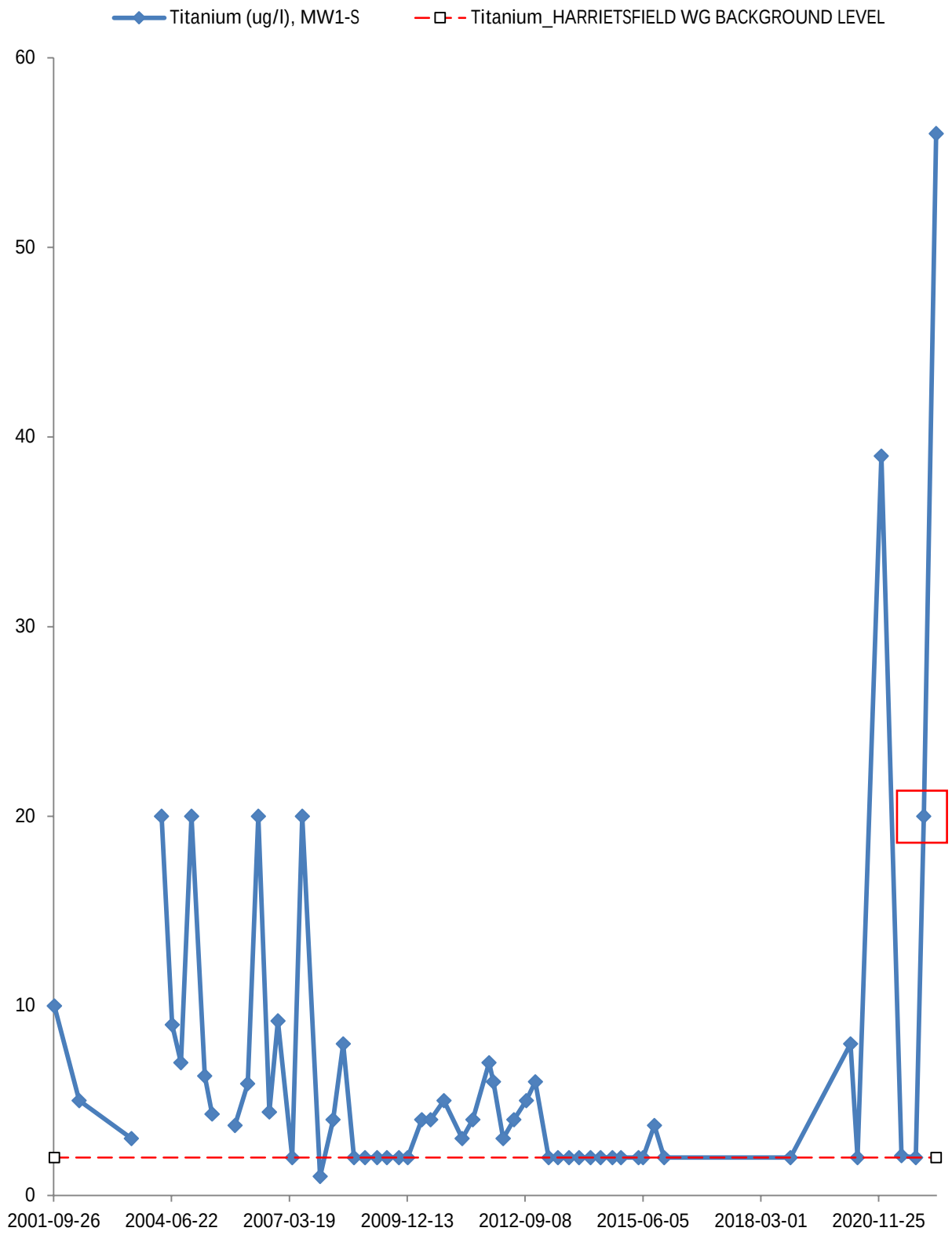
MW1-S - Thallium



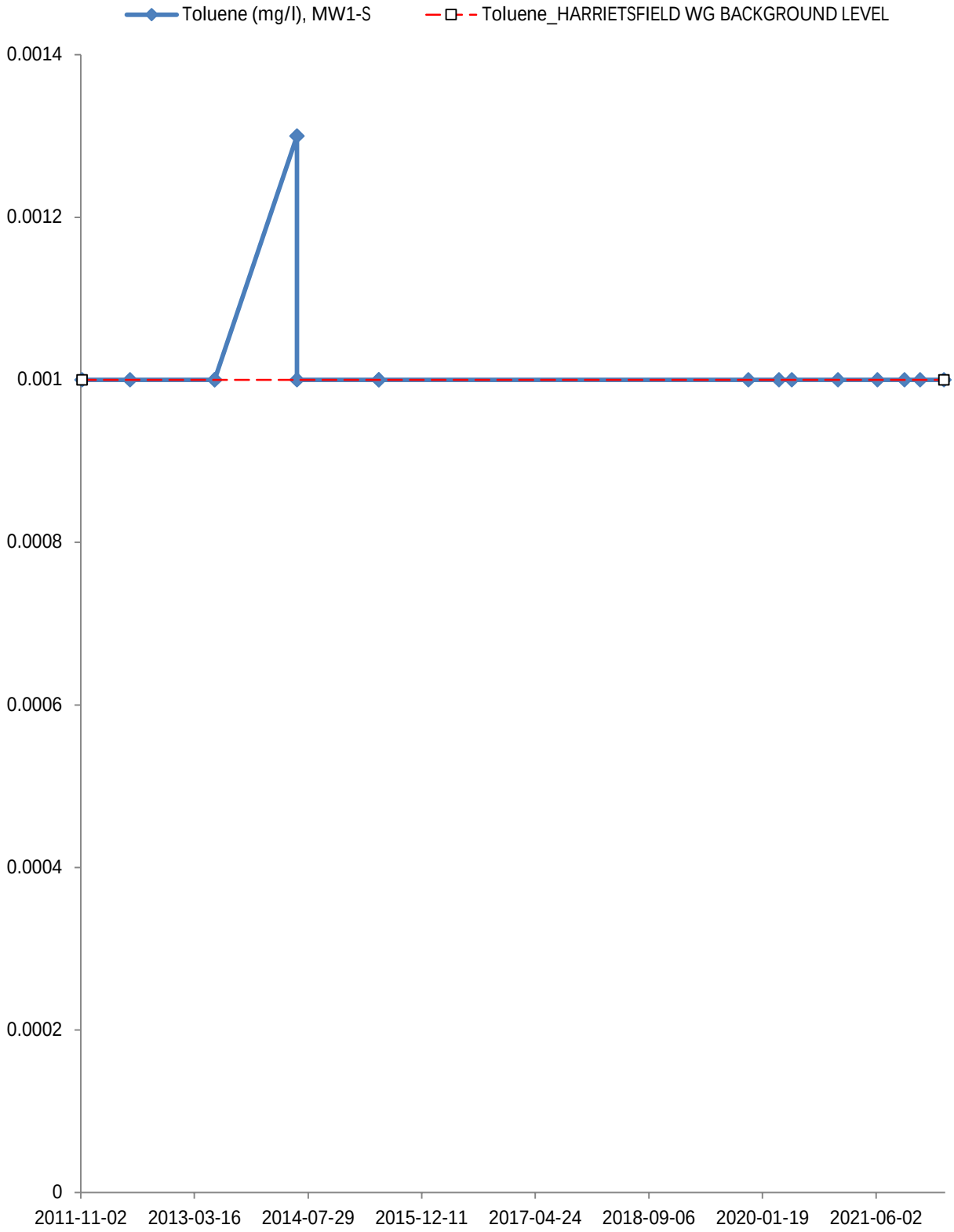
MW1-S - Tin


Tin (ug/l), MW1-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

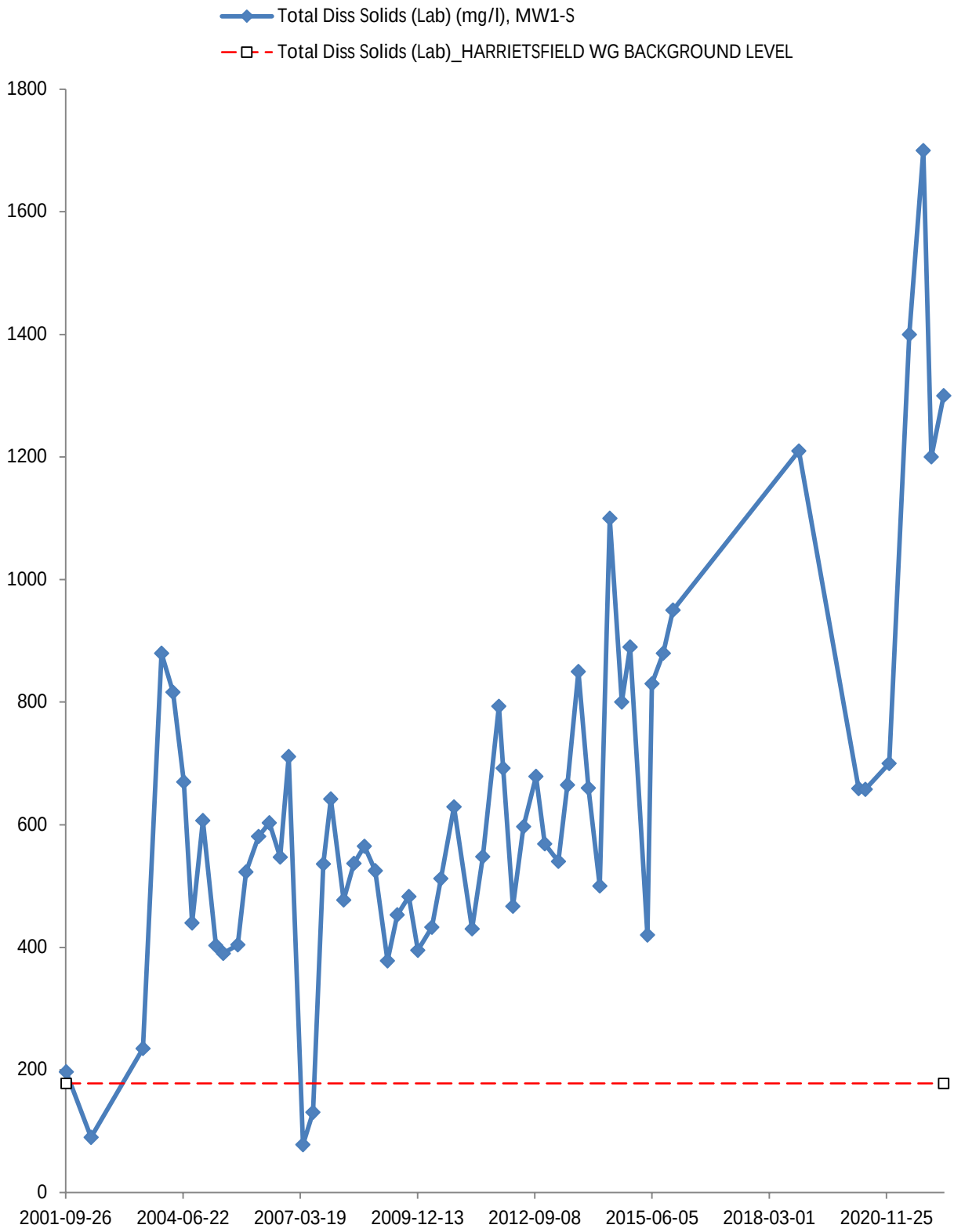
MW1-S - Titanium



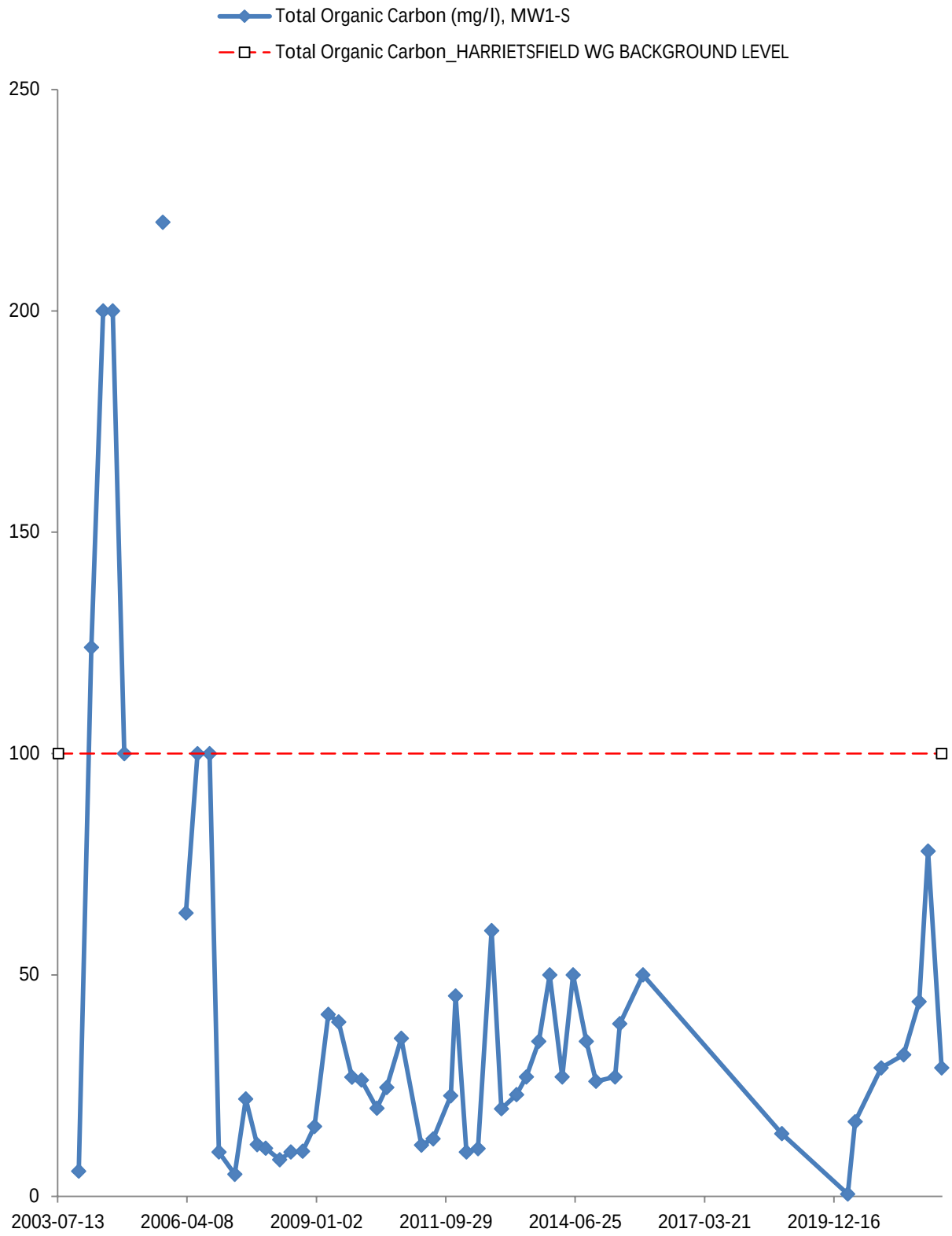
MW1-S - Toluene



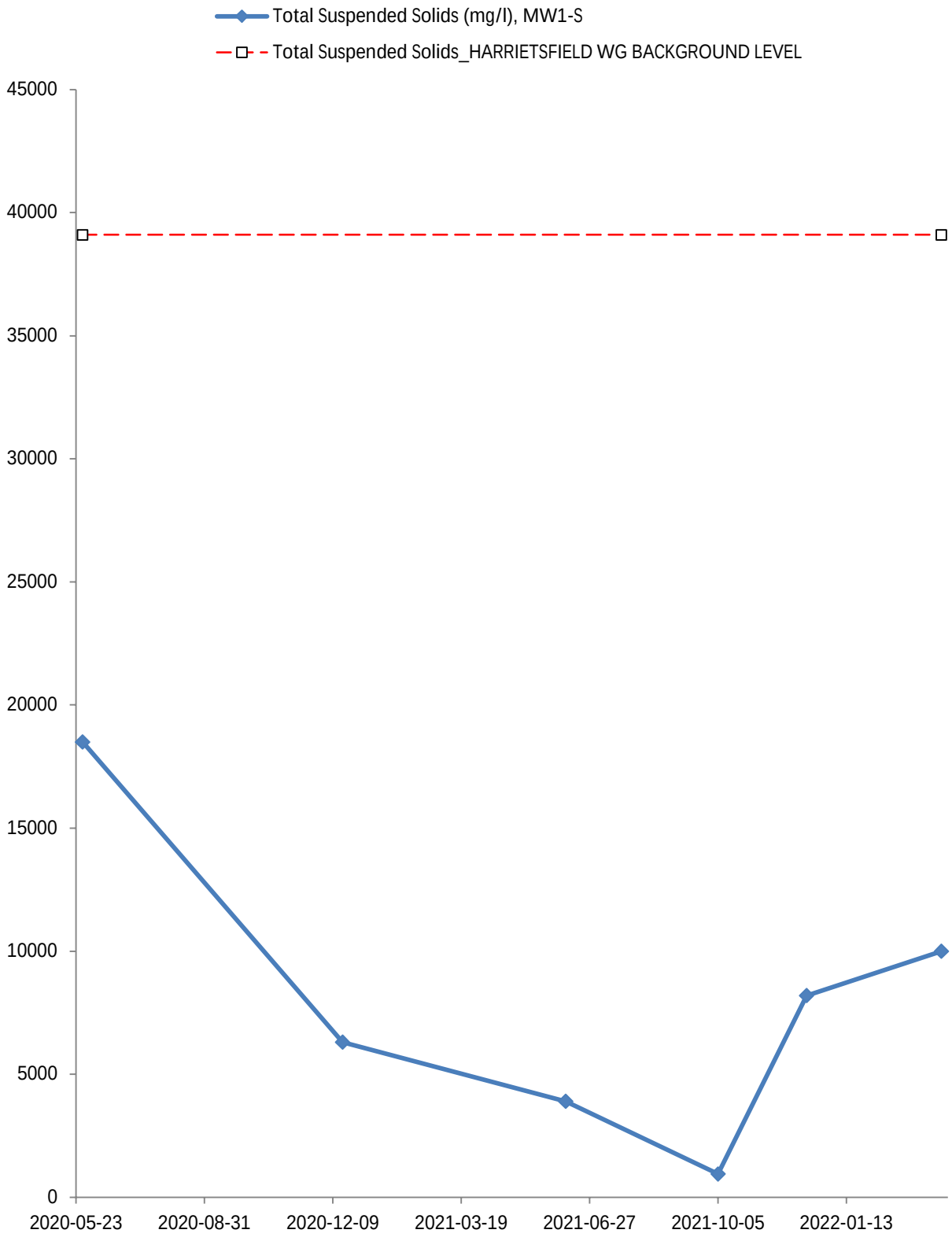
MW1-S - Total Diss Solids (Lab)



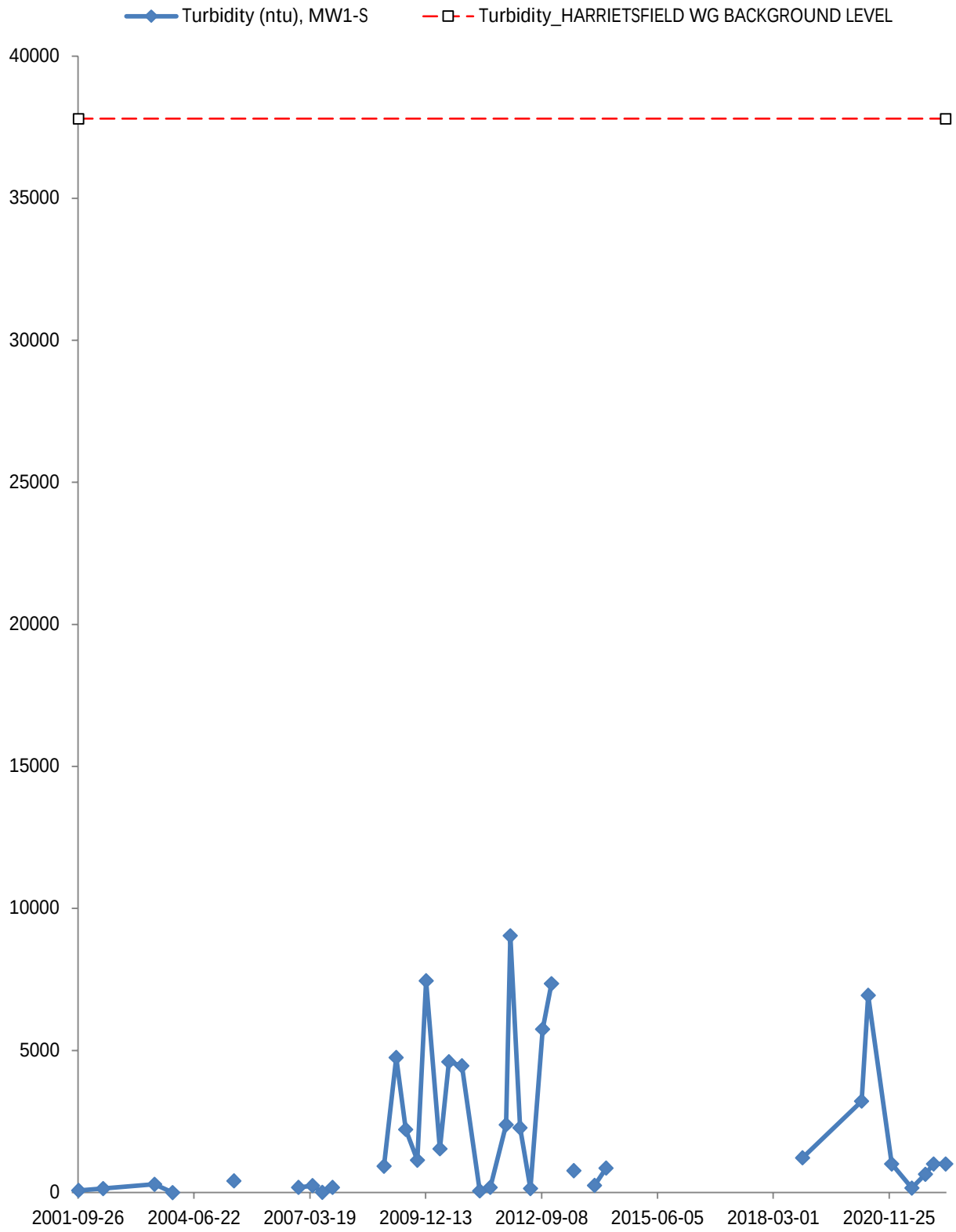
MW1-S - Total Organic Carbon



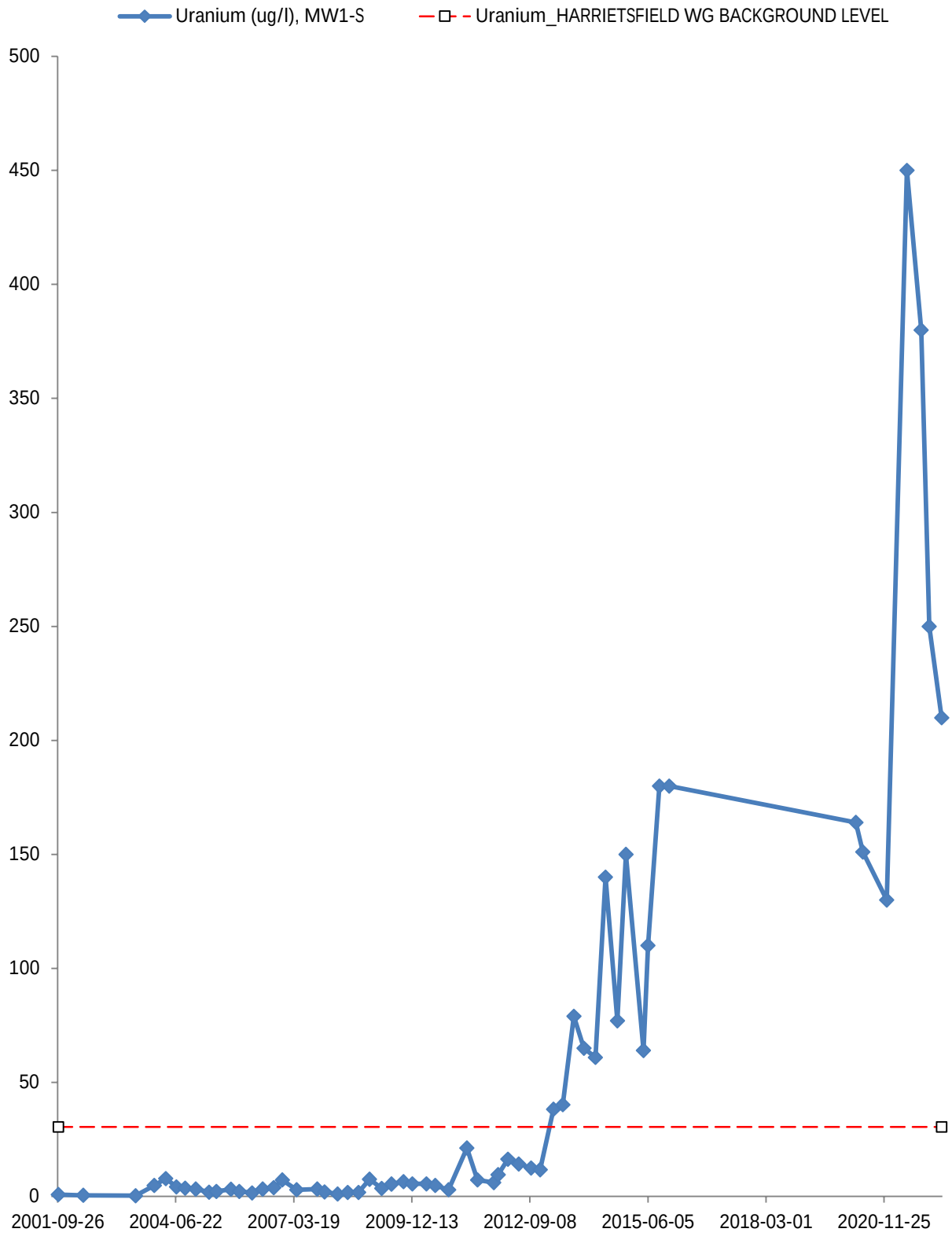
MW1-S - Total Suspended Solids



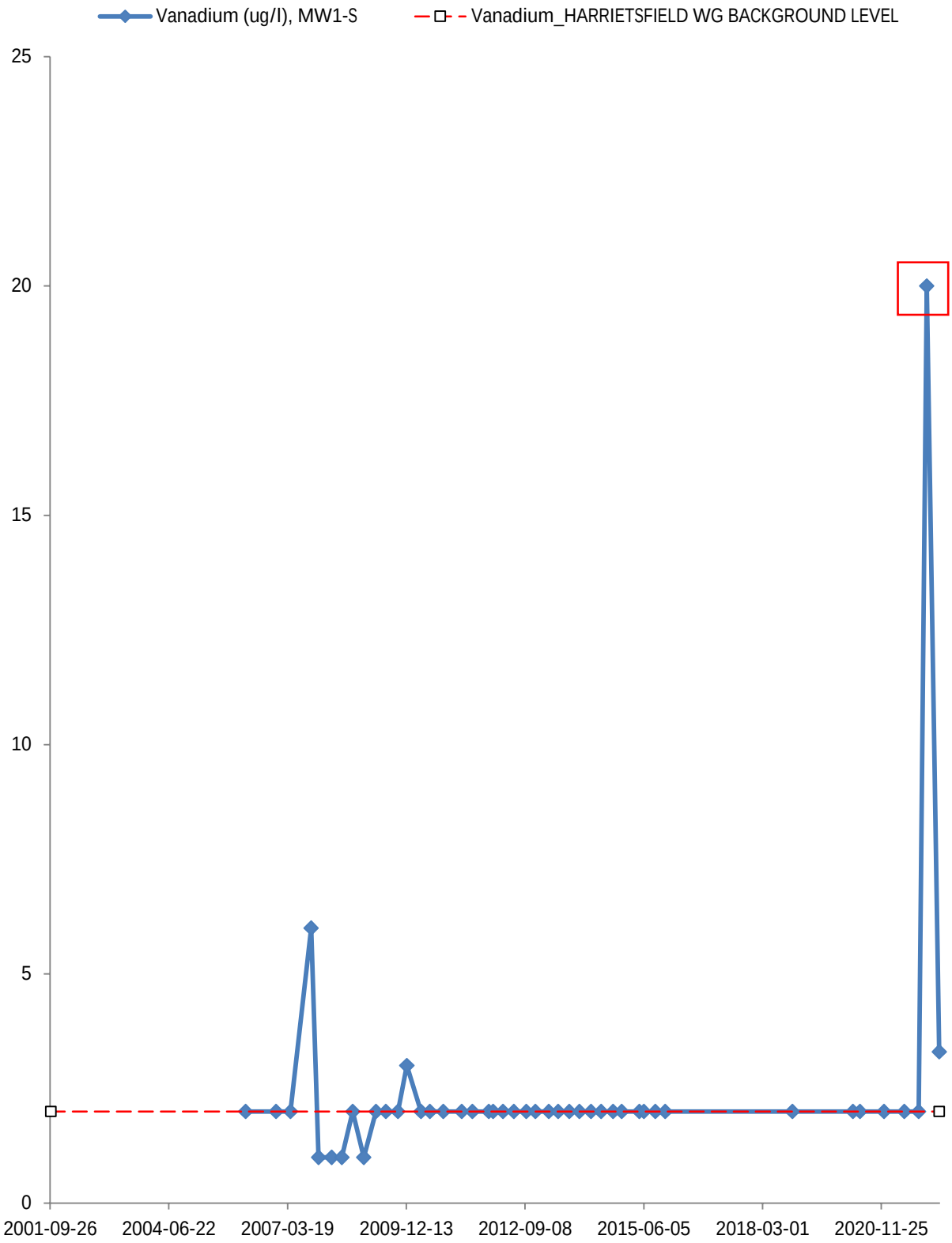
MW1-S - Turbidity



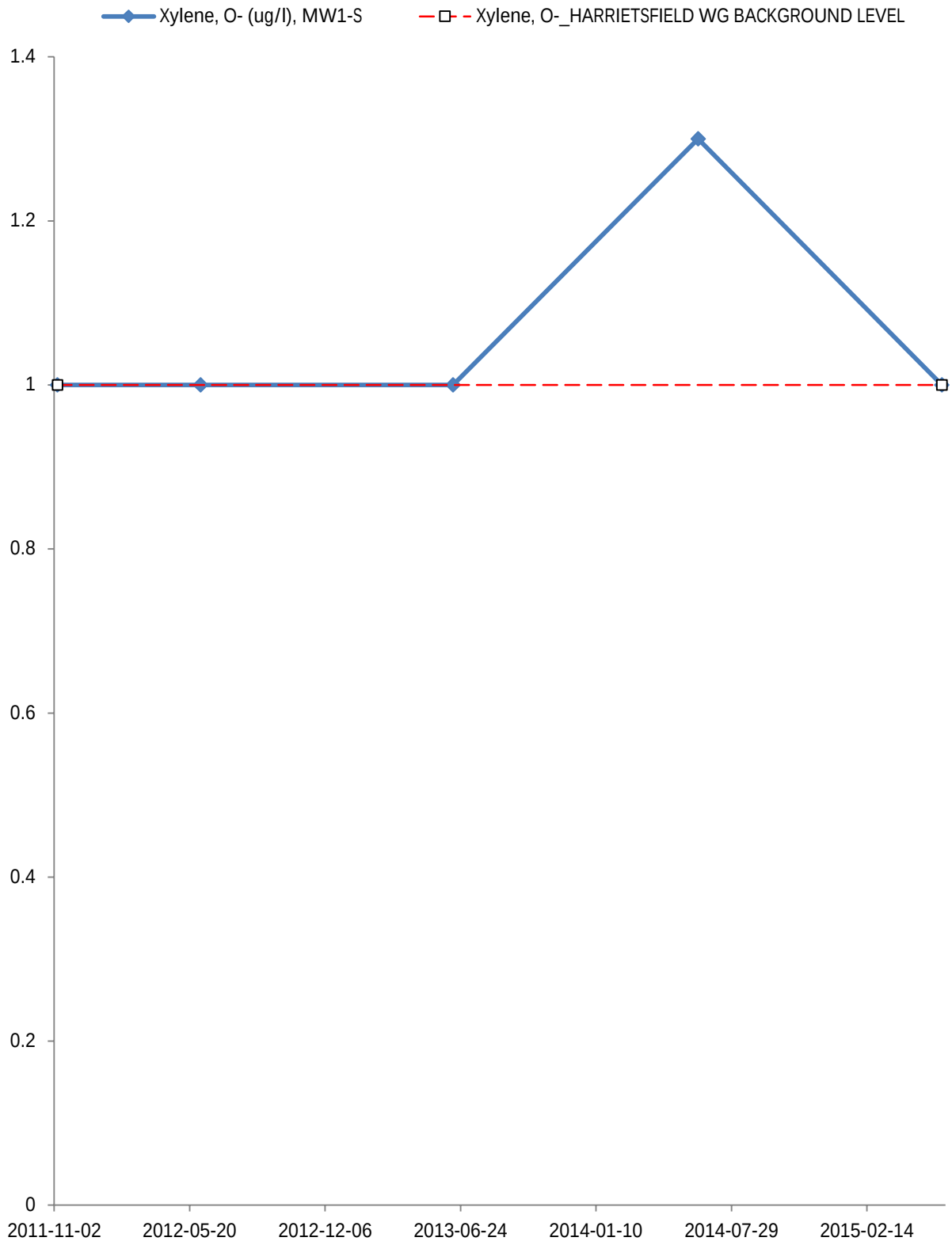
MW1-S - Uranium



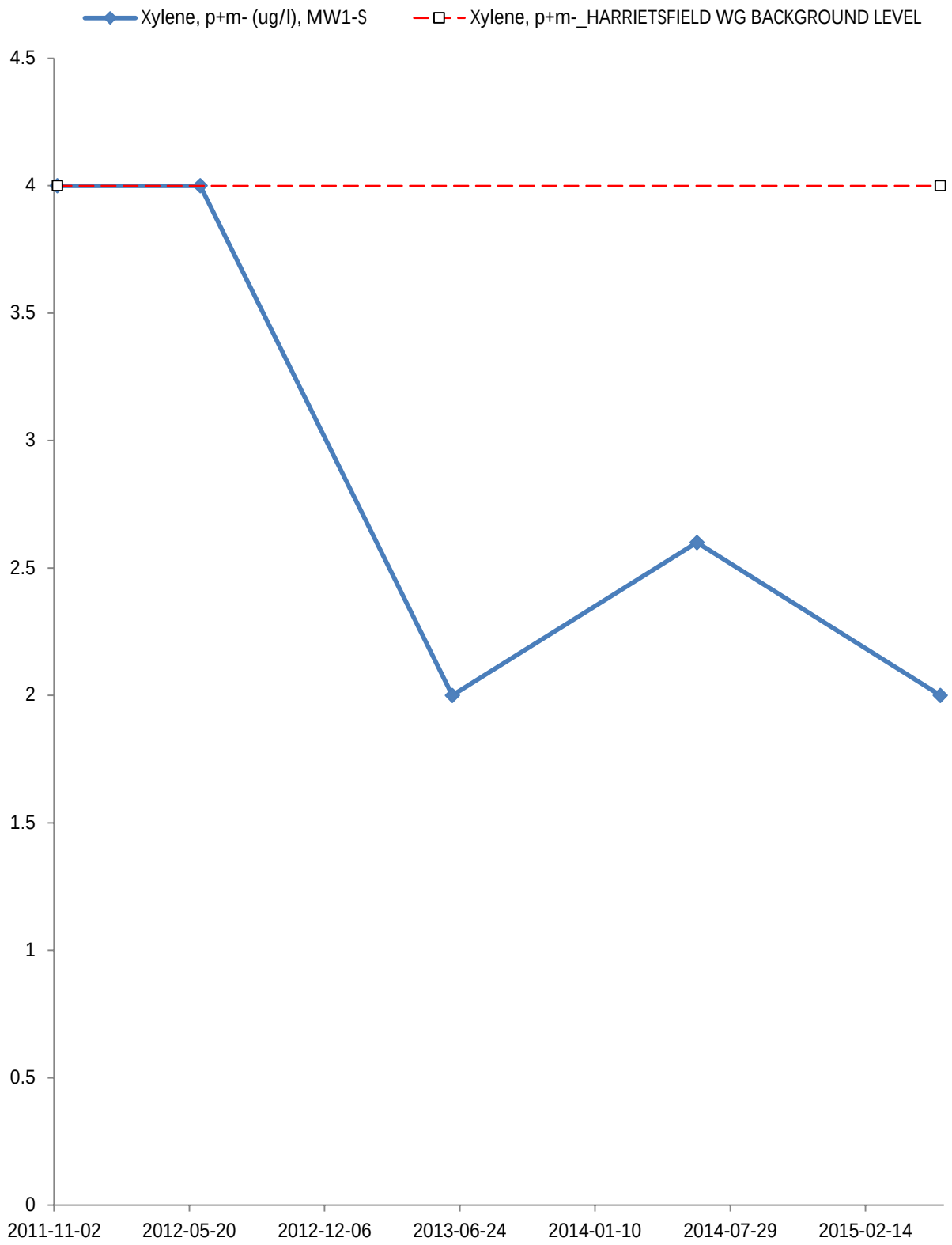
MW1-S - Vanadium



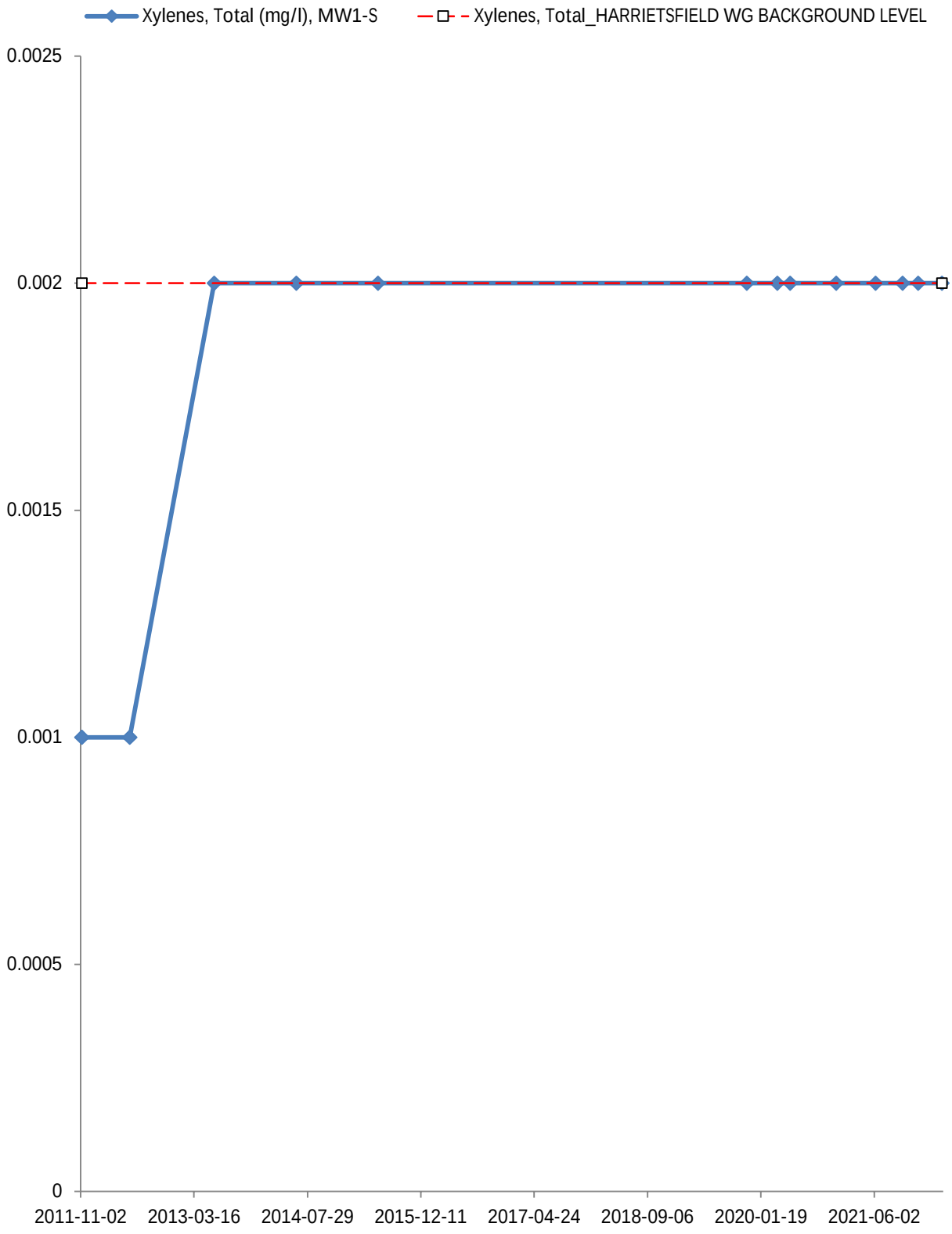
MW1-S - Xylene, O-



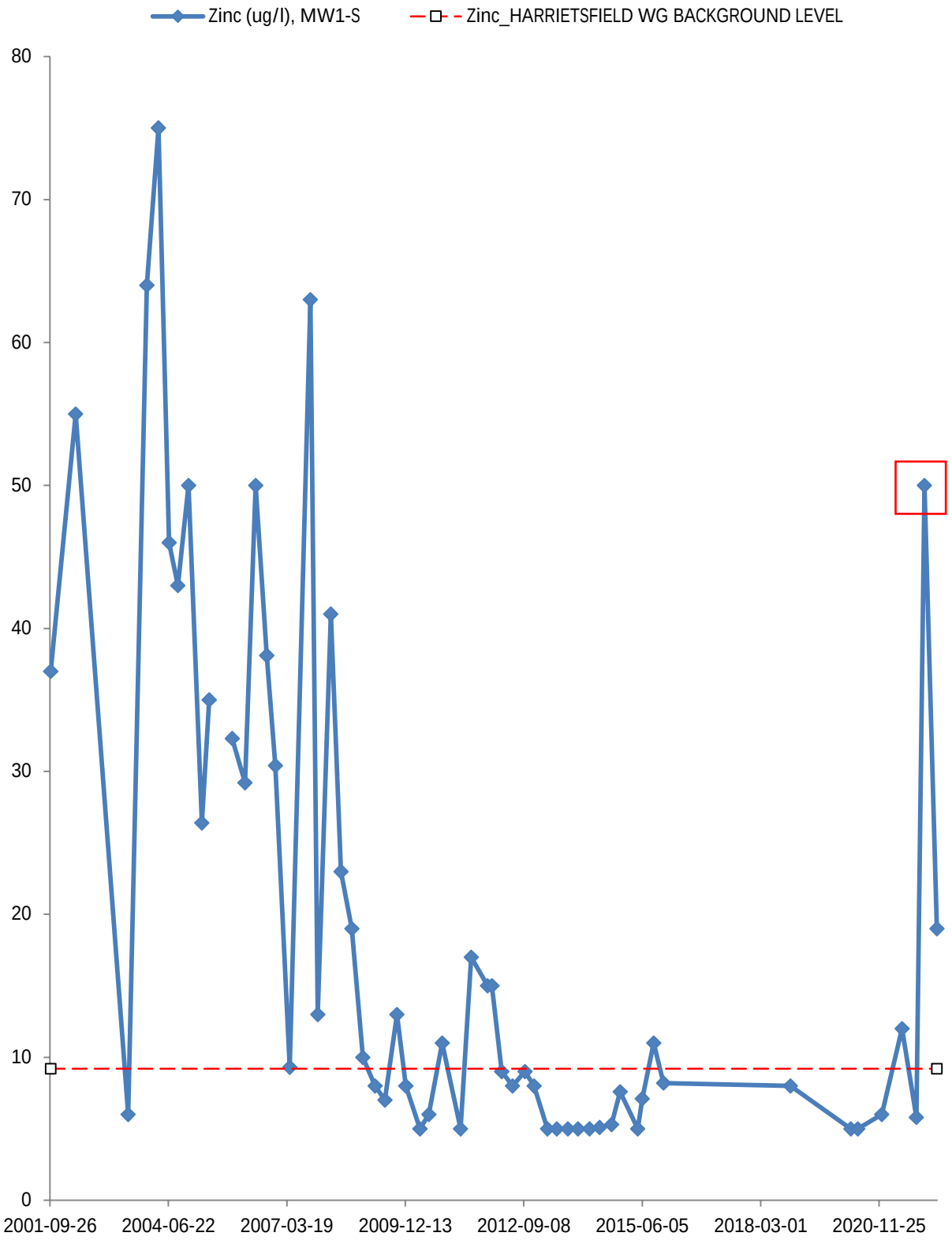
MW1-S - Xylene, p+m-



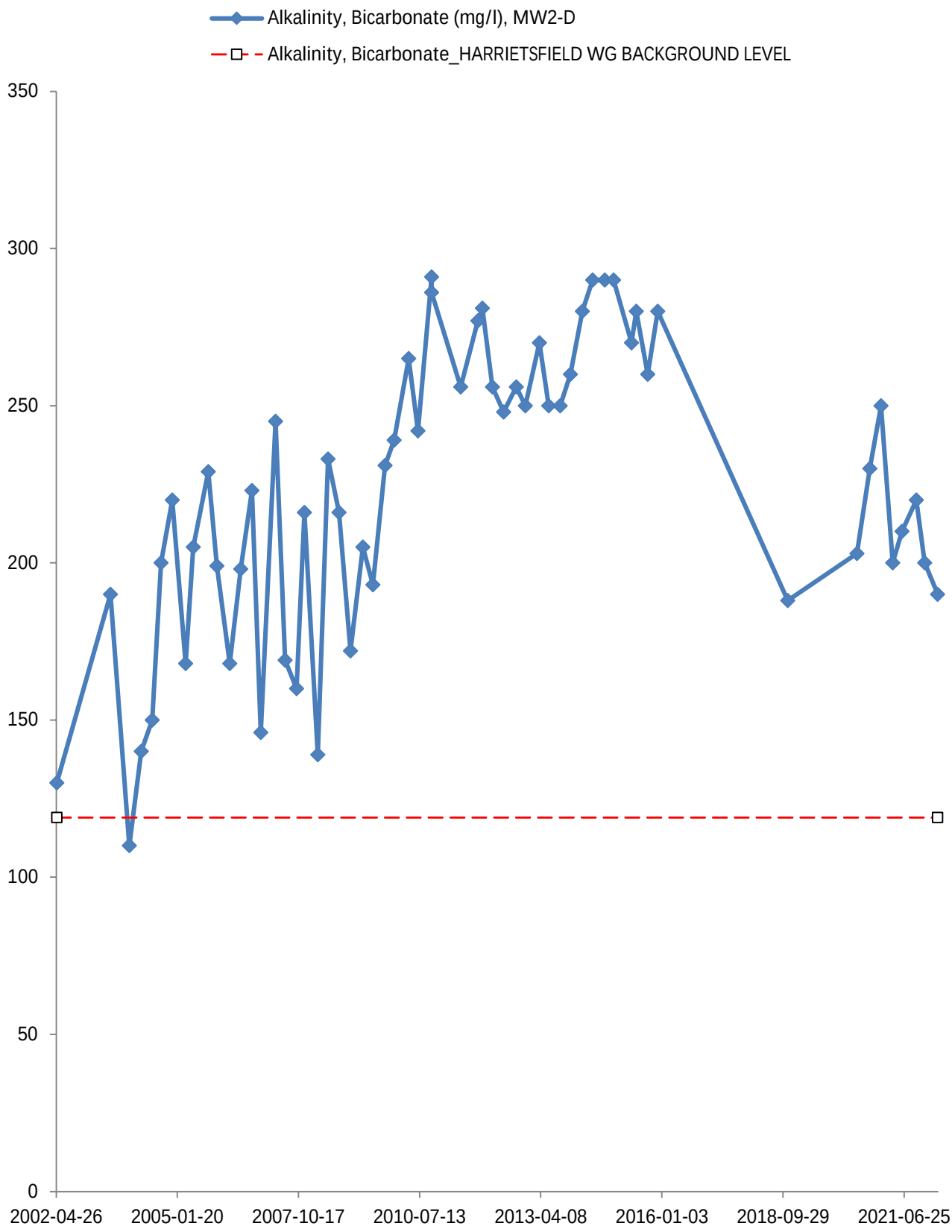
MW1-S - Xylenes, Total



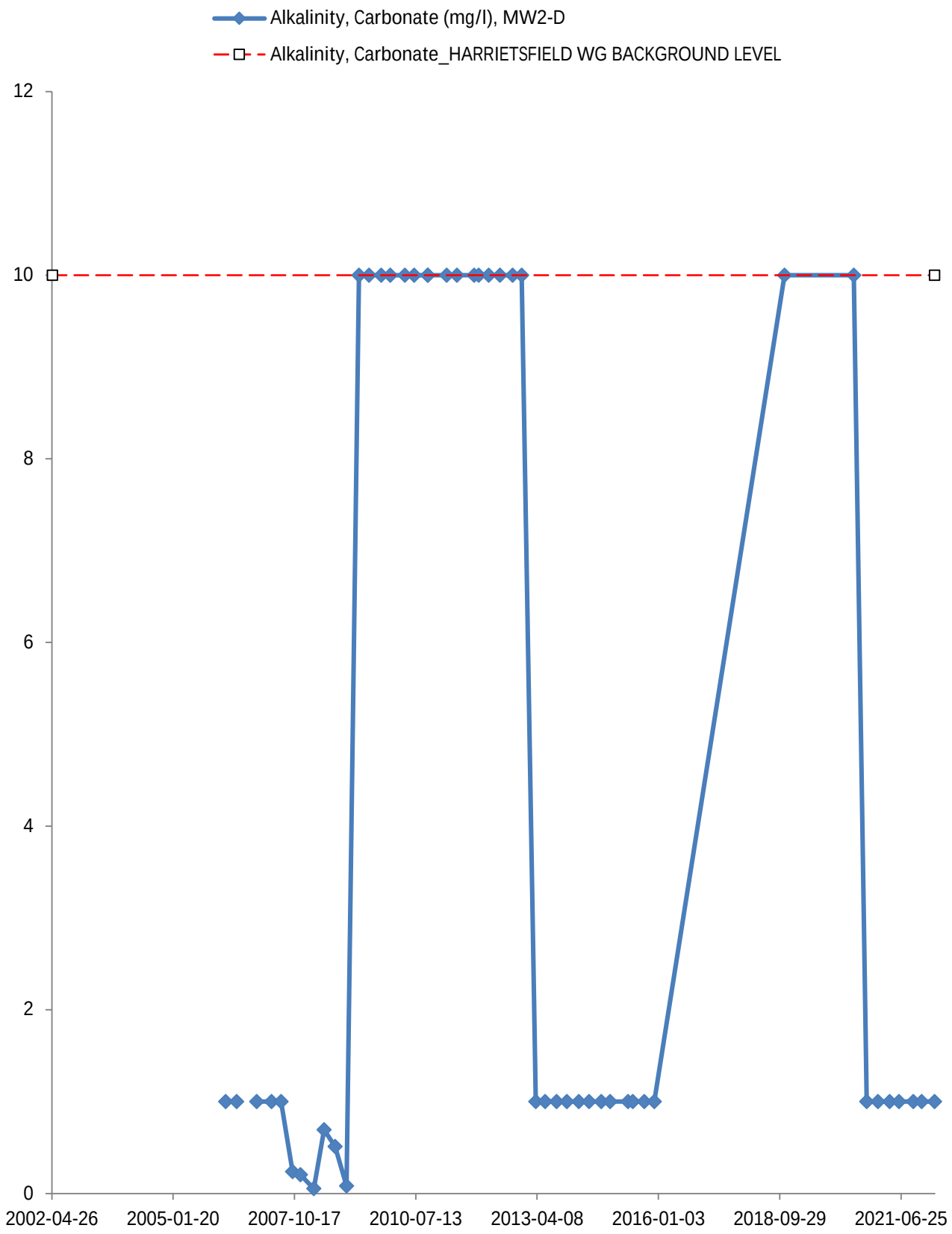
MW1-S - Zinc


Zinc (ug/l), MW1-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2001-09-26
2004-06-22
2007-03-19
2009-12-13
2012-09-08
2015-06-05
2018-03-01
2020-11-25

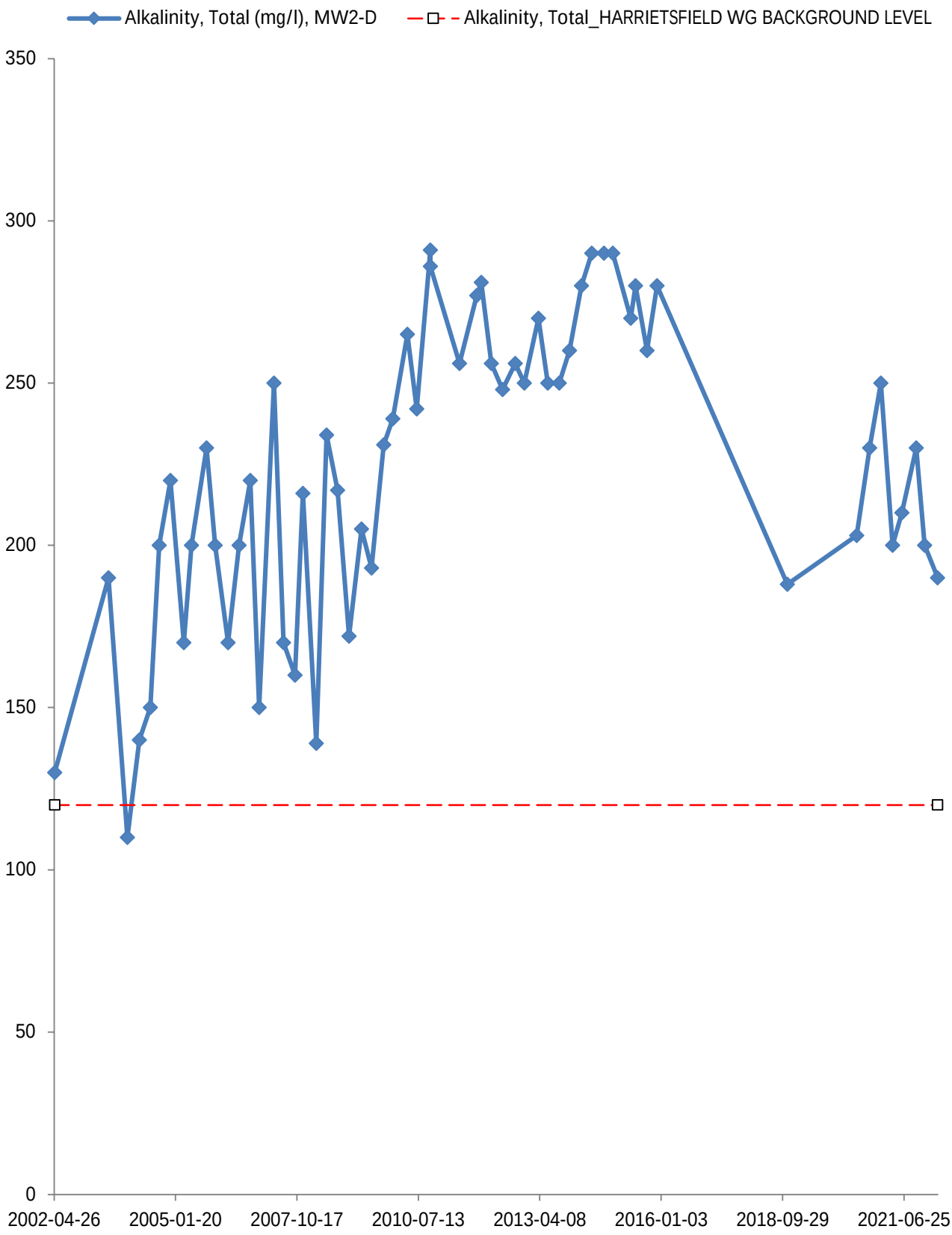
MW2-D-Alkalinity, Bicarbonate



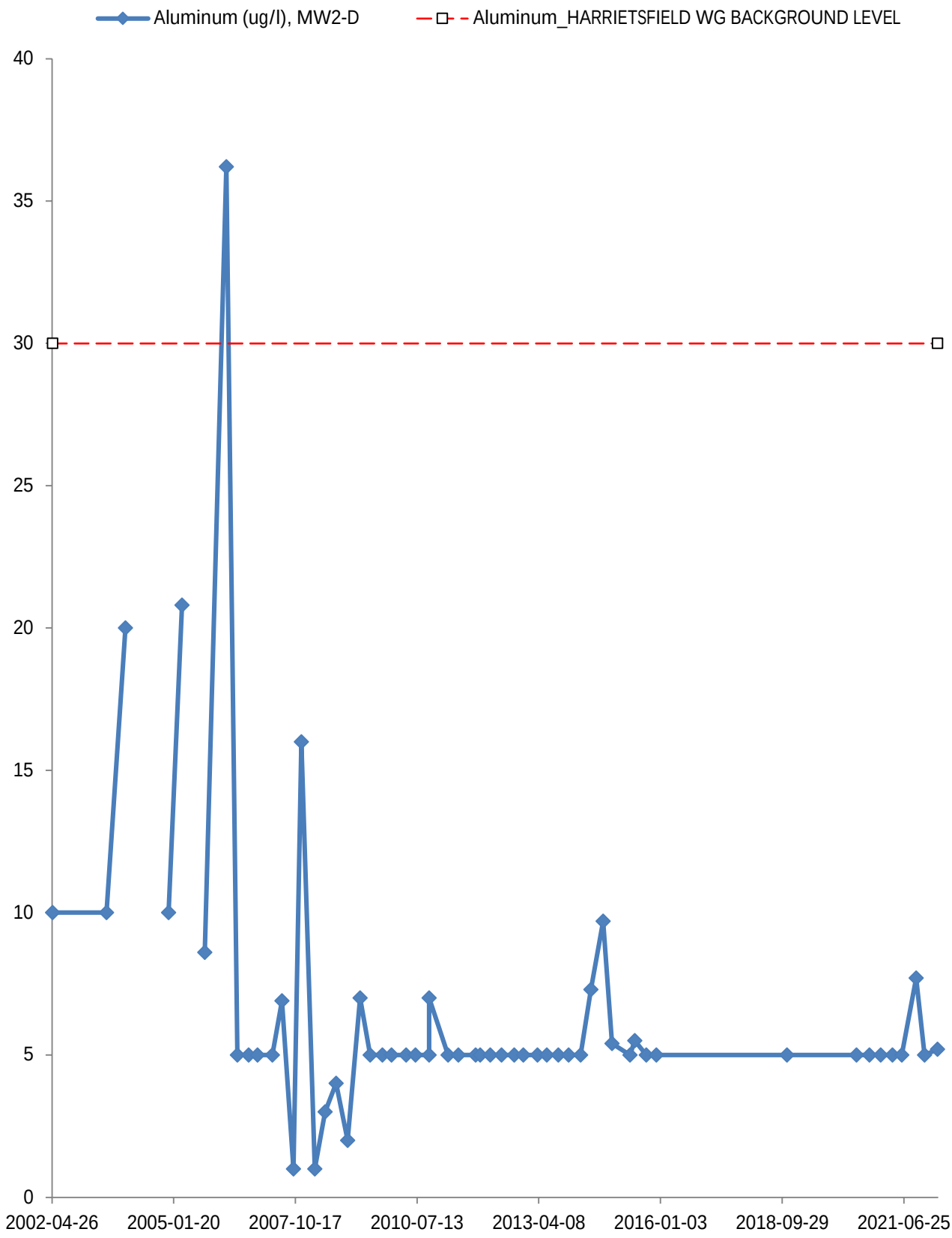
MW2-D-Alkalinity, Carbonate



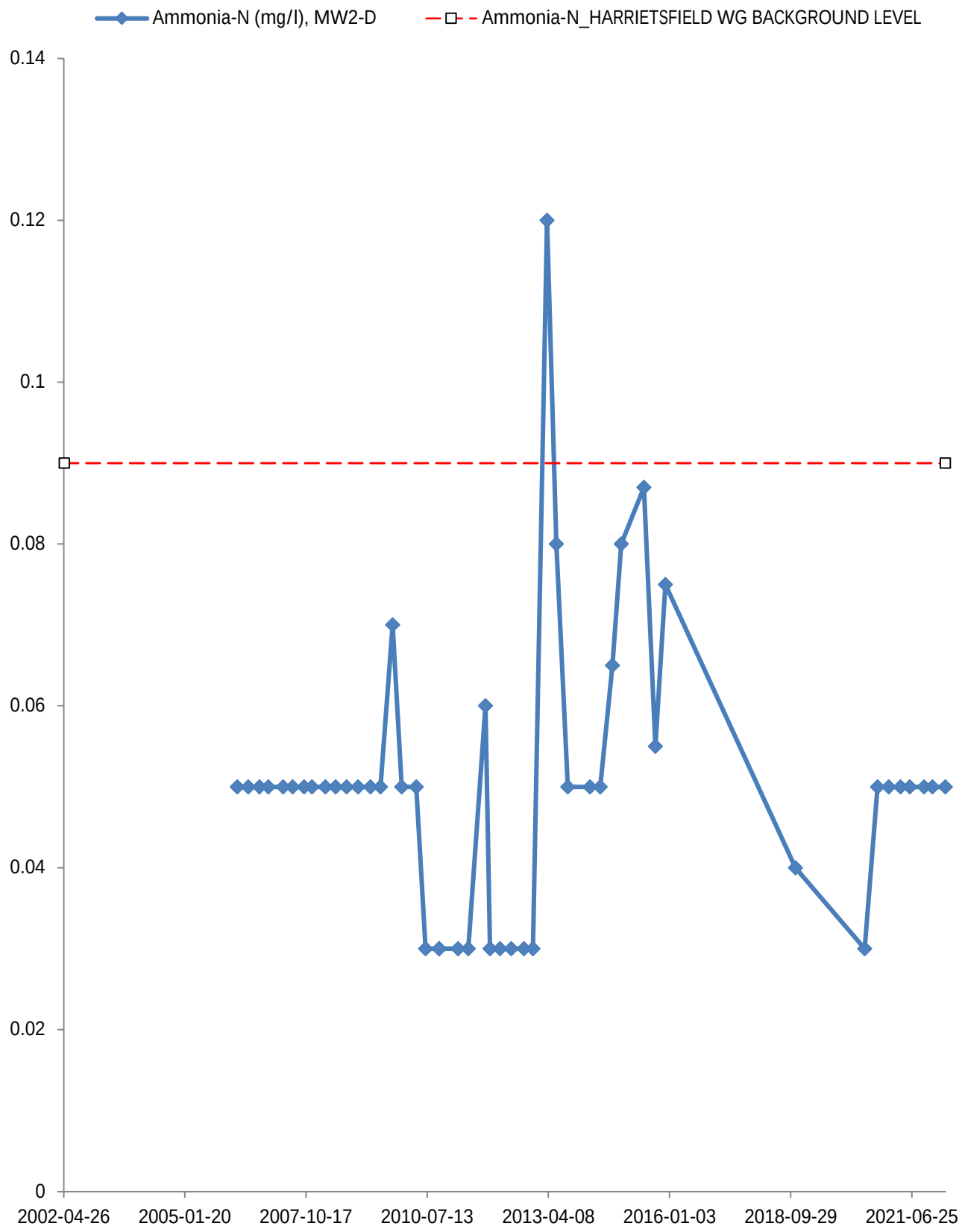
MW2-D-Alkalinity, Total



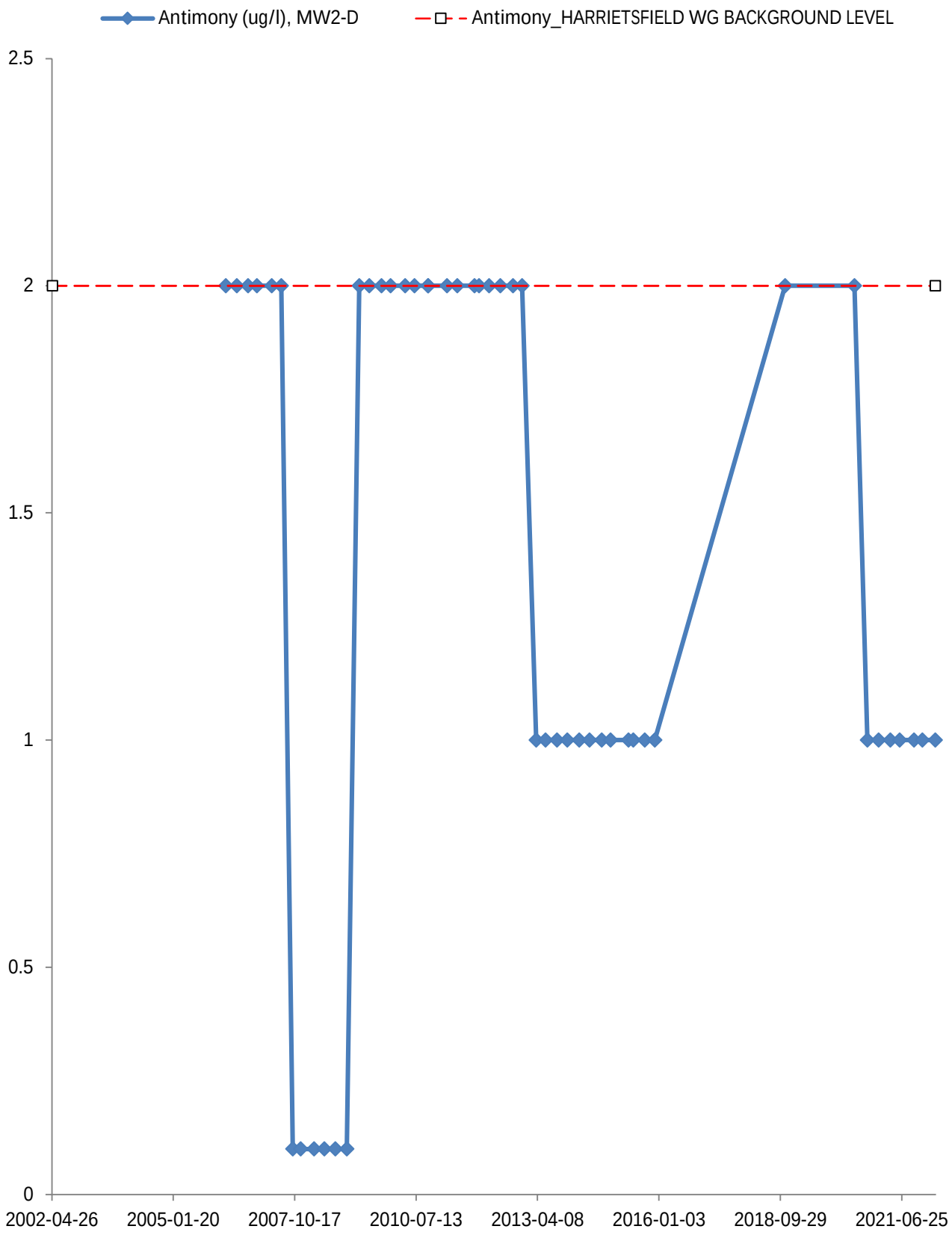
MW2-D-Aluminum



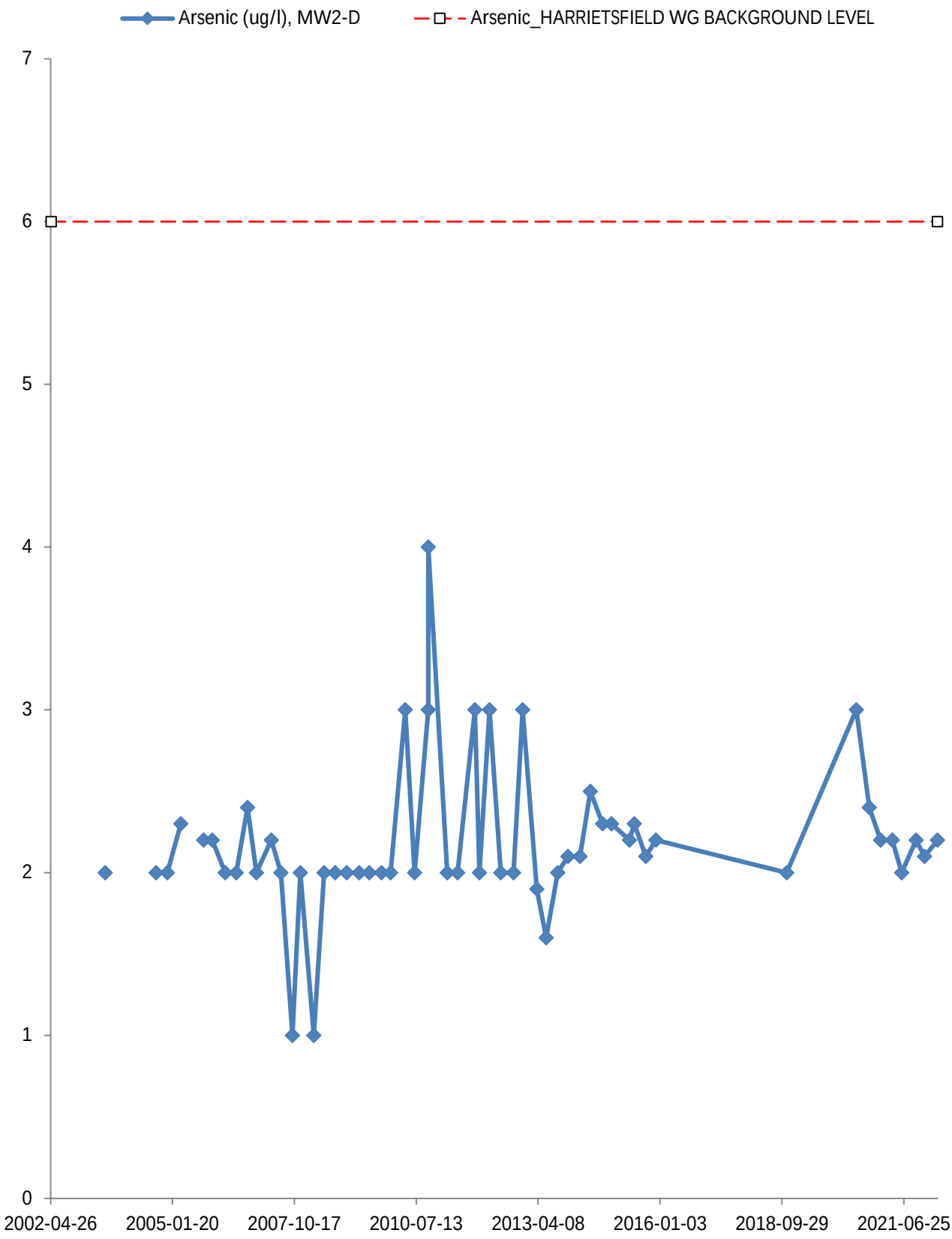
MW2-D-Ammonia-N



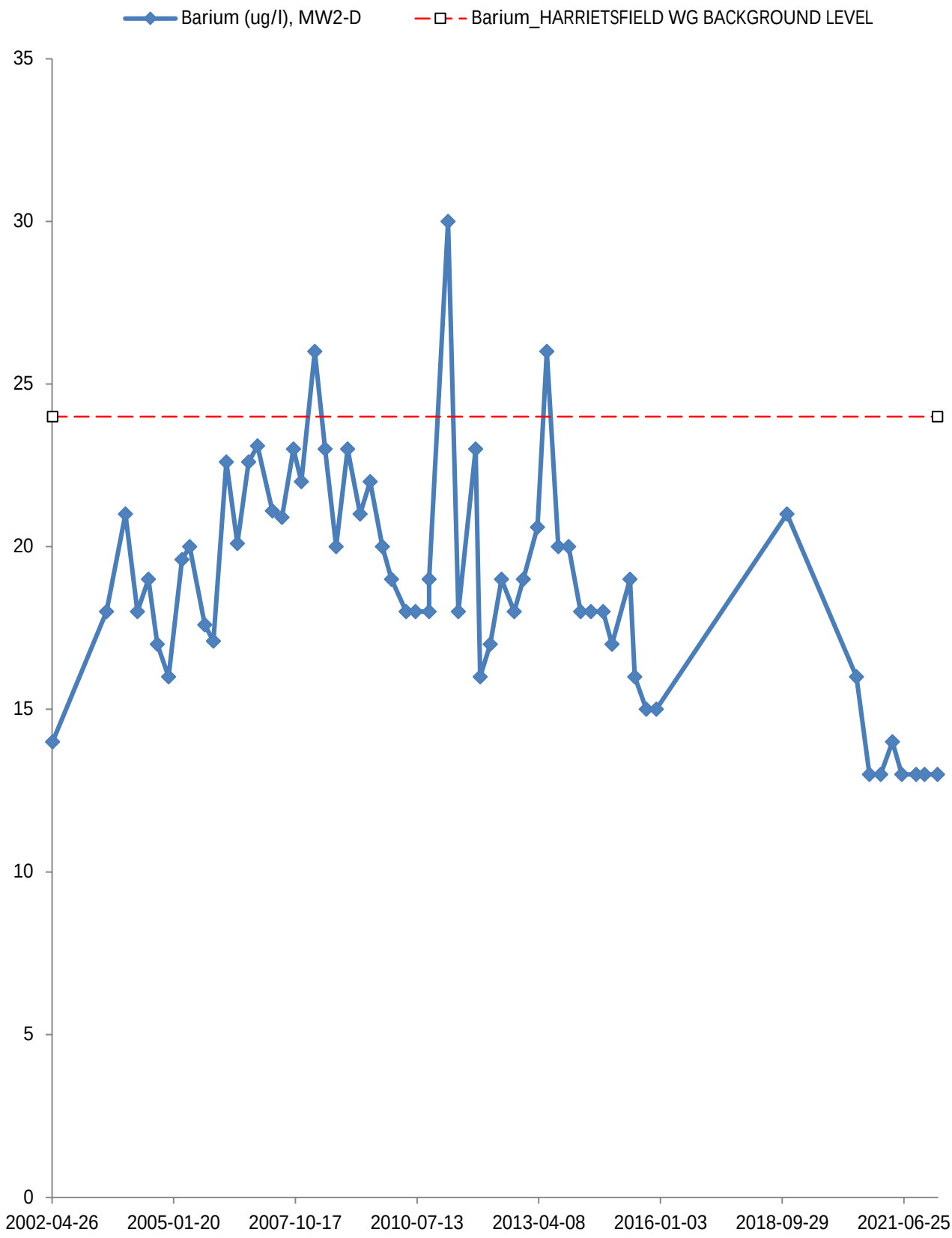
MW2-D-Antimony



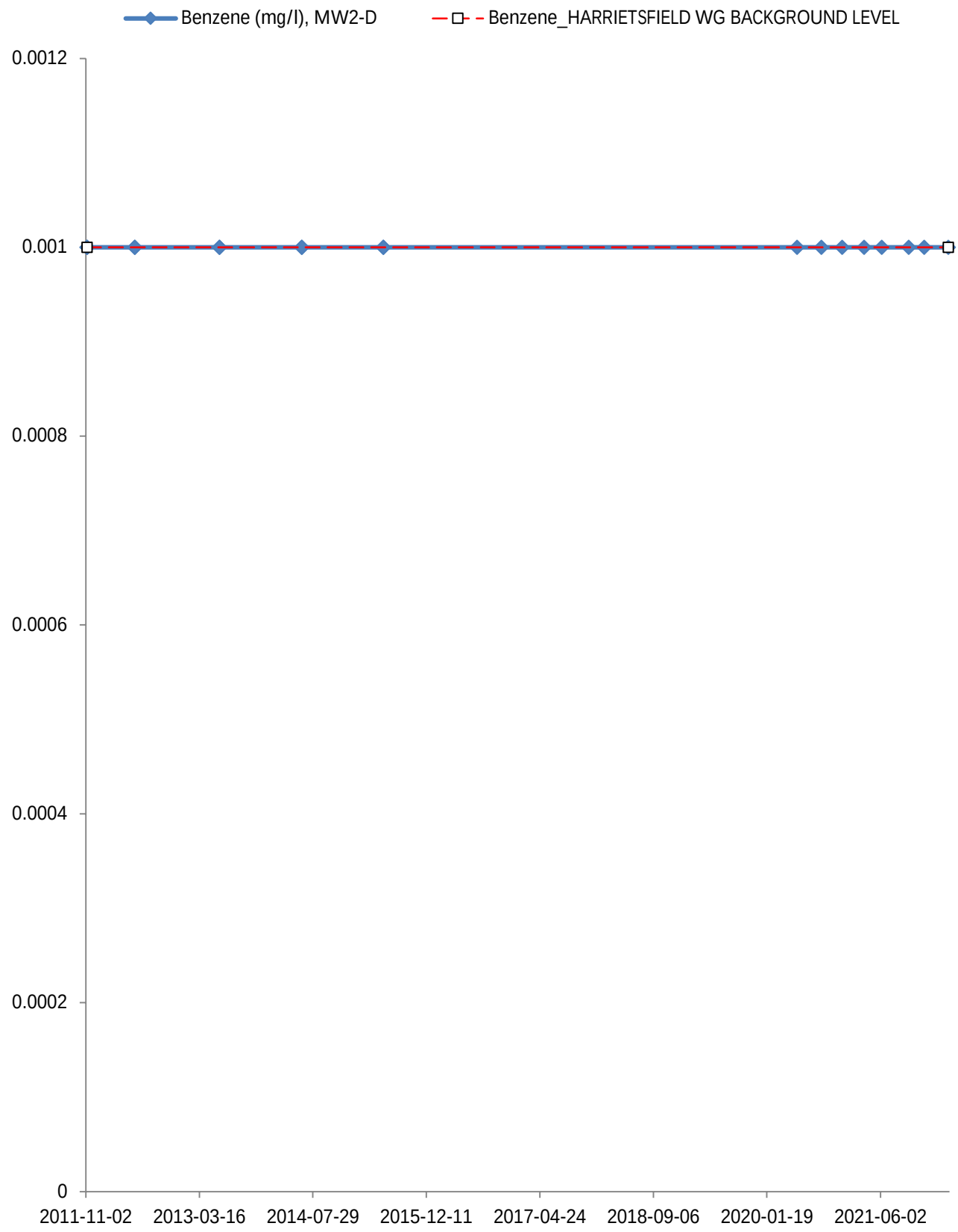
MW2-D-Arsenic



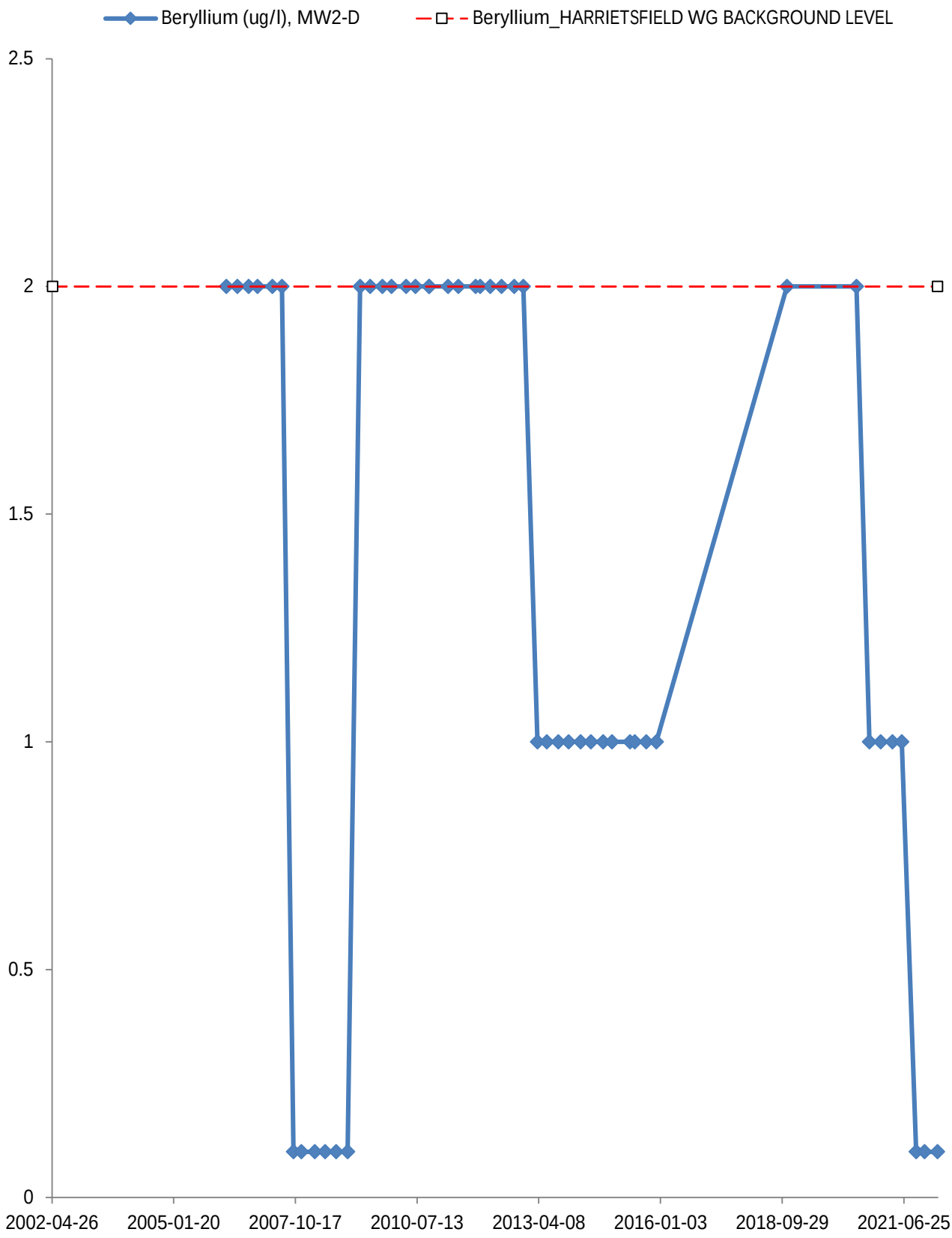
MW2-D-Barium


Barium (ug/l), MW2-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

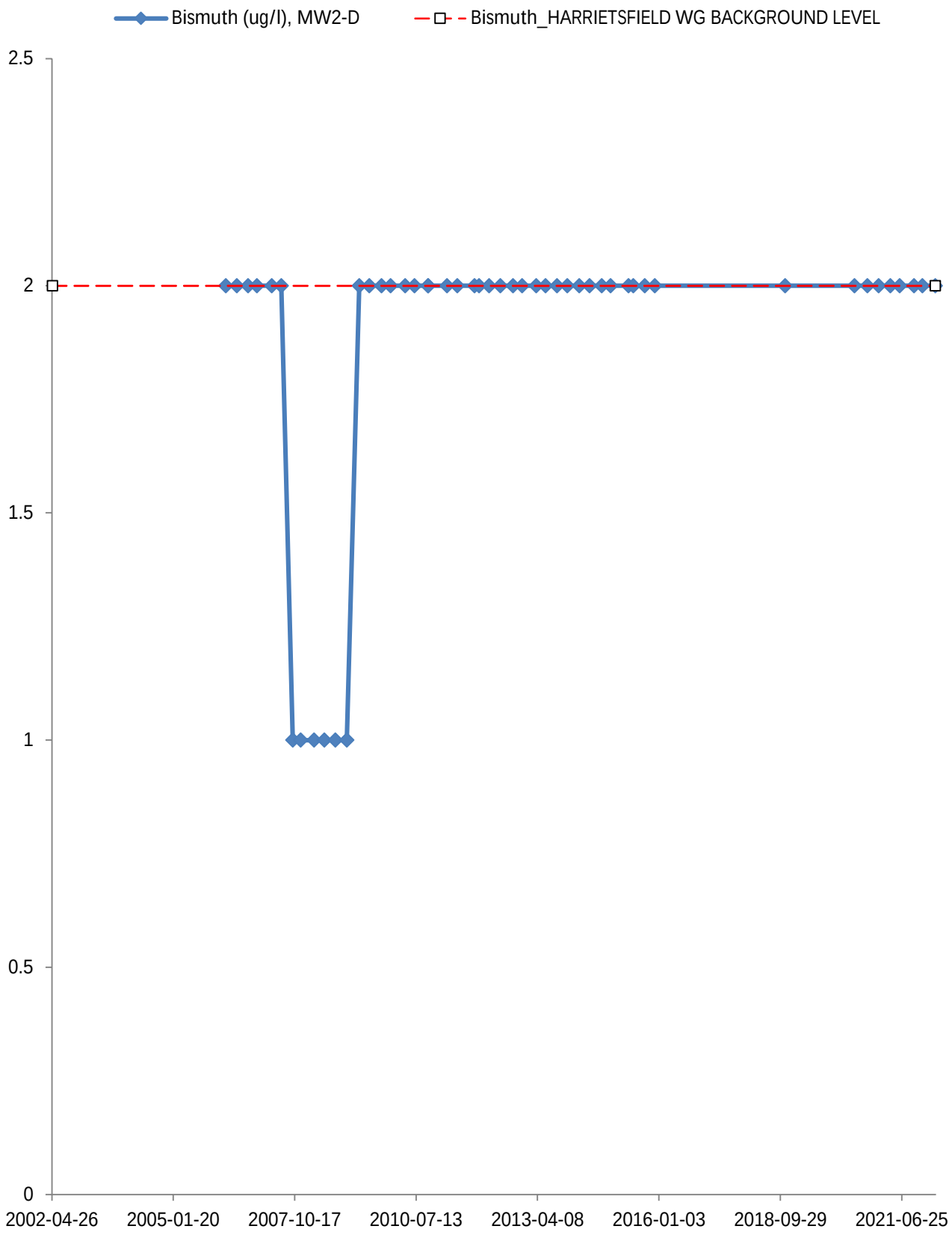
MW2-D-Benzene



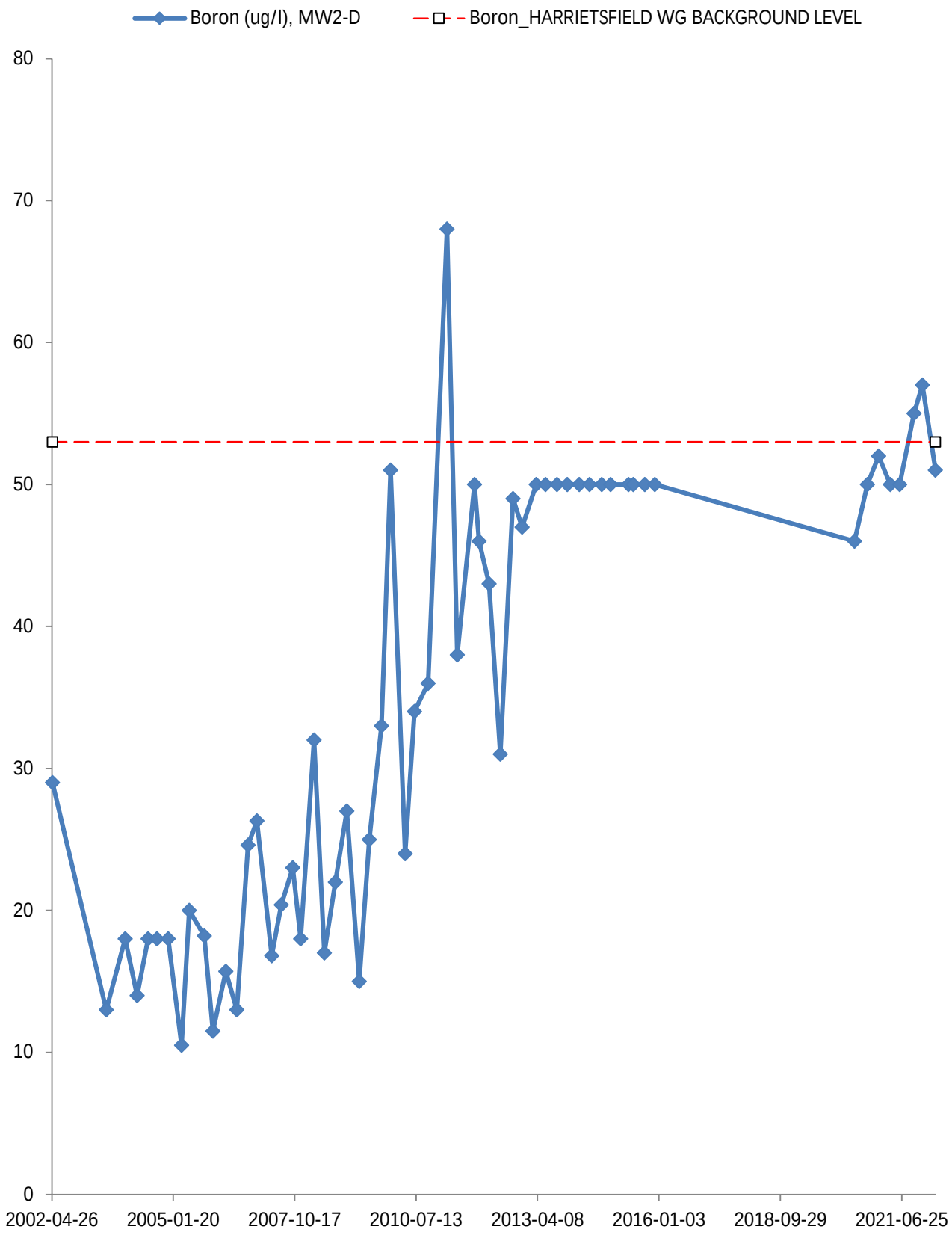
MW2-D-Beryllium



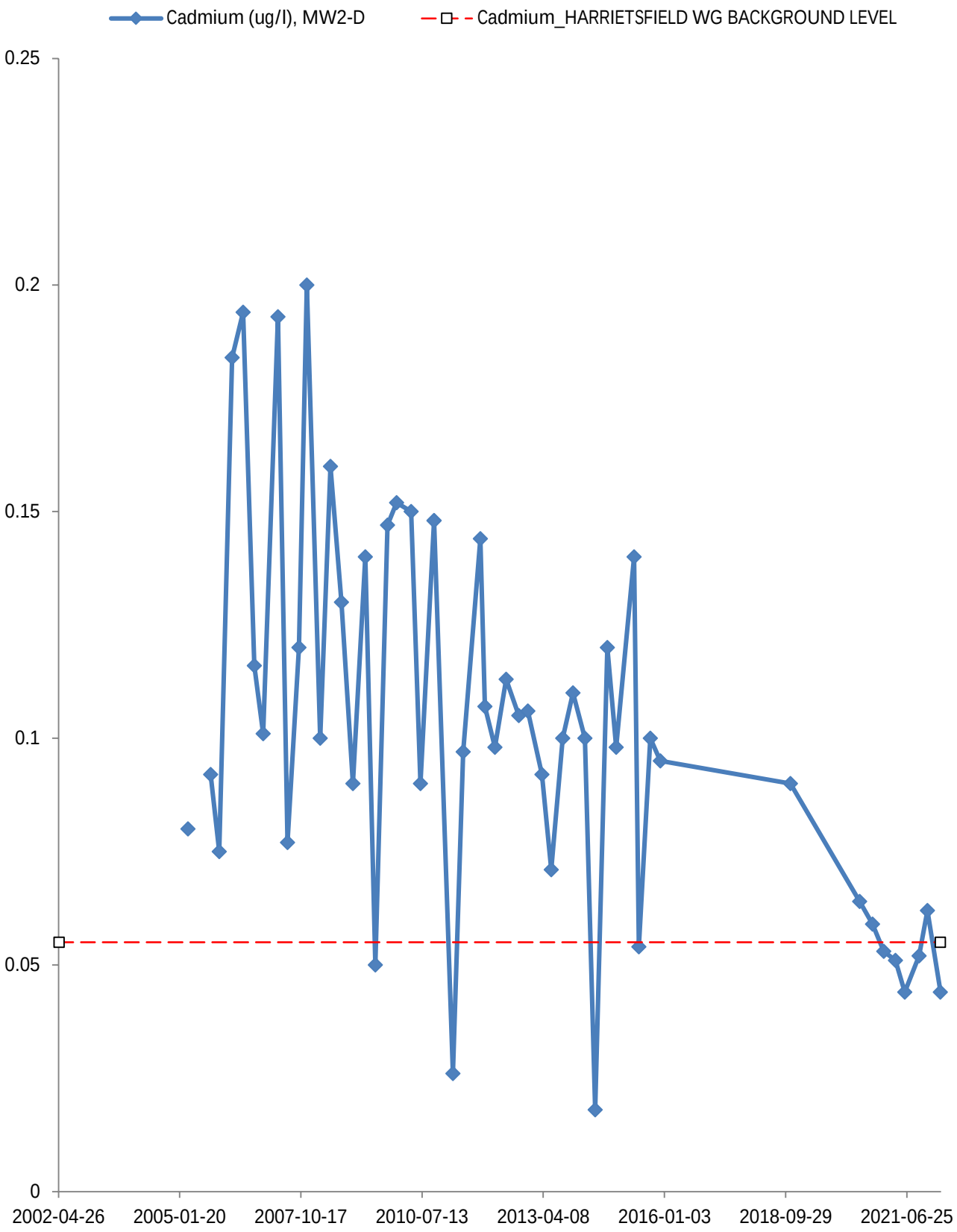
MW2-D-Bismuth



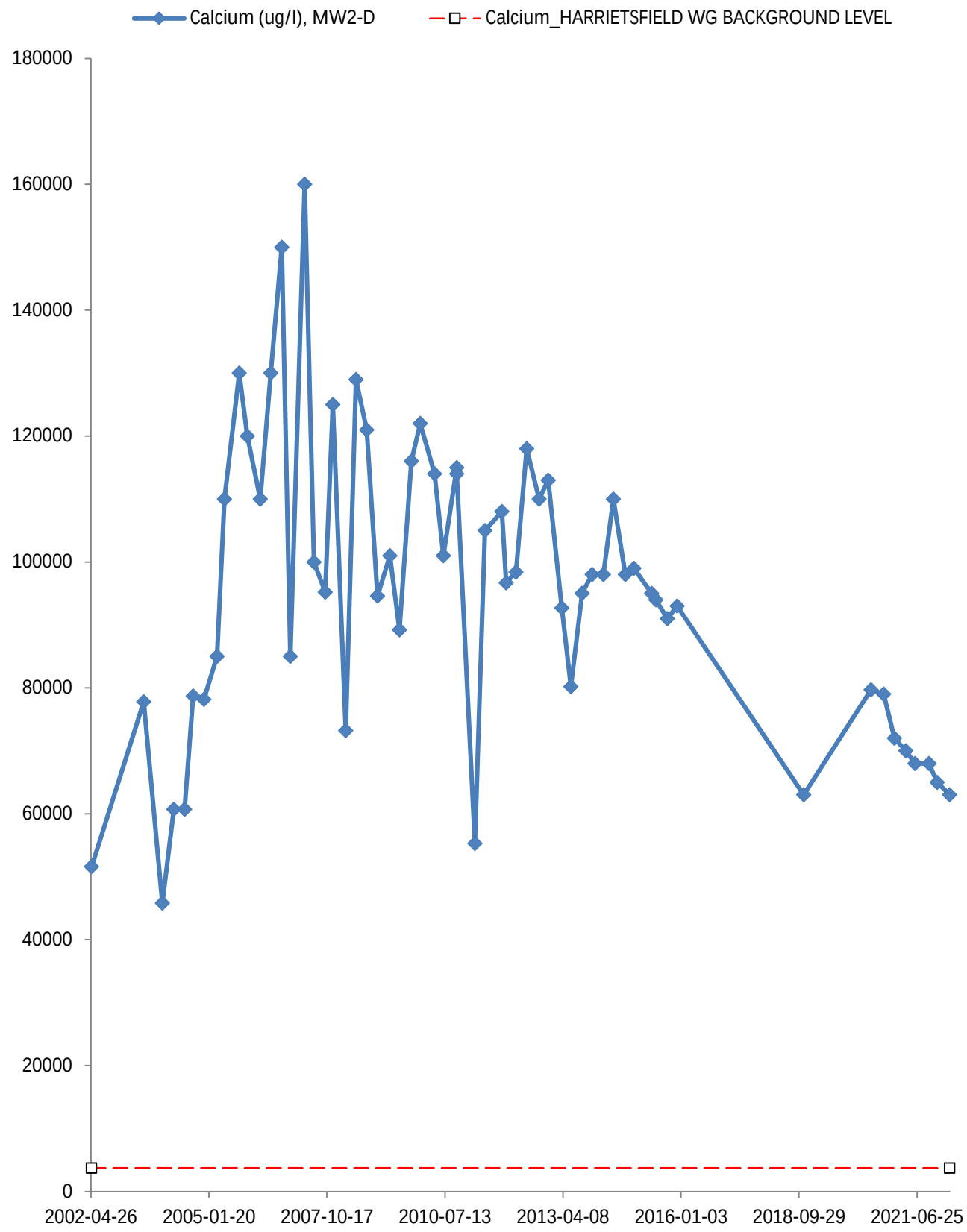
MW2-D-Boron


Boron (ug/l), MW2-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

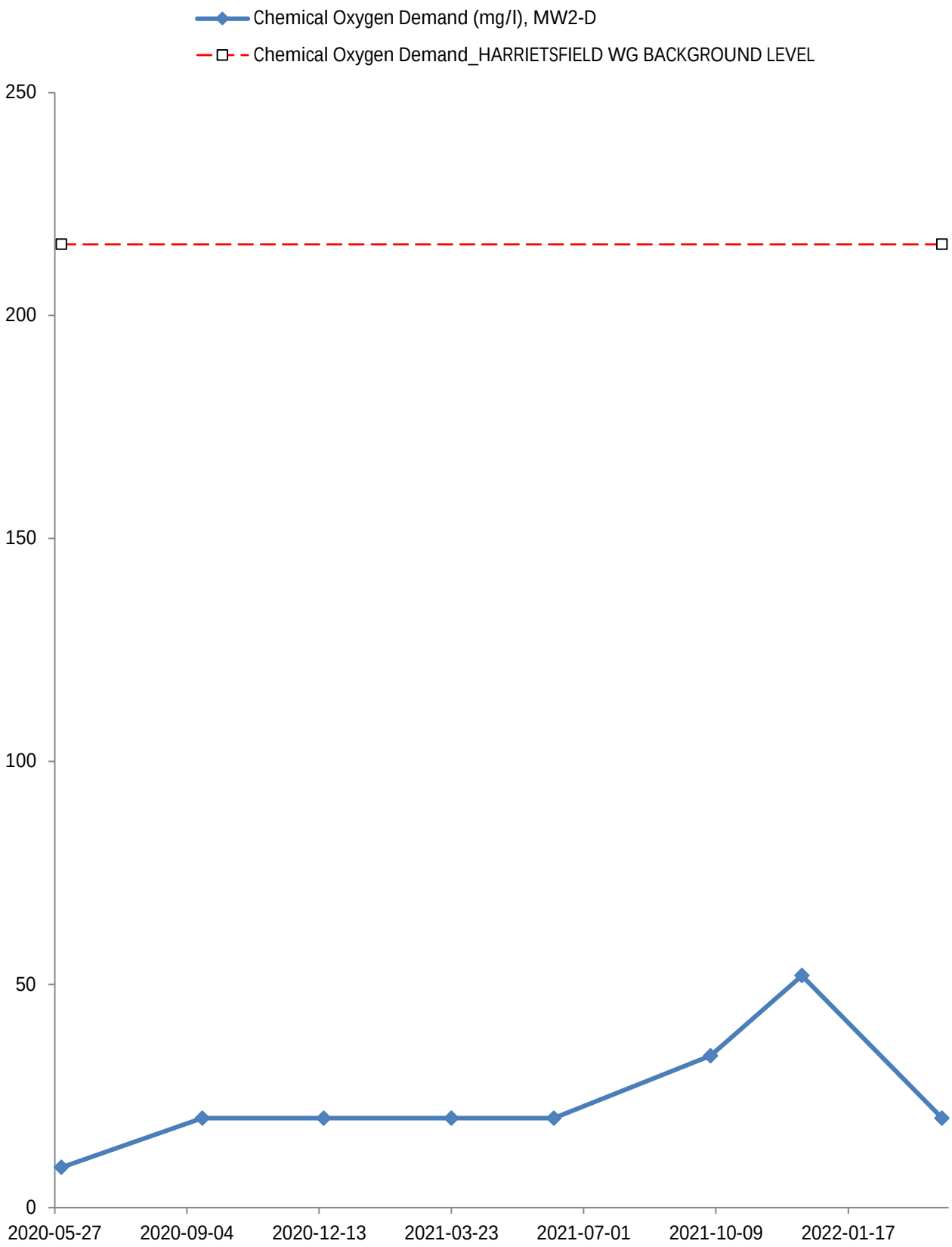
MW2-D-Cadmium



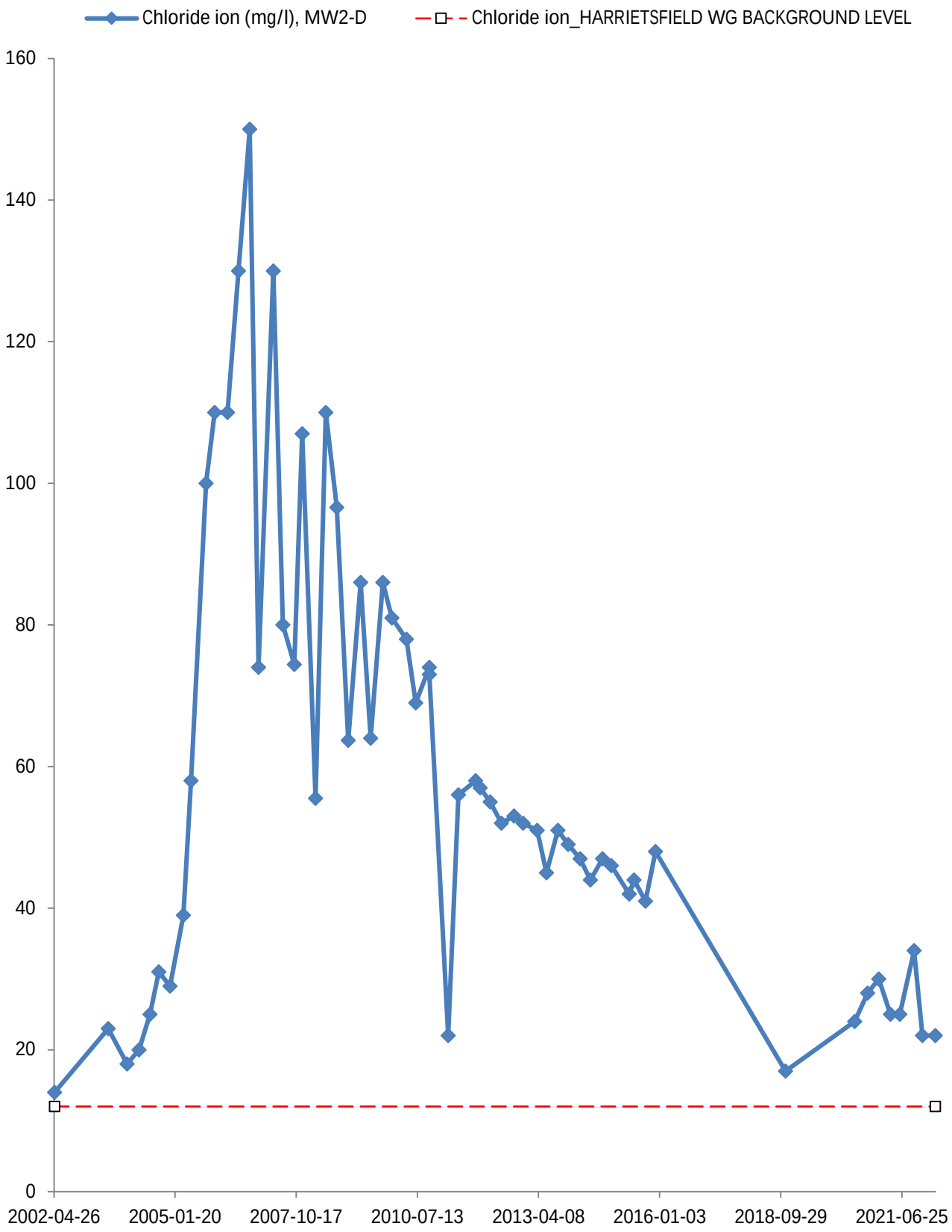
MW2-D-Calcium



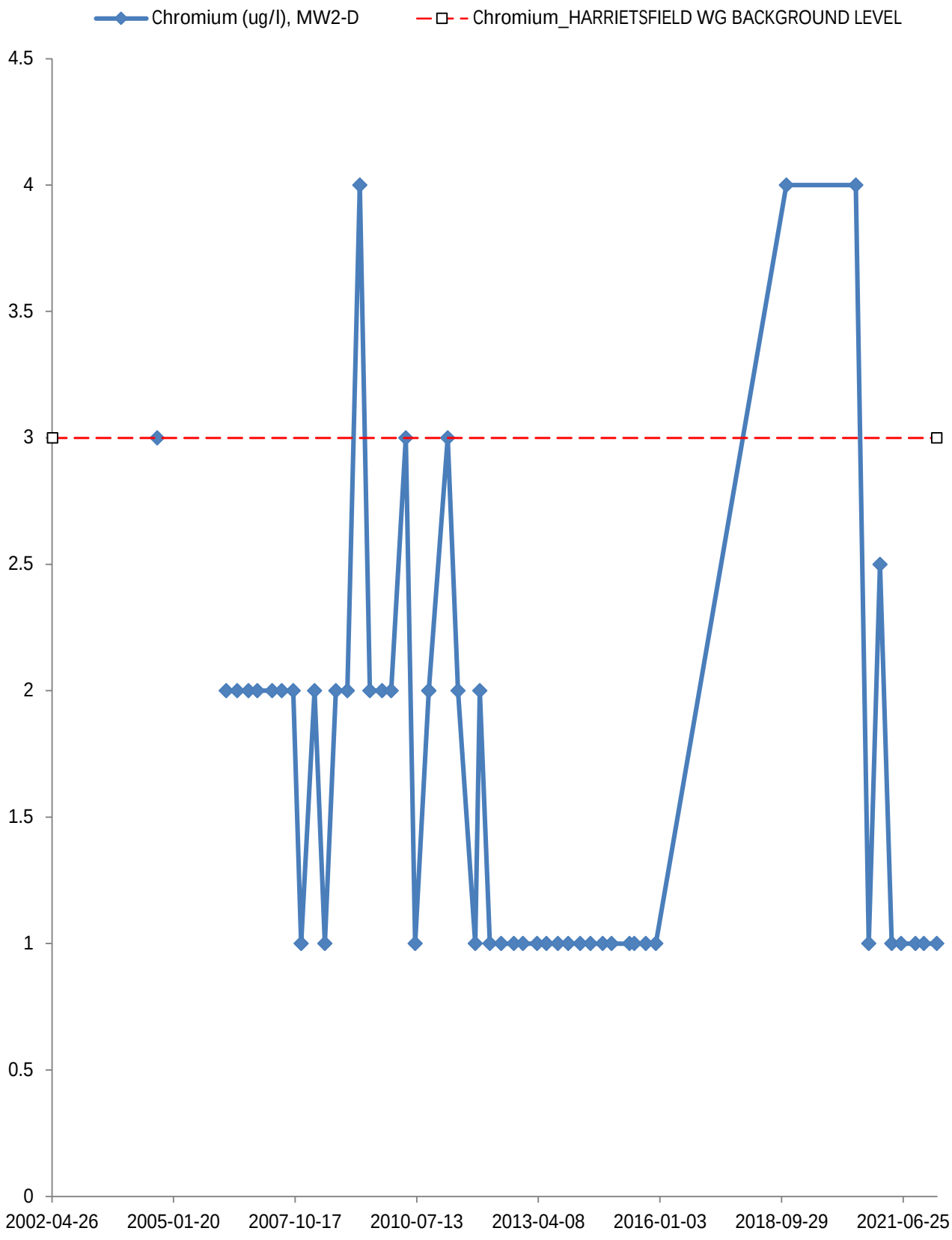
MW2-D-Chemical Oxygen Demand



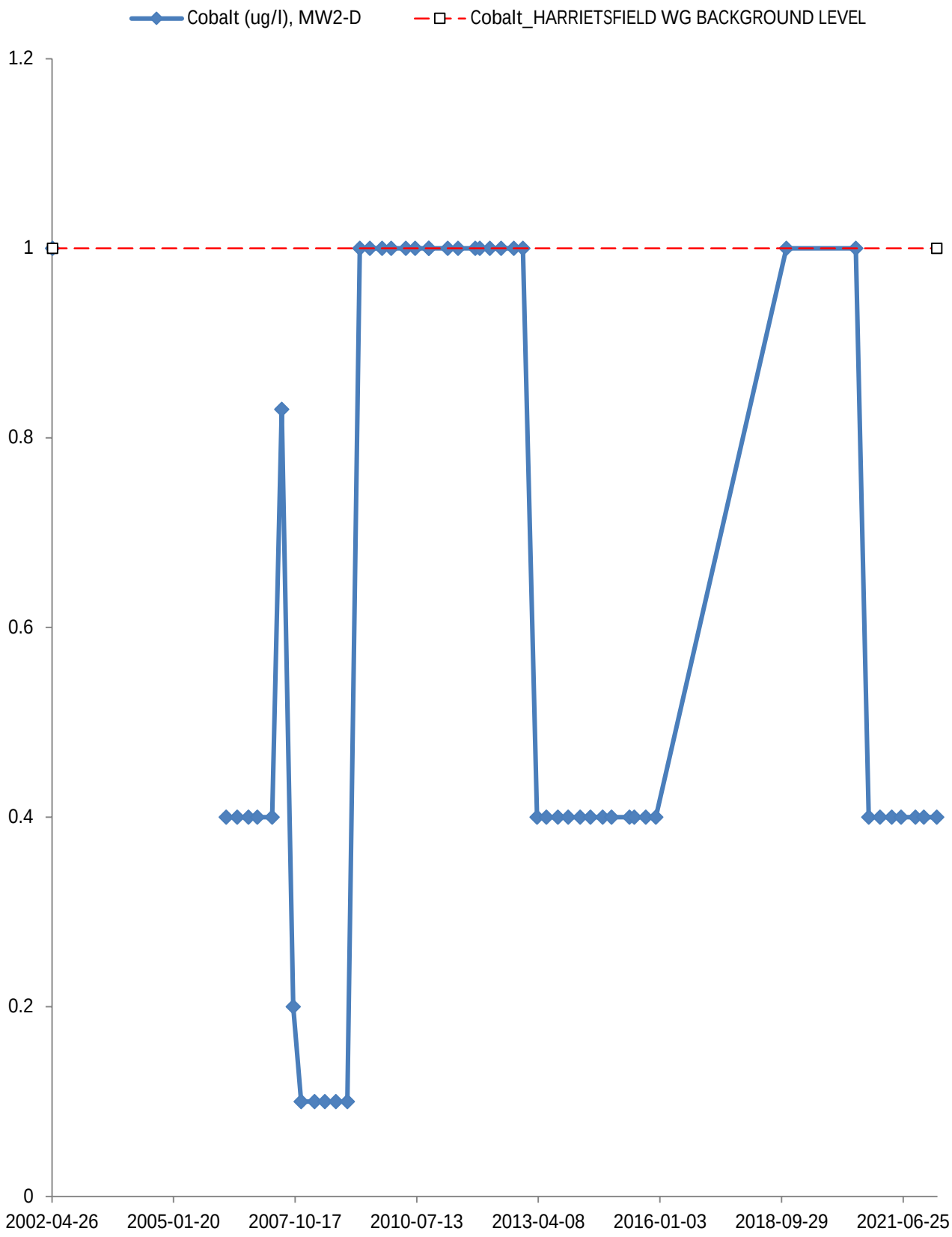
MW2-D-Chloride ion



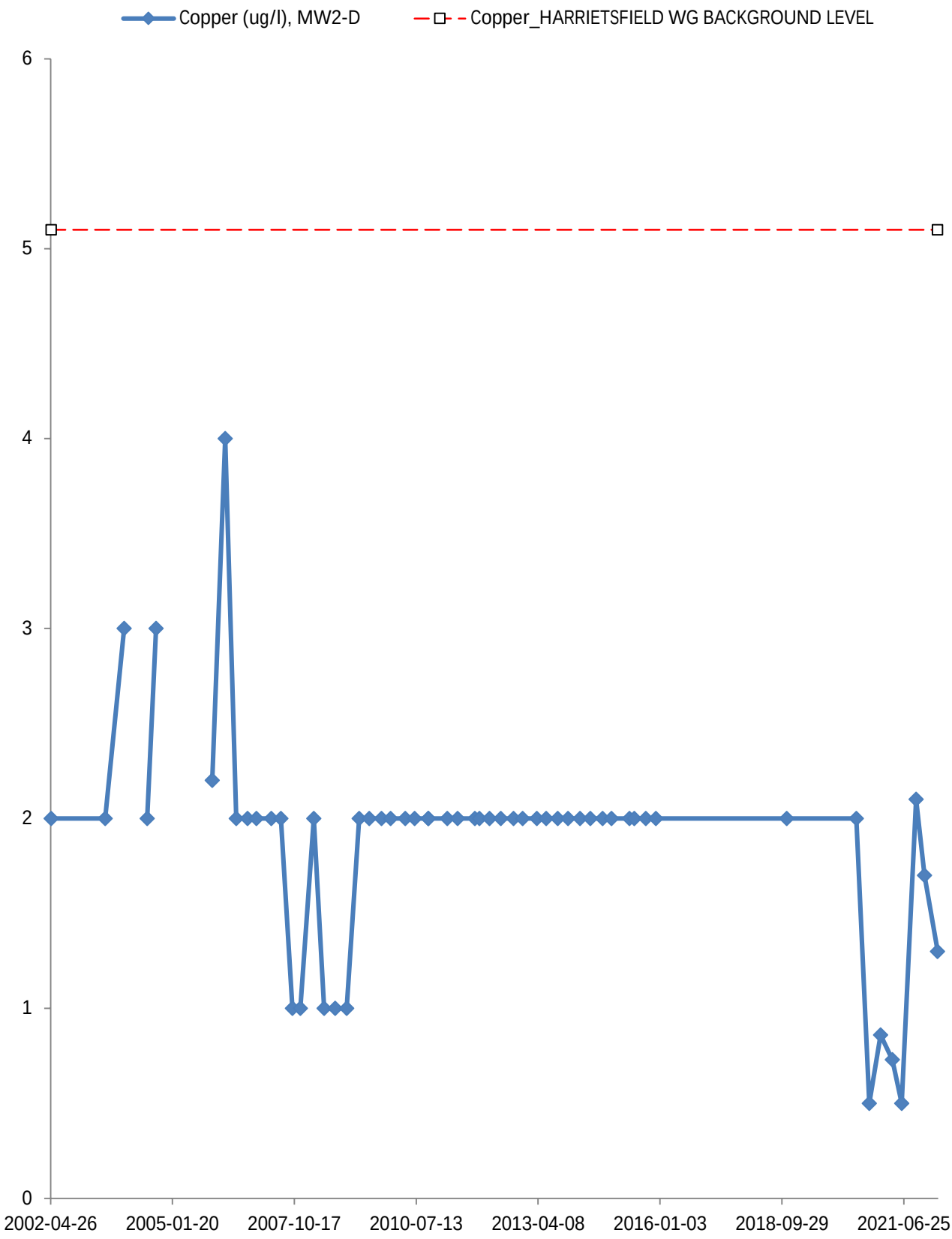
MW2-D-Chromium



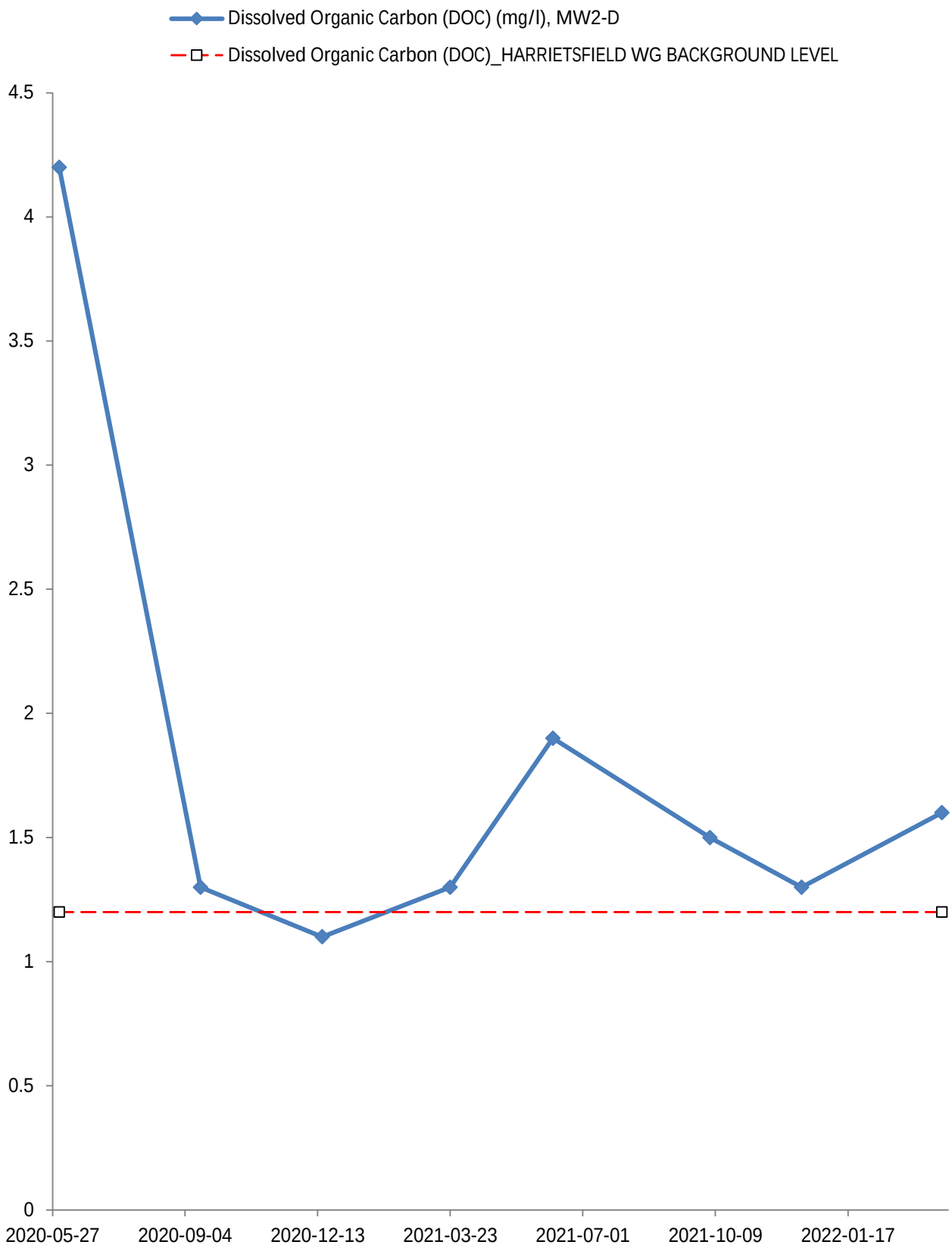
MW2-D-Cobalt


Cobalt (ug/l), MW2-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

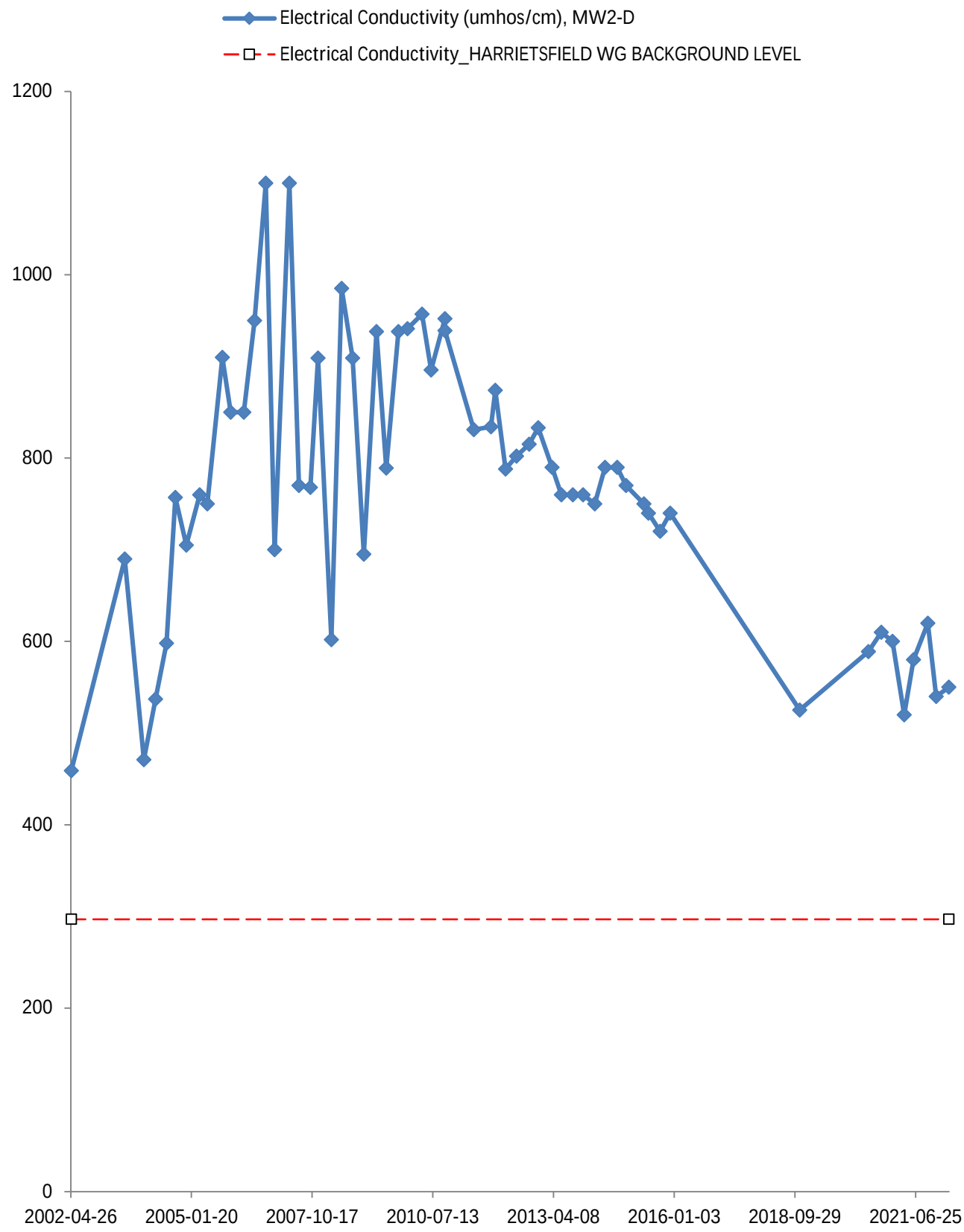
MW2-D-Copper


Copper (ug/l), MW2-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

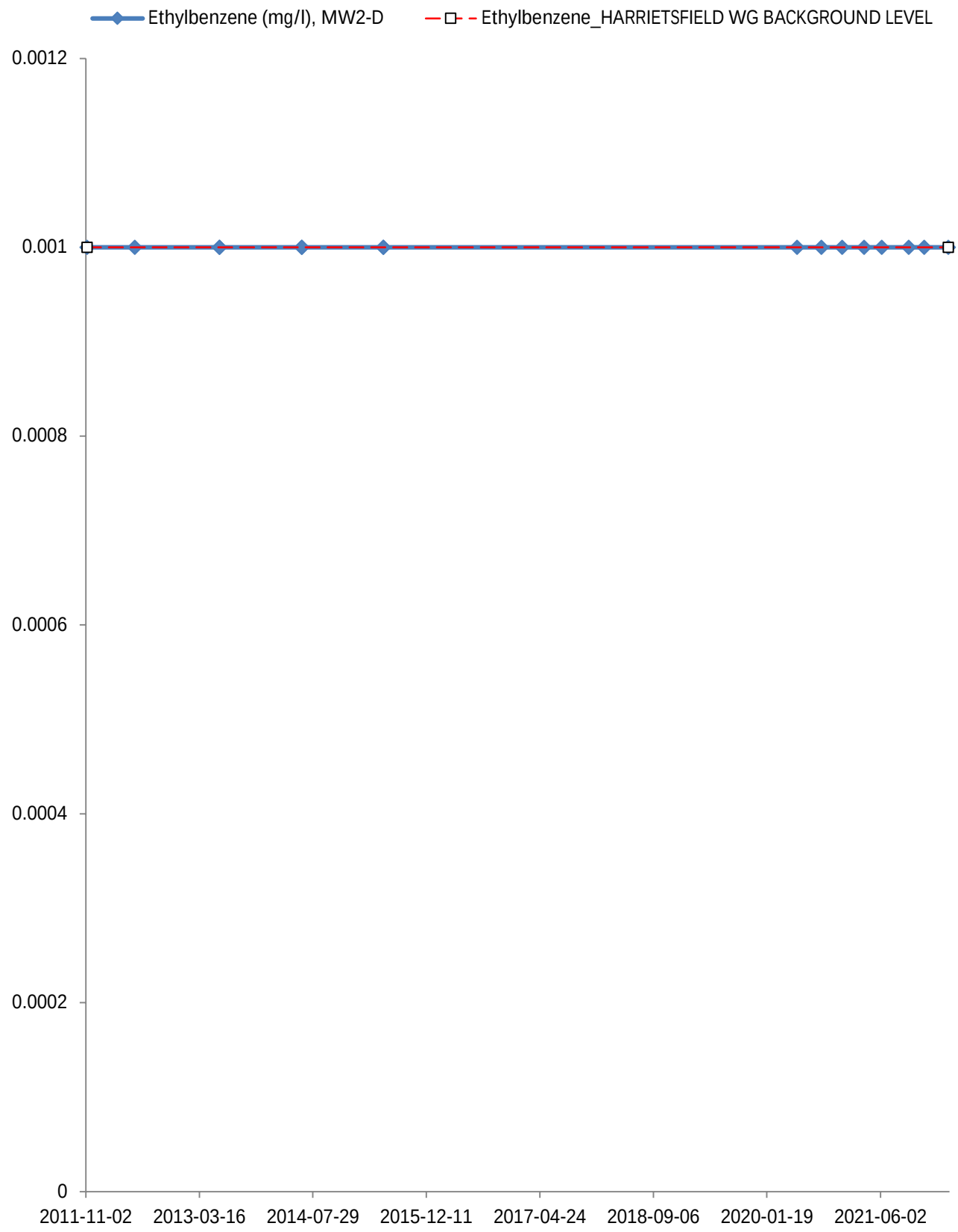
MW2-D-Dissolved Organic Carbon7



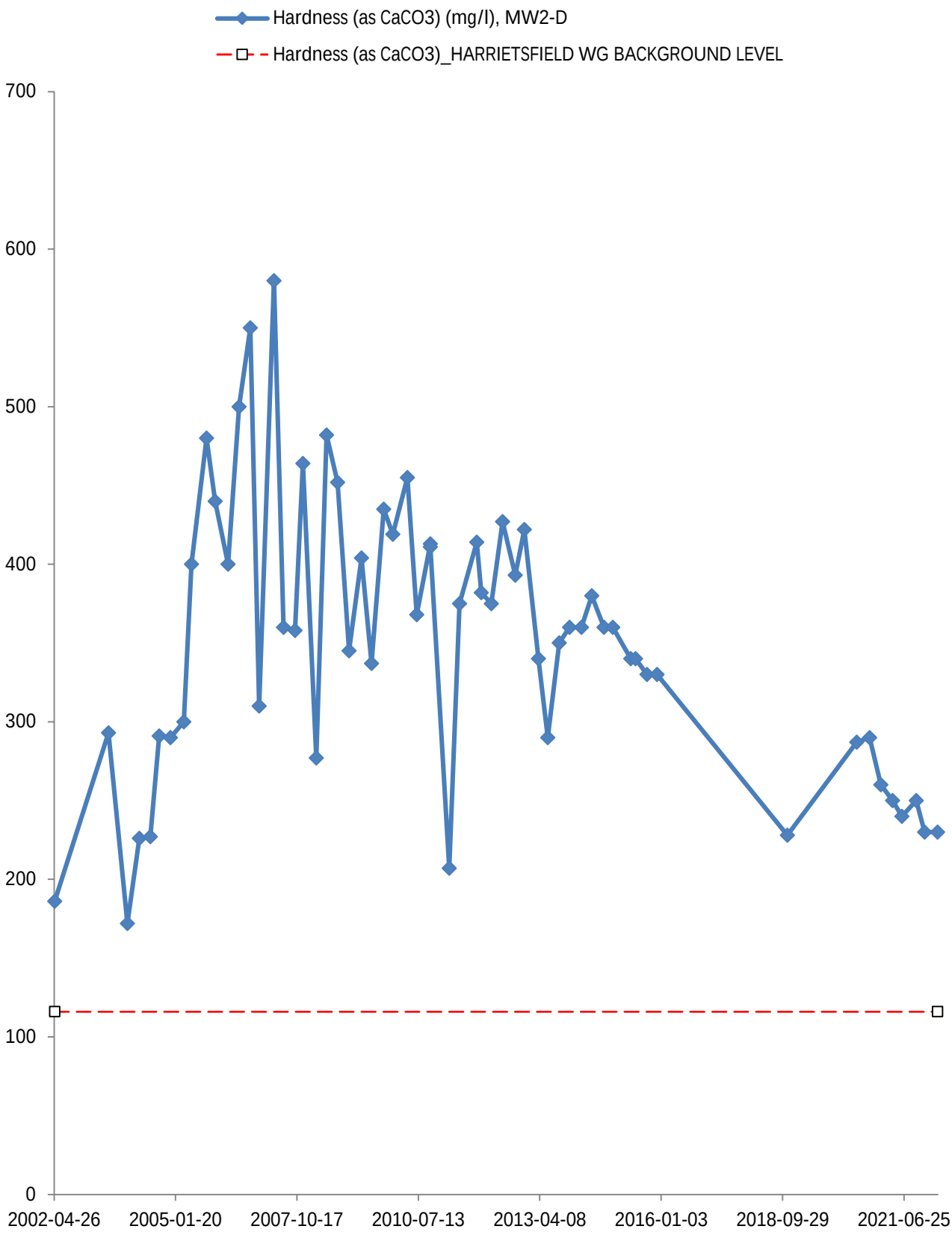
MW2-D-Electrical Conductivity



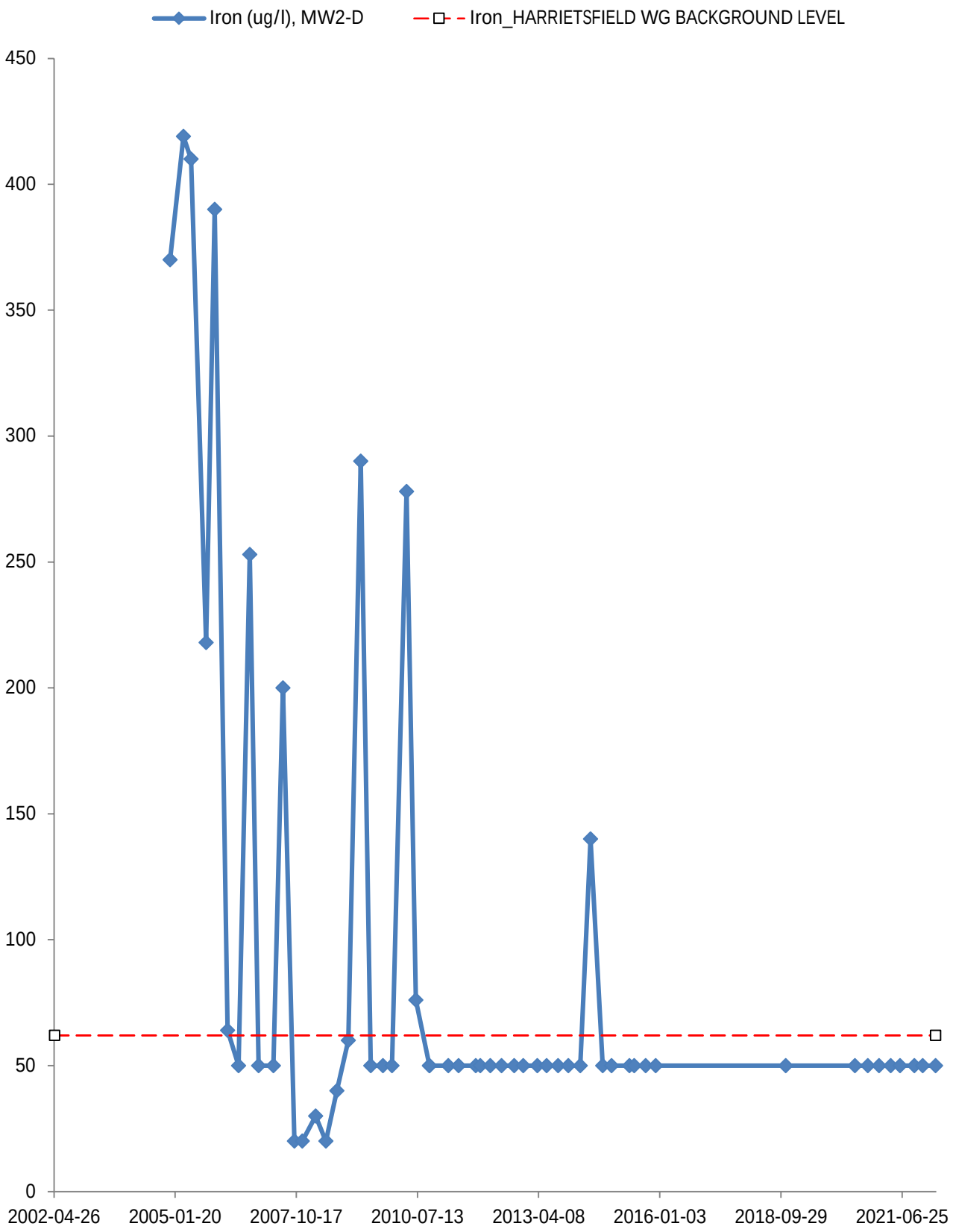
MW2-D-Ethylbenzene



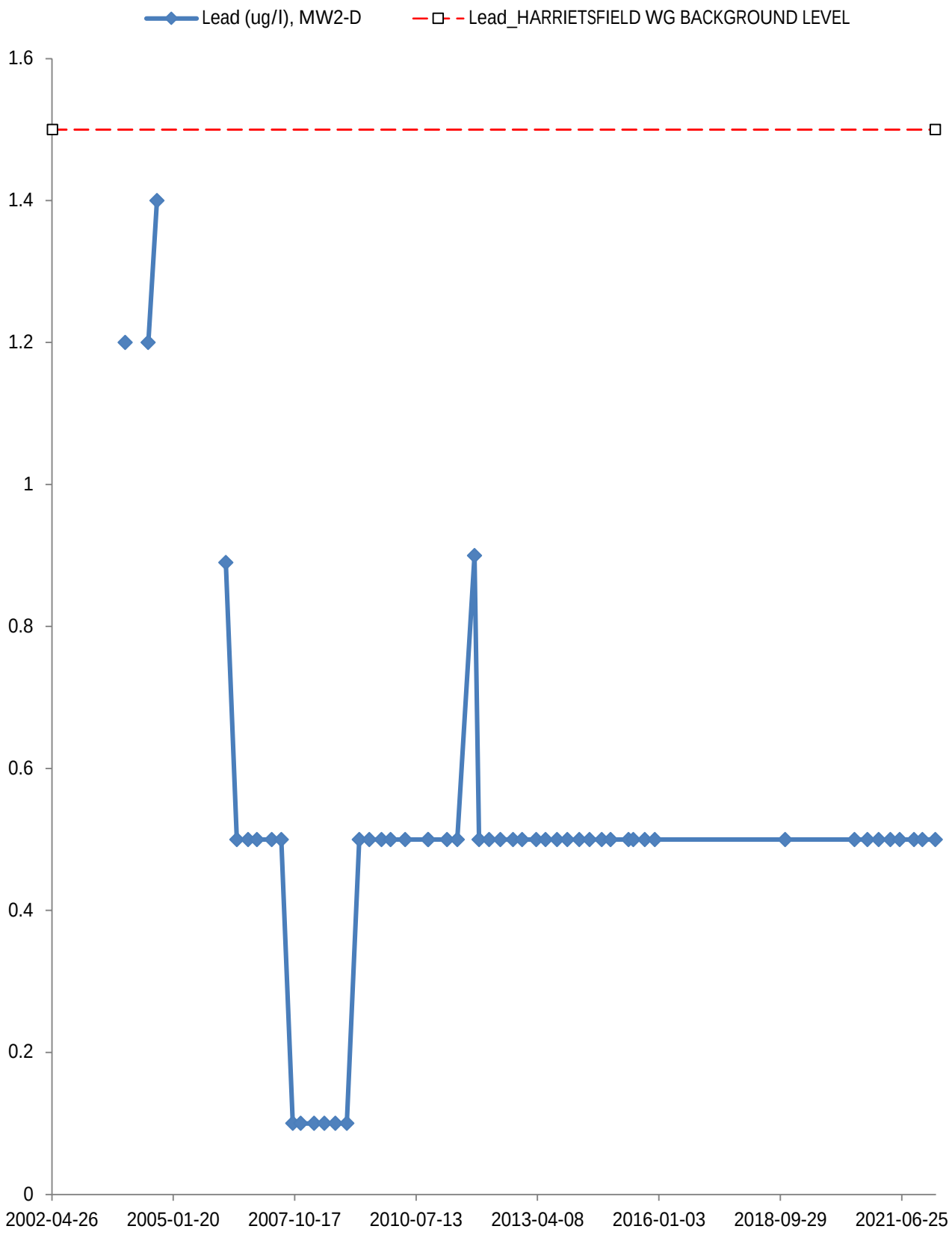
MW2-D-Hardness (as CaCO3)



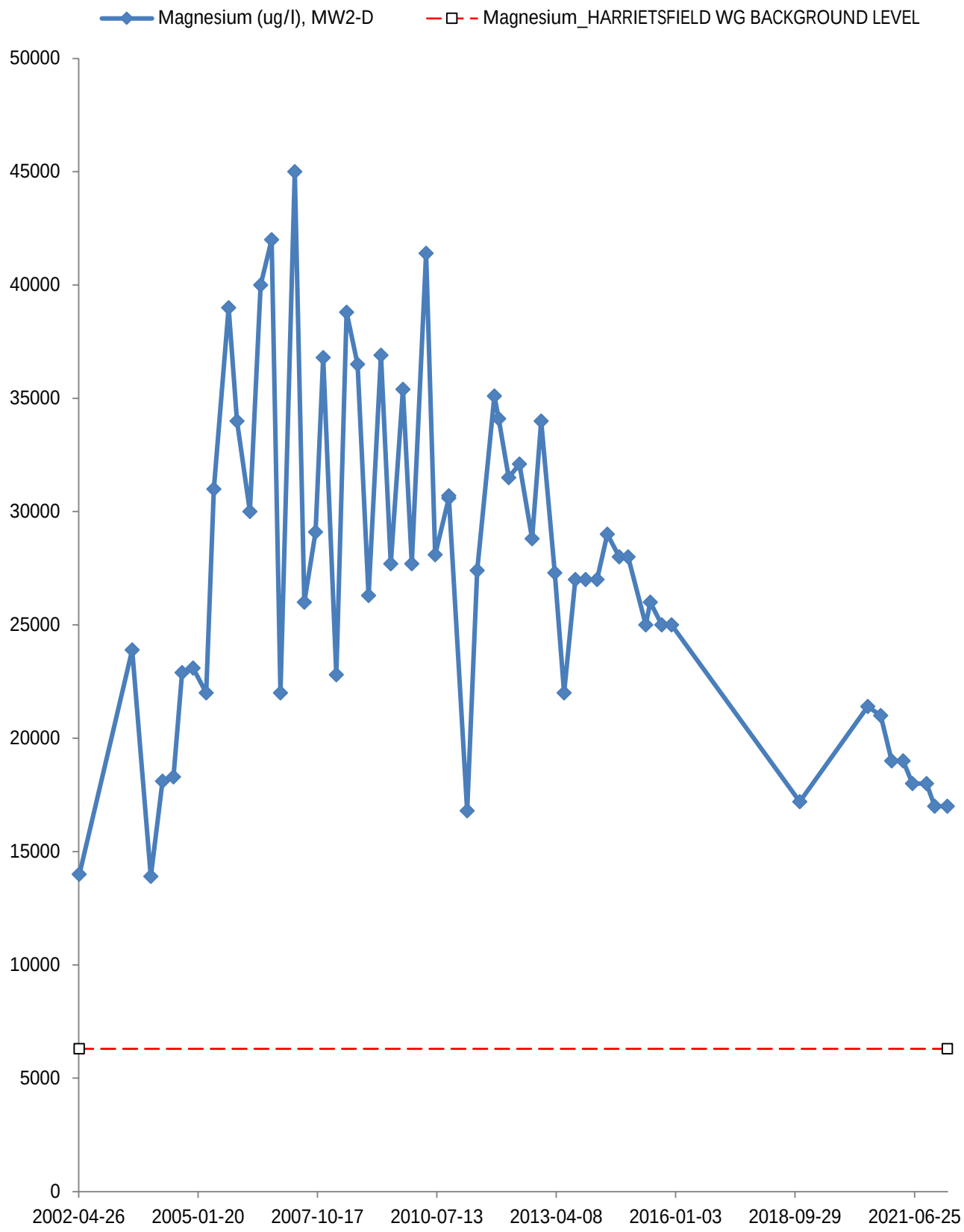
MW2-D-Iron


Iron (ug/l), MW2-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
450
400
350
300
250
200
150
100
50
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

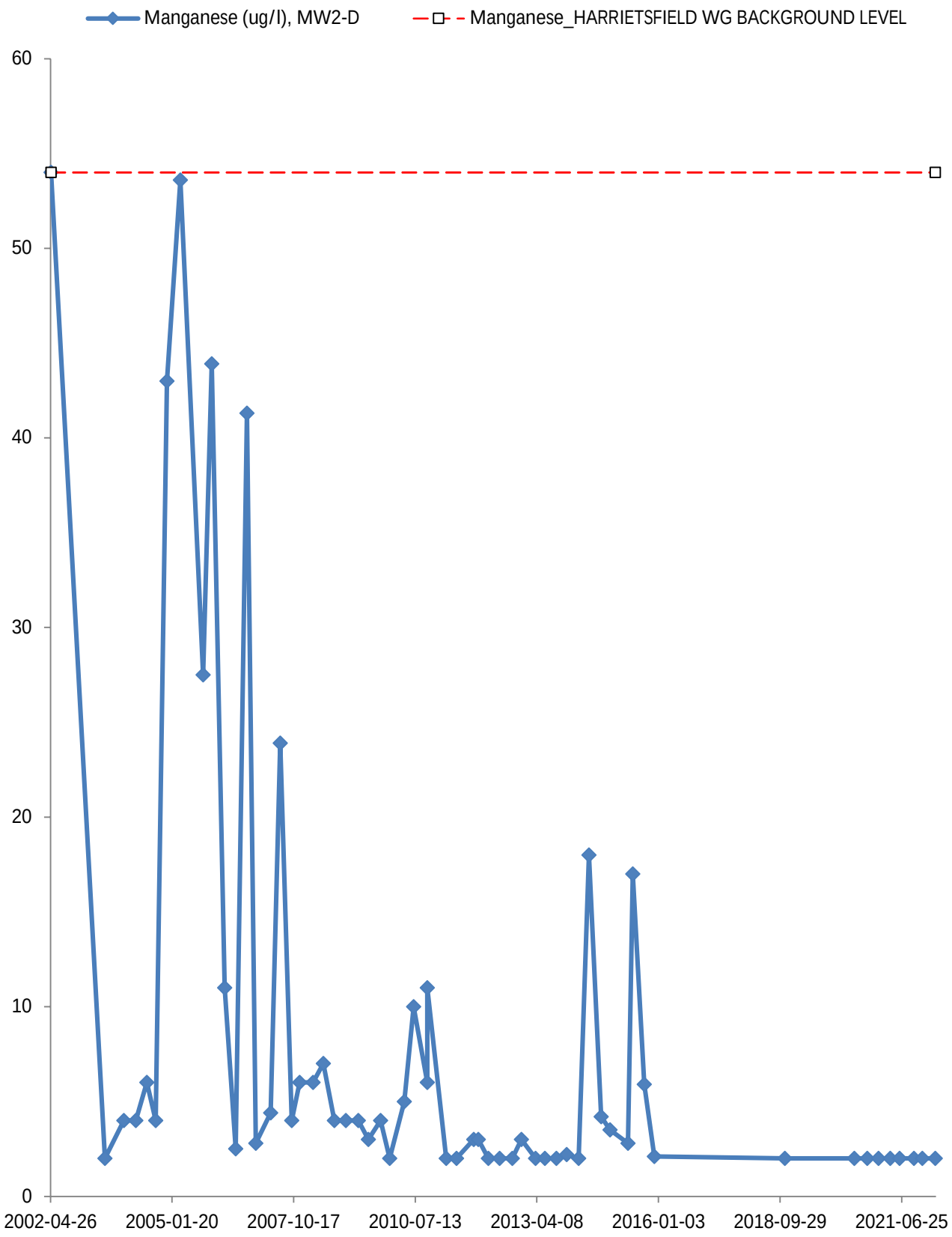
MW2-D-Lead


Lead (ug/l), MW2-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

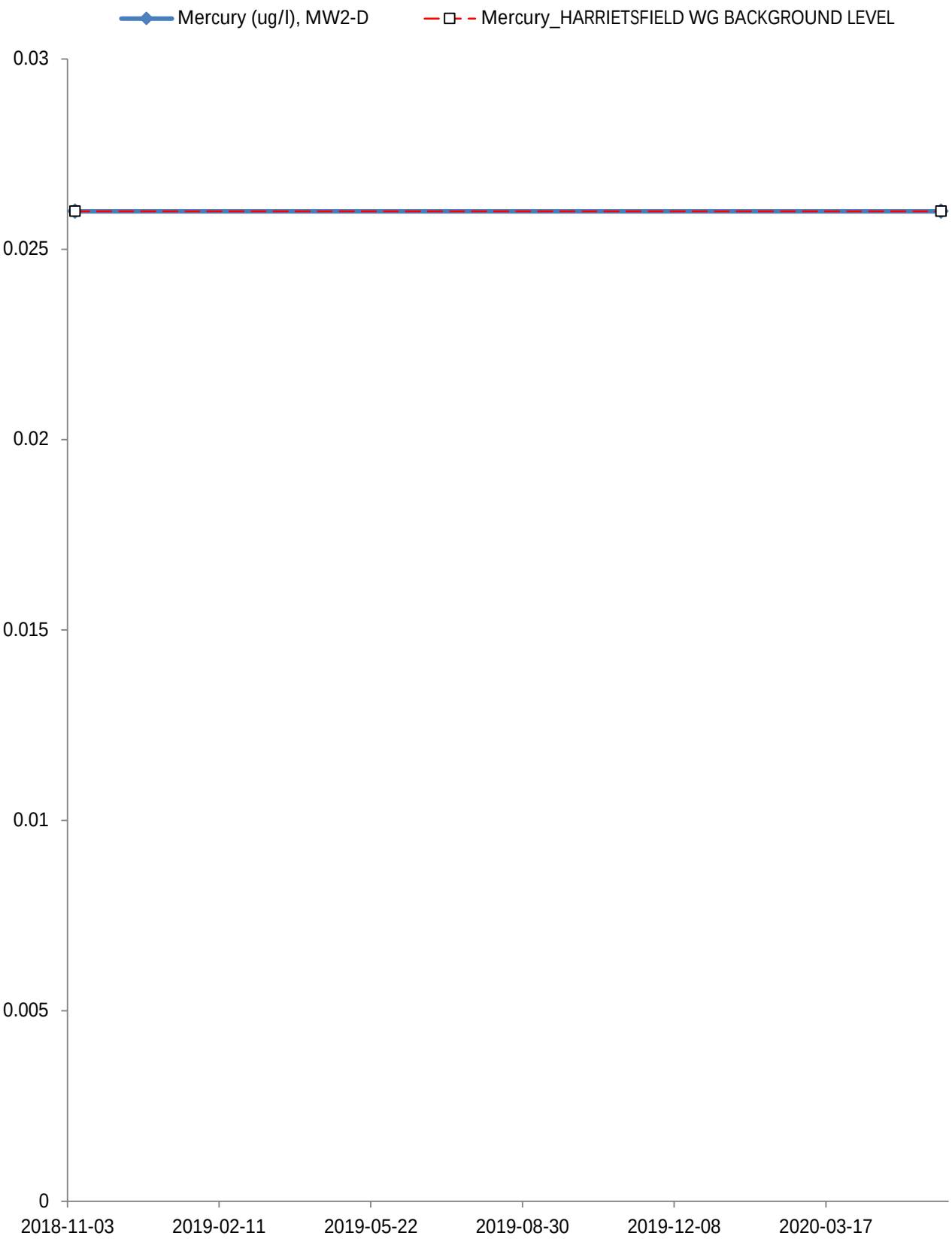
MW2-D-Magnesium



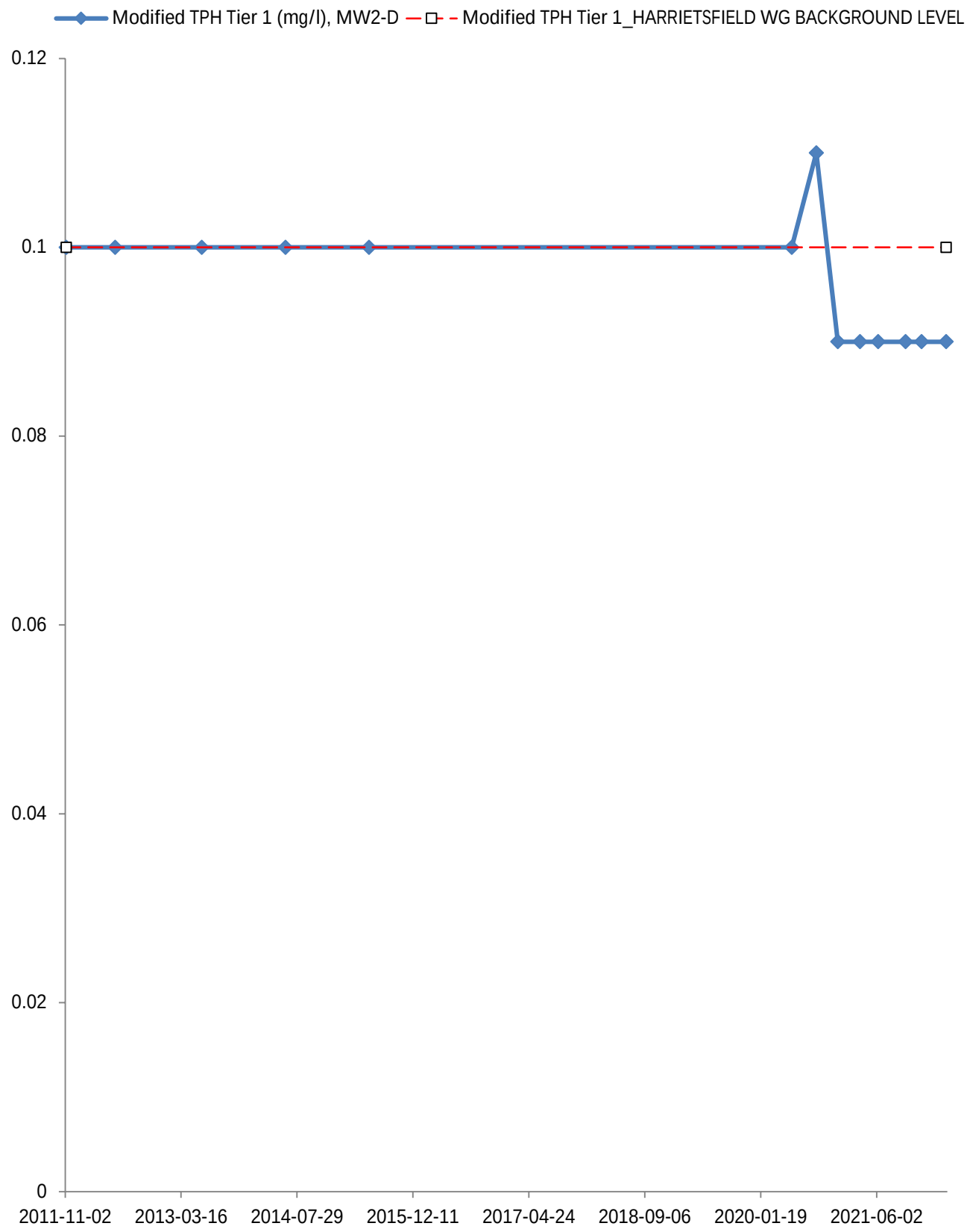
MW2-D-Manganese



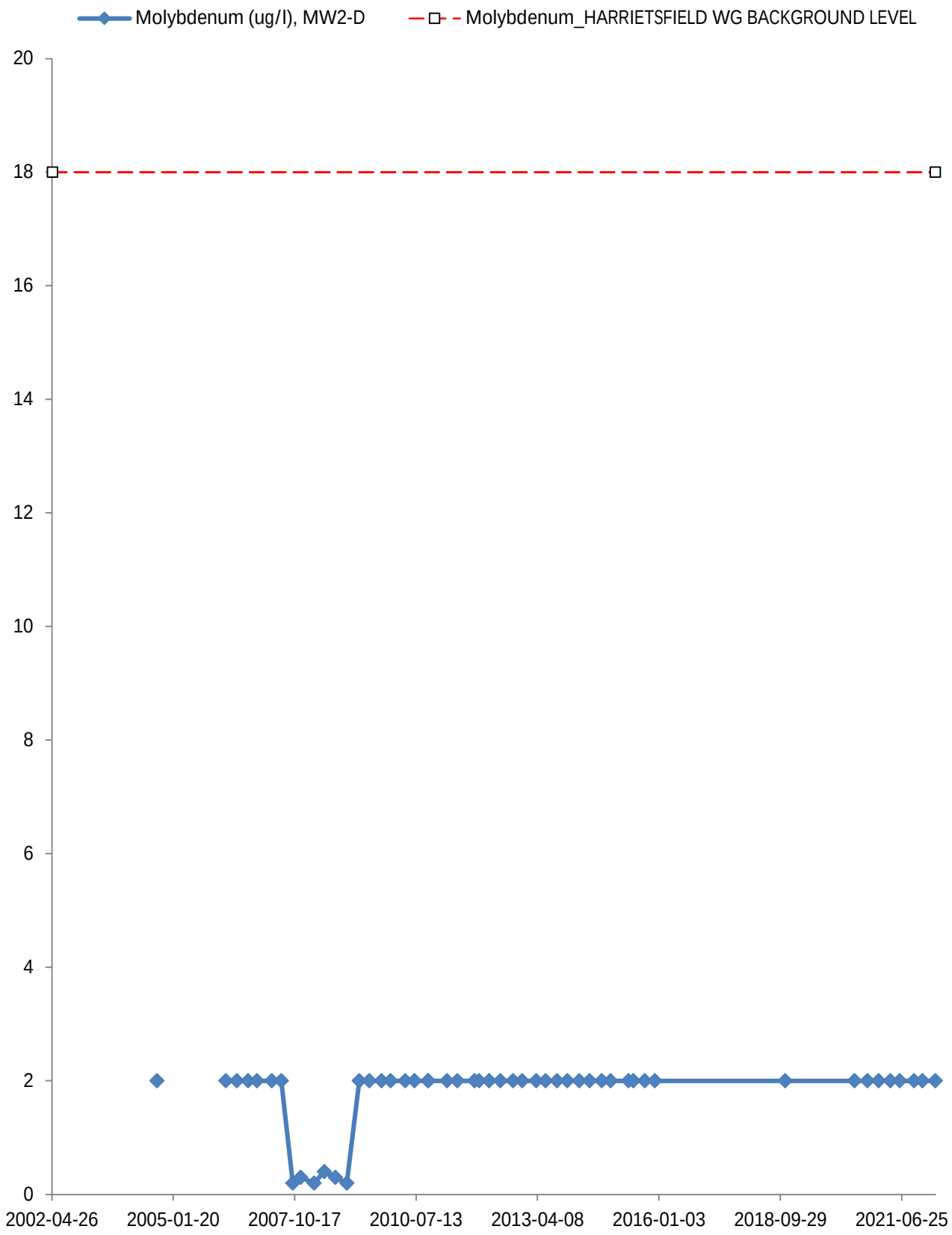
MW2-D-Mercury



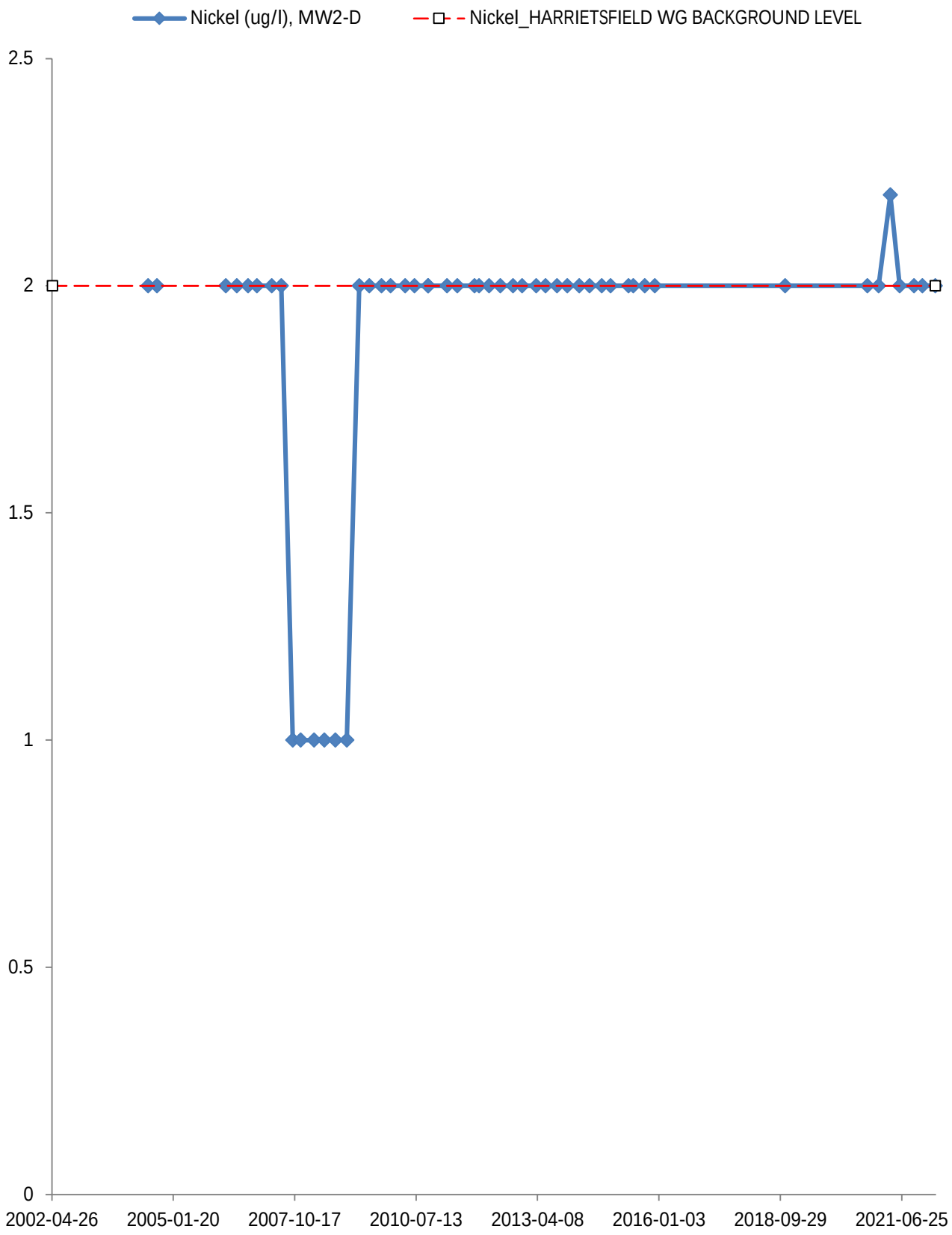
MW2-D-Modified TPH Tier 1



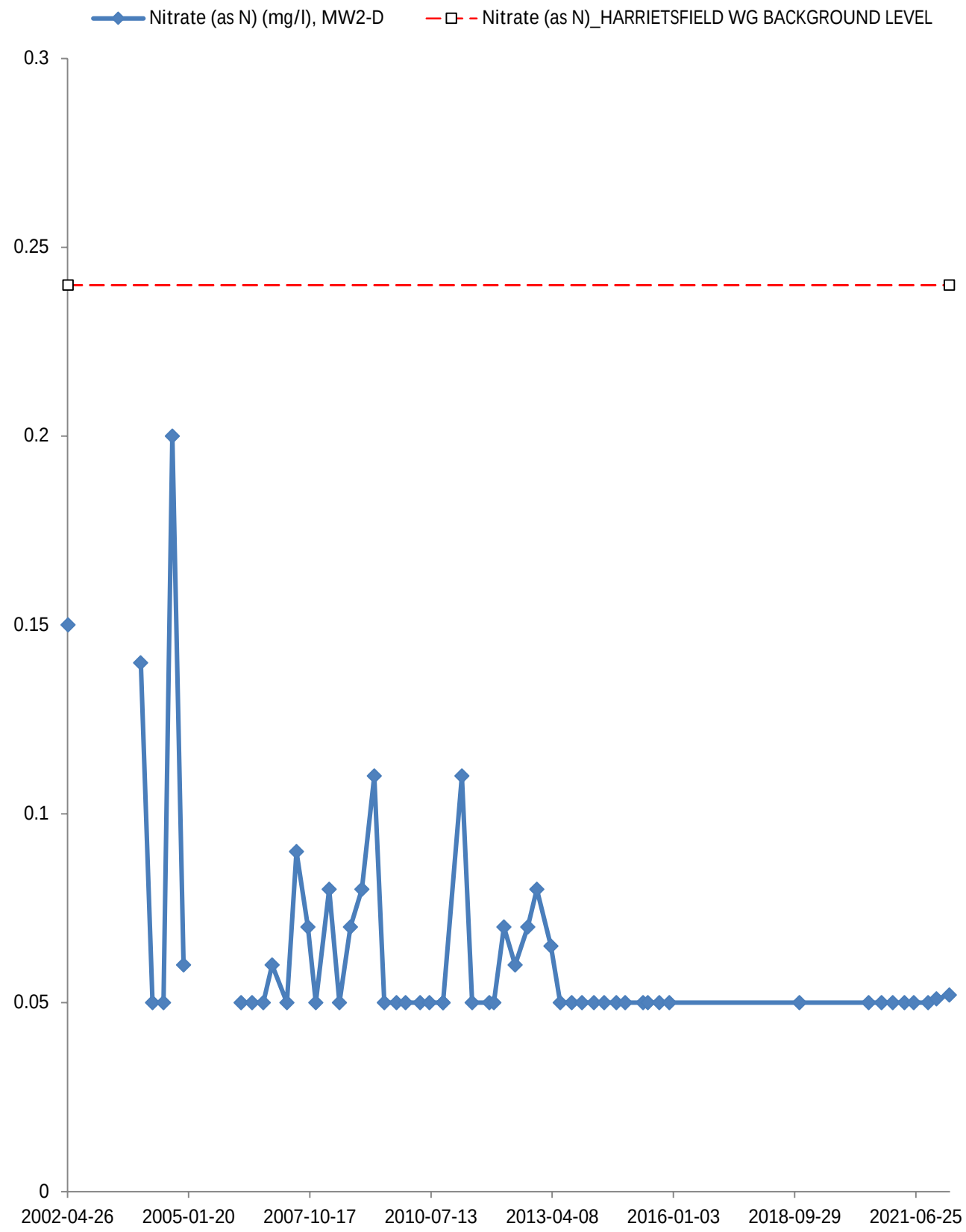
MW2-D-Molybdenum



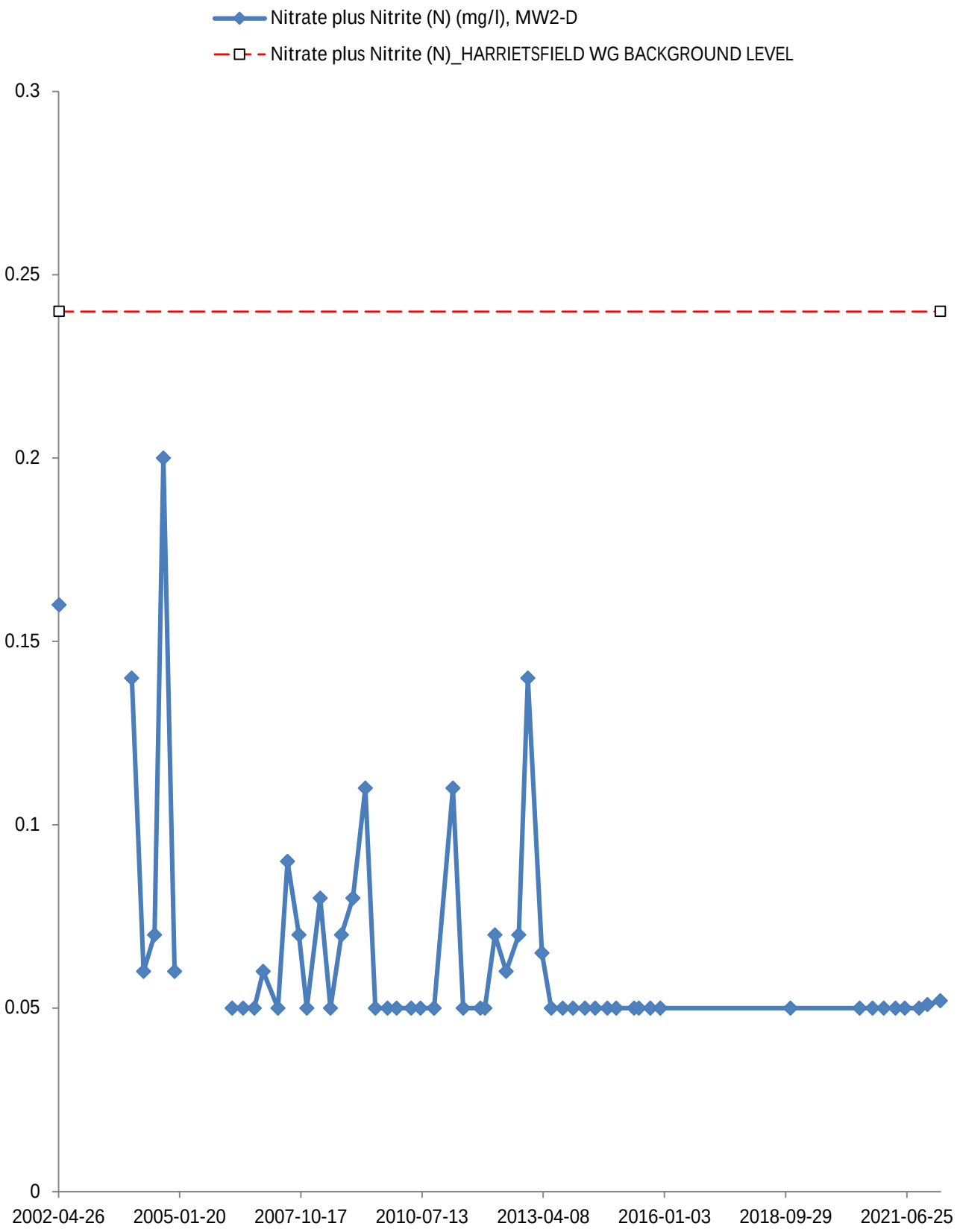
MW2-D-Nickel


Nickel (ug/l), MW2-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

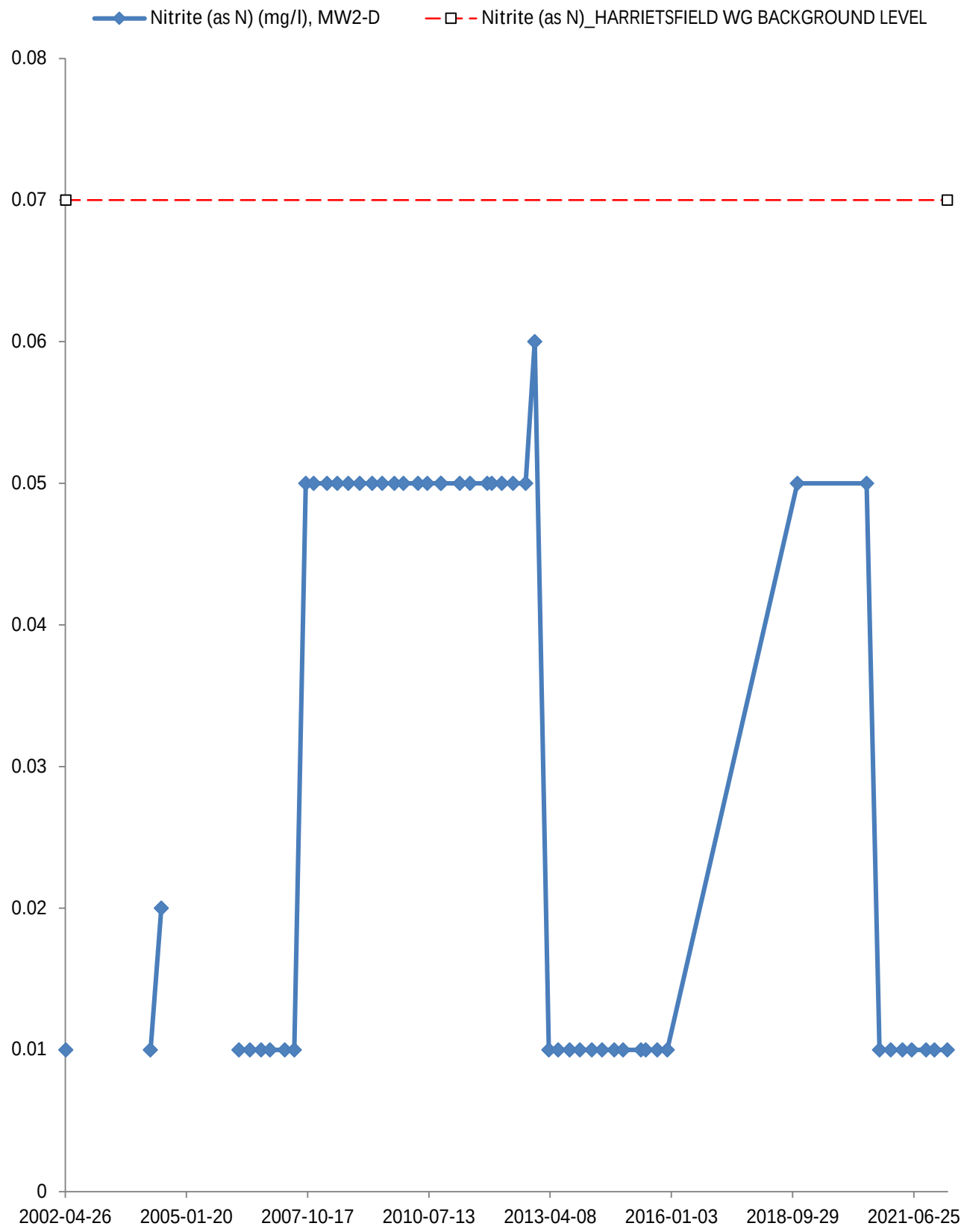
MW2-D-Nitrate (as N)



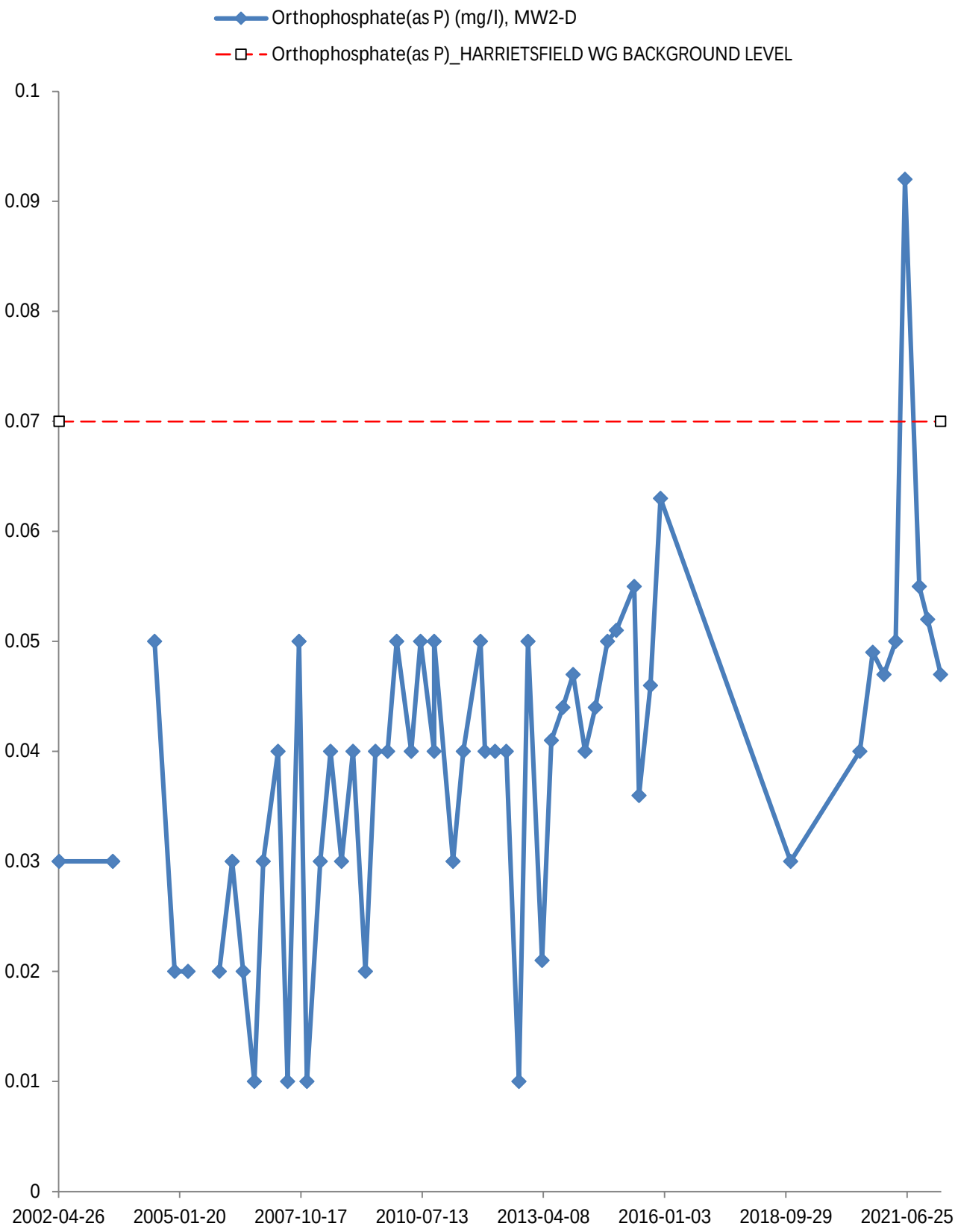
MW2-D-Nitrate plus Nitrite (N)



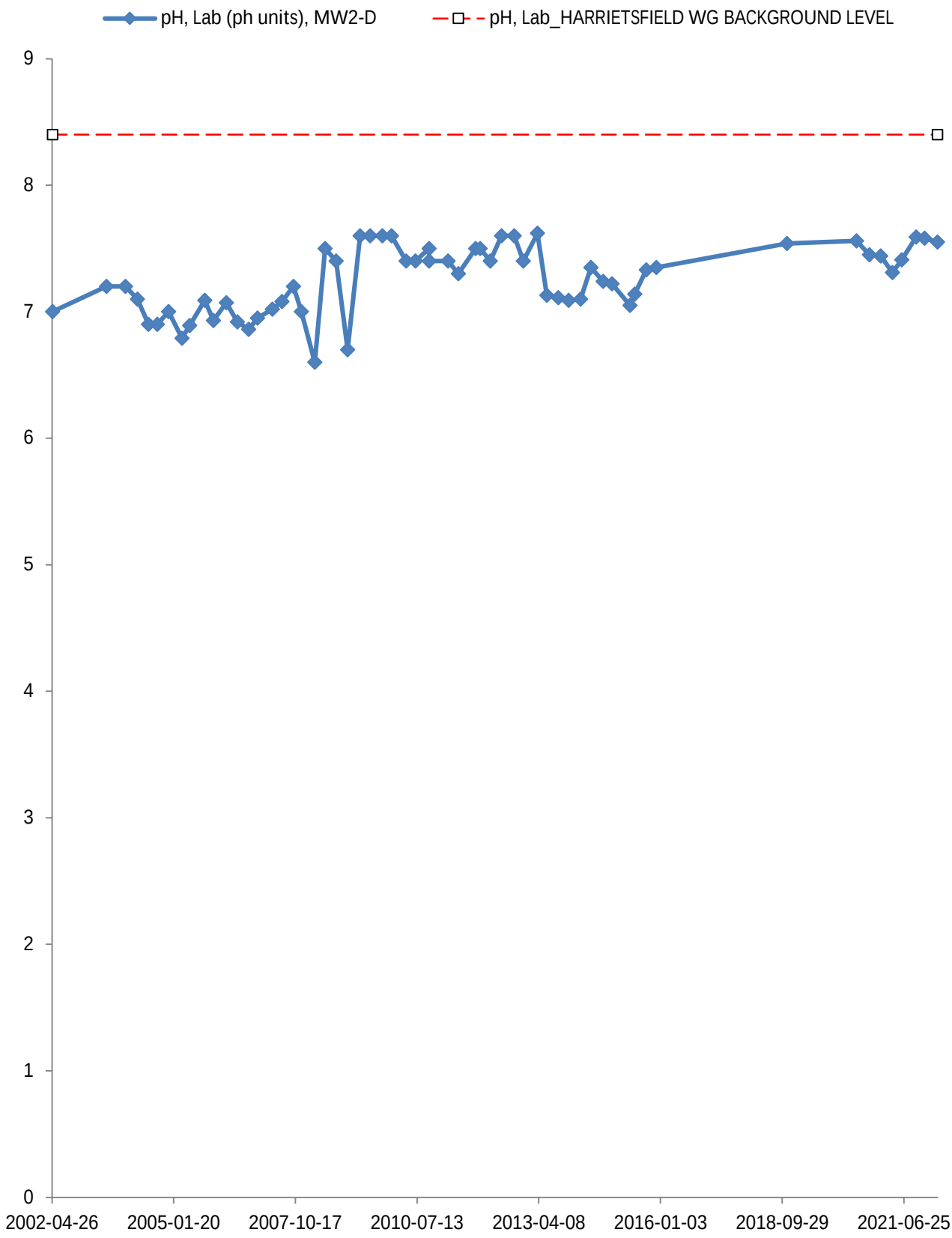
MW2-D-Nitrite (as N)



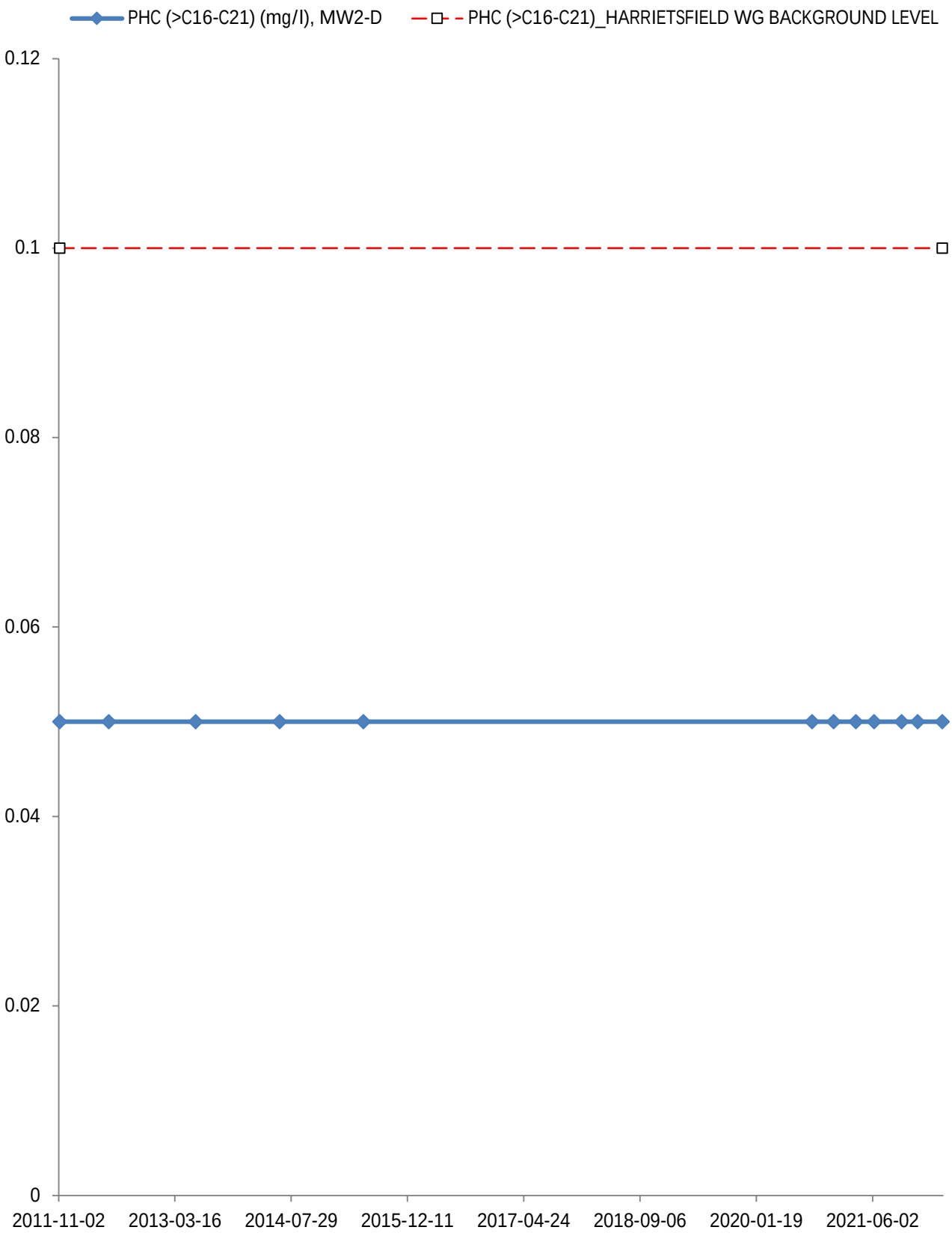
MW2-D-Orthophosphate(as P)



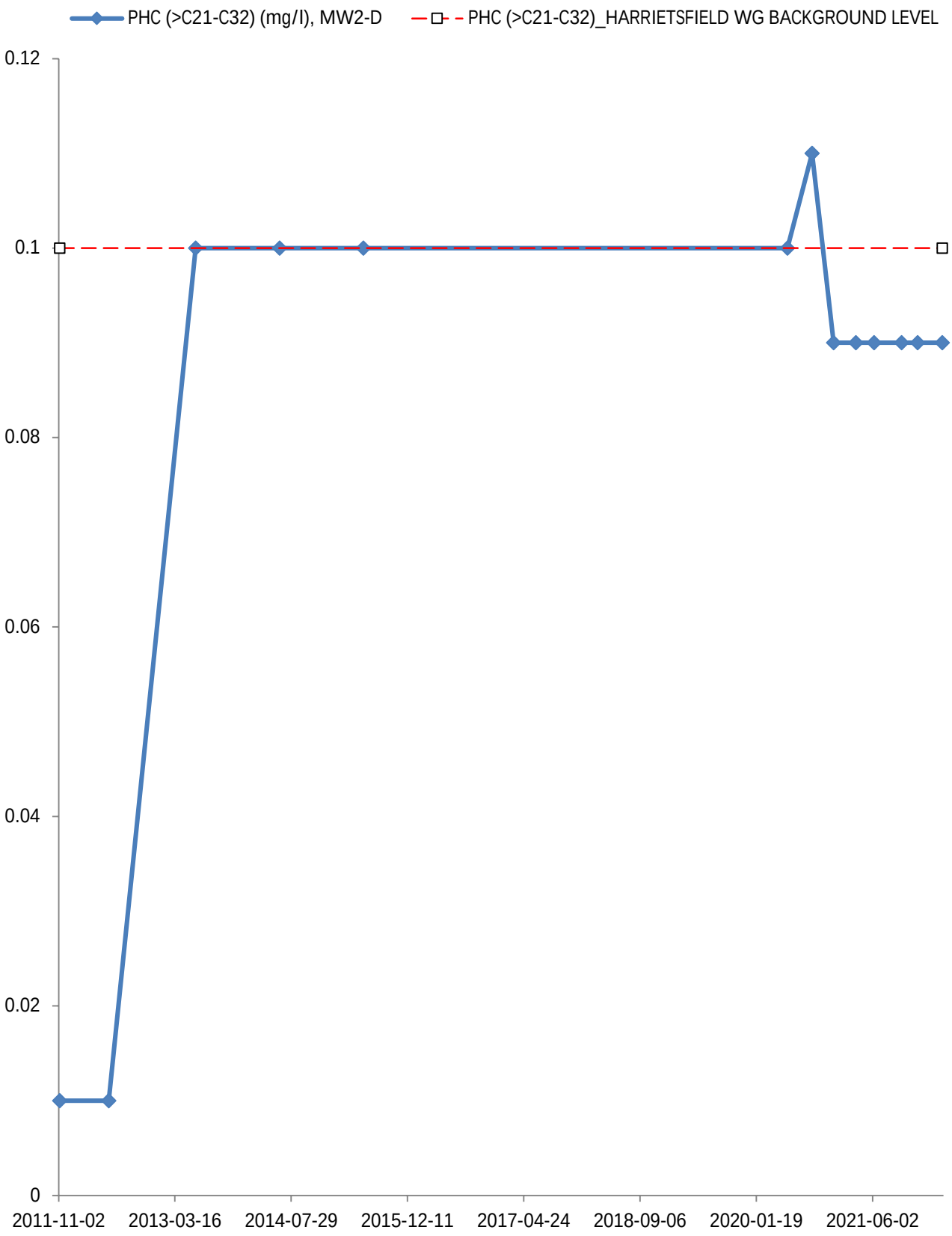
MW2-D-pH, Lab


pH, Lab (ph units), MW2-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

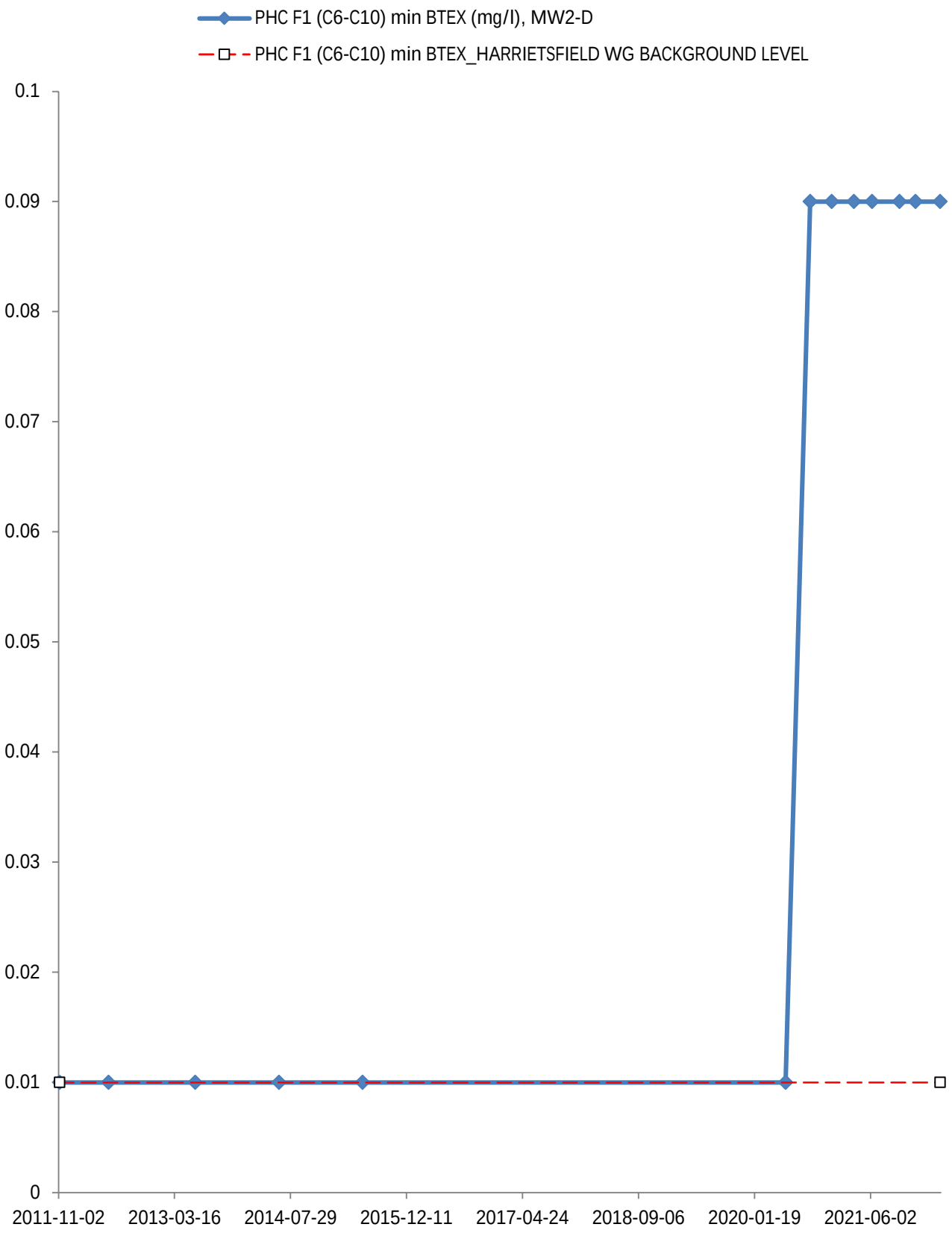
MW2-D-PHC (>C16-C21)



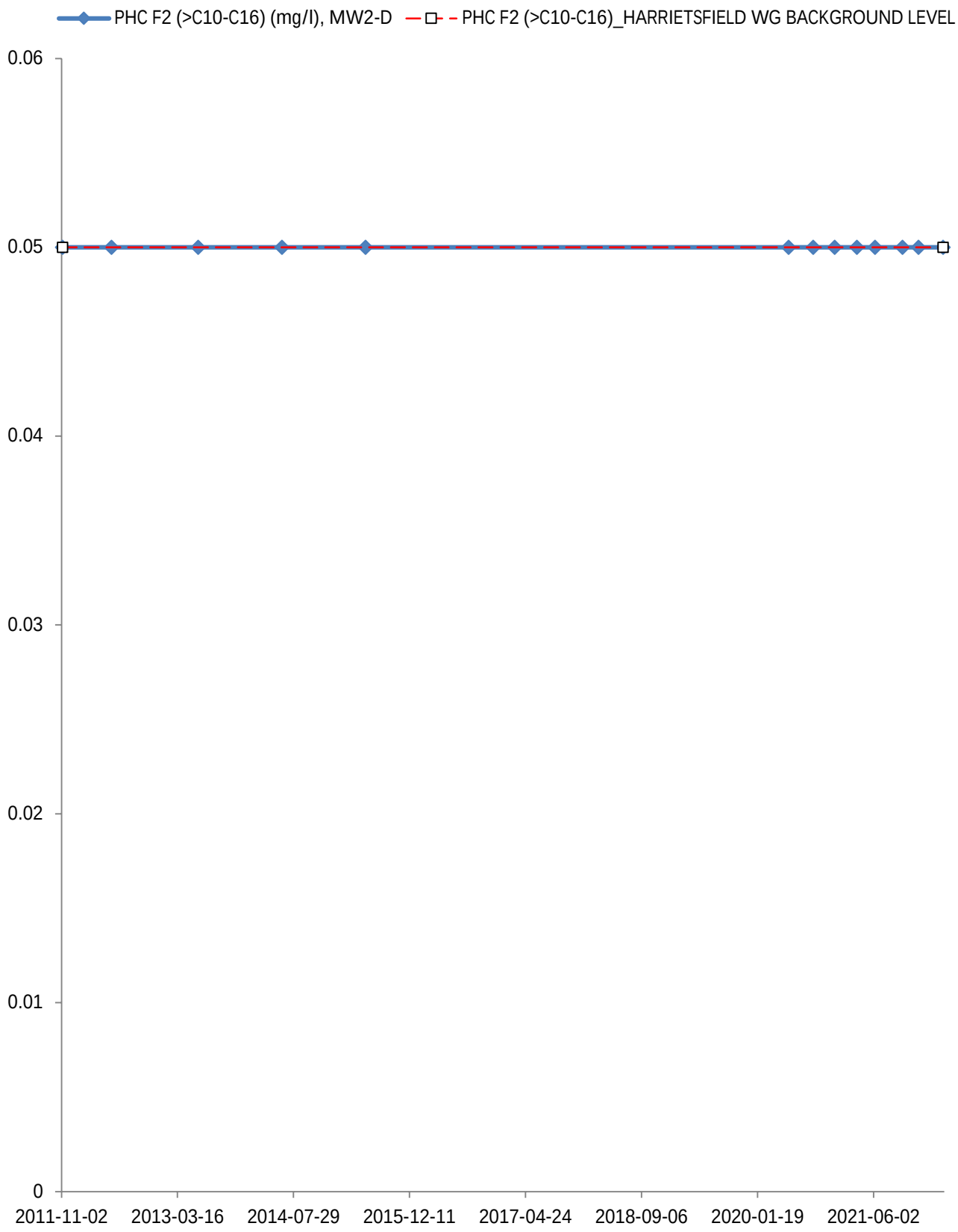
MW2-D-PHC (>C21-C32)



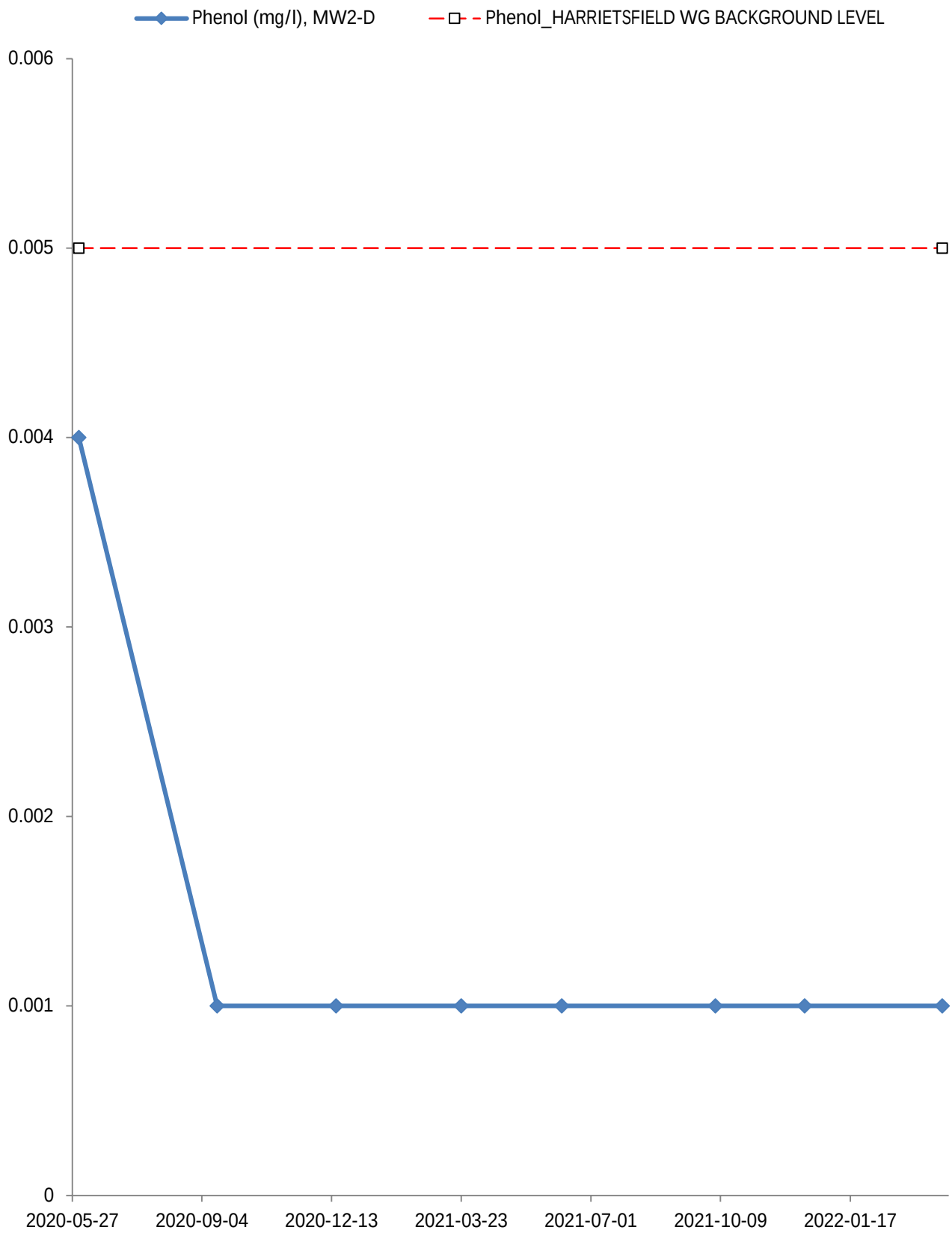
MW2-D-PHC F1 (C6-C10) min BTEX



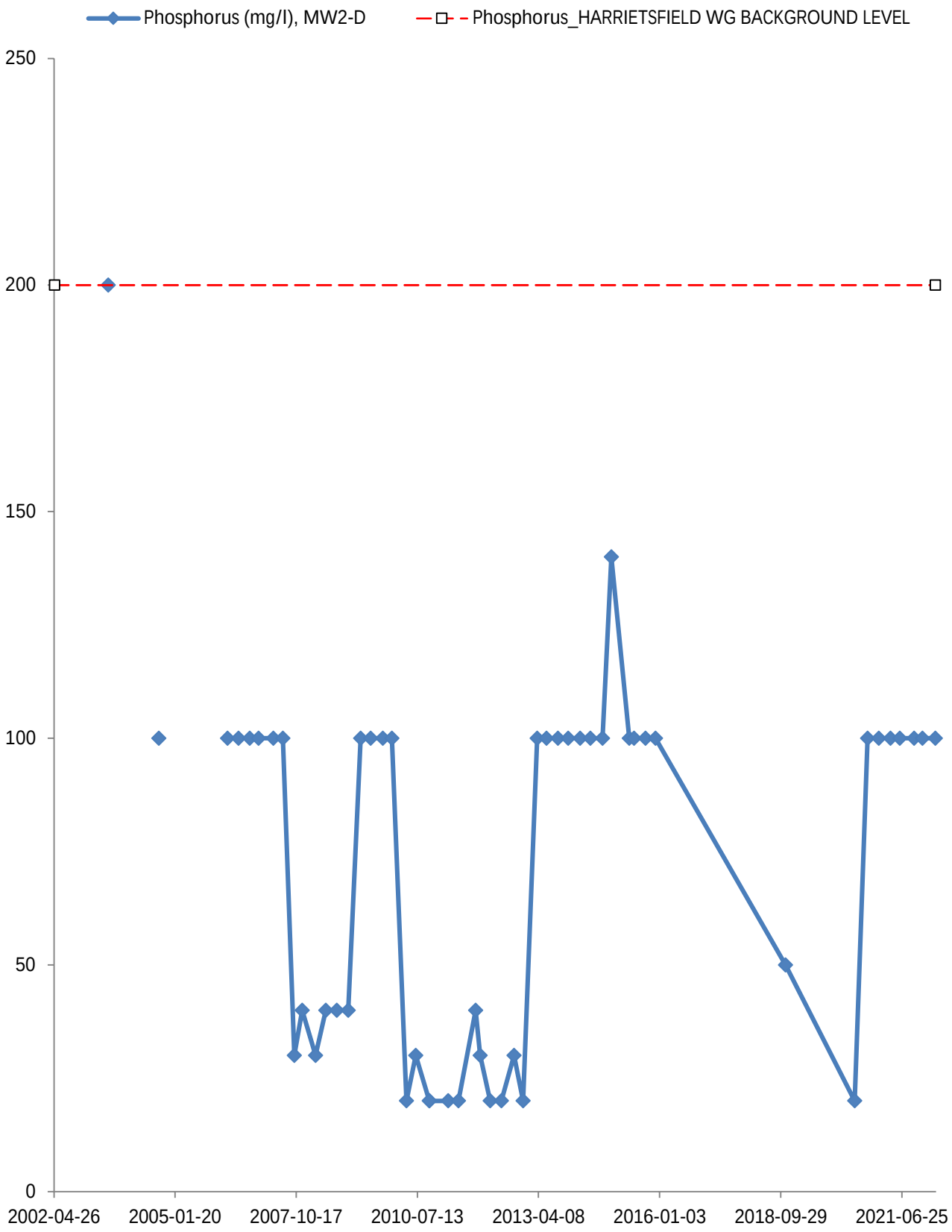
MW2-D-PHC F2 (>C10-C16)



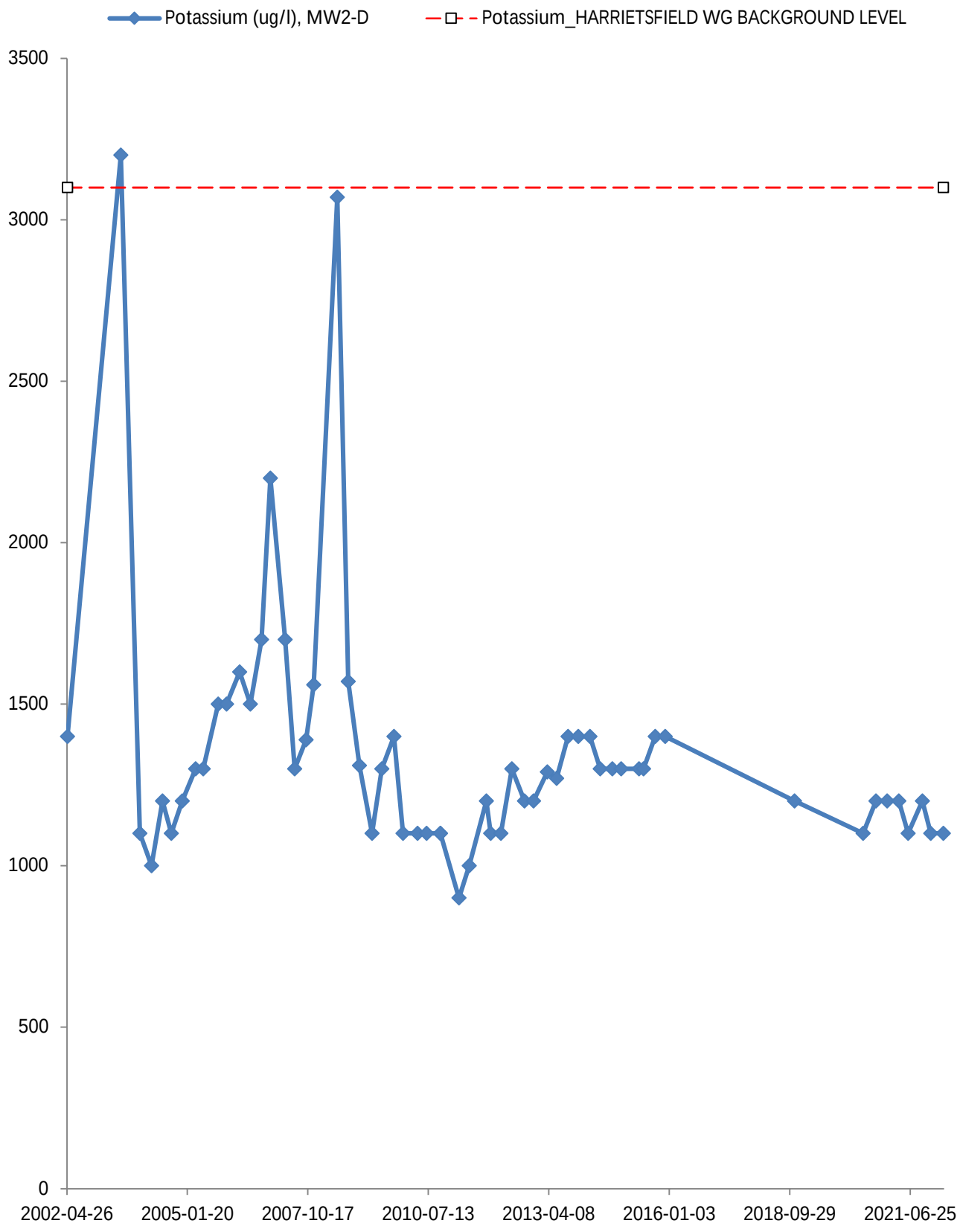
MW2-D-Phenol


Phenol (mg/l), MW2-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

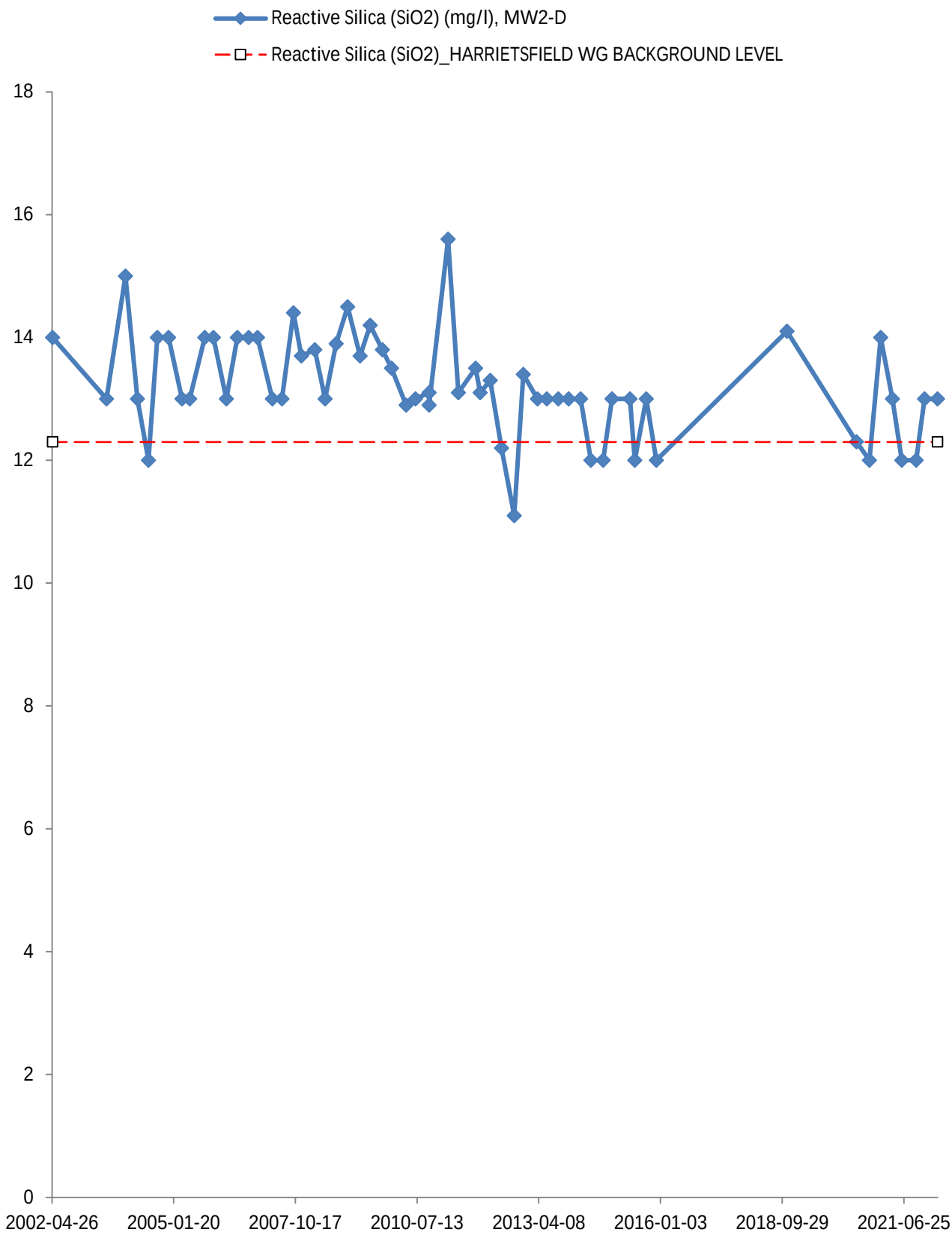
MW2-D-Phosphorus



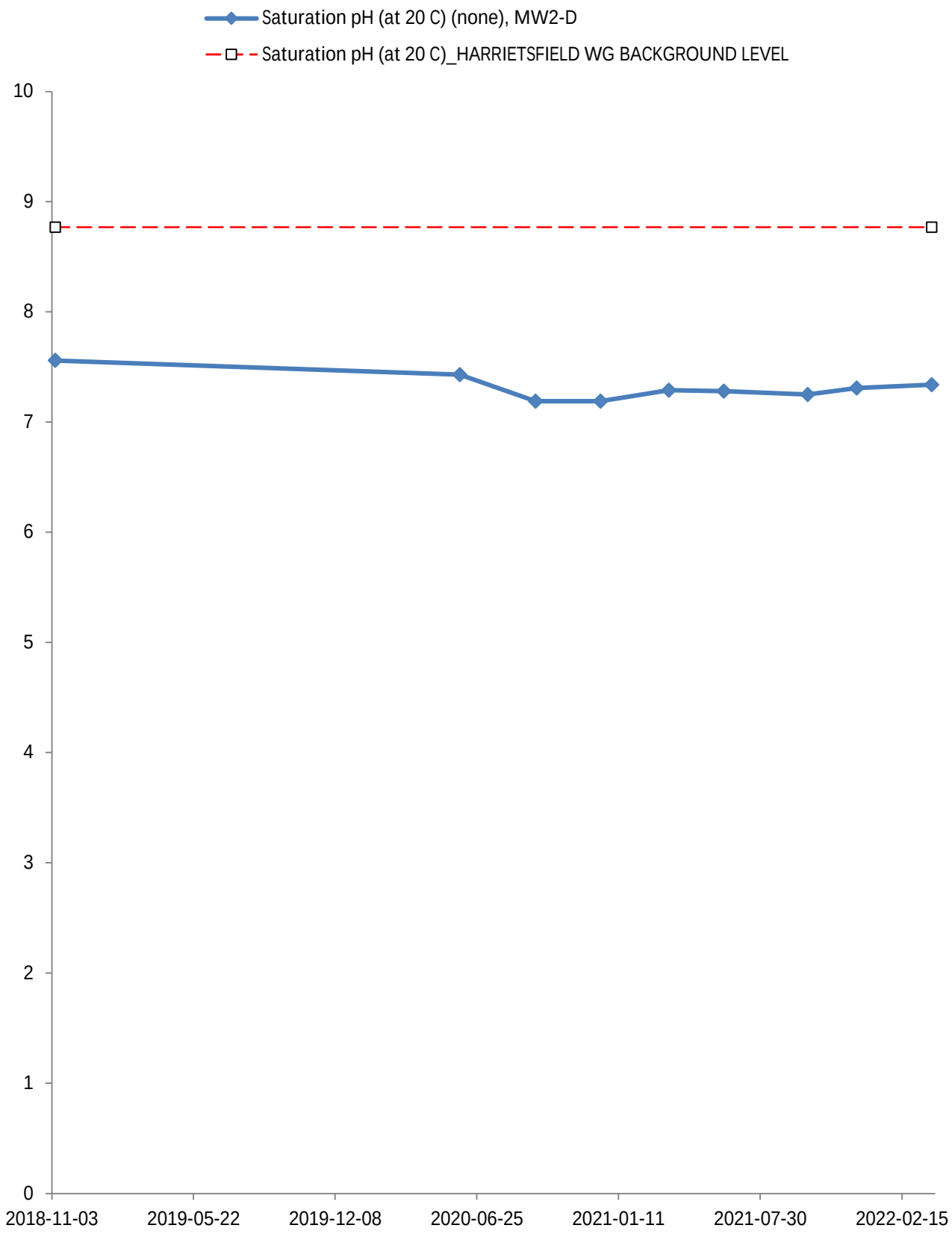
MW2-D-Potassium



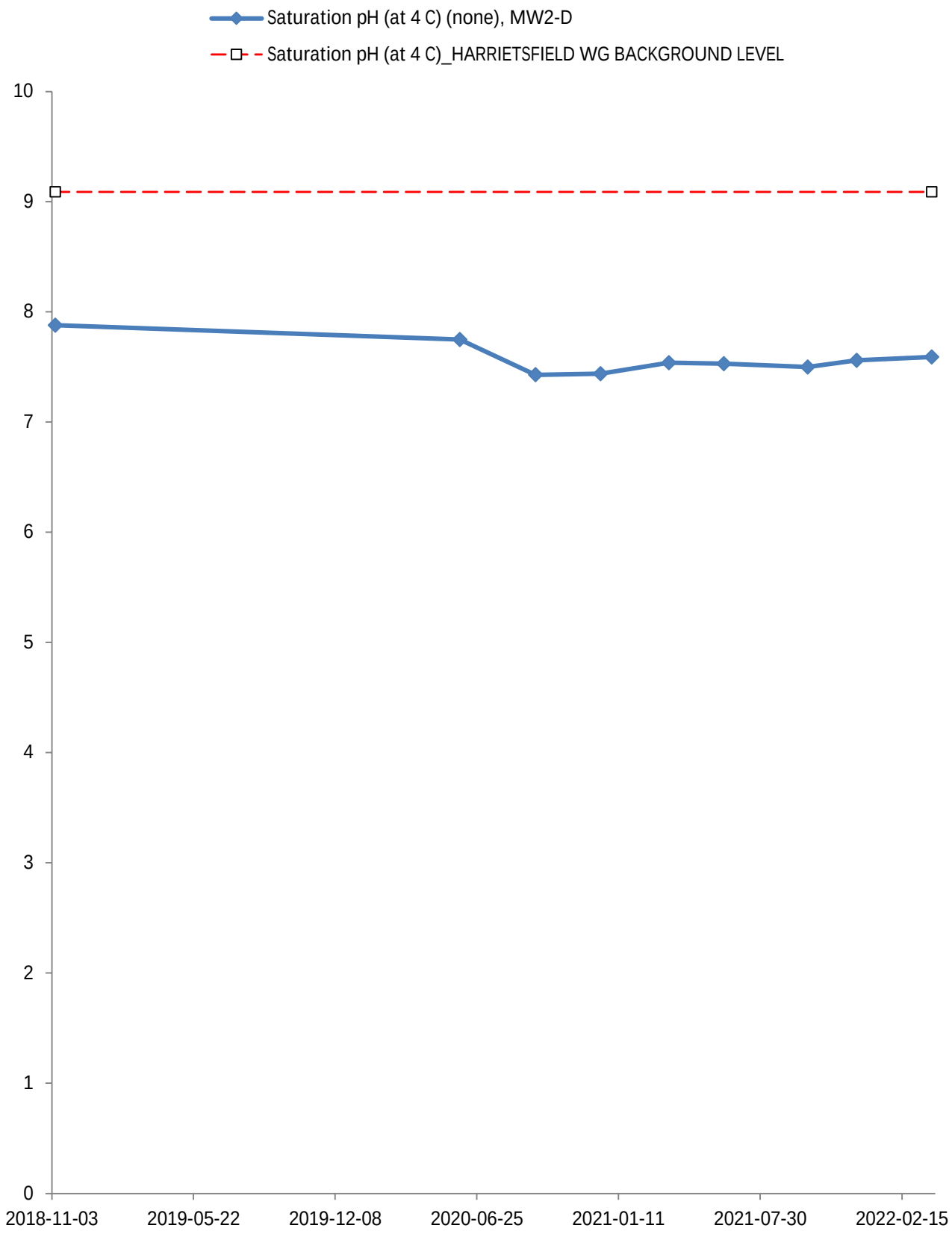
MW2-D-Reactive Silica (SiO2)



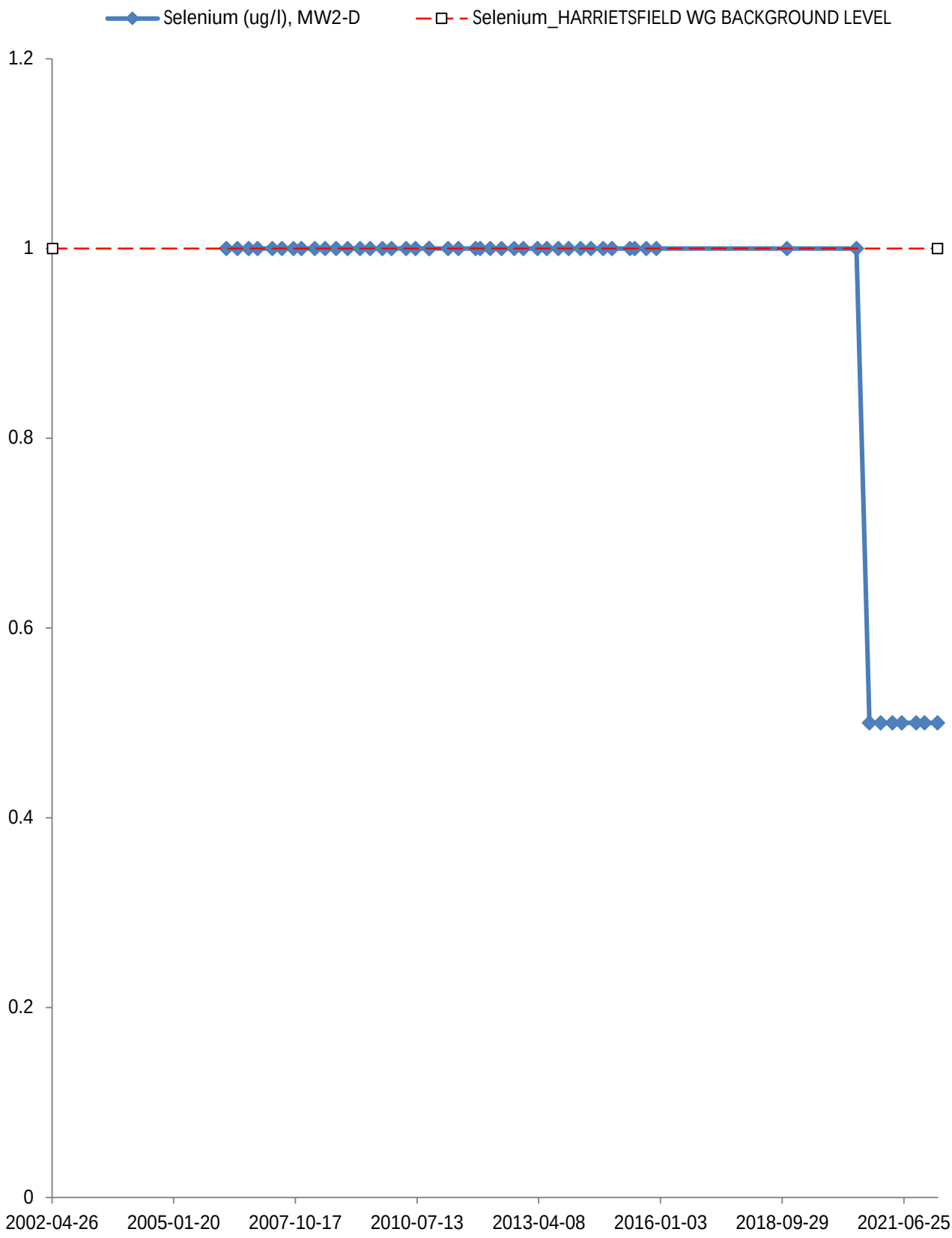
MW2-D-Saturation pH (at 20 C)



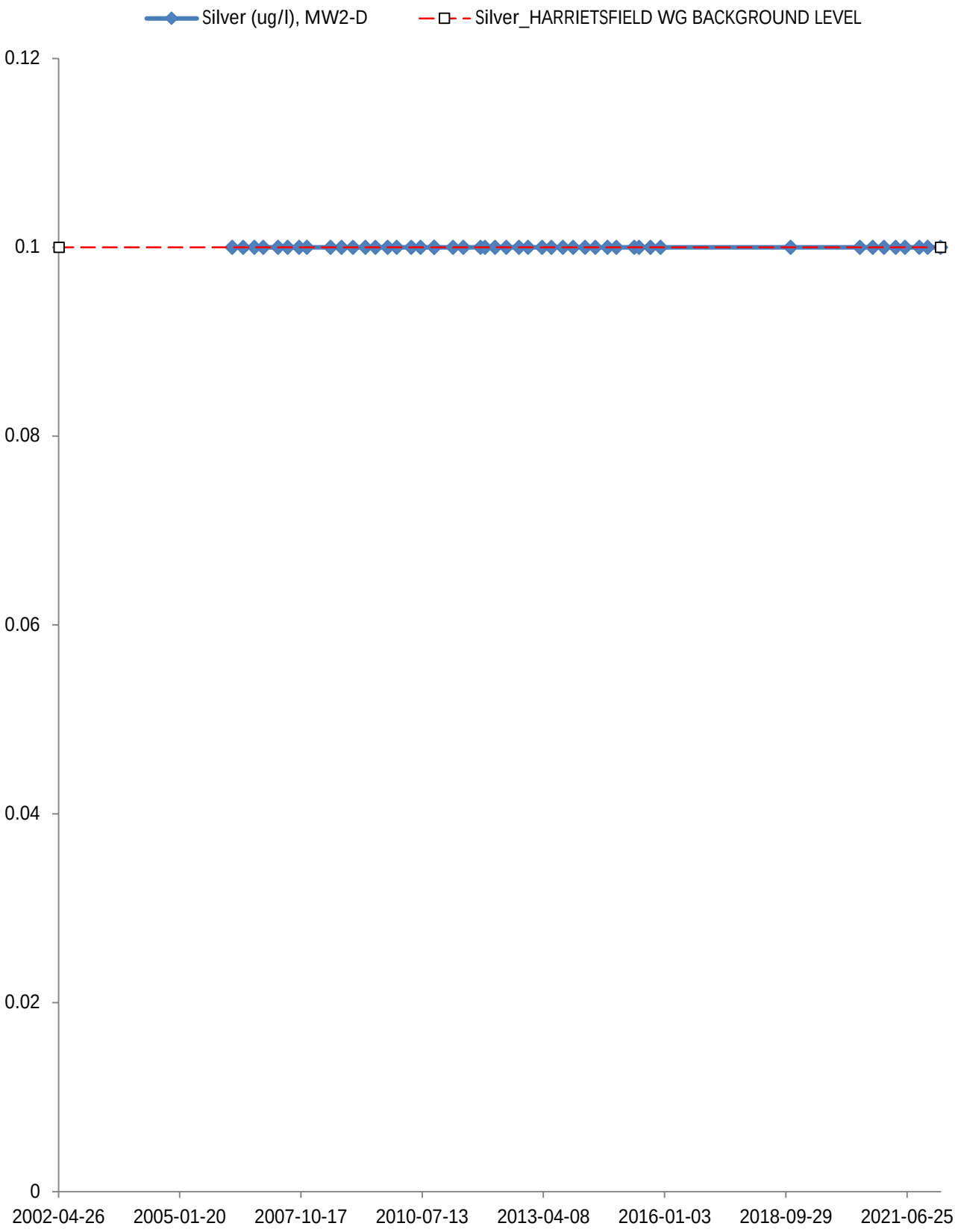
MW2-D-Saturation pH (at 4 C)



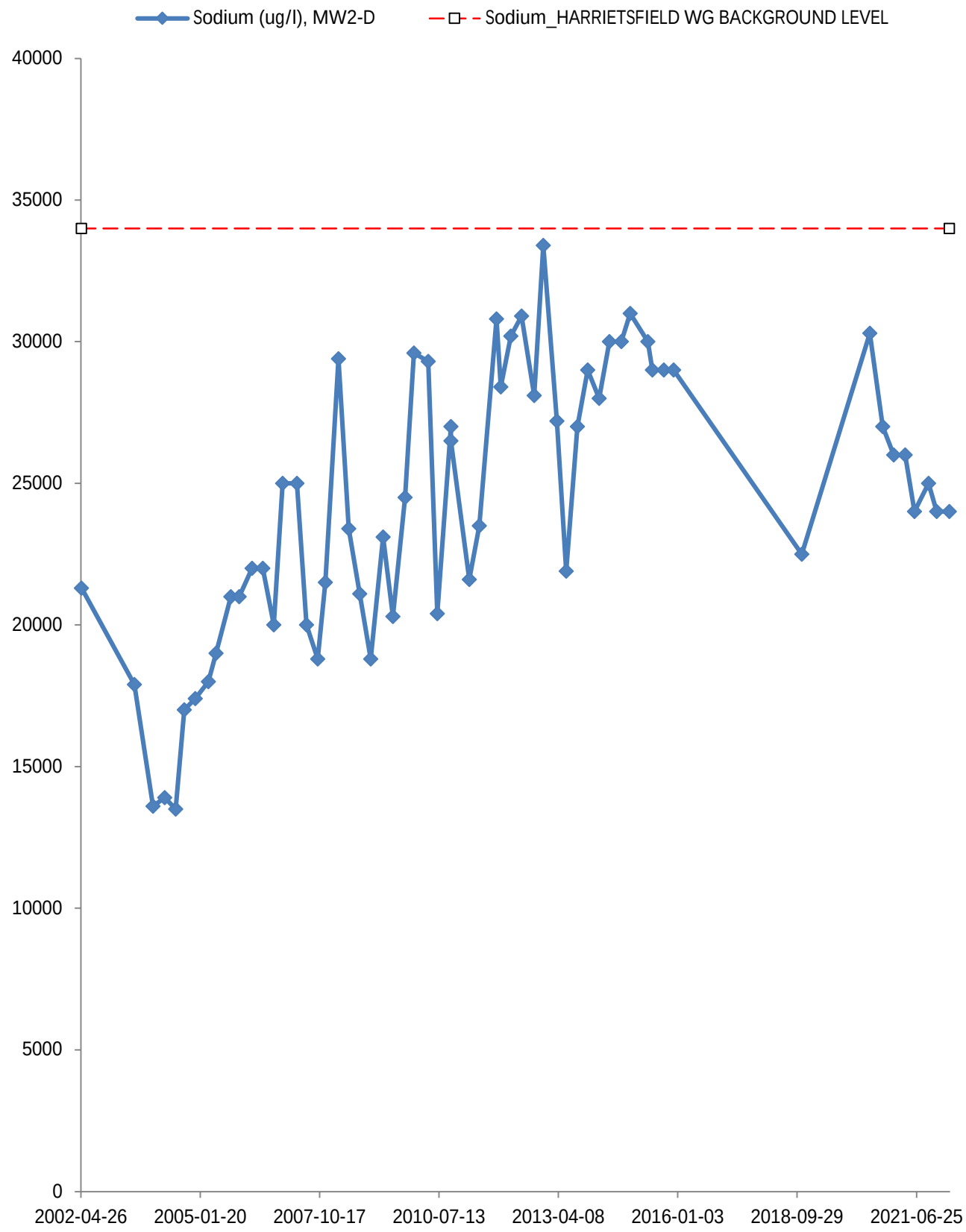
MW2-D-Selenium



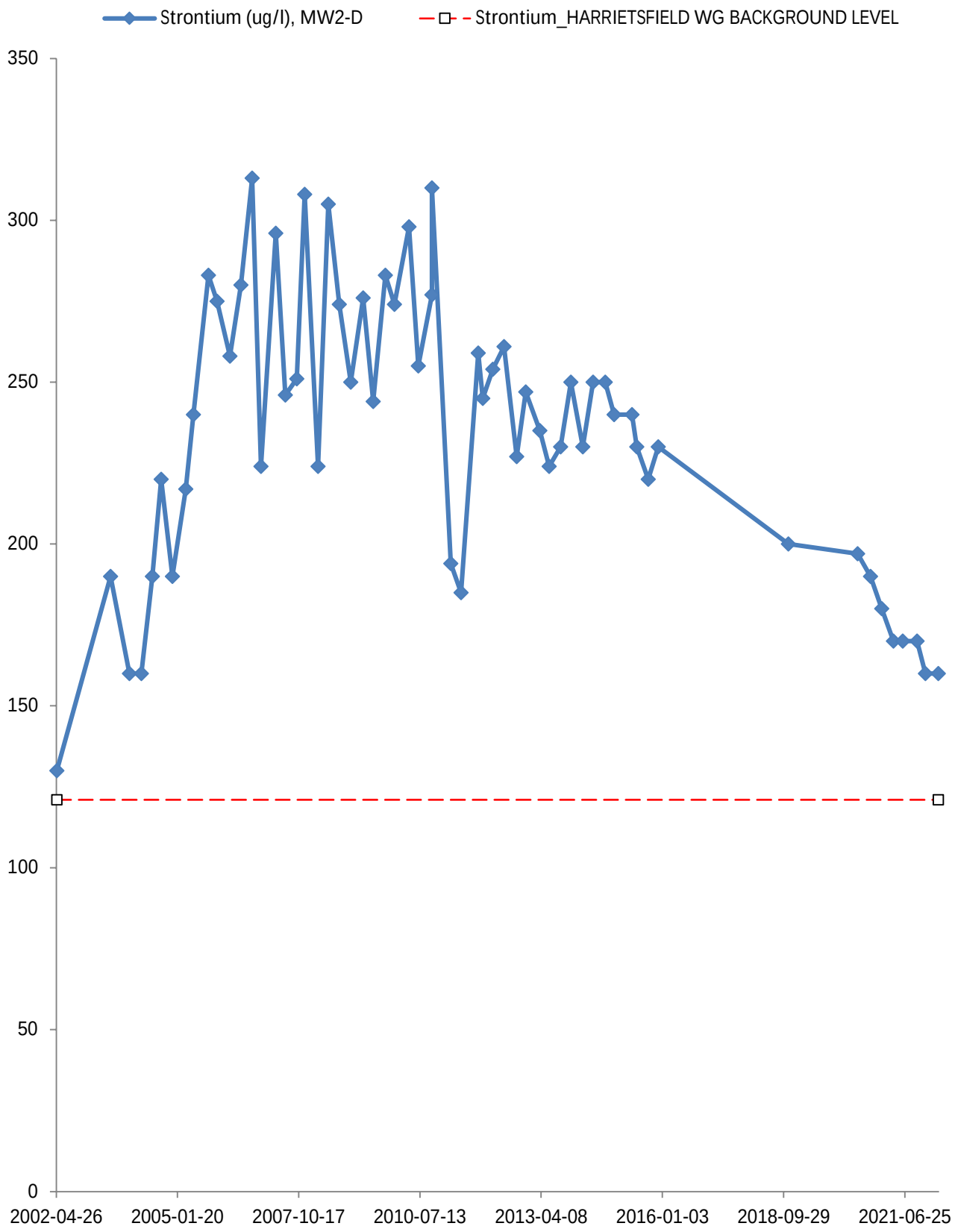
MW2-D-Silver


Silver (ug/l), MW2-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

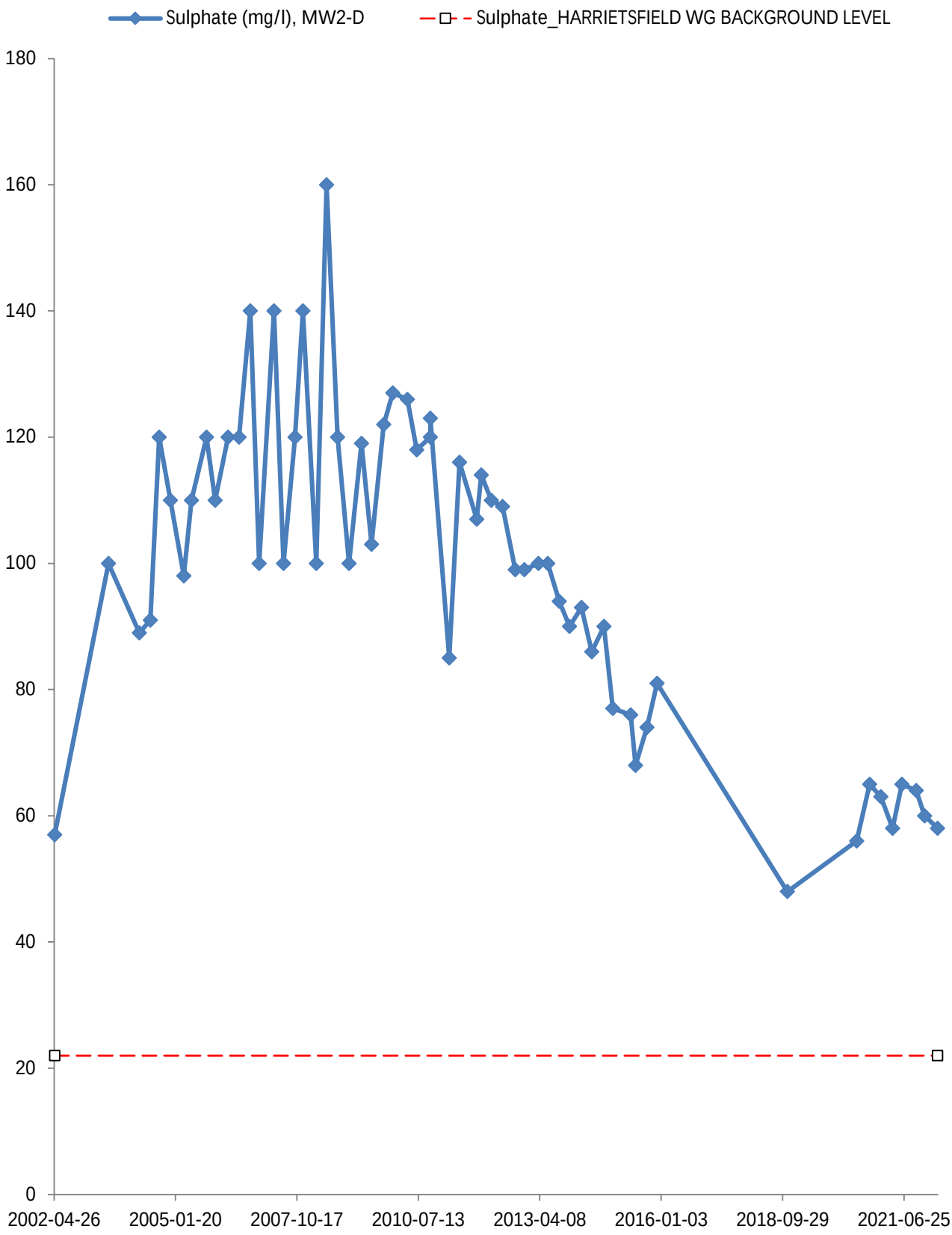
MW2-D-Sodium


Sodium (ug/l), MW2-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
40000
35000
30000
25000
20000
15000
10000
5000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

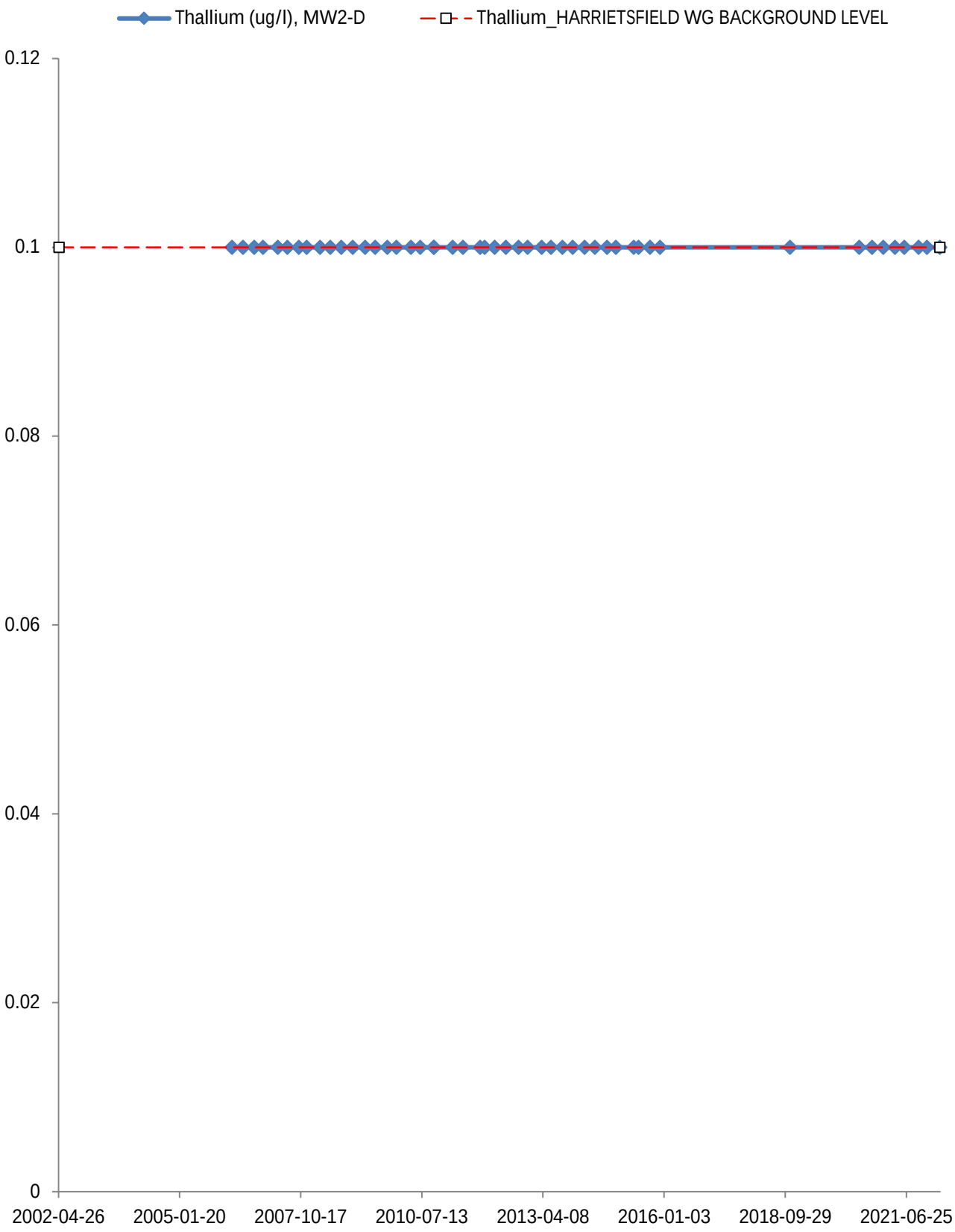
MW2-D-Strontium



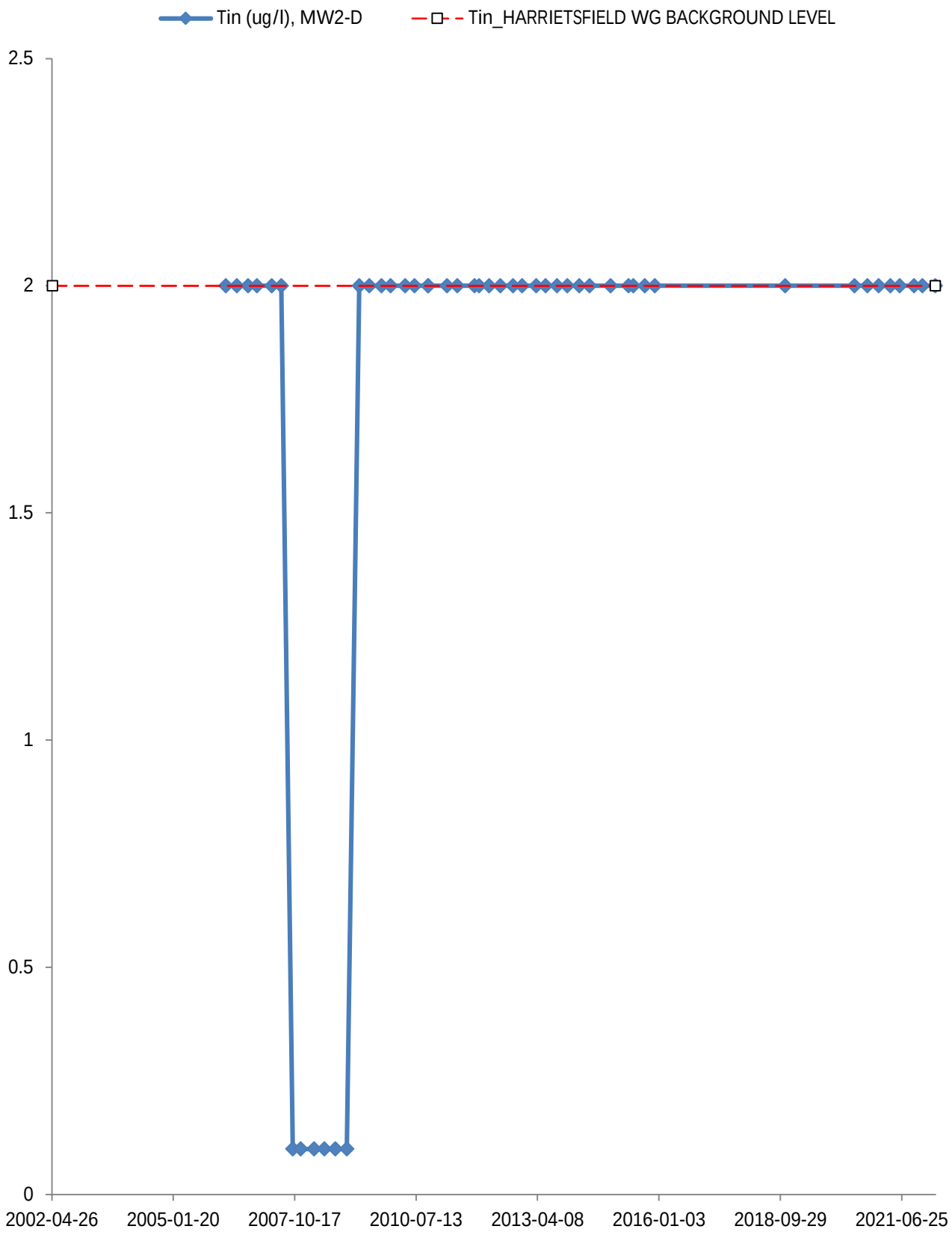
MW2-D-Sulphate



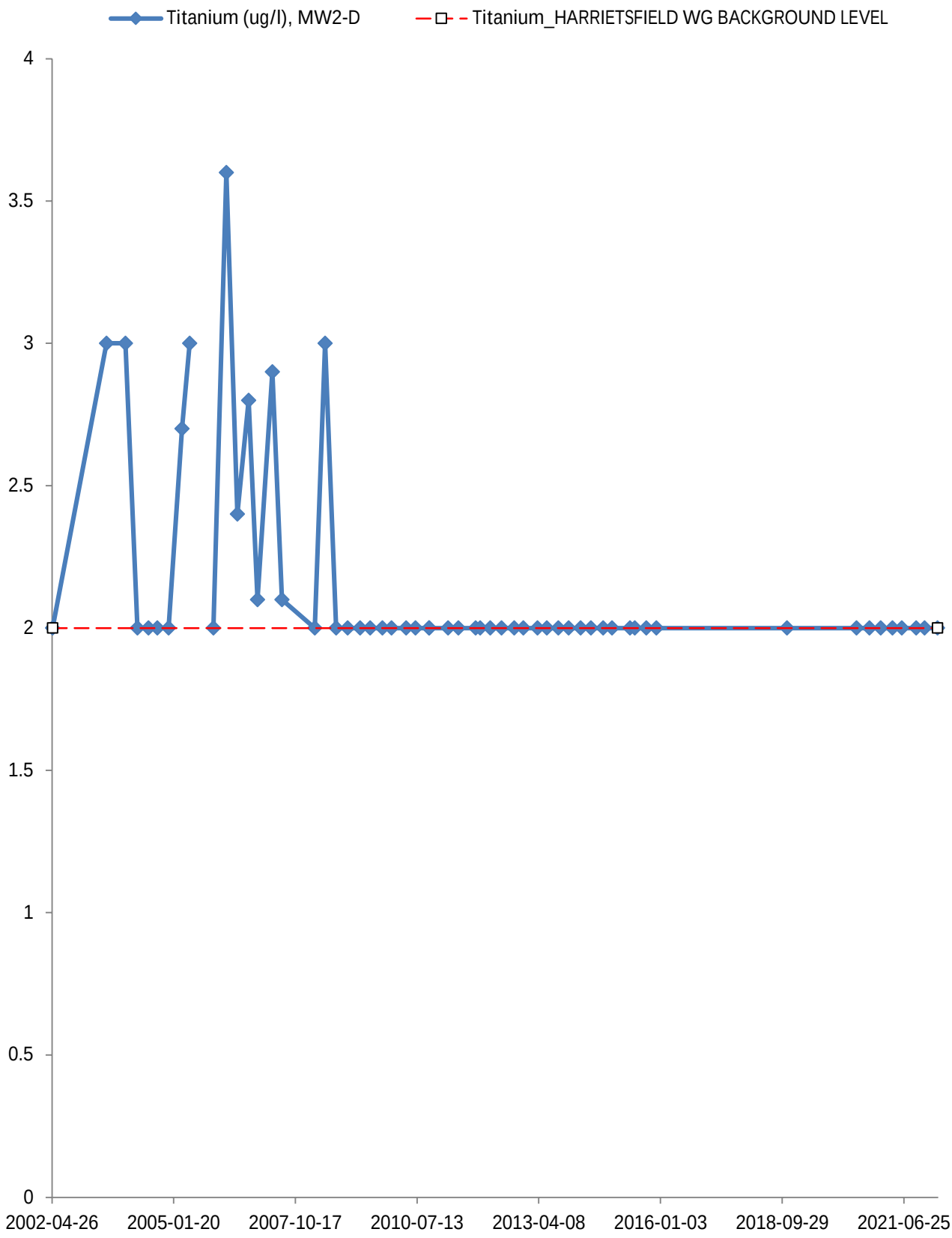
MW2-D-Thallium



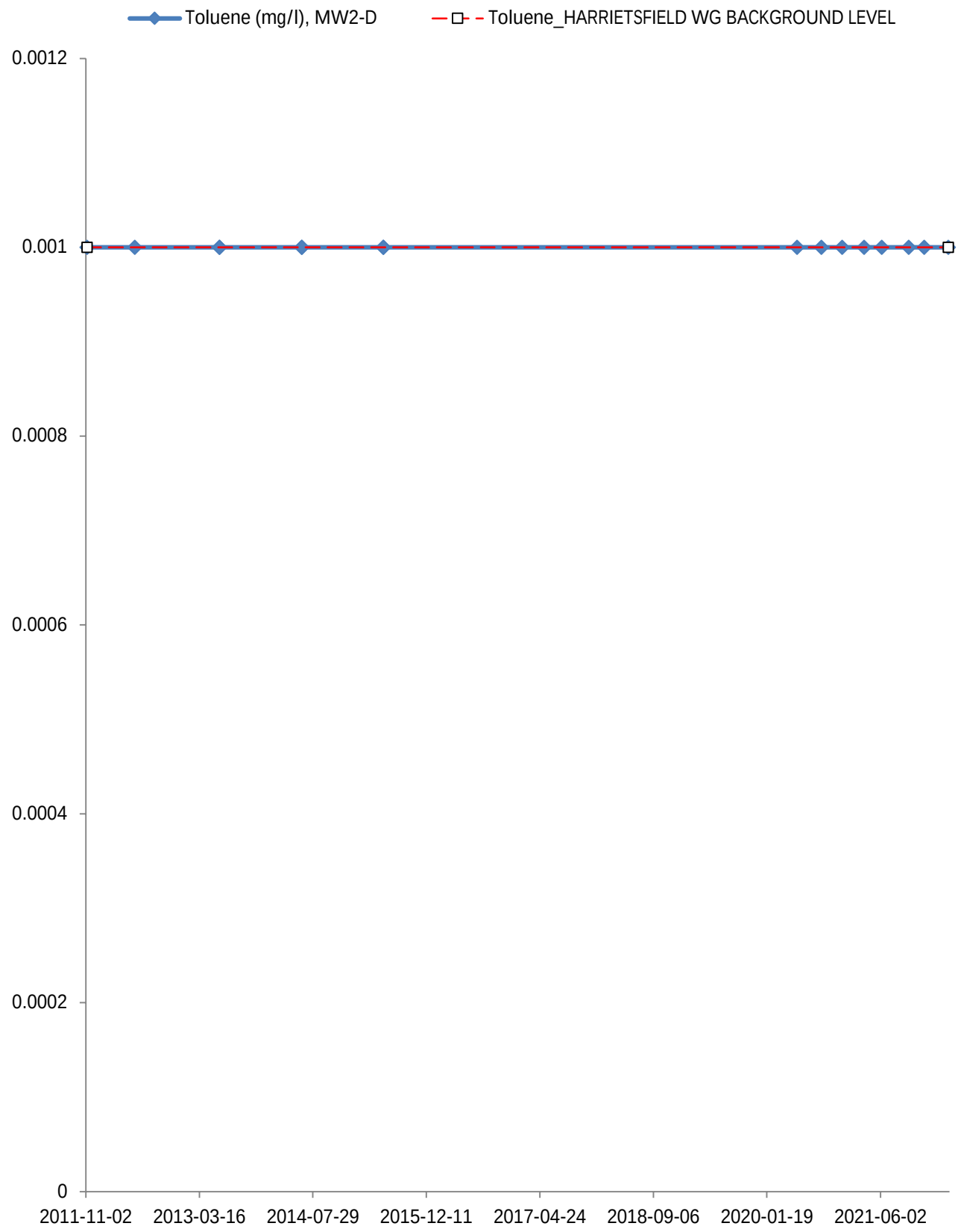
MW2-D-Tin


Tin (ug/l), MW2-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

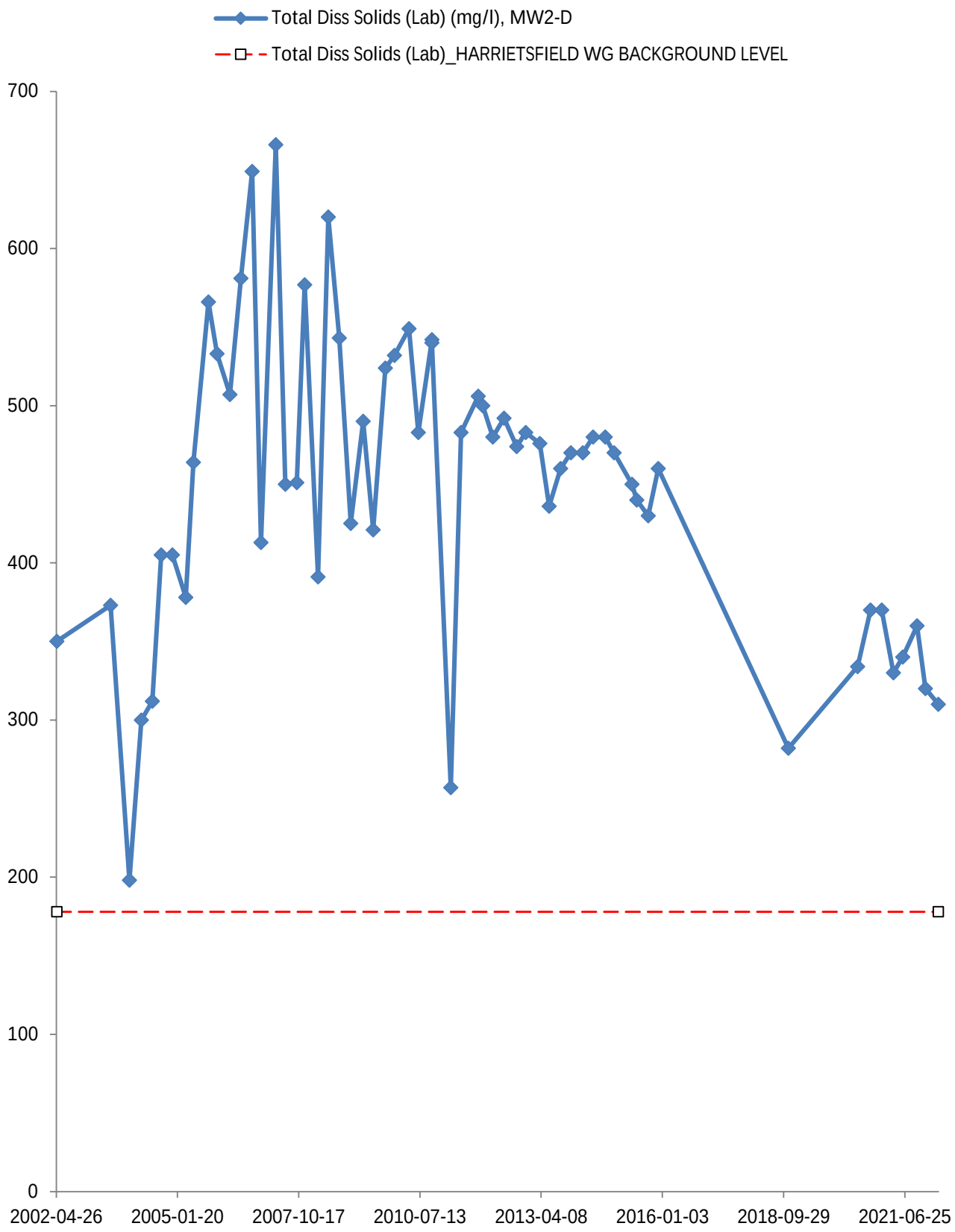
MW2-D-Titanium



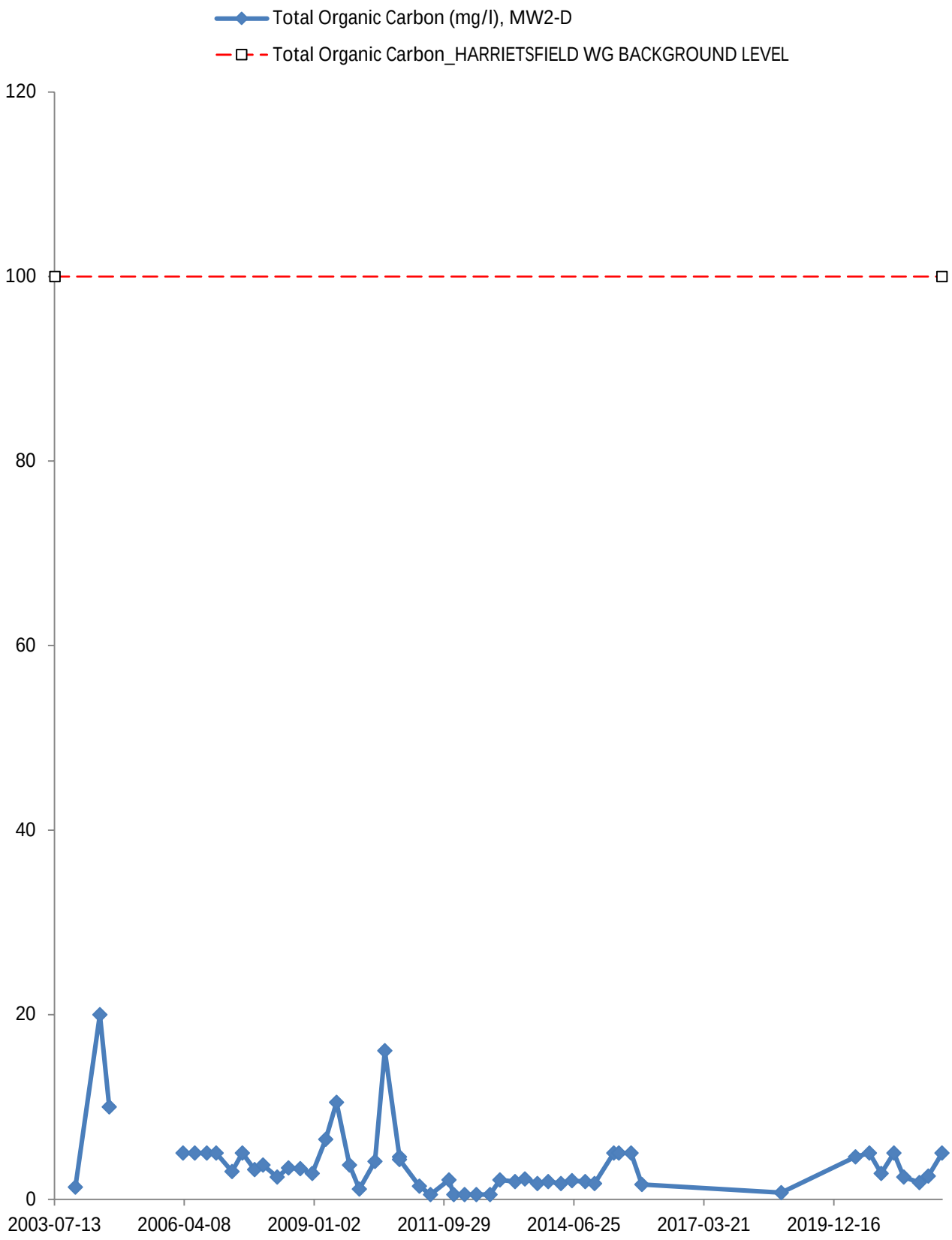
MW2-D-Toluene



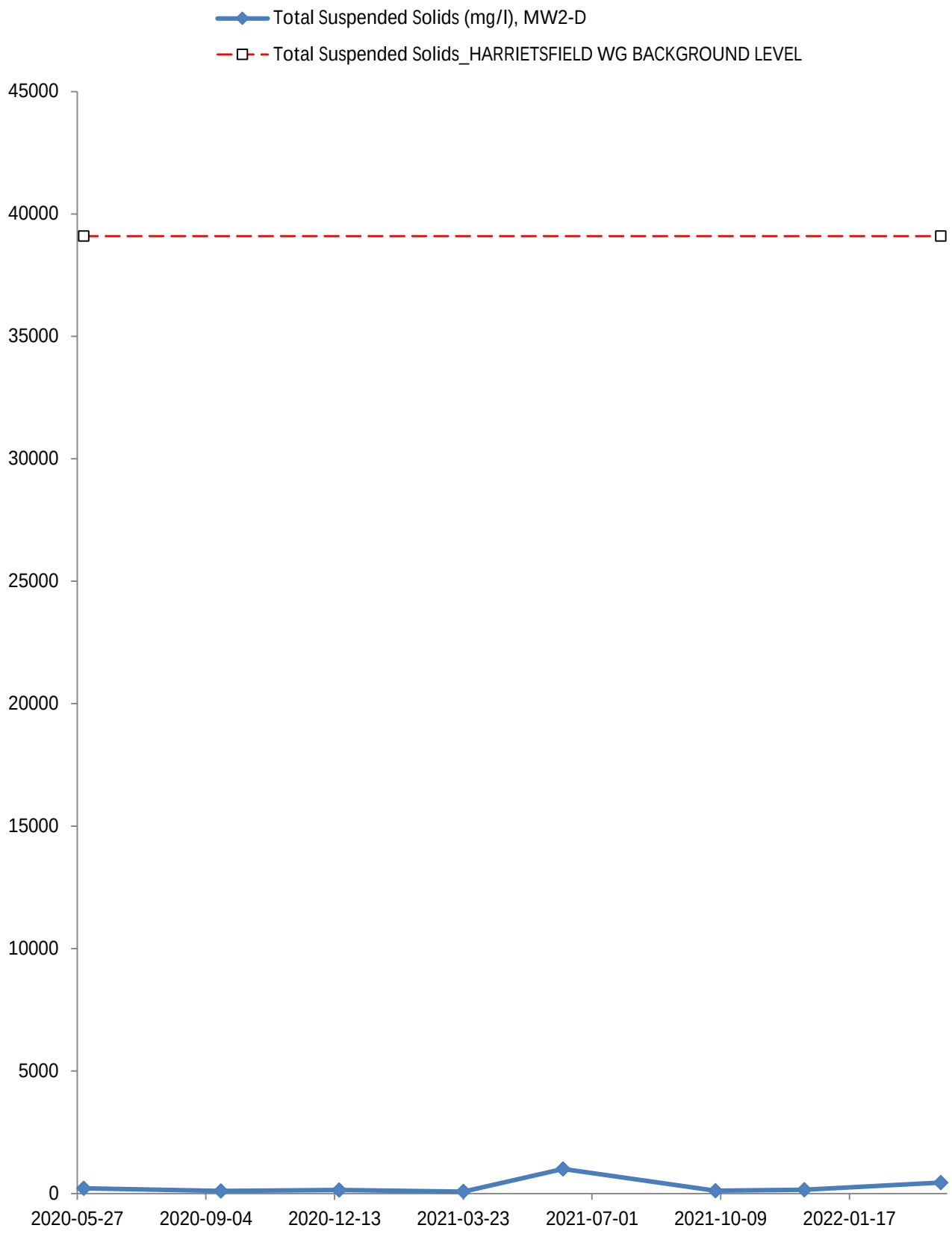
MW2-D-Total Diss Solids (Lab)



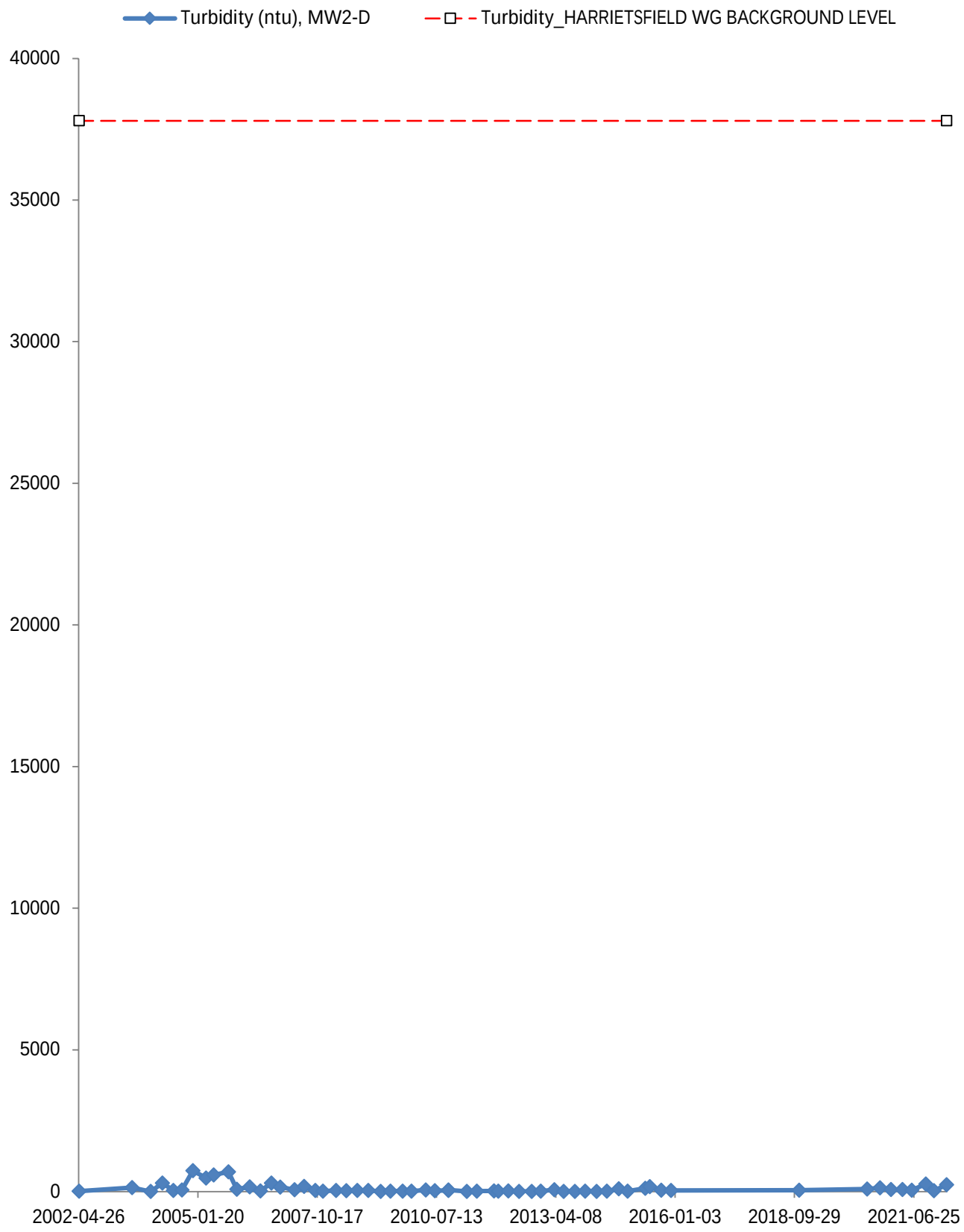
MW2-D-Total Organic Carbon



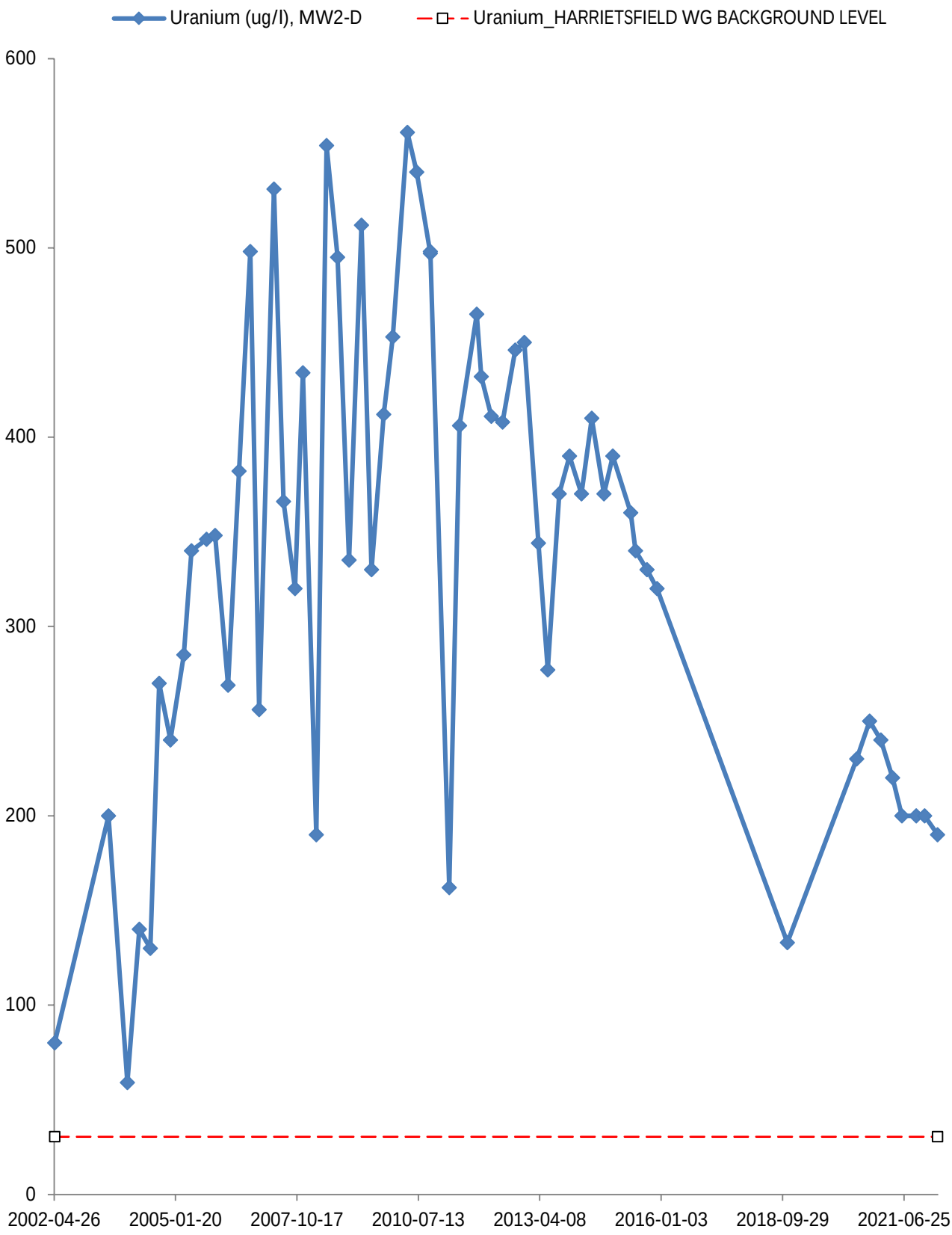
MW2-D-Total Suspended Solids



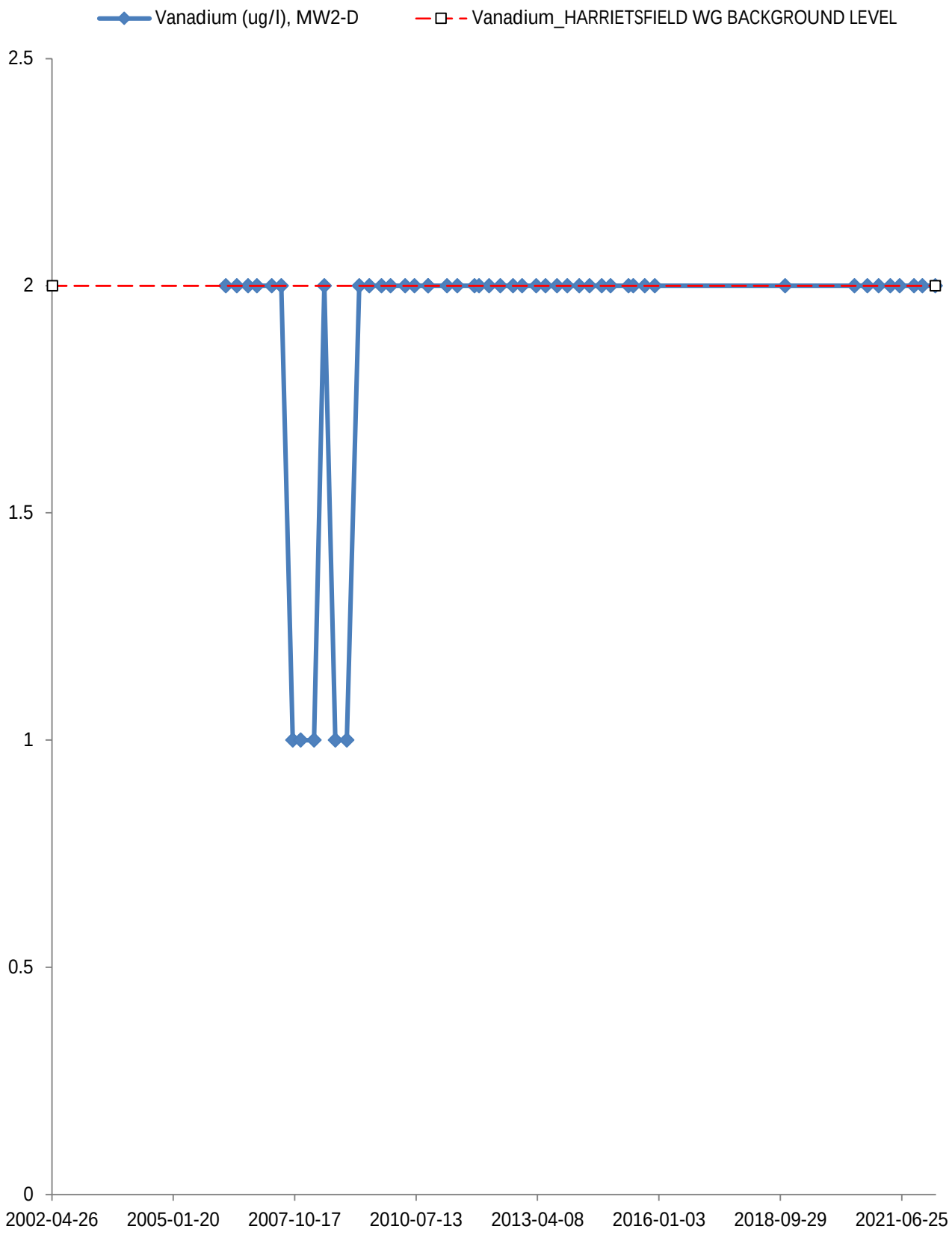
MW2-D-Turbidity



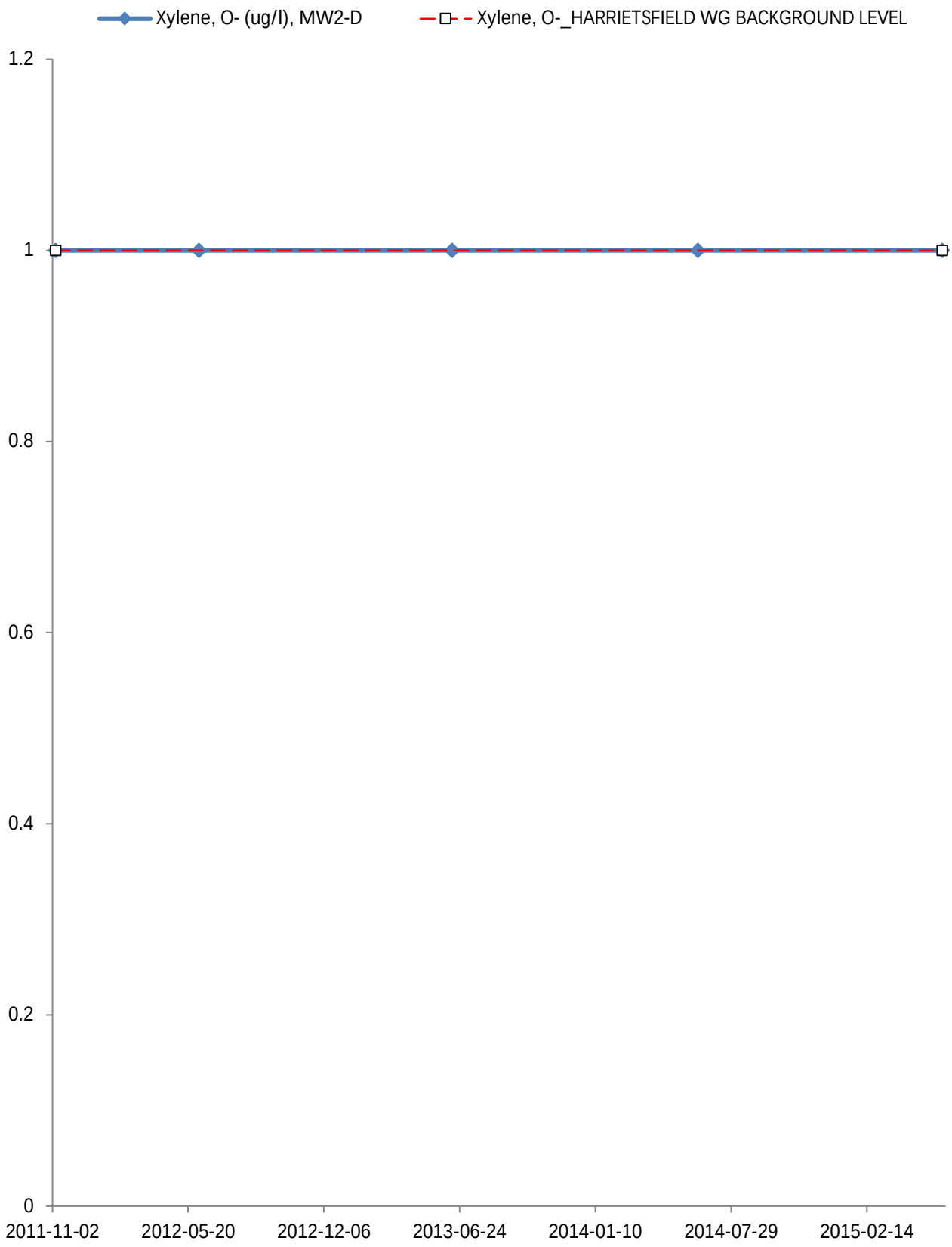
MW2-D-Uranium



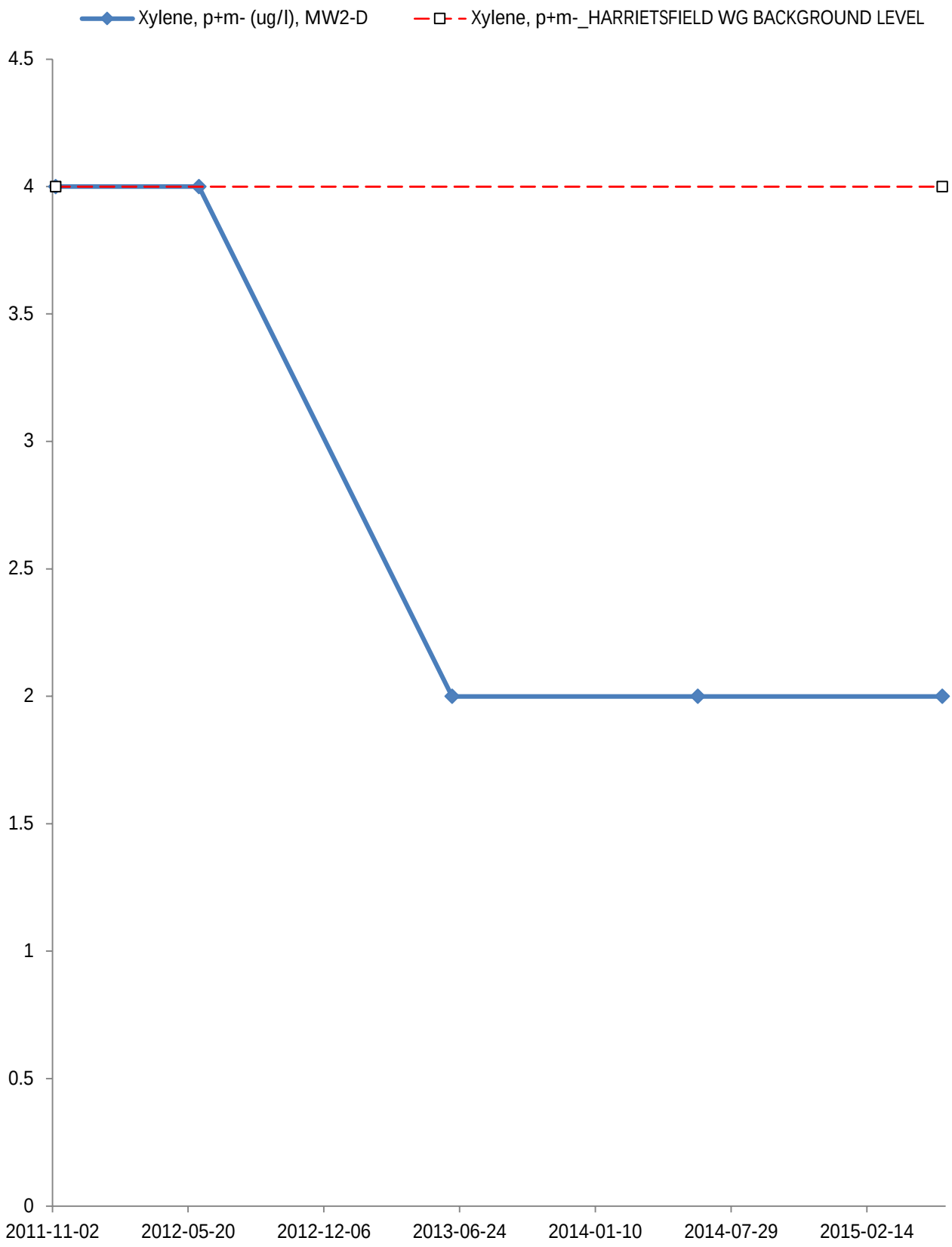
MW2-D-Vanadium



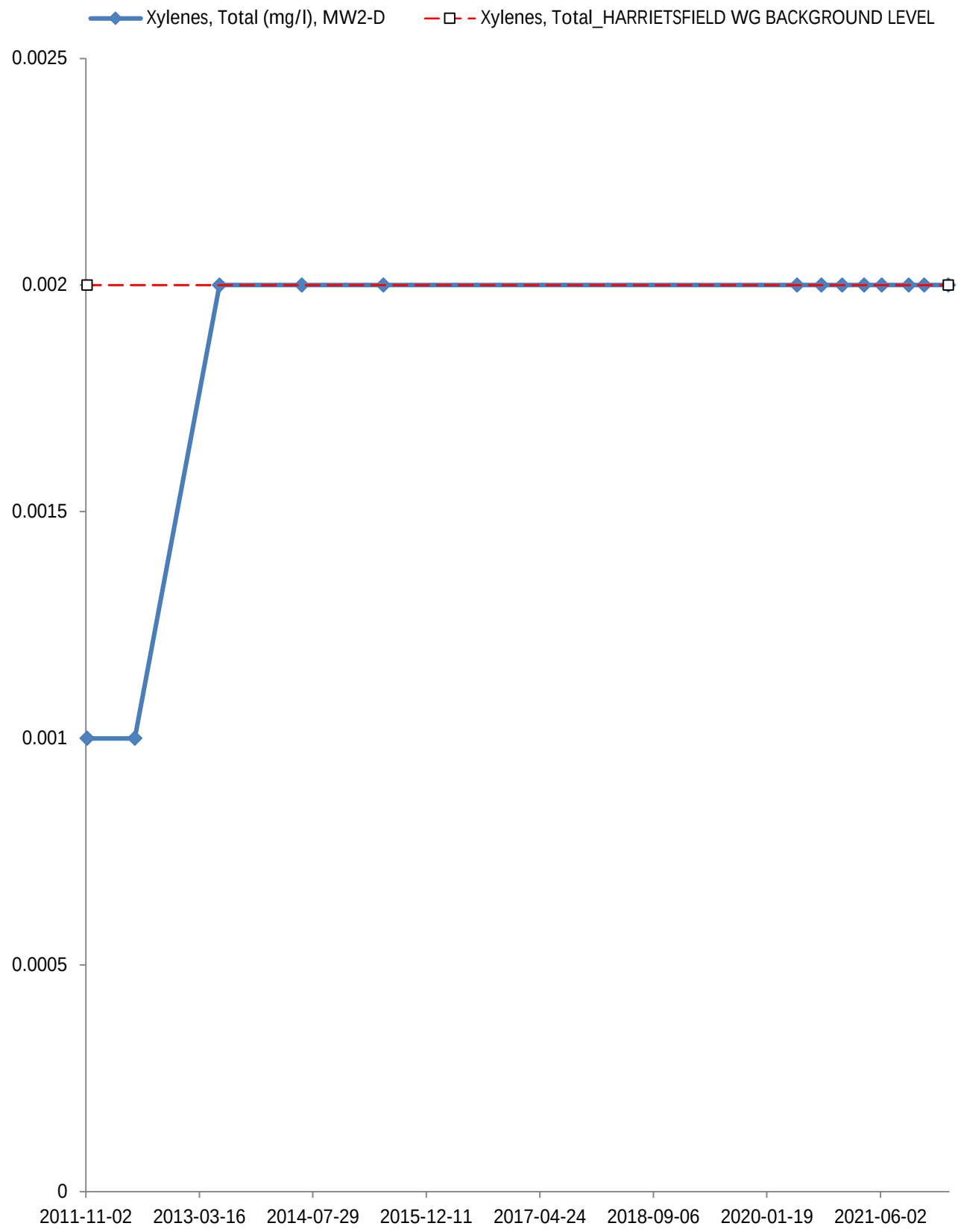
MW2-D-Xylene, O-



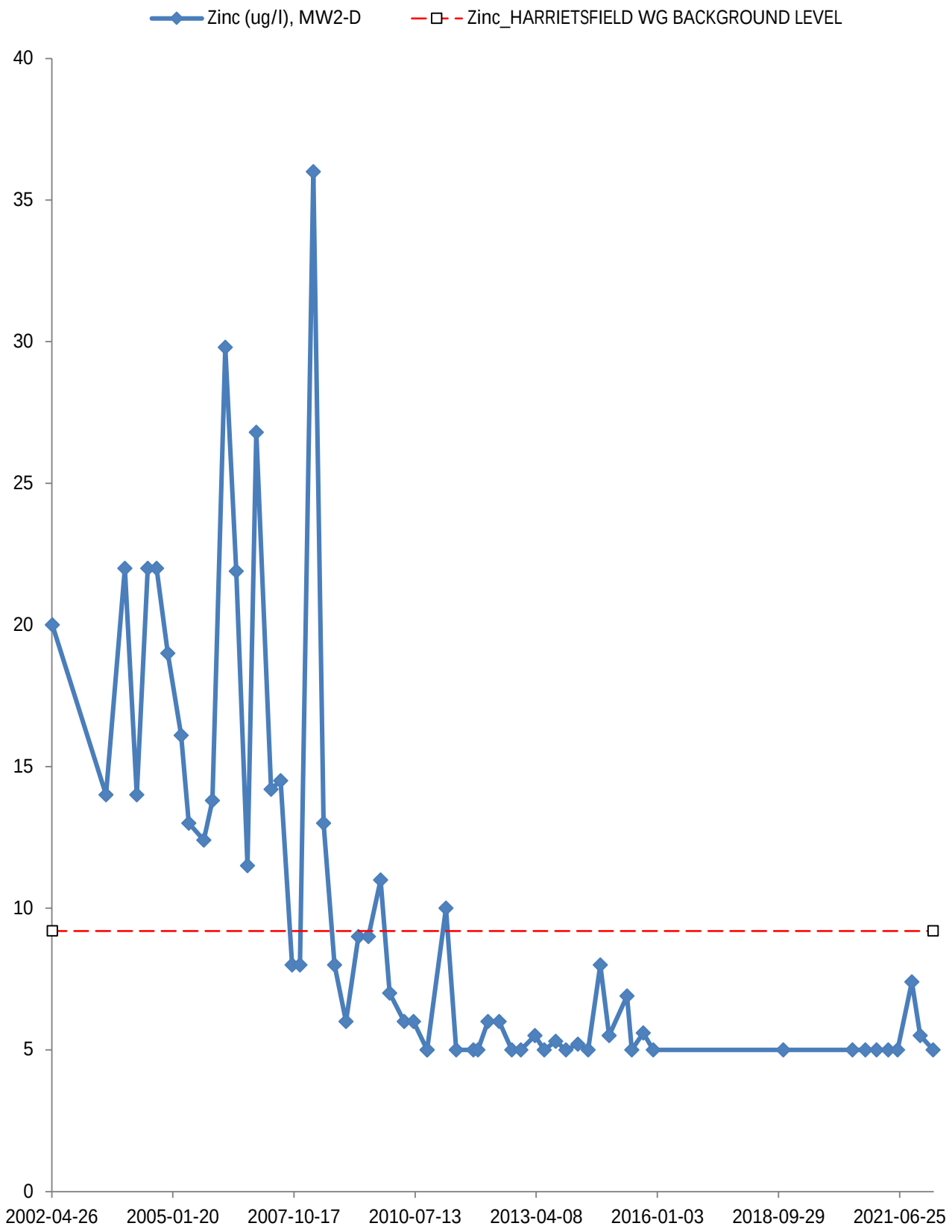
MW2-D-Xylene, p+m-



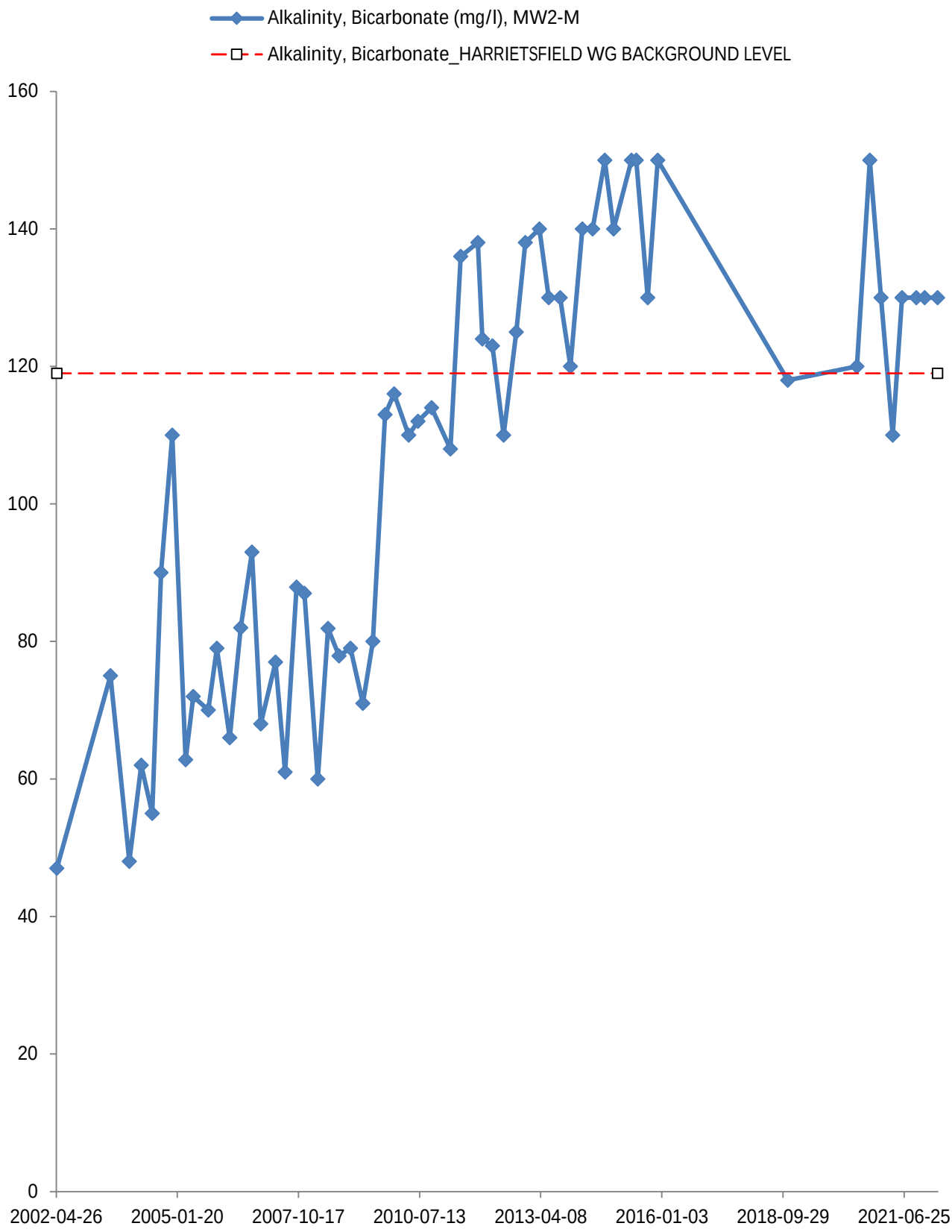
MW2-D-Xylenes, Total



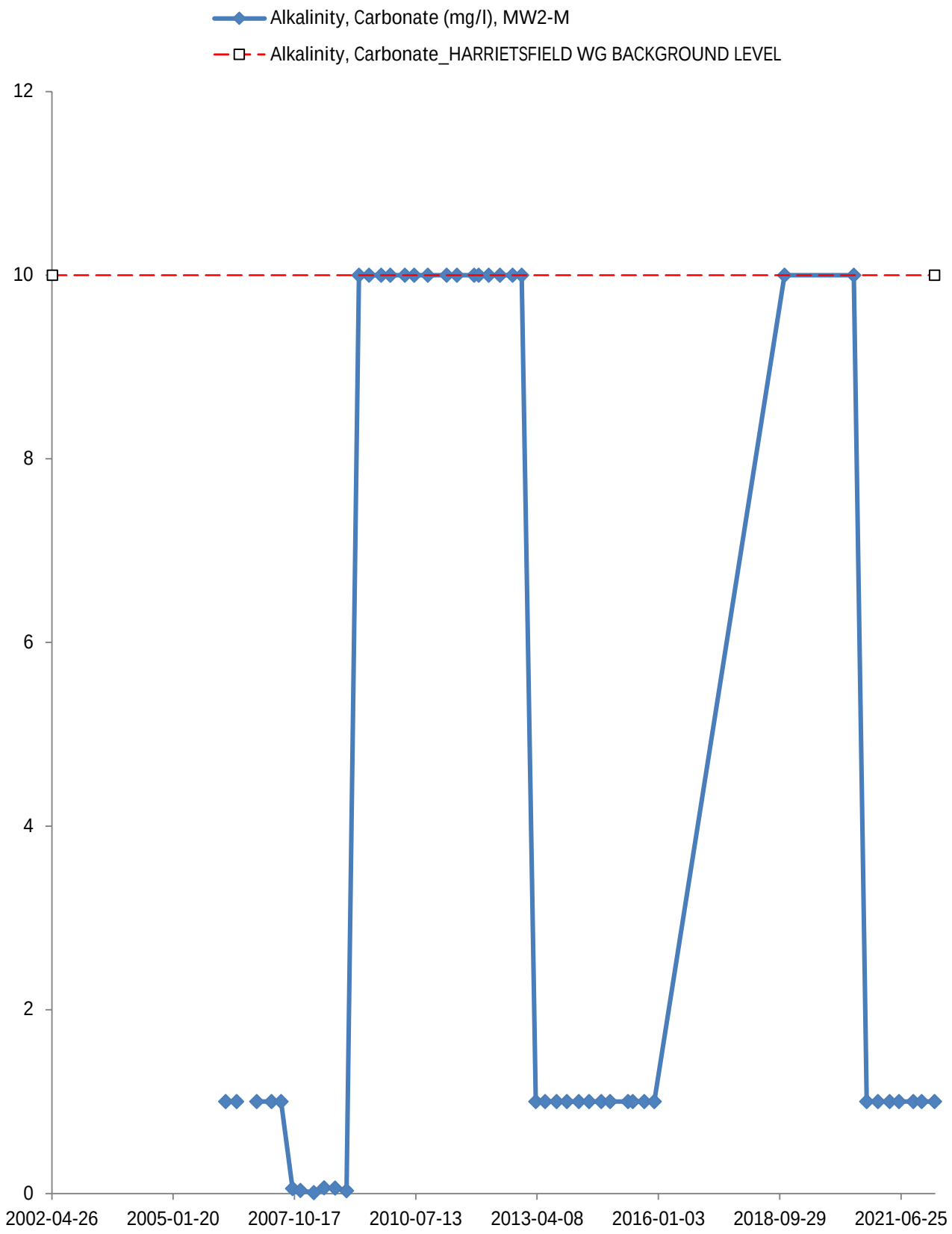
MW2-D-Zinc


Zinc (ug/l), MW2-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
40
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

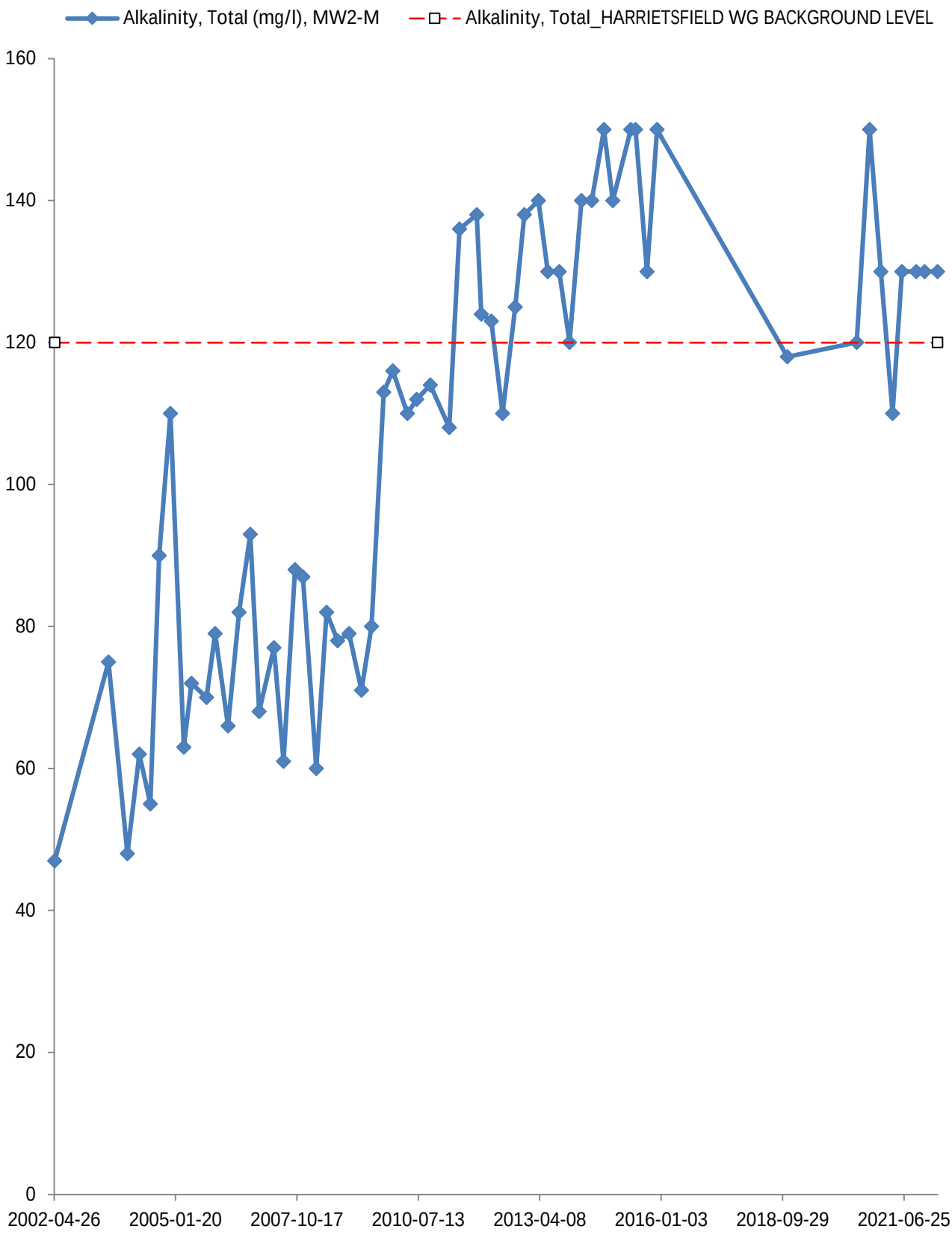
MW2-M-Alkalinity, Bicarbonate



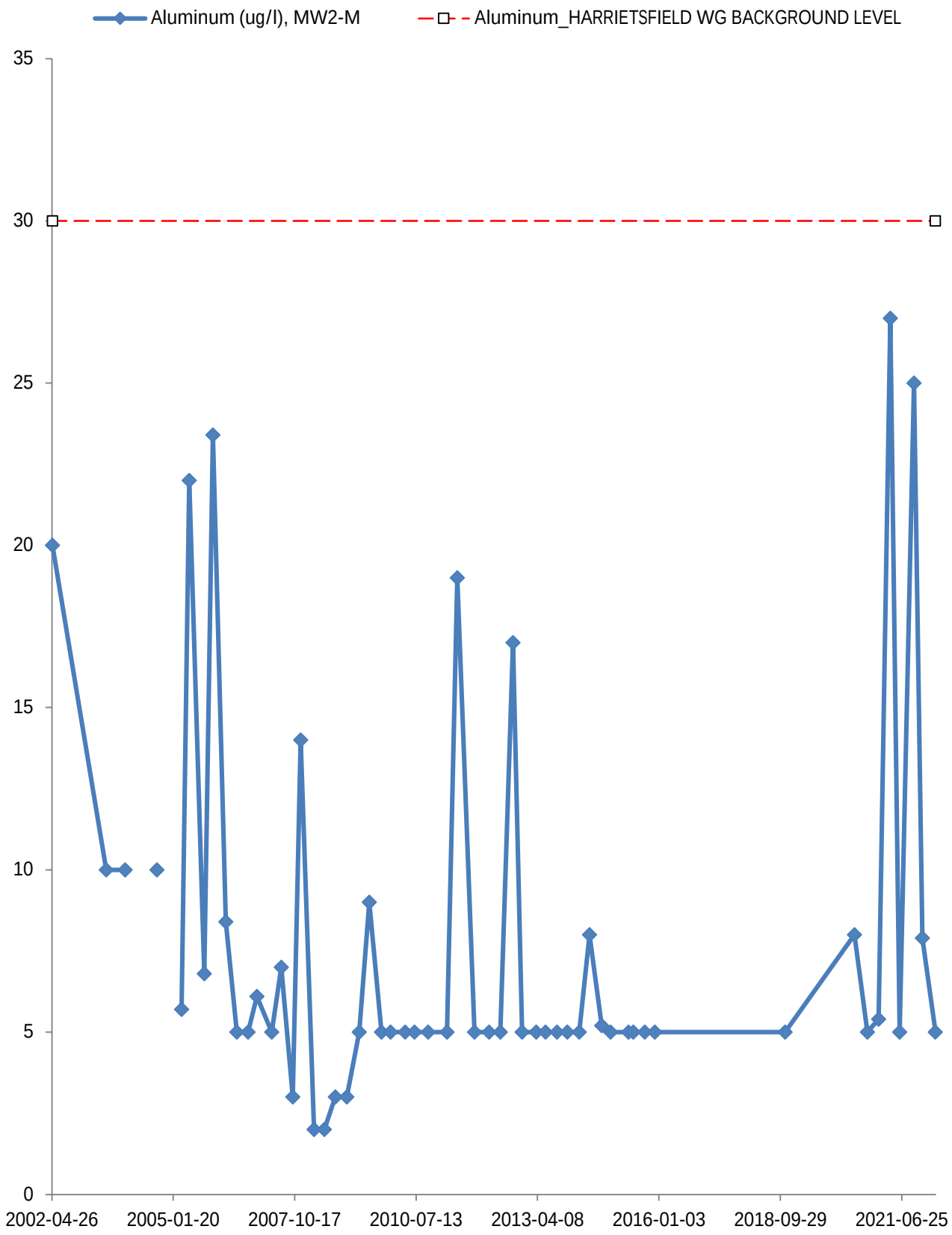
MW2-M-Alkalinity, Carbonate



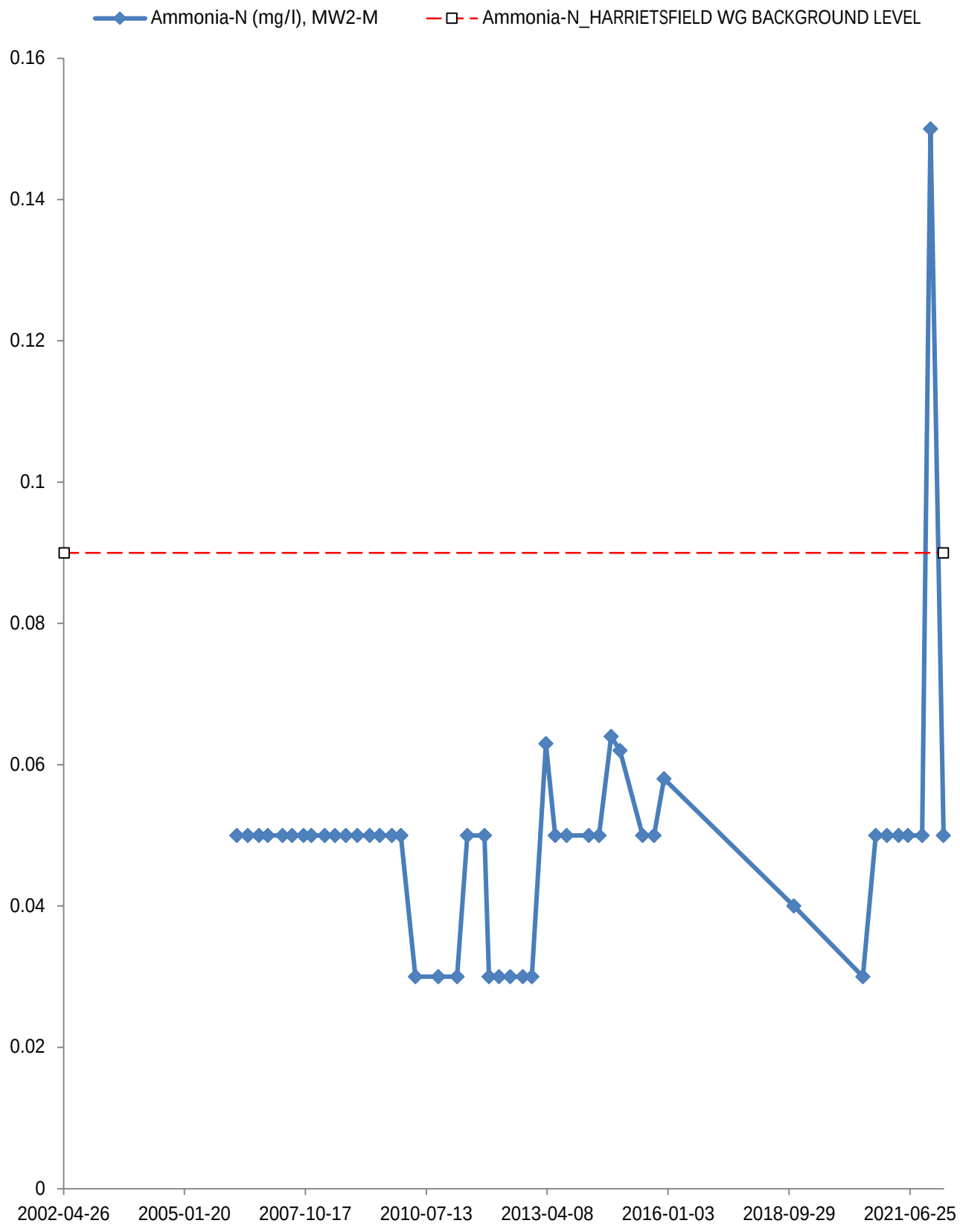
MW2-M-Alkalinity, Total



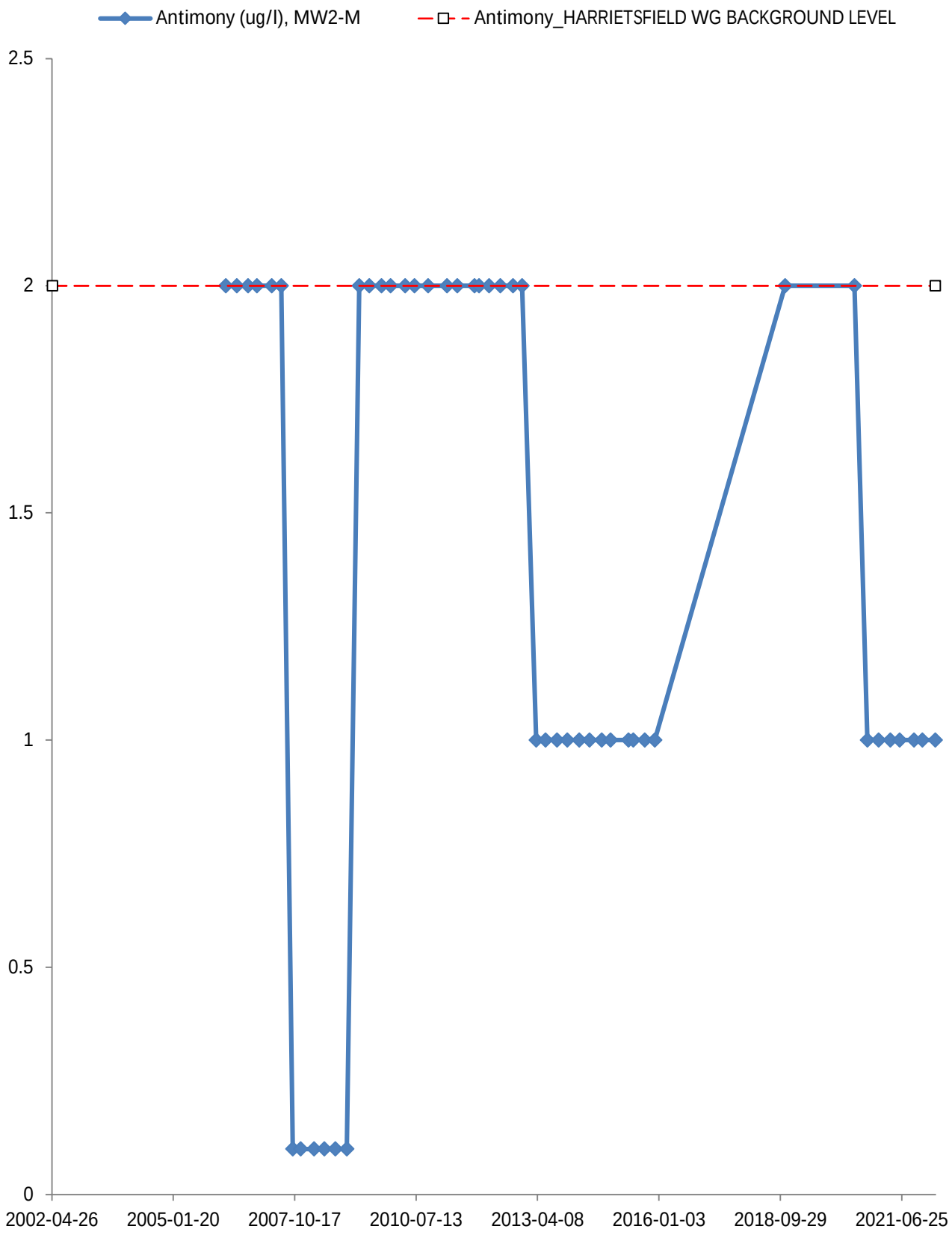
MW2-M-Aluminum



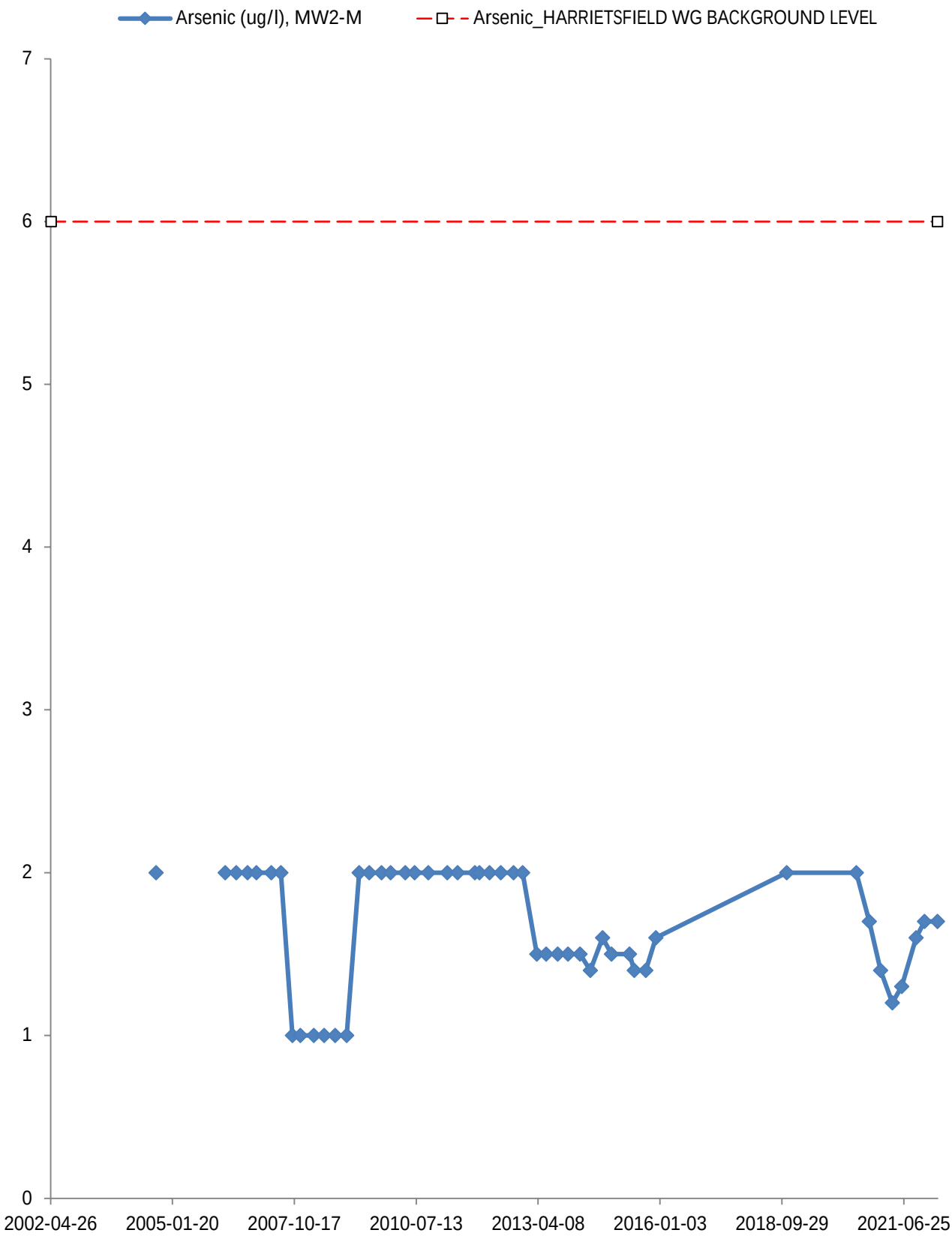
MW2-M-Ammonia-N



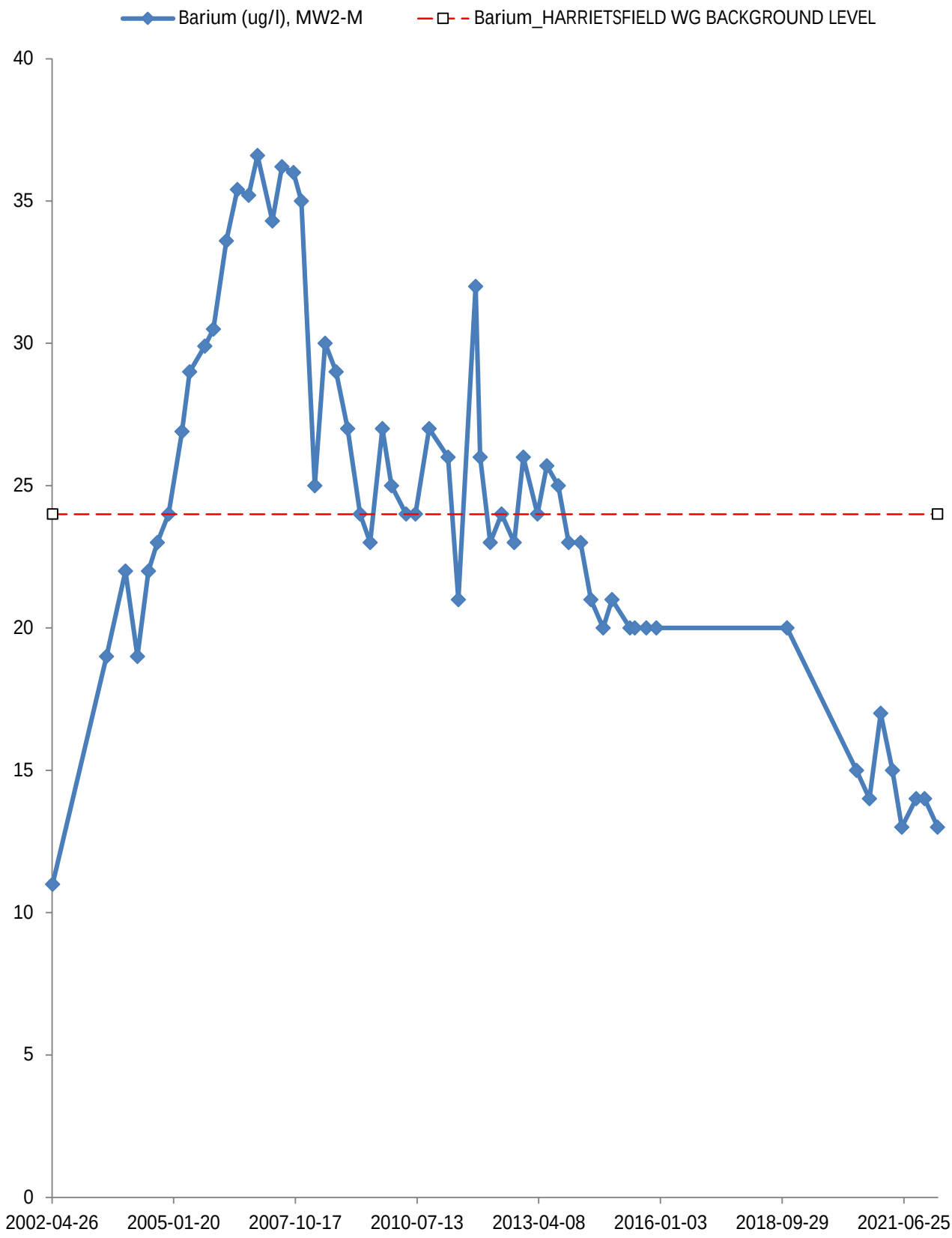
MW2-M-Antimony



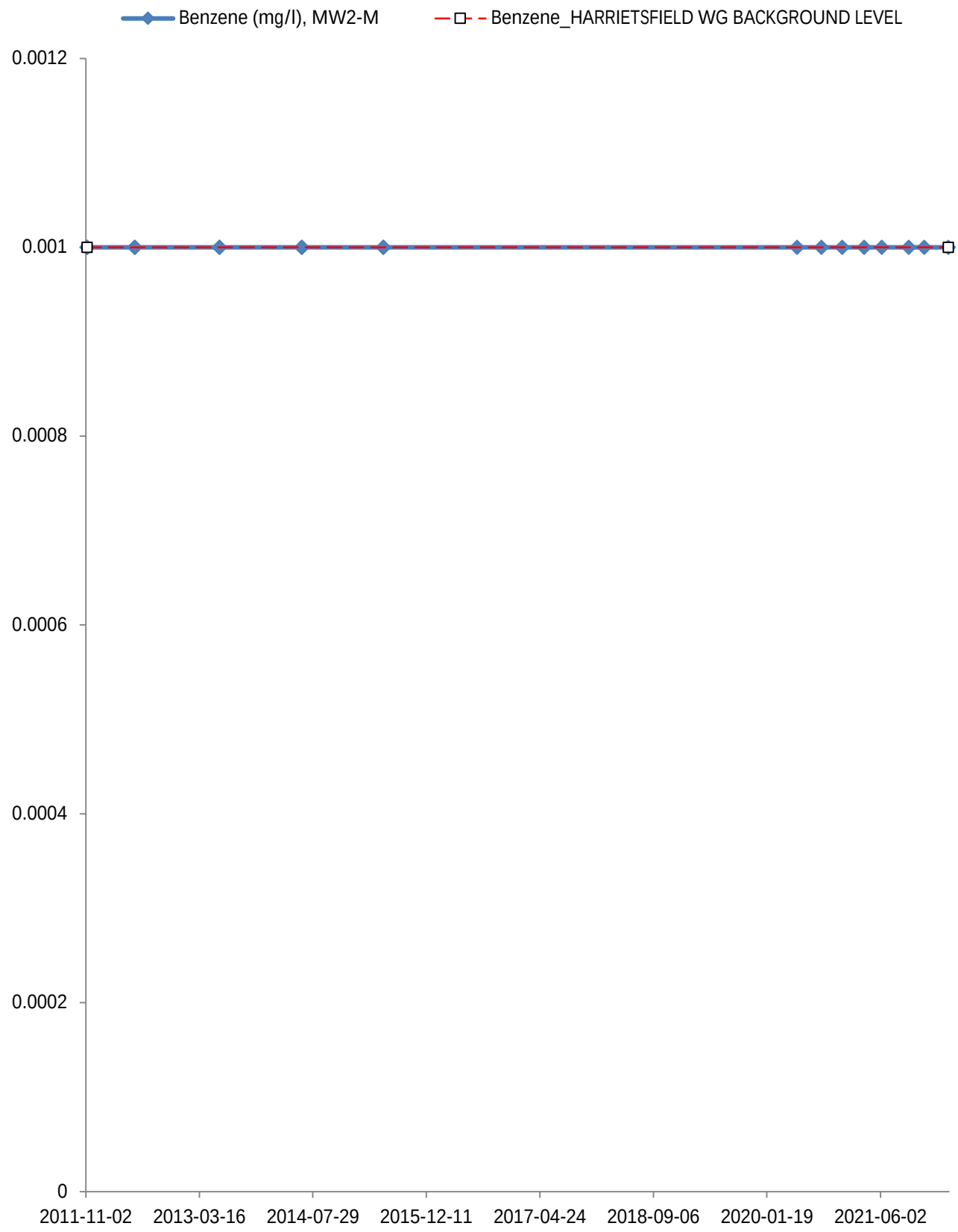
MW2-M-Arsenic



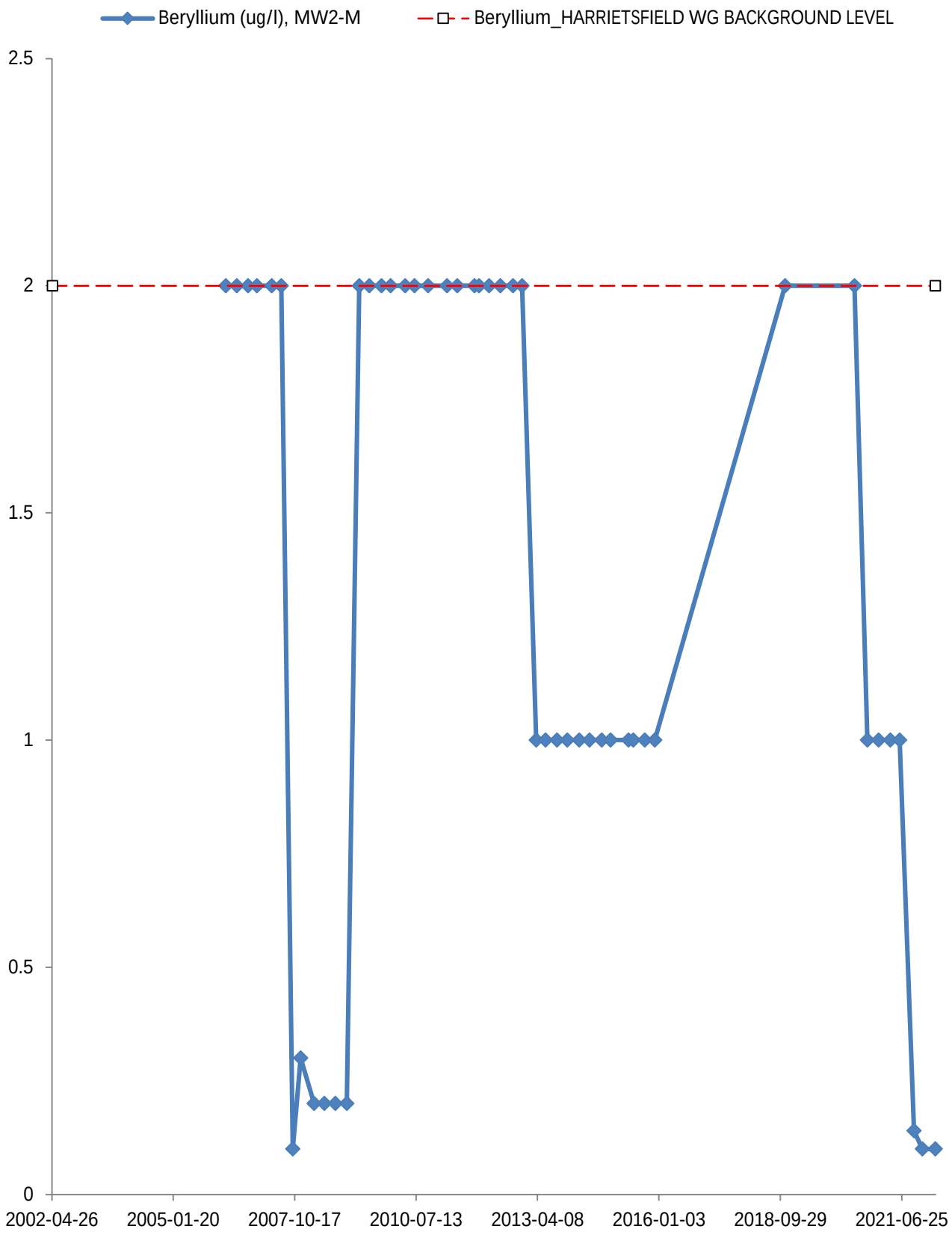
MW2-M-Barium


Barium (ug/l), MW2-M
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
40
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

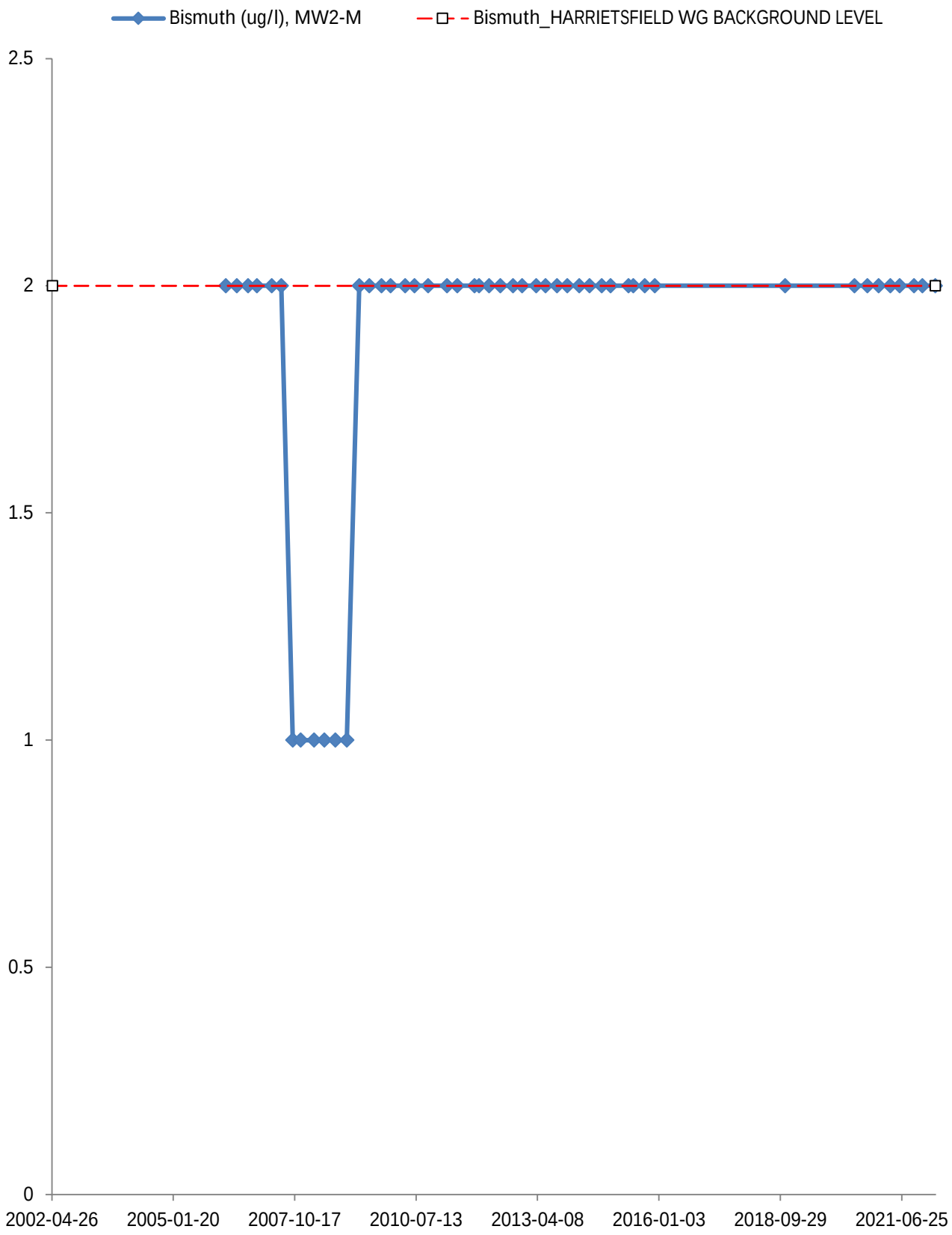
MW2-M-Benzene



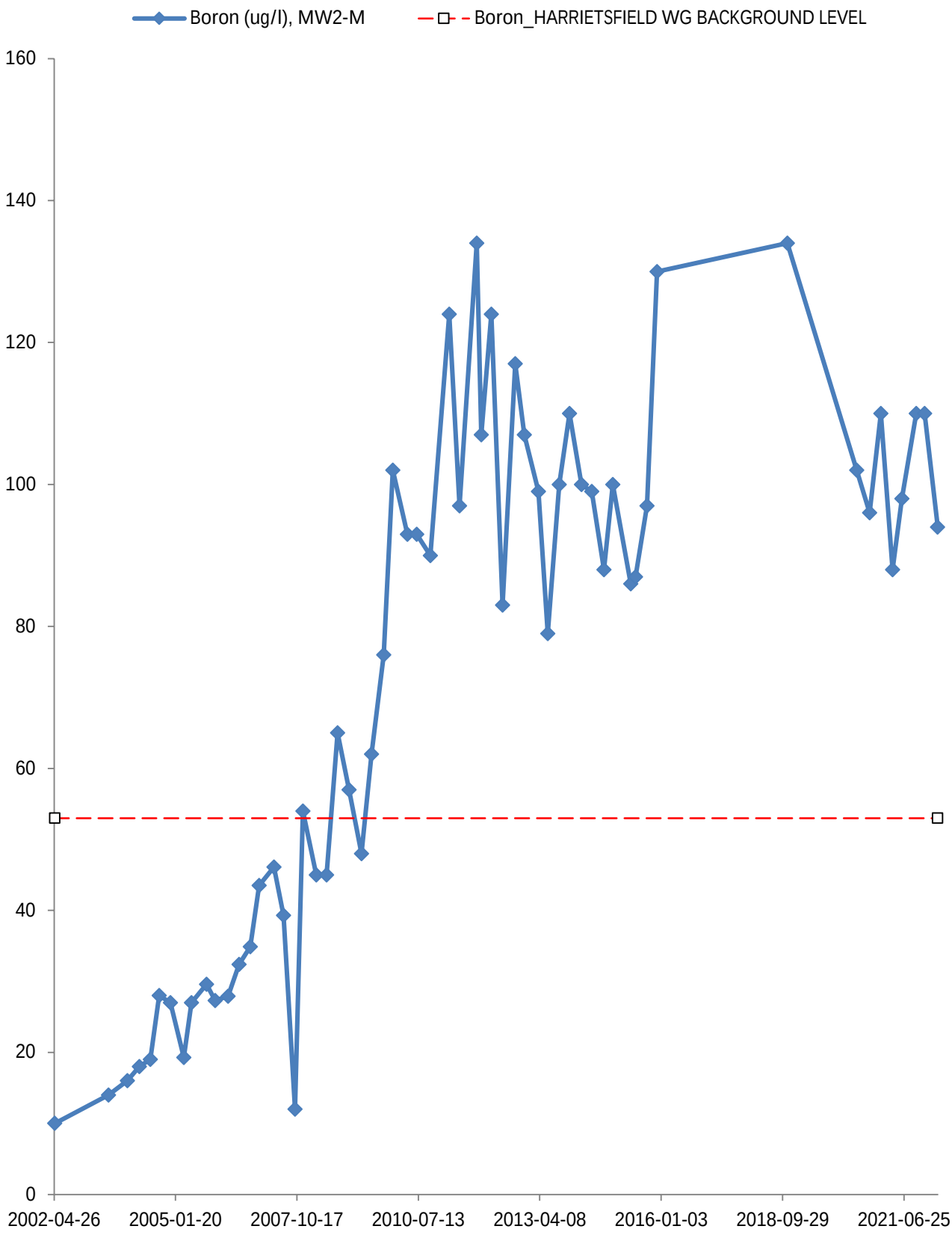
MW2-M-Beryllium



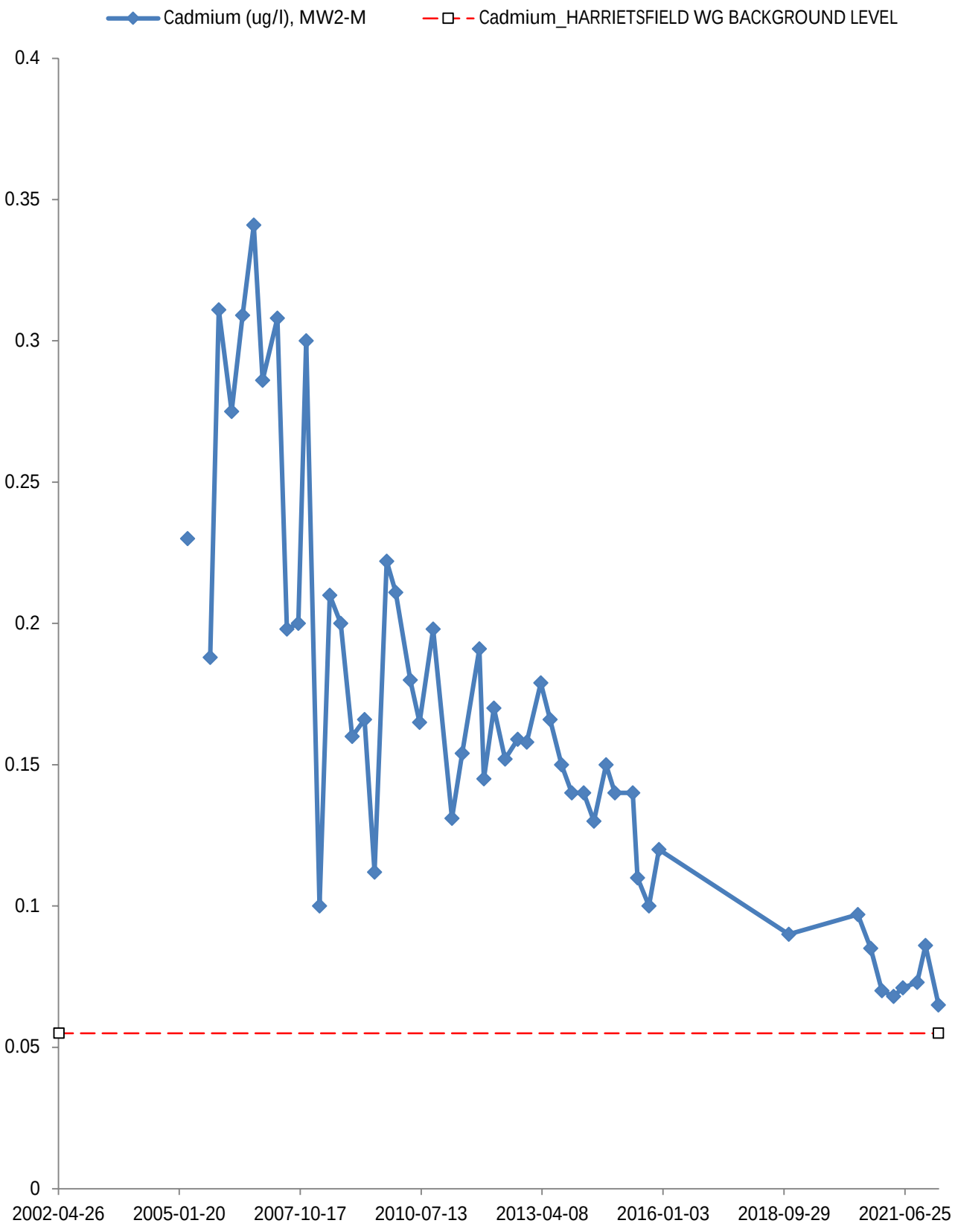
MW2-M-Bismuth



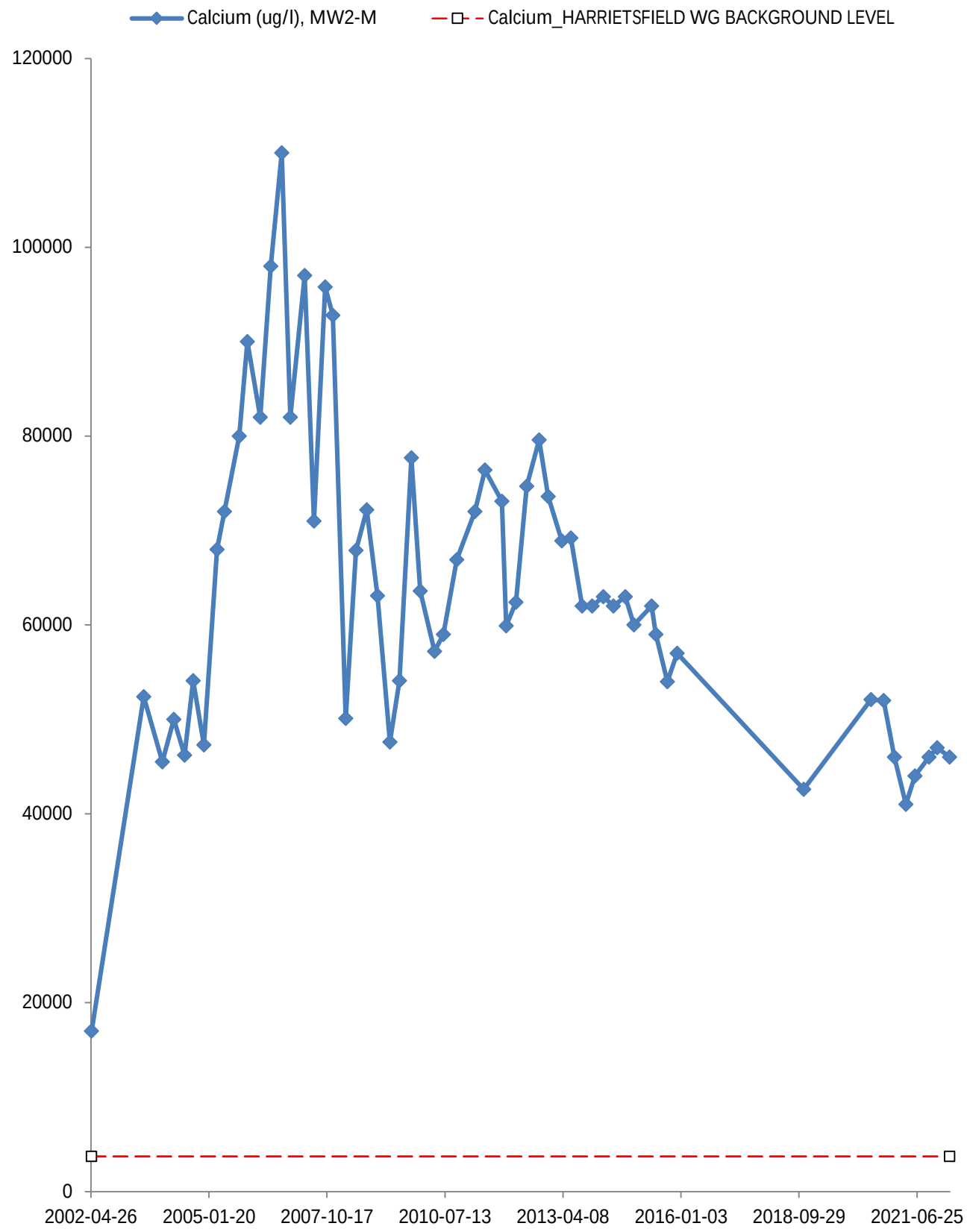
MW2-M-Boron


Boron (ug/l), MW2-M
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
160
140
120
100
80
60
40
20
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

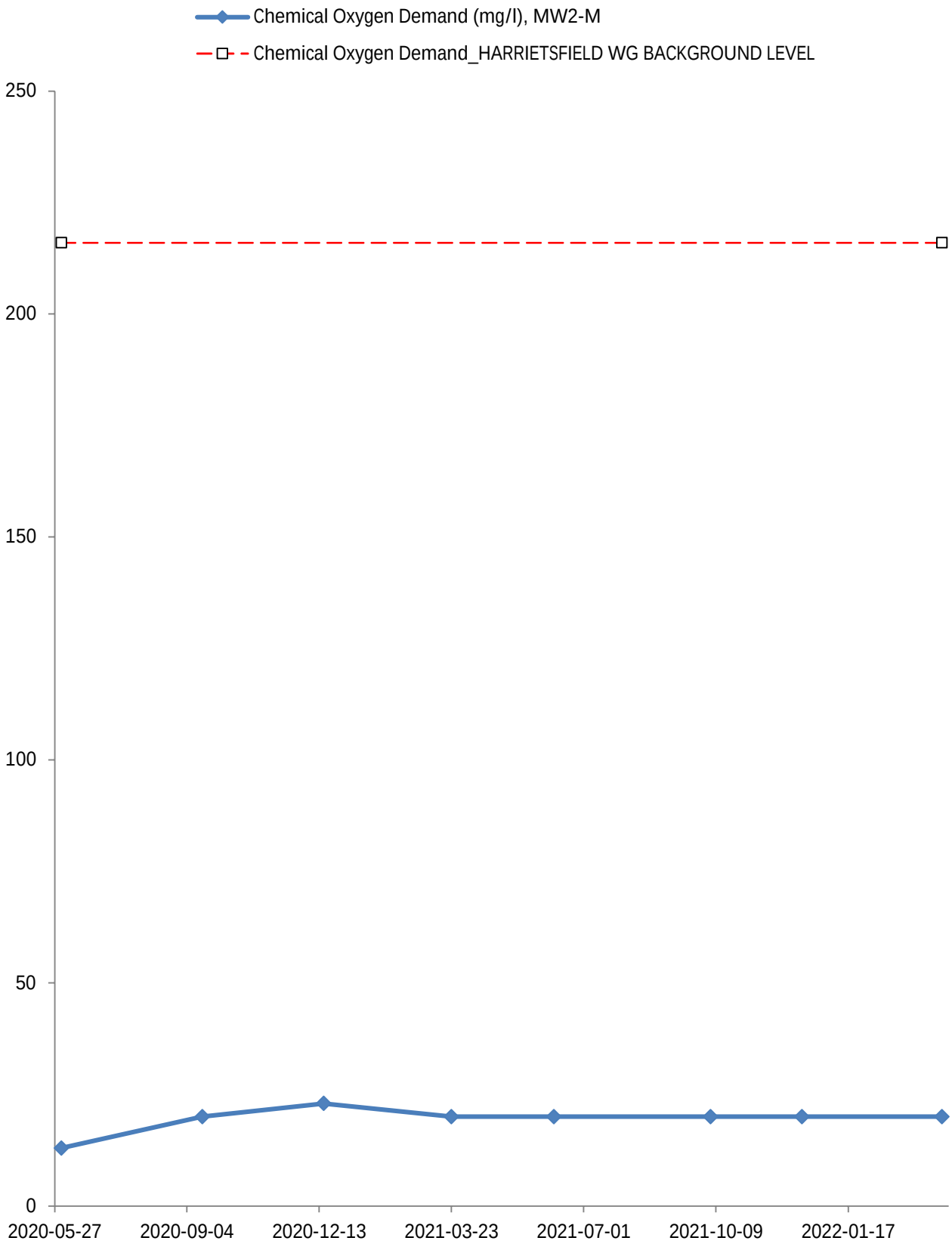
MW2-M-Cadmium



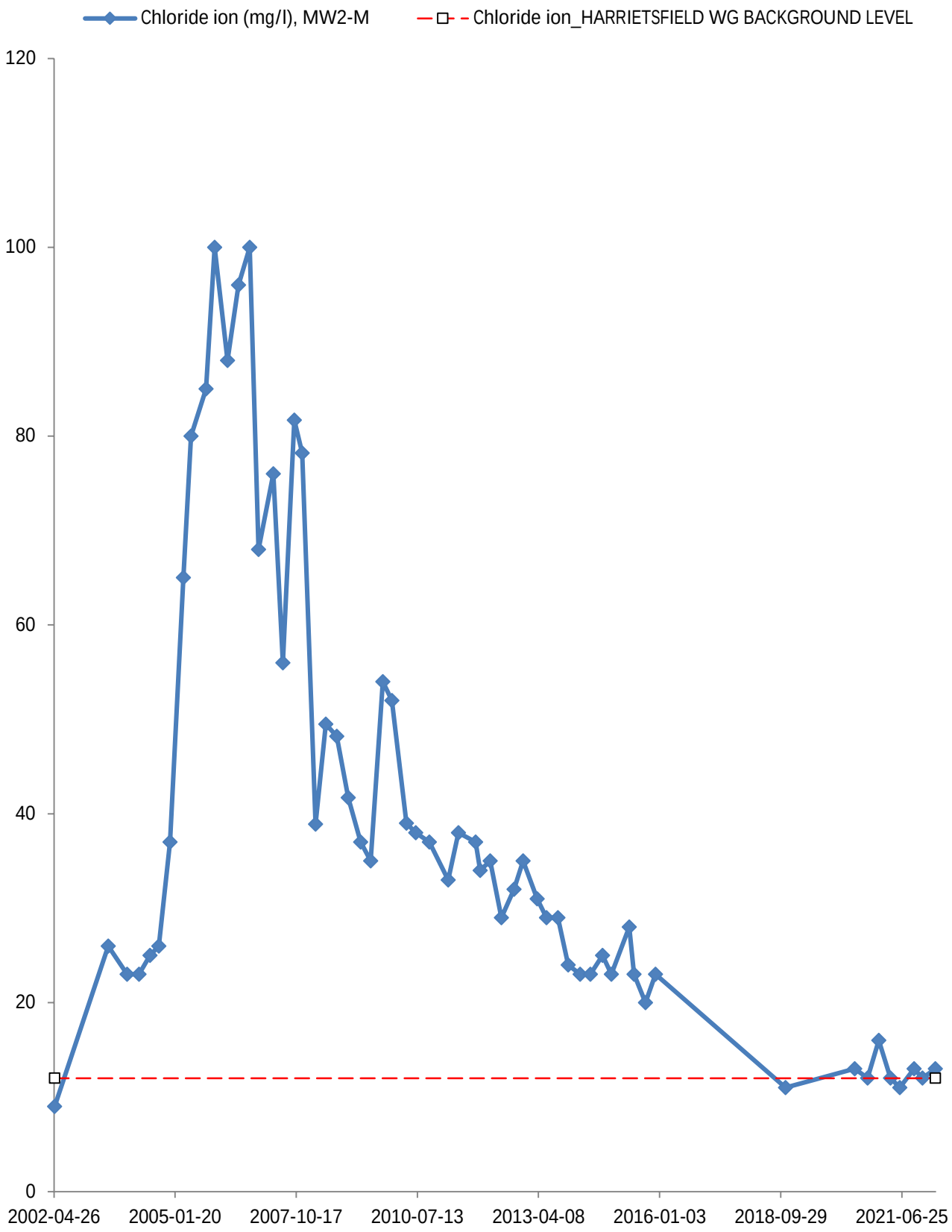
MW2-M-Calcium



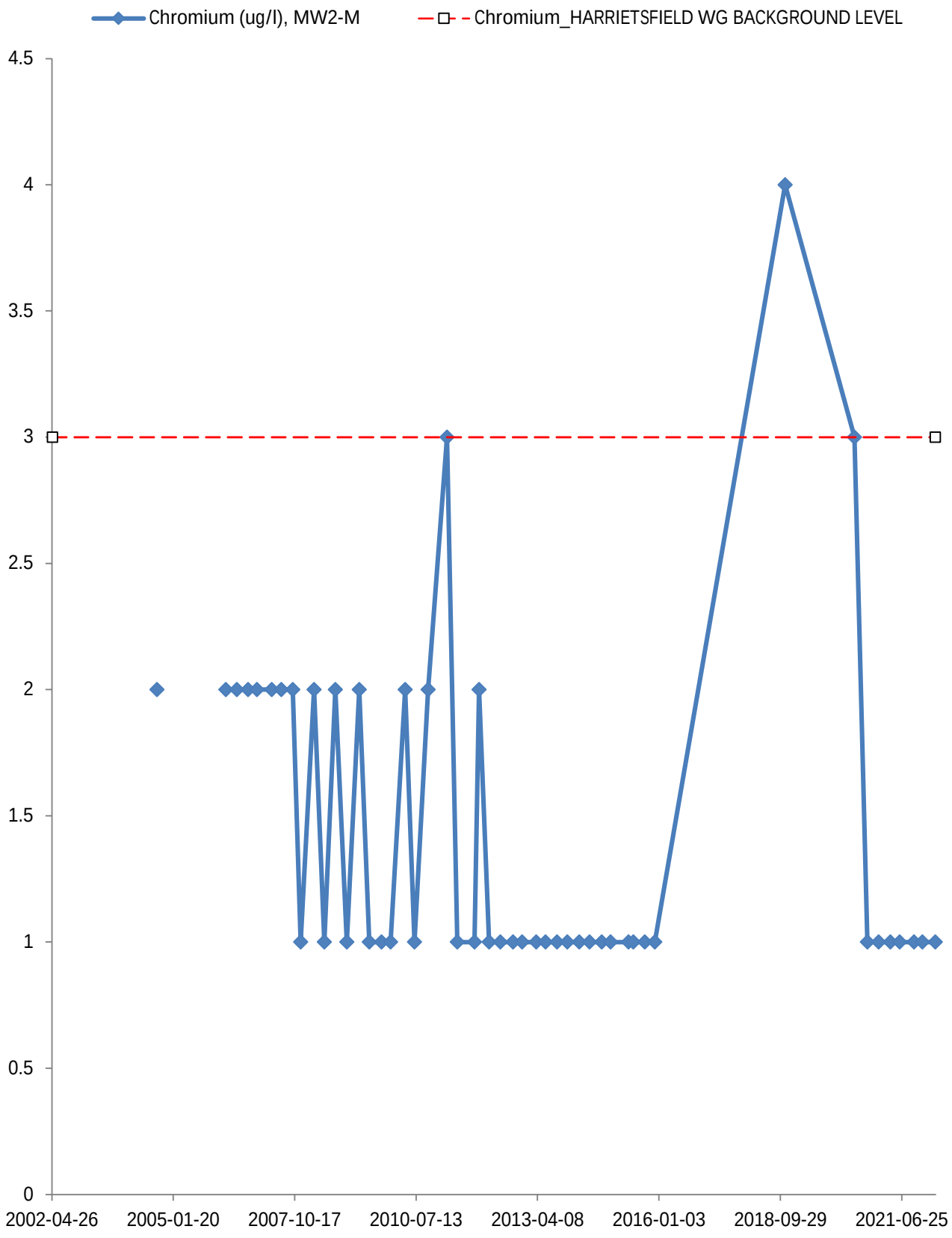
MW2-M-Chemical Oxygen Demand



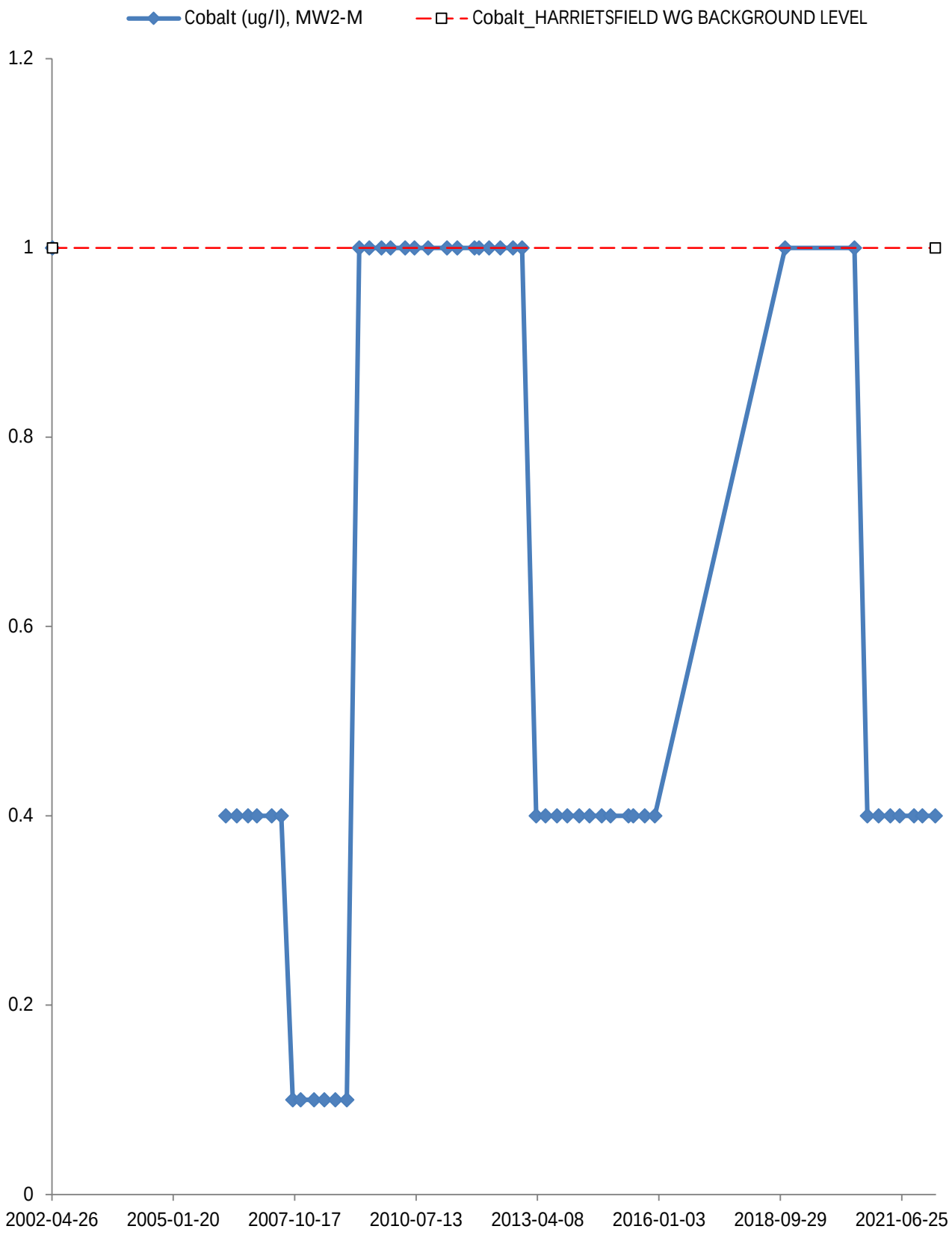
MW2-M-Chloride ion



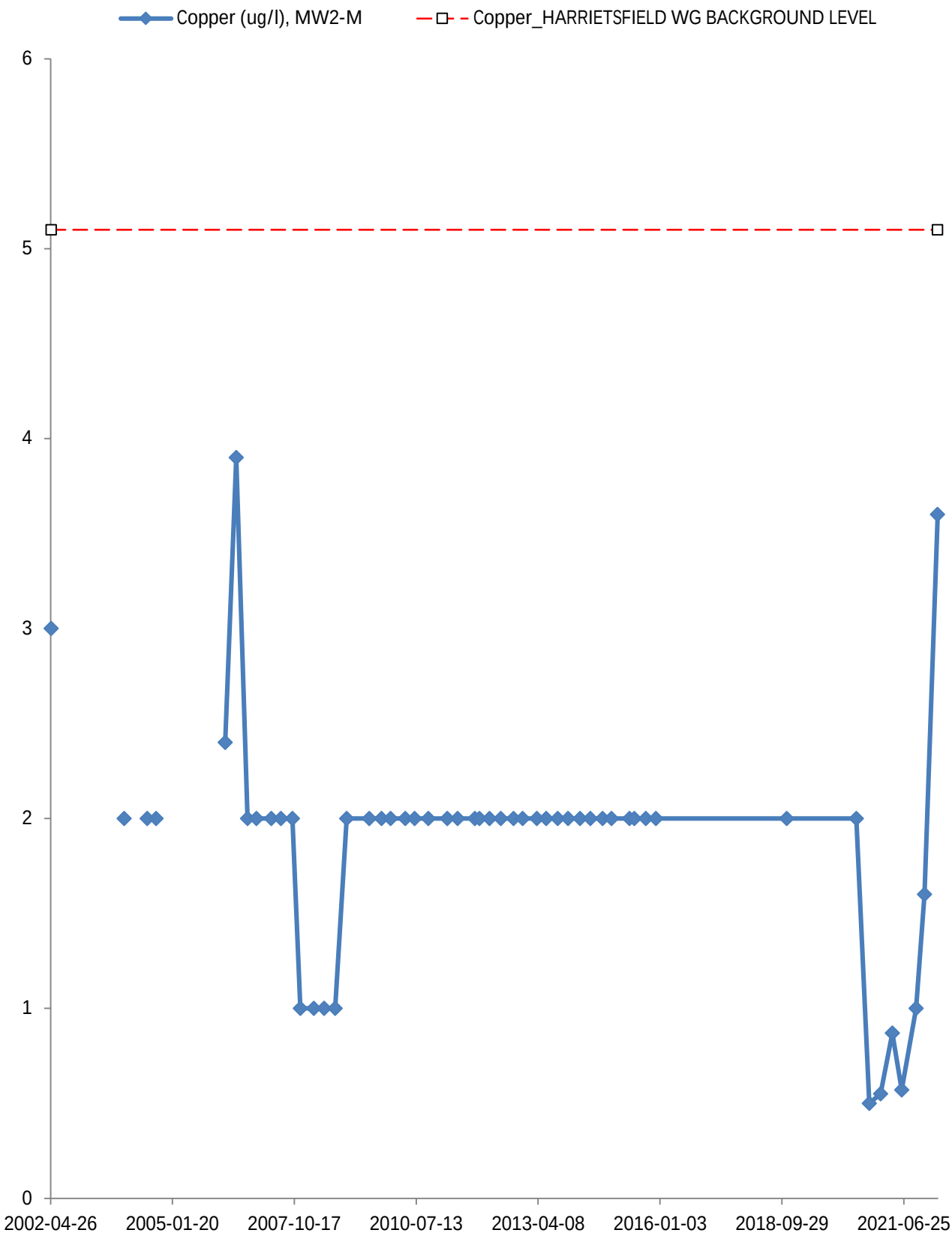
MW2-M-Chromium



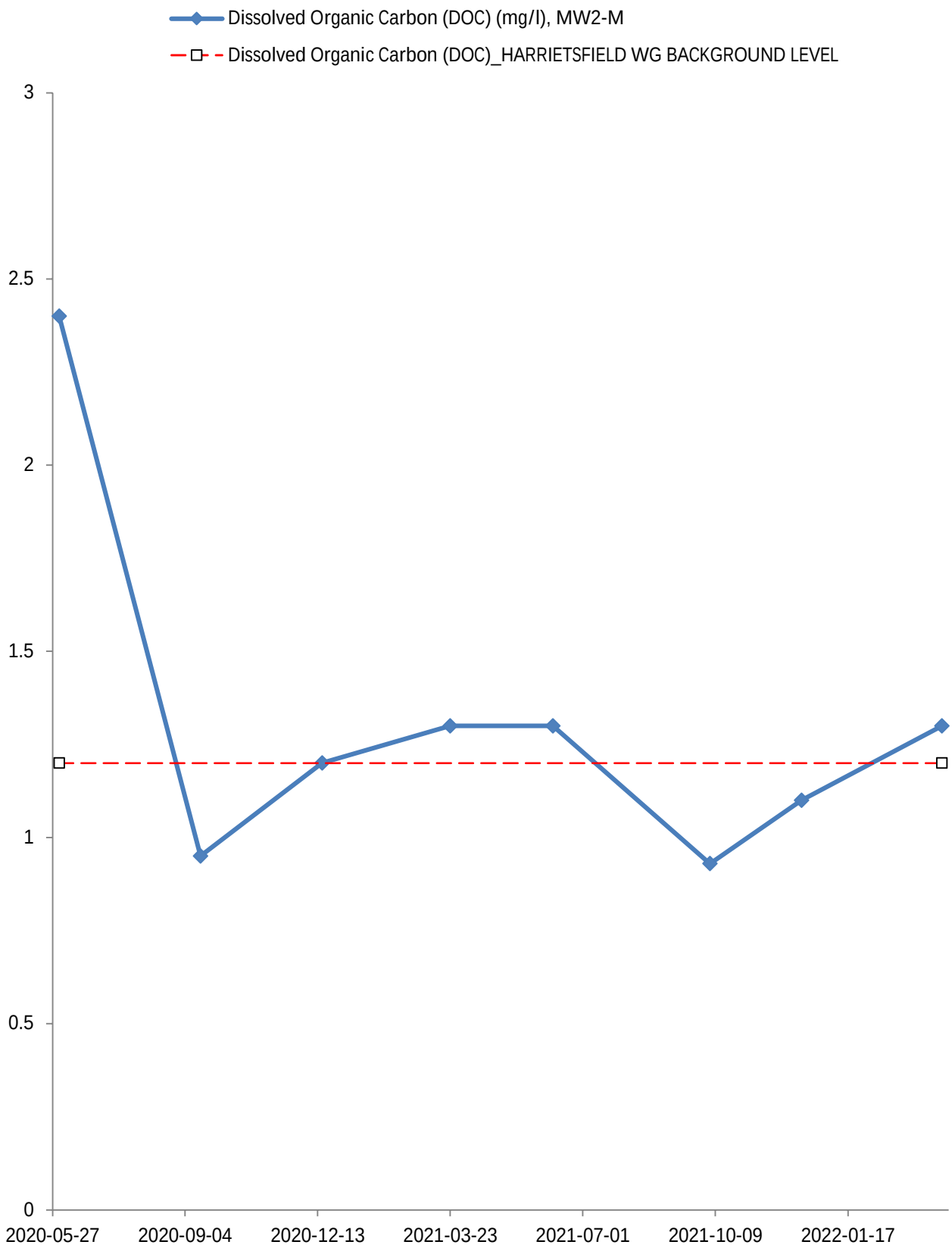
MW2-M-Cobalt


Cobalt (ug/l), MW2-M
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

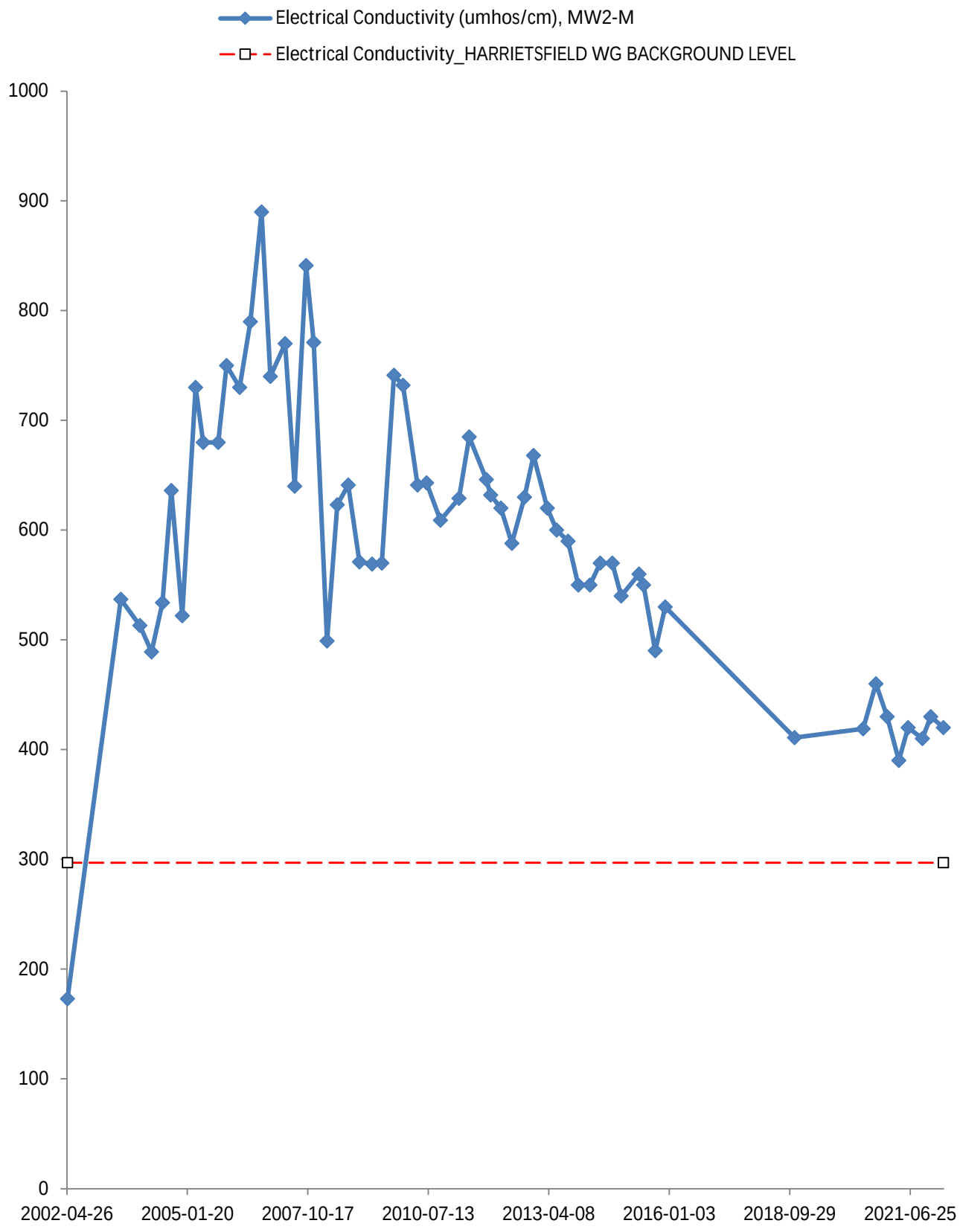
MW2-M-Copper


Copper (ug/l), MW2-M
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

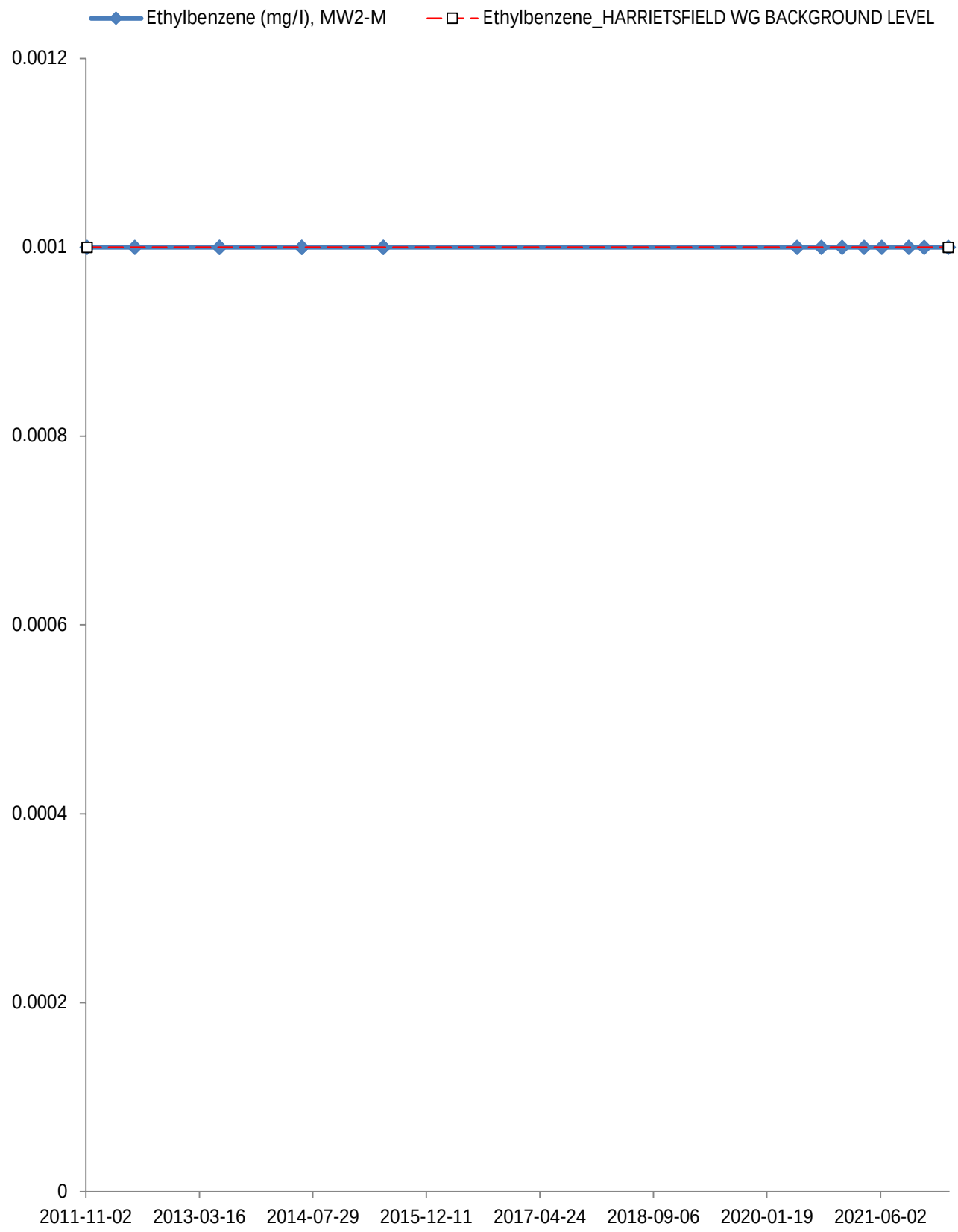
MW2-M-Dissolved Organic Carbon7



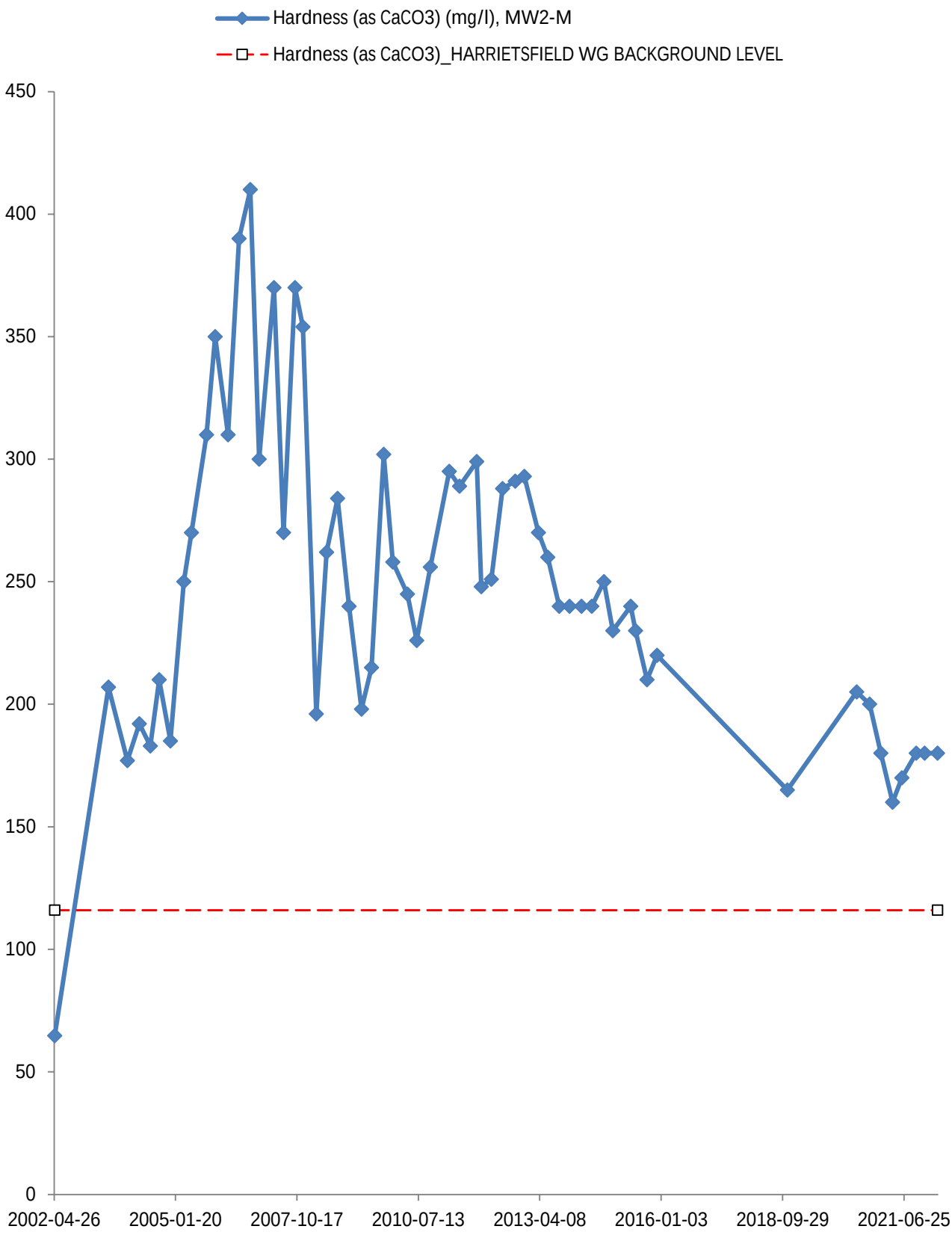
MW2-M-Electrical Conductivity



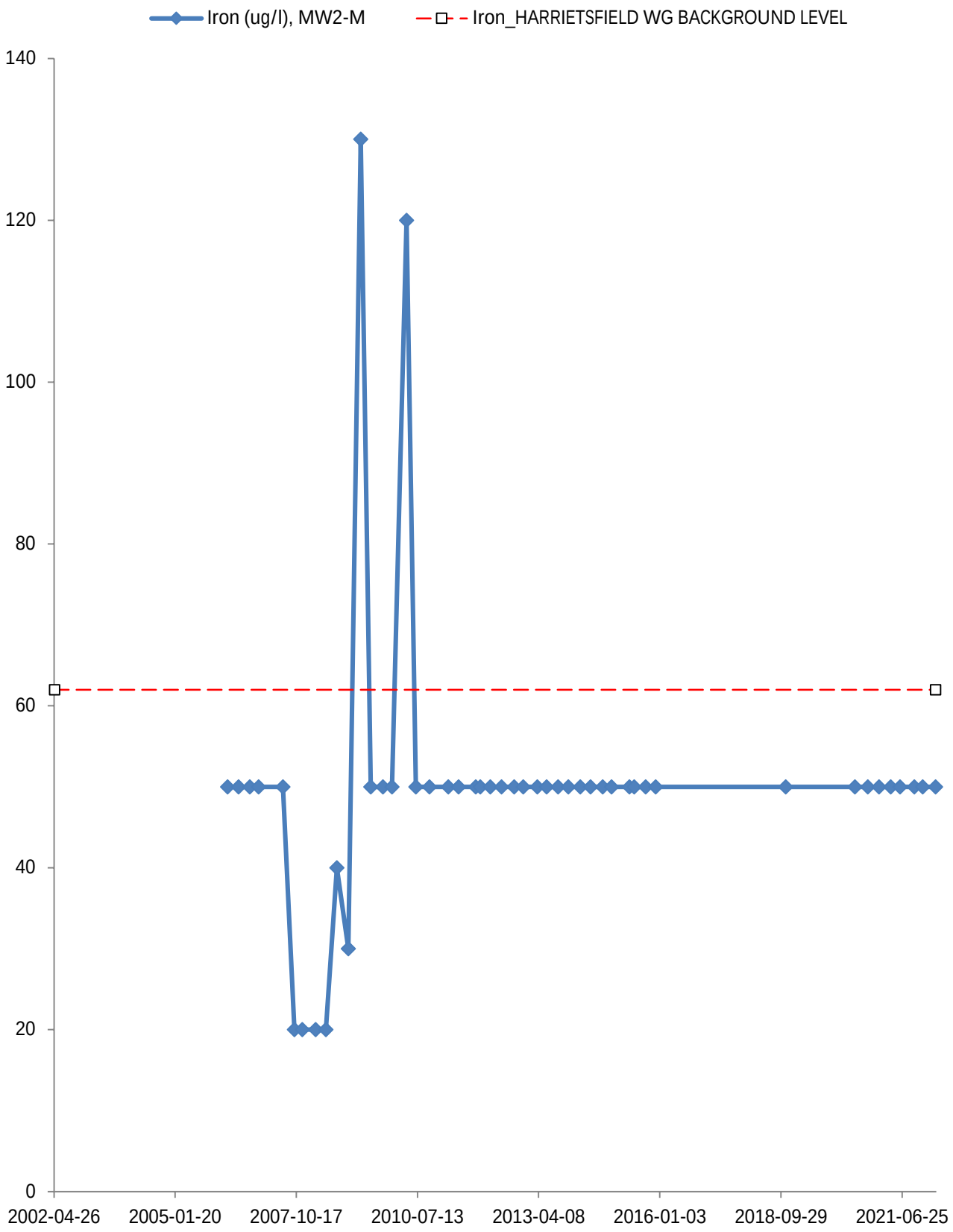
MW2-M-Ethylbenzene



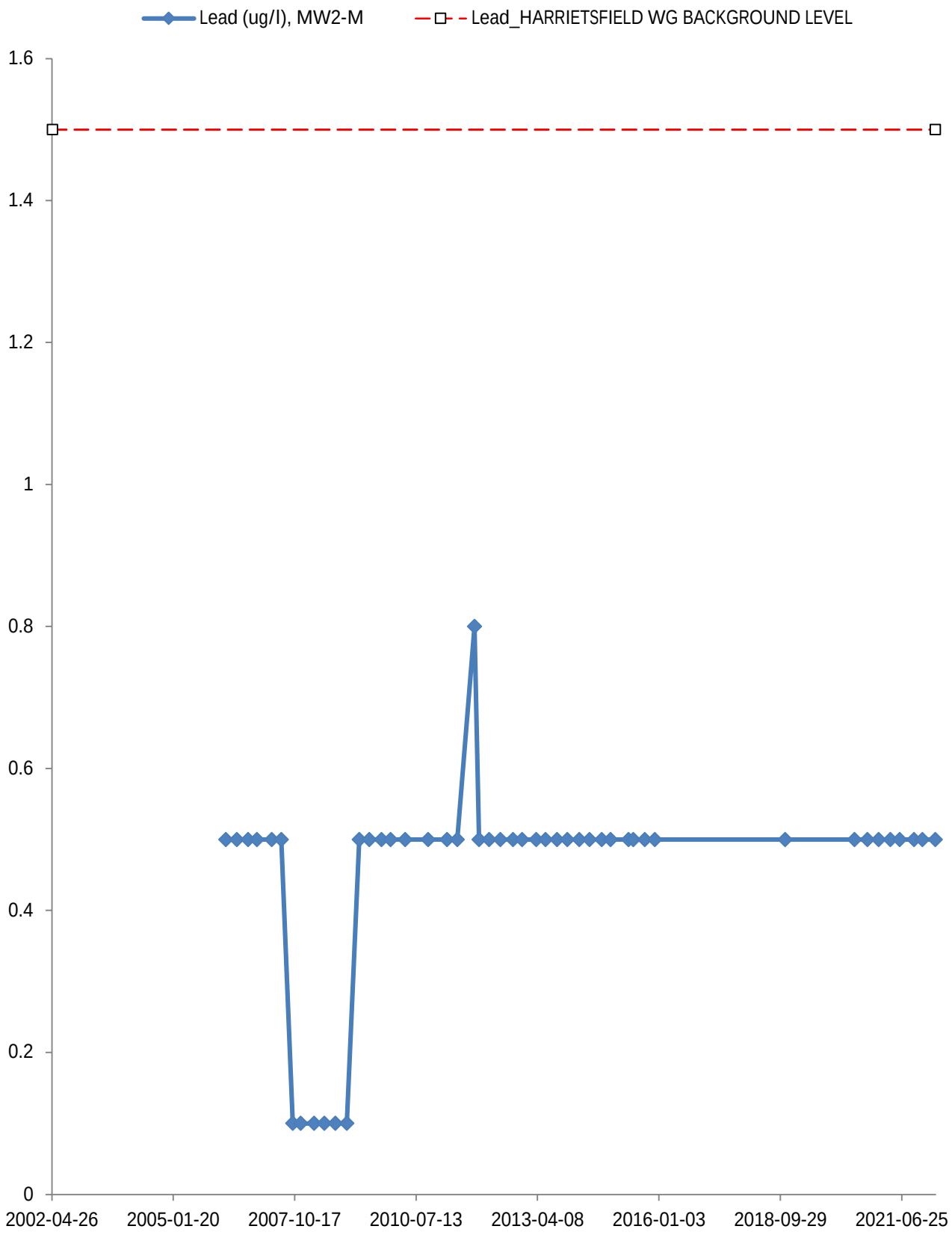
MW2-M-Hardness (as CaCO3)



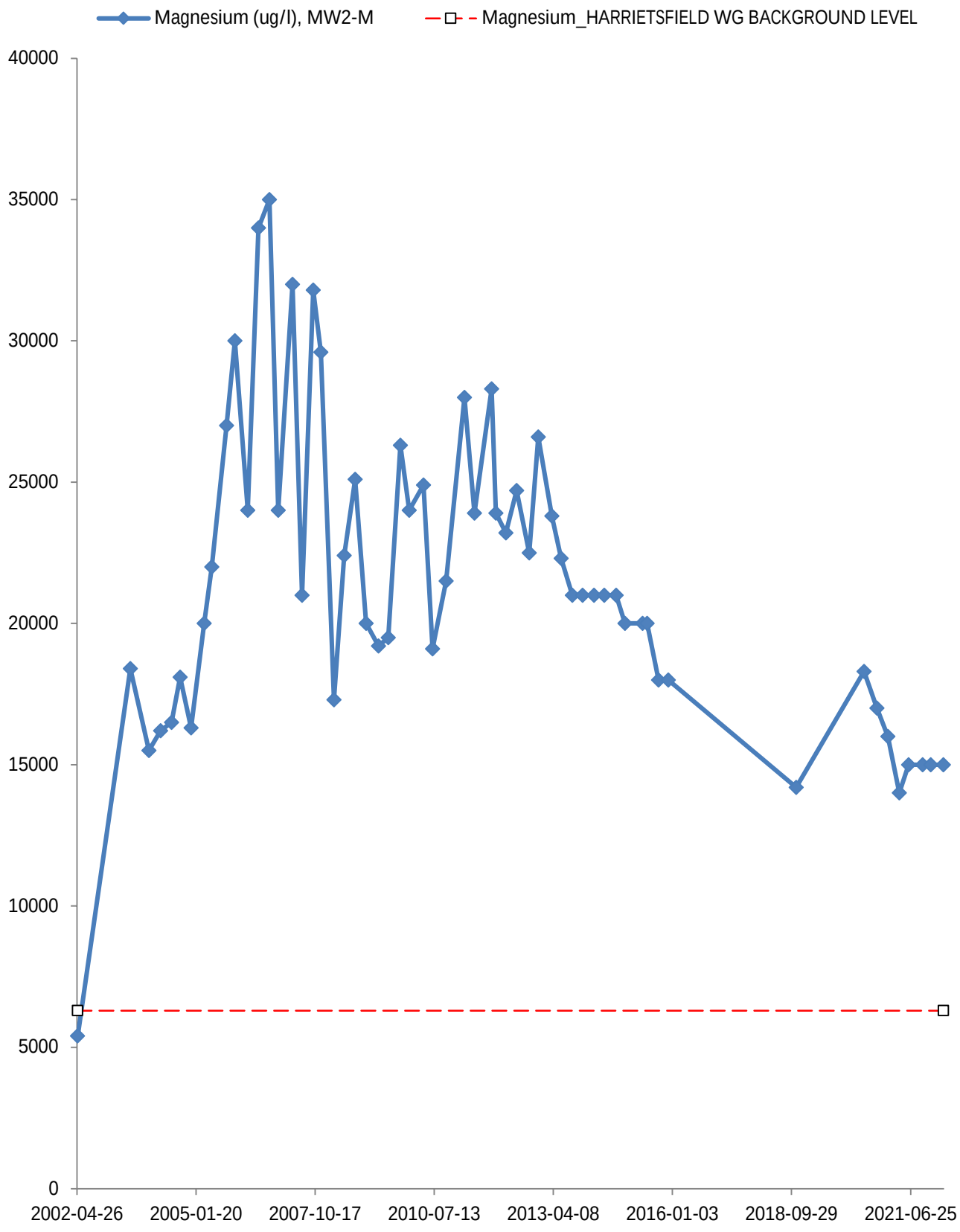
MW2-M-Iron


Iron (ug/l), MW2-M
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
140
120
100
80
60
40
20
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

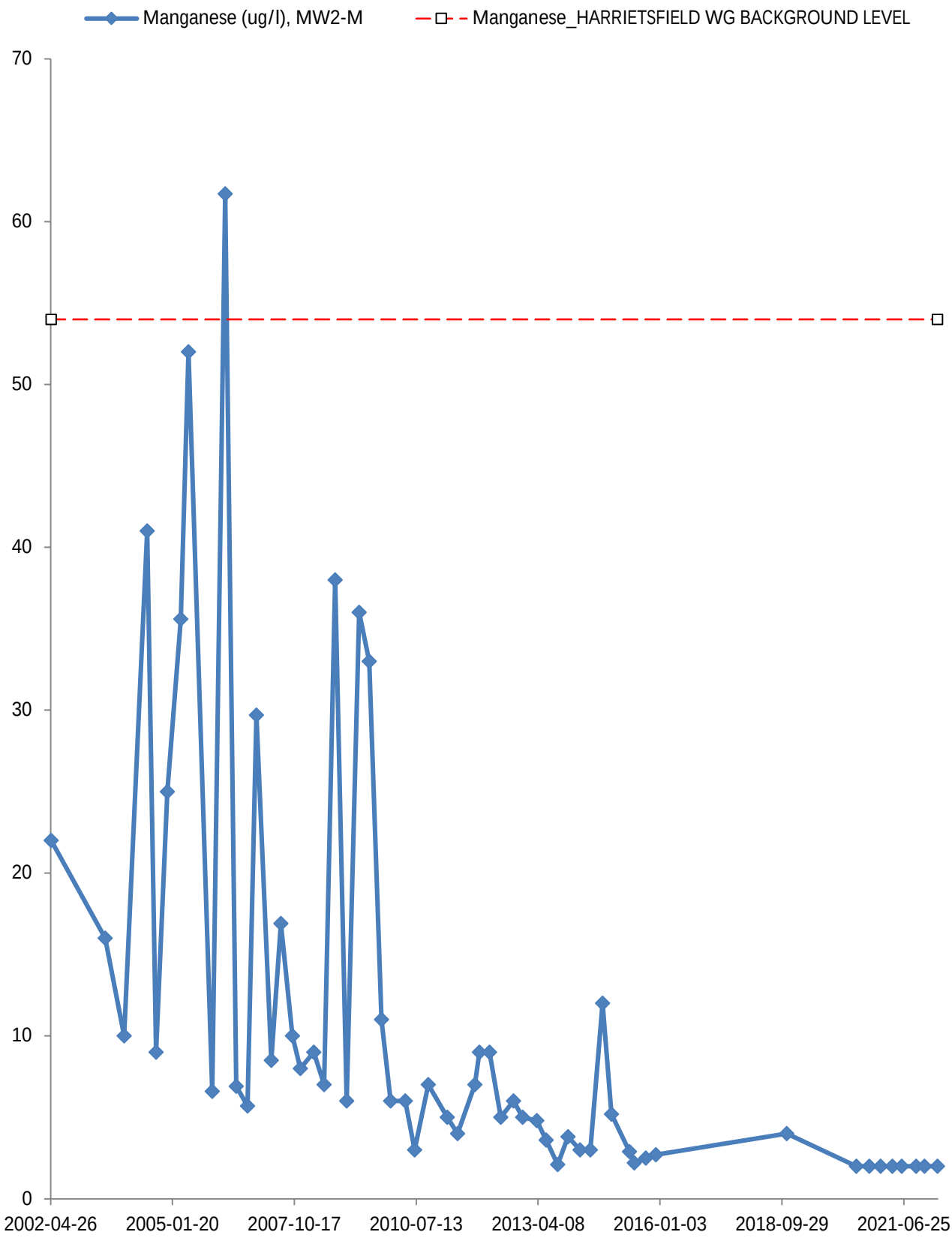
MW2-M-Lead


Lead (ug/l), MW2-M
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

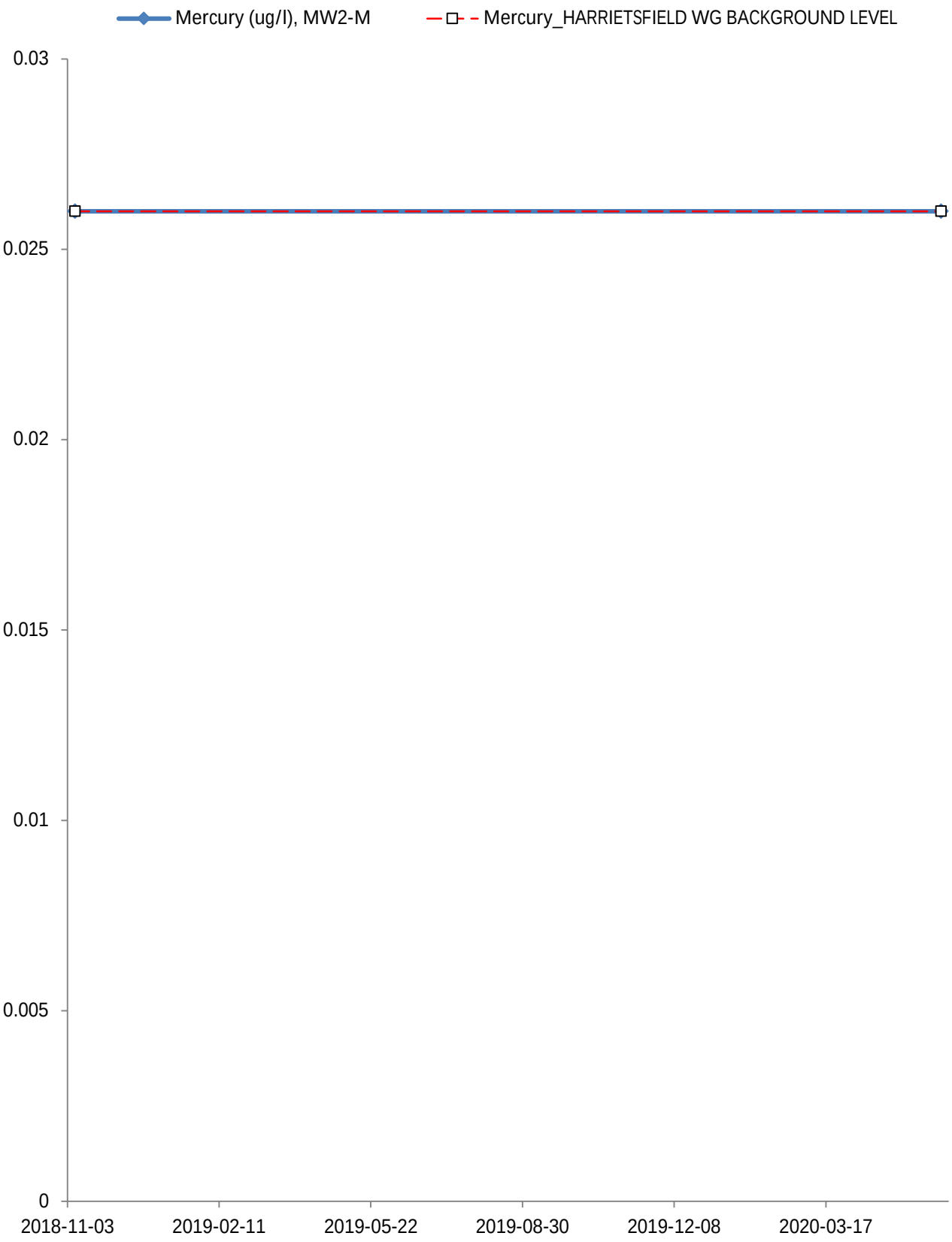
MW2-M-Magnesium



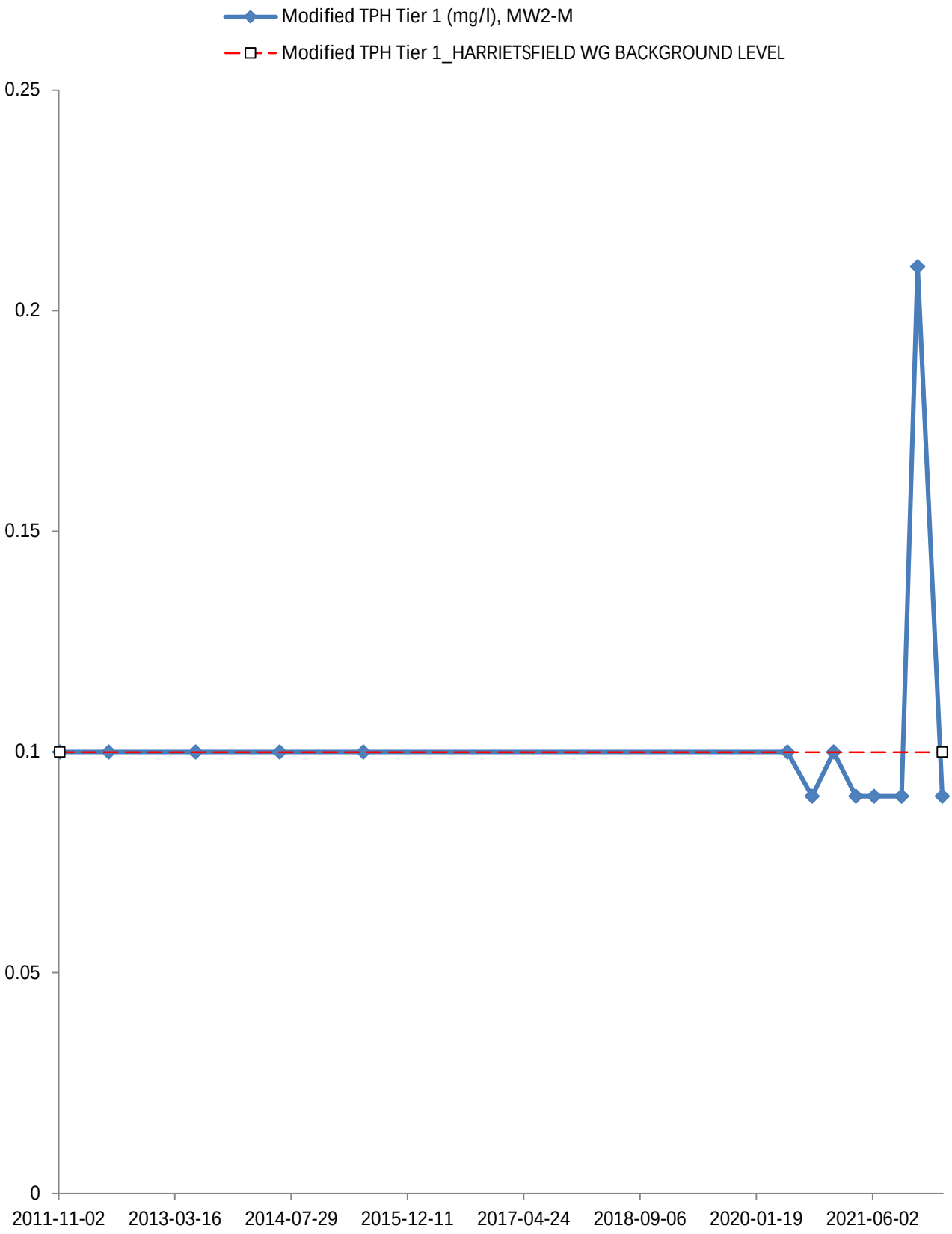
MW2-M-Manganese



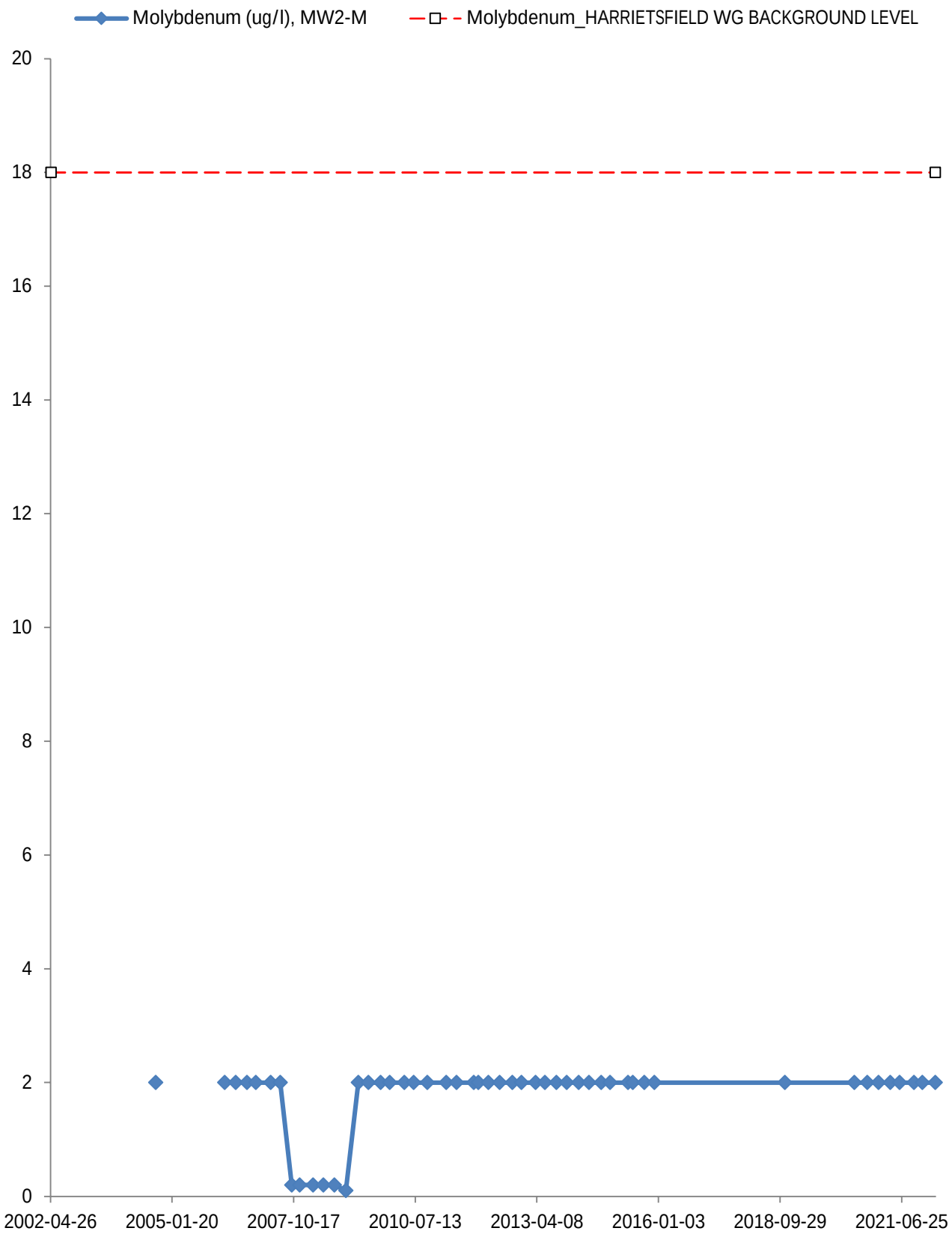
MW2-M-Mercury



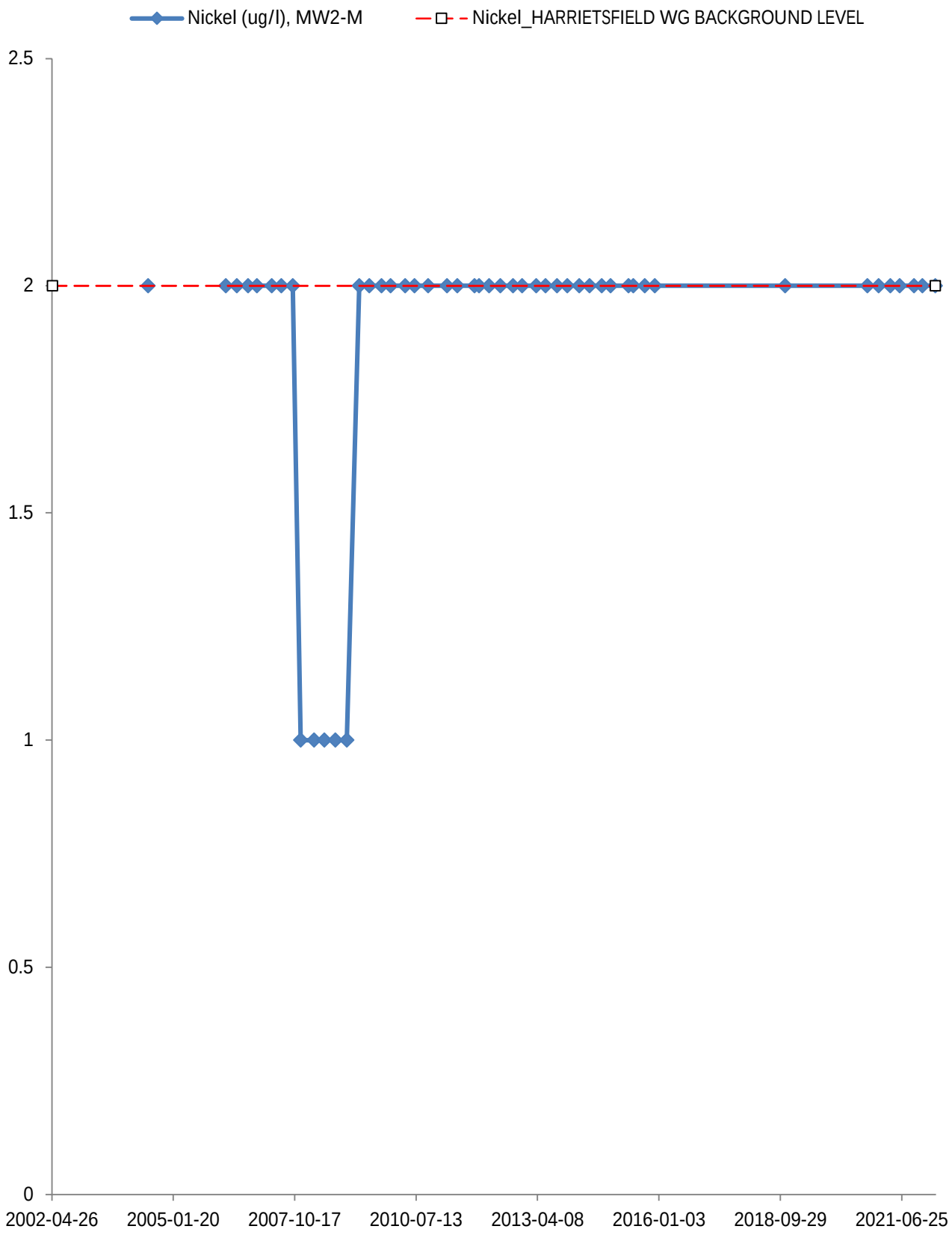
MW2-M-Modified TPH Tier 1



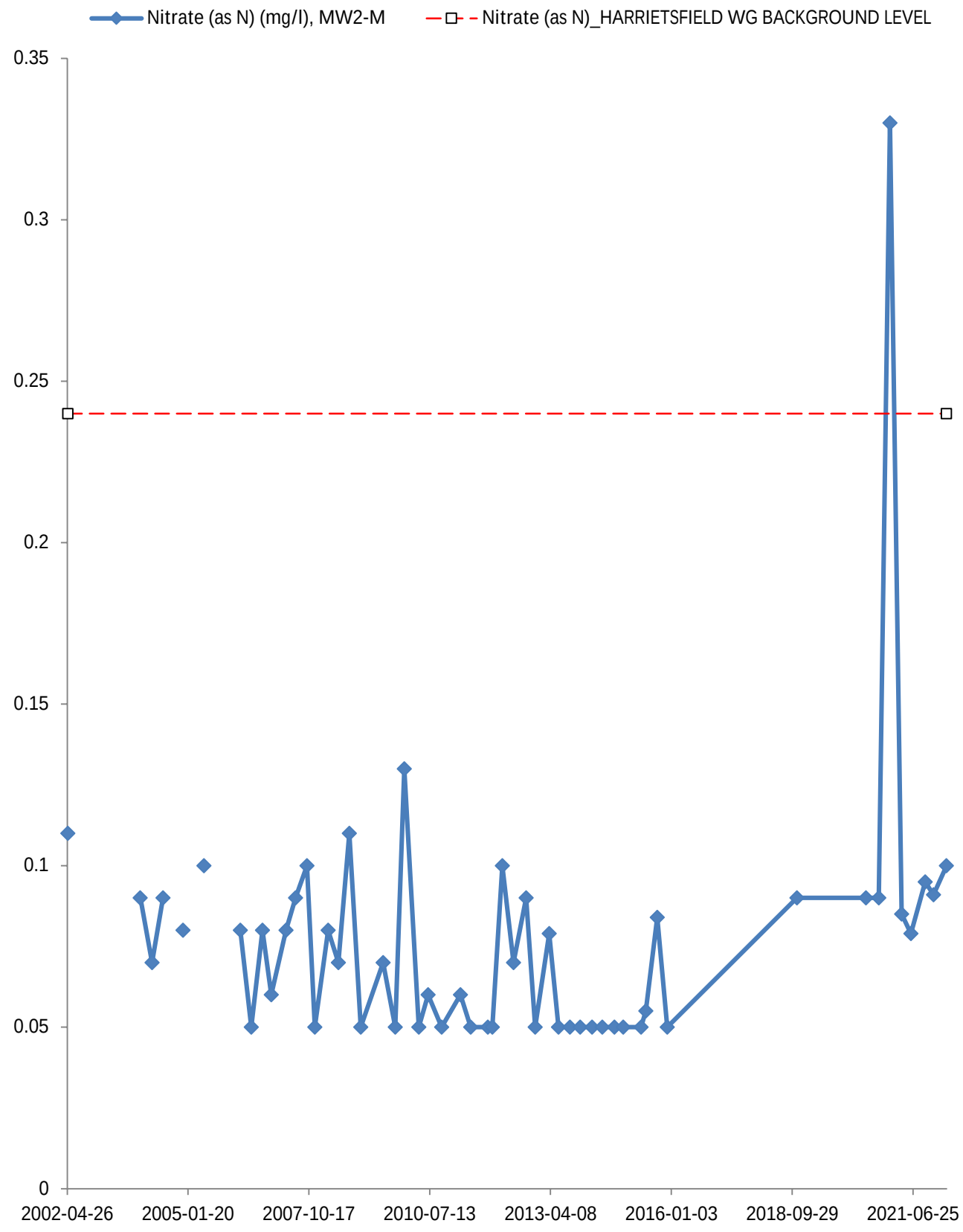
MW2-M-Molybdenum



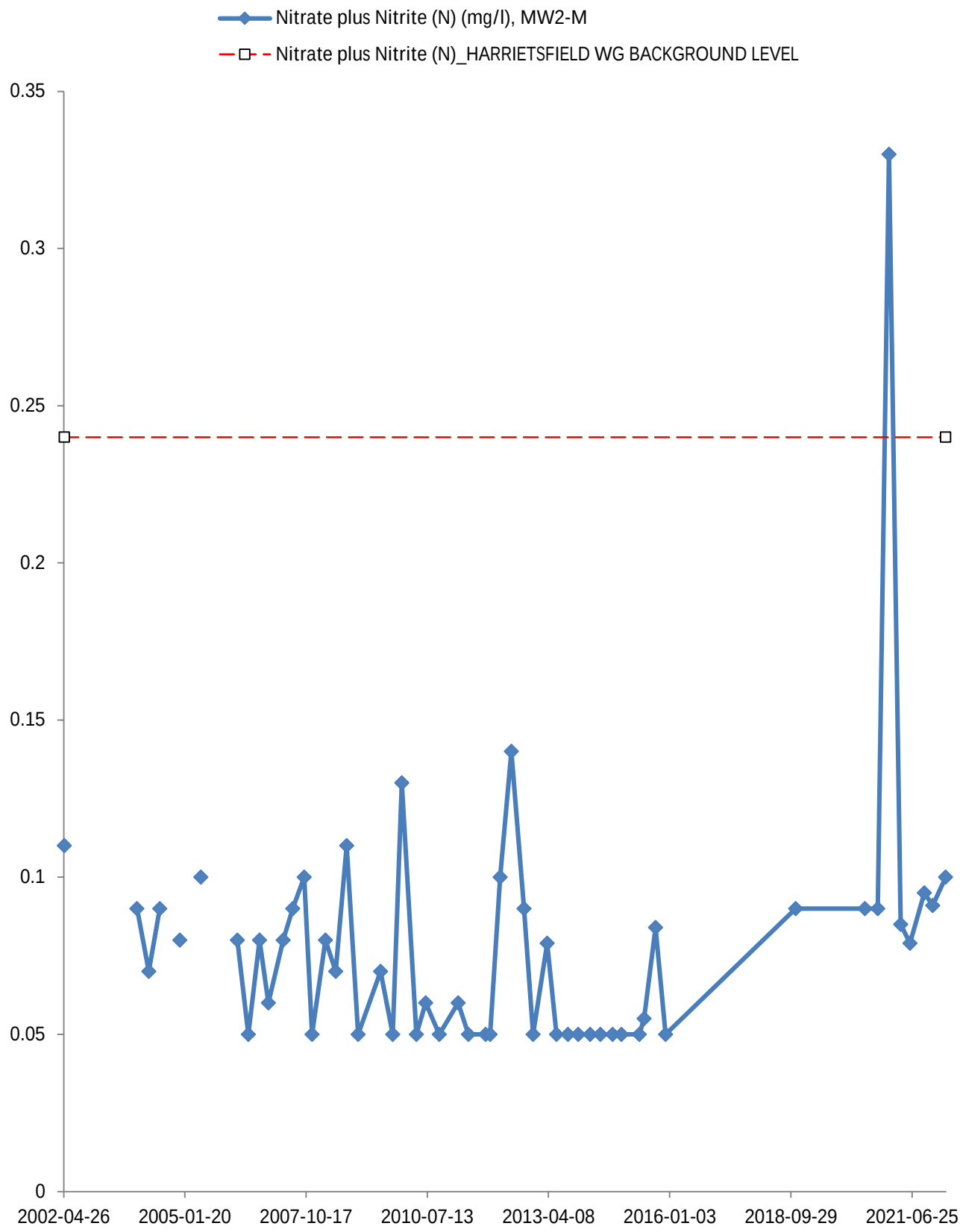
MW2-M-Nickel


Nickel (ug/l), MW2-M
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

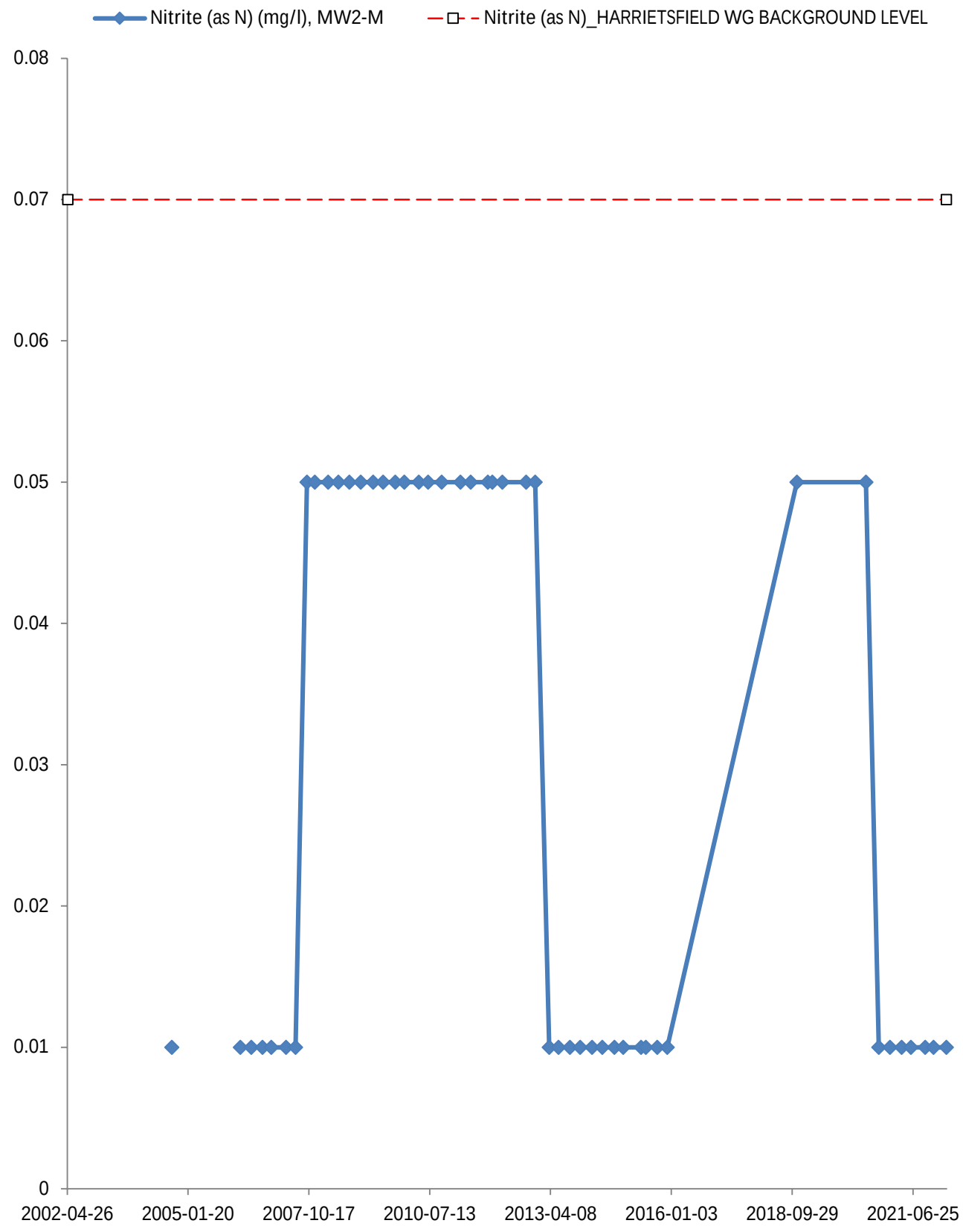
MW2-M-Nitrate (as N)



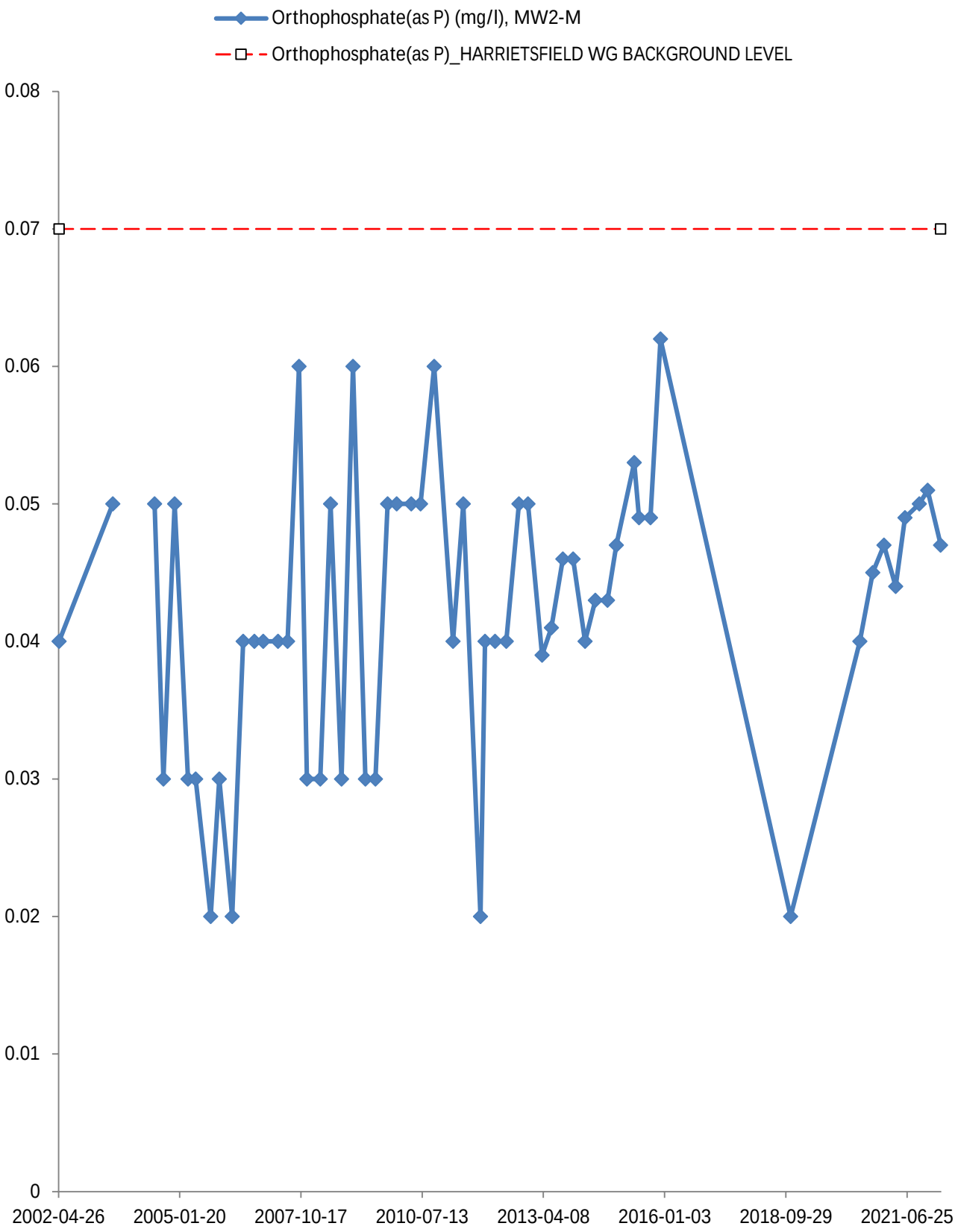
MW2-M-Nitrate plus Nitrite (N)



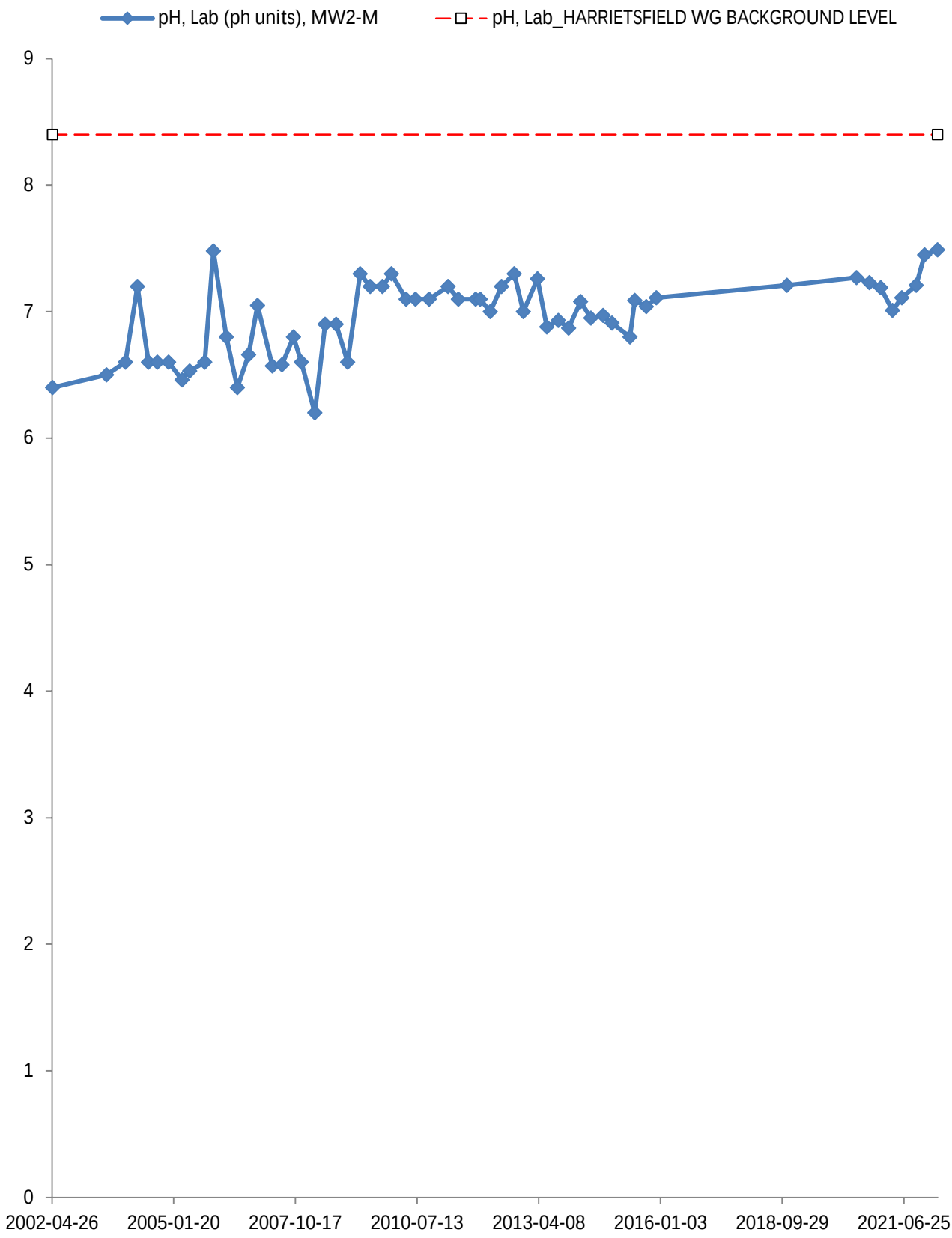
MW2-M-Nitrite (as N)



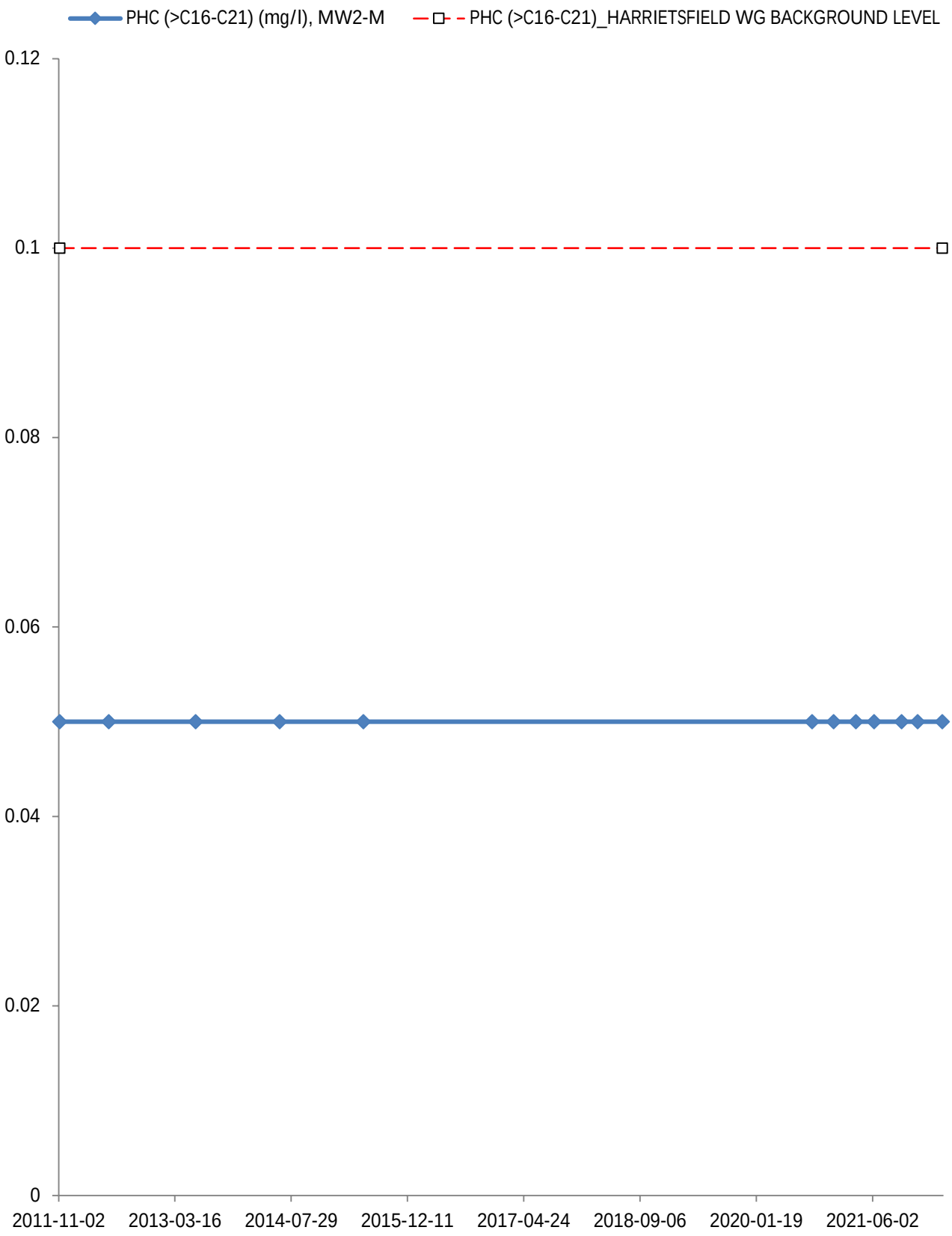
MW2-M-Orthophosphate(as P)



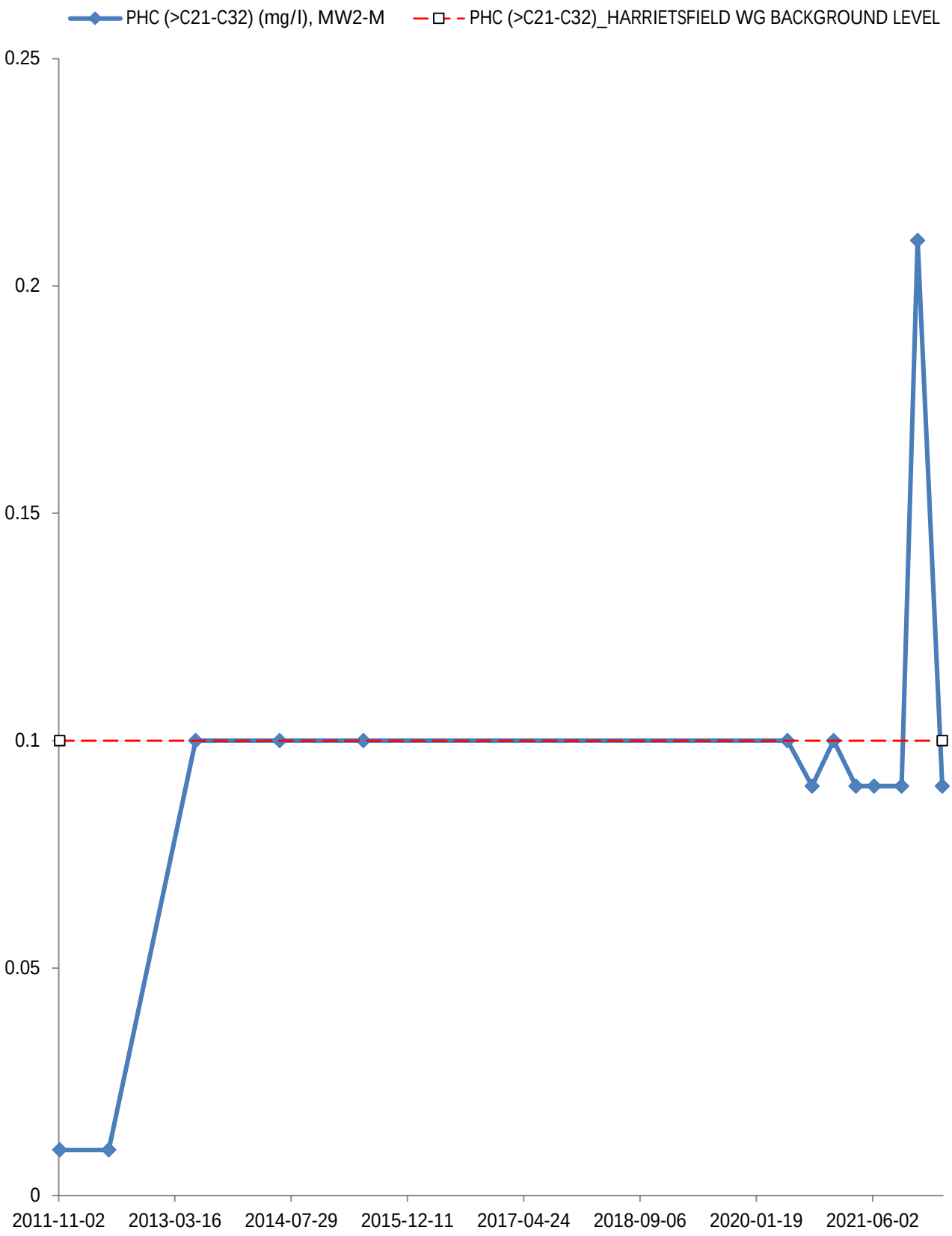
MW2-M-pH, Lab


pH, Lab (ph units), MW2-M
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

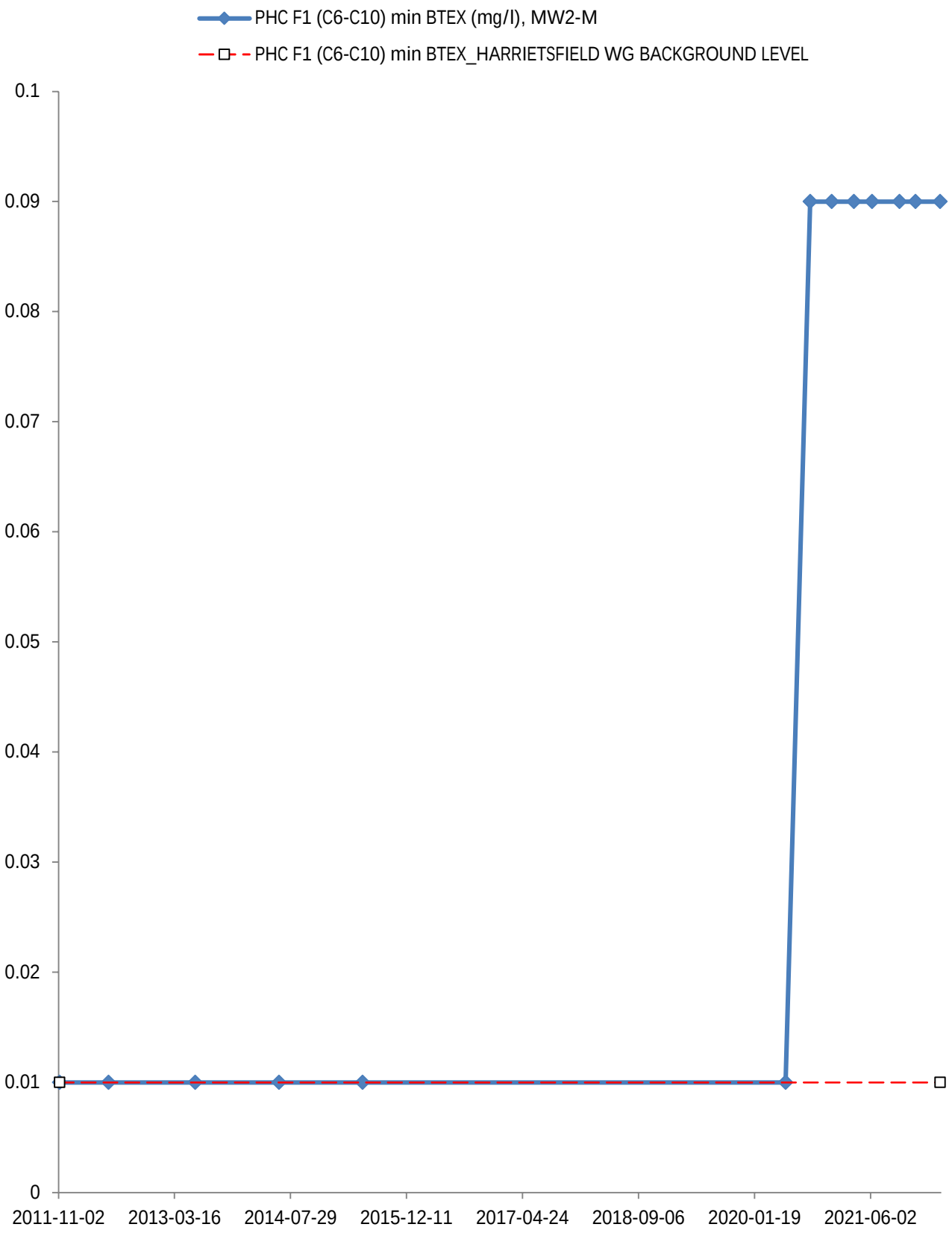
MW2-M-PHC (>C16-C21)



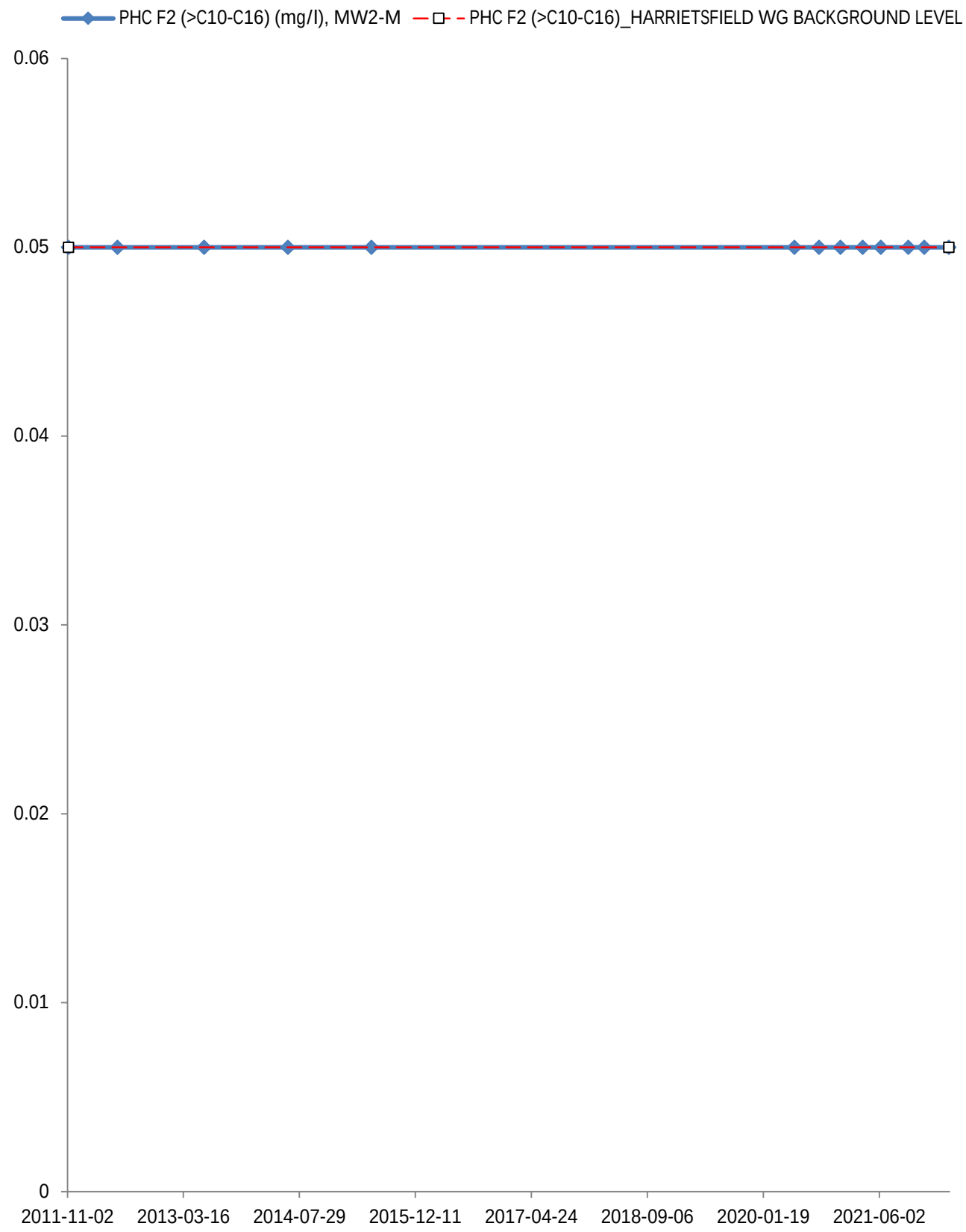
MW2-M-PHC (>C21-C32)



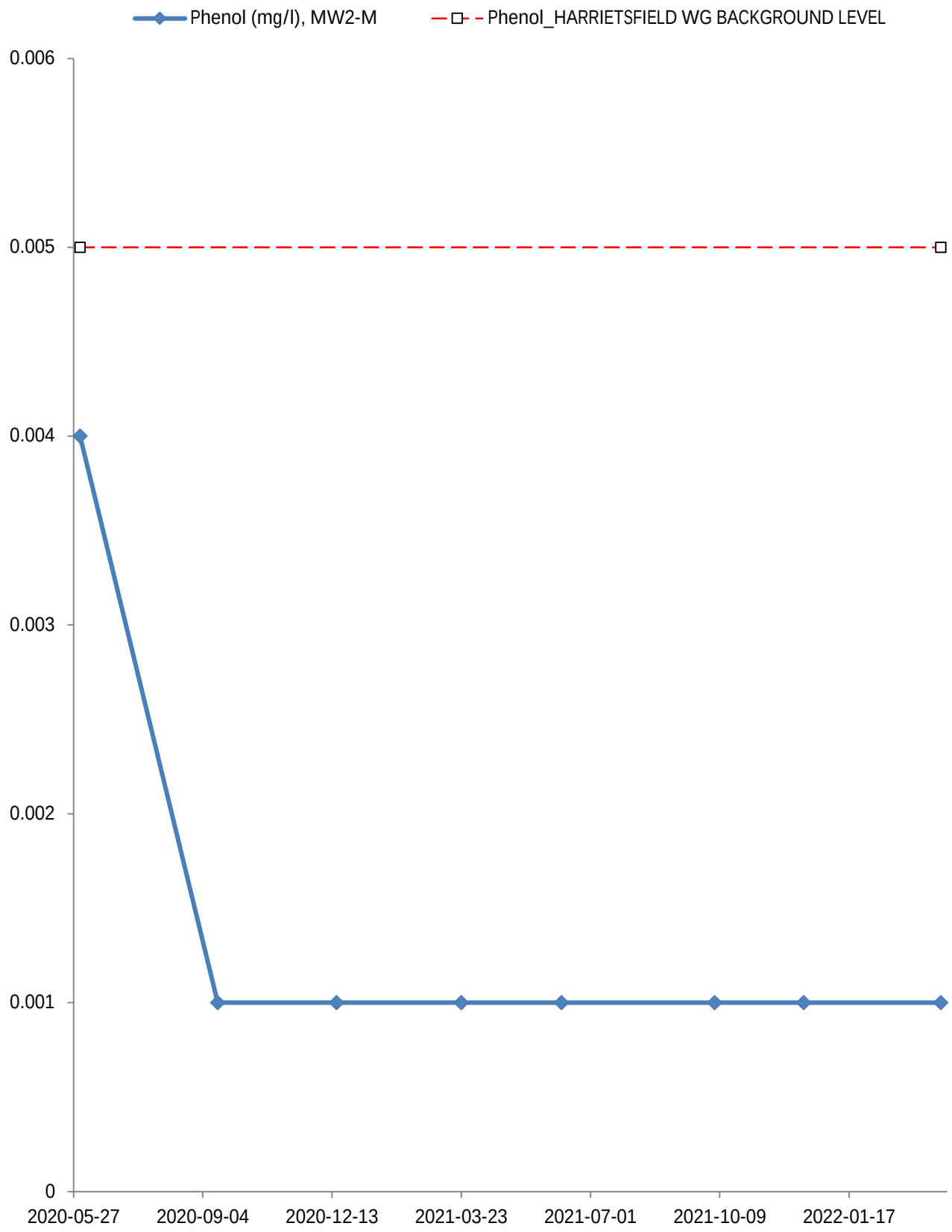
MW2-M-PHC F1 (C6-C10) min BTEX



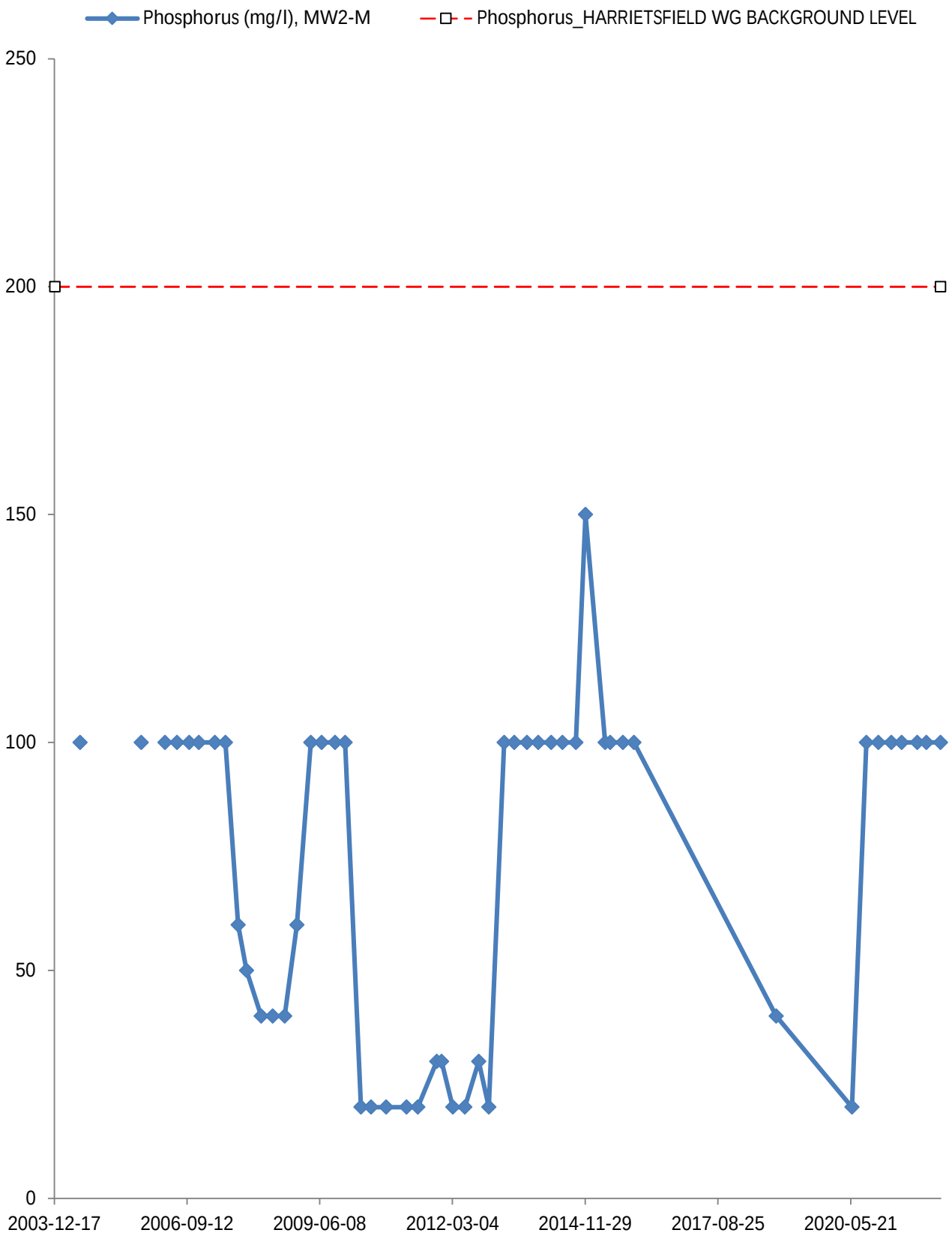
MW2-M-PHC F2 (>C10-C16)



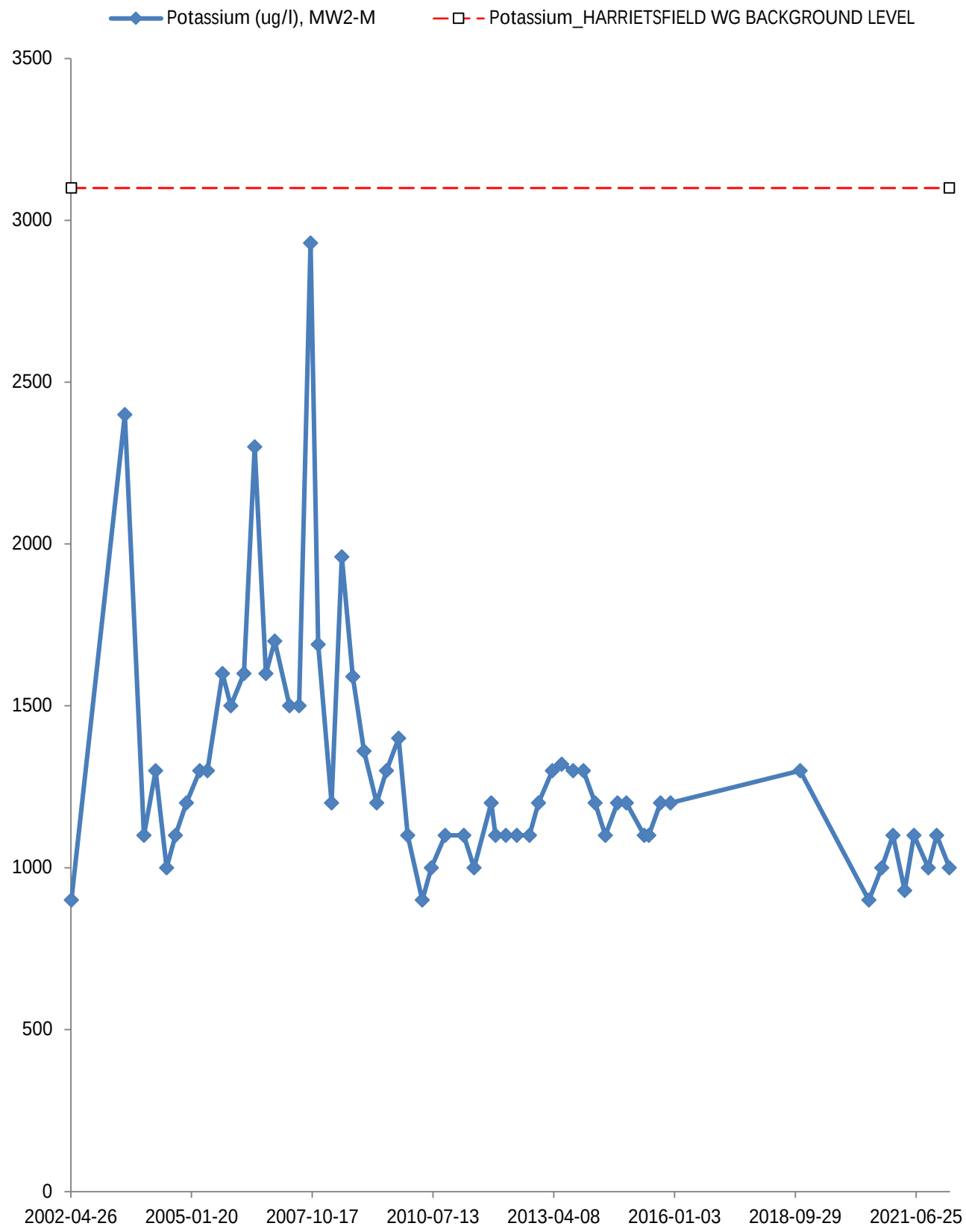
MW2-M-Phenol


Phenol (mg/l), MW2-M
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

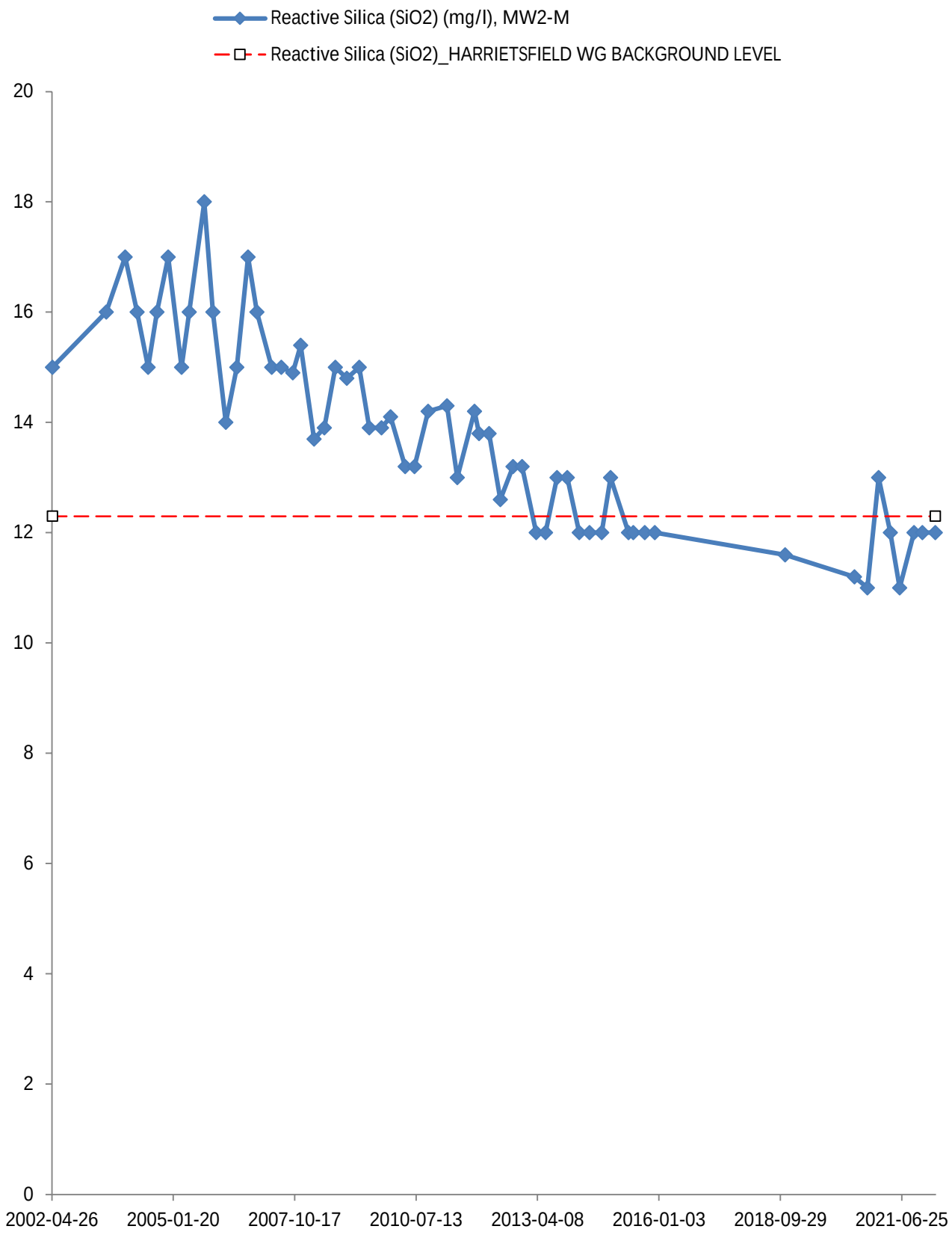
MW2-M-Phosphorus



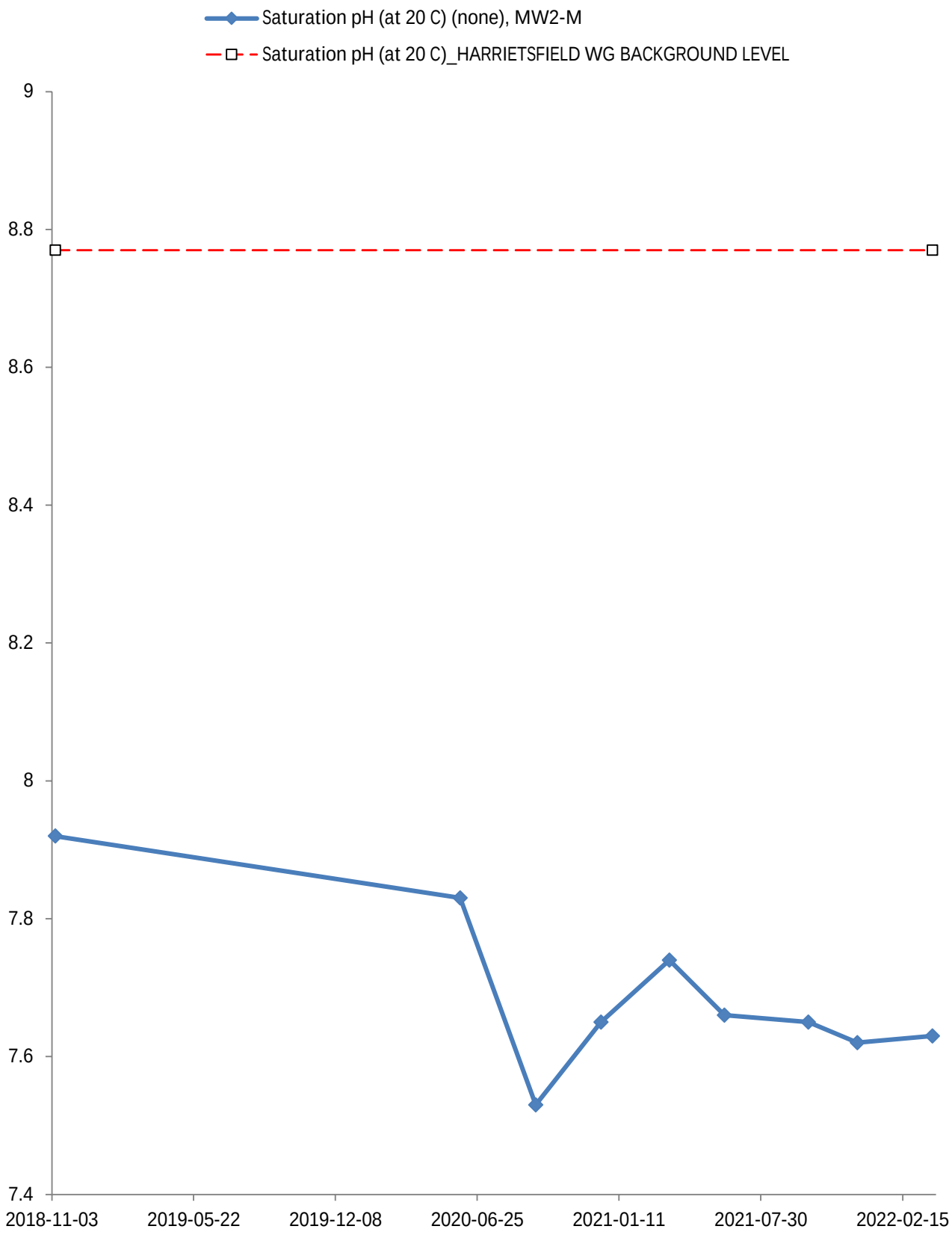
MW2-M-Potassium



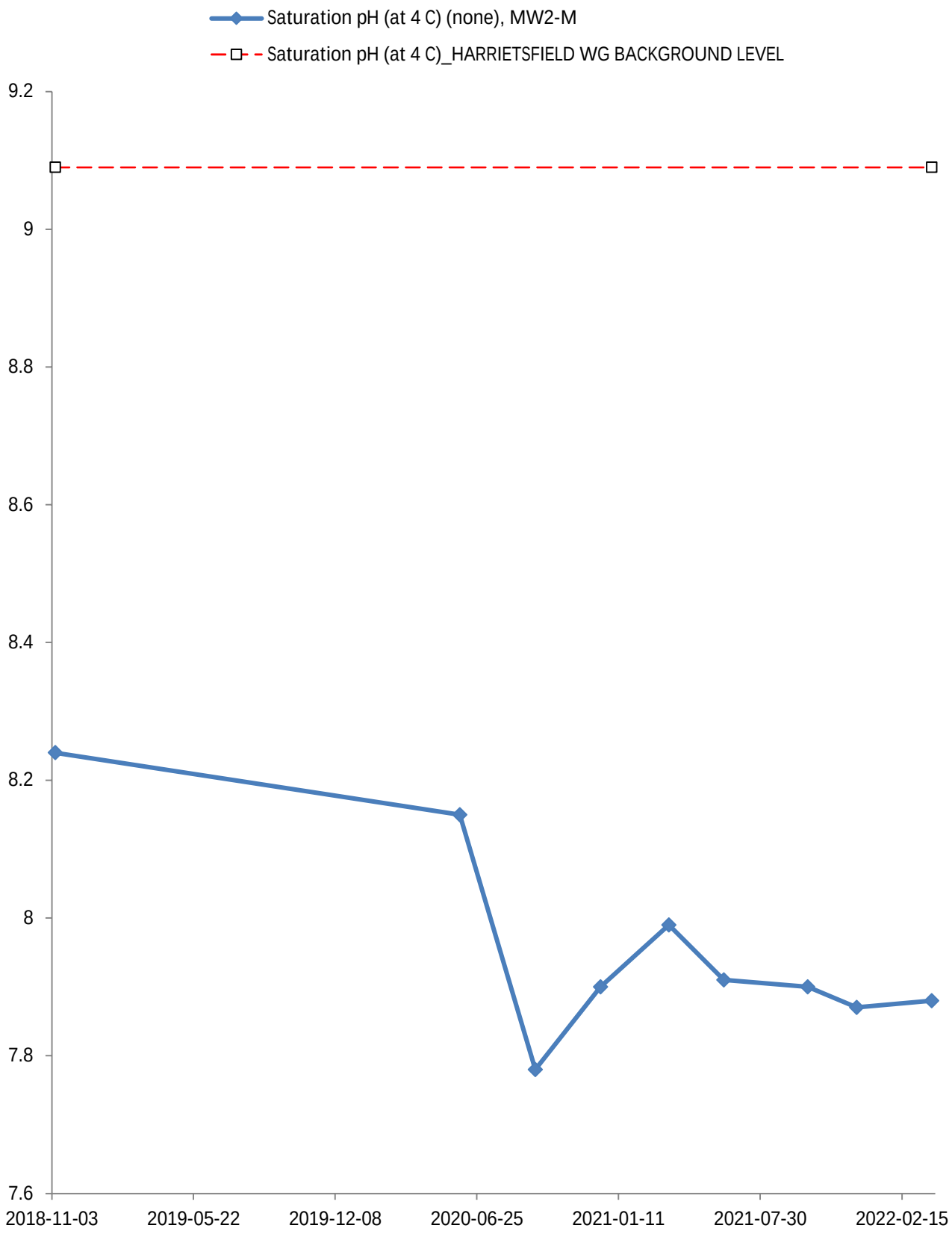
MW2-M-Reactive Silica (SiO2)



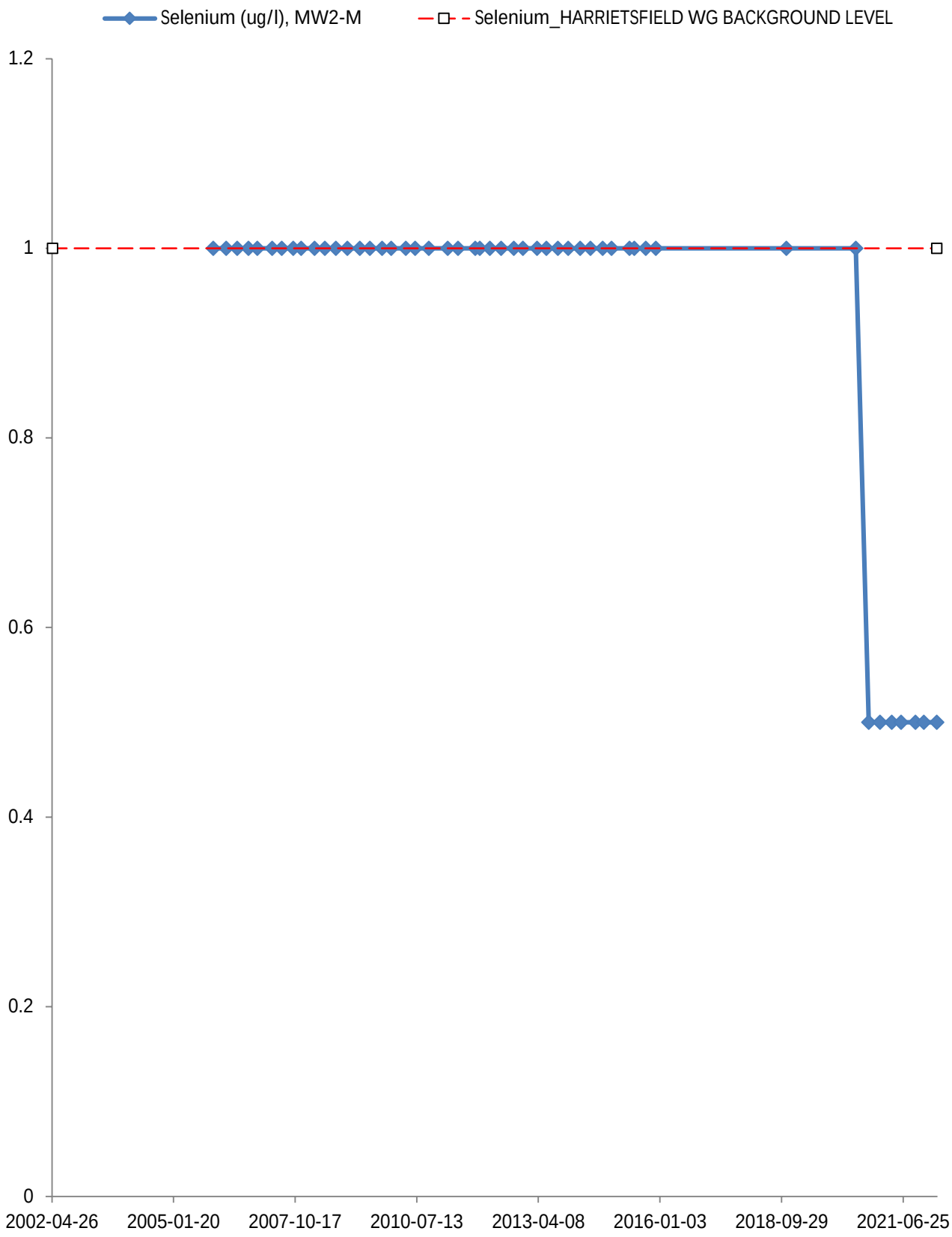
MW2-M-Saturation pH (at 20 C)



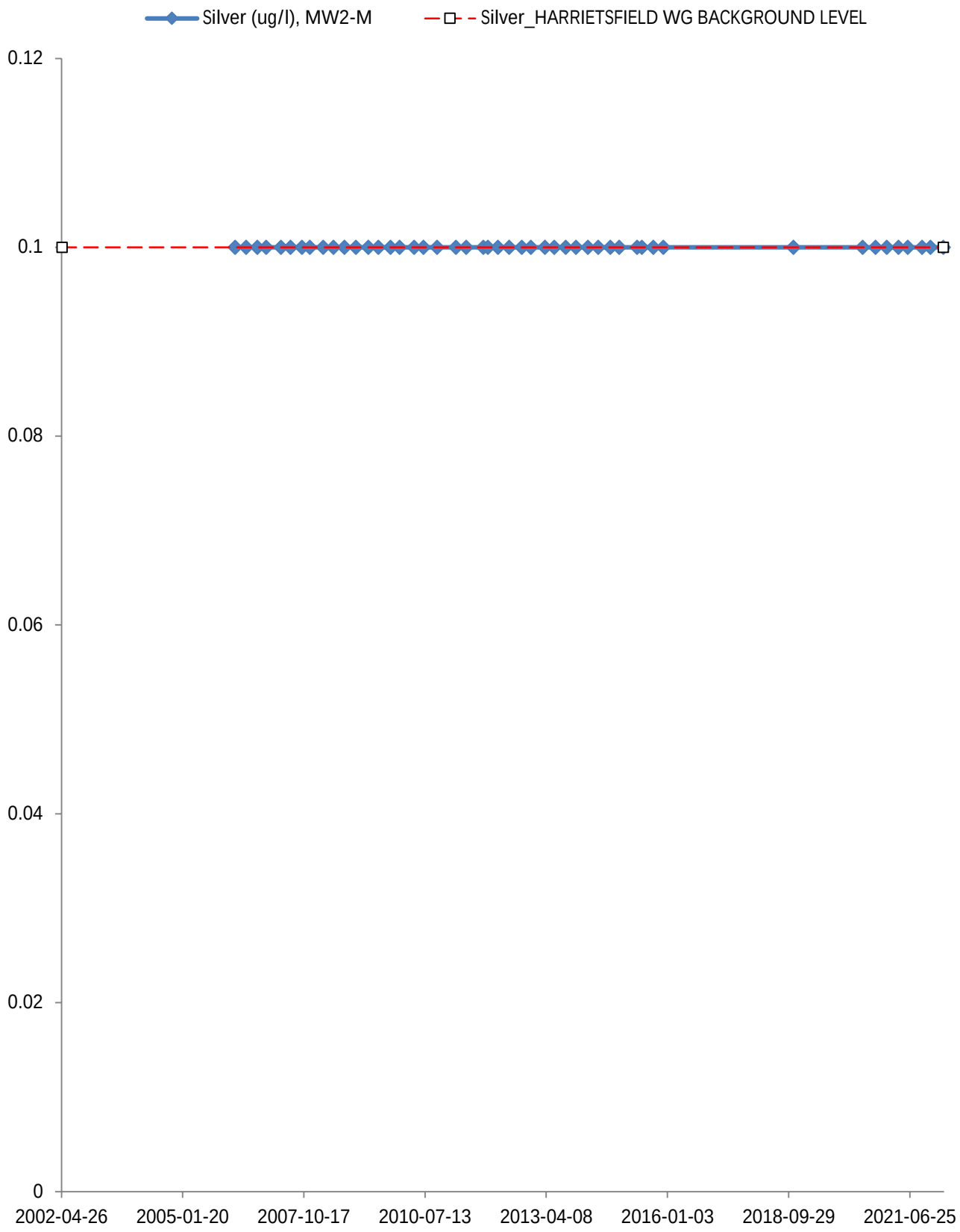
MW2-M-Saturation pH (at 4 C)



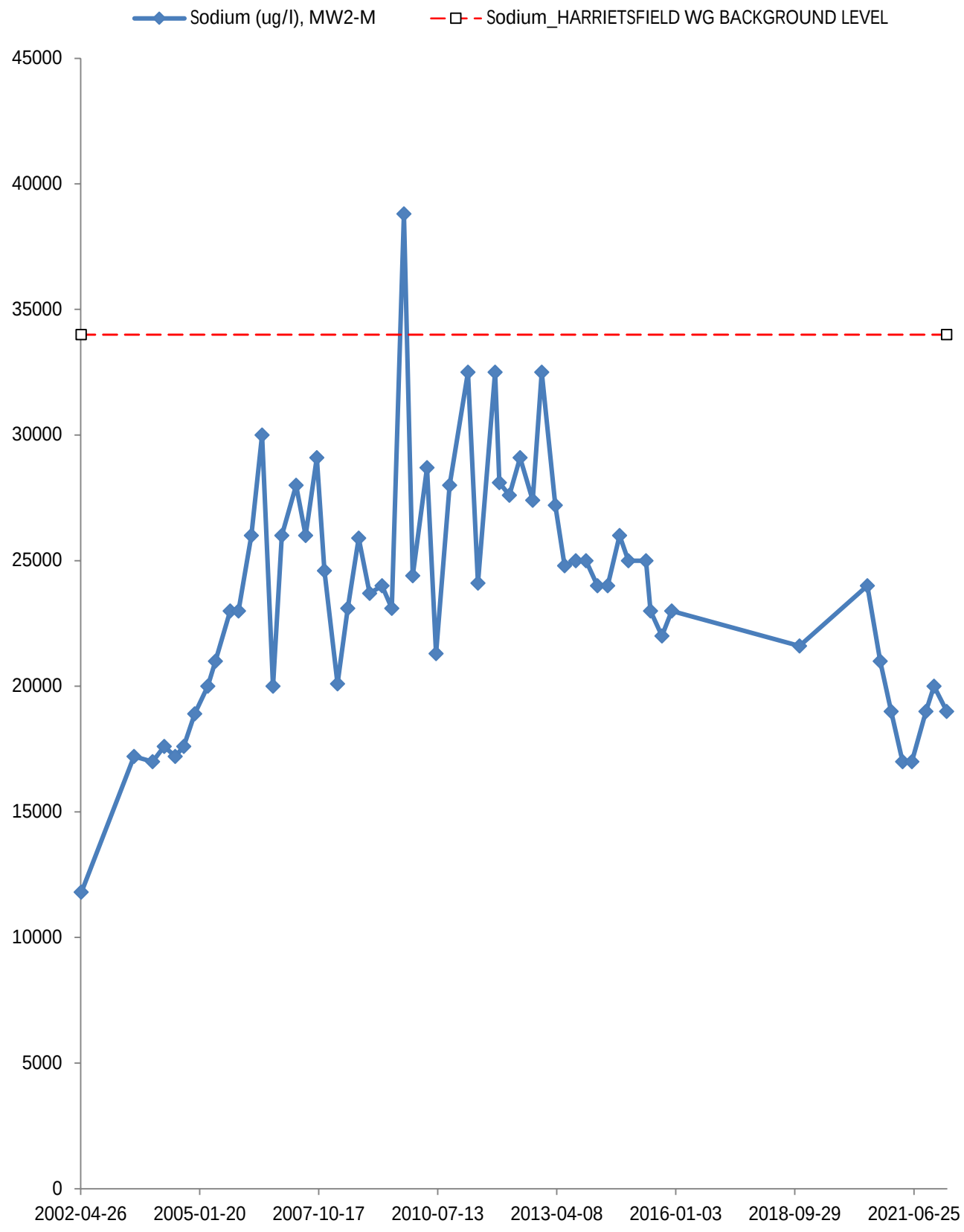
MW2-M-Selenium



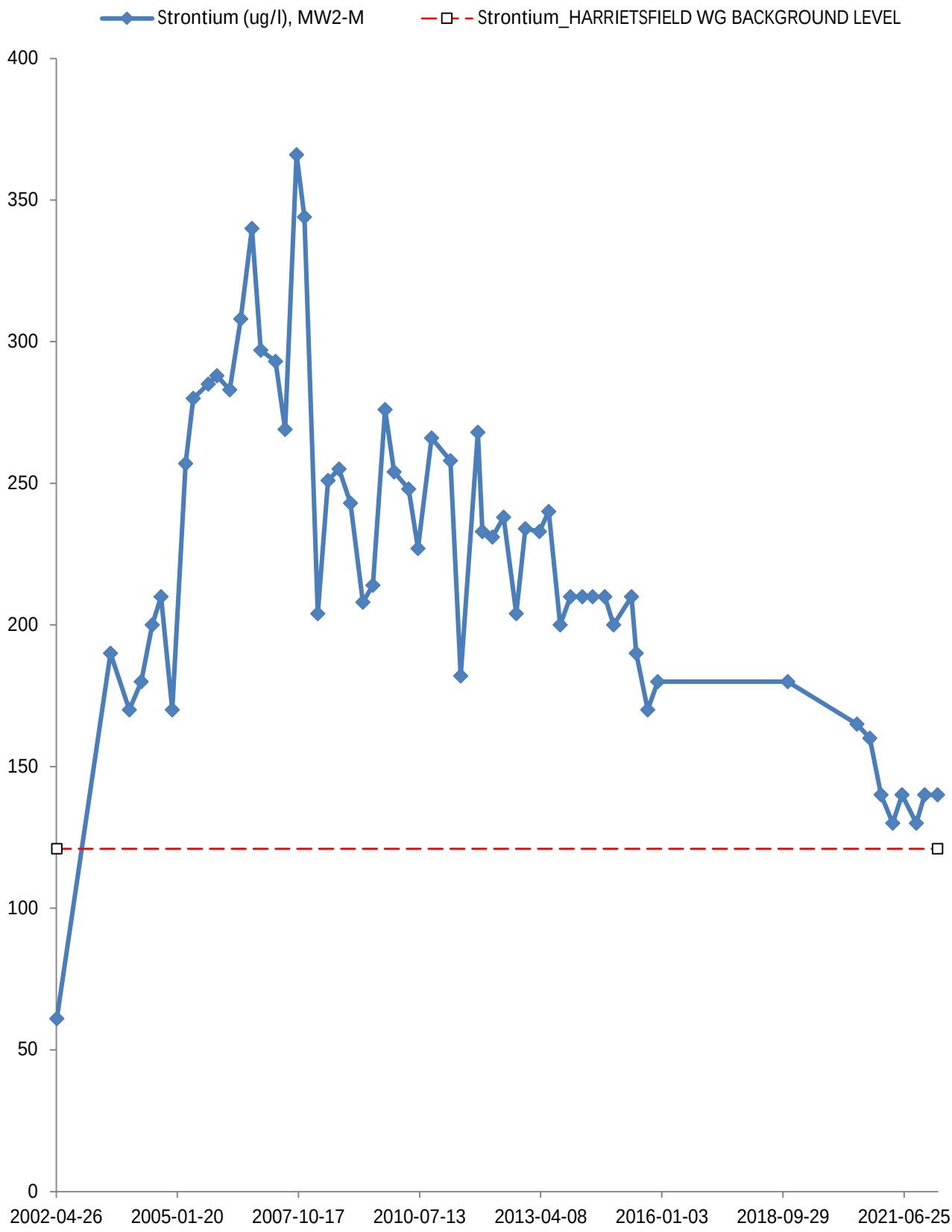
MW2-M-Silver


Silver (ug/l), MW2-M
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

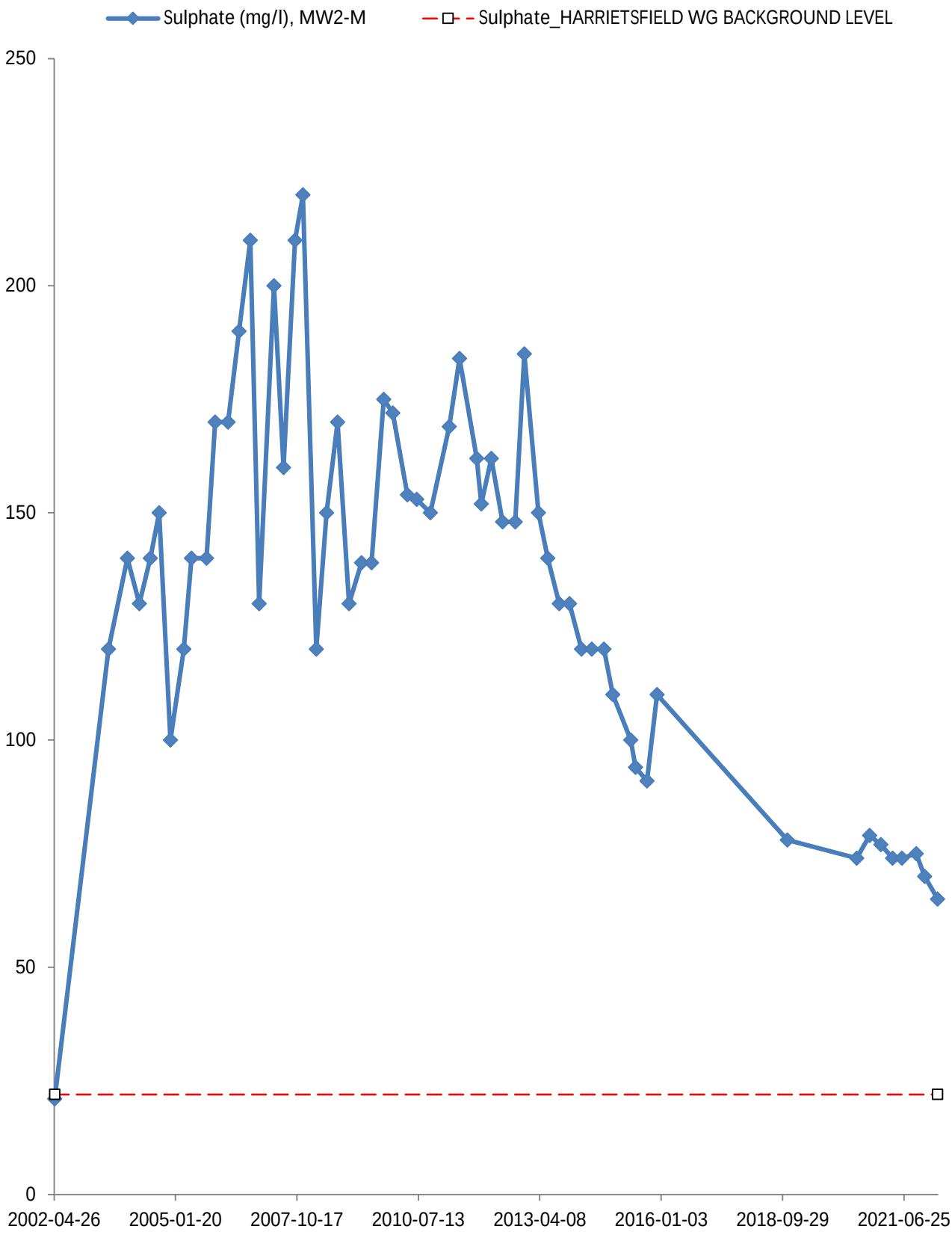
MW2-M-Sodium


Sodium (ug/l), MW2-M
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

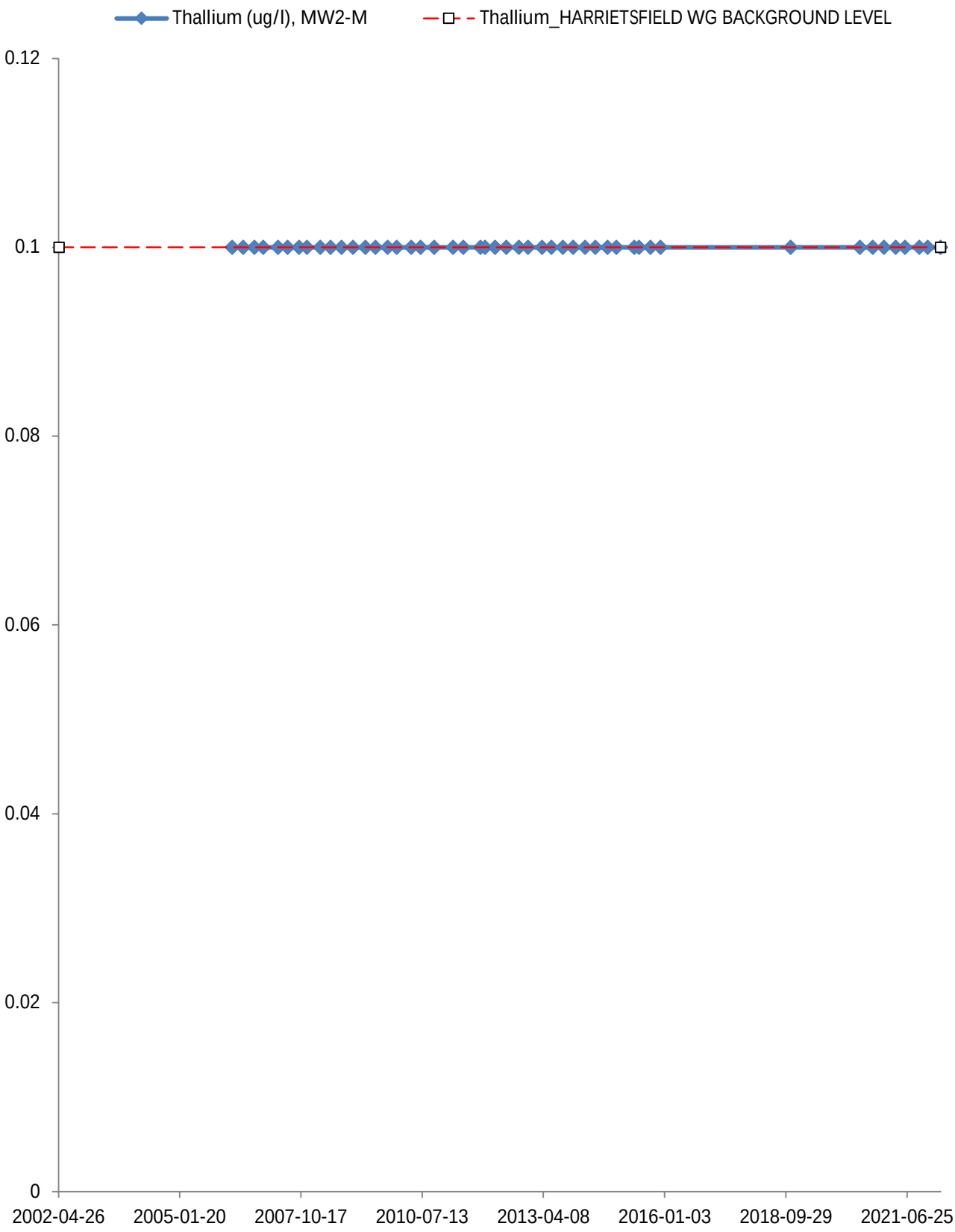
MW2-M-Strontium



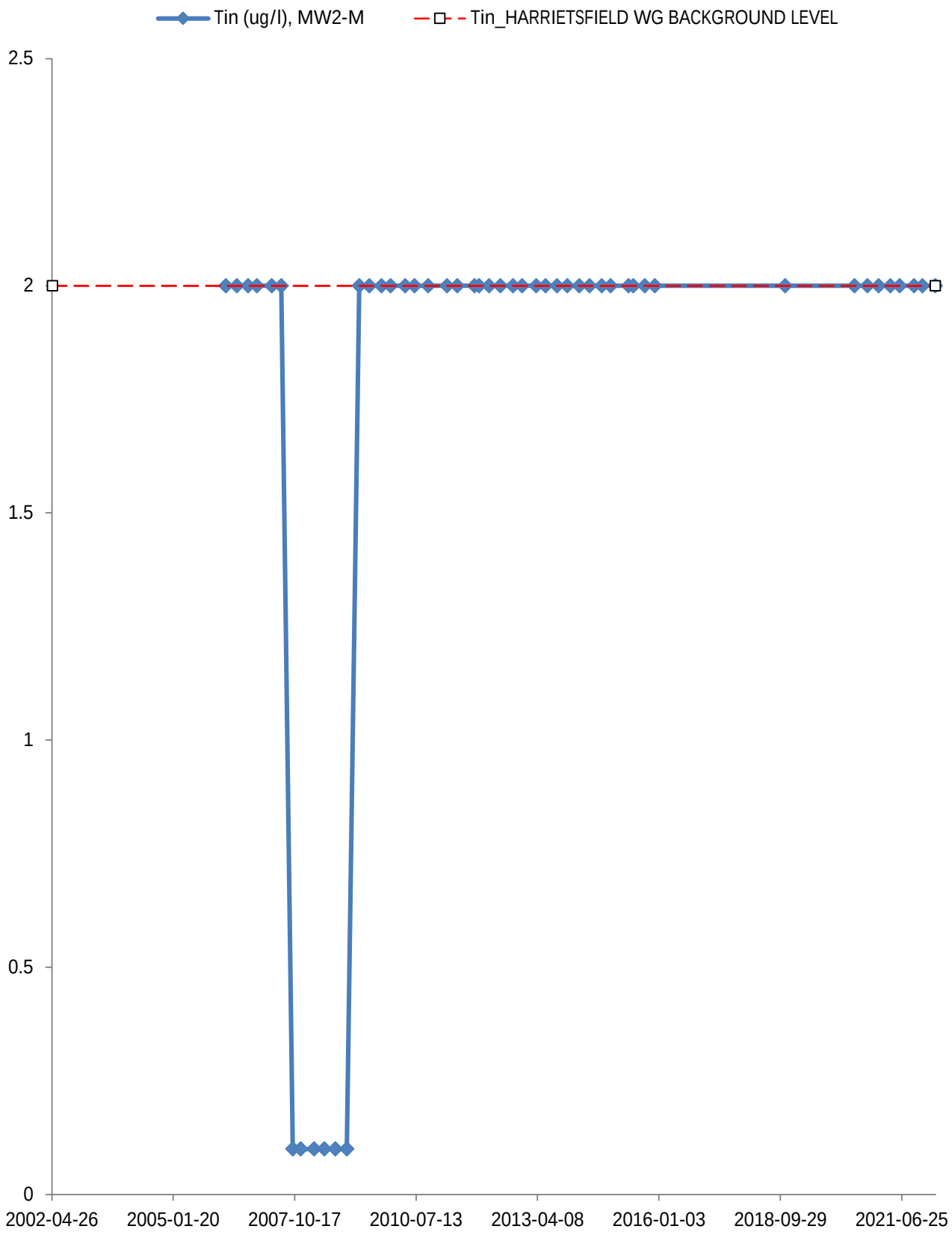
MW2-M-Sulphate



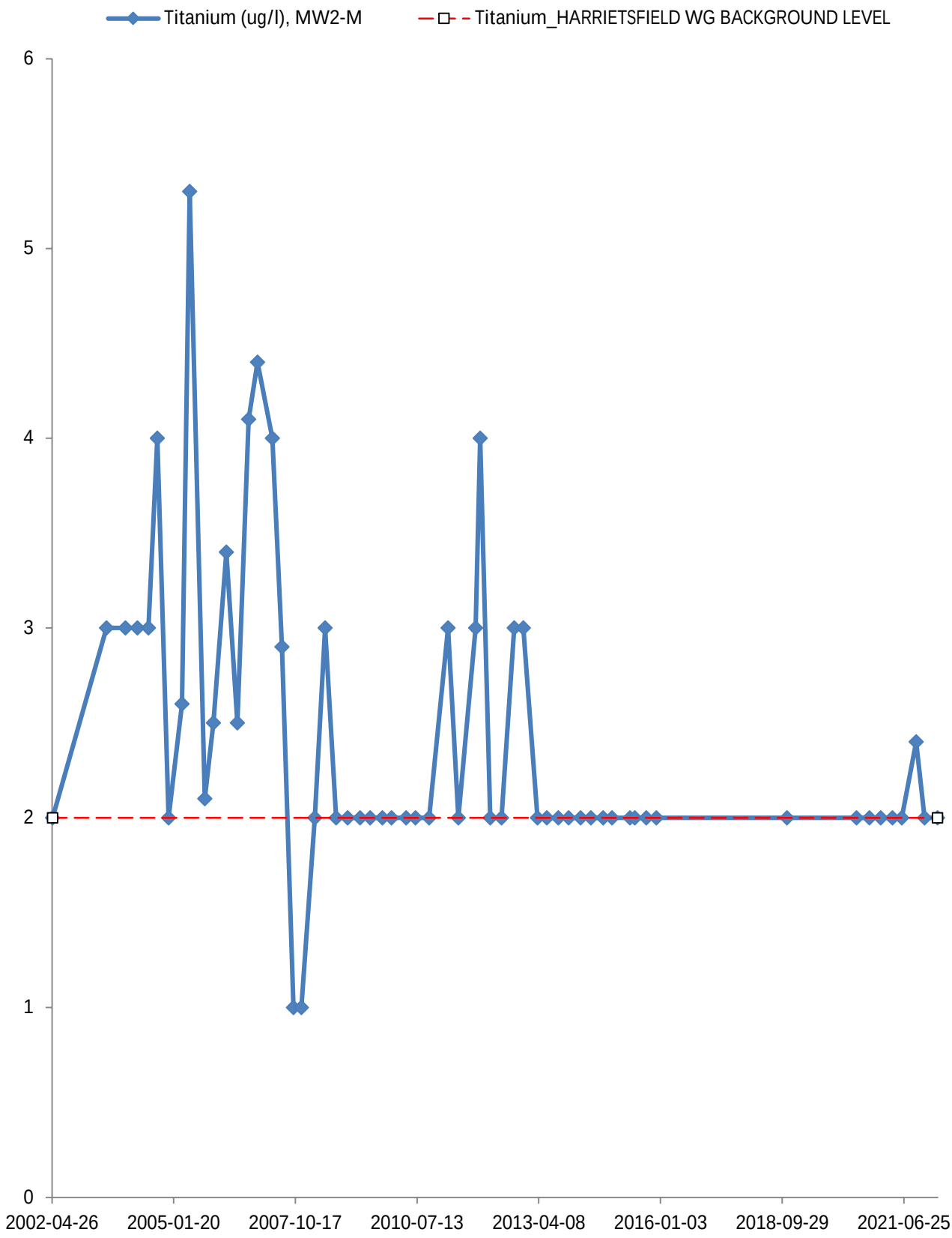
MW2-M-Thallium



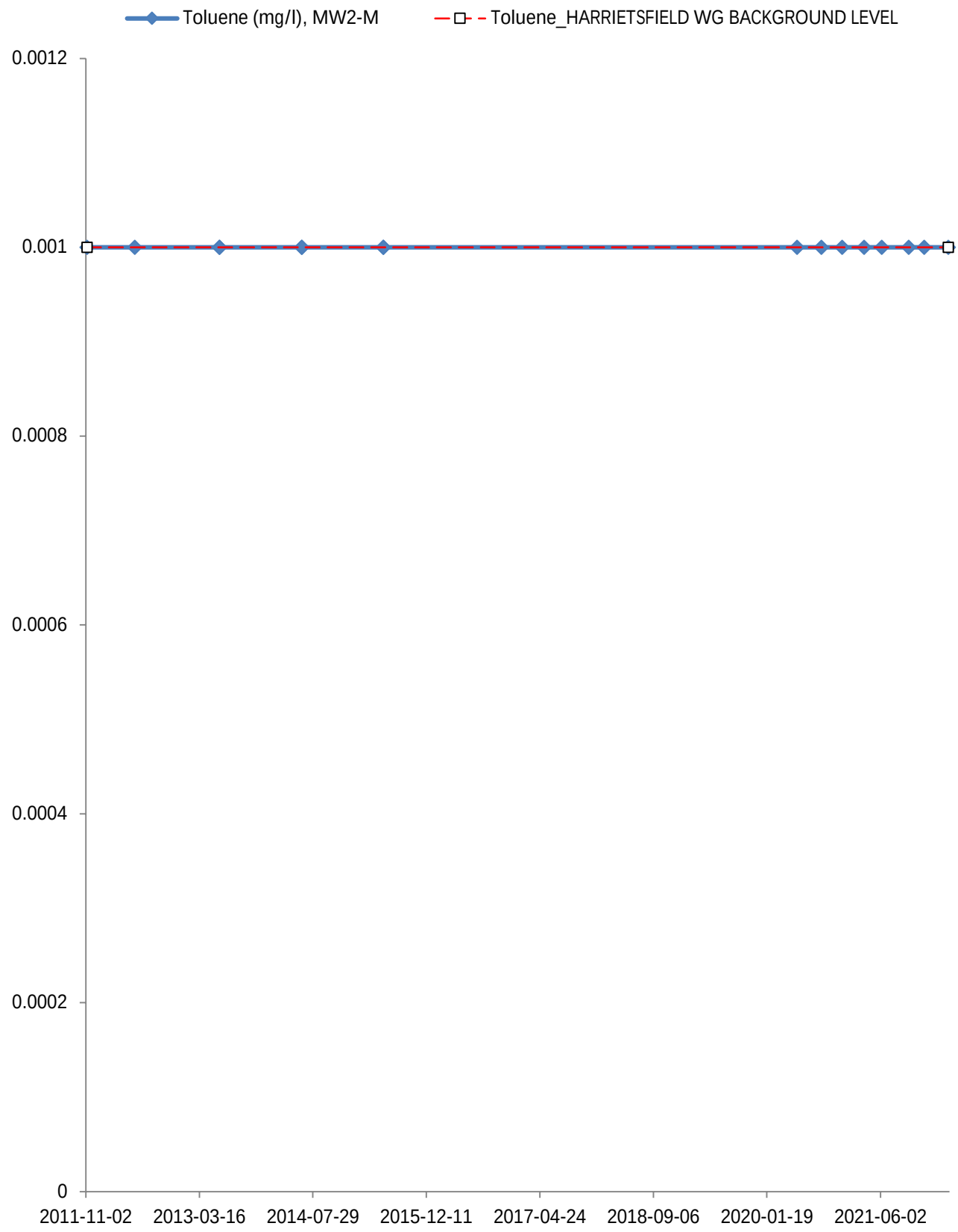
MW2-M-Tin


Tin (ug/l), MW2-M
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

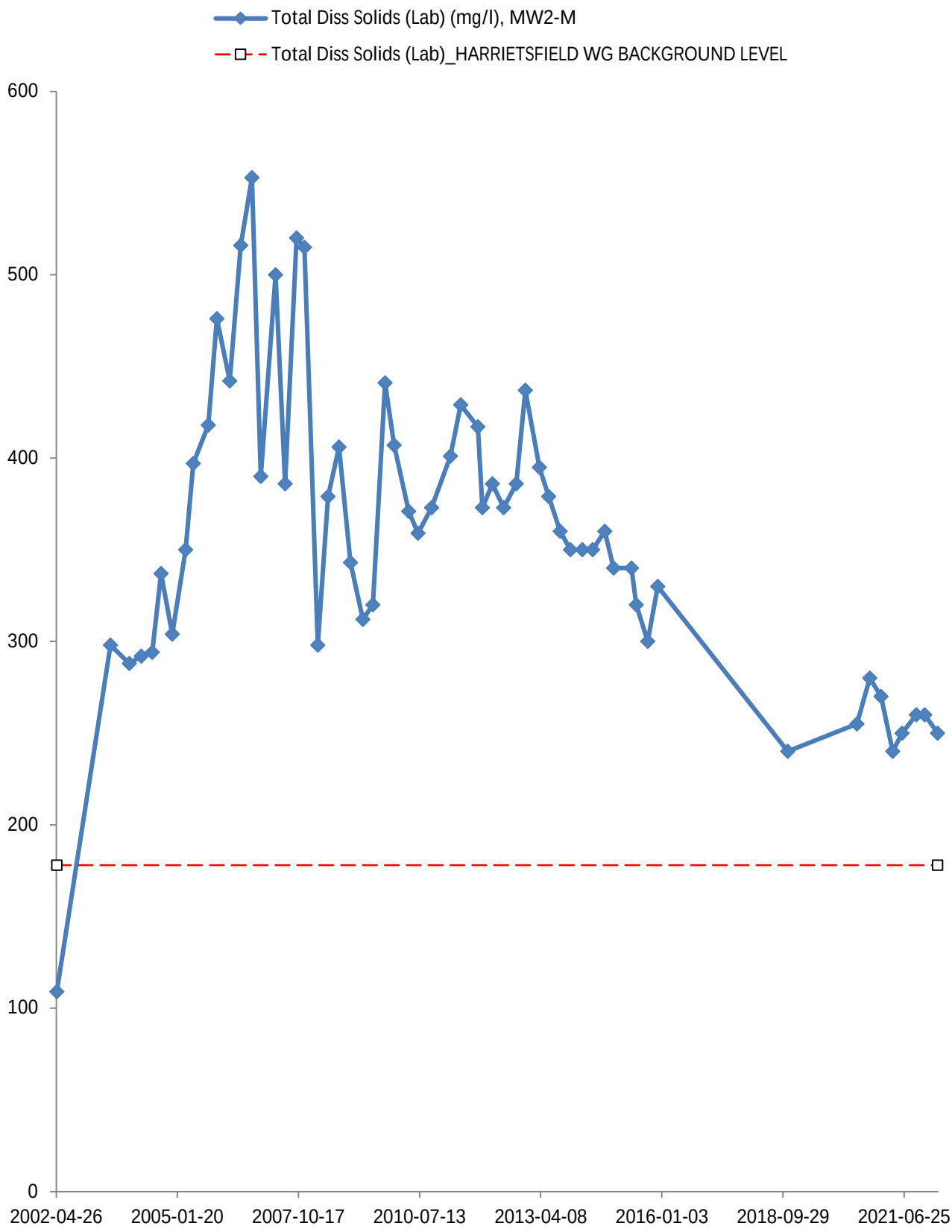
MW2-M-Titanium



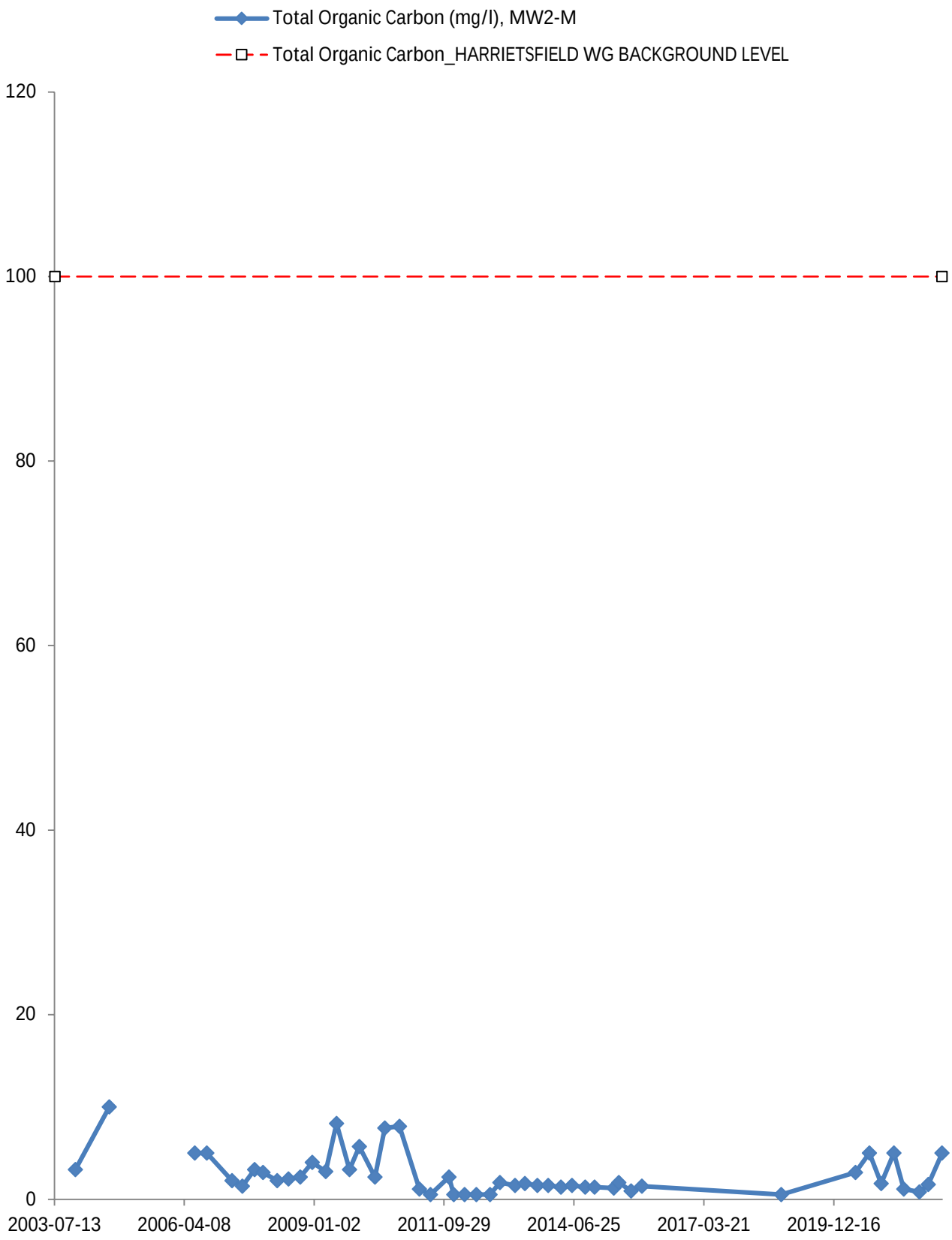
MW2-M-Toluene



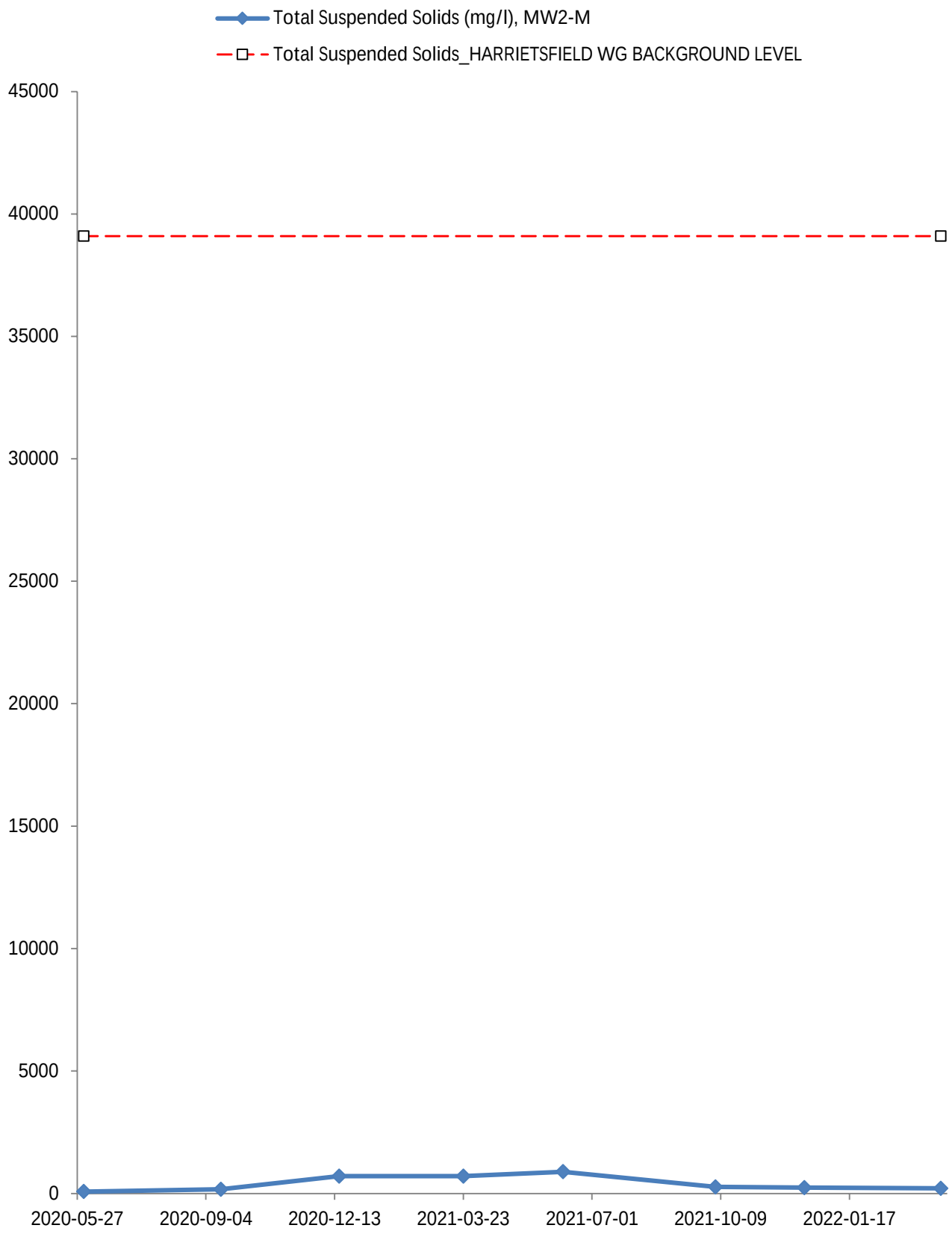
MW2-M-Total Diss Solids (Lab)



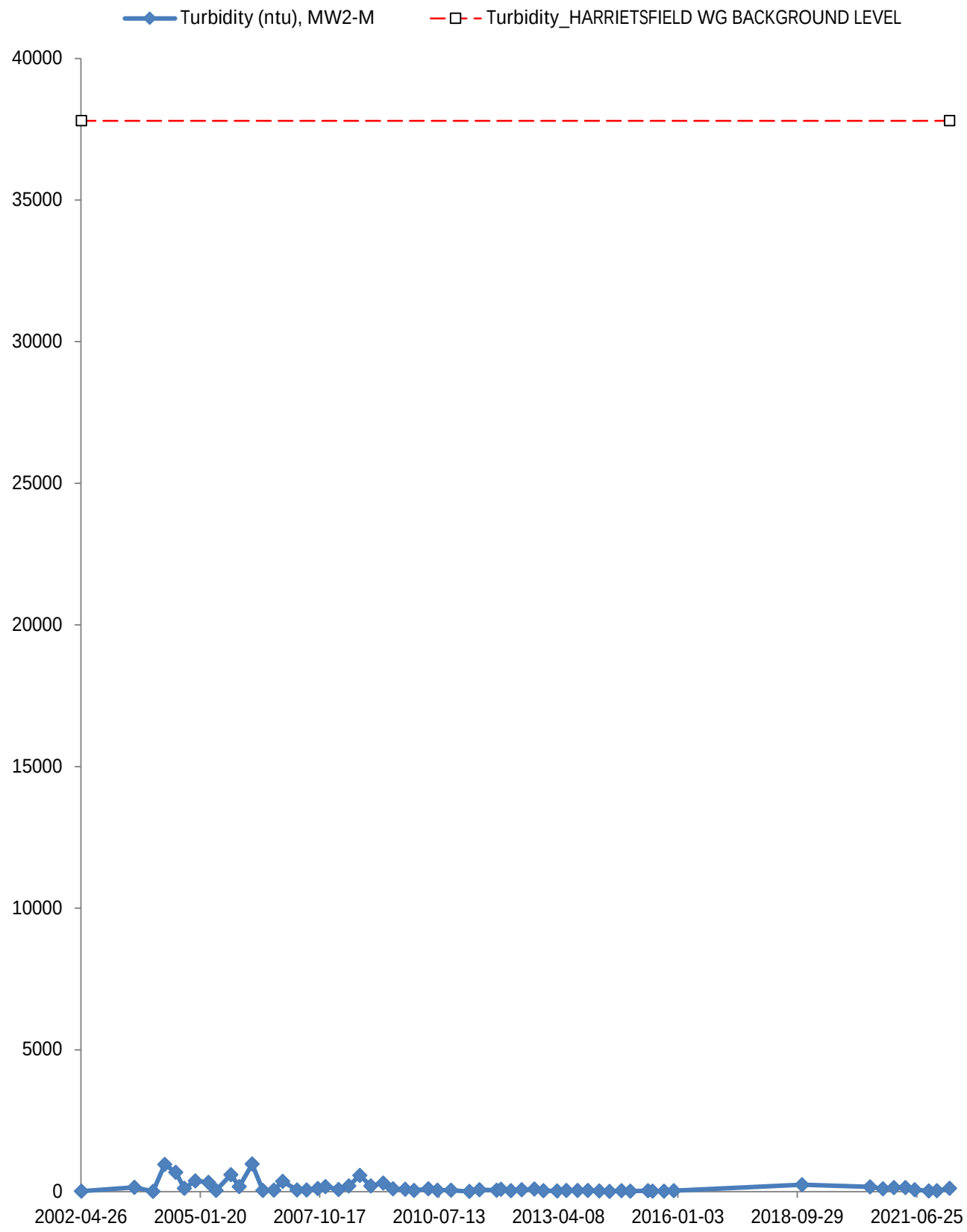
MW2-M-Total Organic Carbon



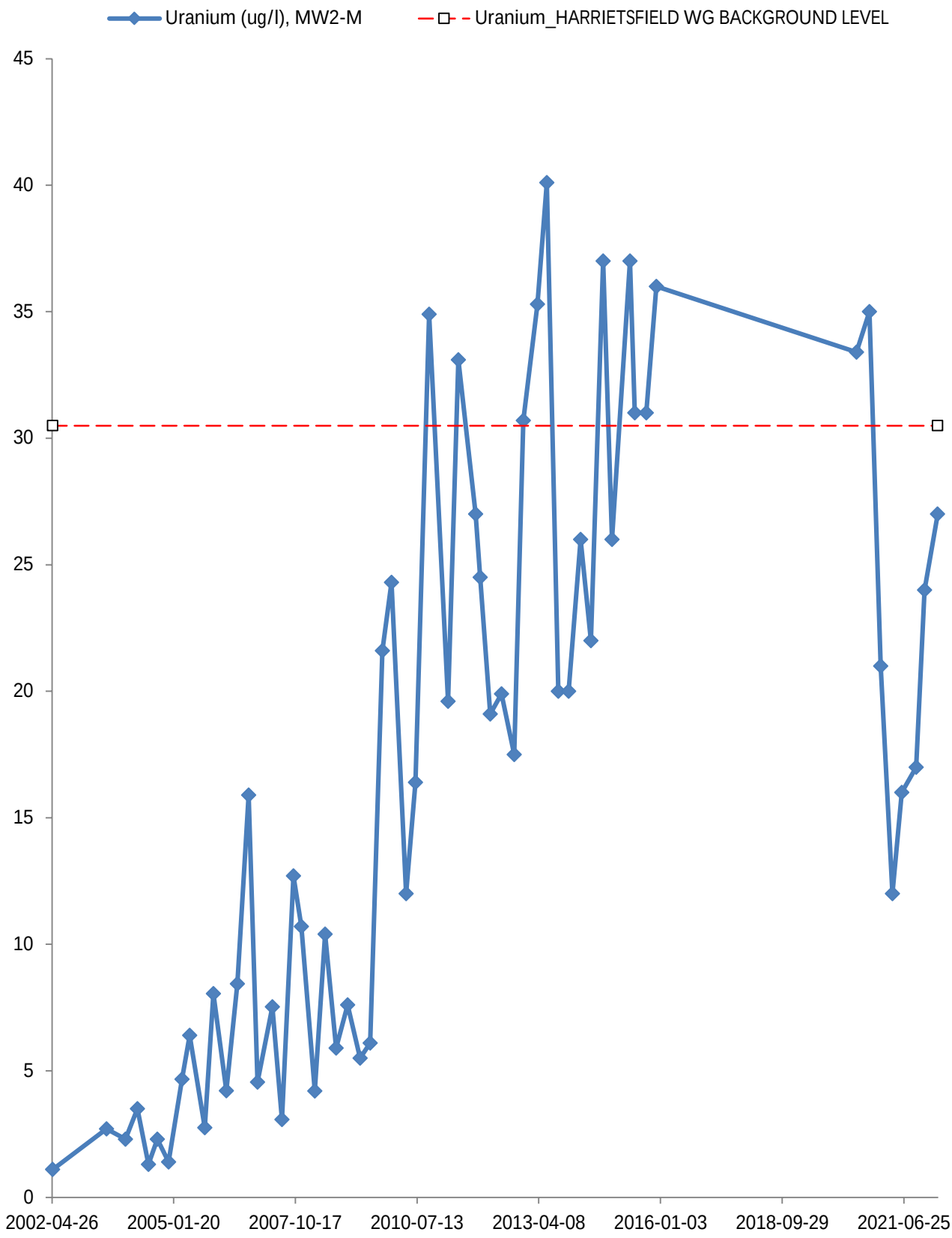
MW2-M-Total Suspended Solids



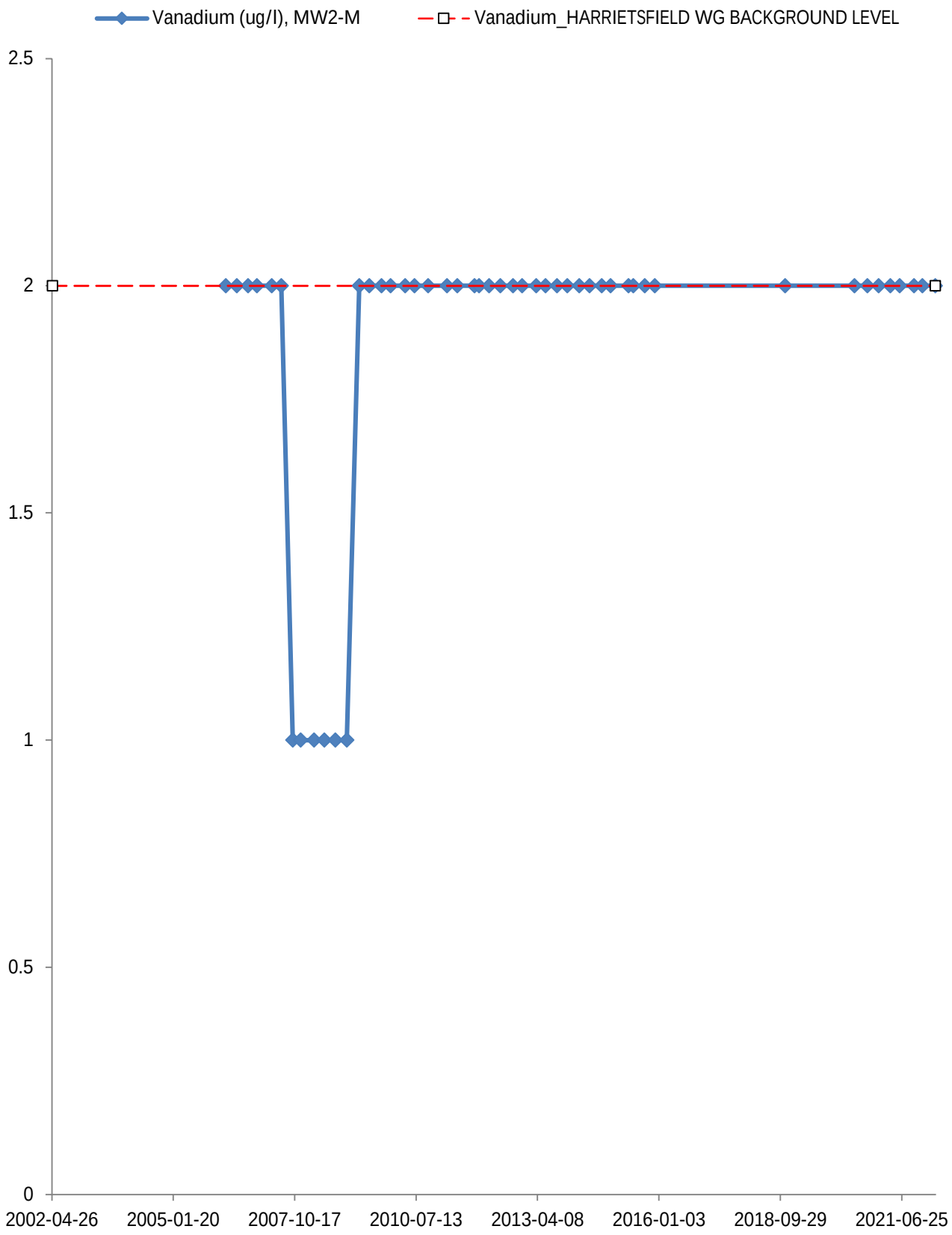
MW2-M-Turbidity



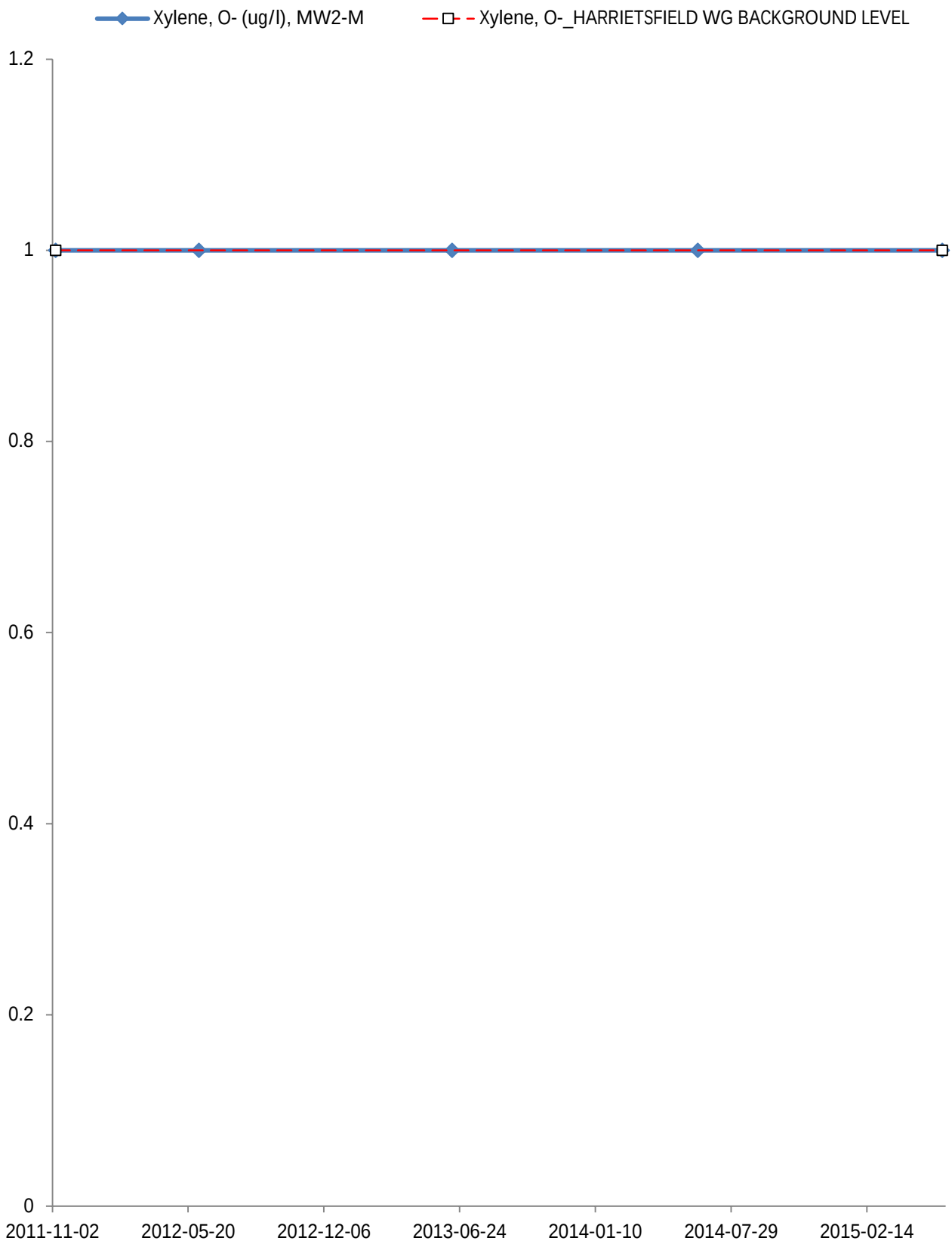
MW2-M-Uranium



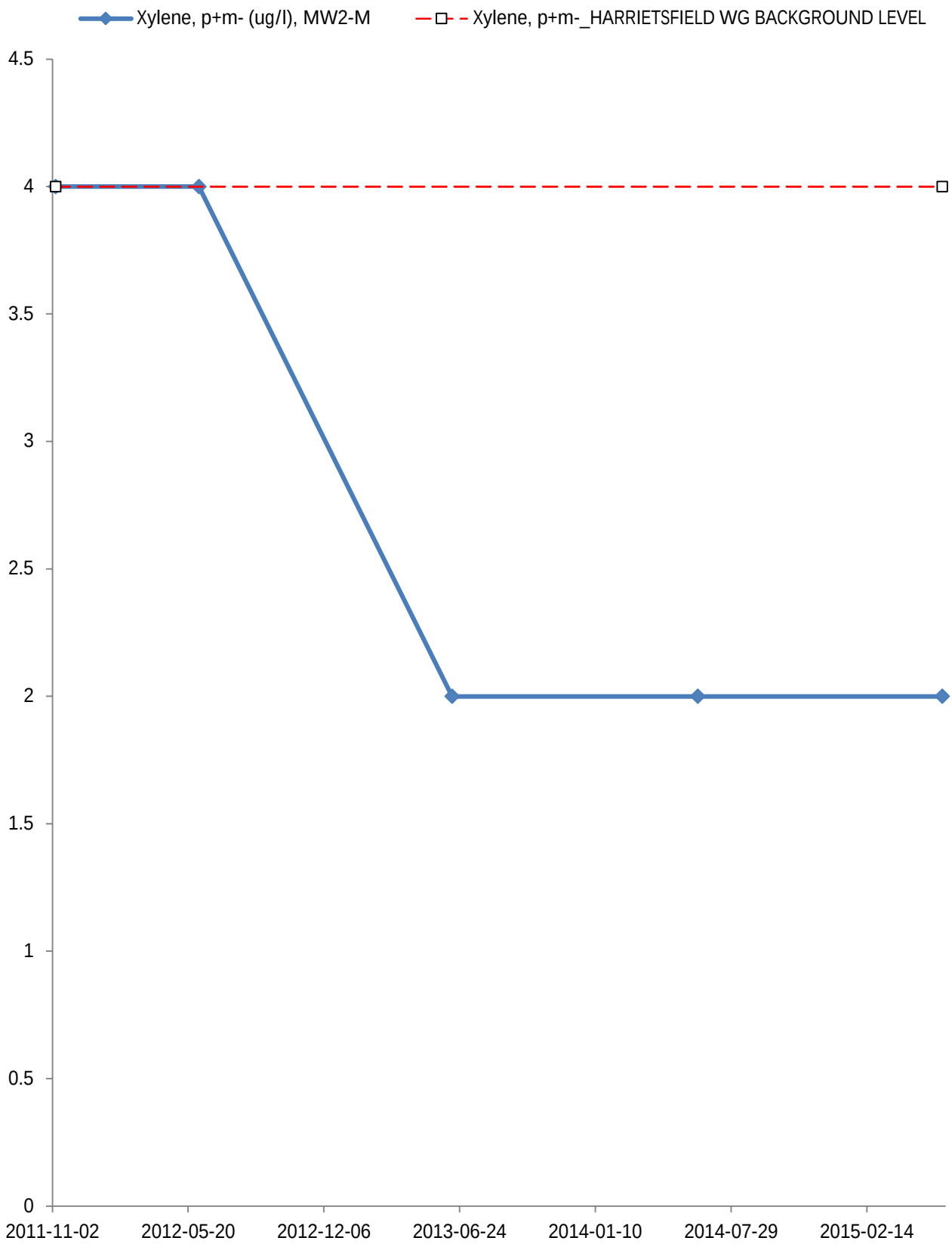
MW2-M-Vanadium



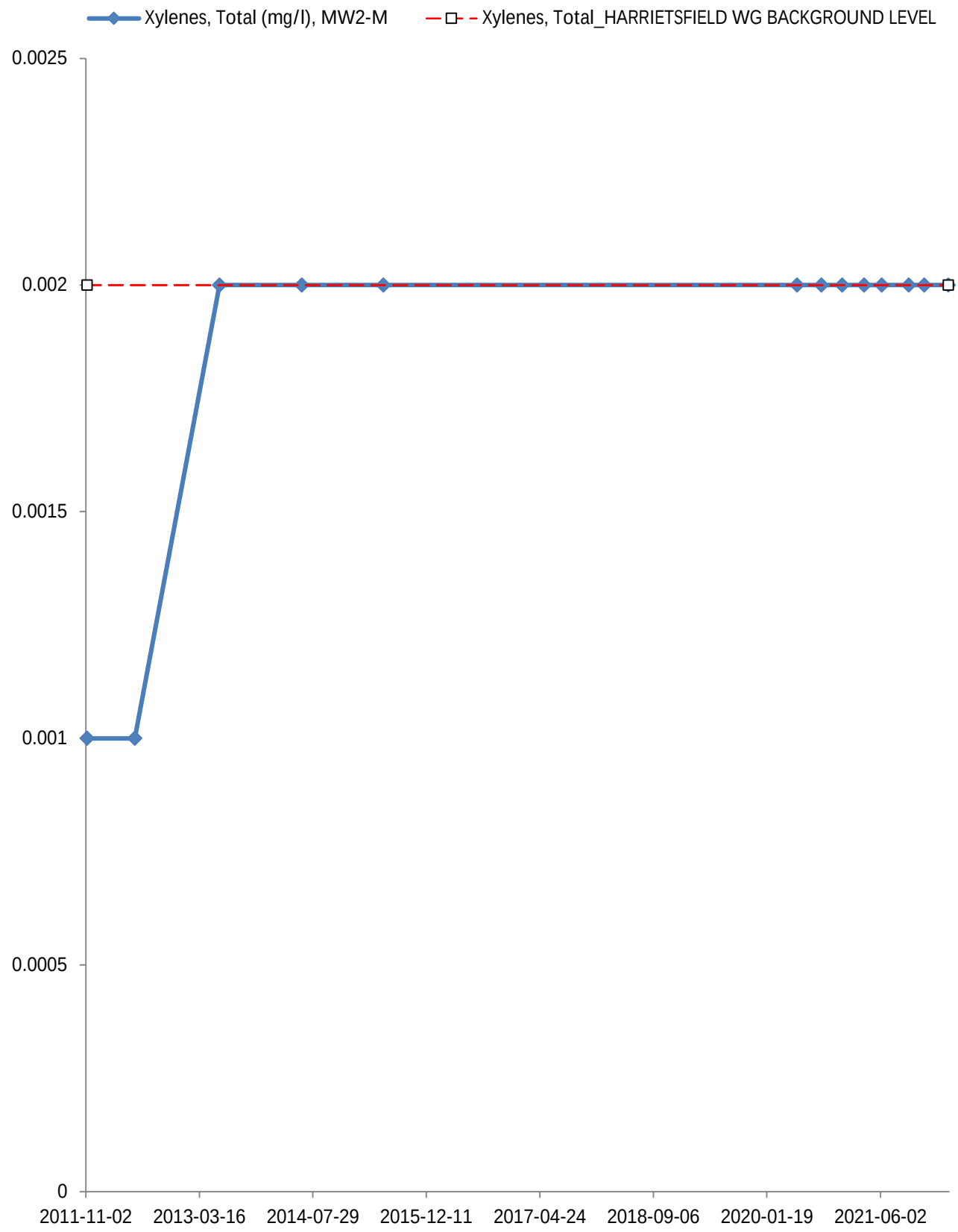
MW2-M-Xylene, O-



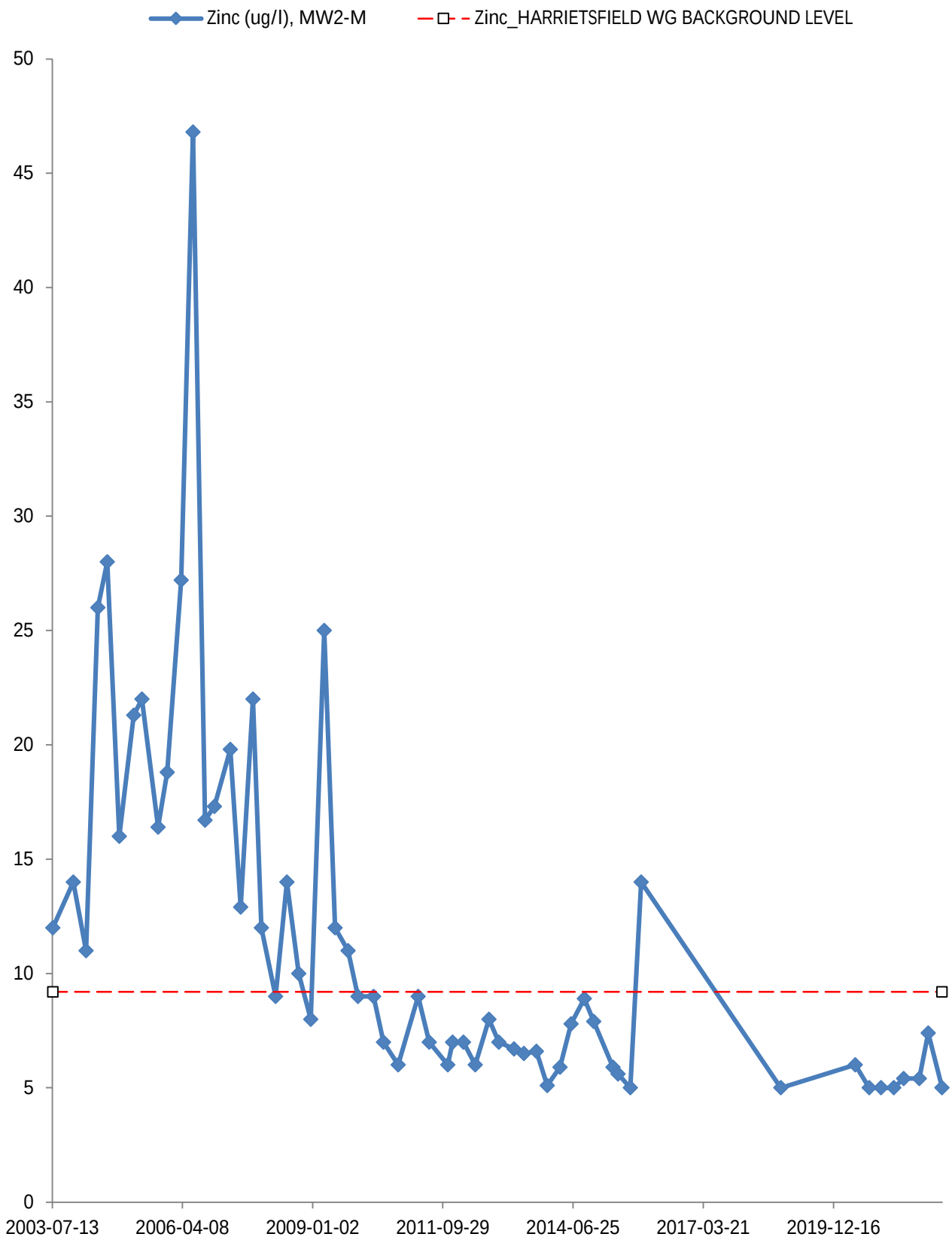
MW2-M-Xylene, p+m-



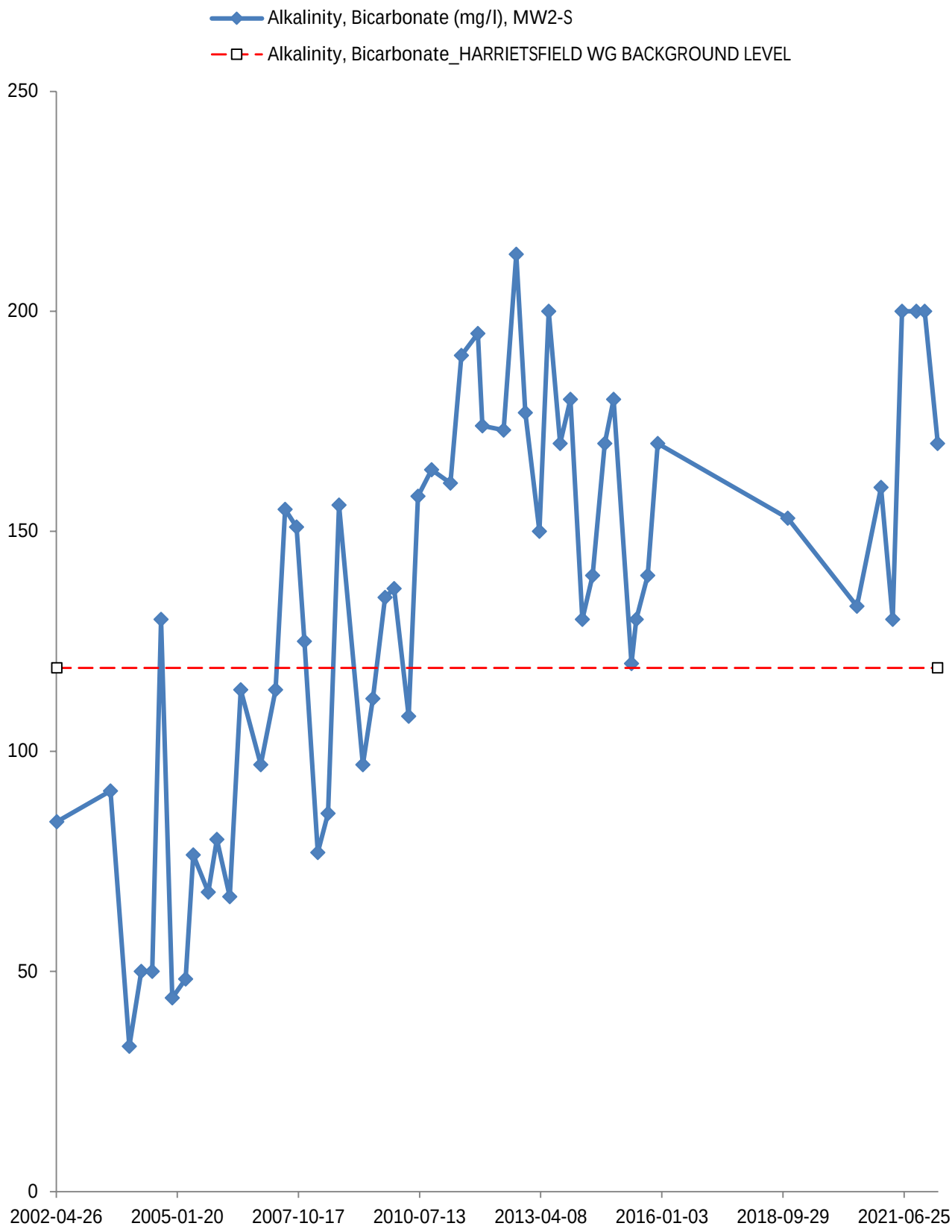
MW2-M-Xylenes, Total



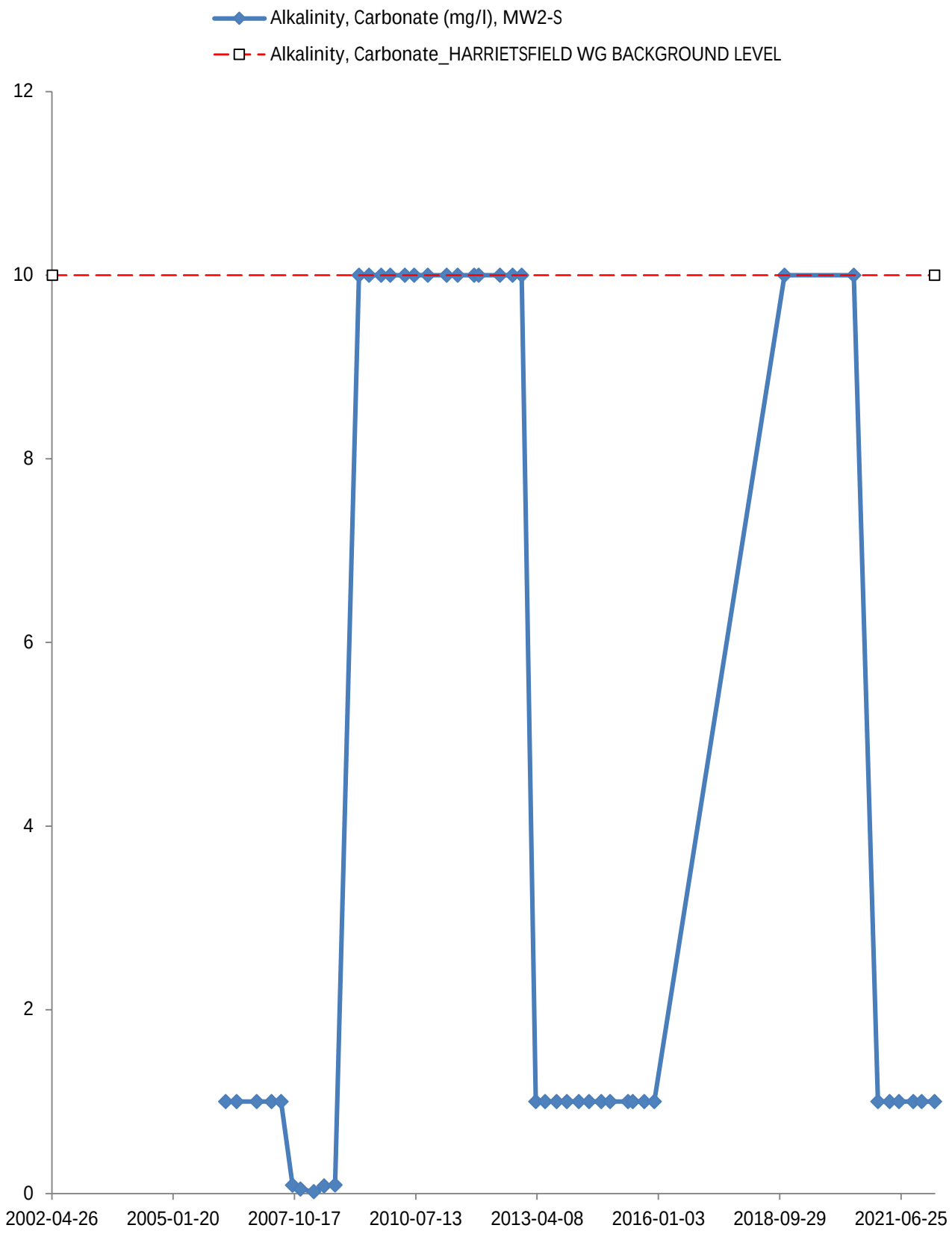
MW2-M-Zinc


Zinc (ug/l), MW2-M
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
50
45
40
35
30
25
20
15
10
5
0
2003-07-13
2006-04-08
2009-01-02
2011-09-29
2014-06-25
2017-03-21
2019-12-16

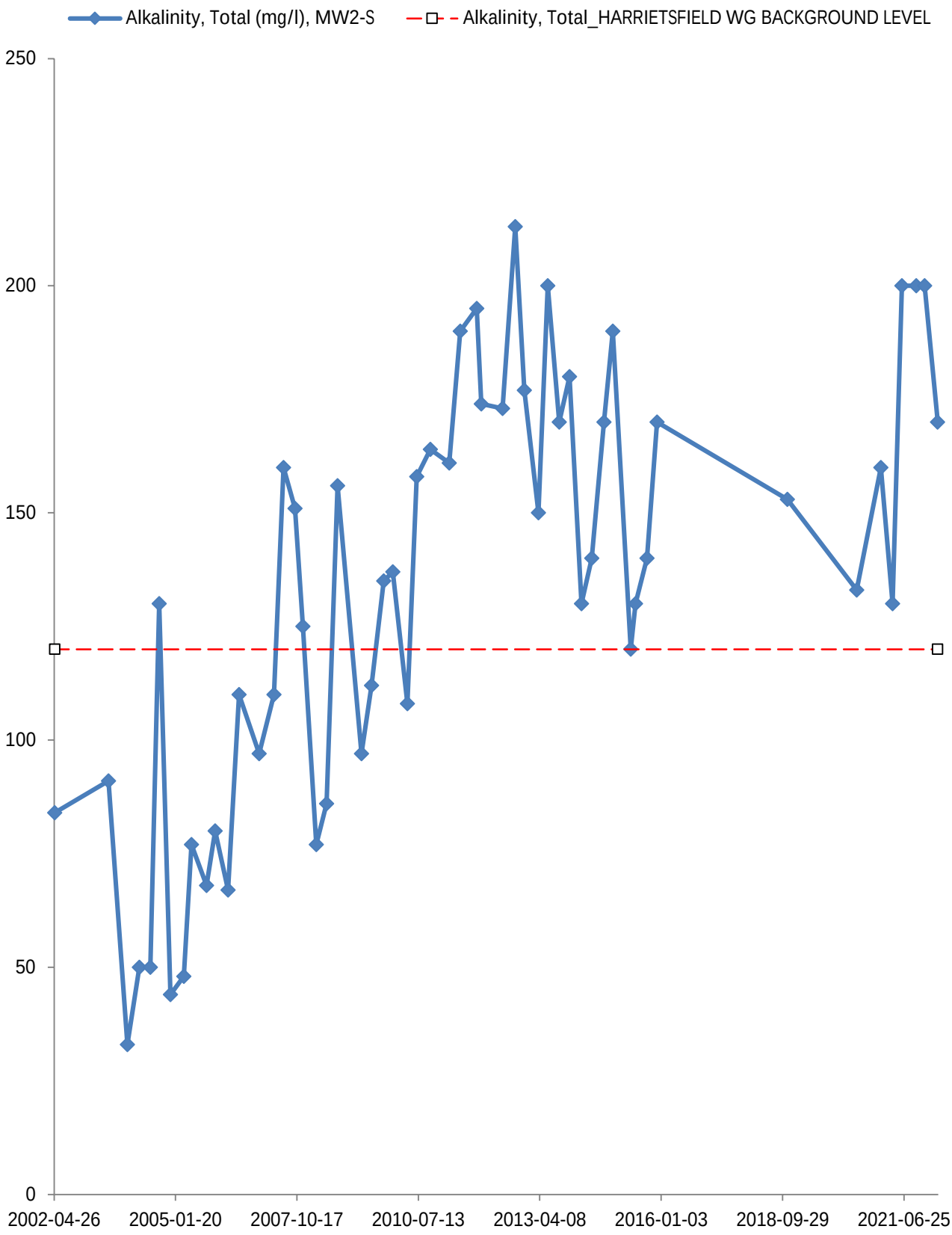
MW2-S-Alkalinity, Bicarbonate



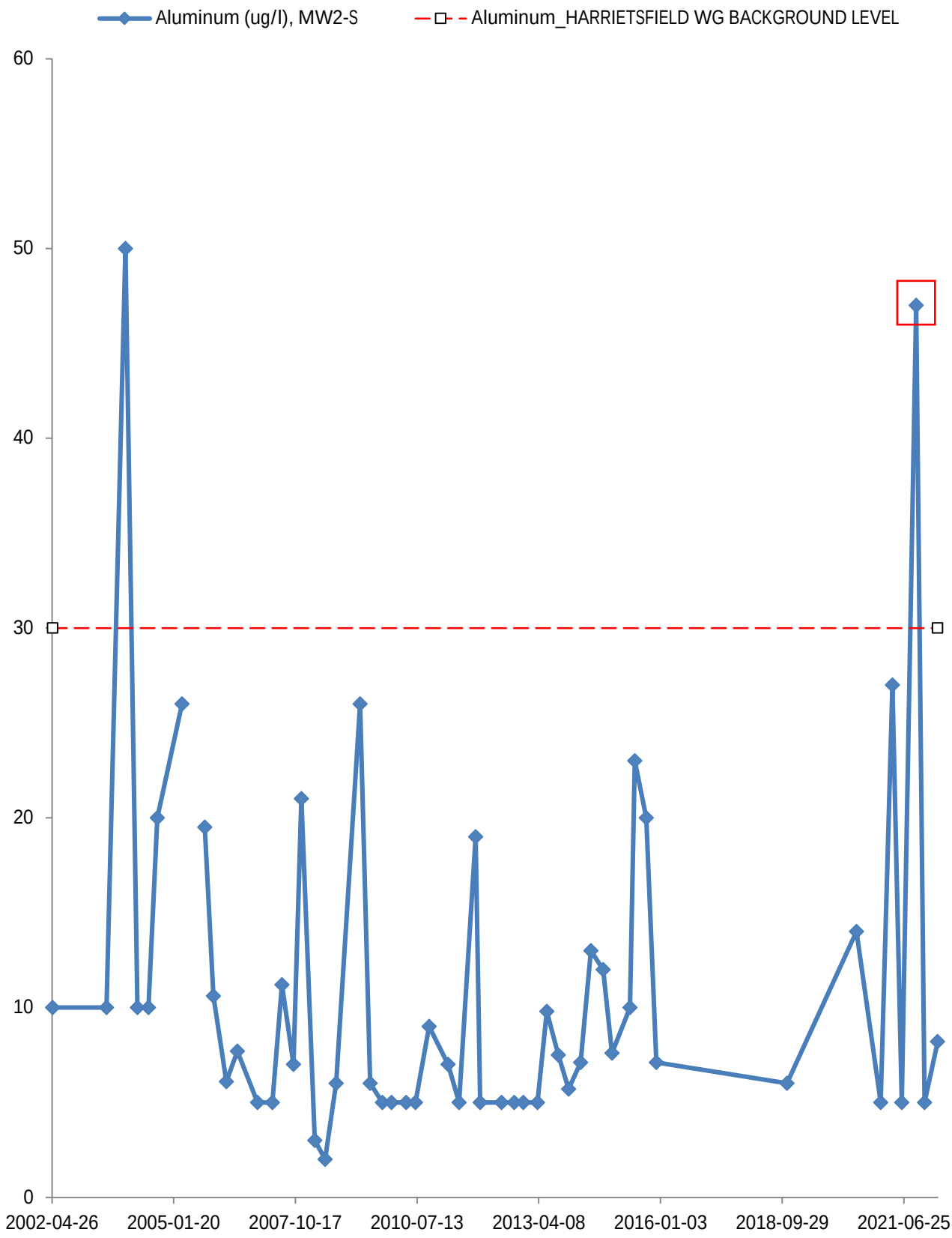
MW2-S-Alkalinity, Carbonate



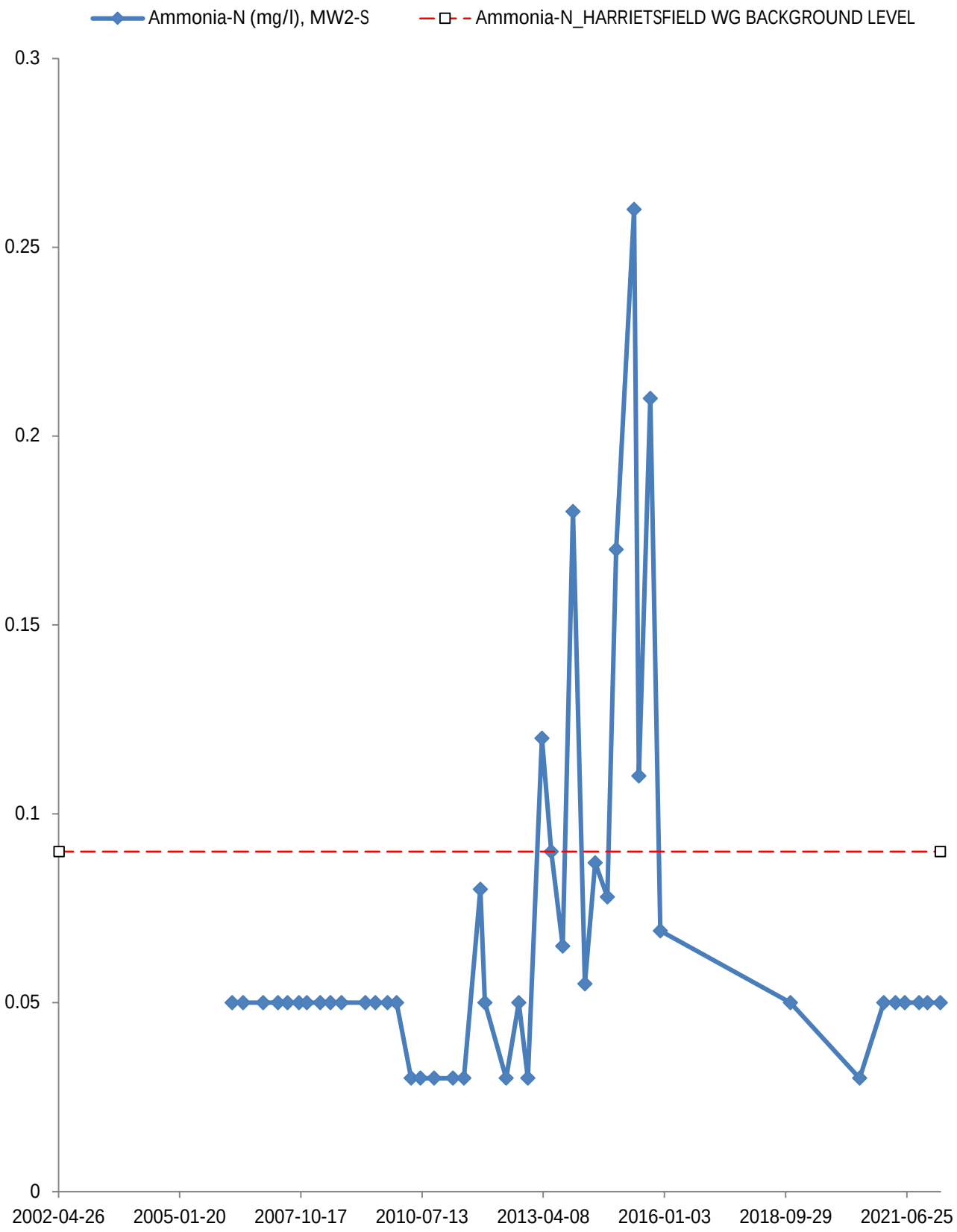
MW2-S-Alkalinity, Total



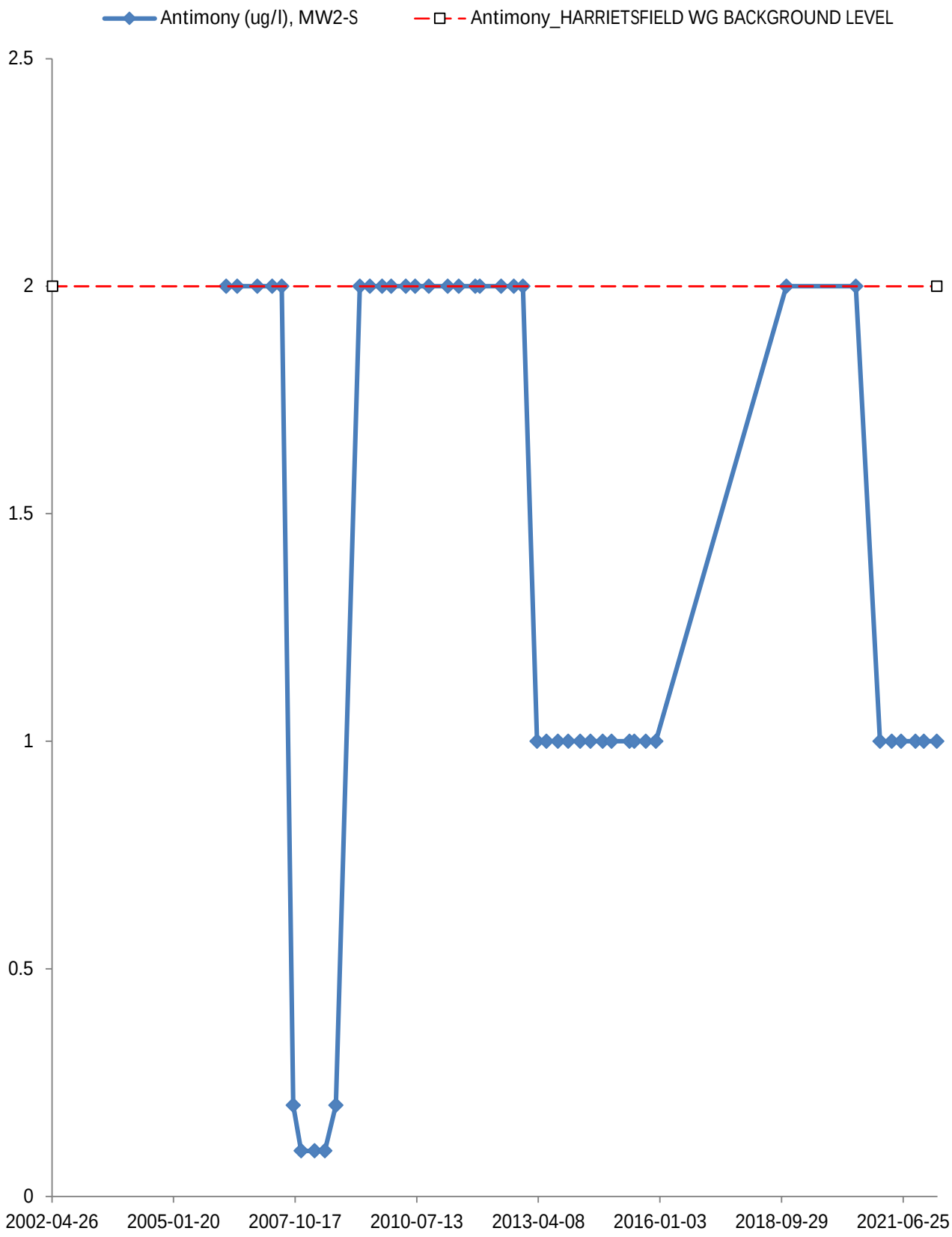
MW2-S-Aluminum



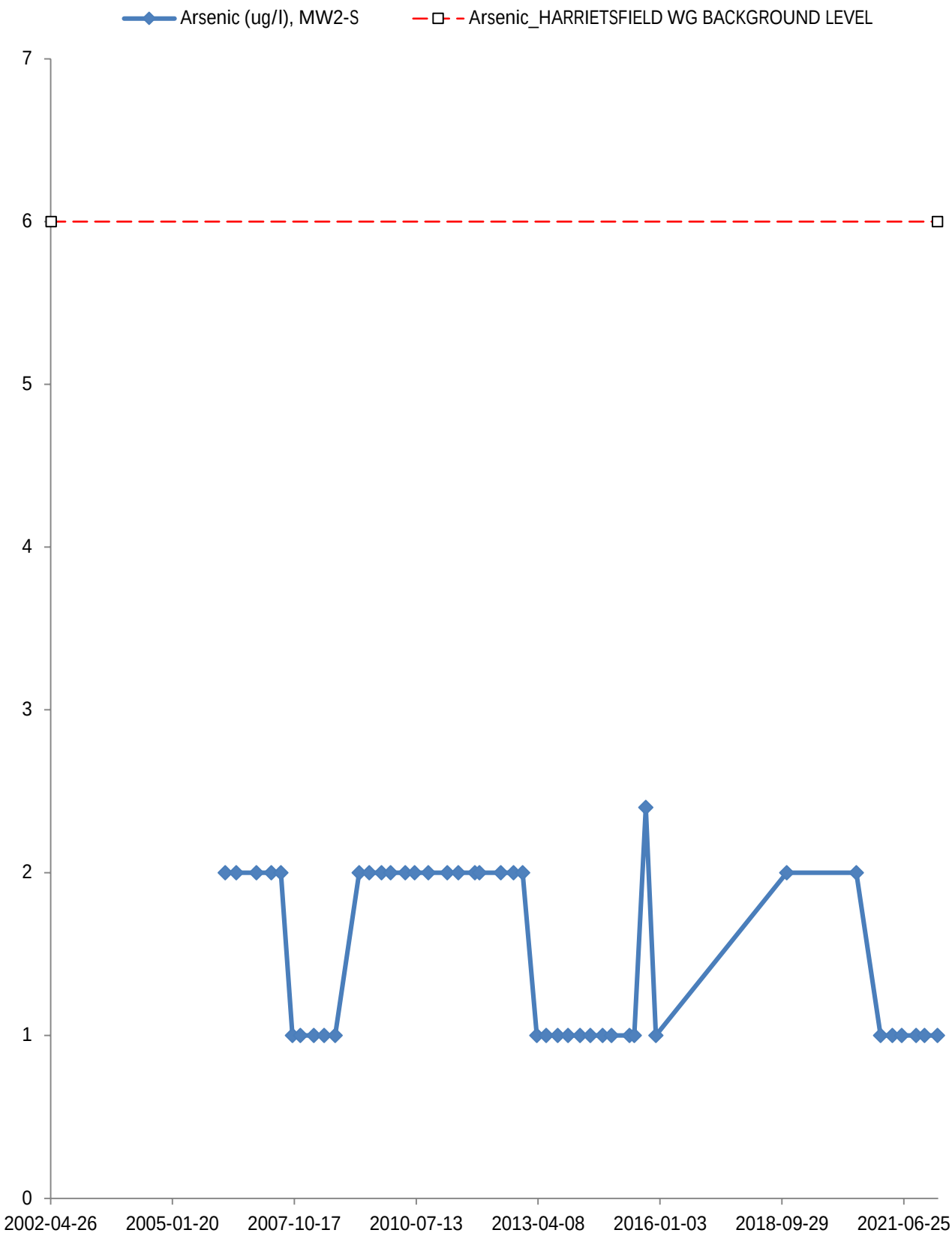
MW2-S-Ammonia-N



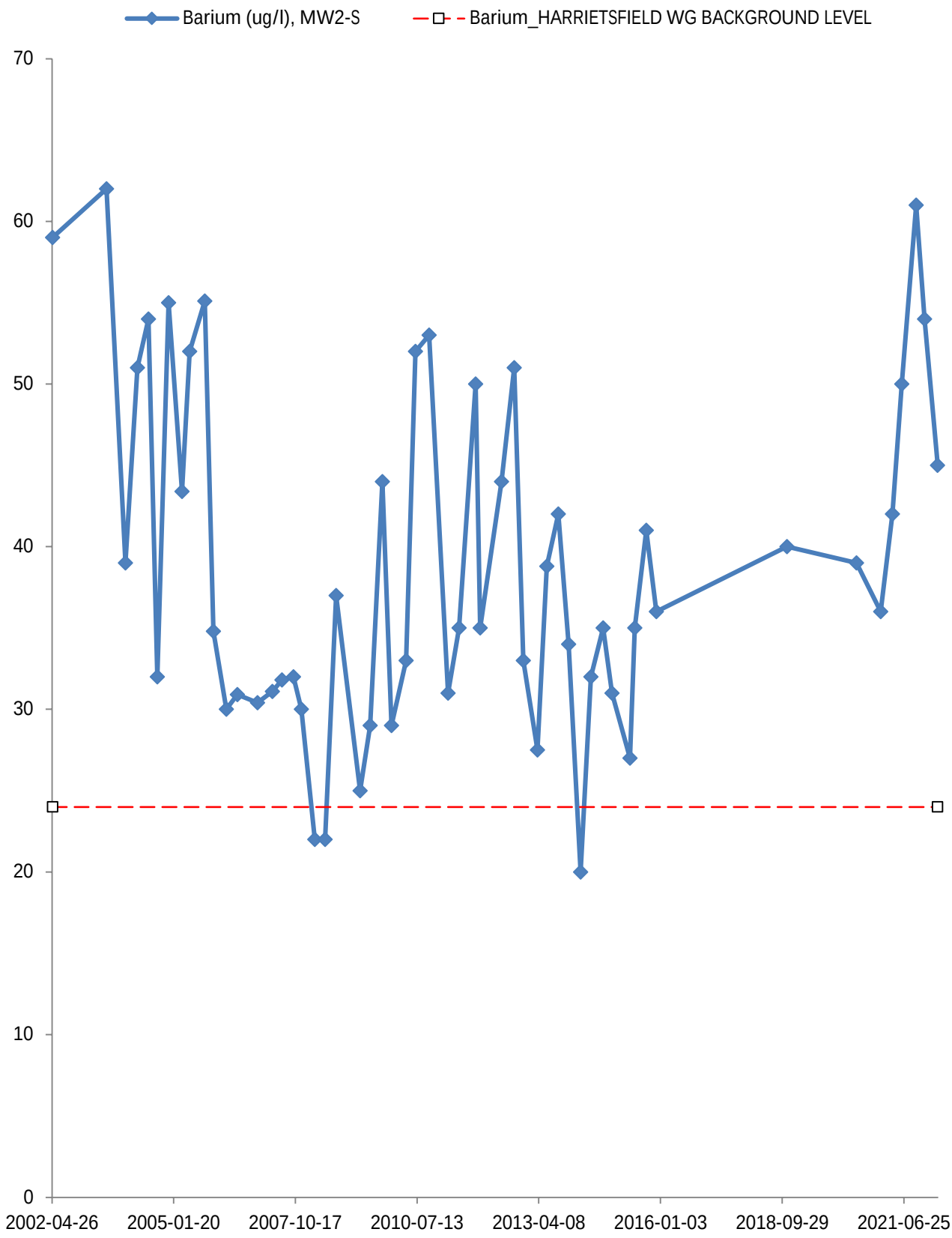
MW2-S-Antimony



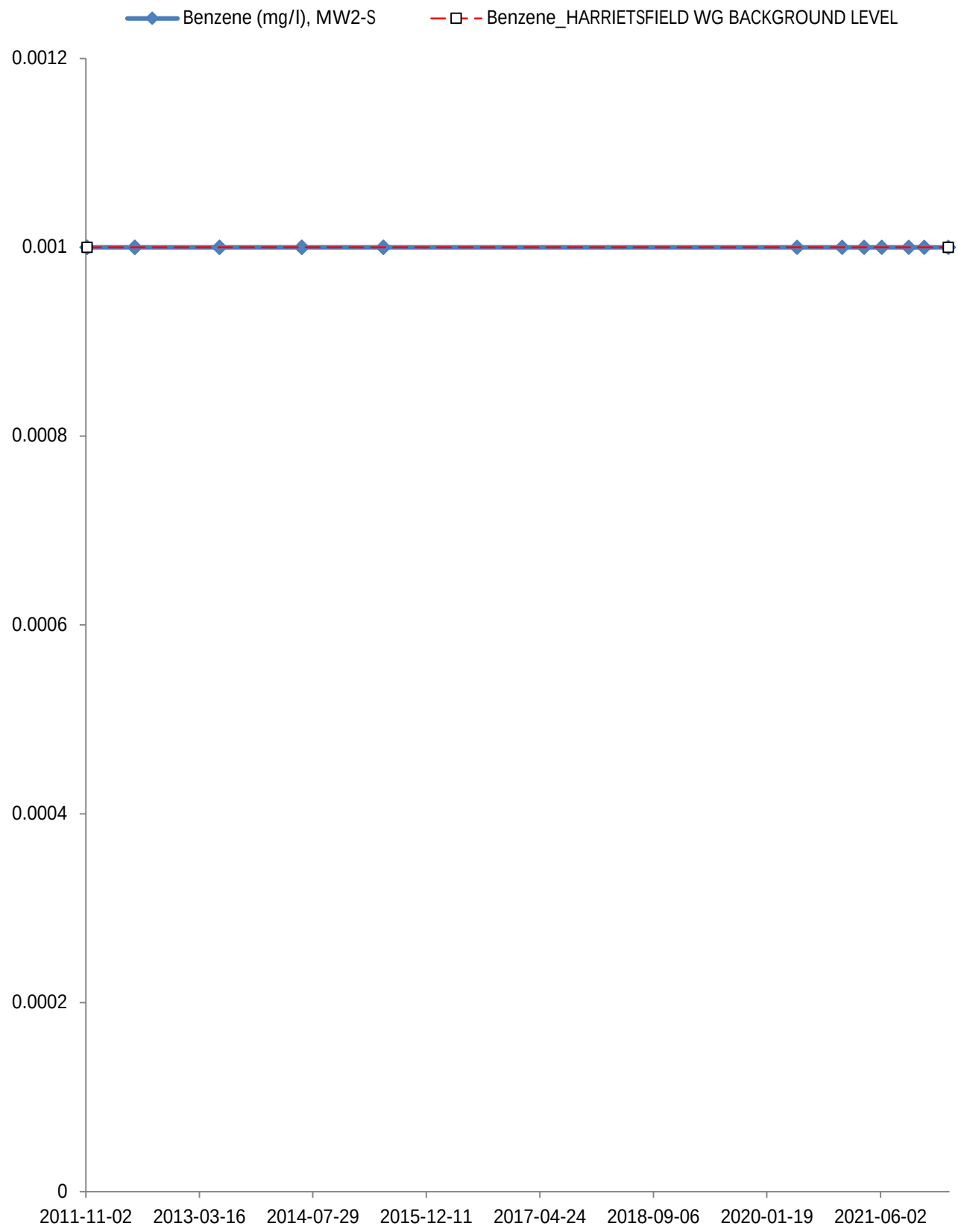
MW2-S-Arsenic



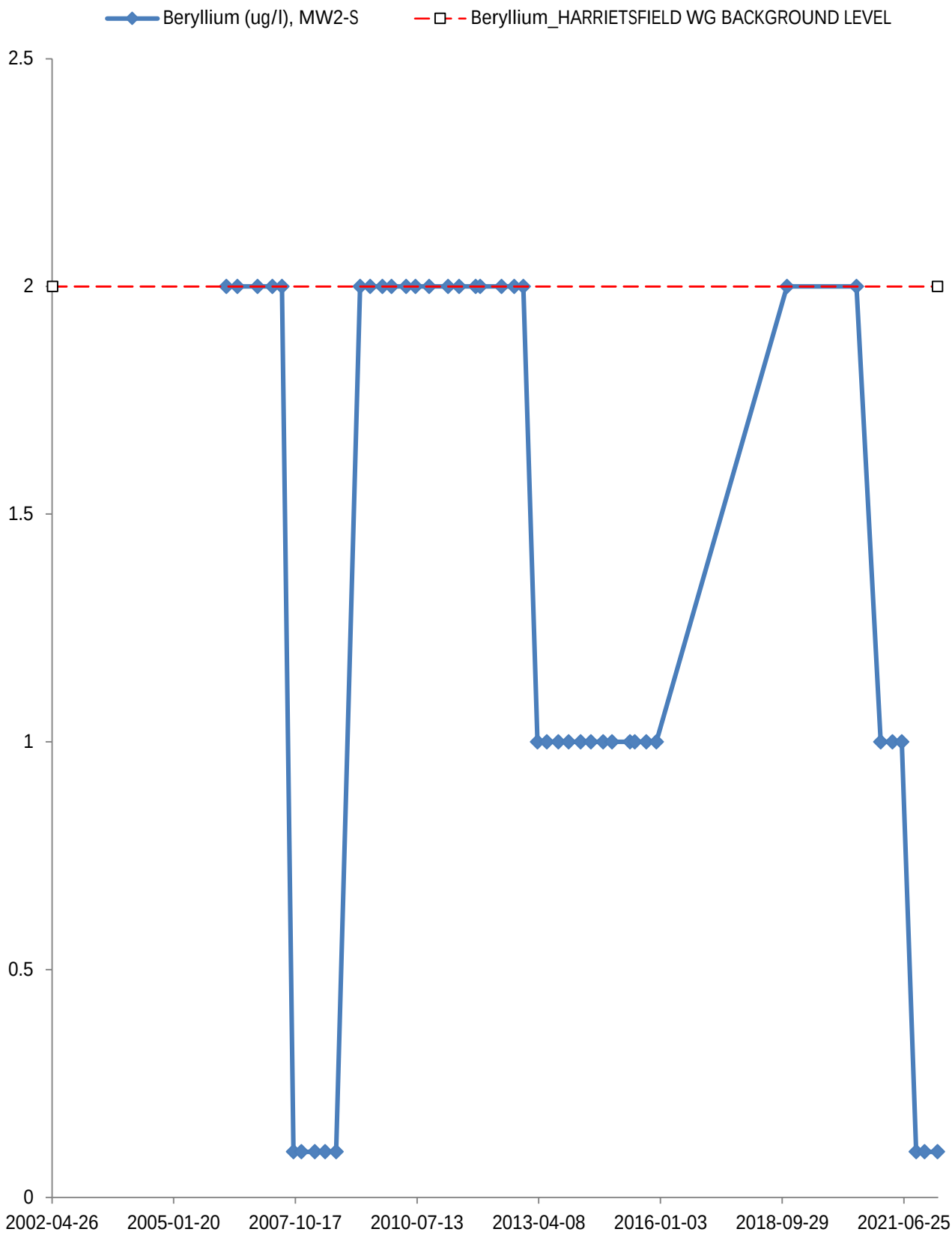
MW2-S-Barium


Barium (ug/l), MW2-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

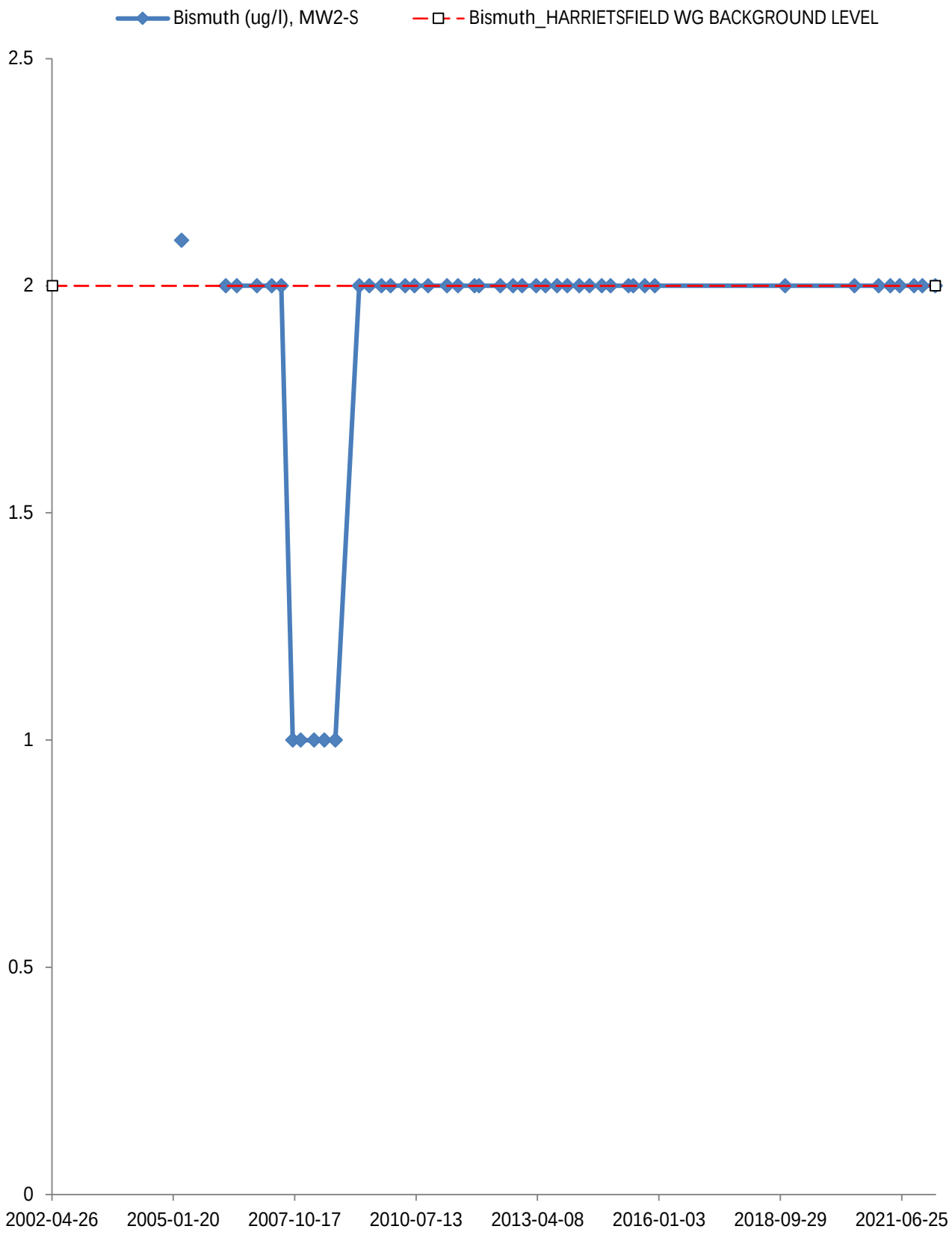
MW2-S-Benzene



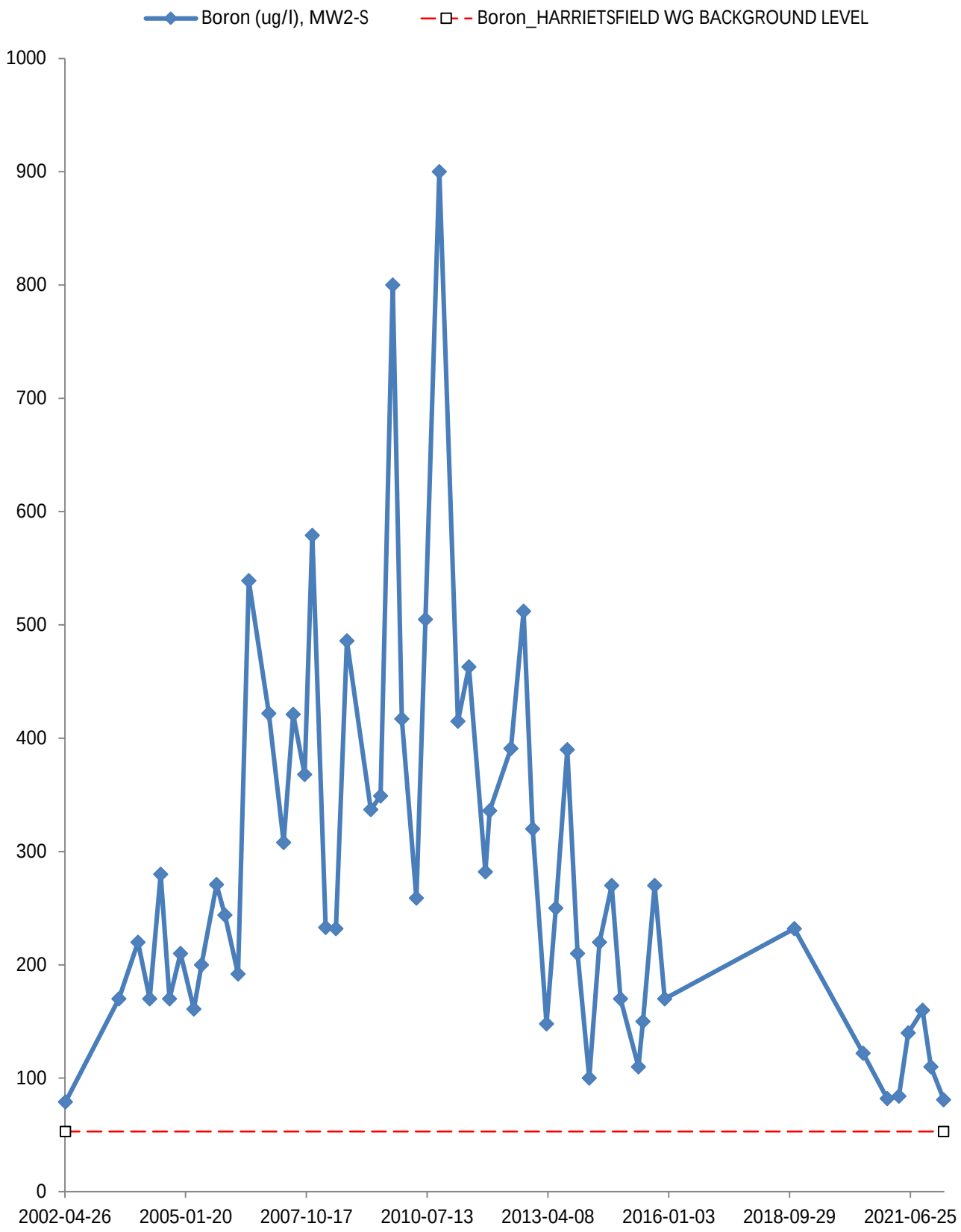
MW2-S-Beryllium



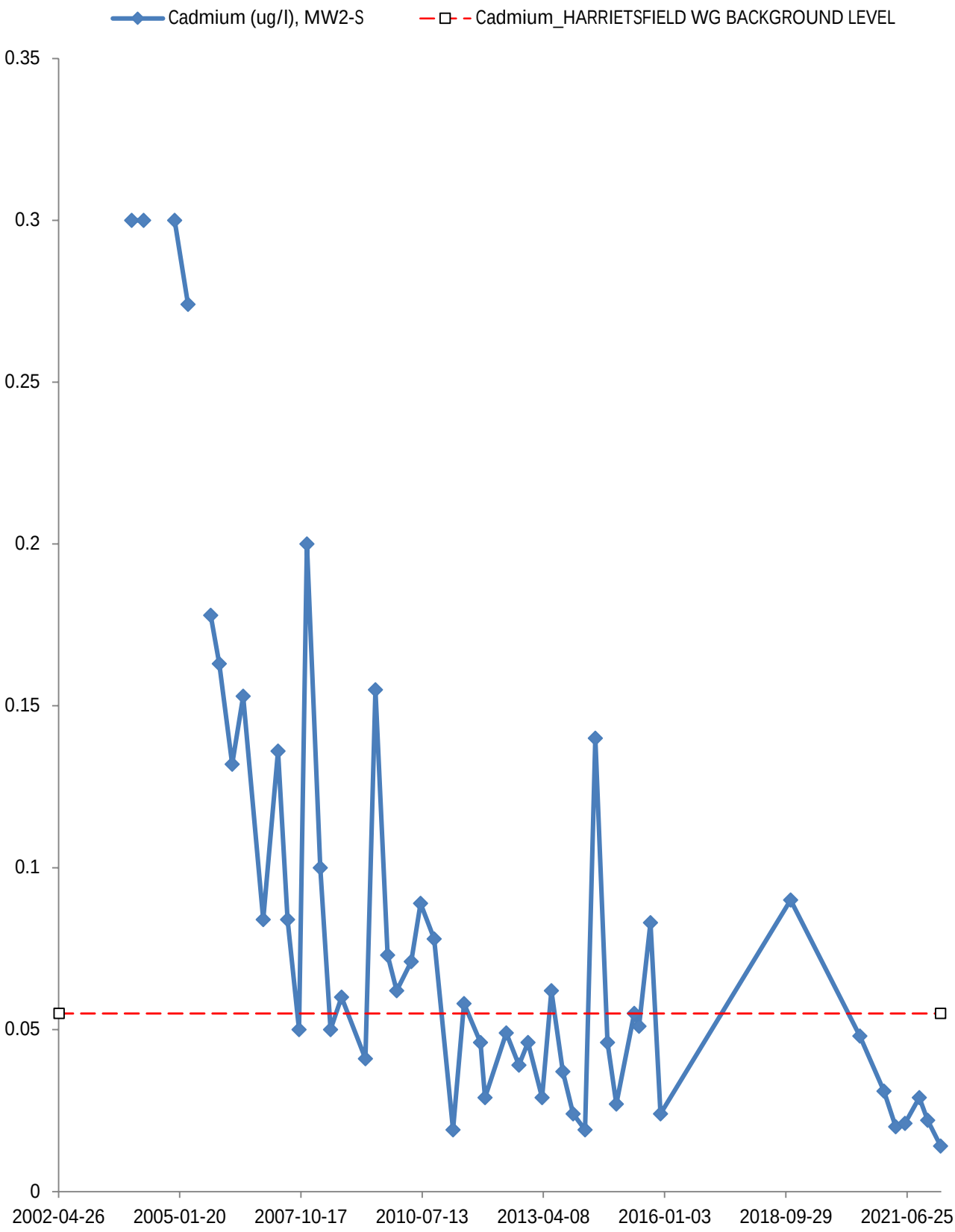
MW2-S-Bismuth



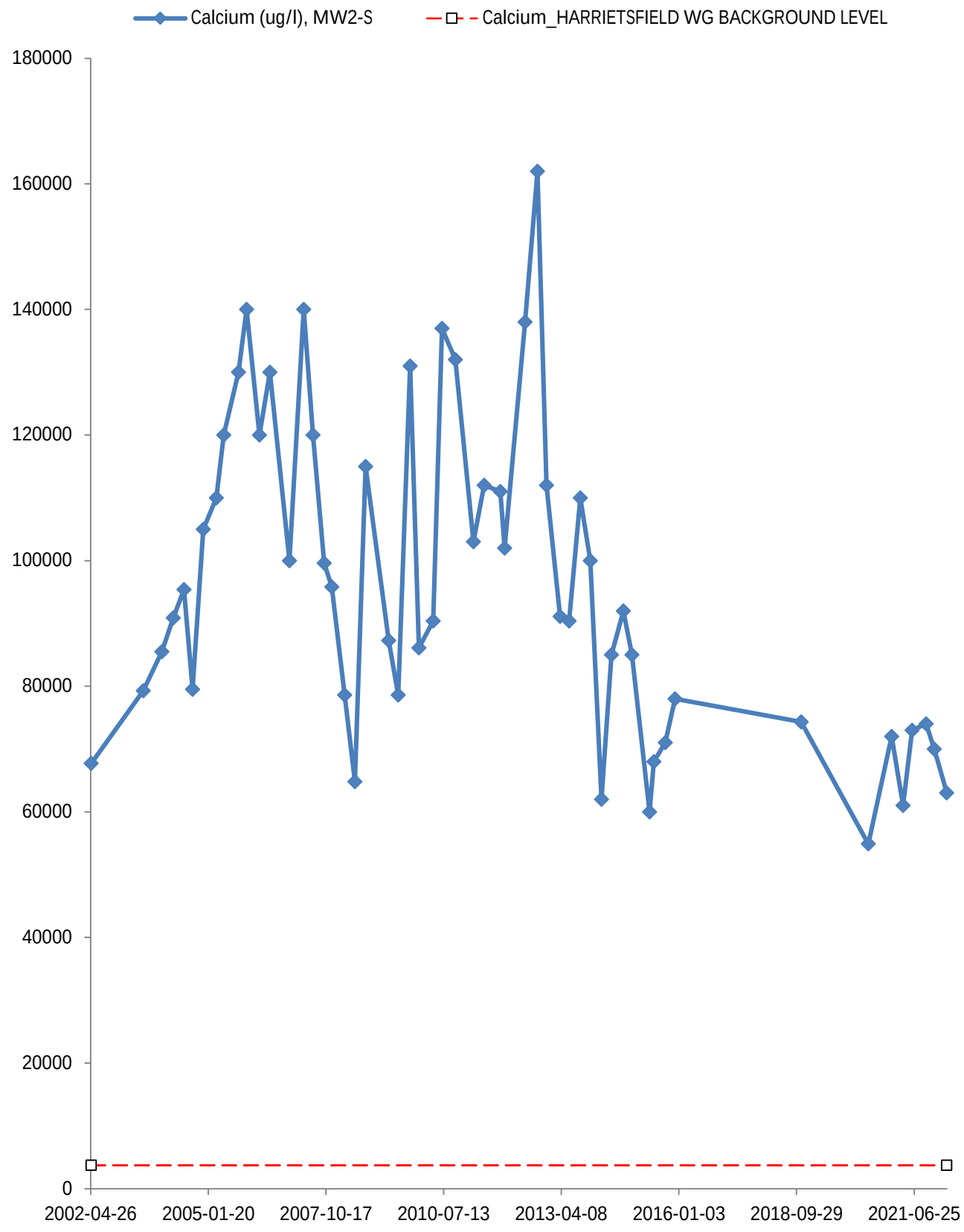
MW2-S-Boron


Boron (ug/l), MW2-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
1000
900
800
700
600
500
400
300
200
100
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

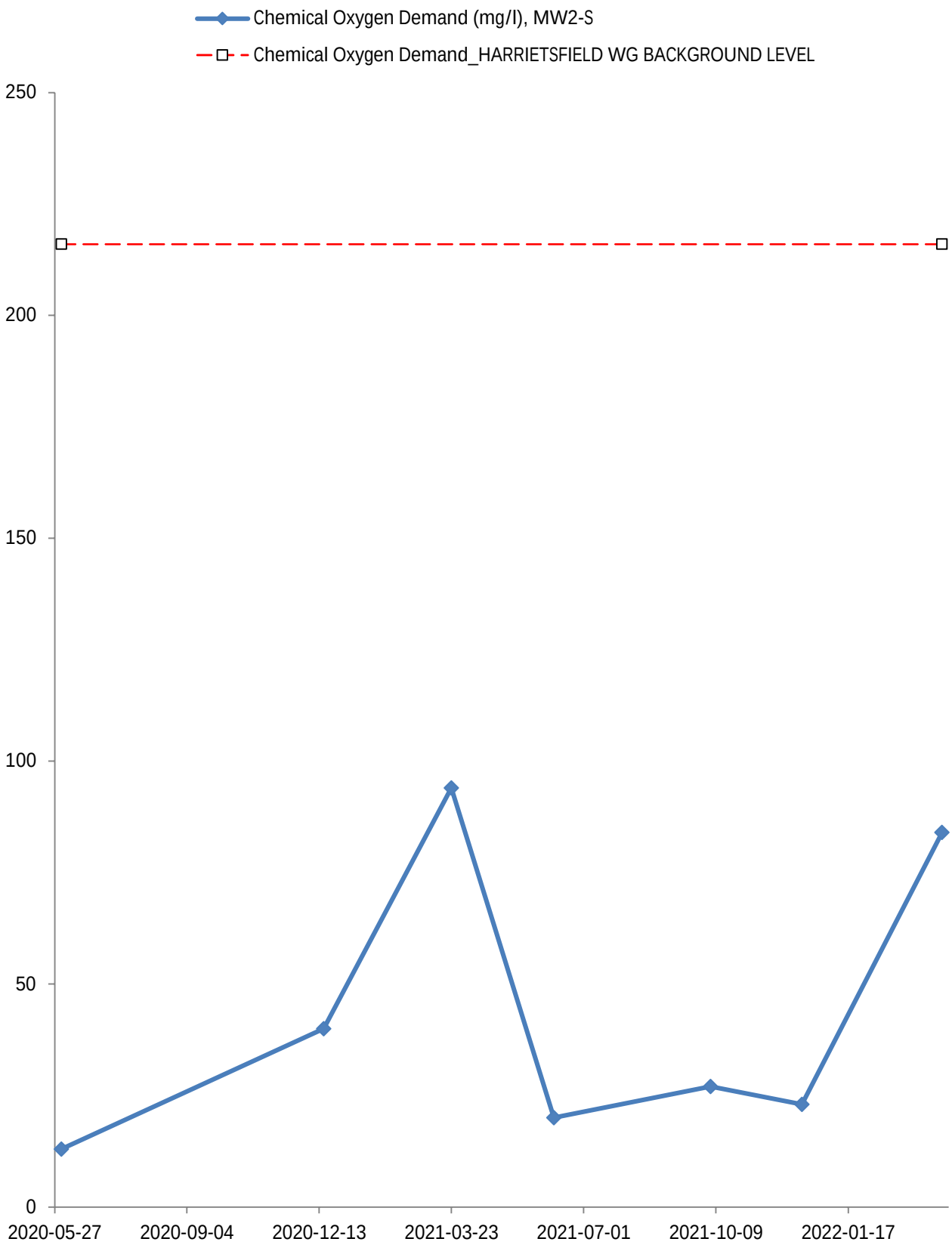
MW2-S-Cadmium



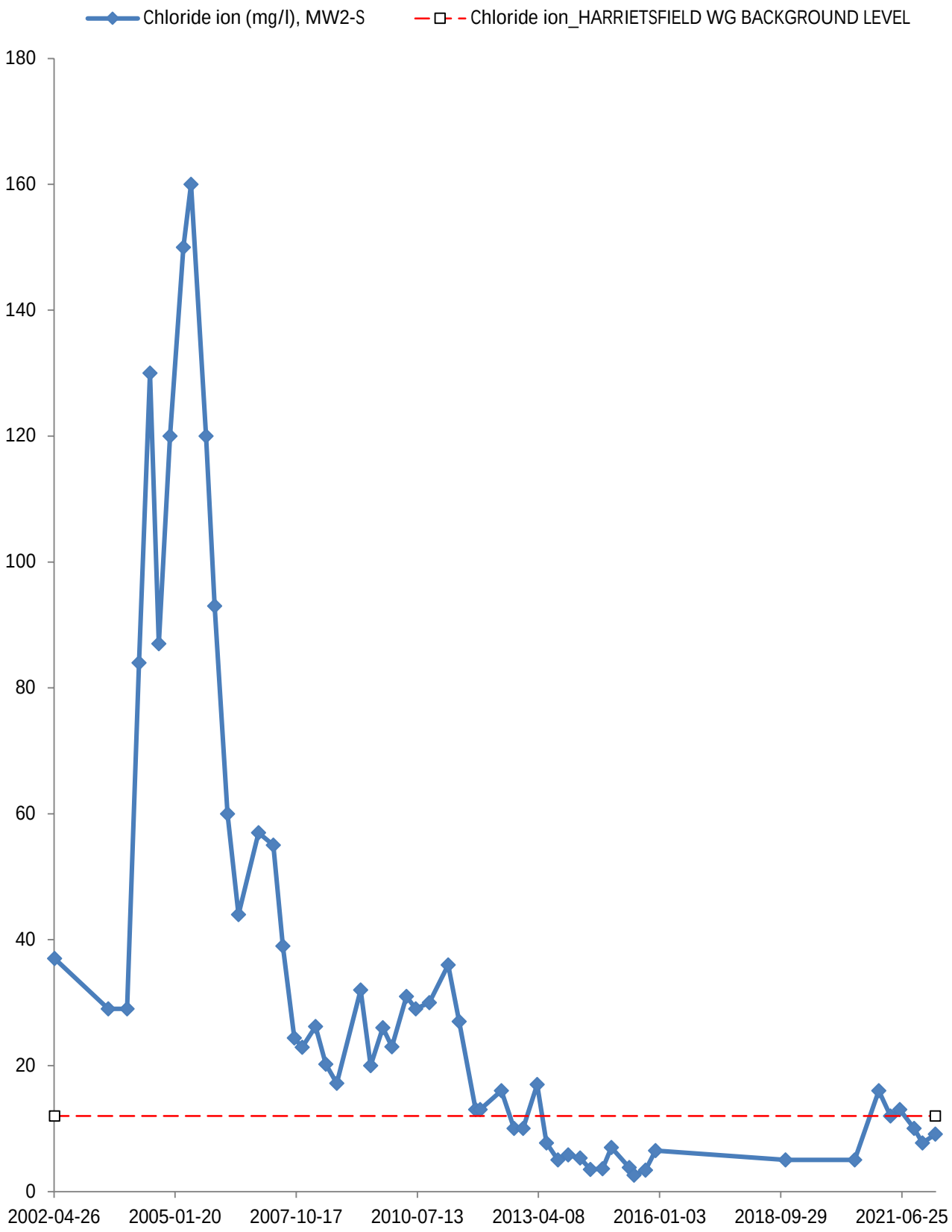
MW2-S-Calcium



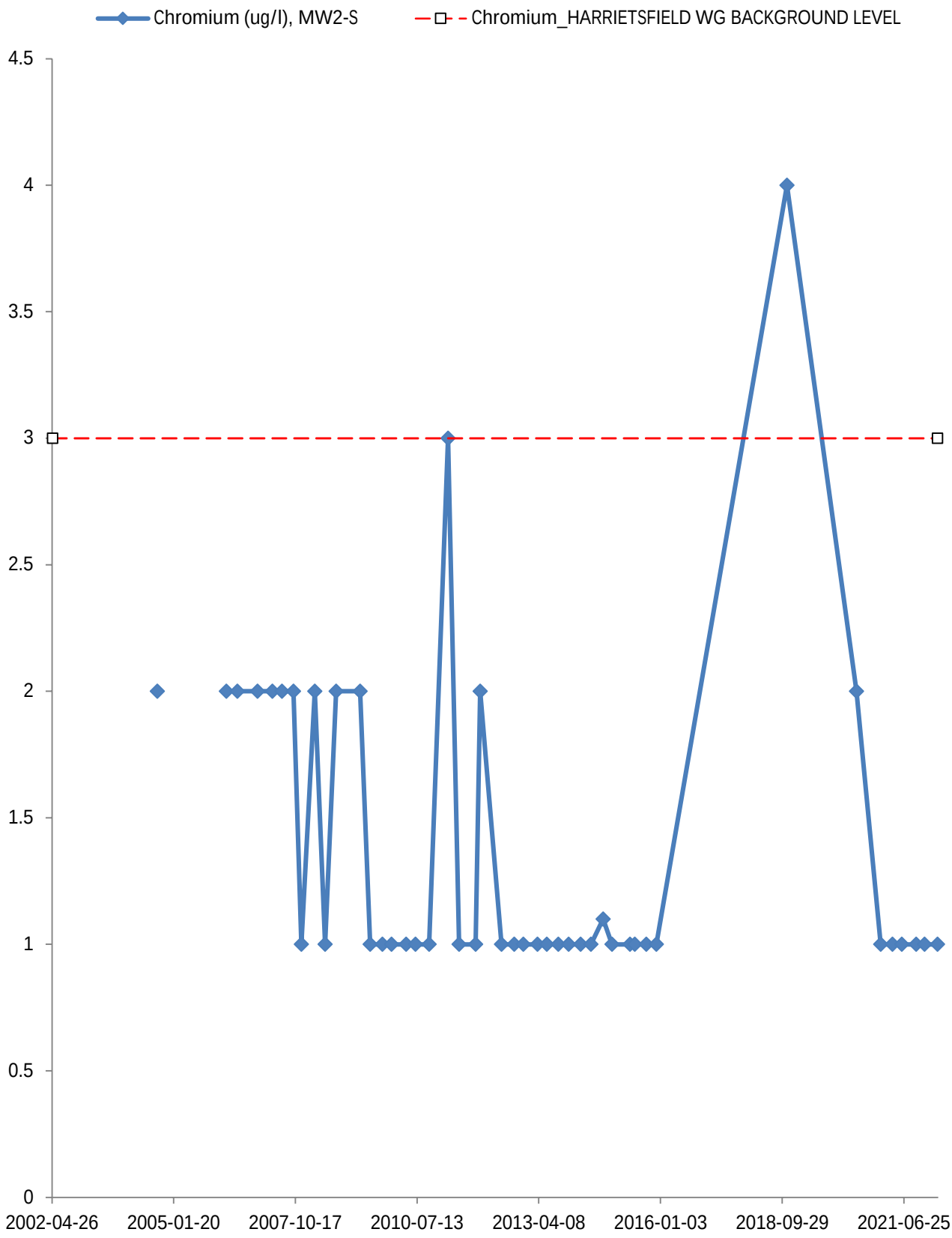
MW2-S-Chemical Oxygen Demand



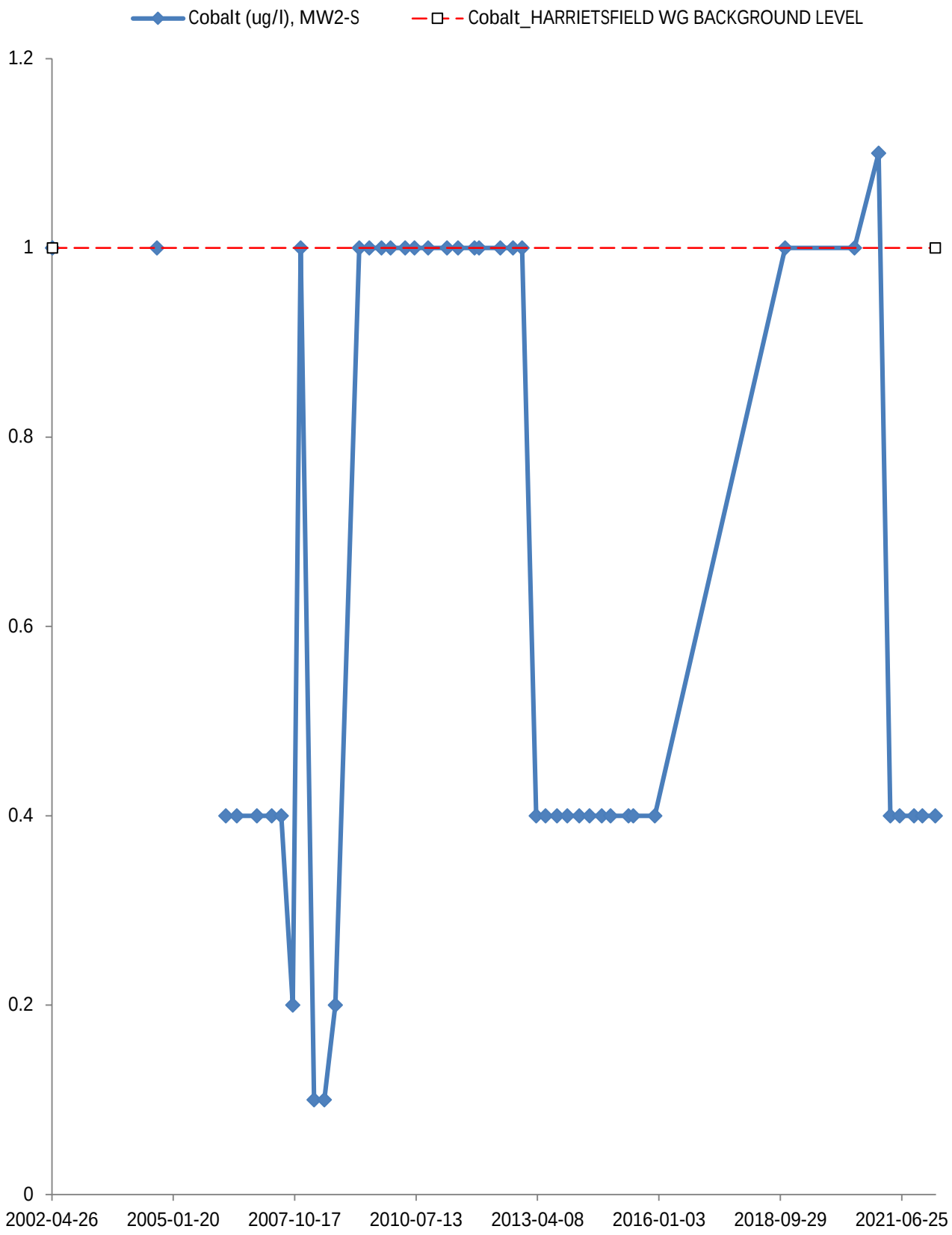
MW2-S-Chloride ion



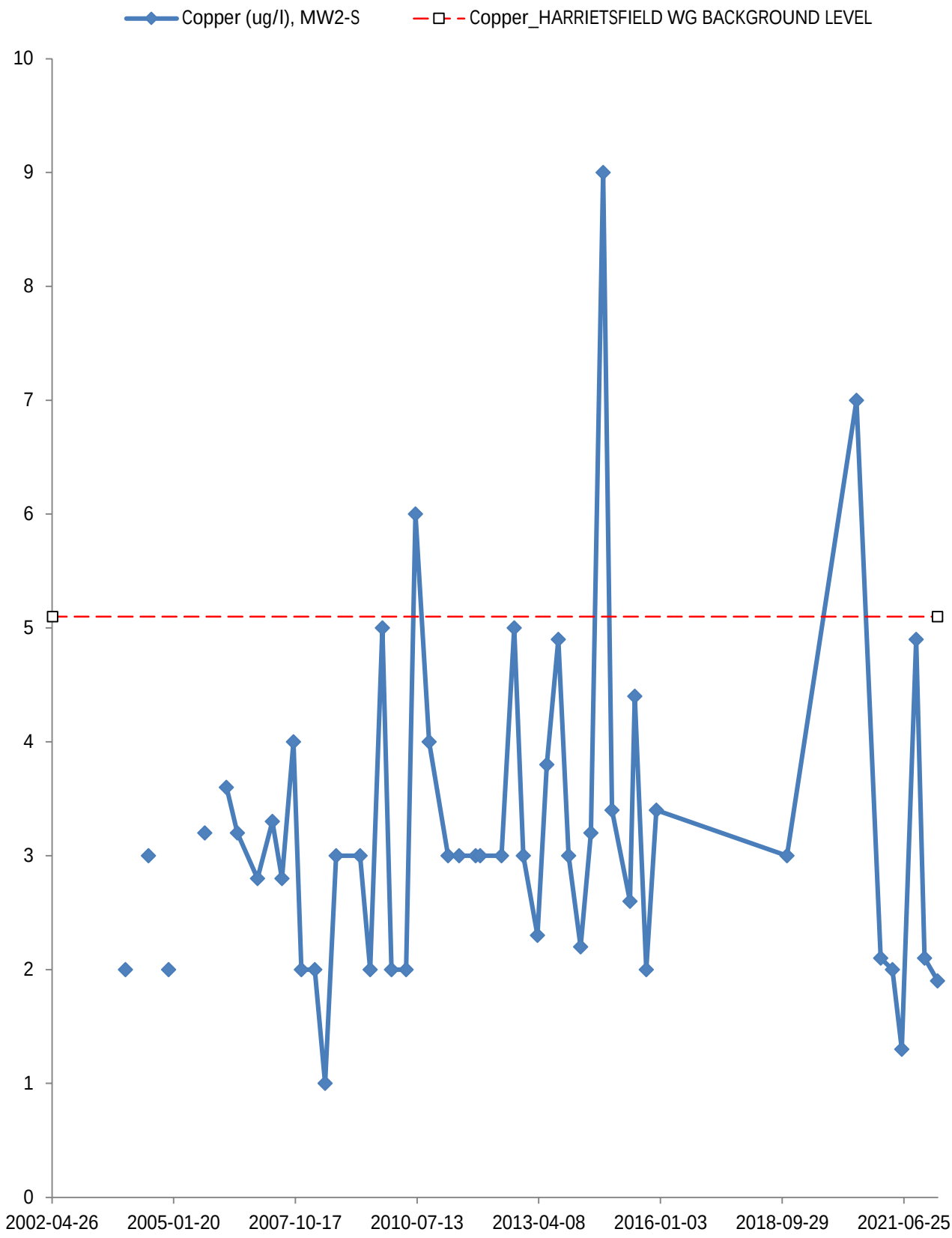
MW2-S-Chromium



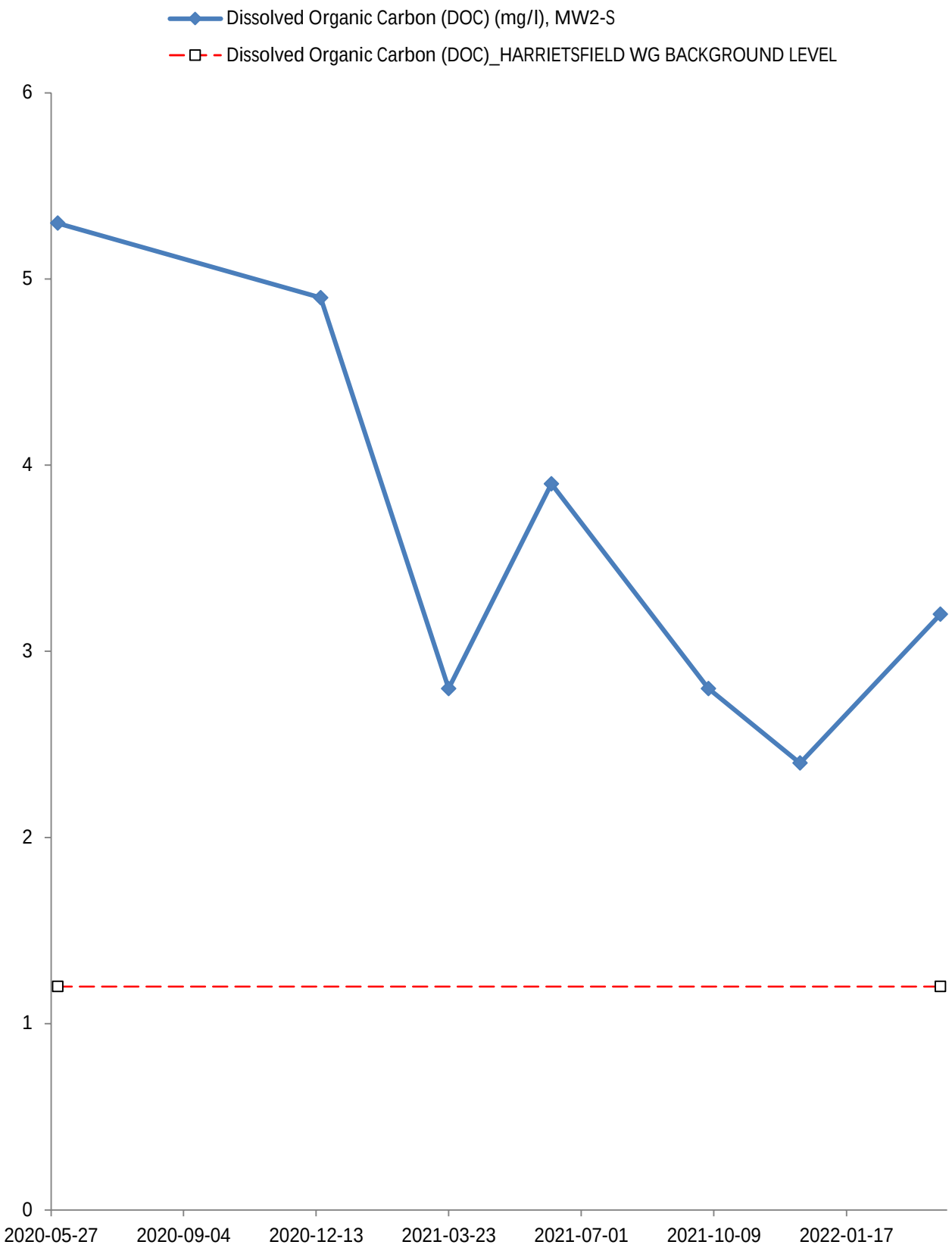
MW2-S-Cobalt


Cobalt (ug/l), MW2-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

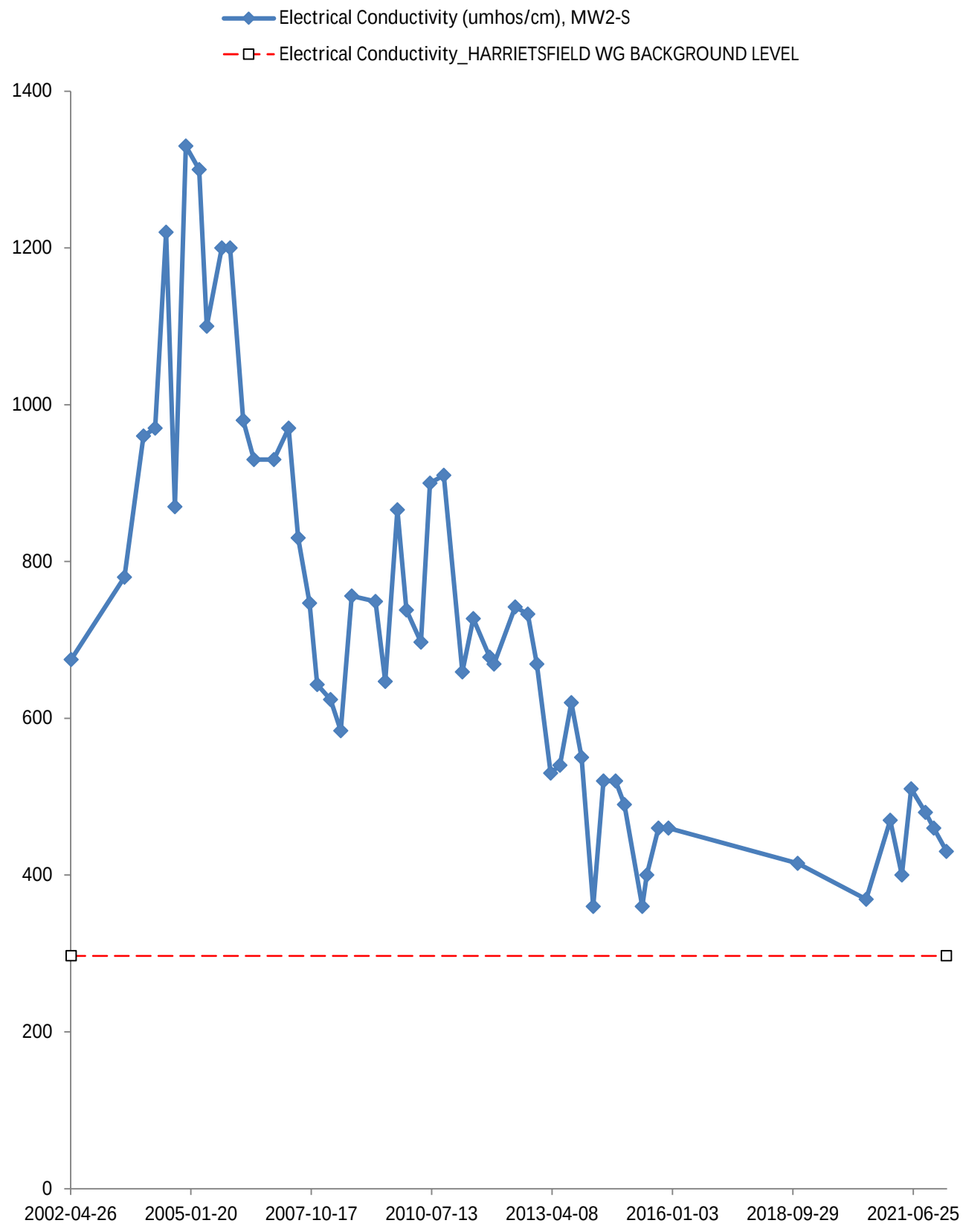
MW2-S-Copper


Copper (ug/l), MW2-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

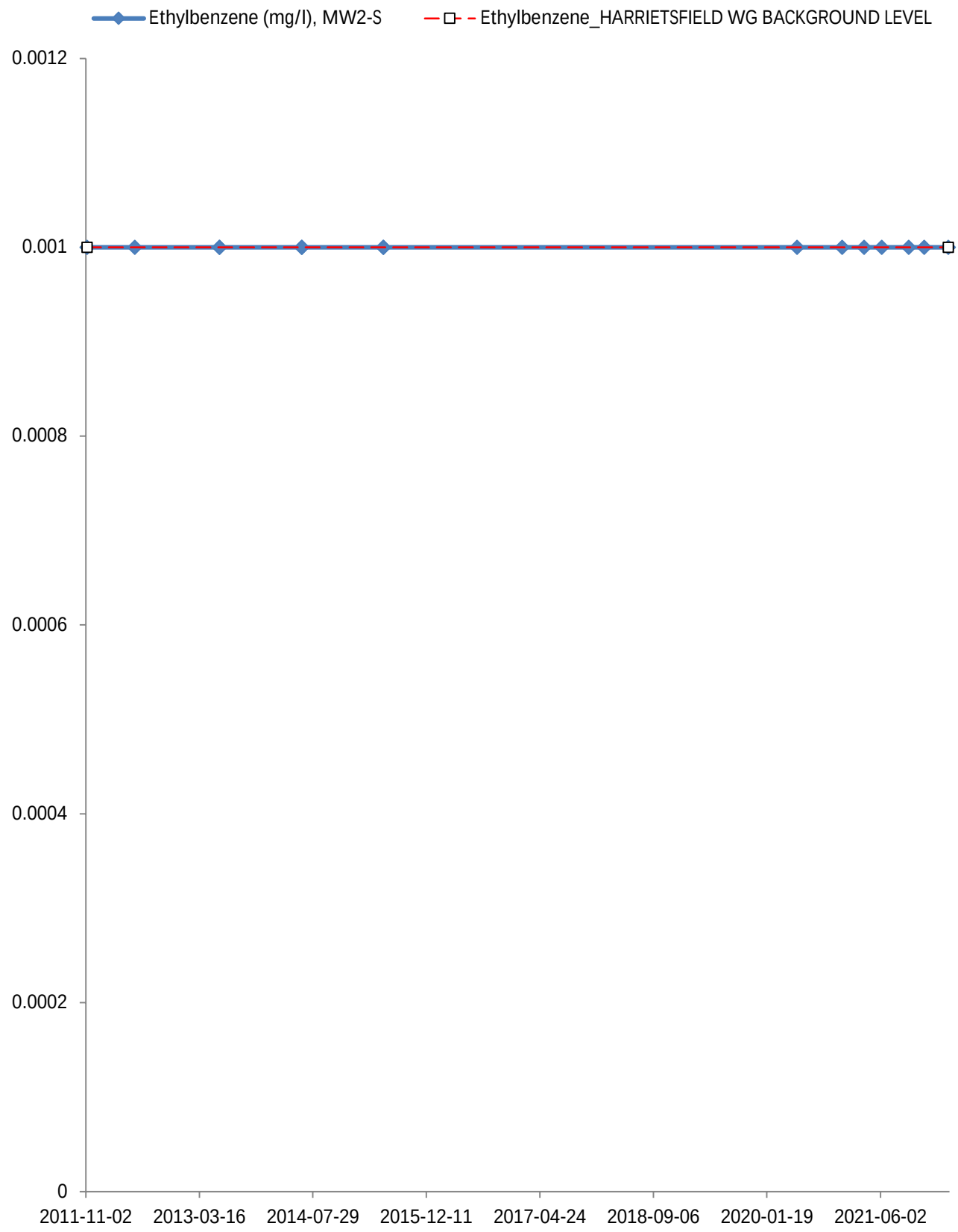
MW2-S-Dissolved Organic Carbon7



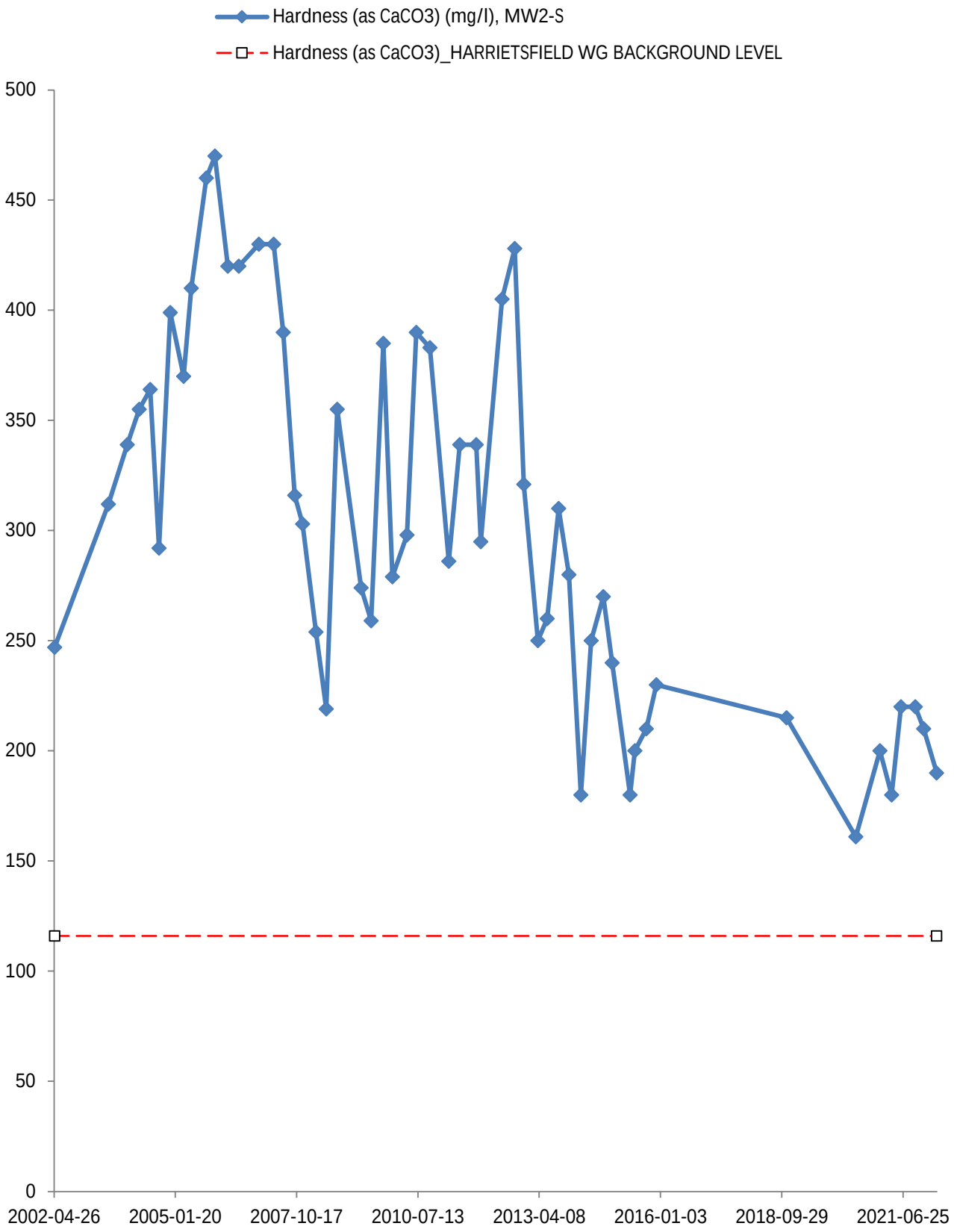
MW2-S-Electrical Conductivity



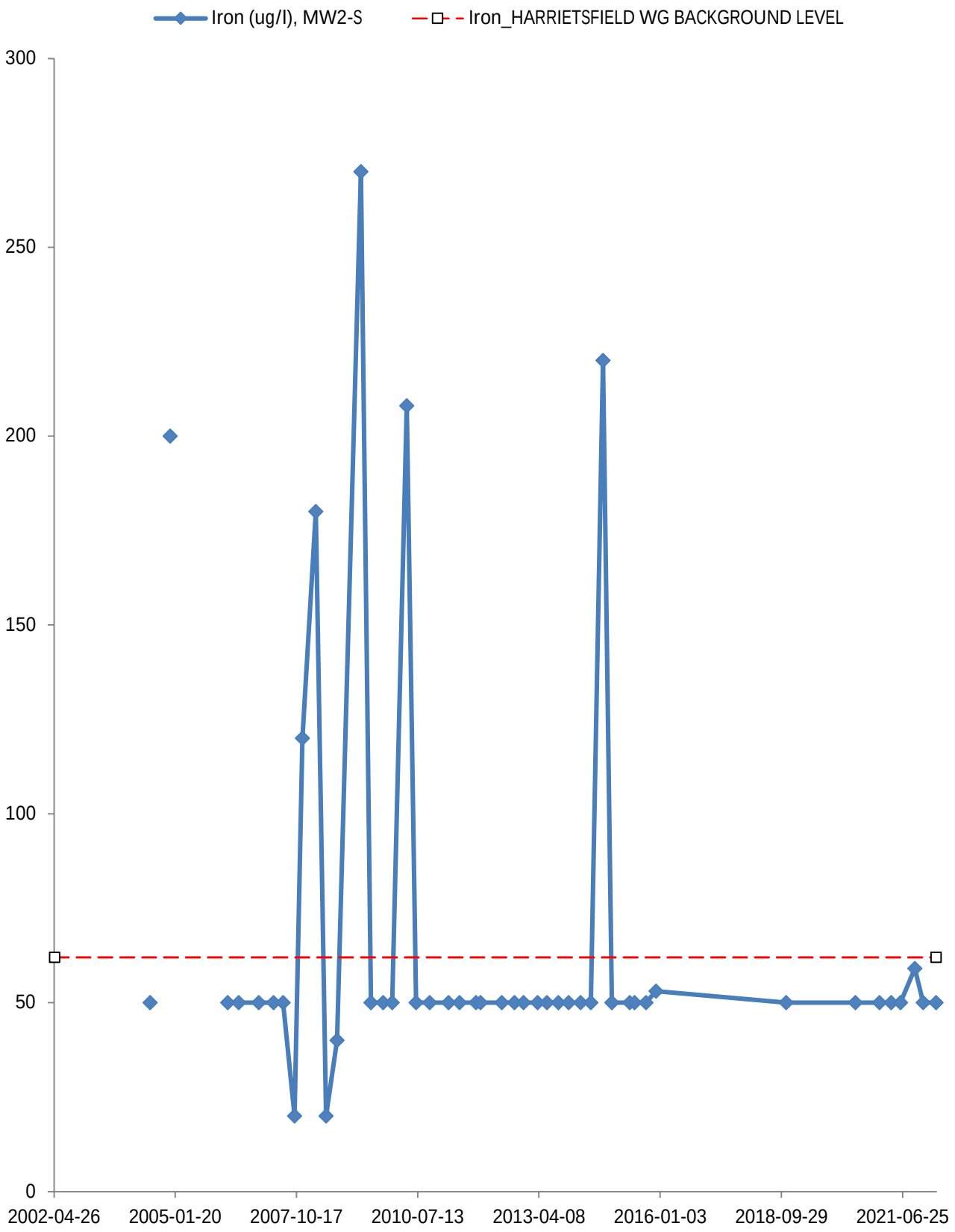
MW2-S-Ethylbenzene



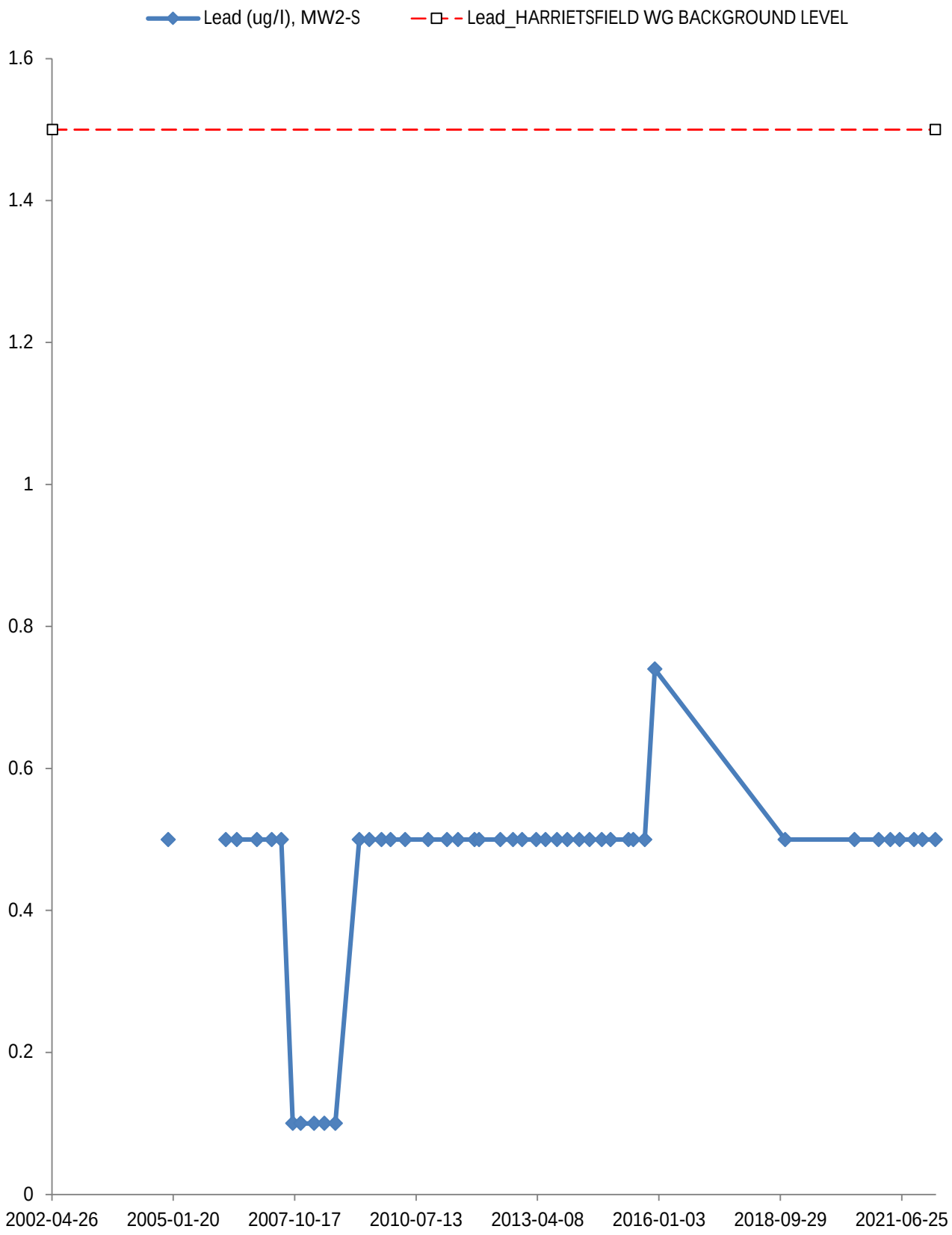
MW2-S-Hardness (as CaCO3)



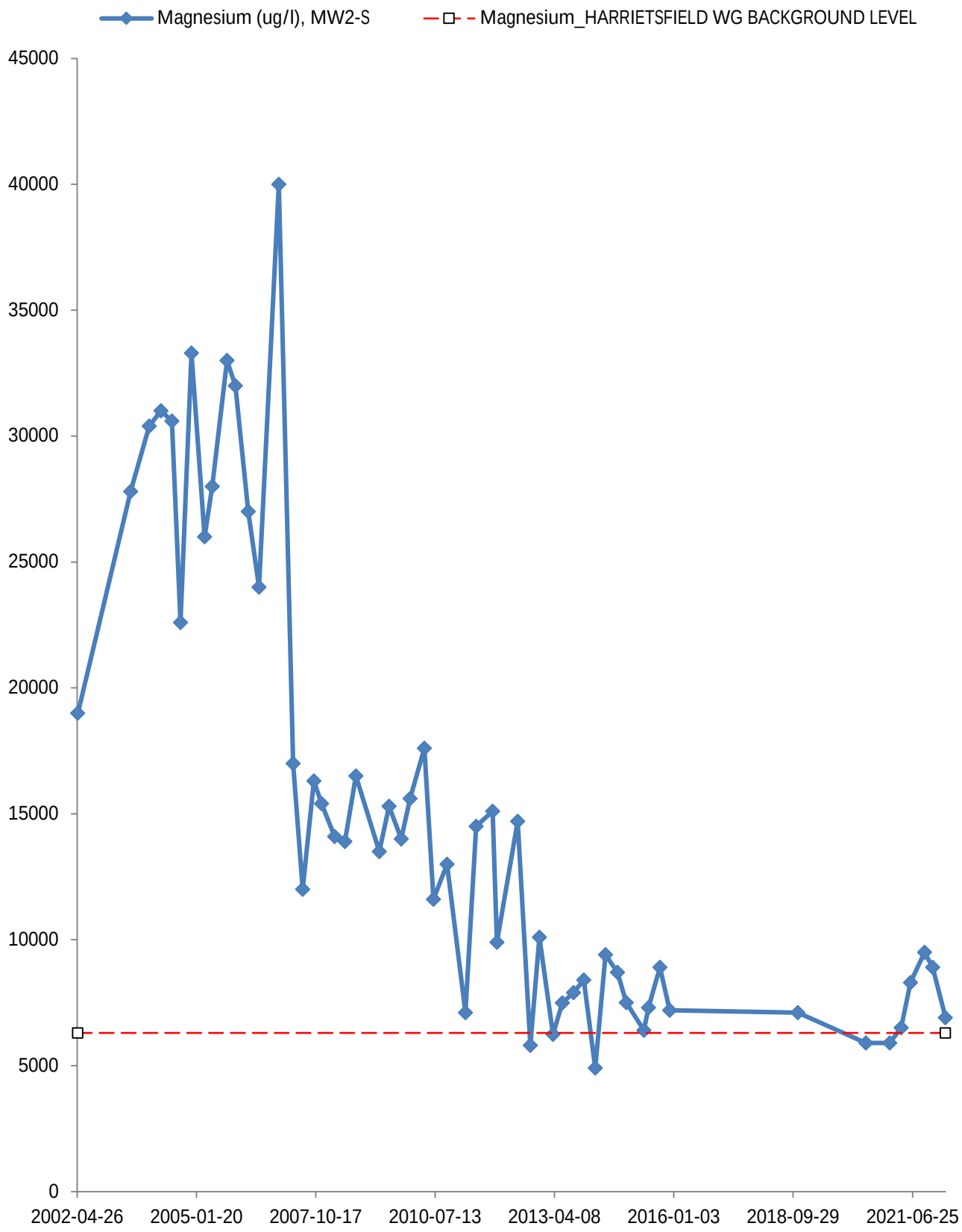
MW2-S-Iron


Iron (ug/l), MW2-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
300
250
200
150
100
50
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

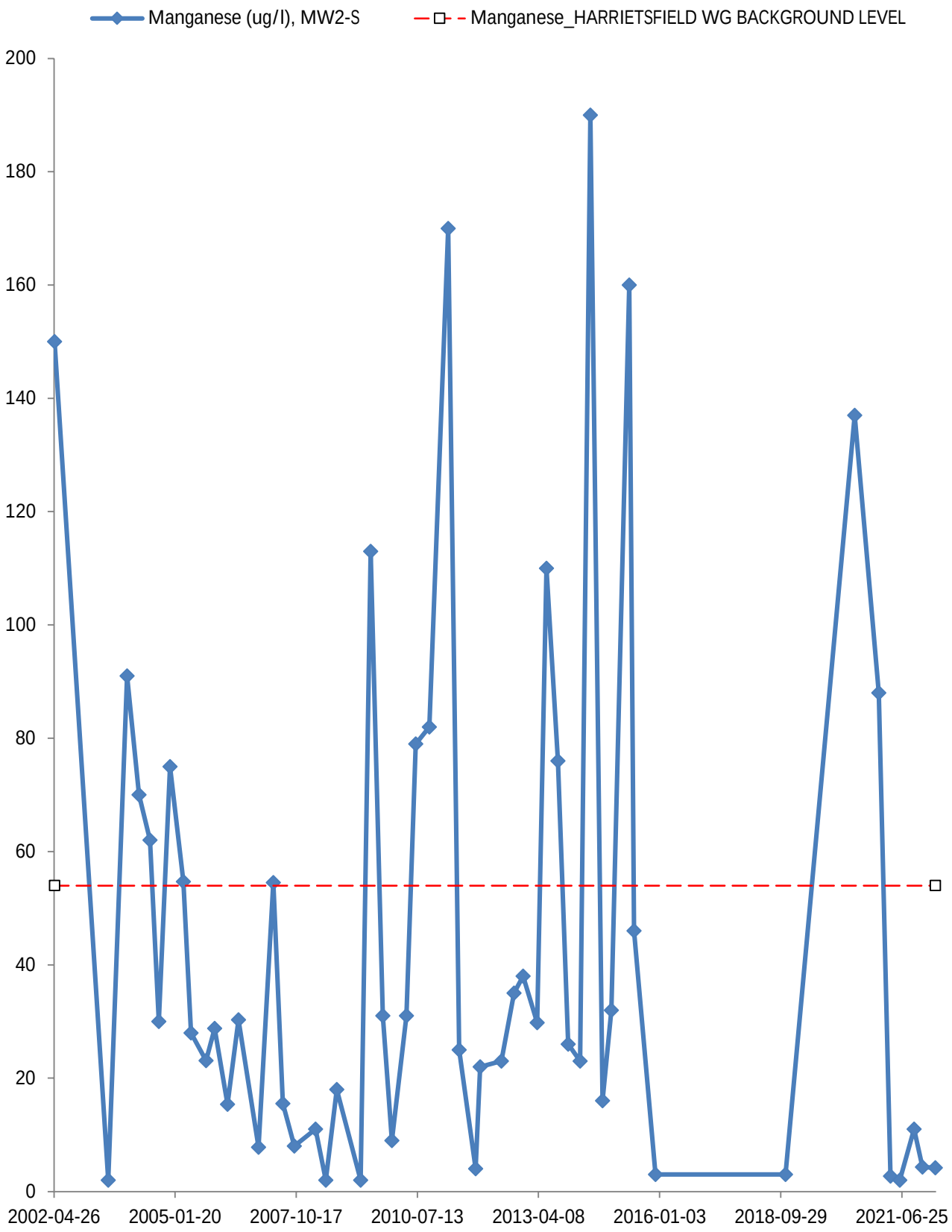
MW2-S-Lead


Lead (ug/l), MW2-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

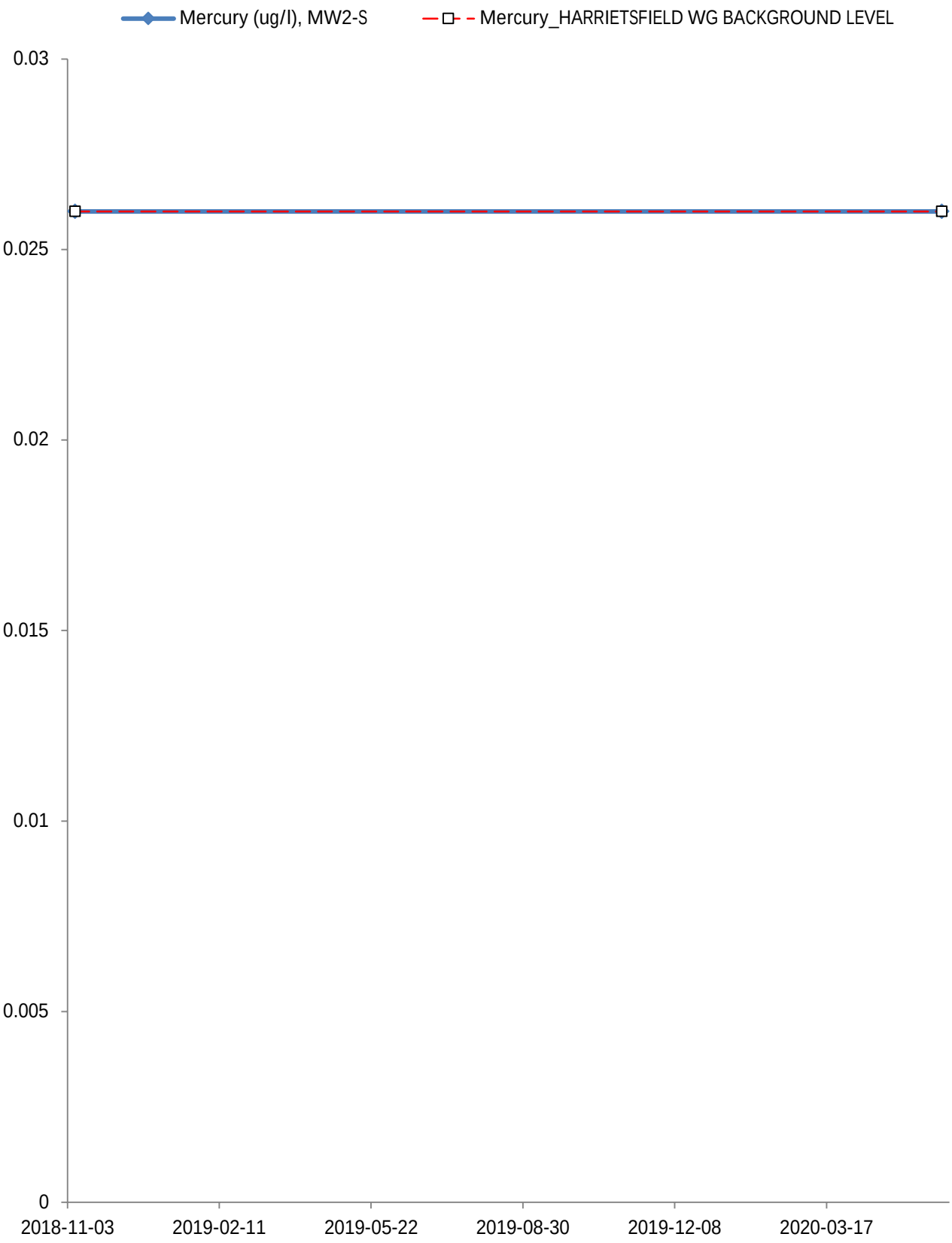
MW2-S-Magnesium



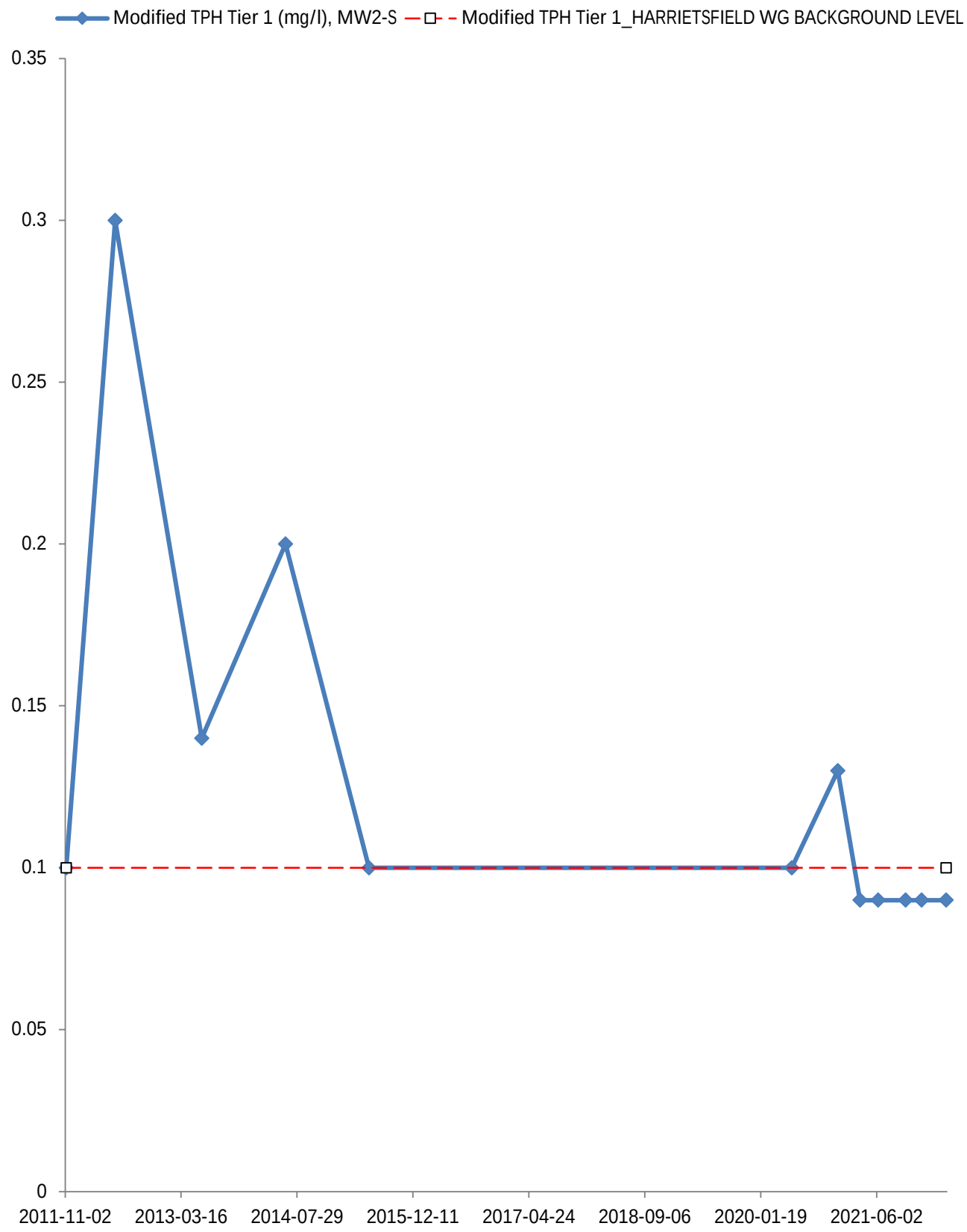
MW2-S-Manganese



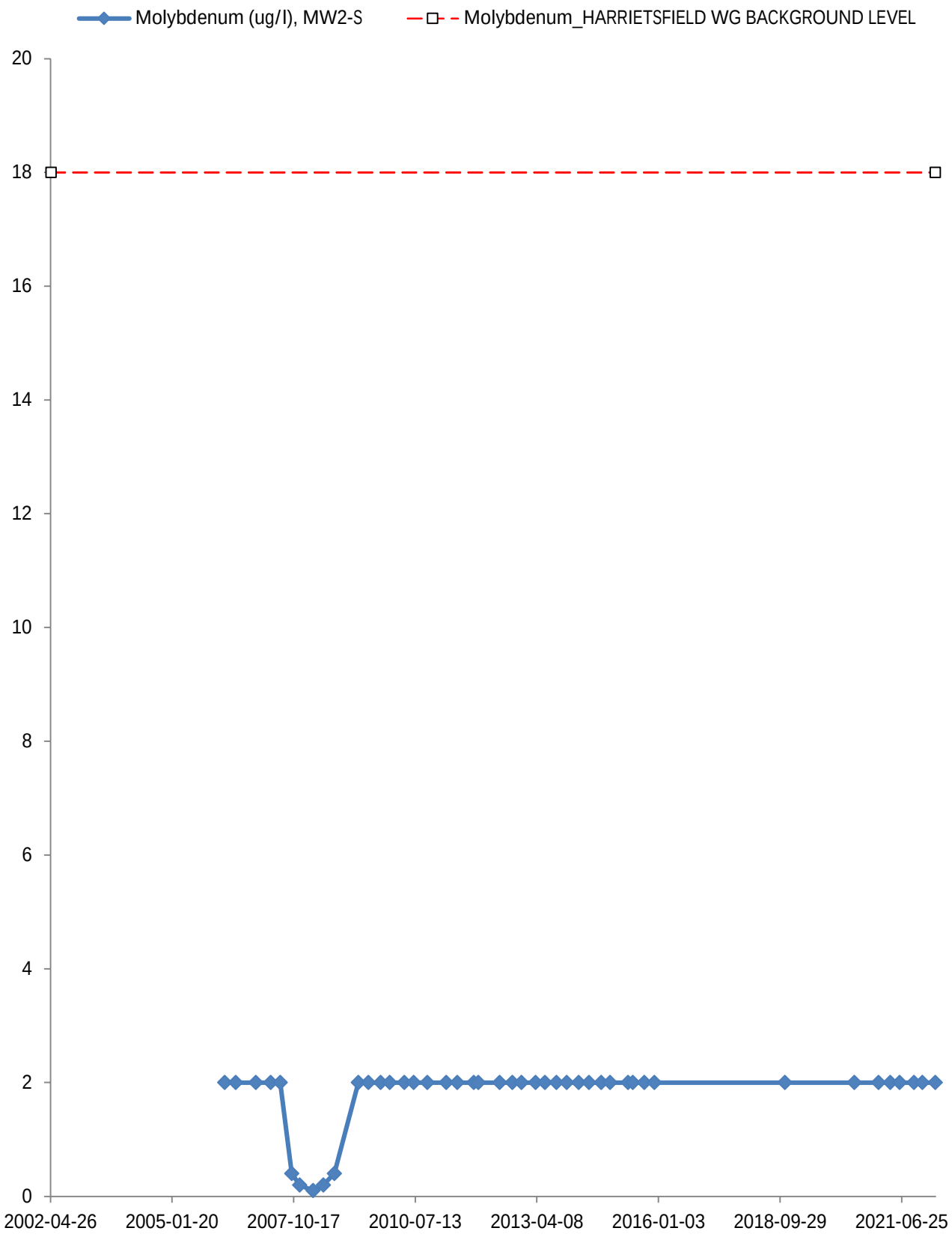
MW2-S-Mercury



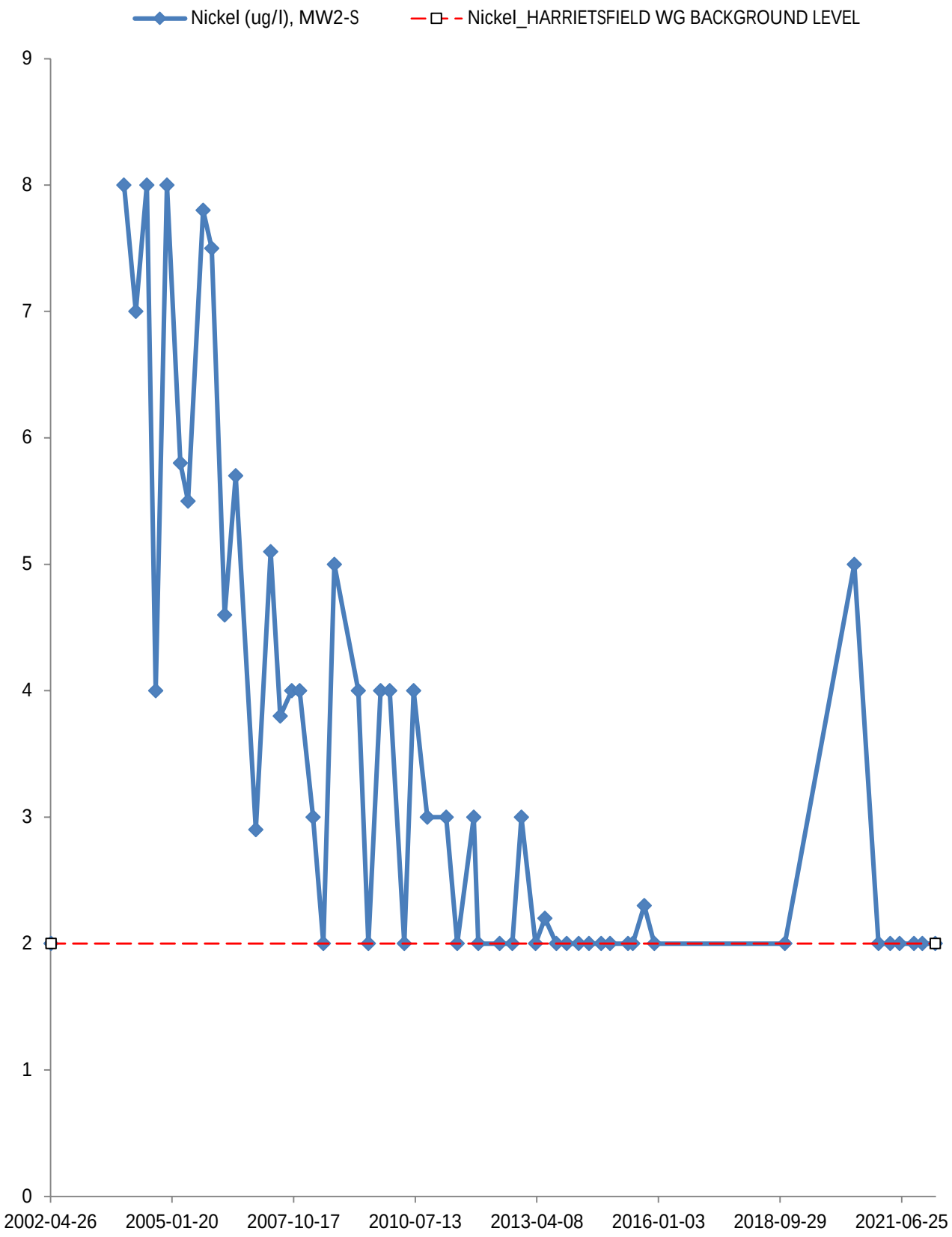
MW2-S-Modified TPH Tier 1



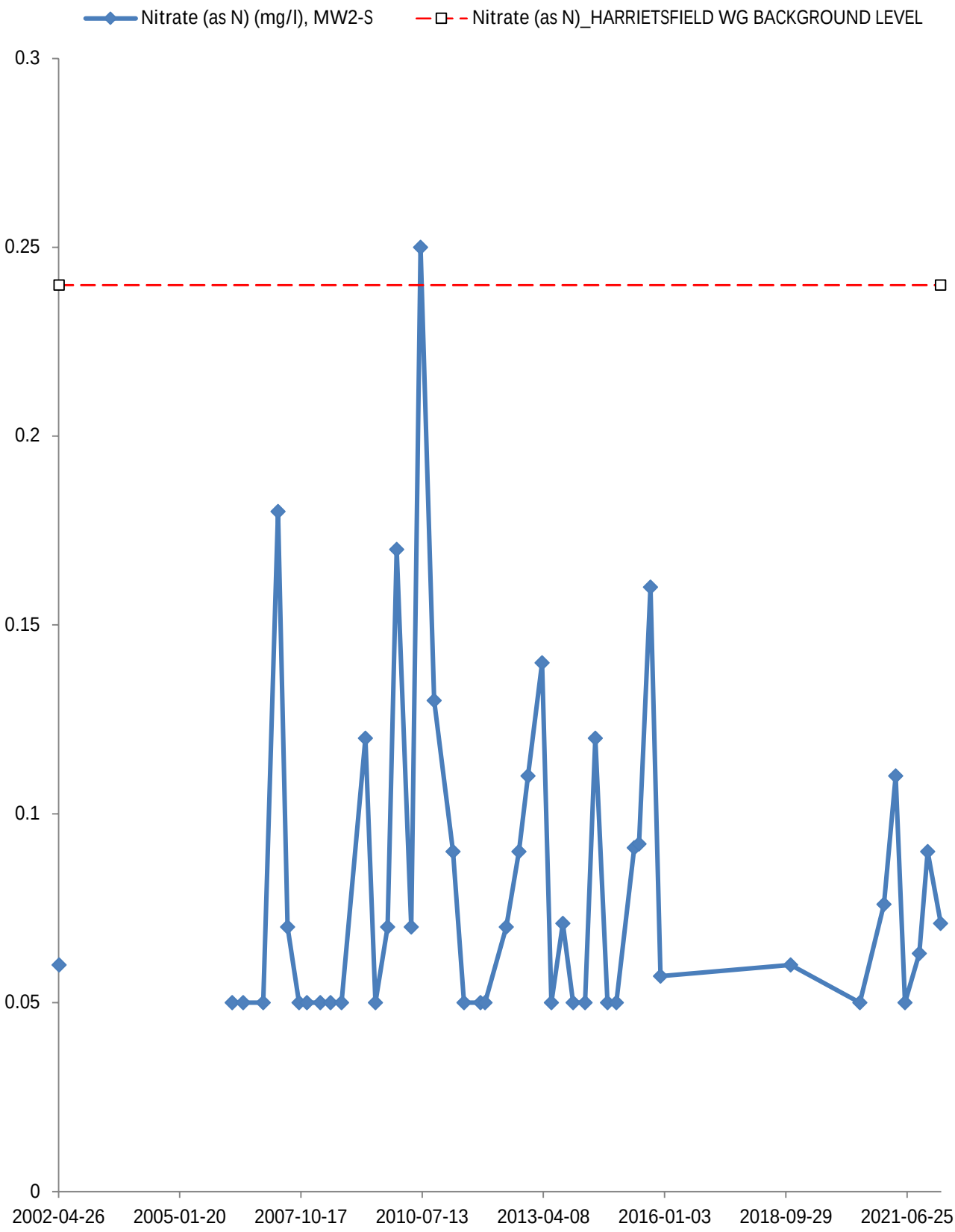
MW2-S-Molybdenum



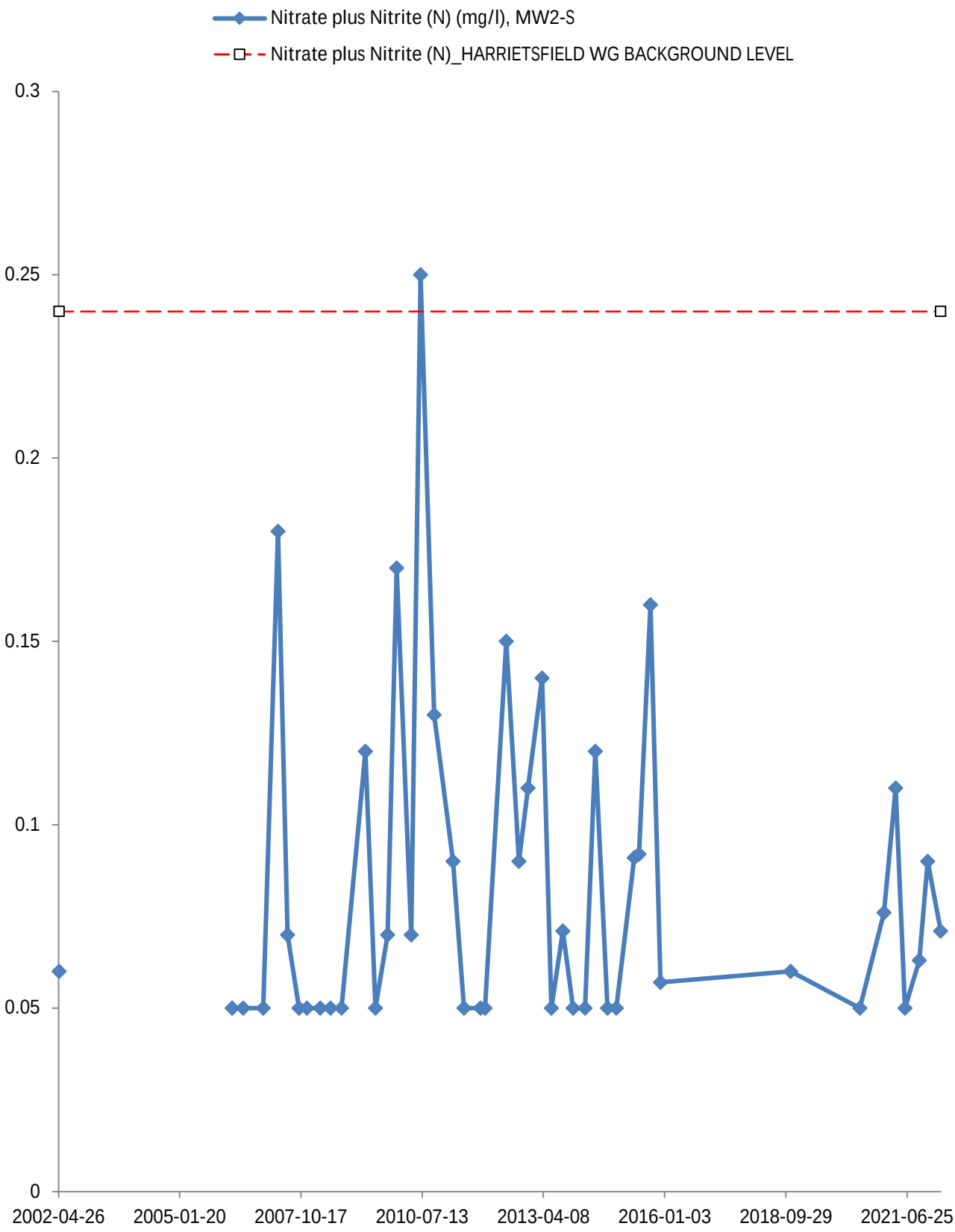
MW2-S-Nickel


Nickel (ug/l), MW2-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

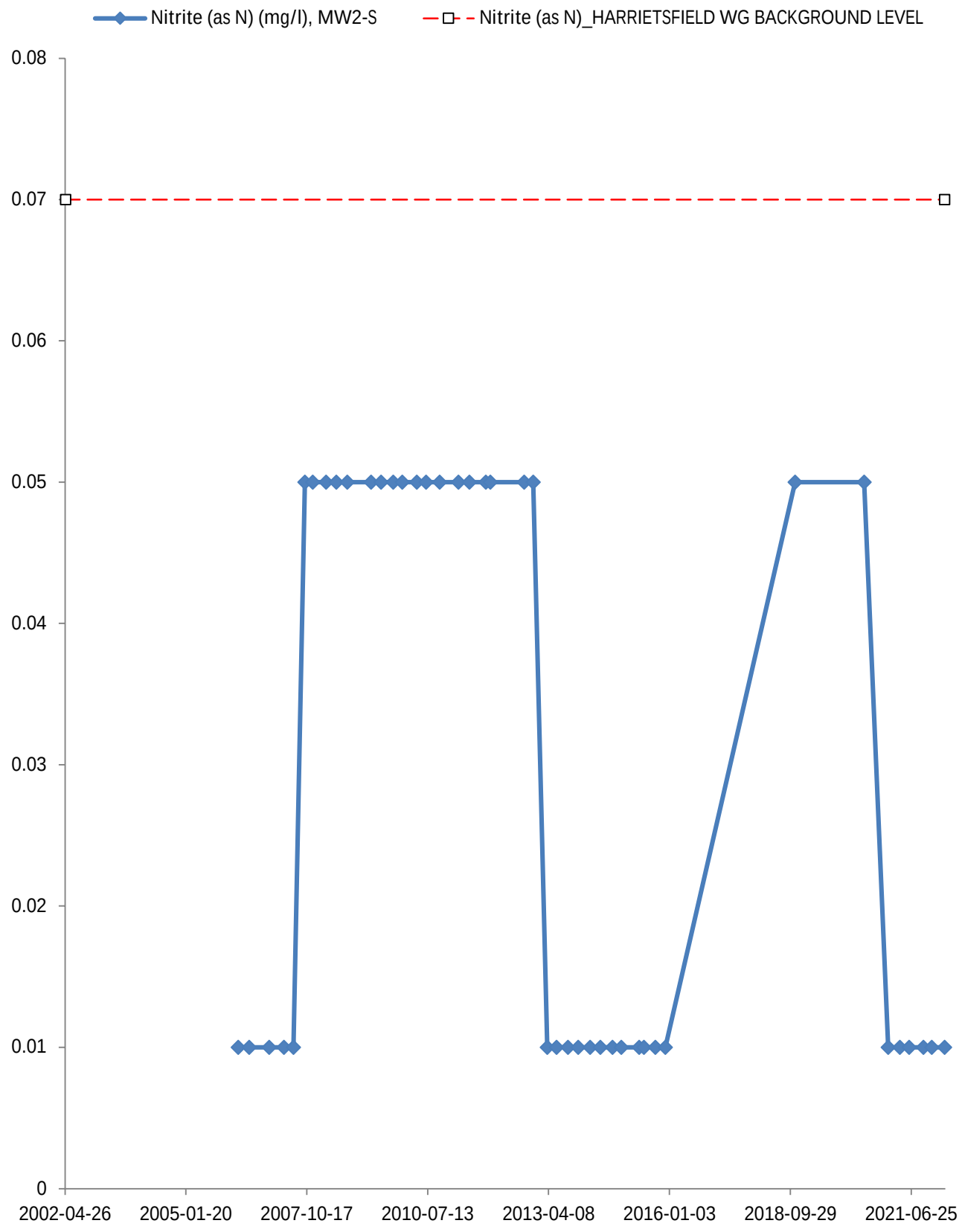
MW2-S-Nitrate (as N)



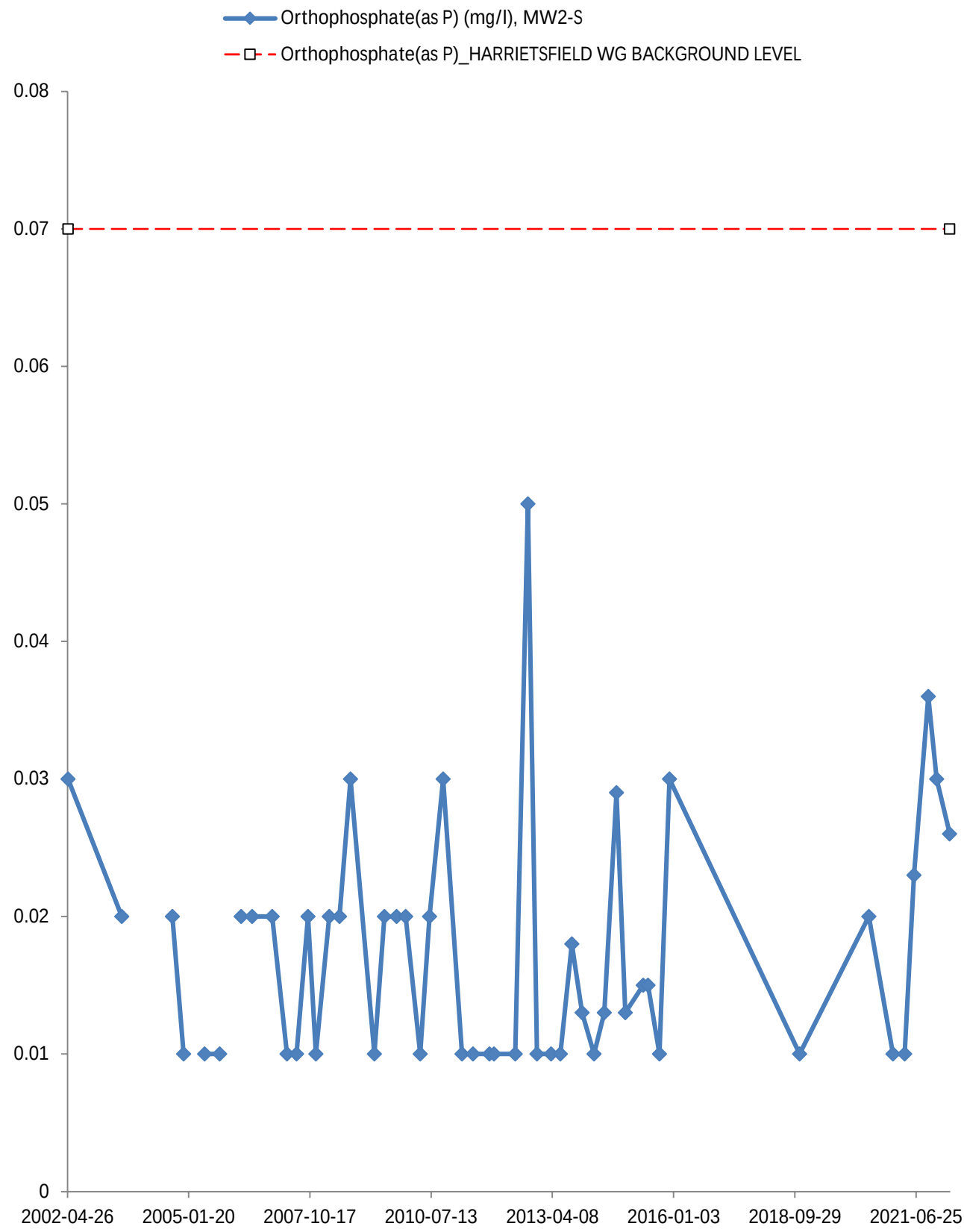
MW2-S-Nitrate plus Nitrite (N)



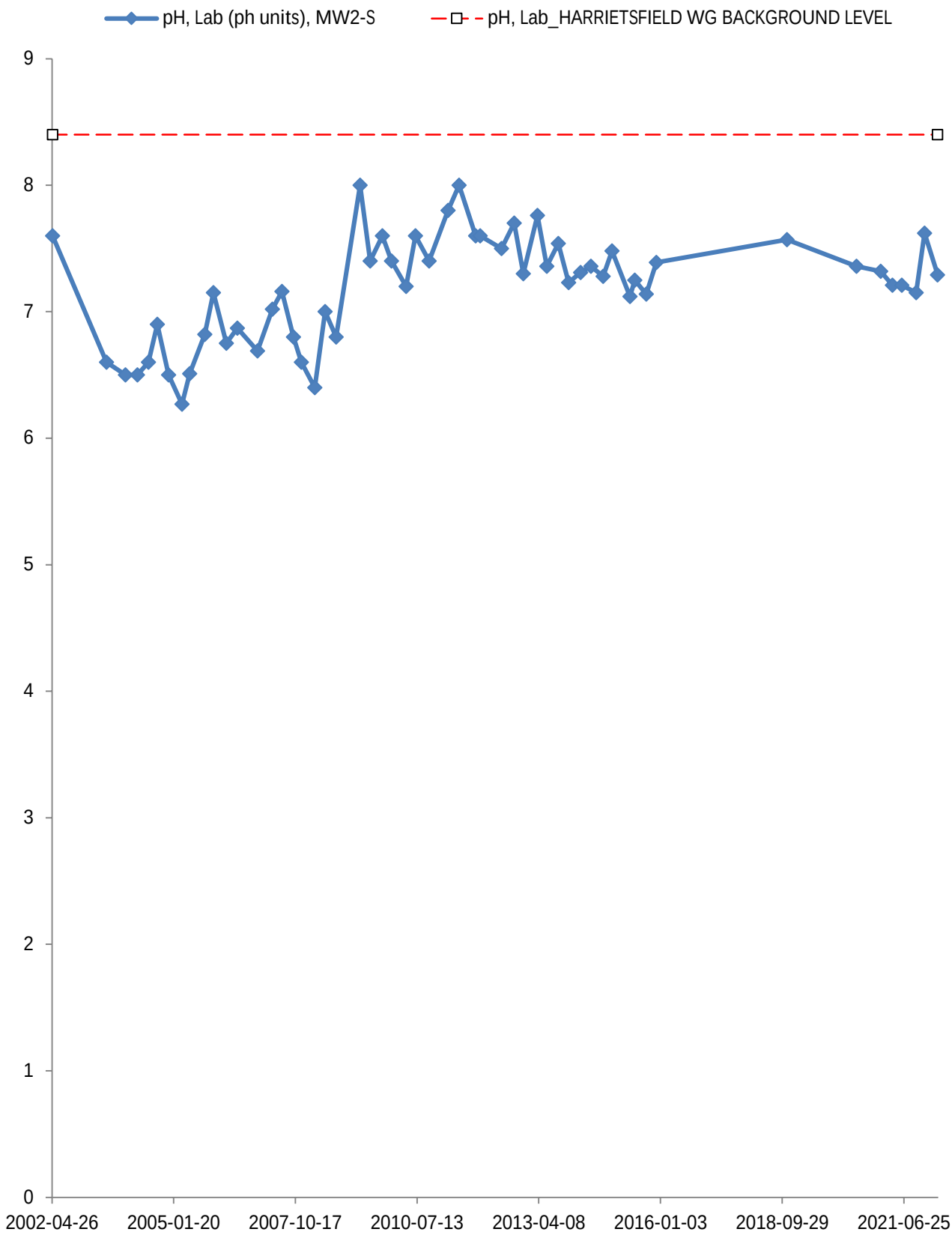
MW2-S-Nitrite (as N)



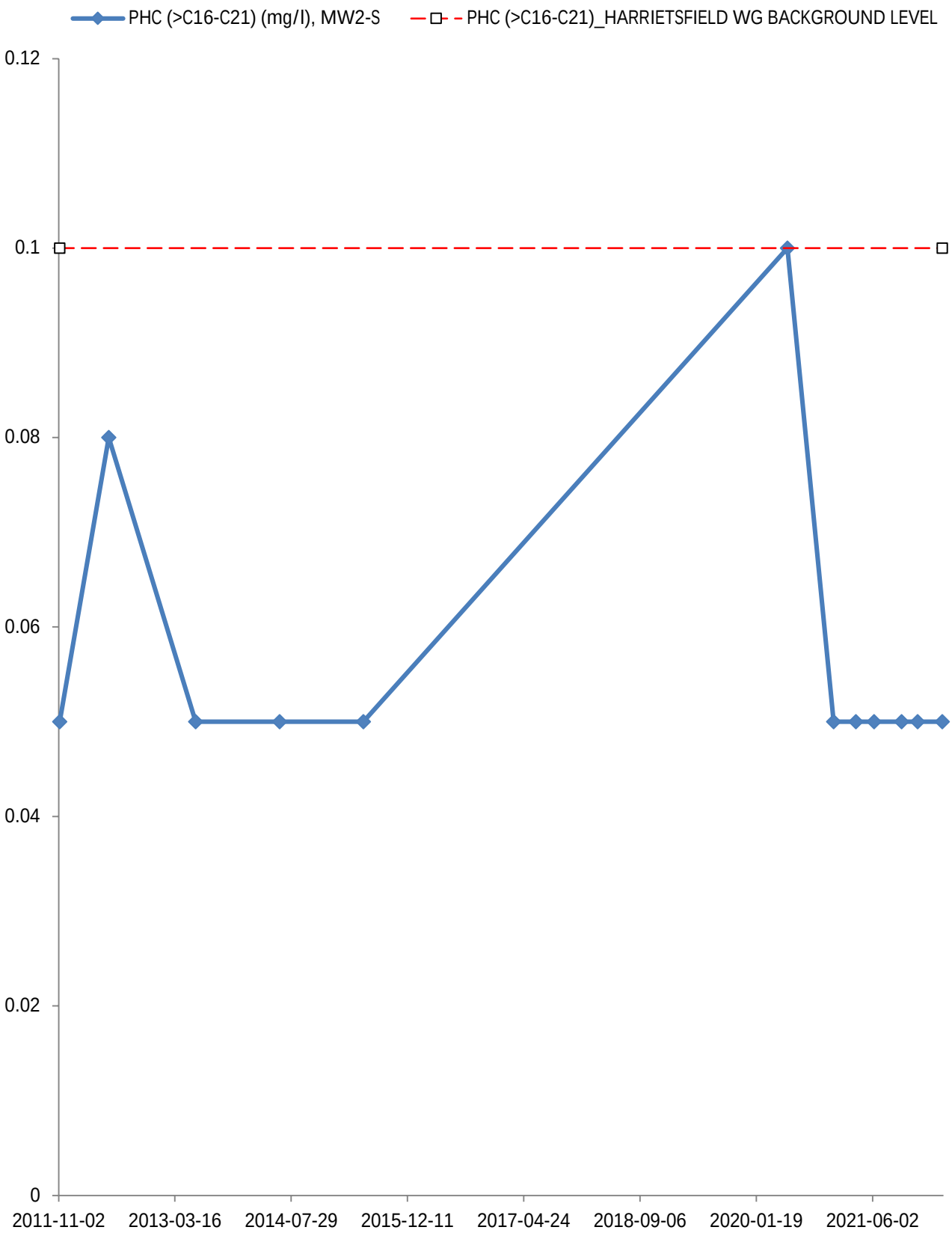
MW2-S-Orthophosphate(as P)



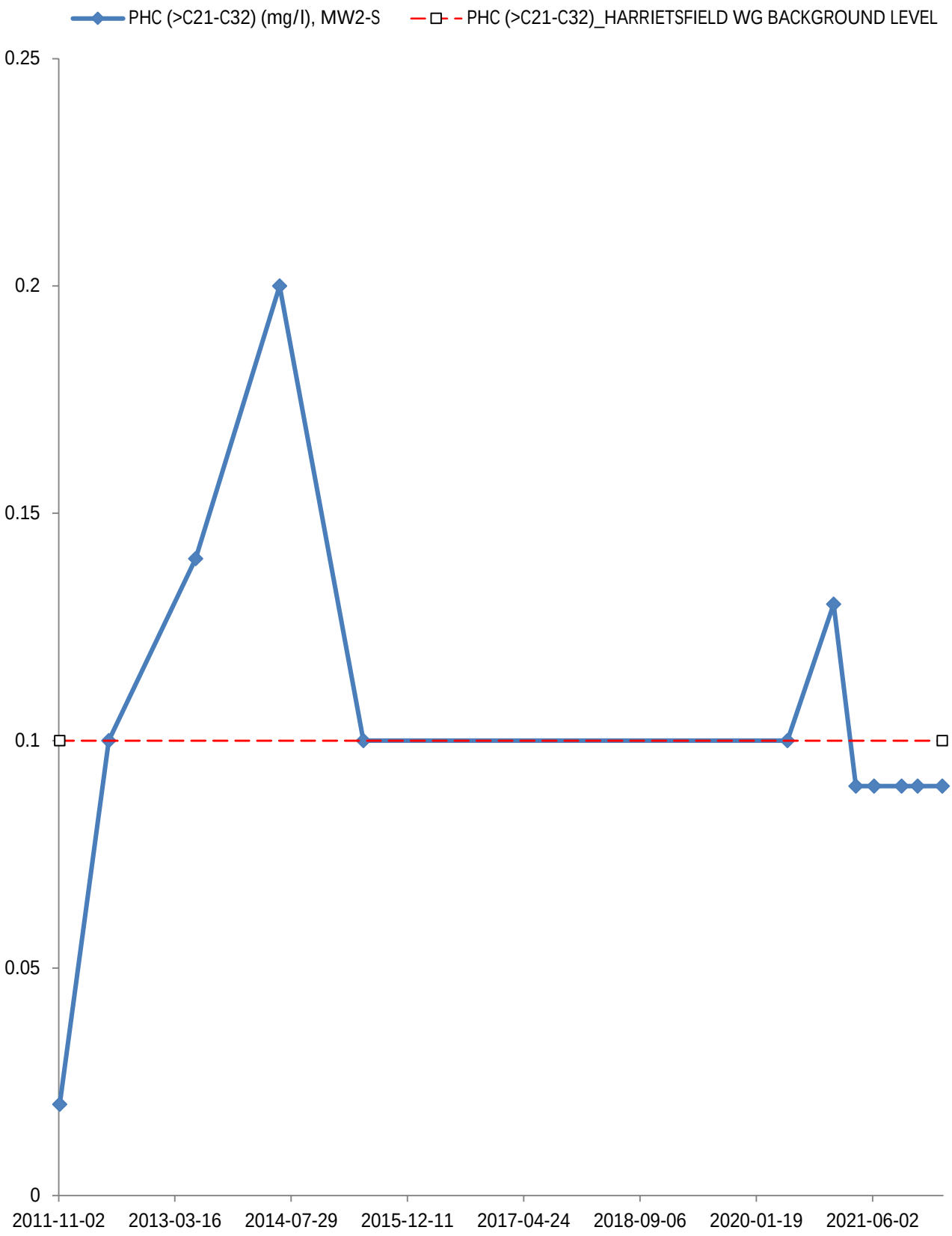
MW2-S-pH, Lab


pH, Lab (ph units), MW2-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

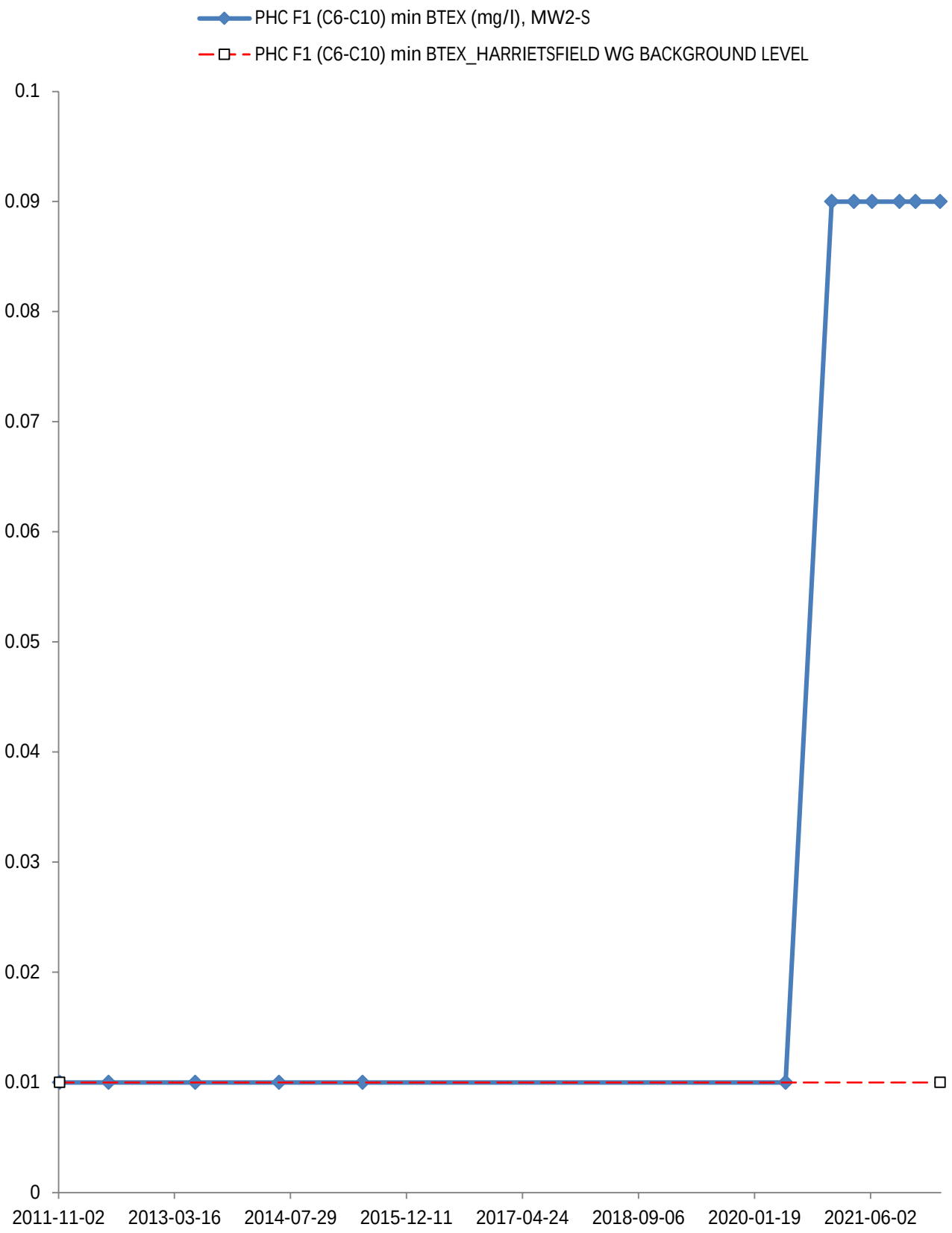
MW2-S-PHC (>C16-C21)



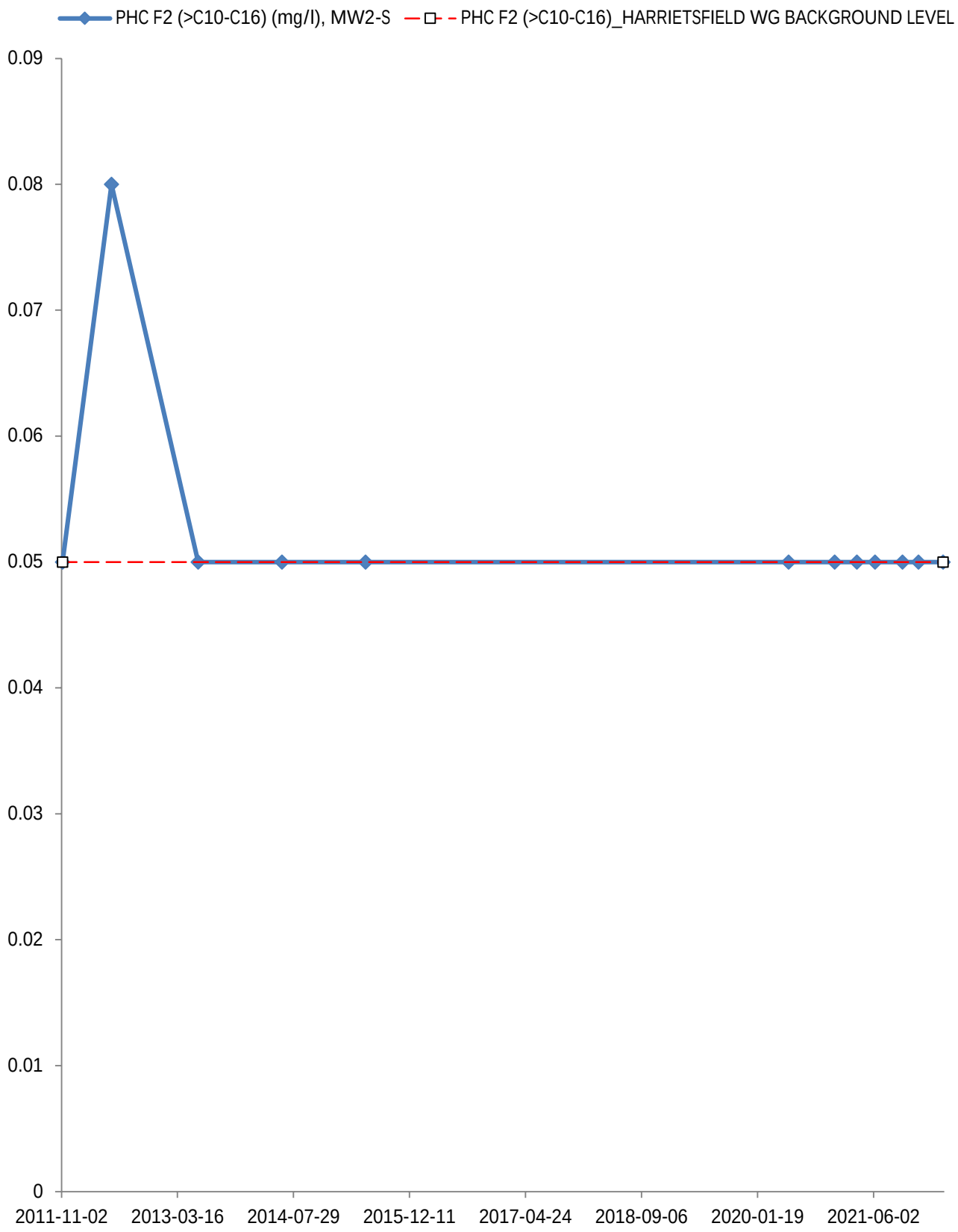
MW2-S-PHC (>C21-C32)



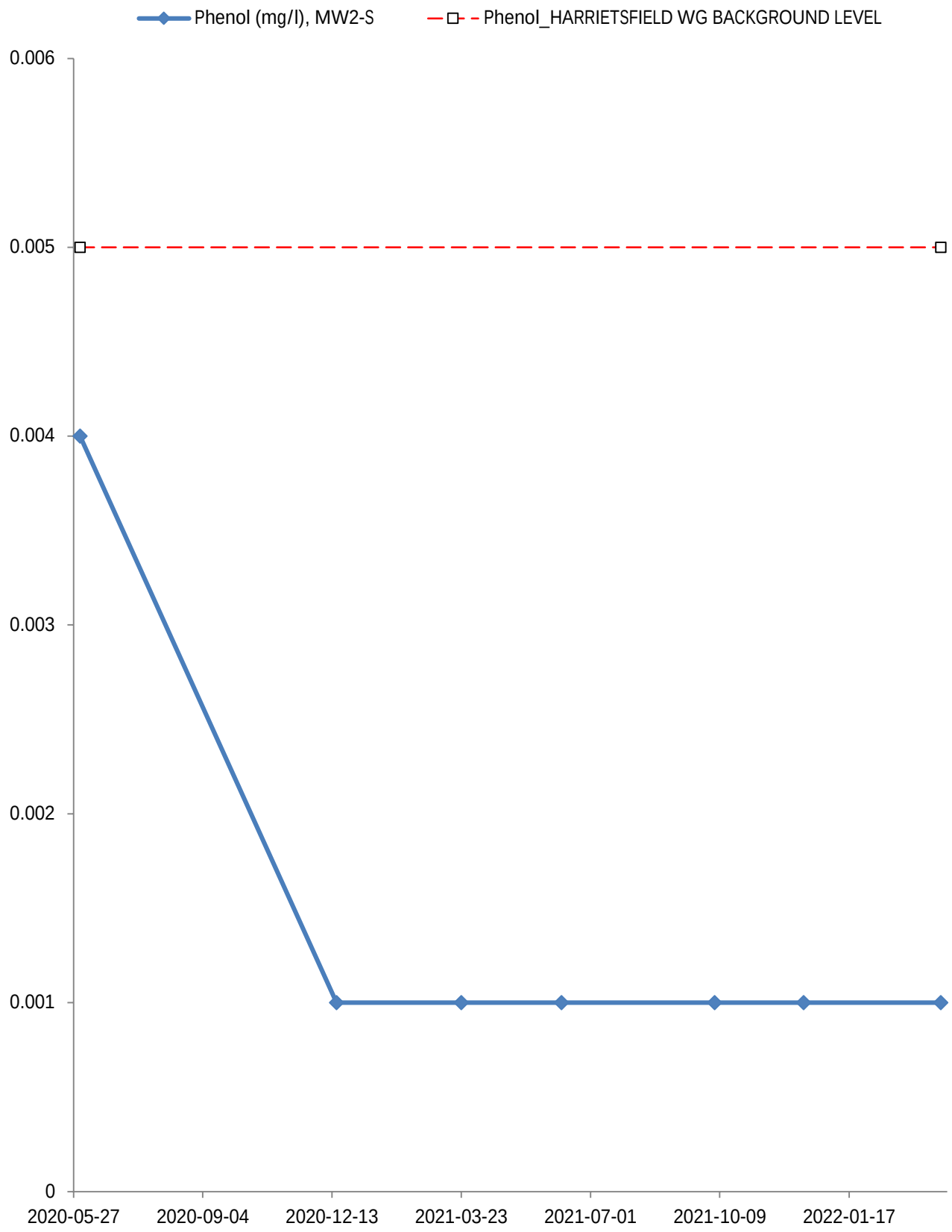
MW2-S-PHC F1 (C6-C10) min BTEX



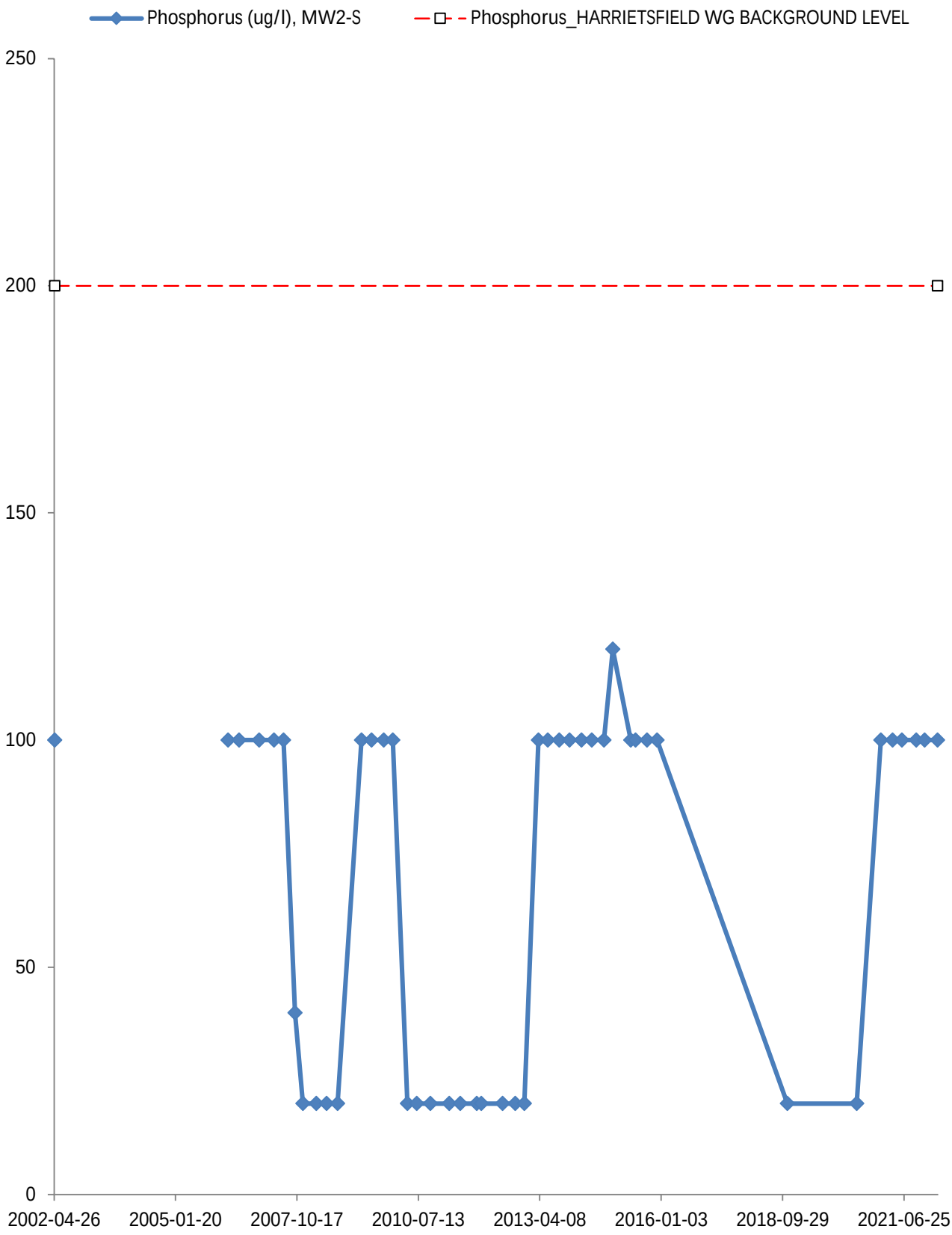
MW2-S-PHC F2 (>C10-C16)



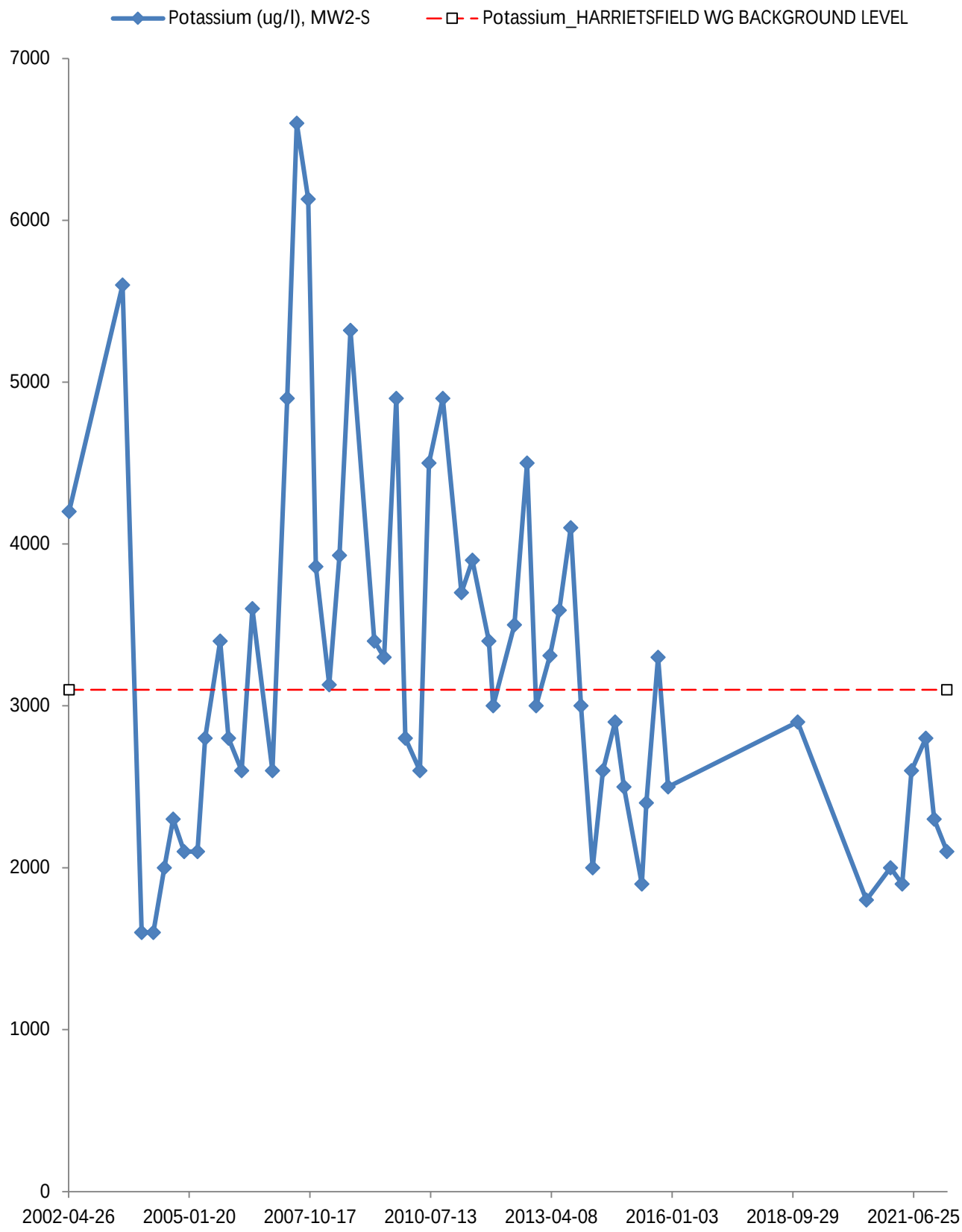
MW2-S-Phenol


Phenol (mg/l), MW2-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

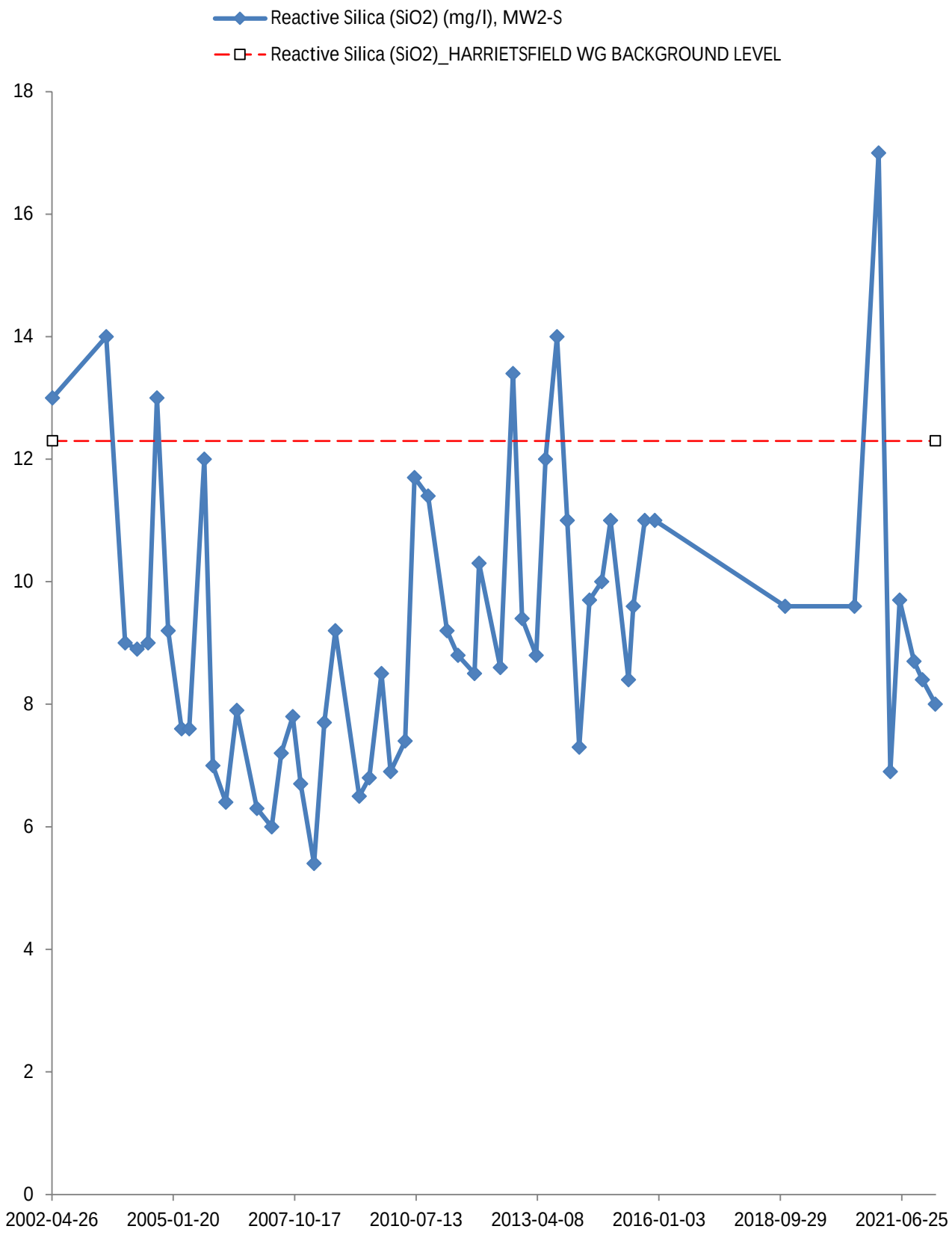
MW2-S-Phosphorus



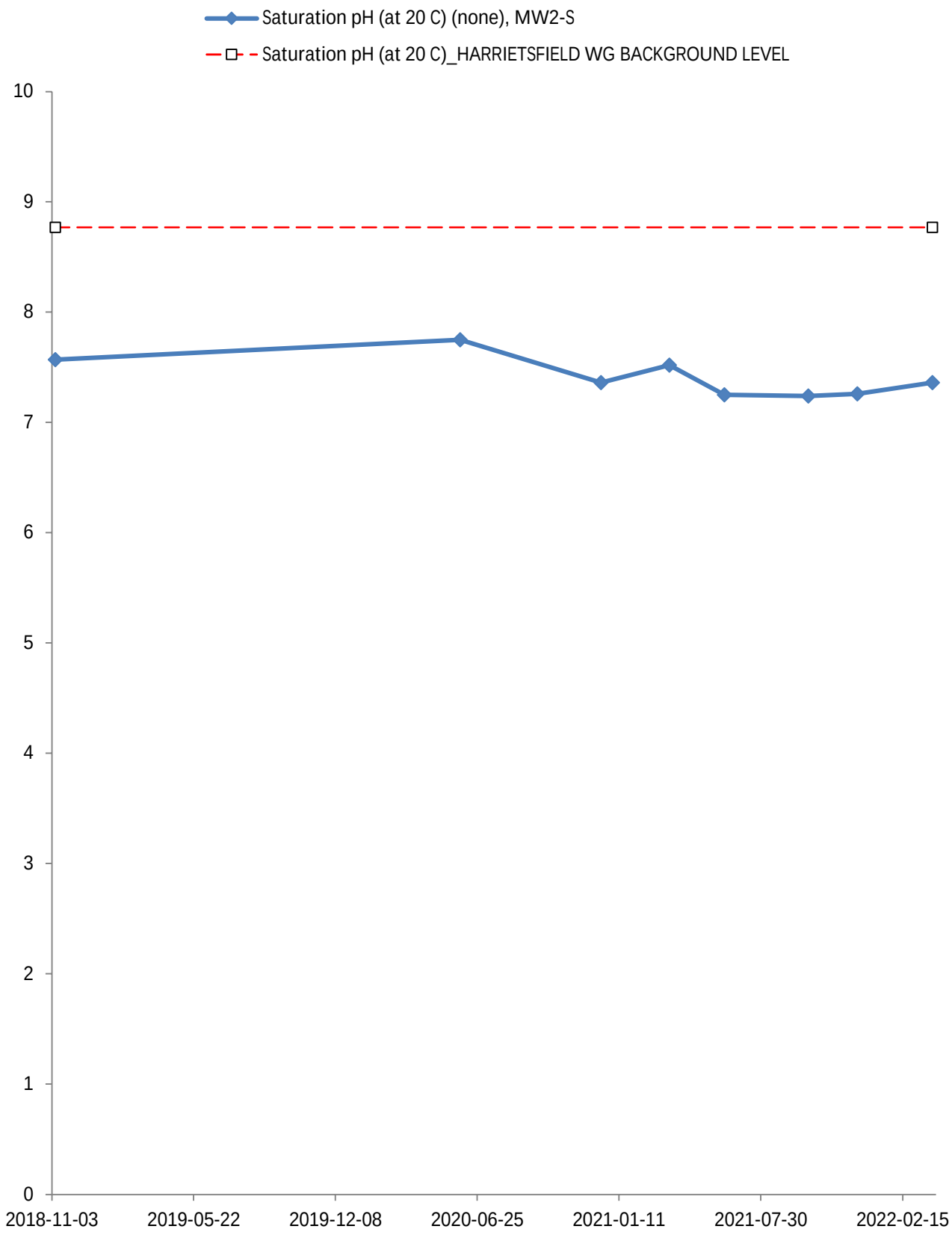
MW2-S-Potassium



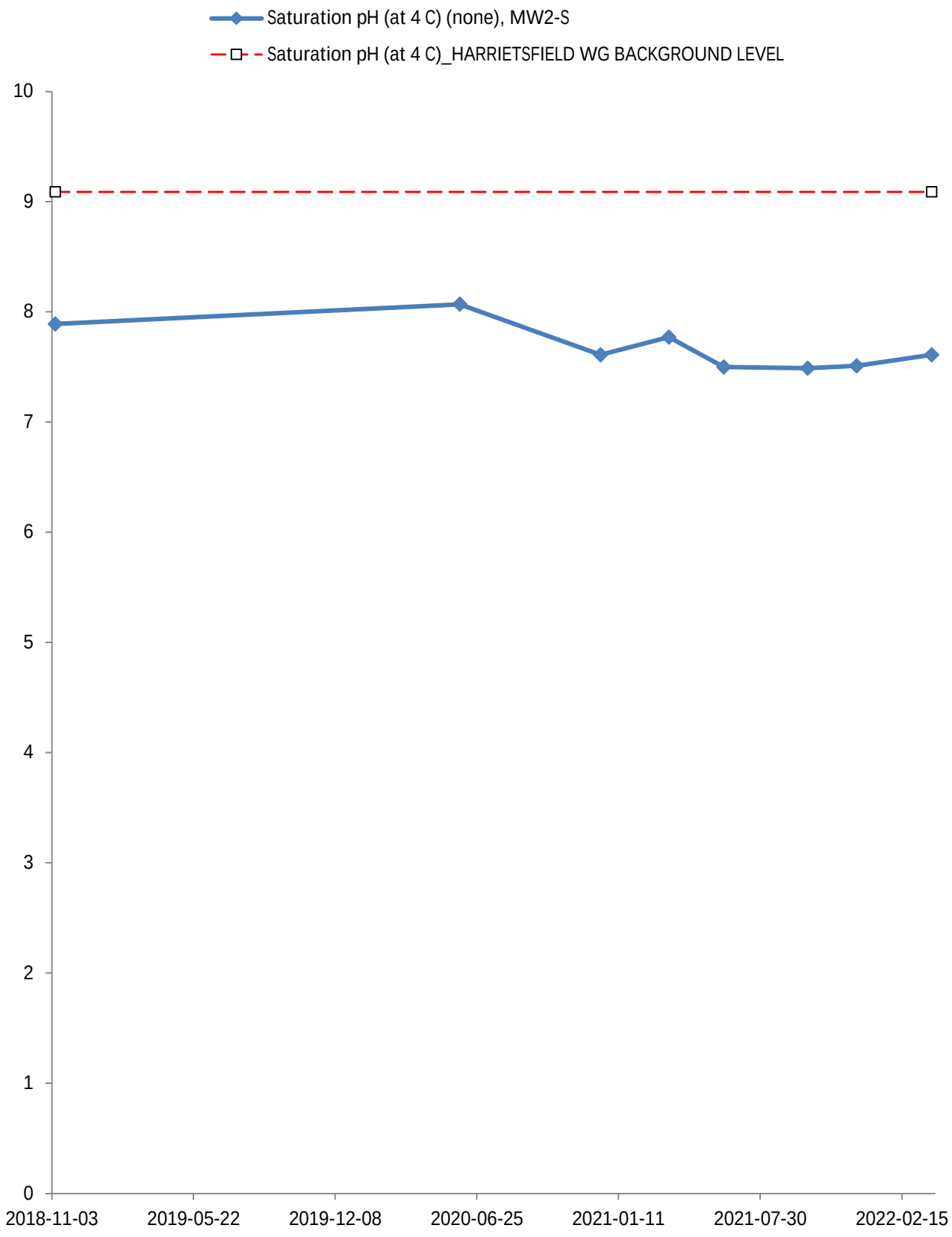
MW2-S-Reactive Silica (SiO2)



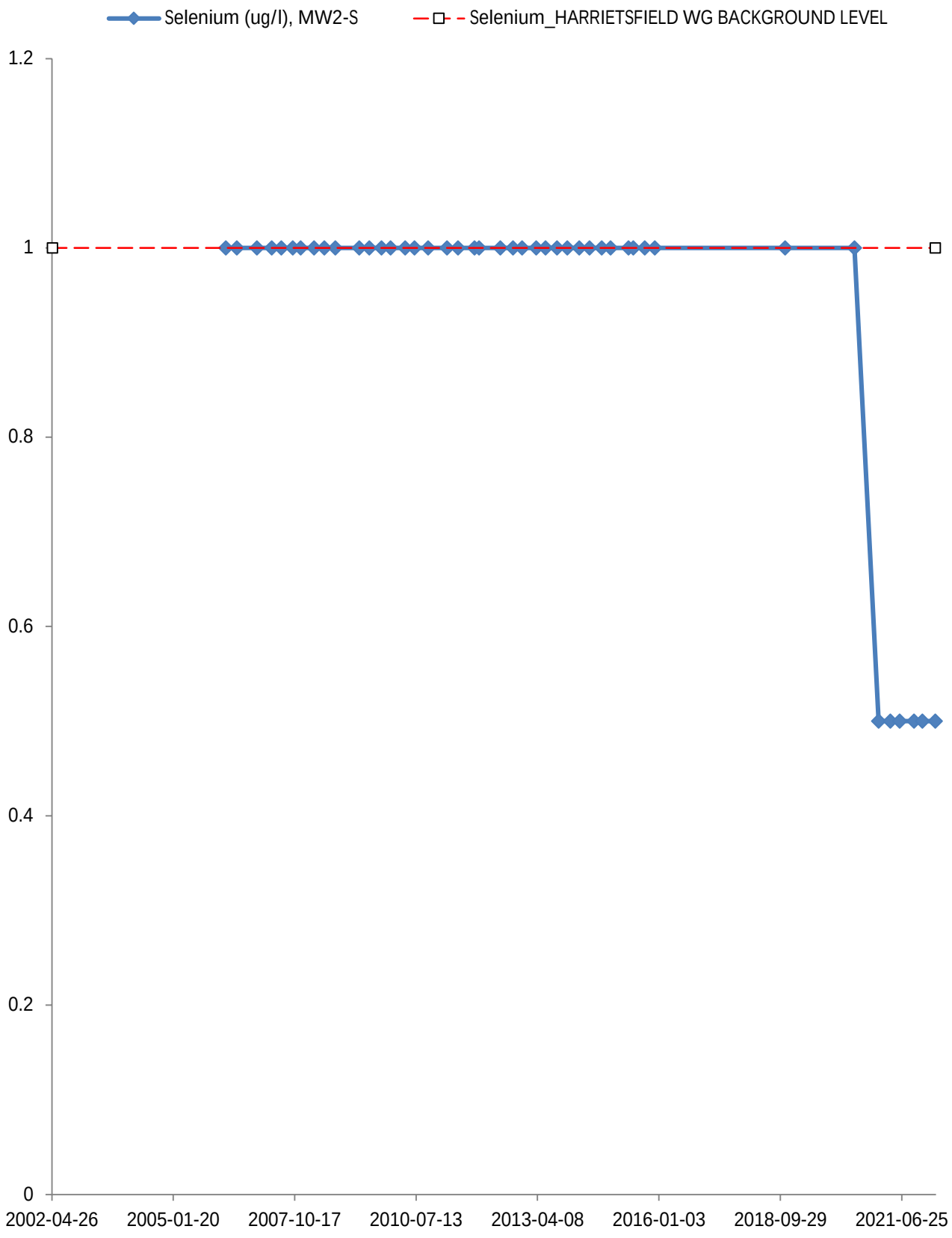
MW2-S-Saturation pH (at 20 C)



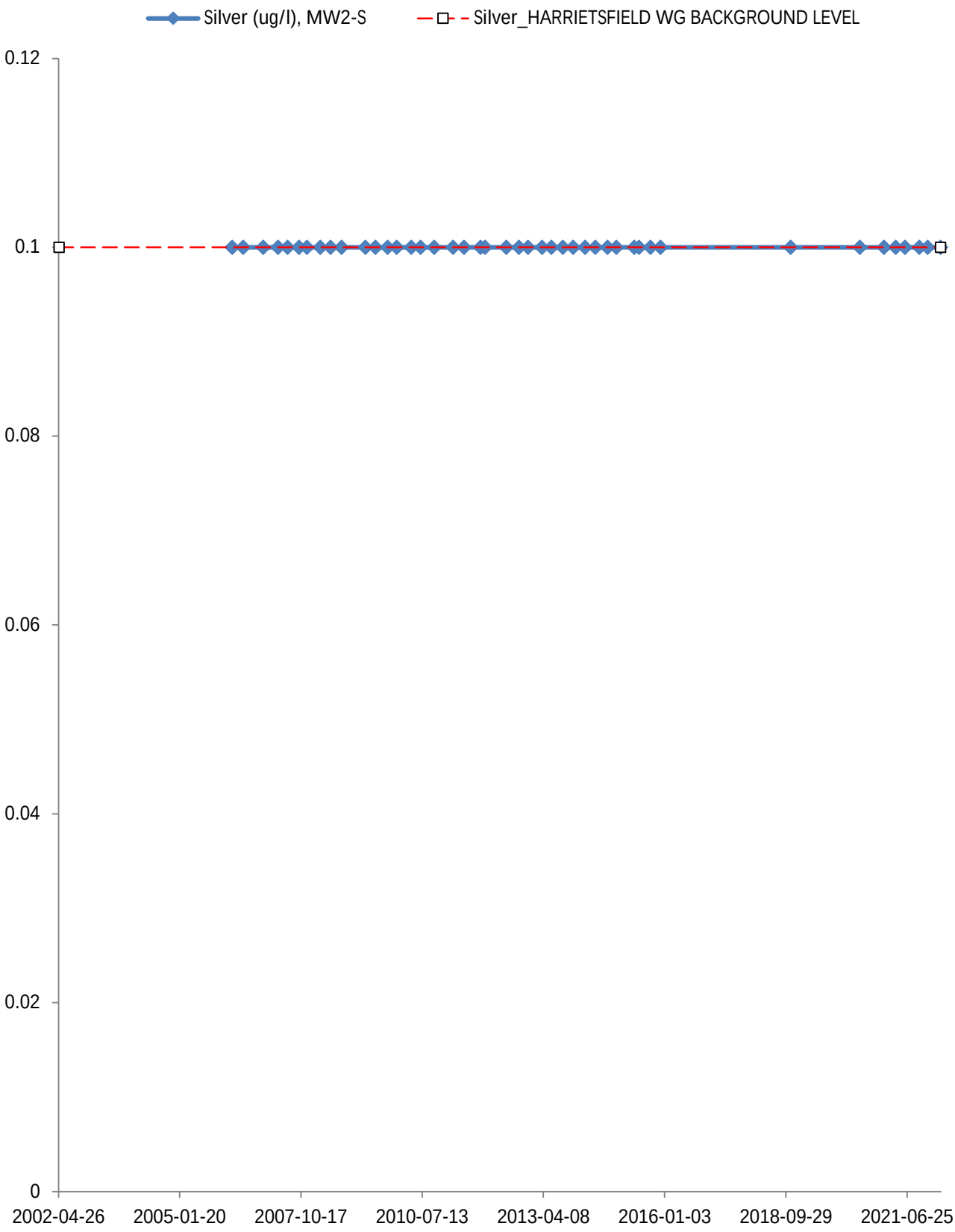
MW2-S-Saturation pH (at 4 C)



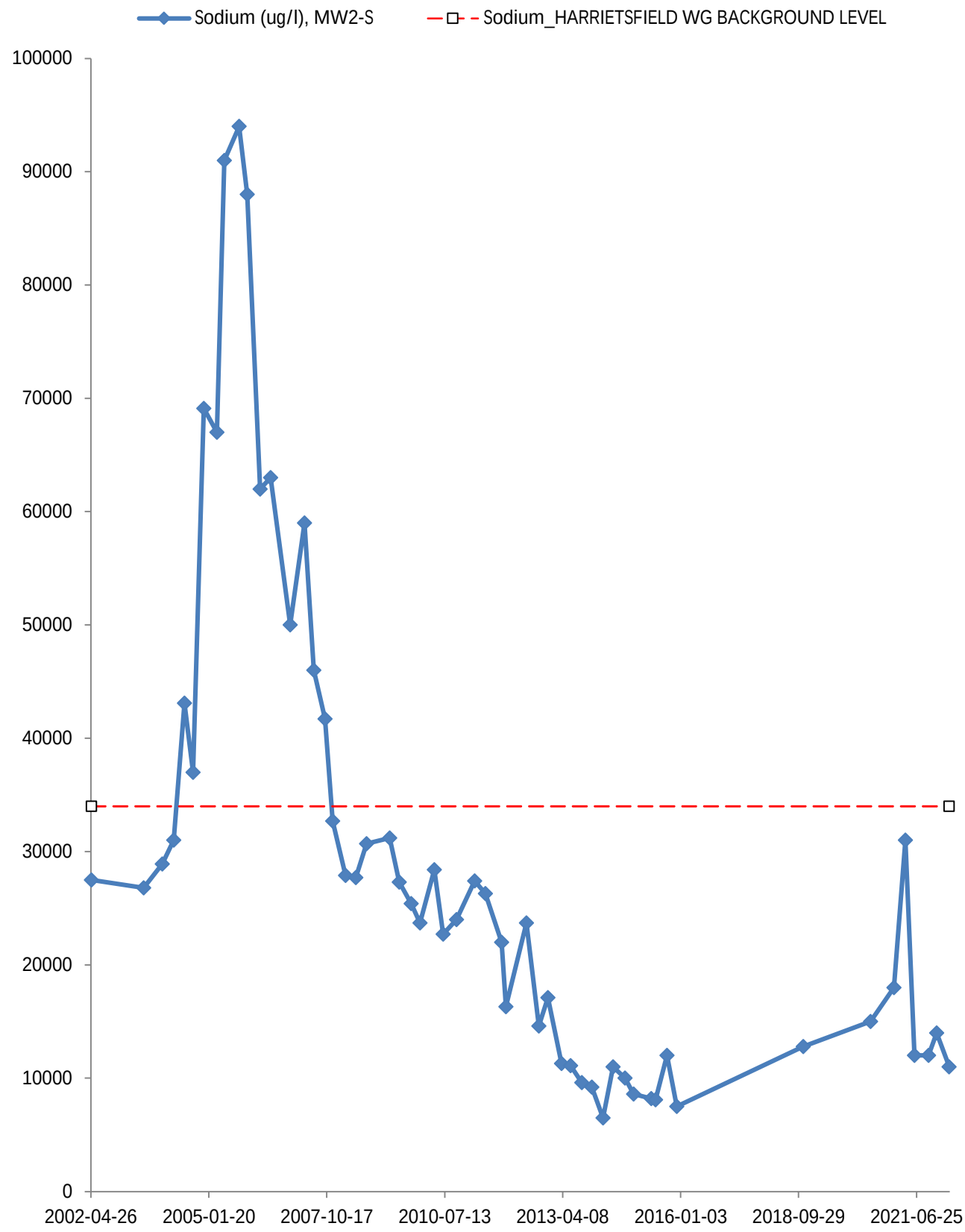
MW2-S-Selenium



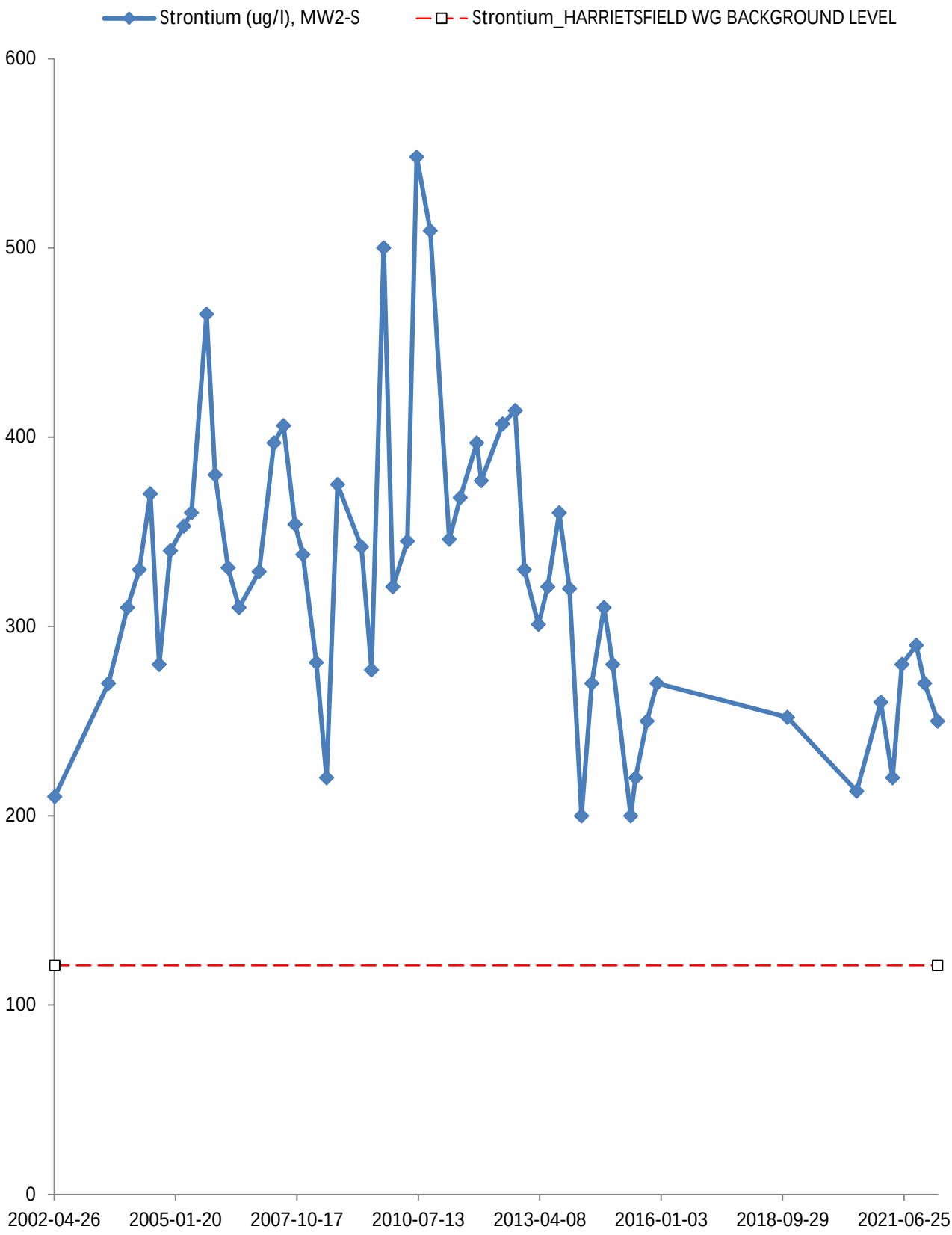
MW2-S-Silver


Silver (ug/l), MW2-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

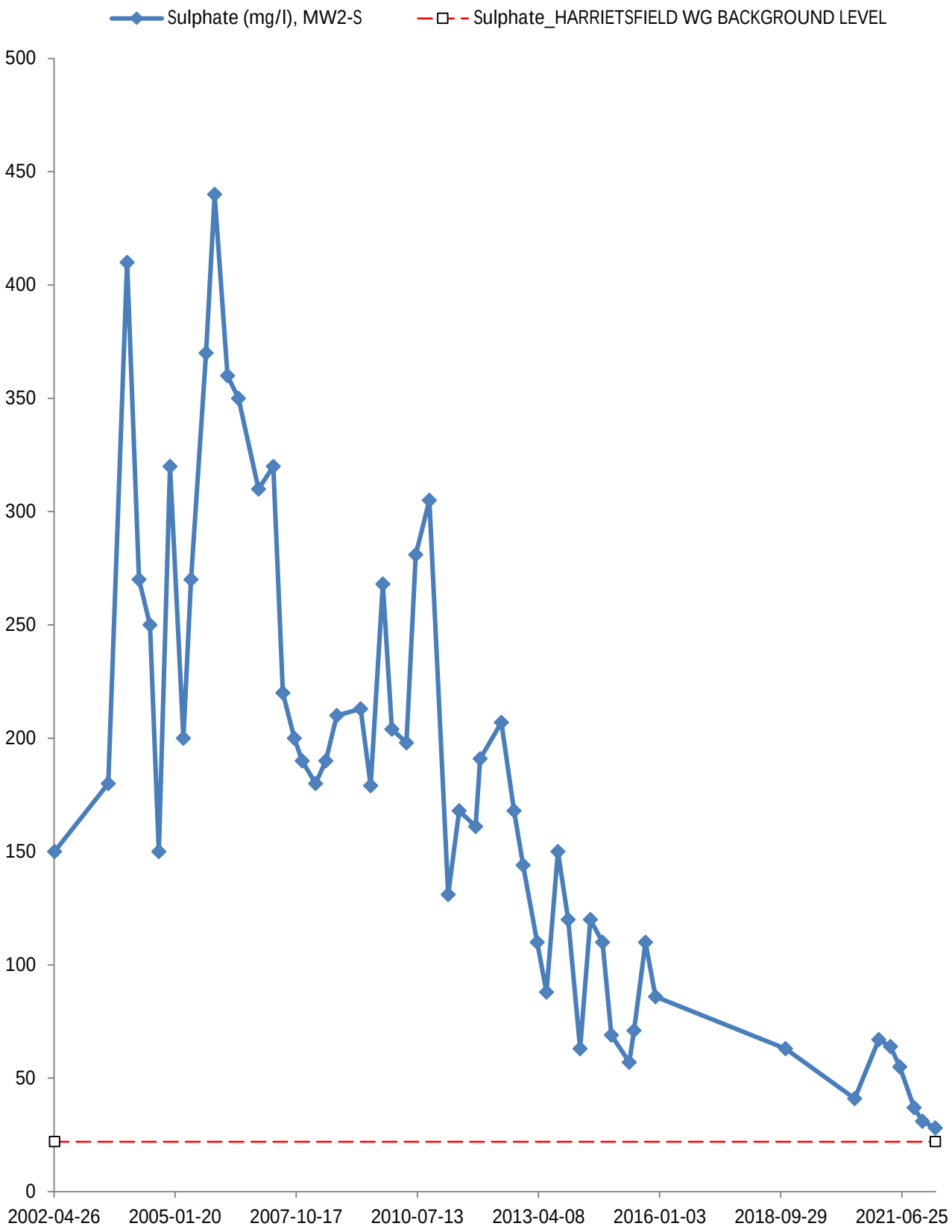
MW2-S-Sodium


Sodium (ug/l), MW2-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

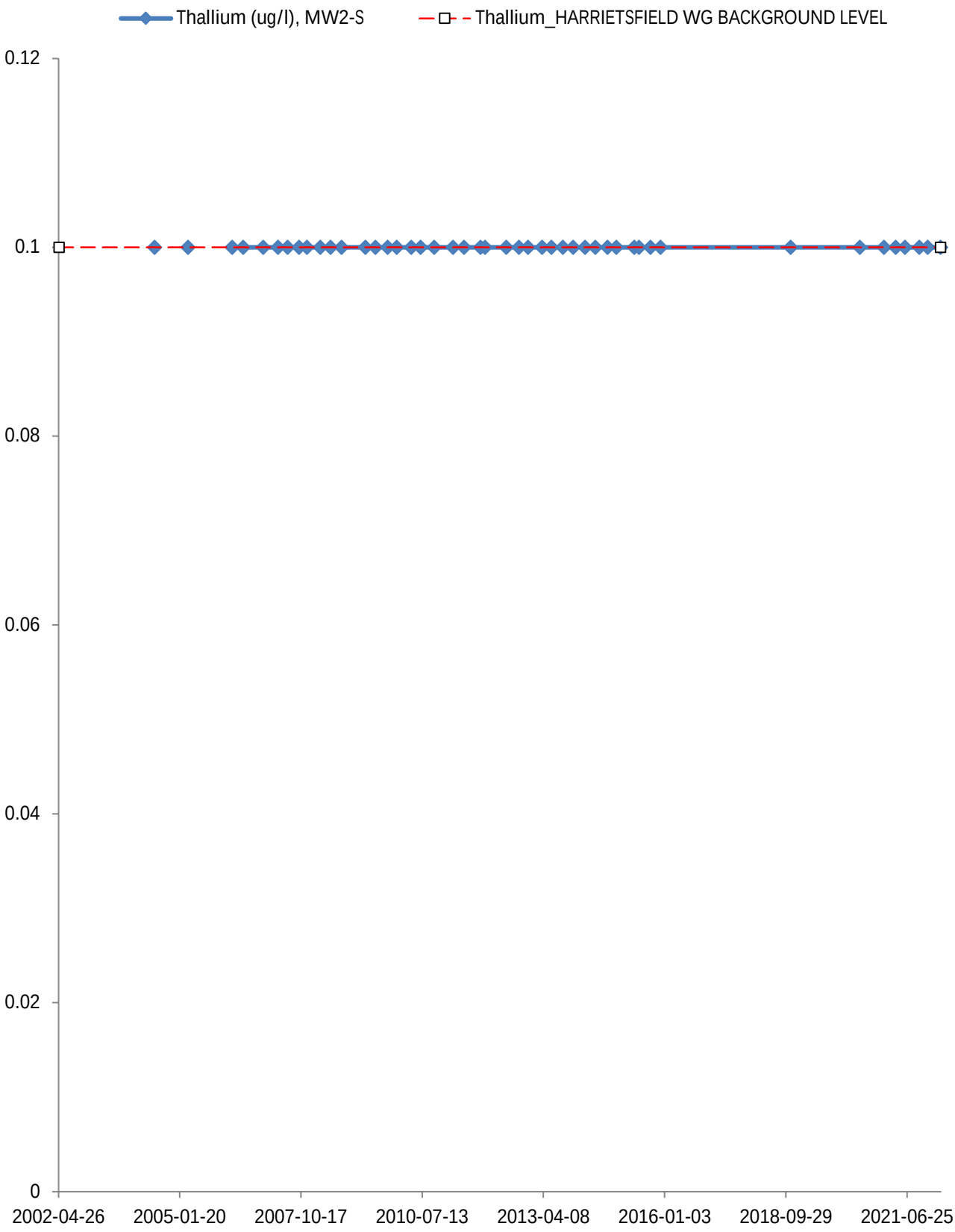
MW2-S-Strontium



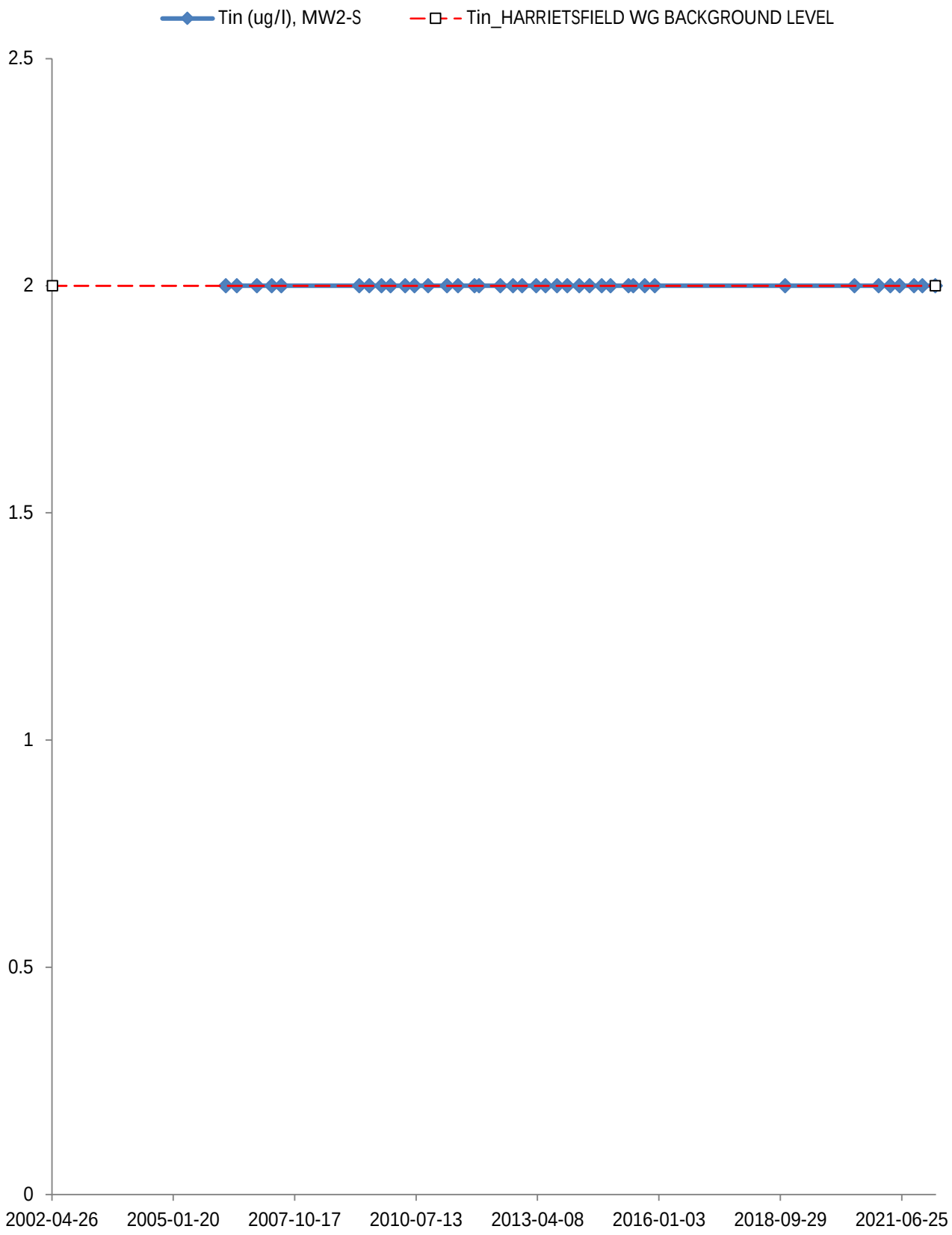
MW2-S-Sulphate



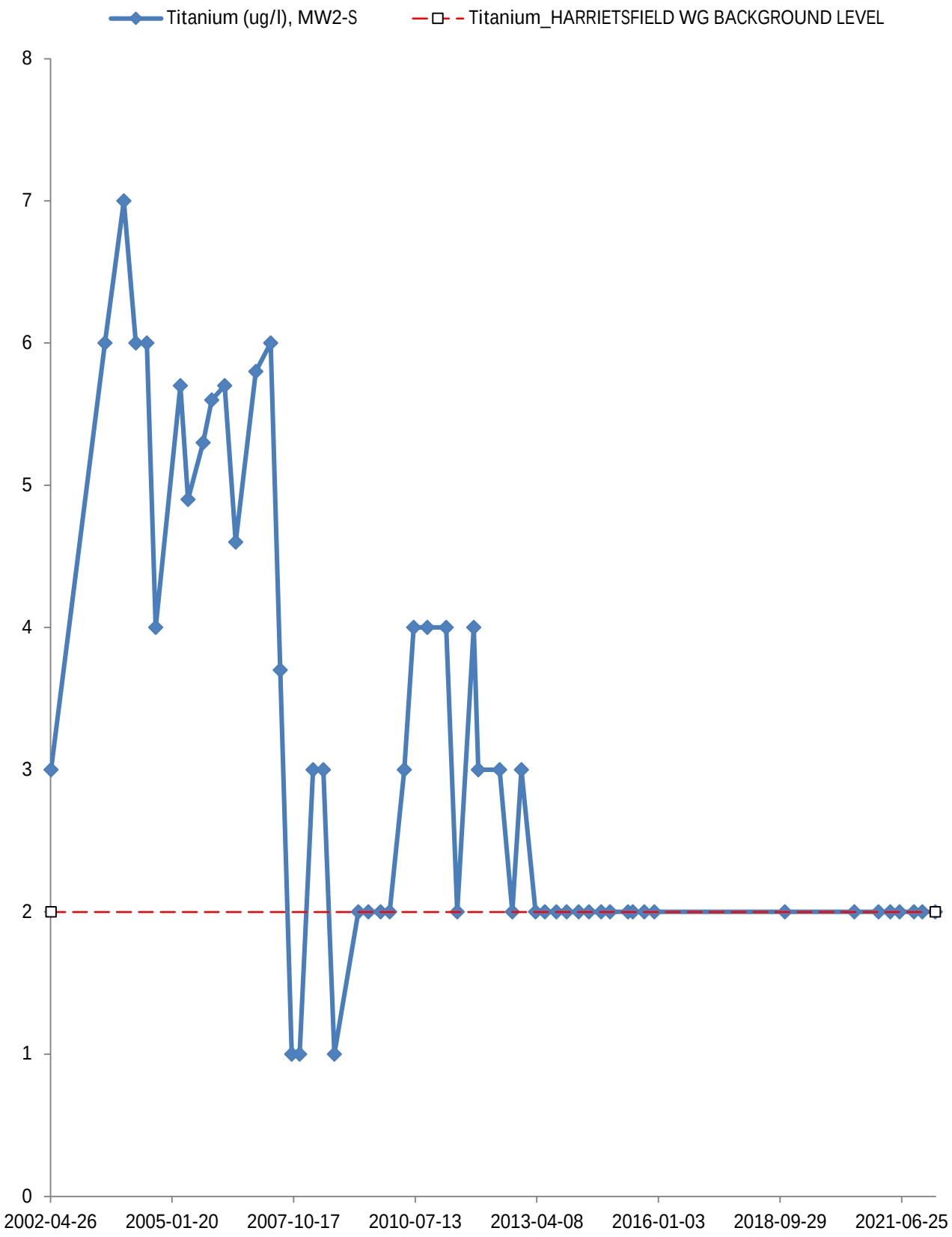
MW2-S-Thallium



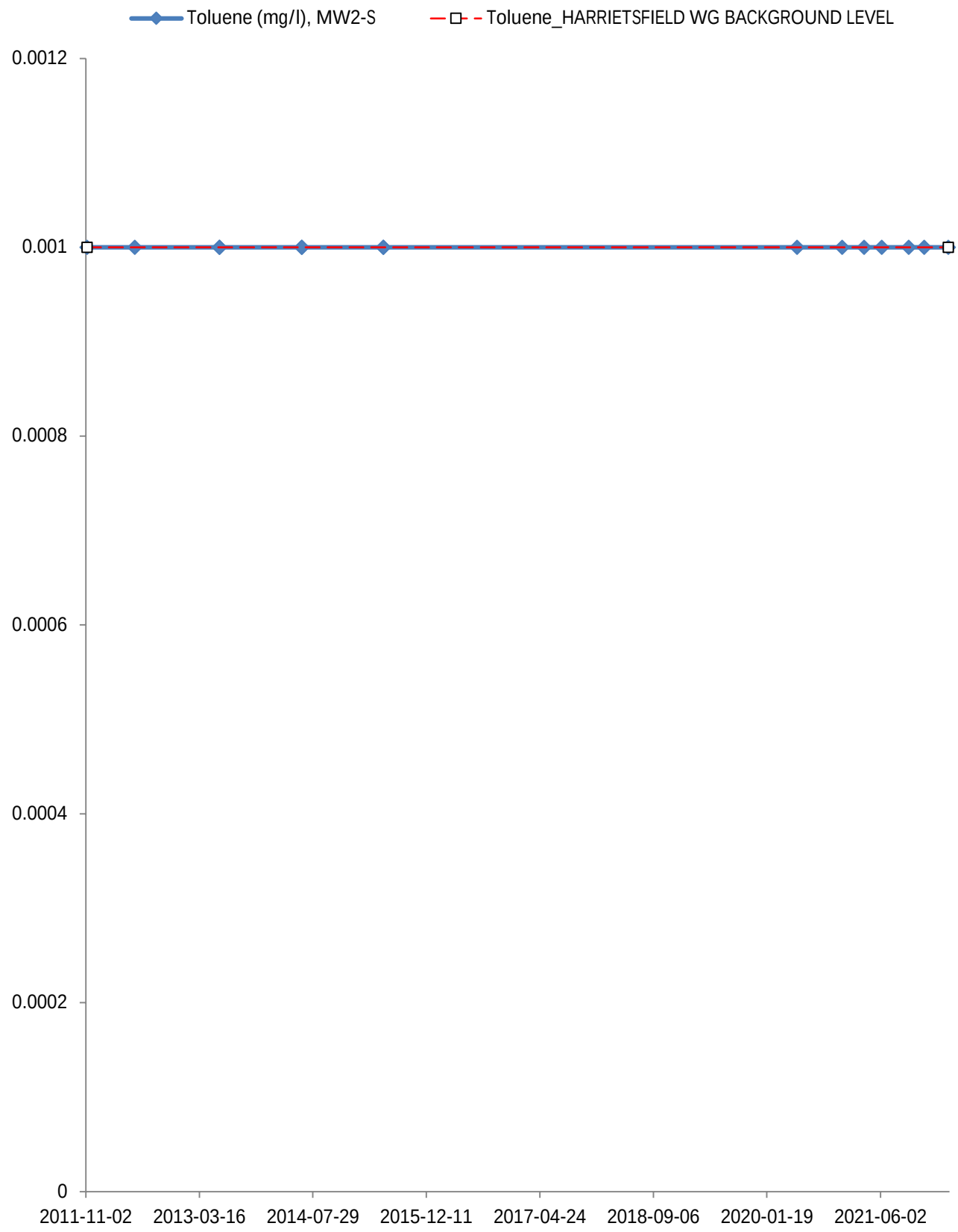
MW2-S-Tin


Tin (ug/l), MW2-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

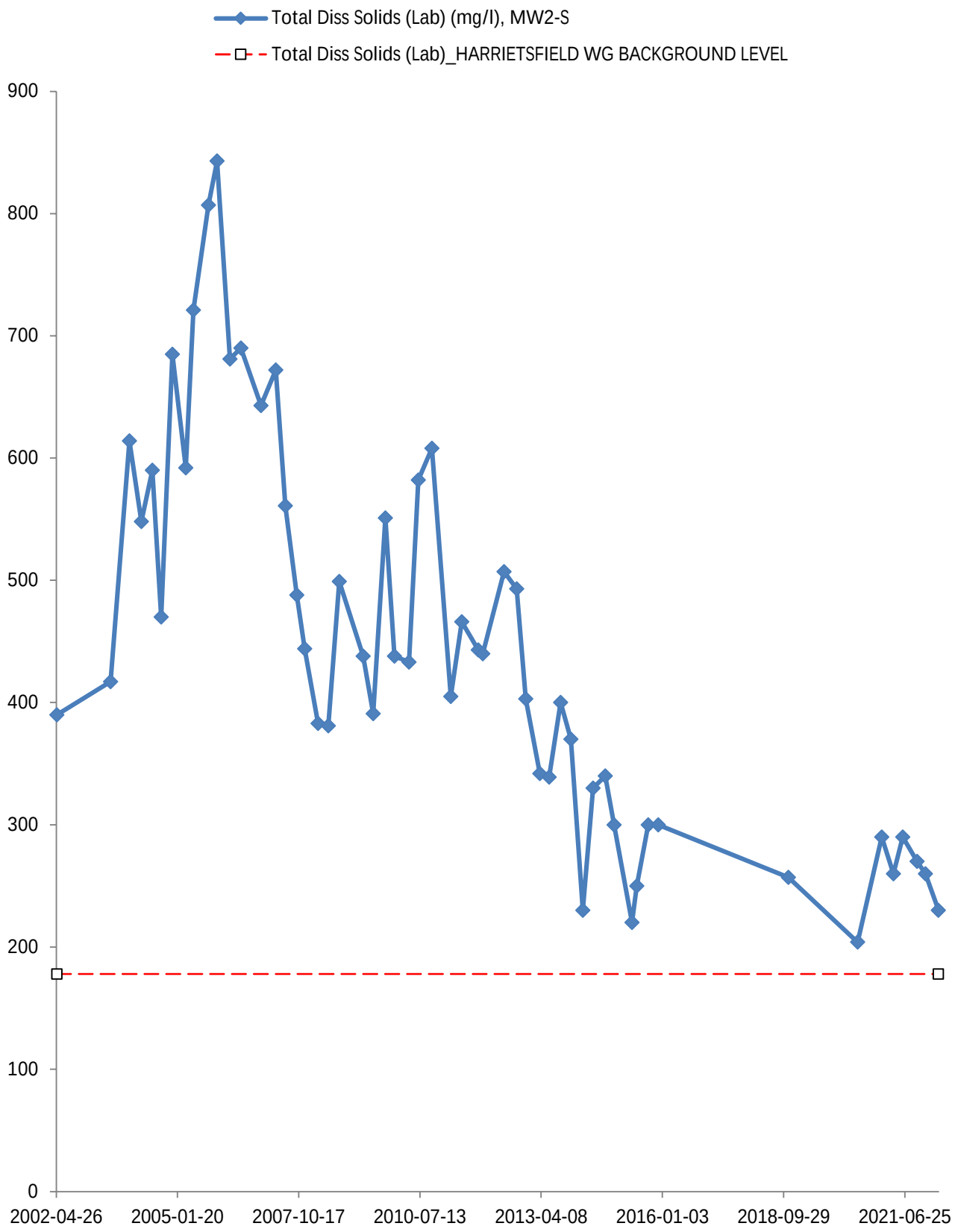
MW2-S-Titanium



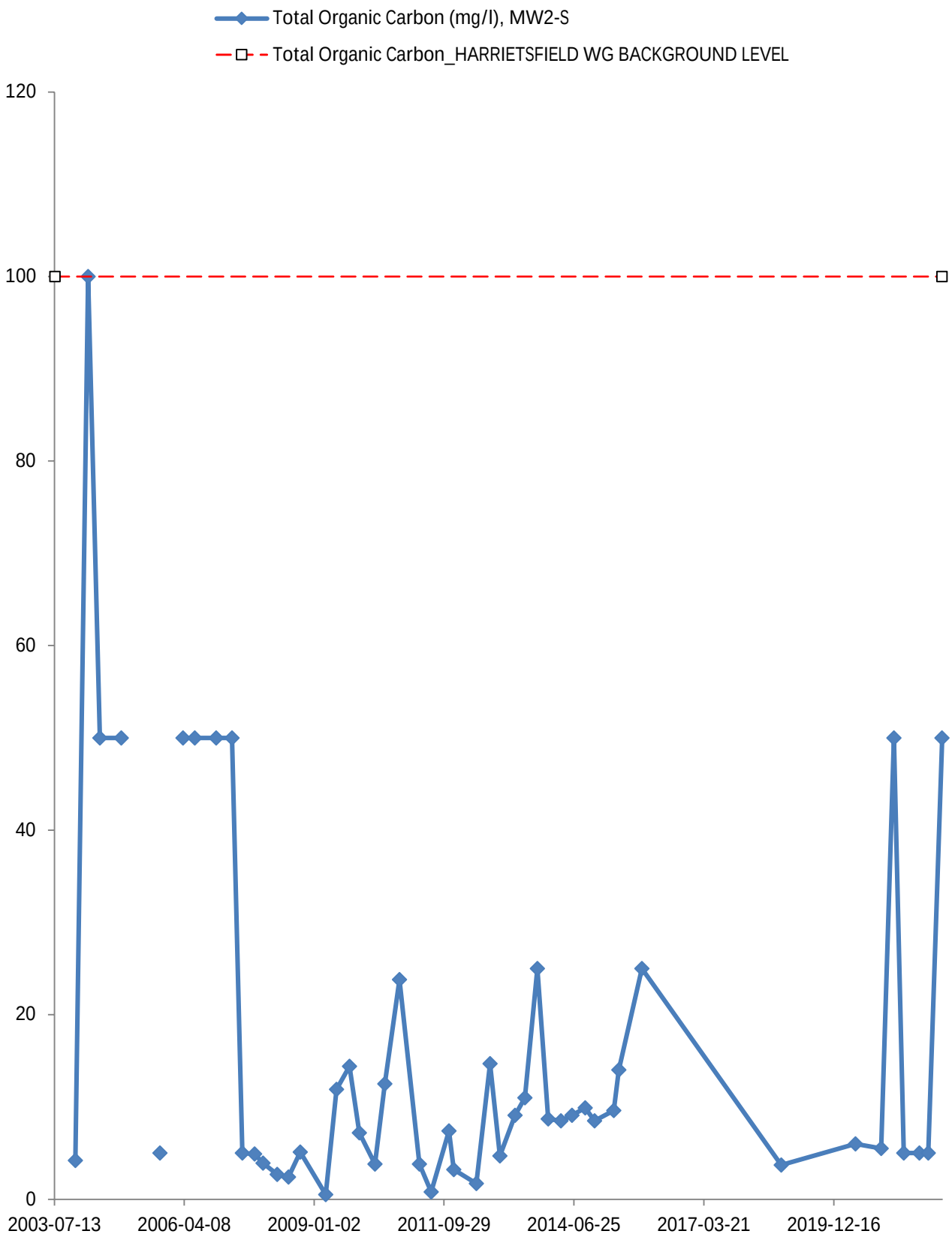
MW2-S-Toluene



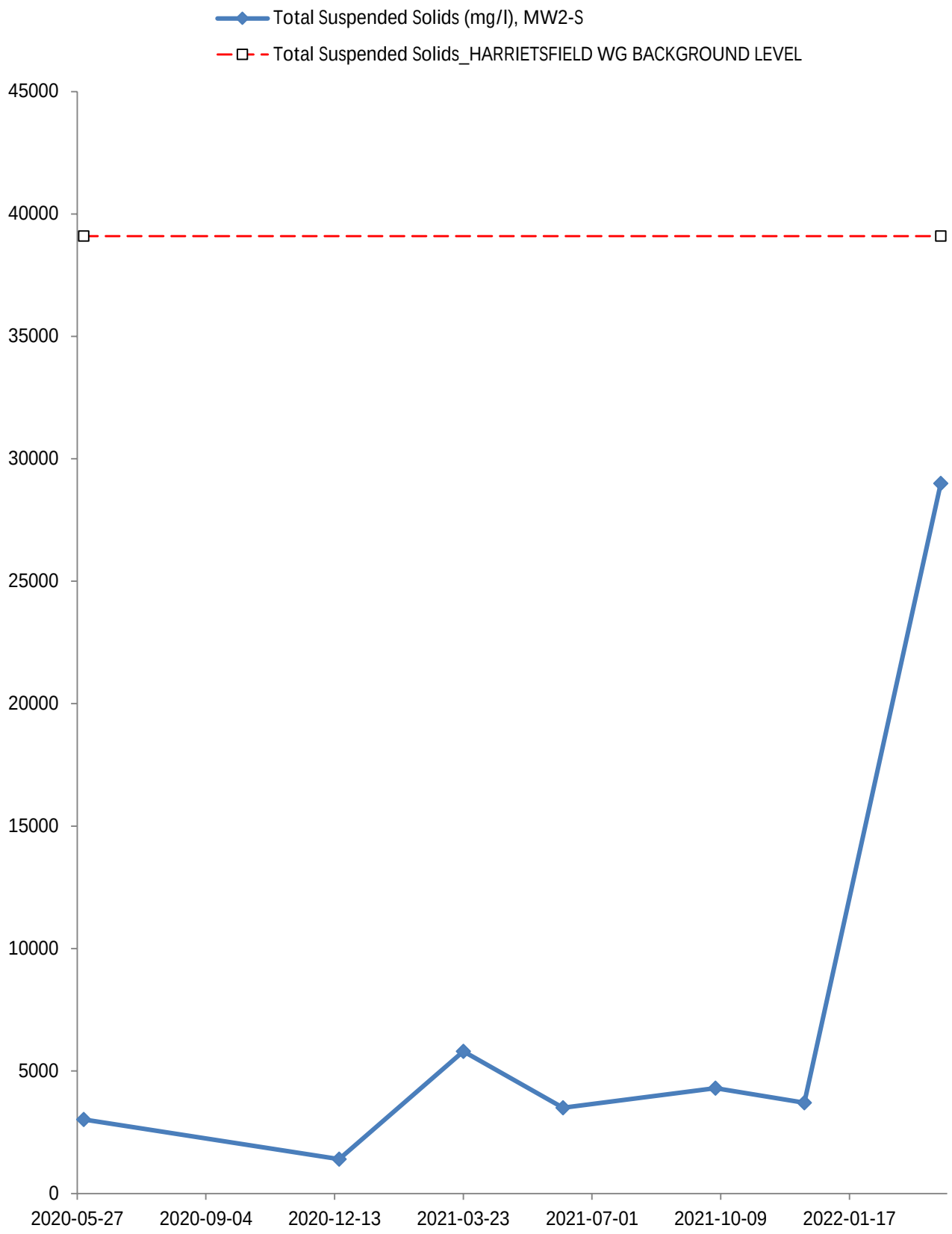
MW2-S-Total Diss Solids (Lab)



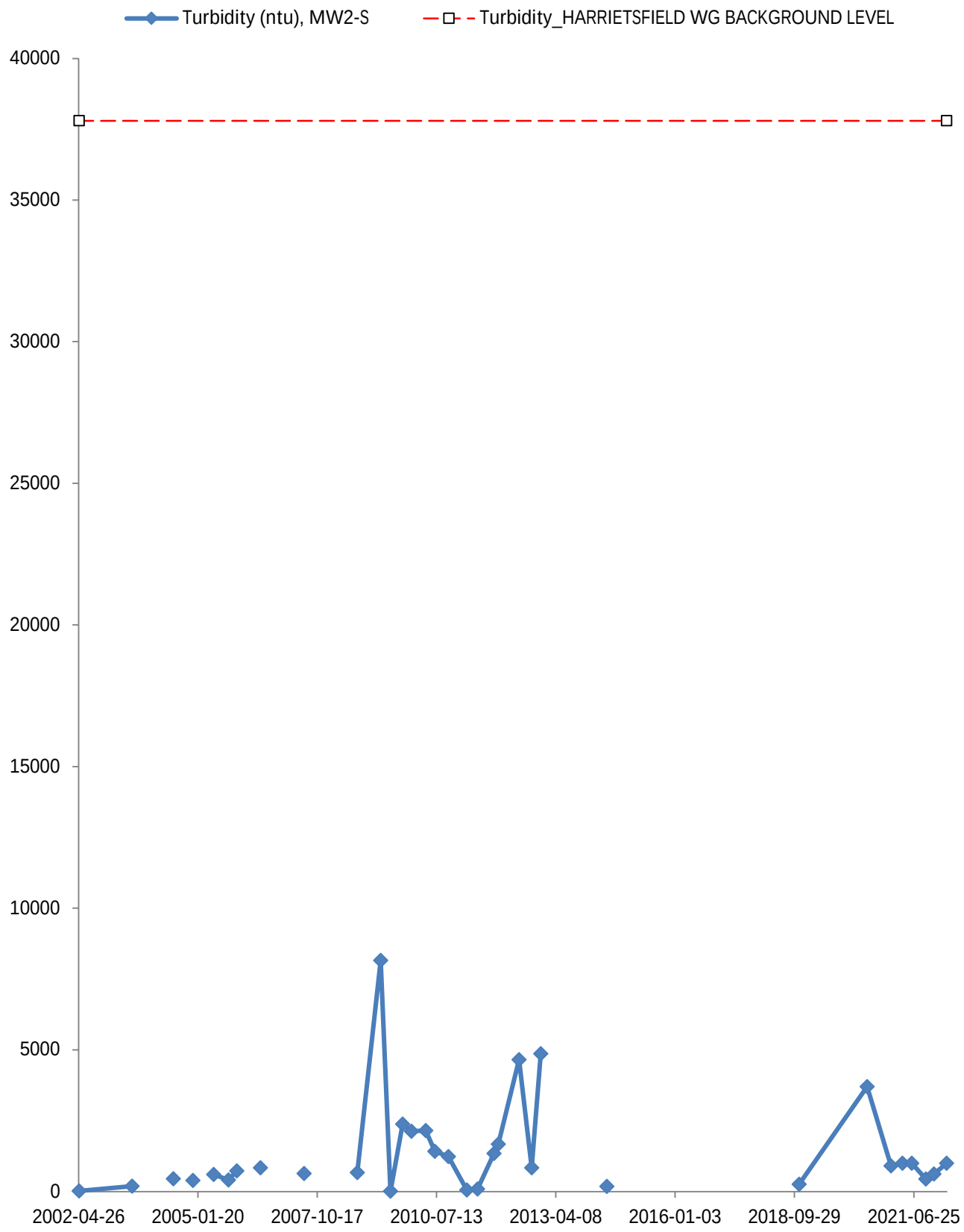
MW2-S-Total Organic Carbon



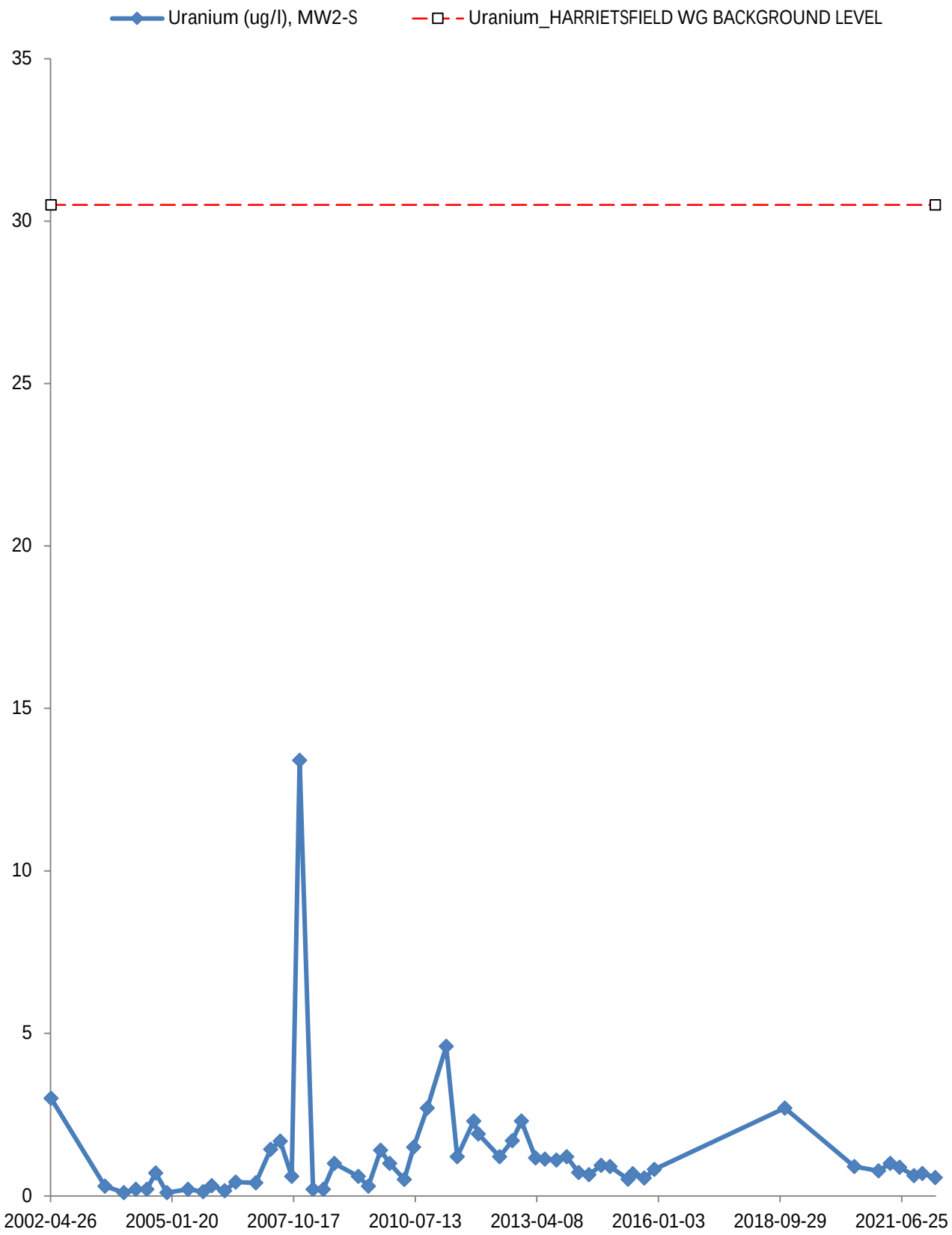
MW2-S-Total Suspended Solids



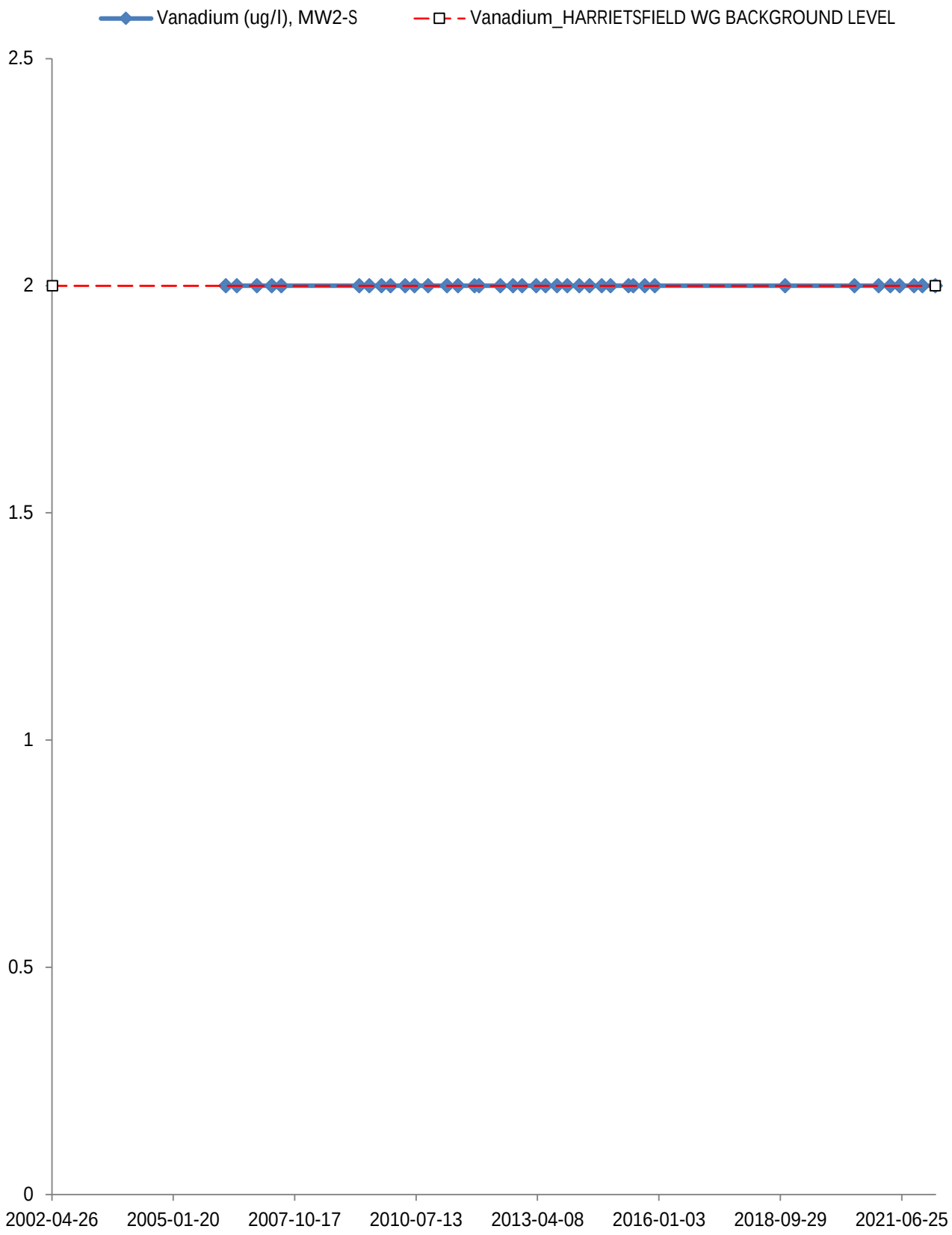
MW2-S-Turbidity



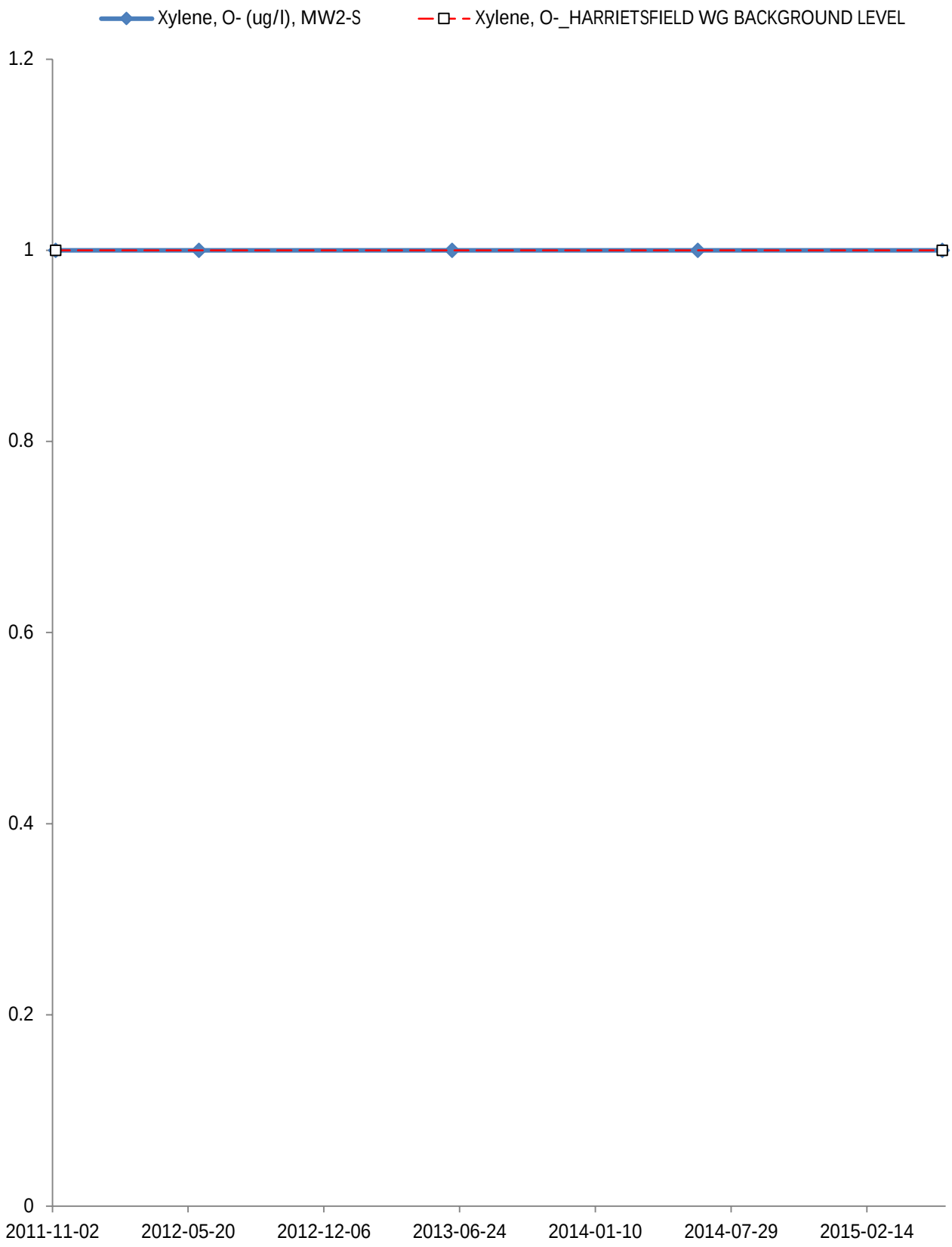
MW2-S-Uranium



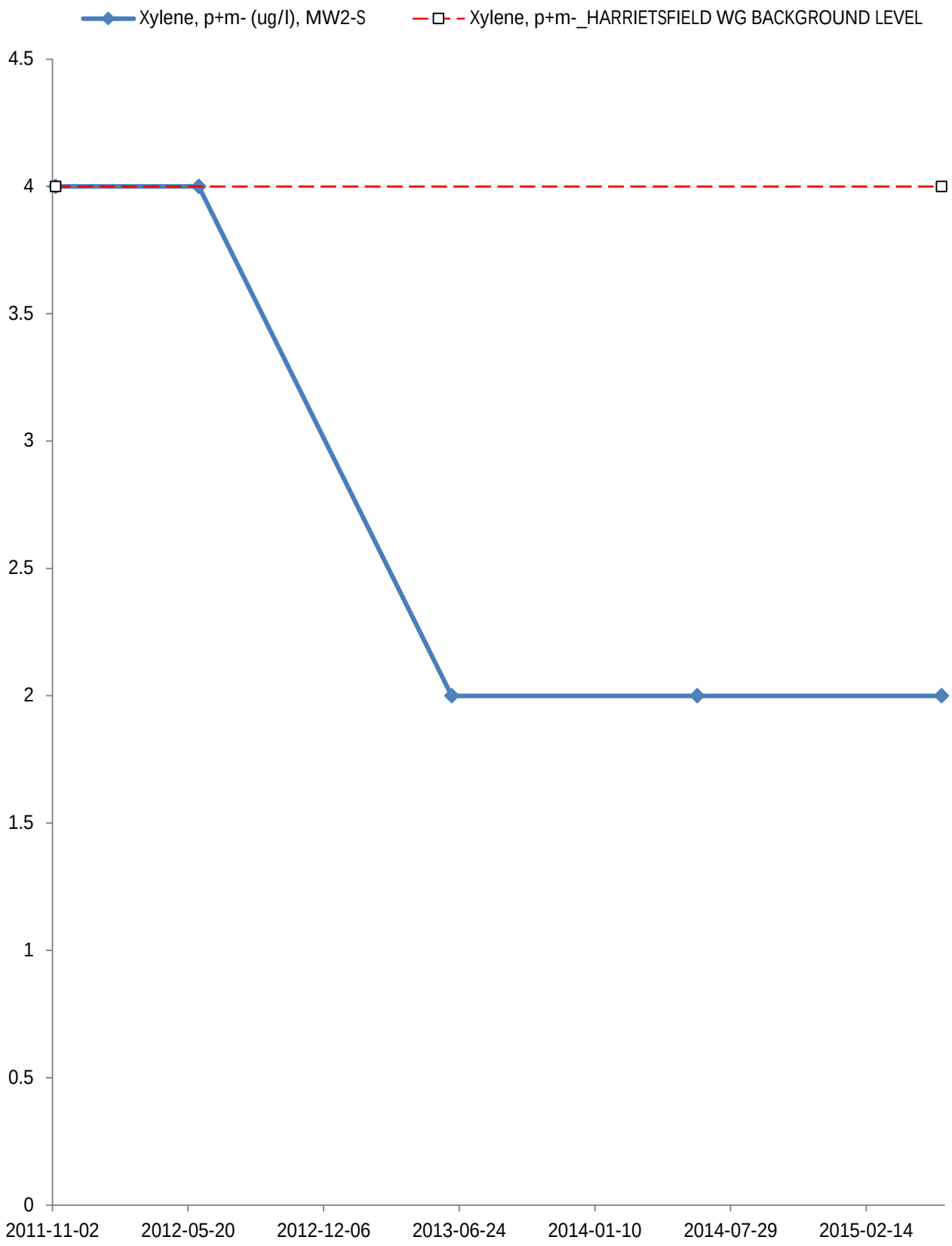
MW2-S-Vanadium



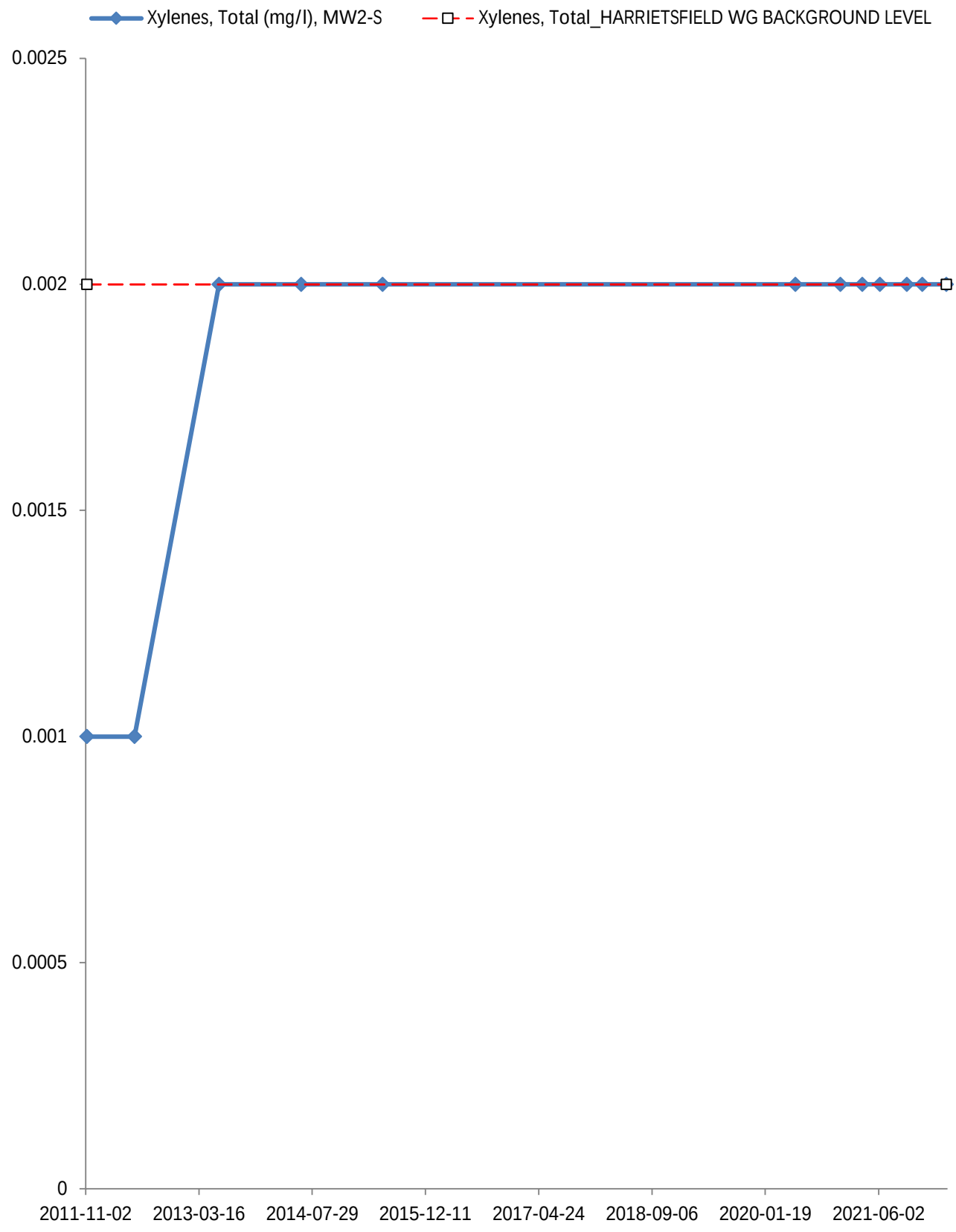
MW2-S-Xylene, O-



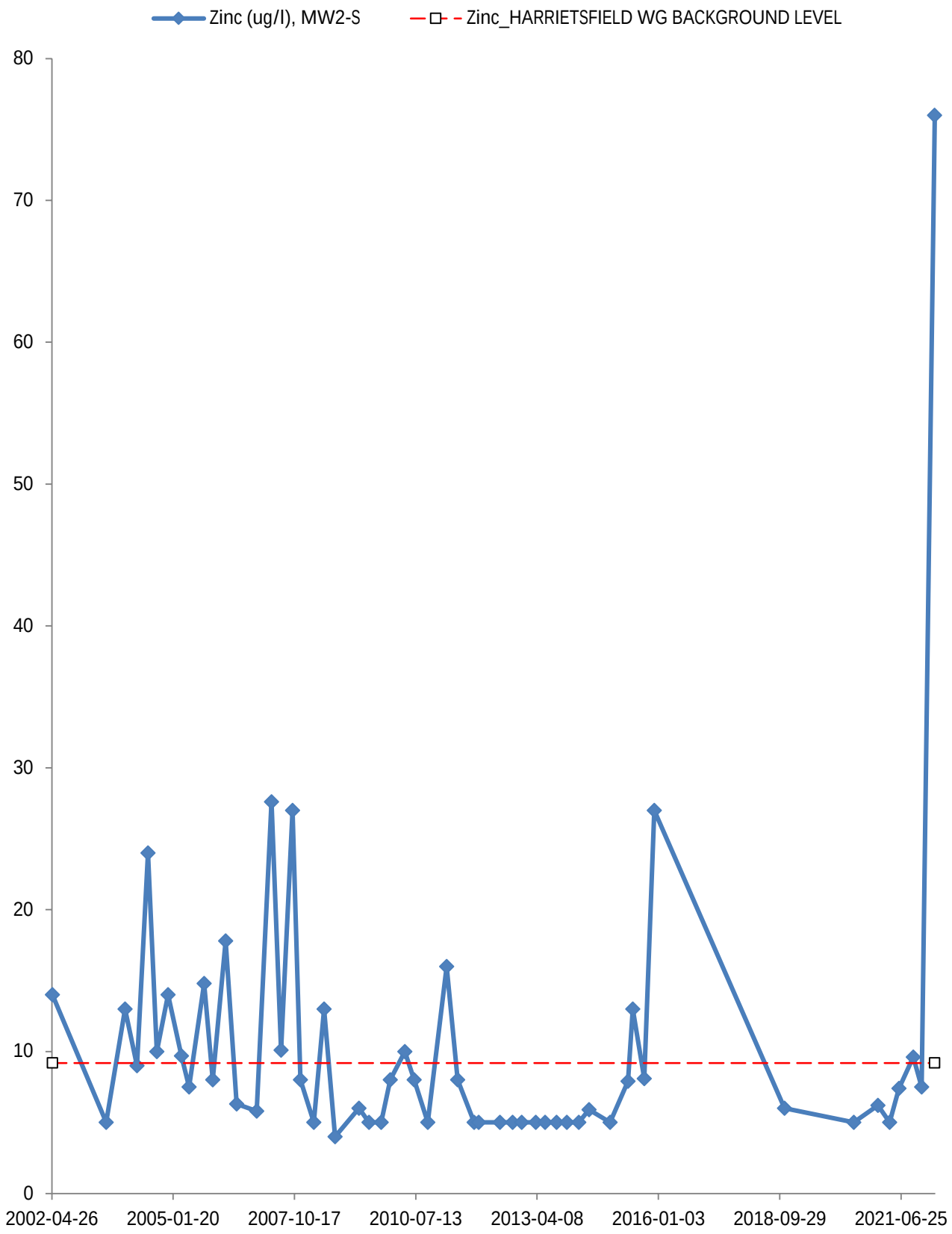
MW2-S-Xylene, p+m-



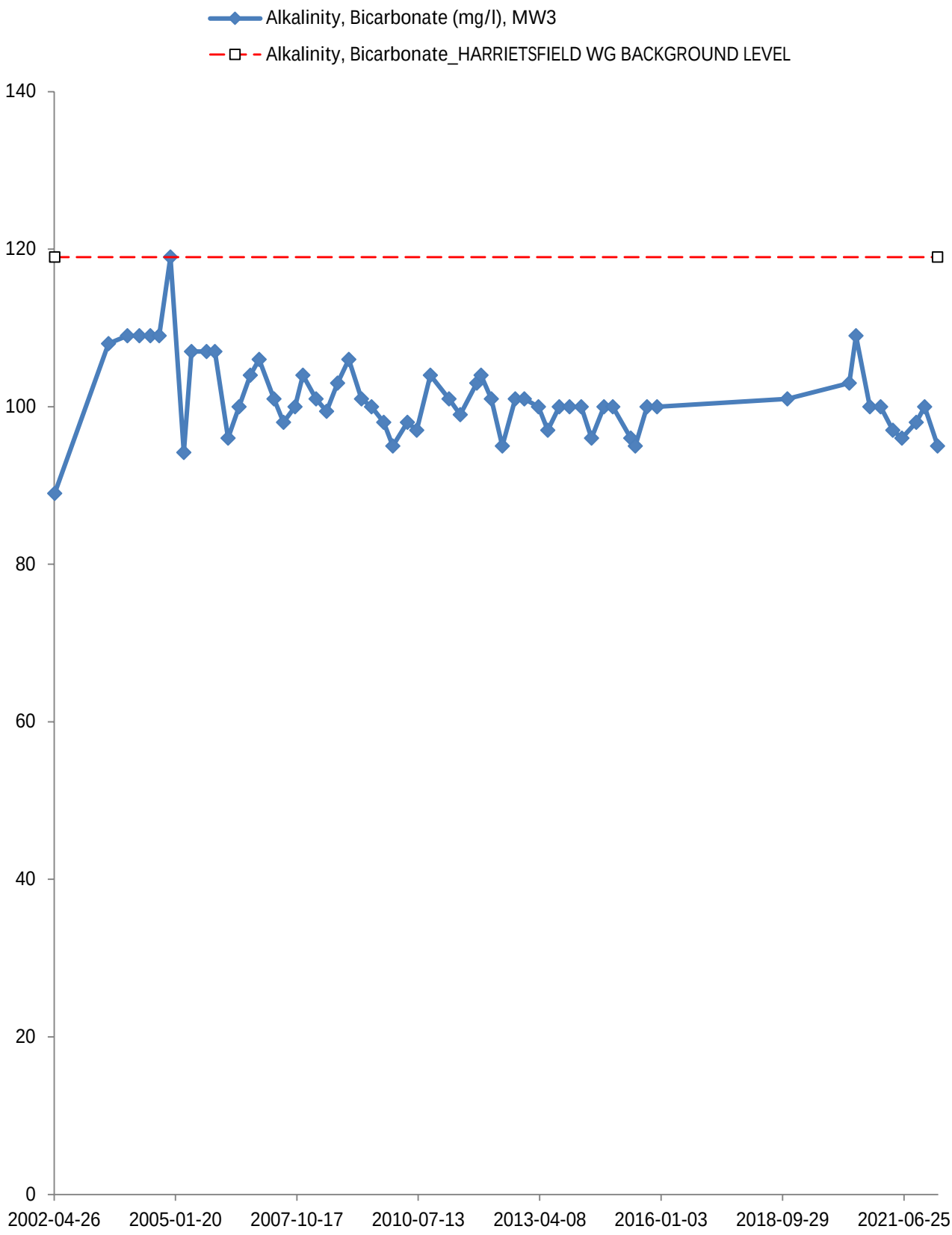
MW2-S-Xylenes, Total



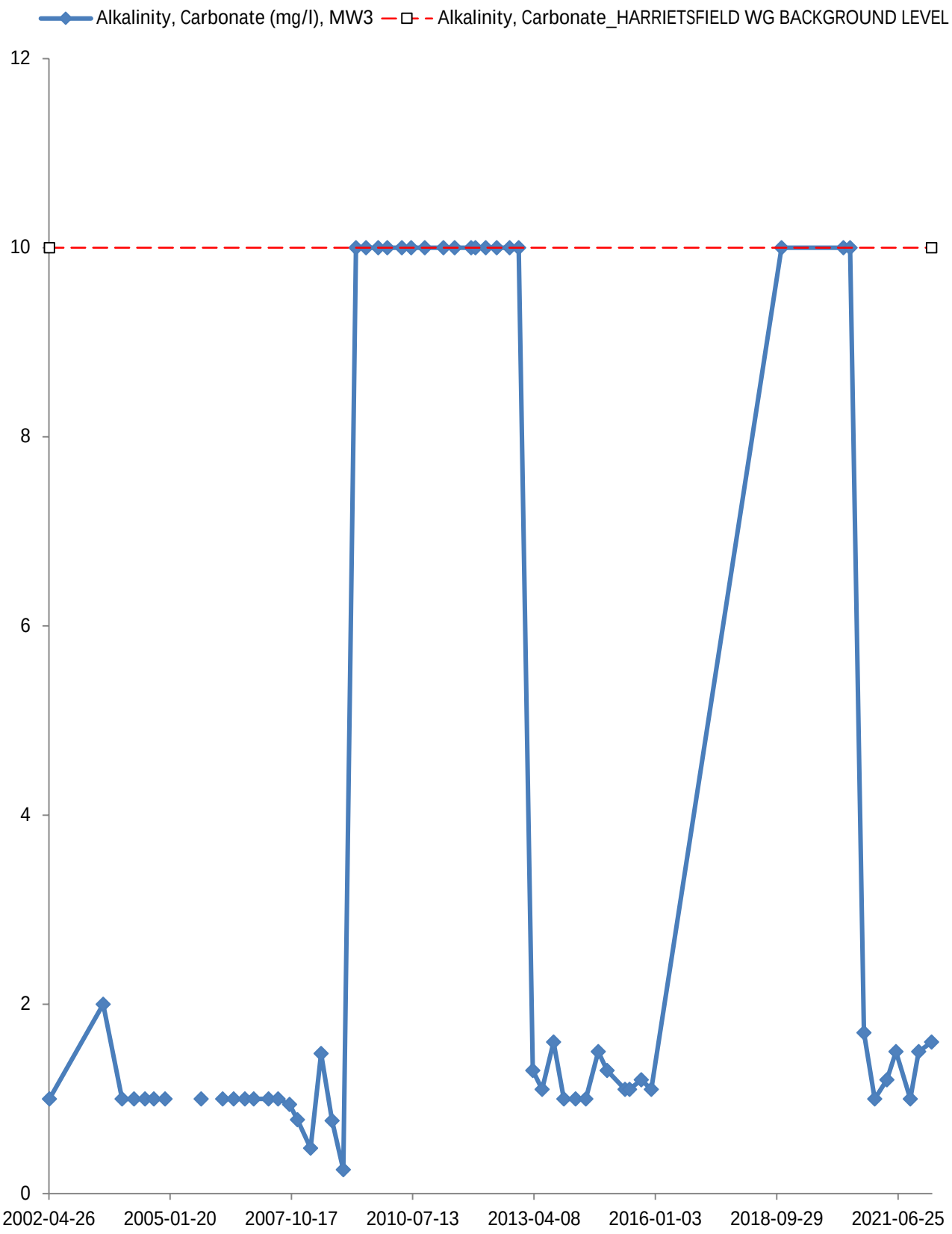
MW2-S-Zinc


Zinc (ug/l), MW2-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

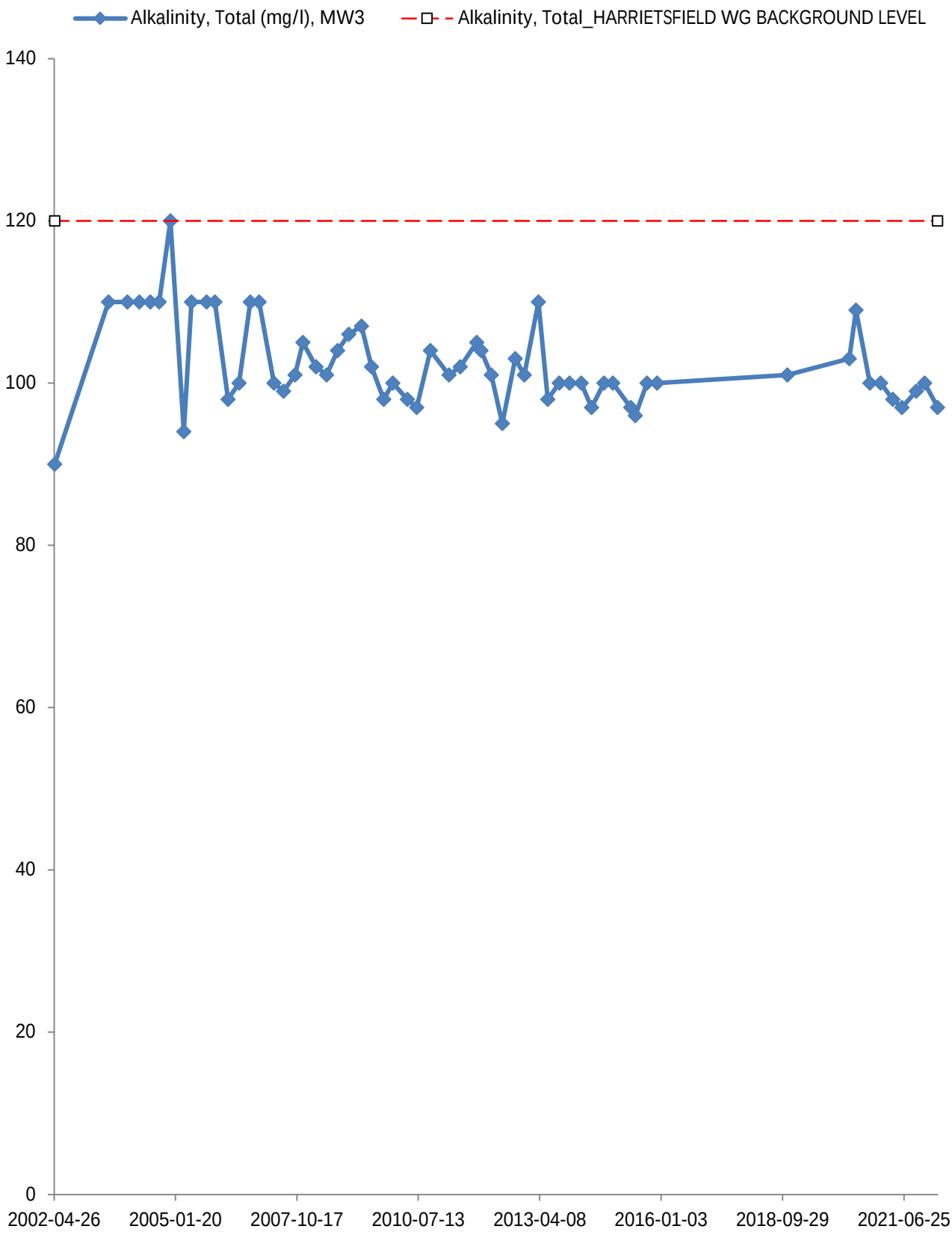
MW3-Alkalinity, Bicarbonate



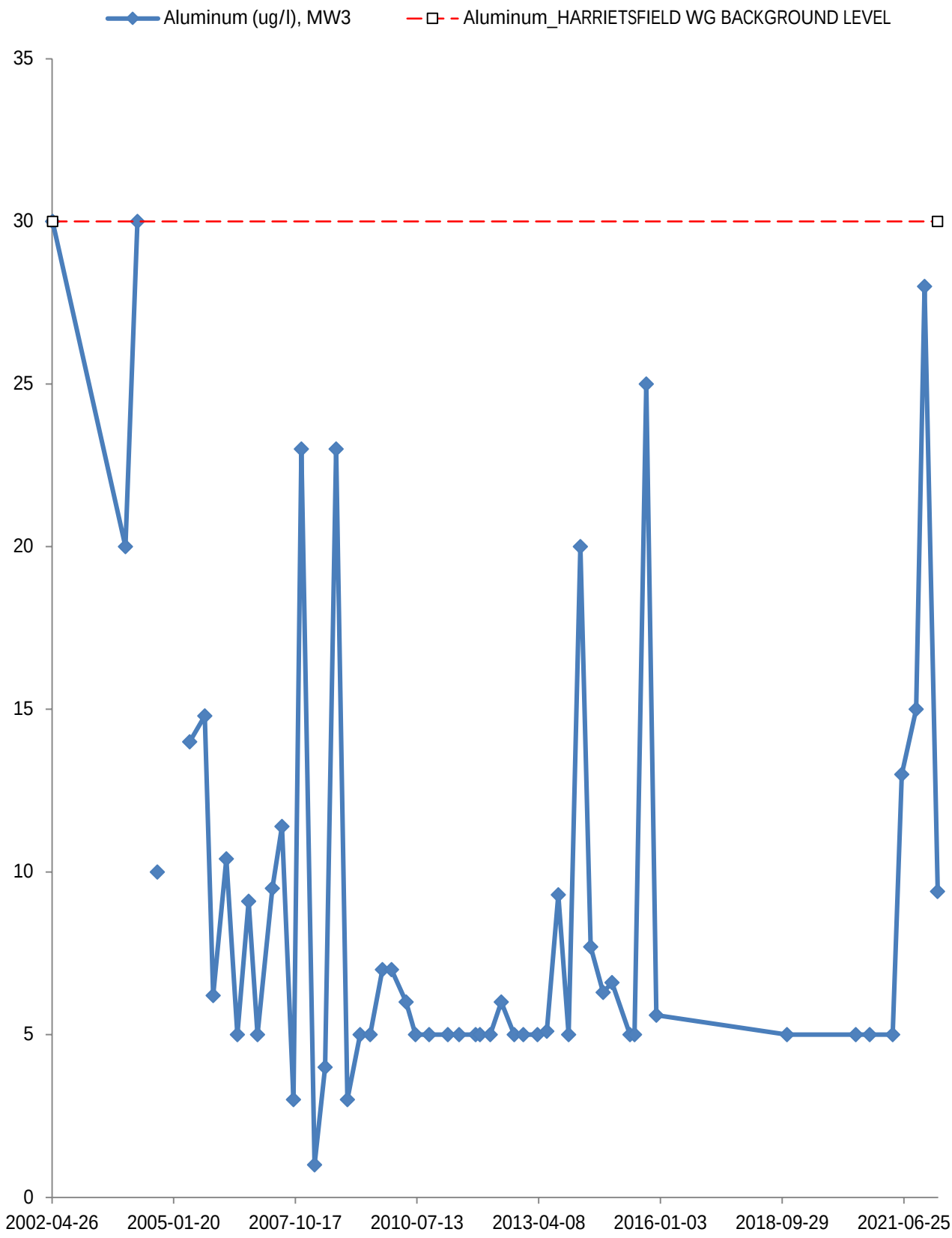
MW3-Alkalinity, Carbonate

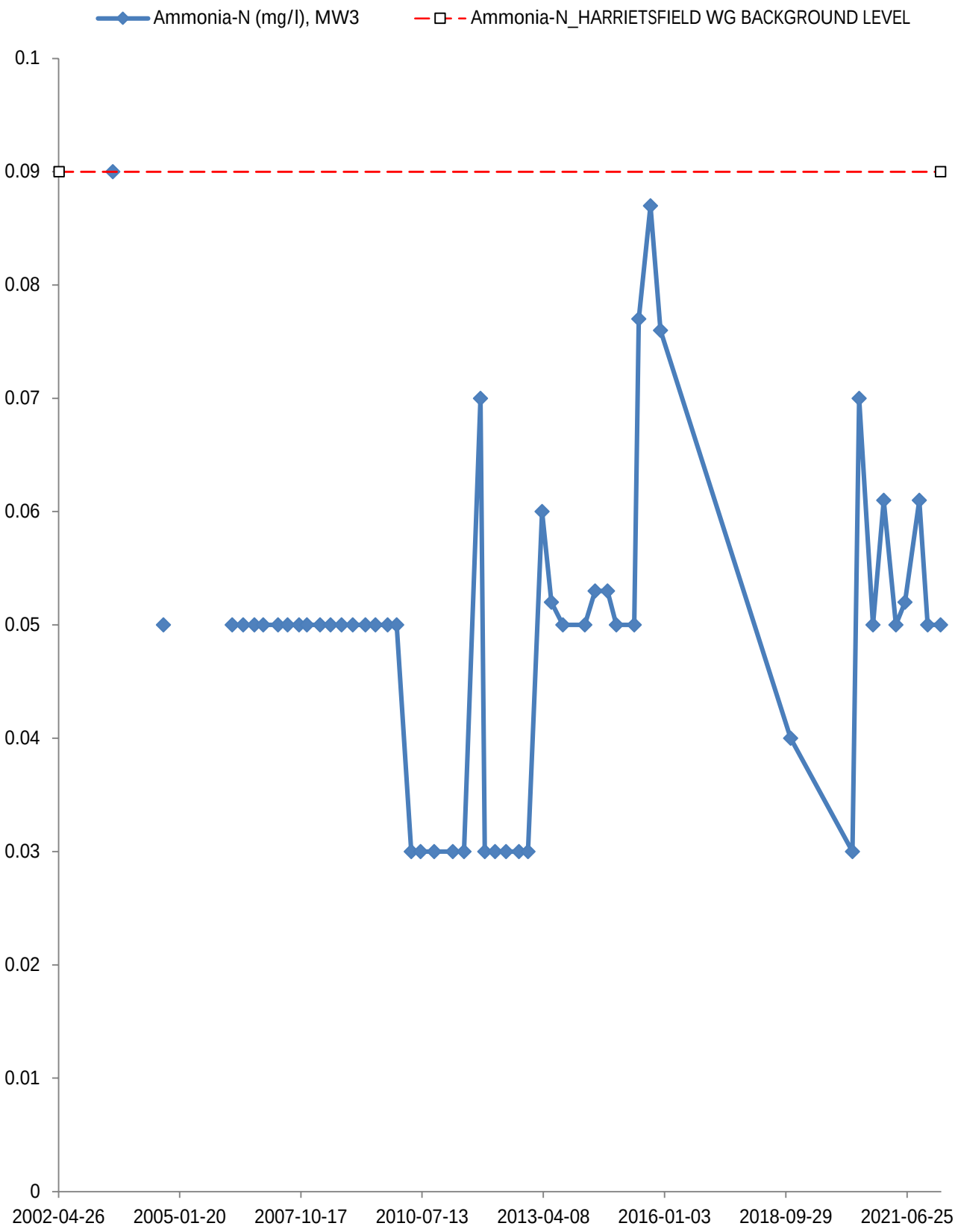


MW3-Alkalinity, Total

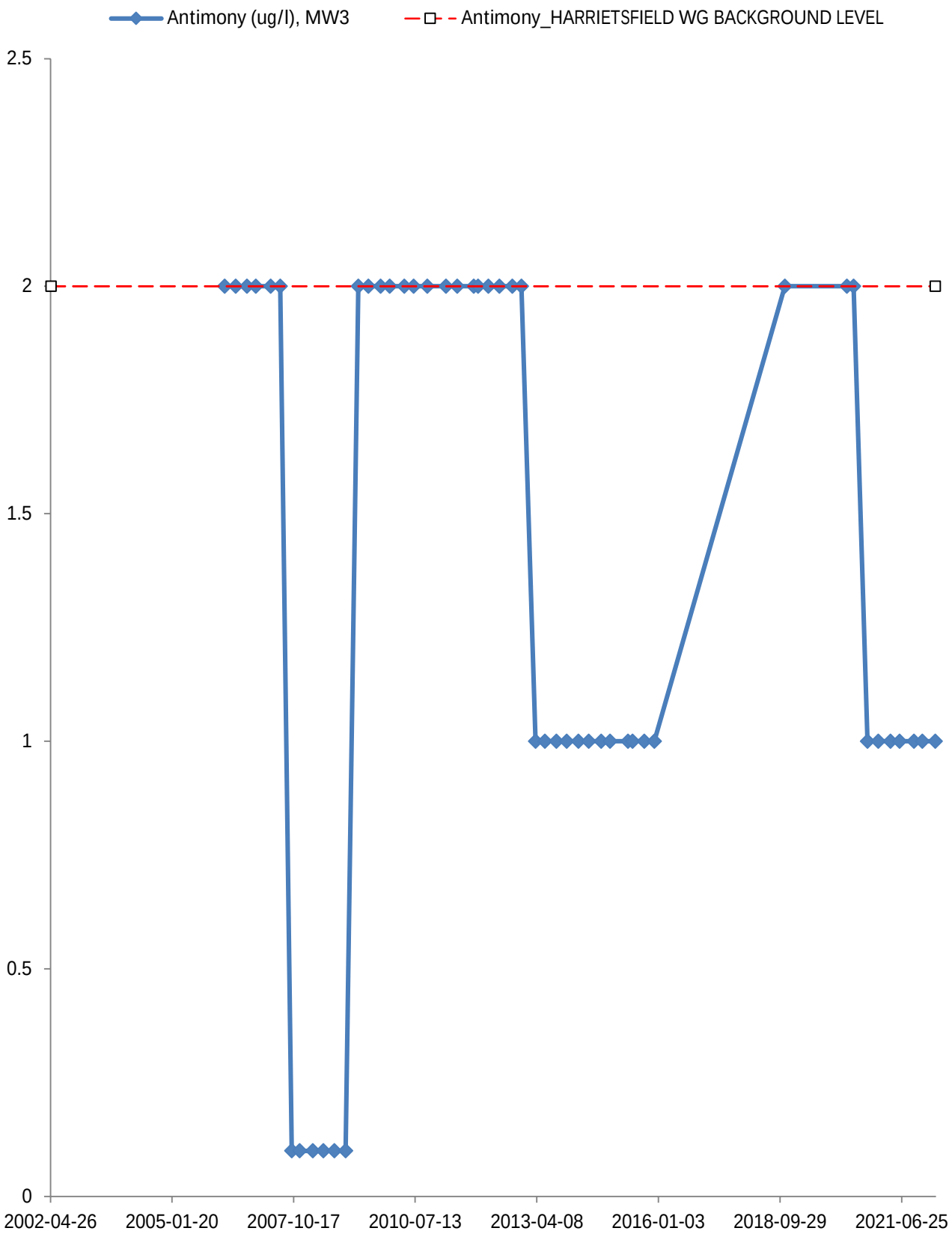


MW3-Aluminum

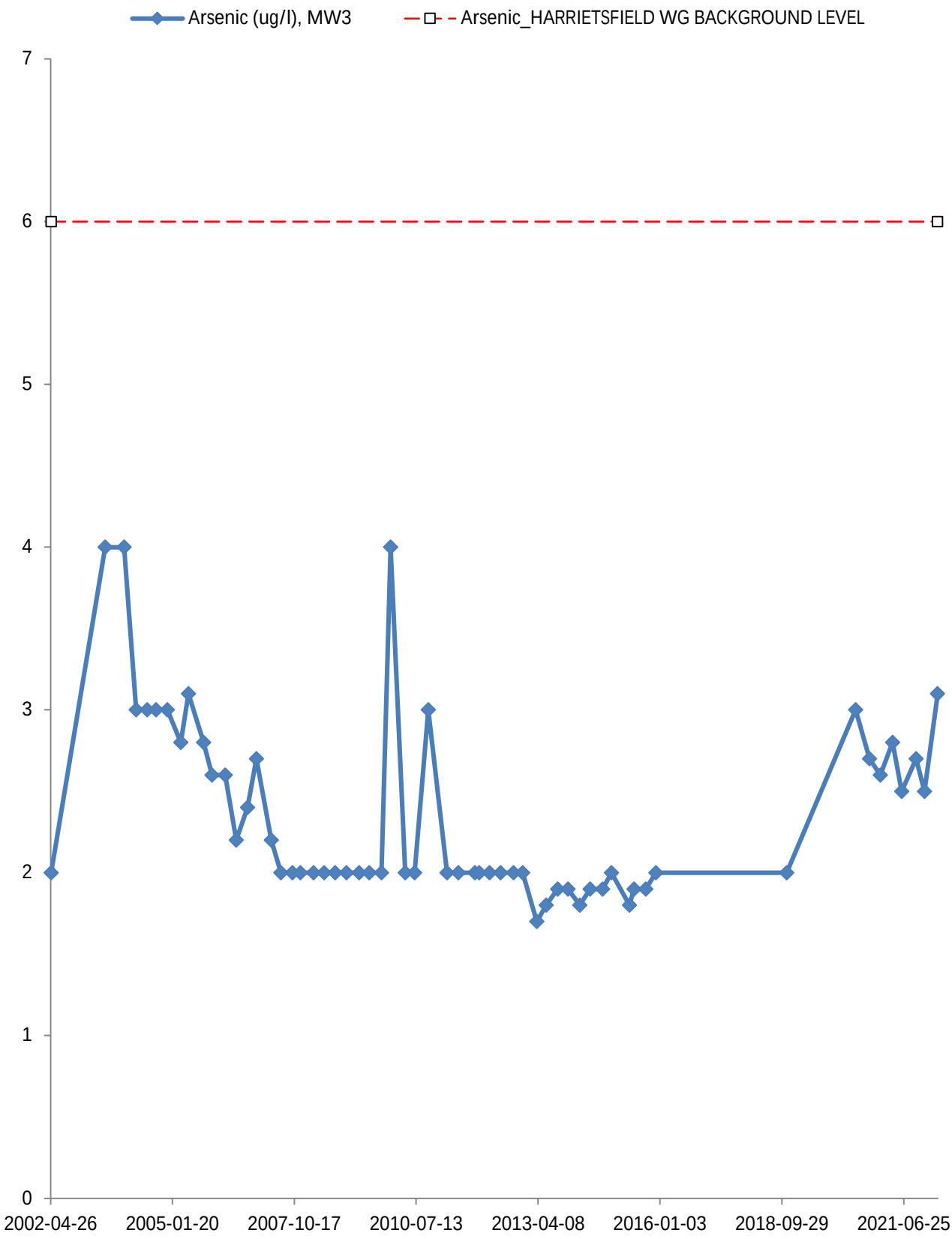



Ammonia-N (mg/l), MW3
Ammonia-N_HARRIETSFIELD WG BACKGROUND LEVEL
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

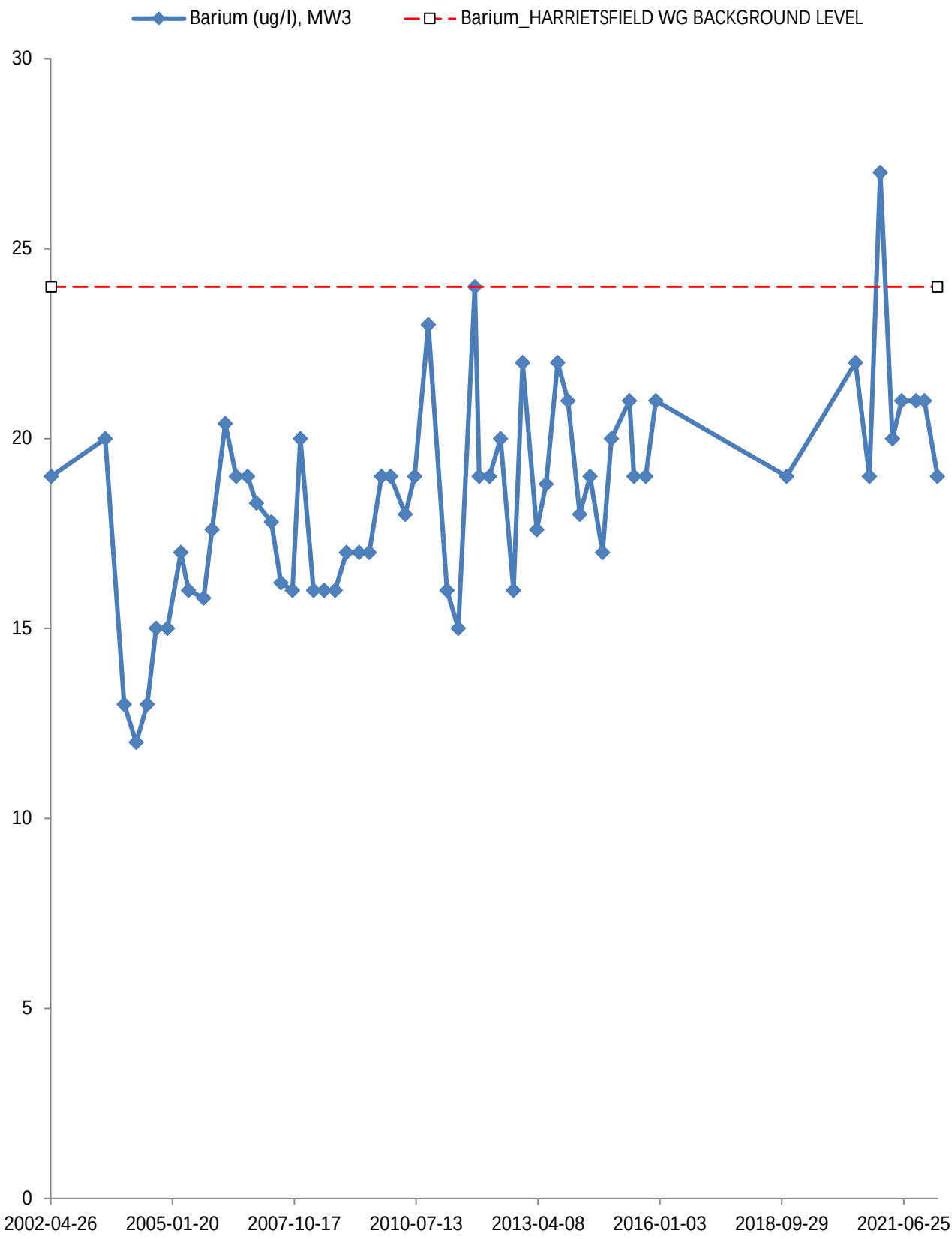
MW3-Antimony



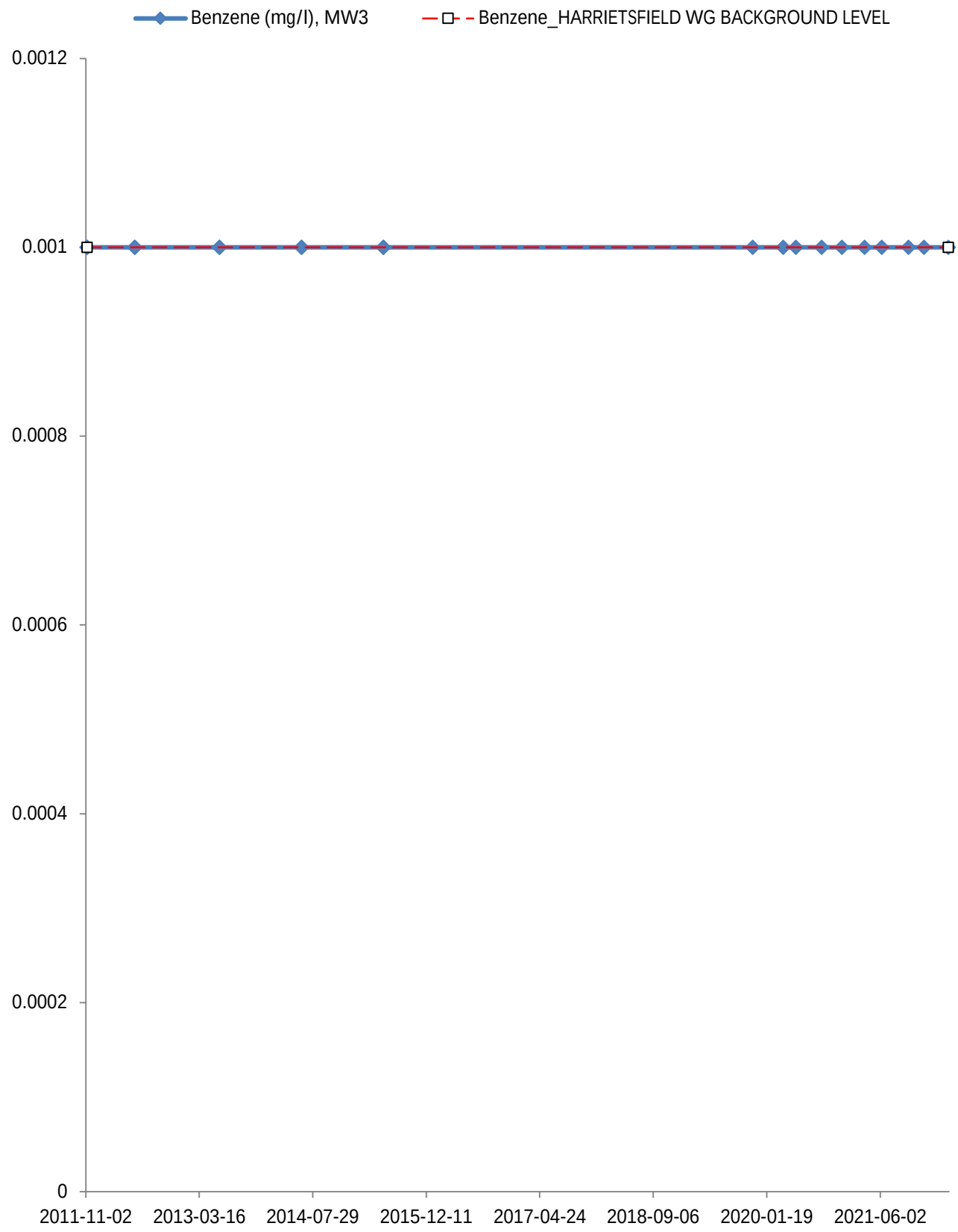
MW3-Arsenic


Arsenic (ug/l), MW3
Arsenic_HARRIETSFIELD WG BACKGROUND LEVEL
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

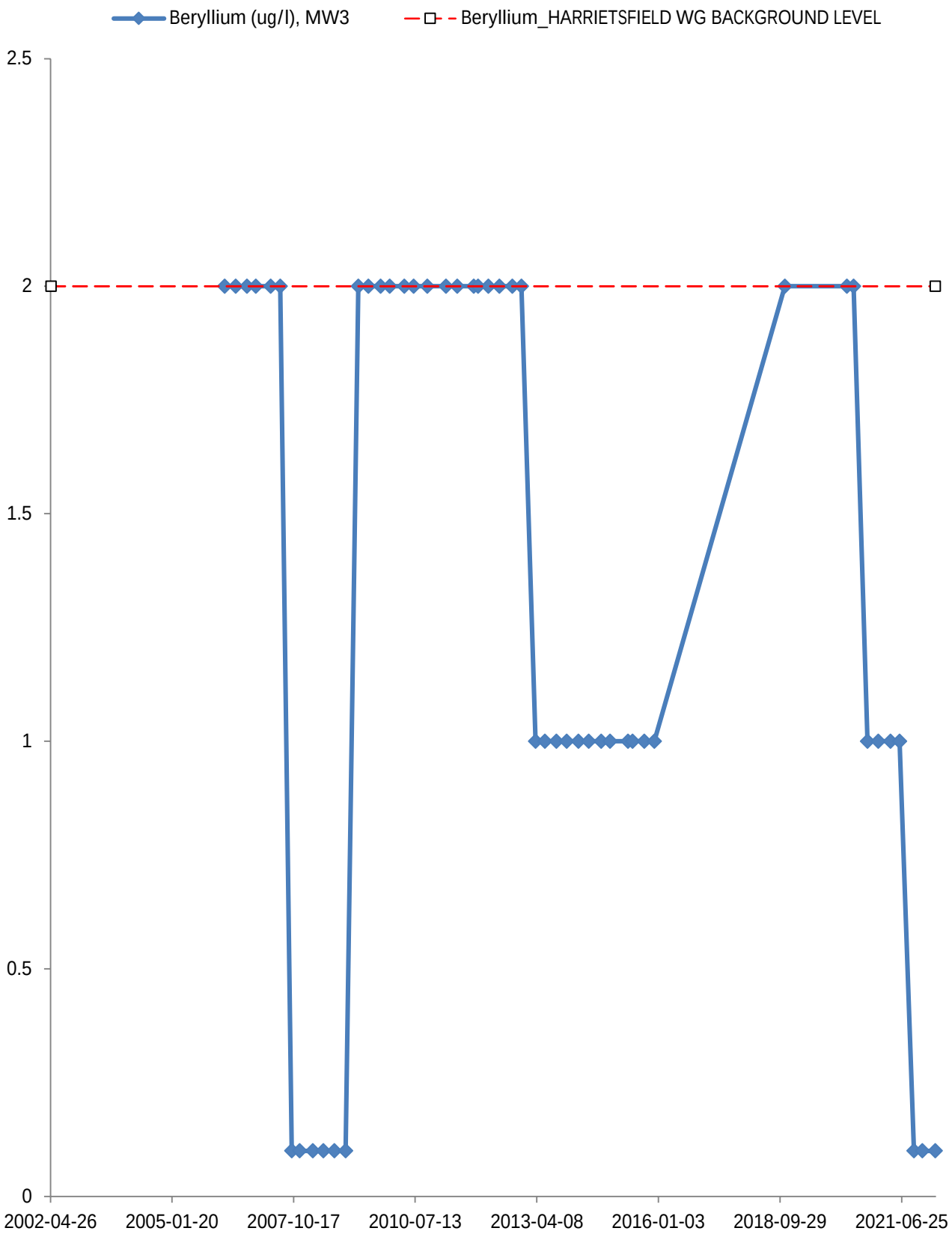
MW3-Barium


Barium (ug/l), MW3
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

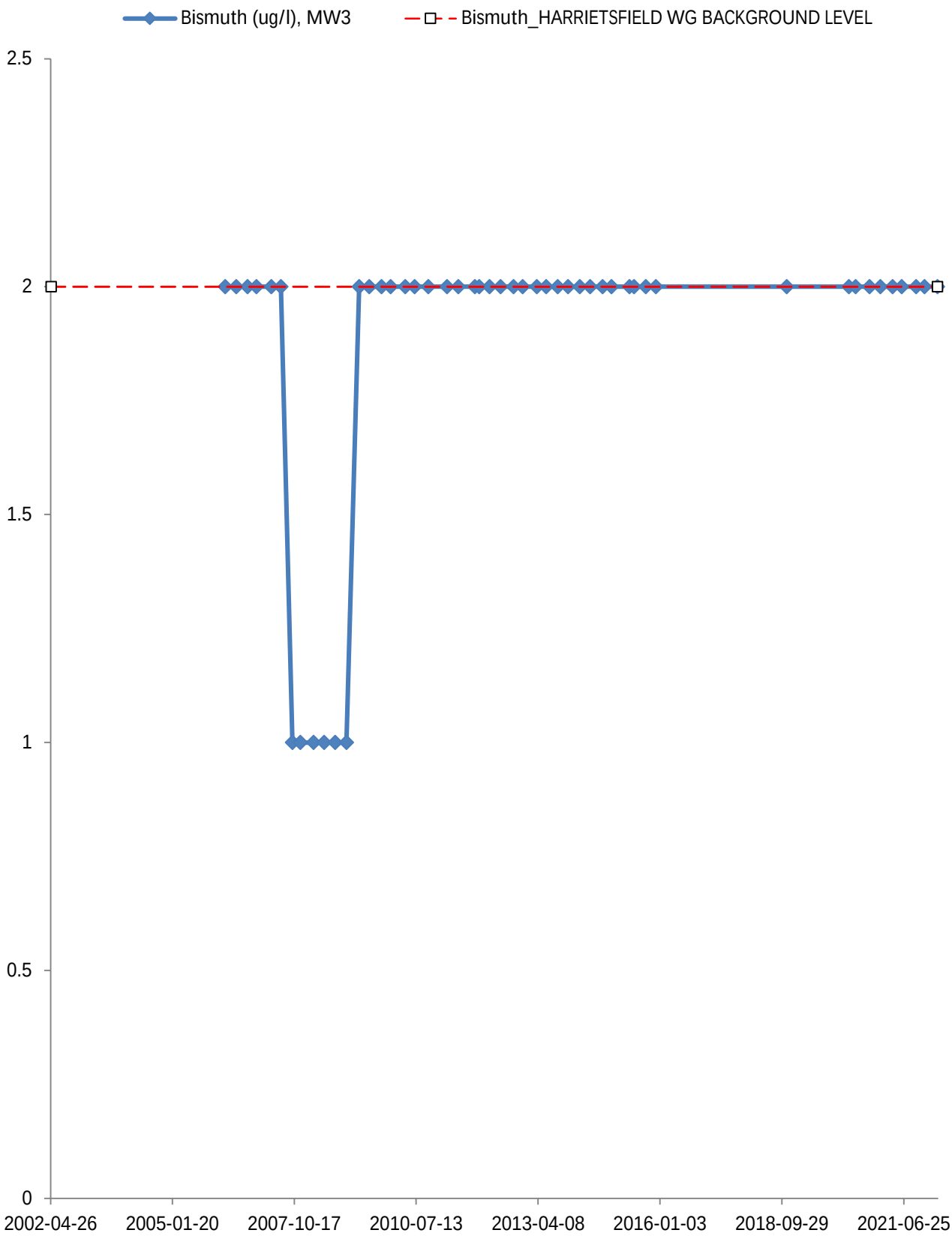
MW3-Benzene


Benzene (mg/l), MW3
Benzene_HARRIETSFIELD WG BACKGROUND LEVEL
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
2011-11-02
2013-03-16
2014-07-29
2015-12-11
2017-04-24
2018-09-06
2020-01-19
2021-06-02

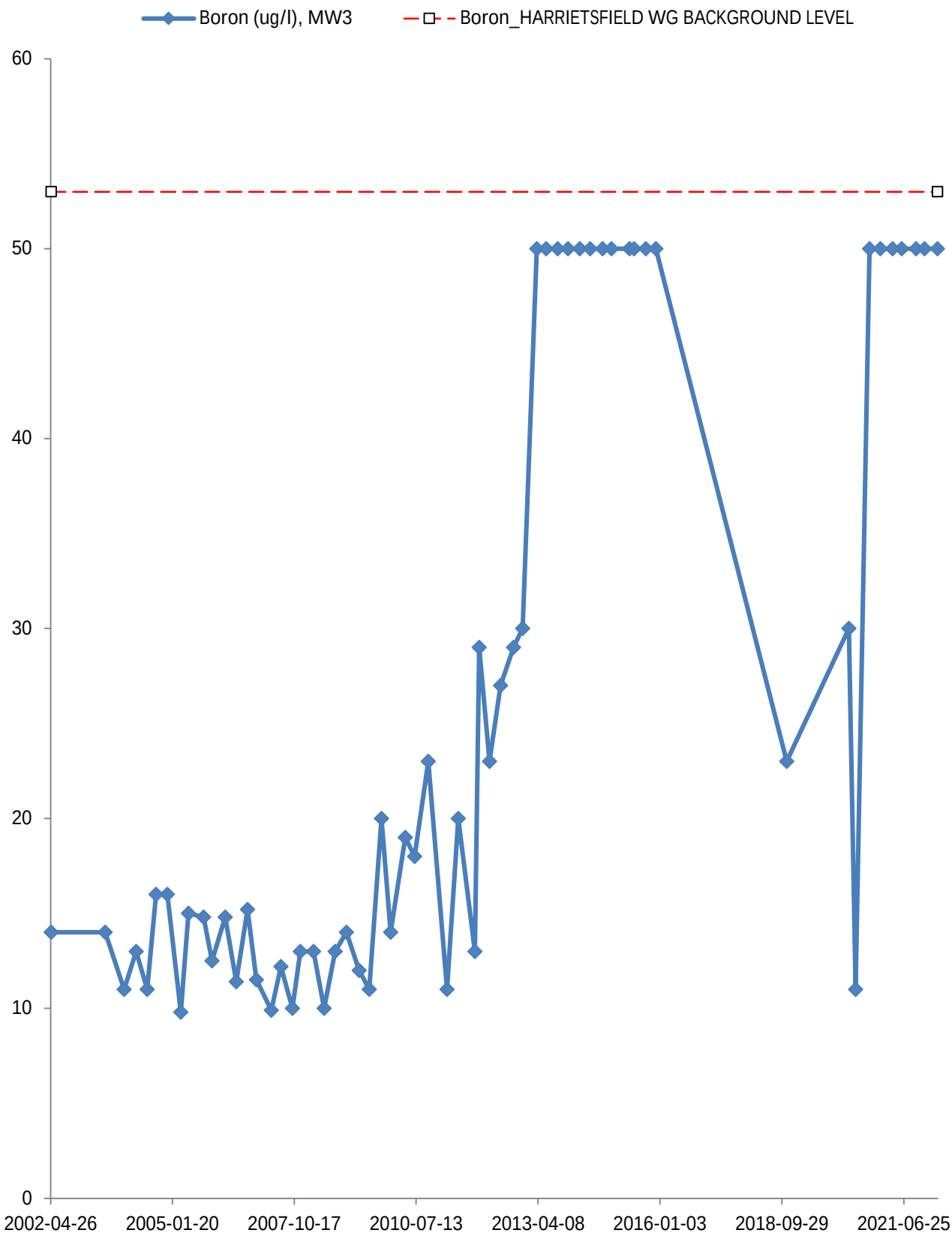
MW3-Beryllium



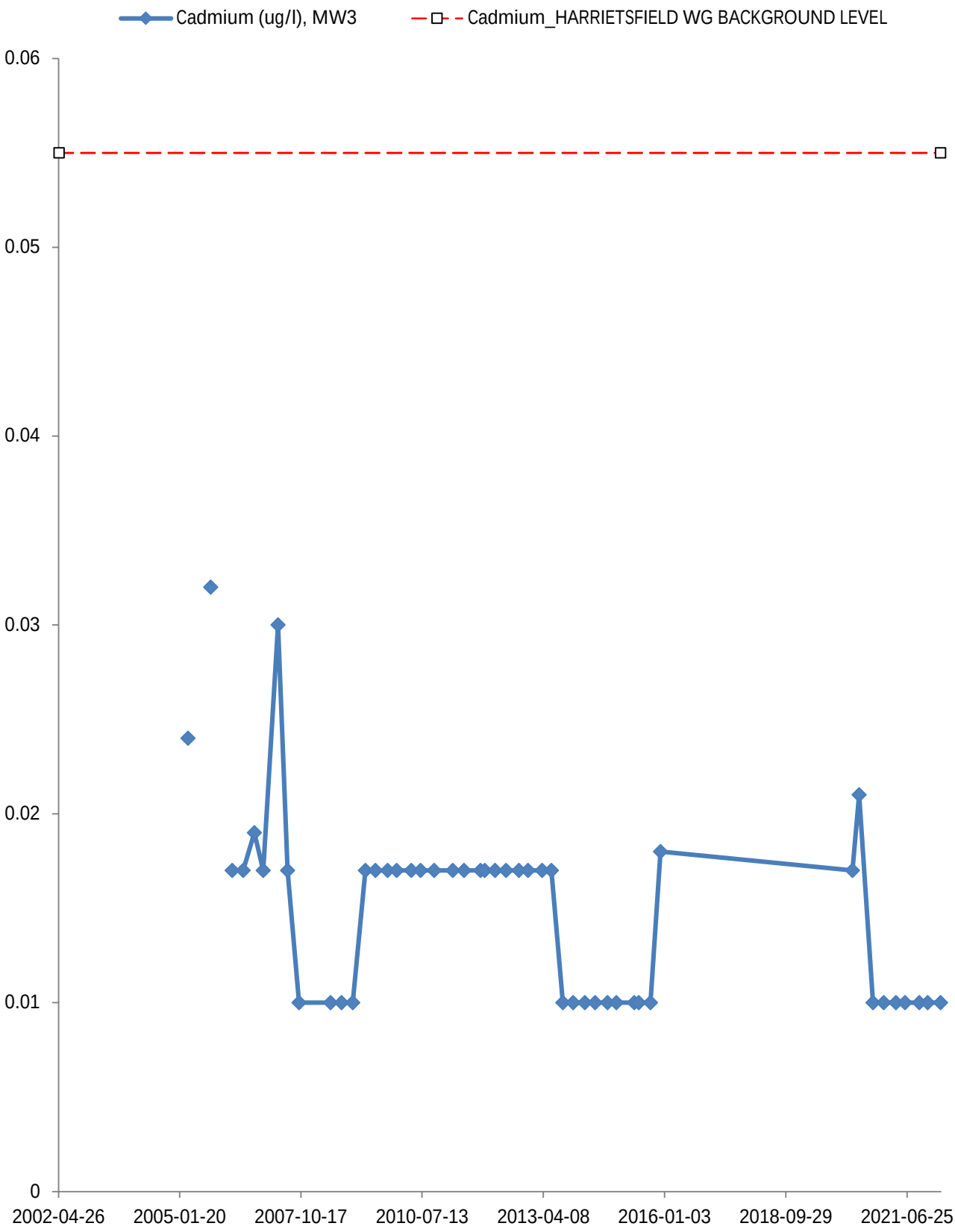
MW3-Bismuth

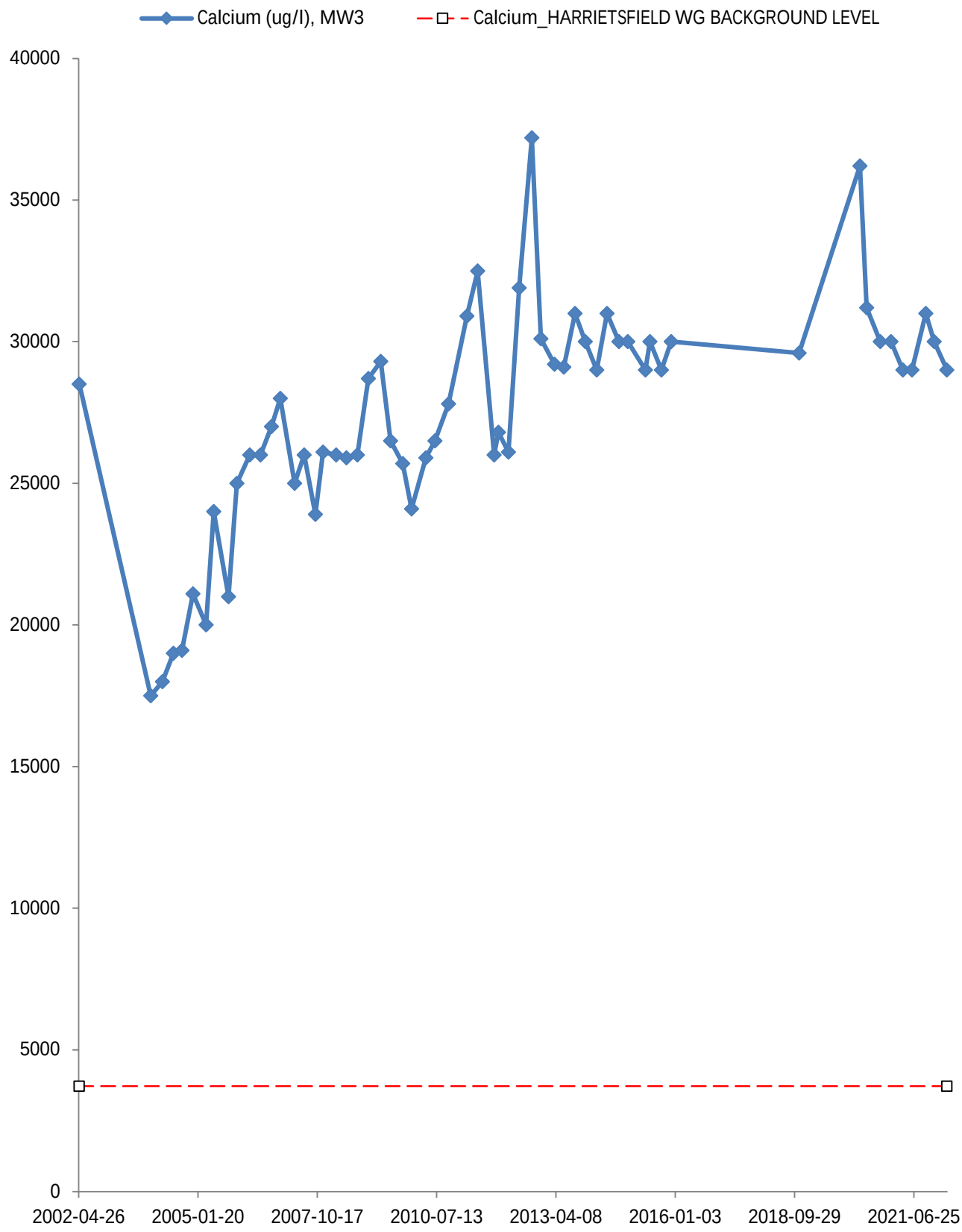

Bismuth (ug/l), MW3
Bismuth_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

MW3-Boron

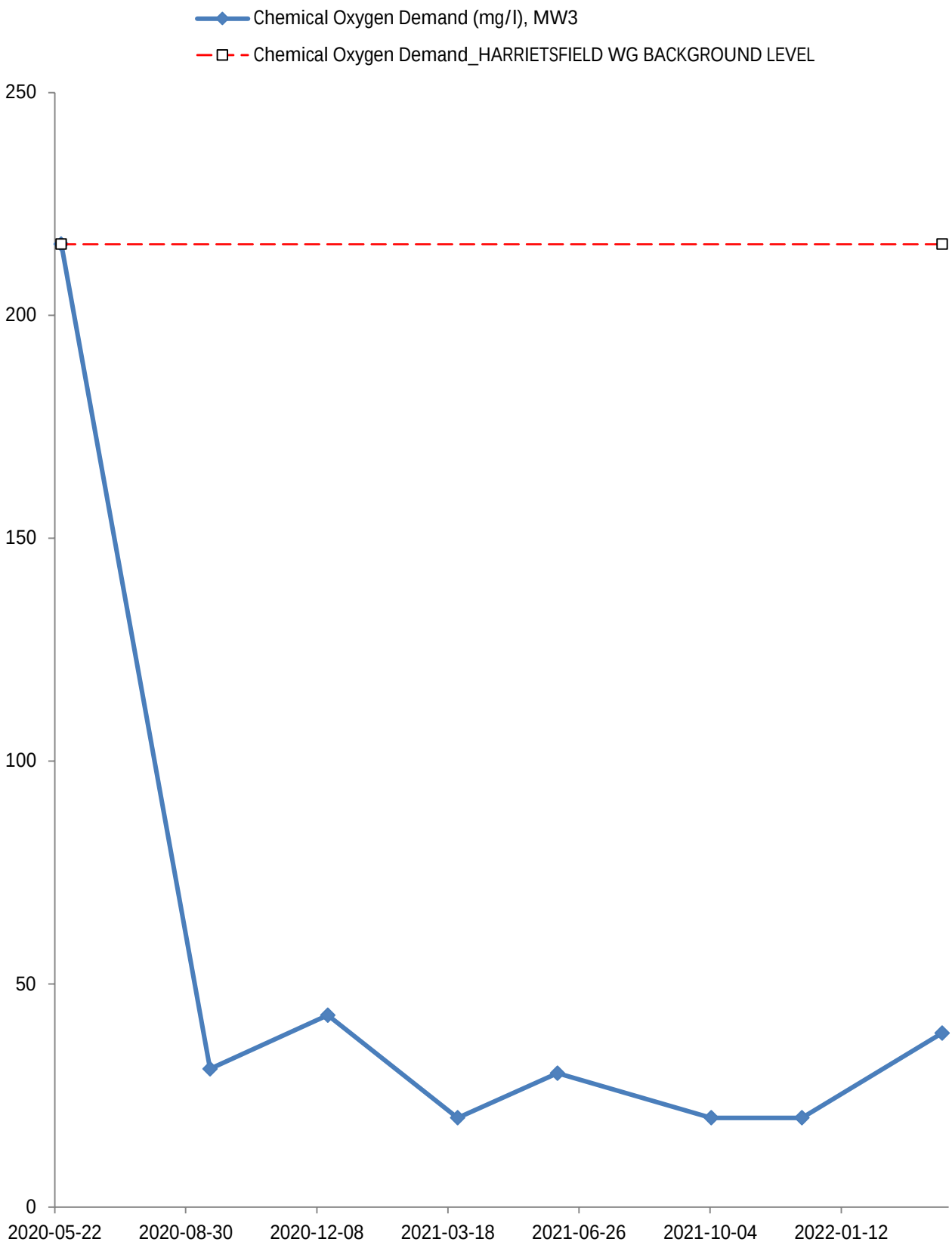

Boron (ug/l), MW3
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

MW3-Cadmium

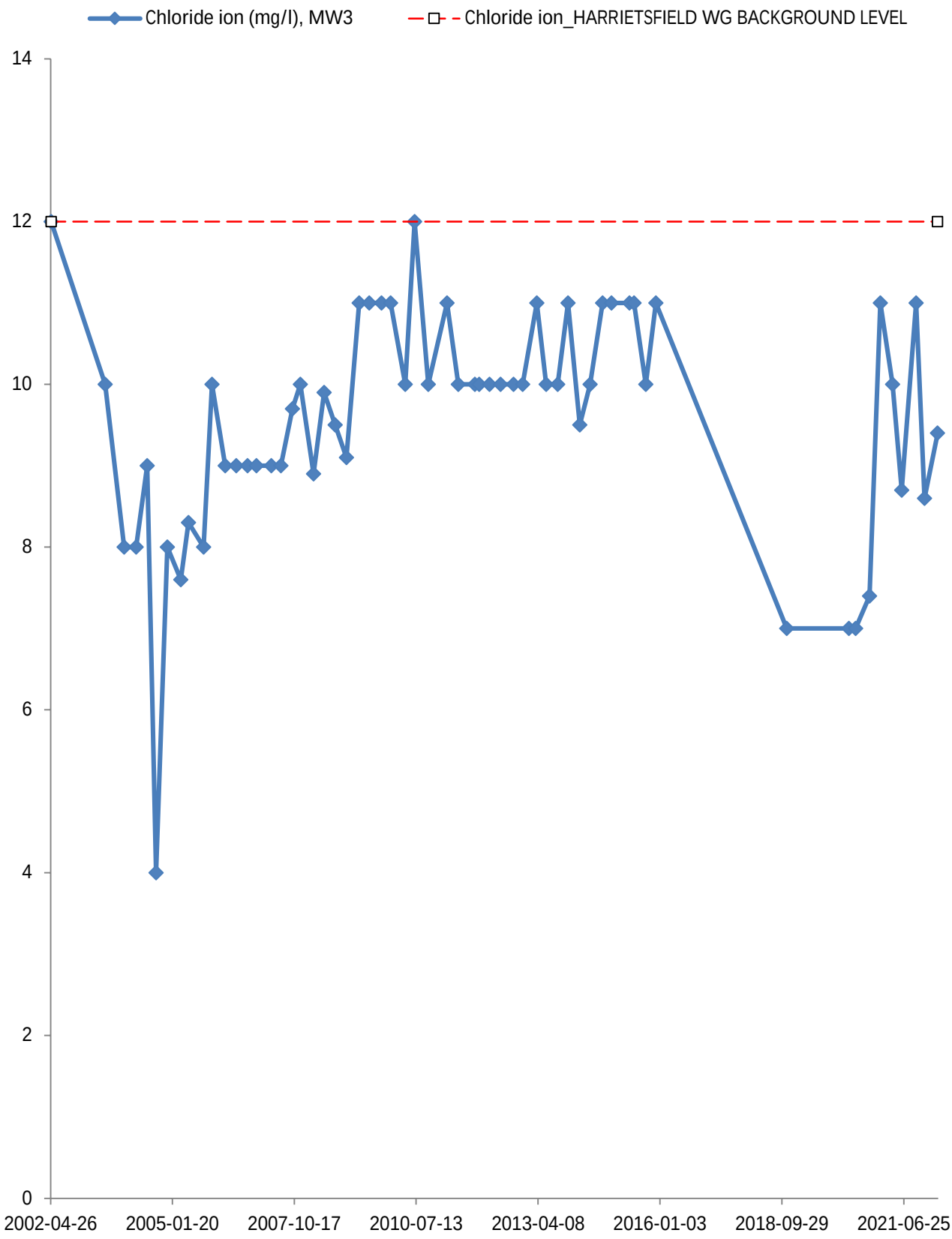

Cadmium (ug/l), MW3
Cadmium_HARRIETSFIELD WG BACKGROUND LEVEL
0.06
0.05
0.04
0.03
0.02
0.01
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25


Calcium (ug/l), MW3
Calcium_HARRIETSFIELD WG BACKGROUND LEVEL
40000
35000
30000
25000
20000
15000
10000
5000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

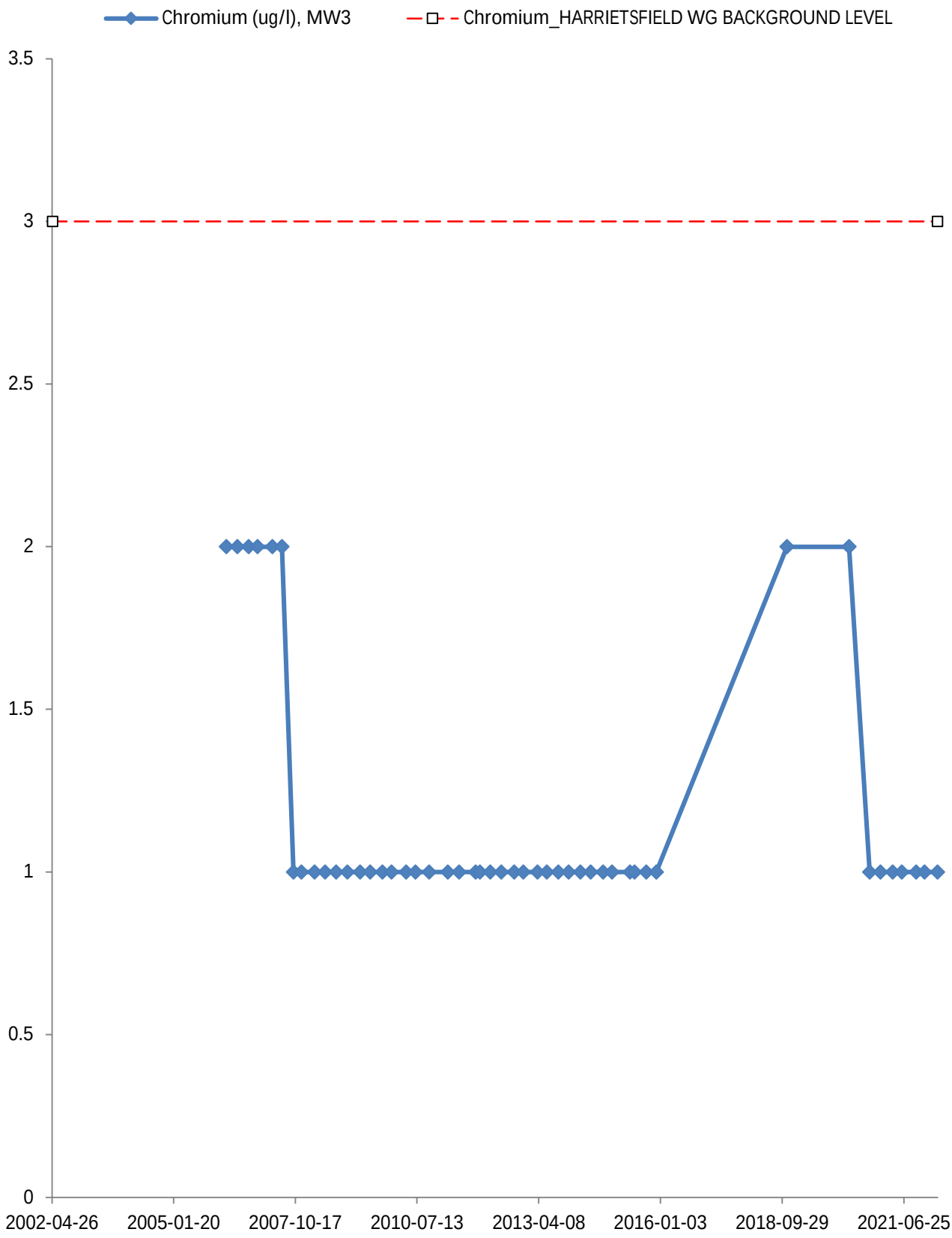
MW3-Chemical Oxygen Demand



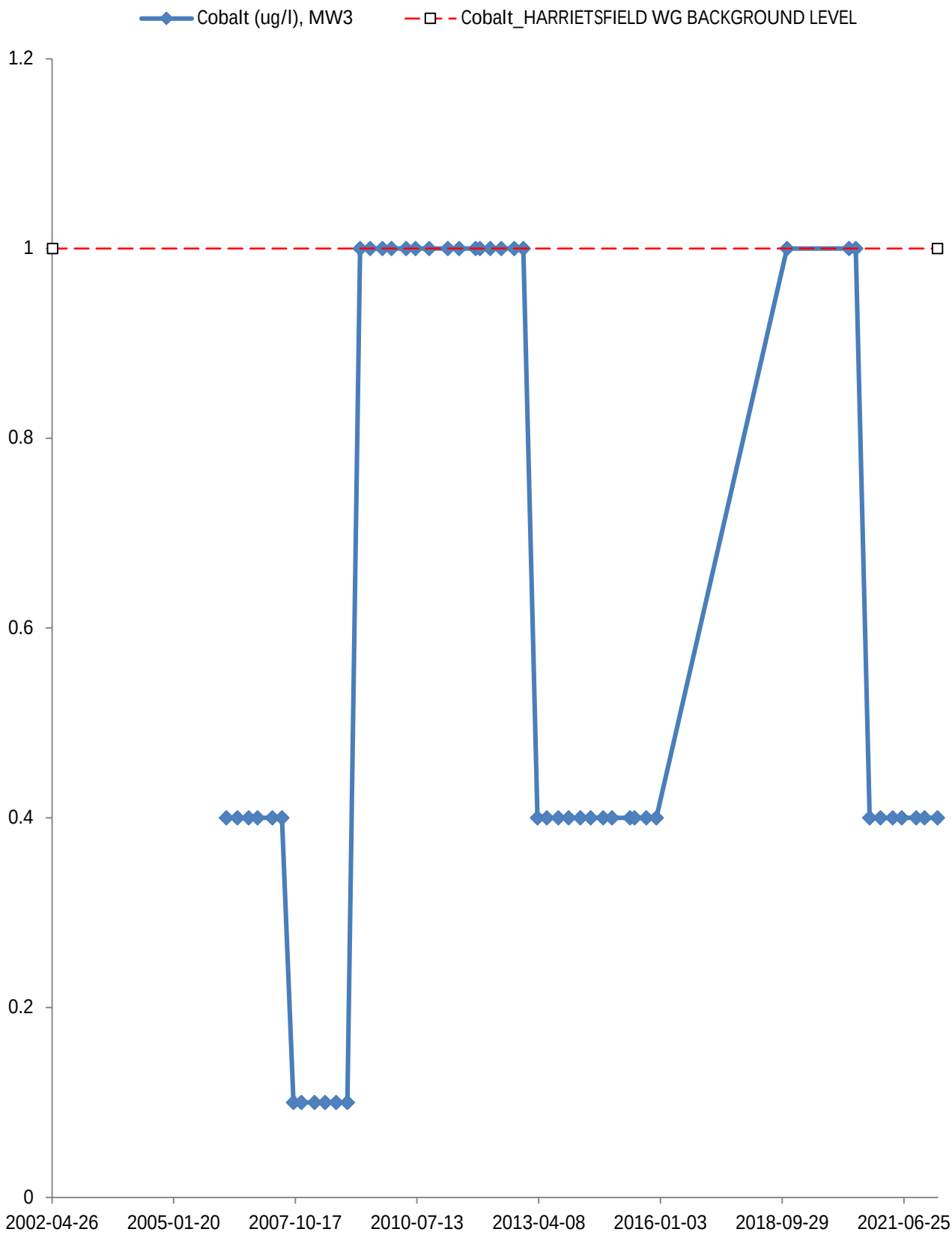
MW3-Chloride ion



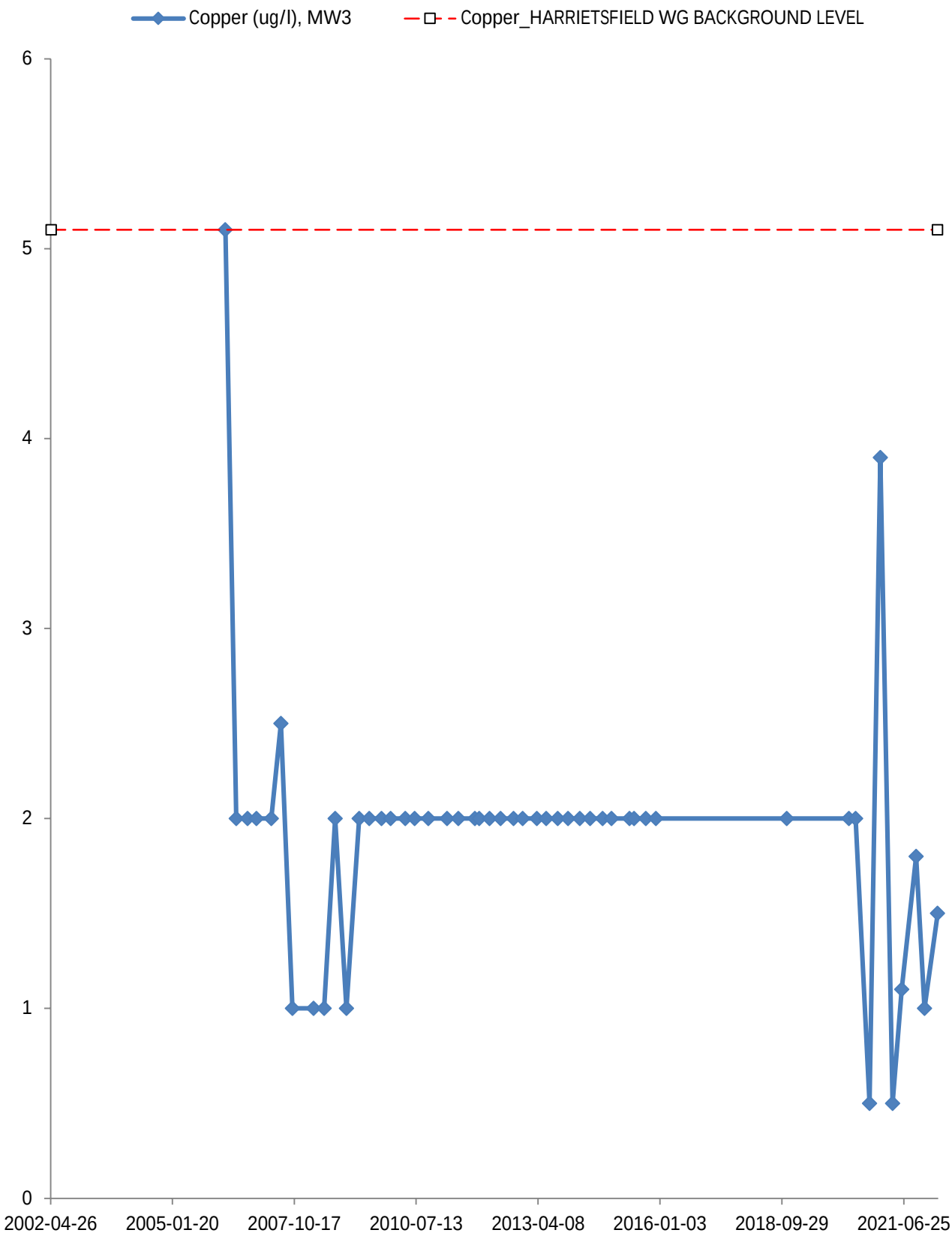
MW3-Chromium



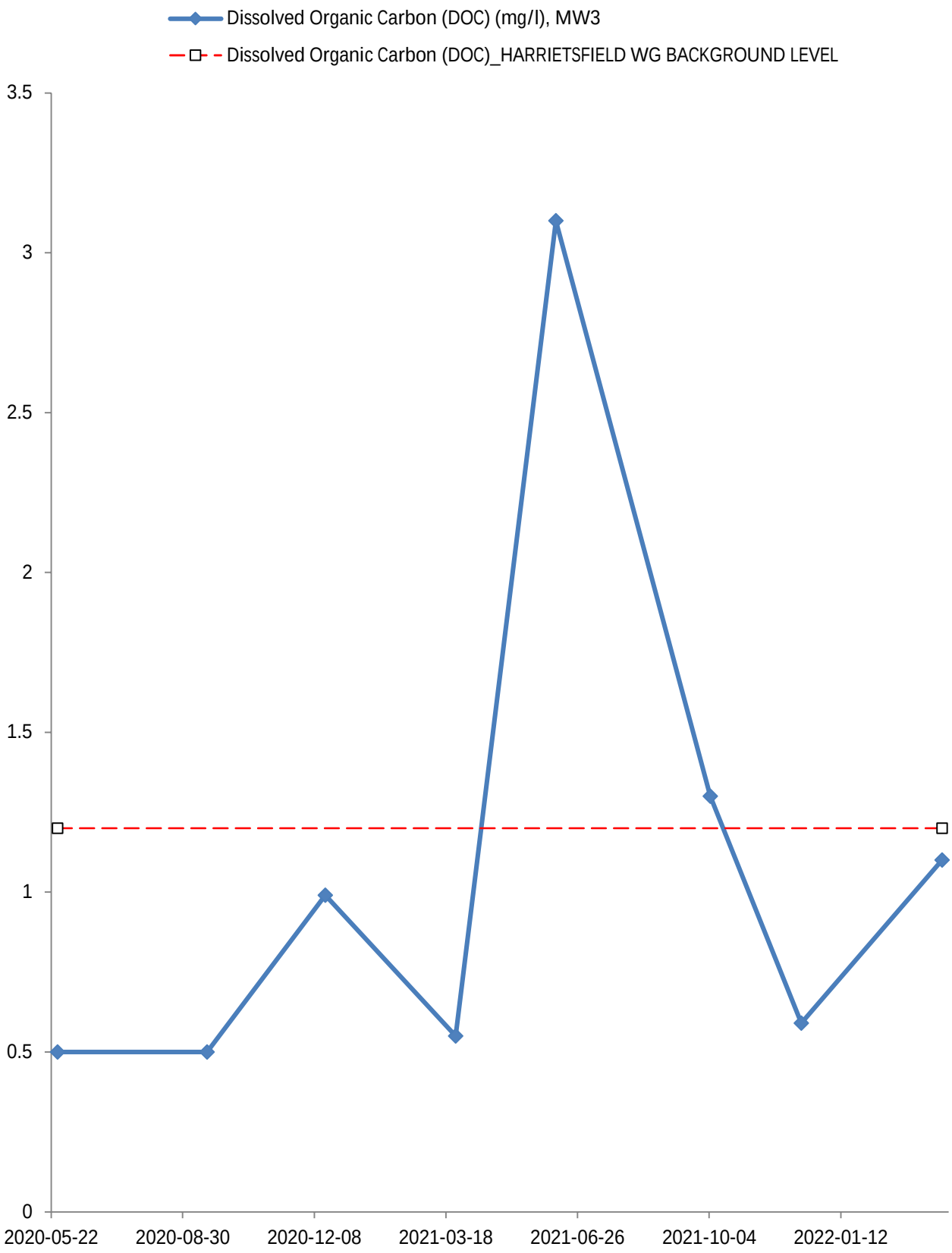
MW3-Cobalt


Cobalt (ug/l), MW3
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

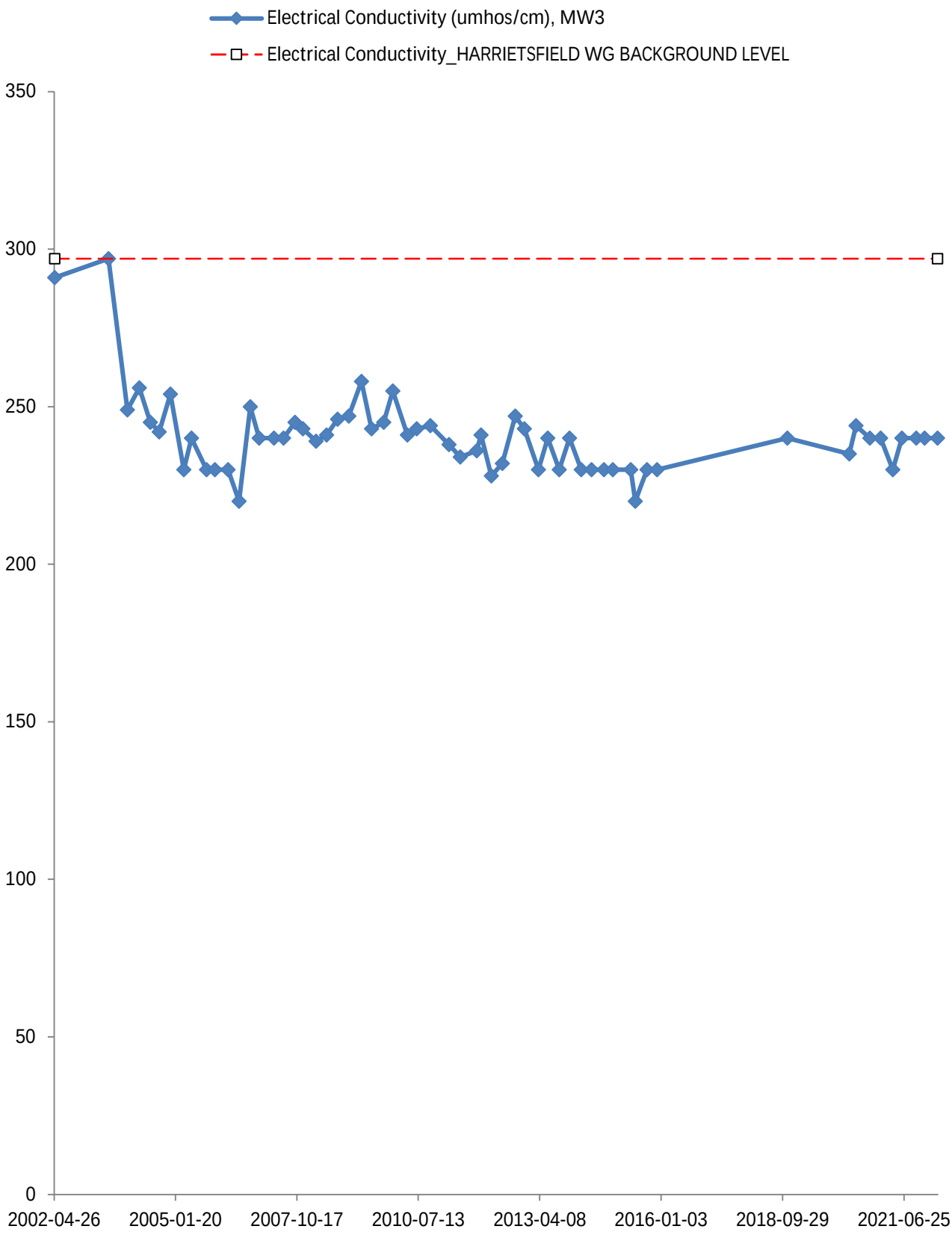
MW3-Copper


Copper (ug/l), MW3
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

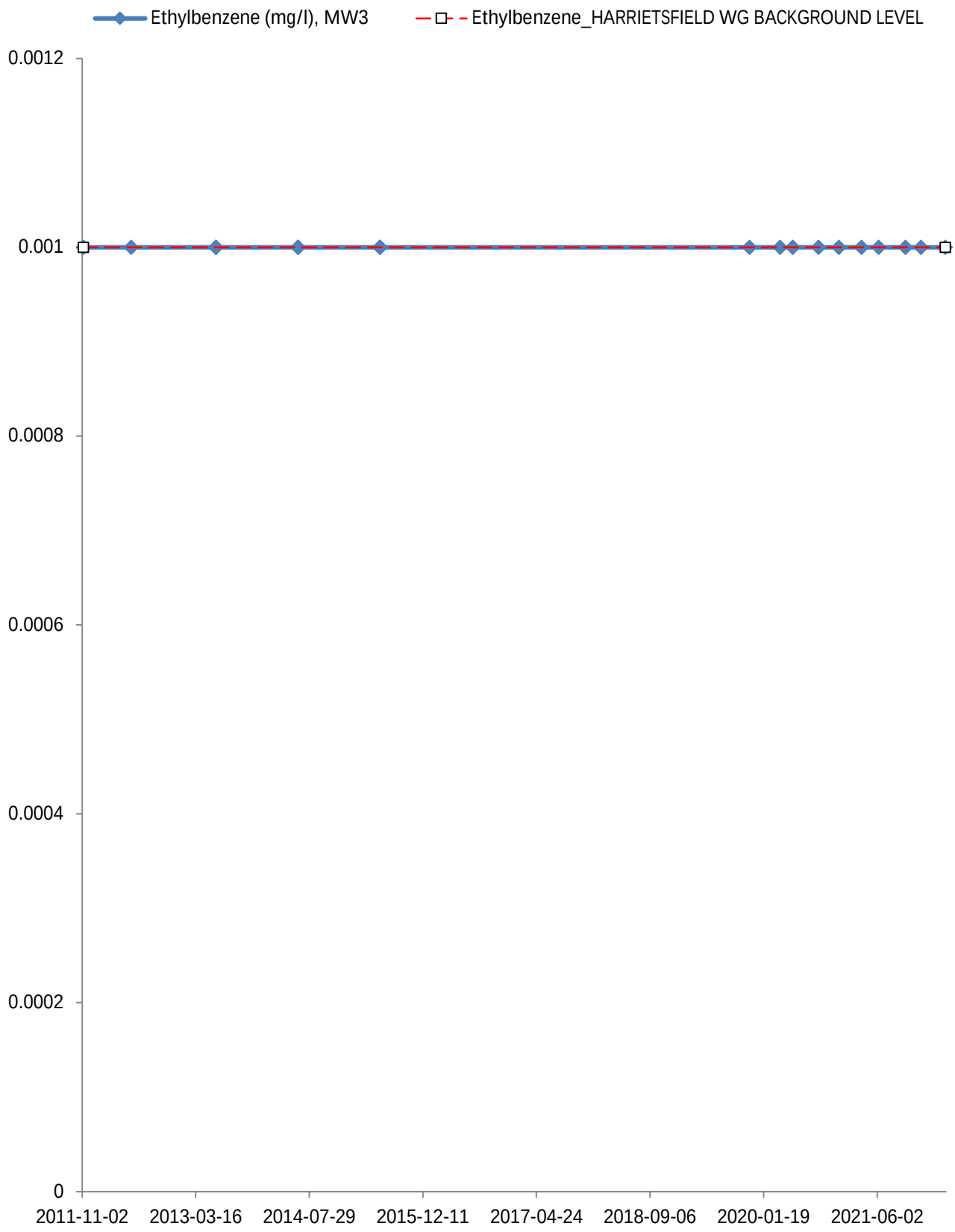
MW3-Dissolved Organic Carbon7



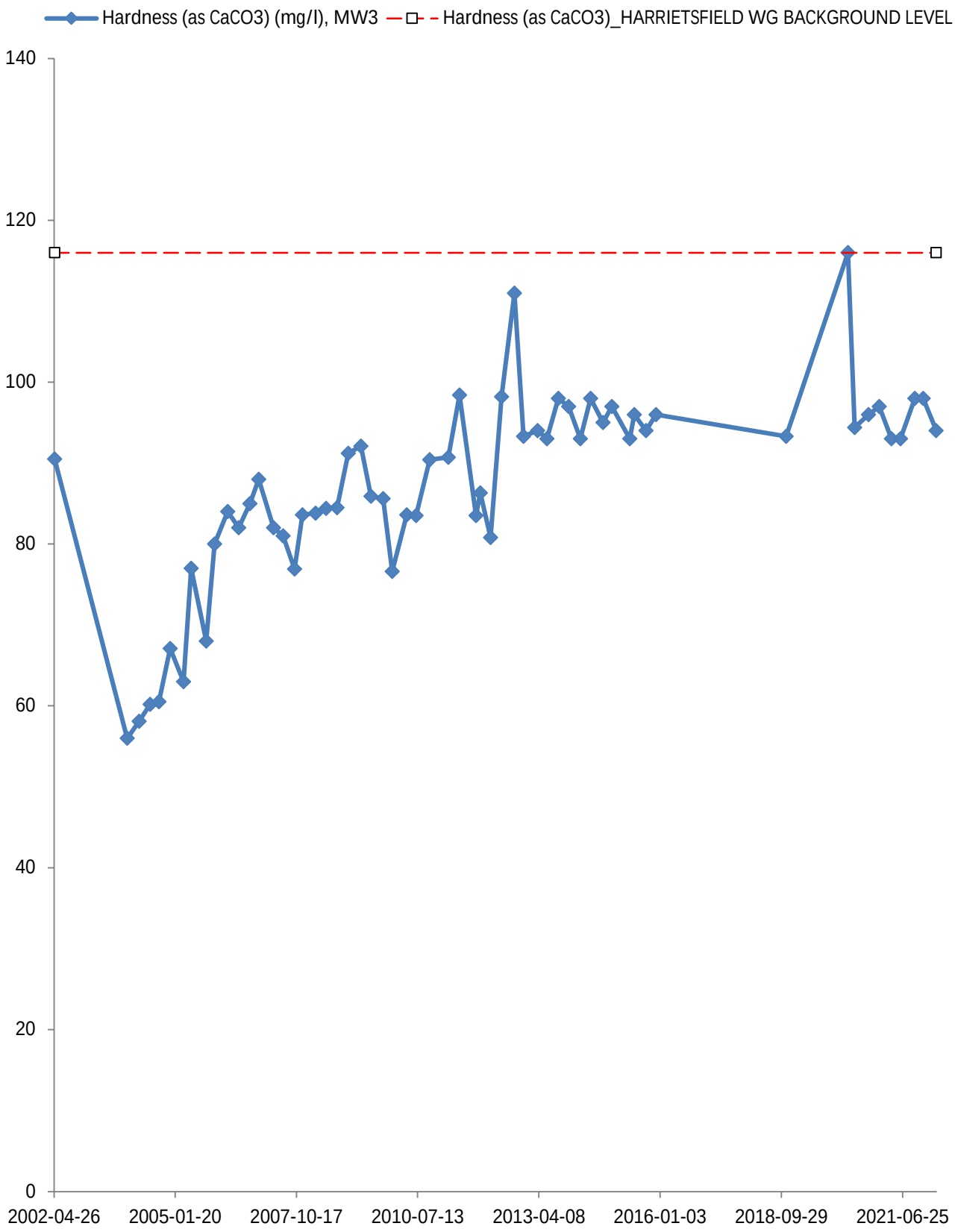
MW3-Electrical Conductivity



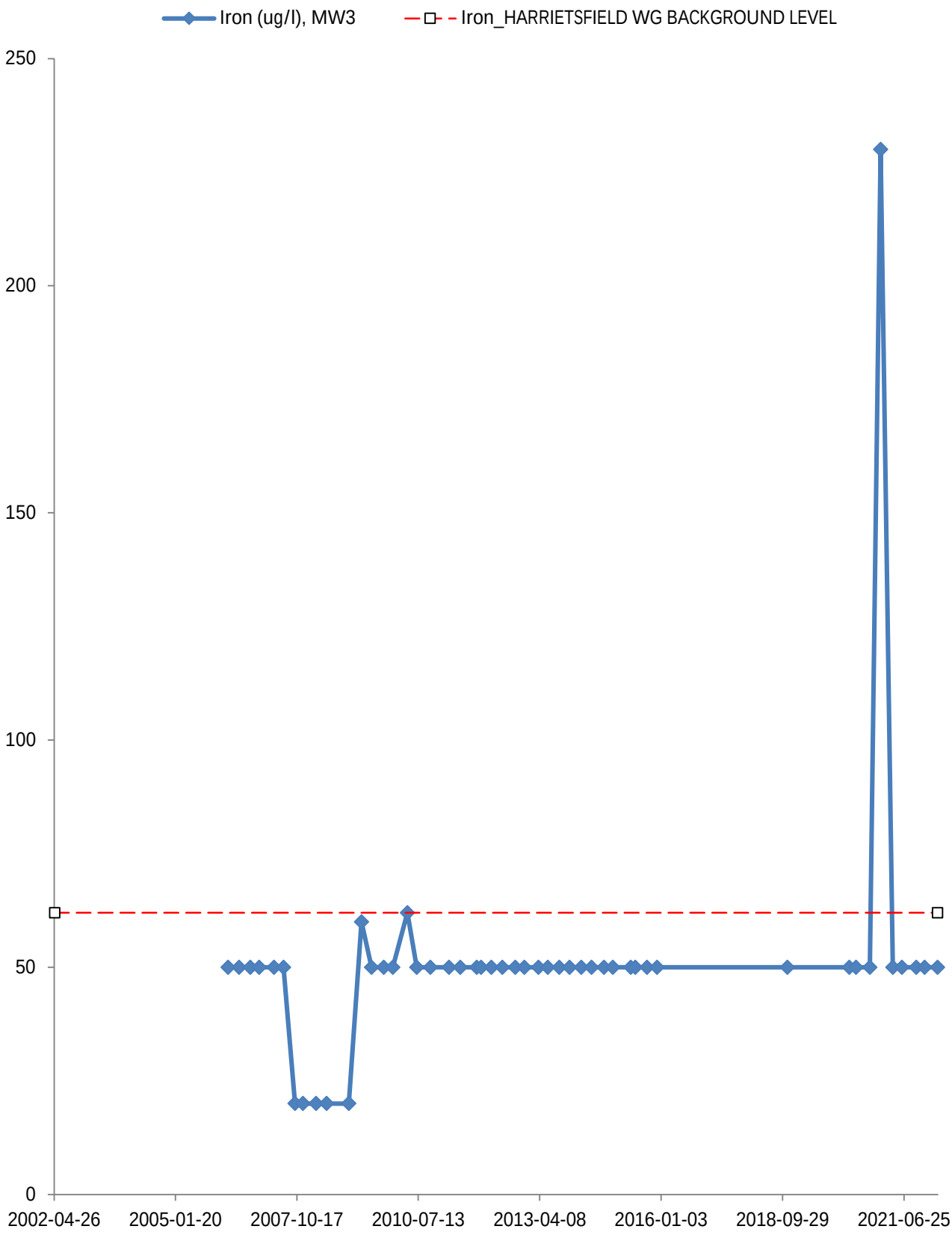
MW3-Ethylbenzene



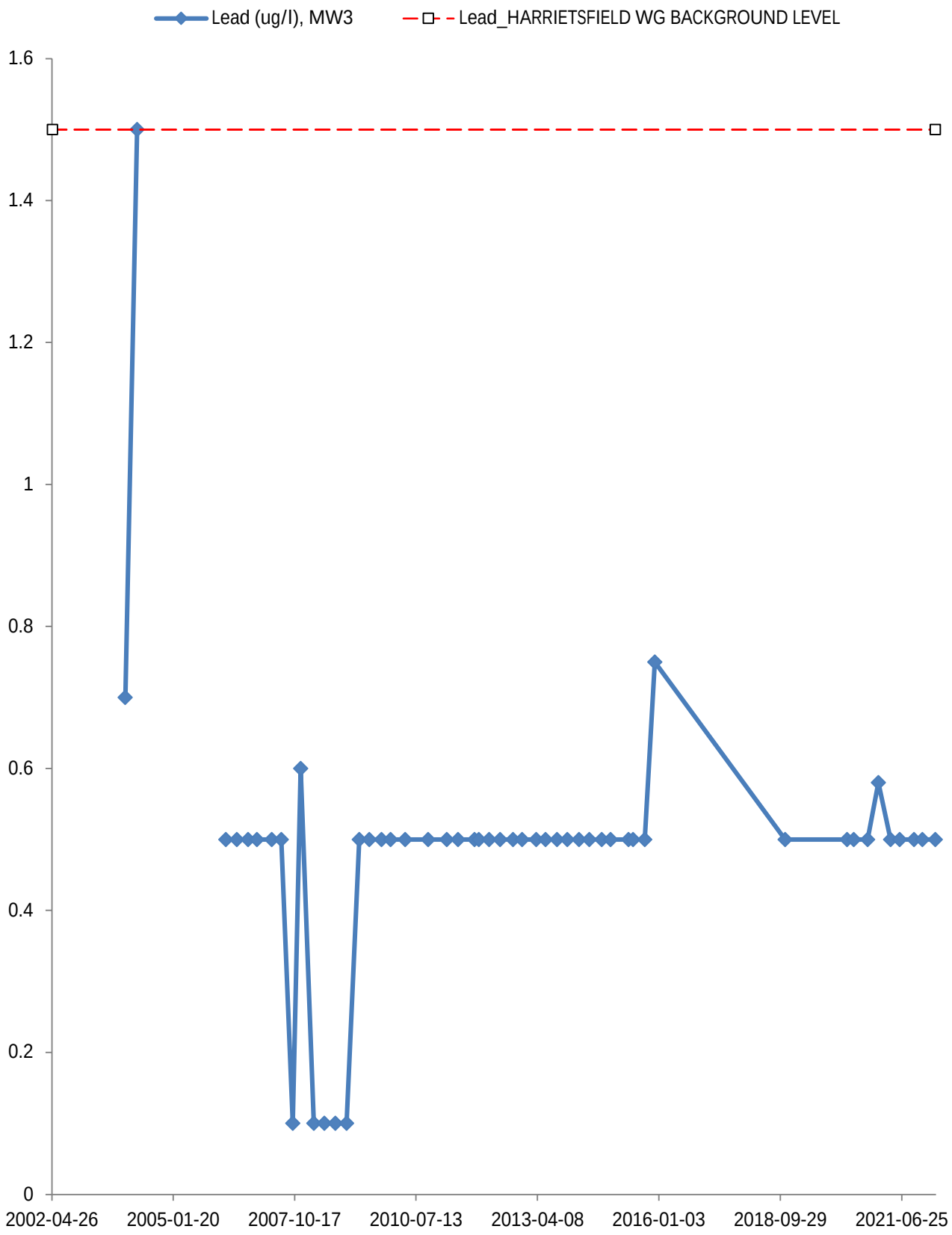
MW3-Hardness (as CaCO3)



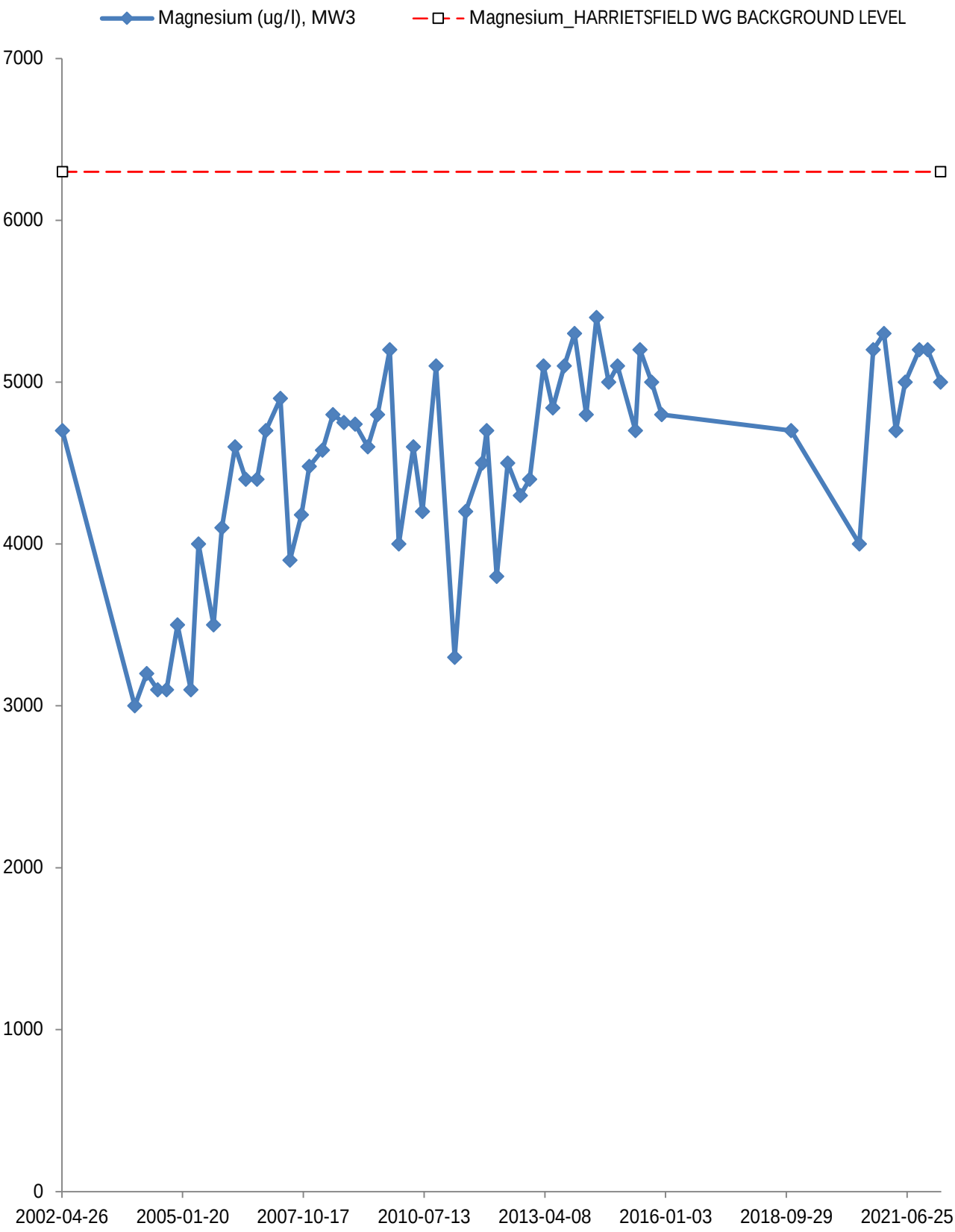
MW3-Iron


Iron (ug/l), MW3
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
250
200
150
100
50
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

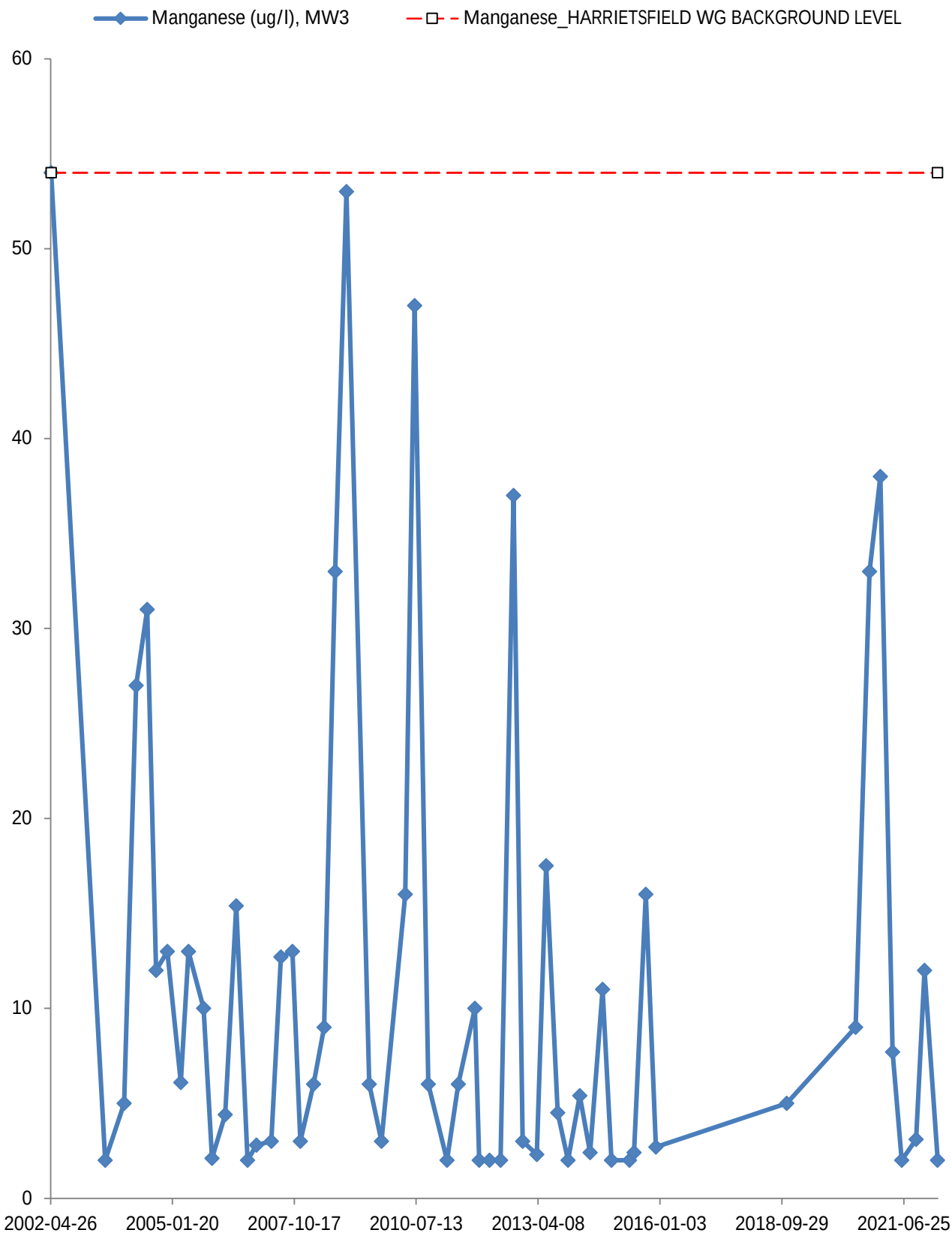
MW3-Lead


Lead (ug/l), MW3
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

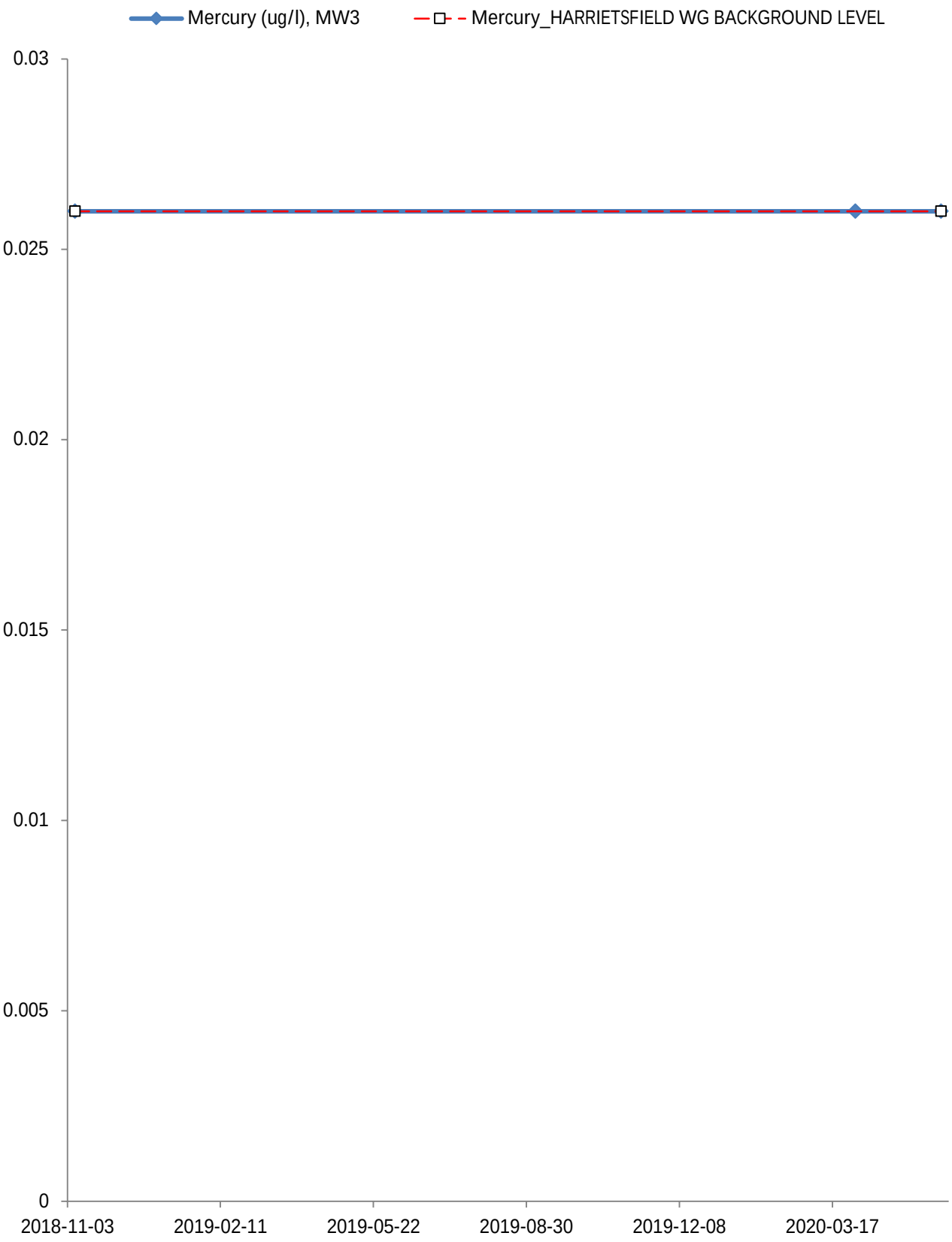
MW3-Magnesium



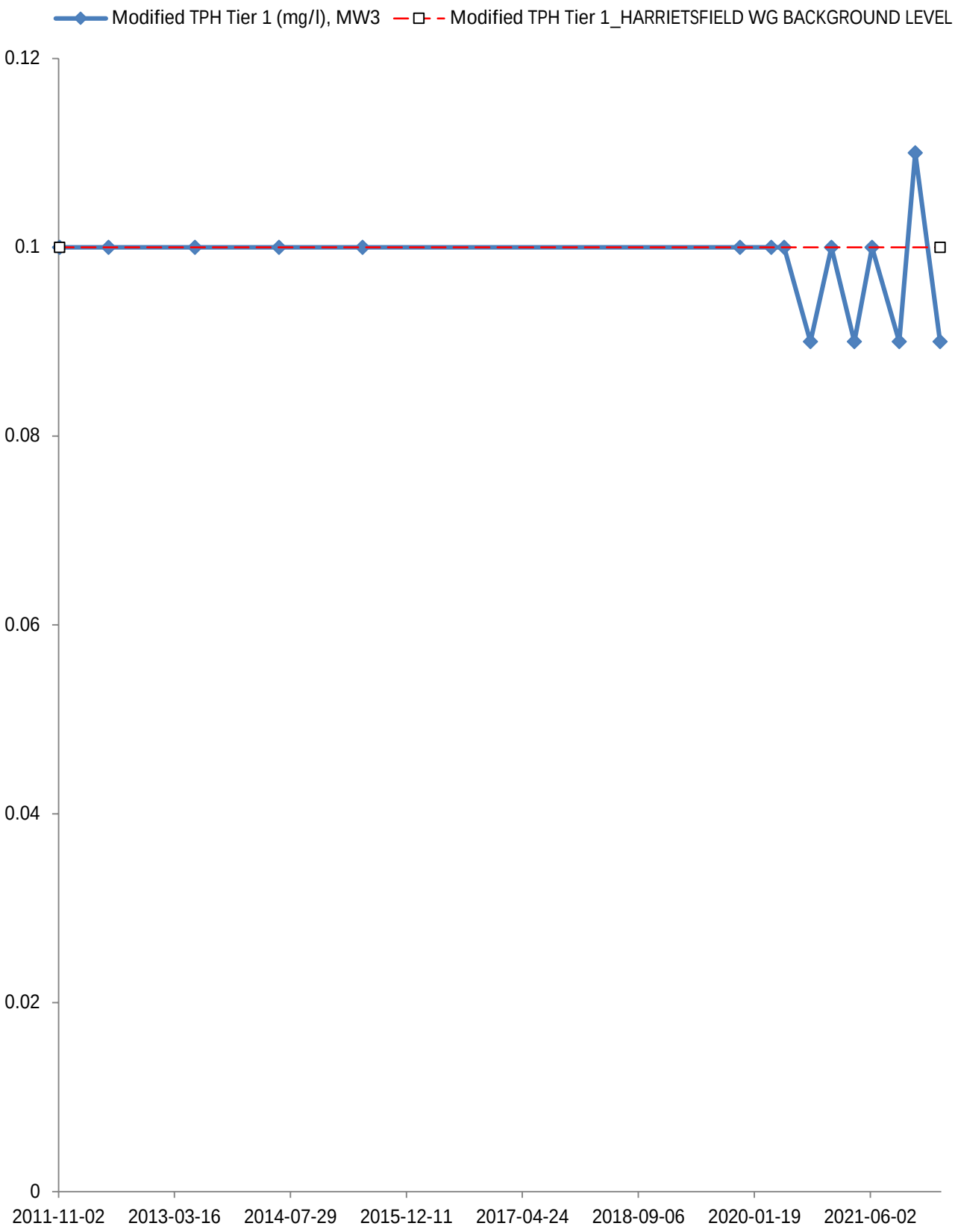
MW3-Manganese



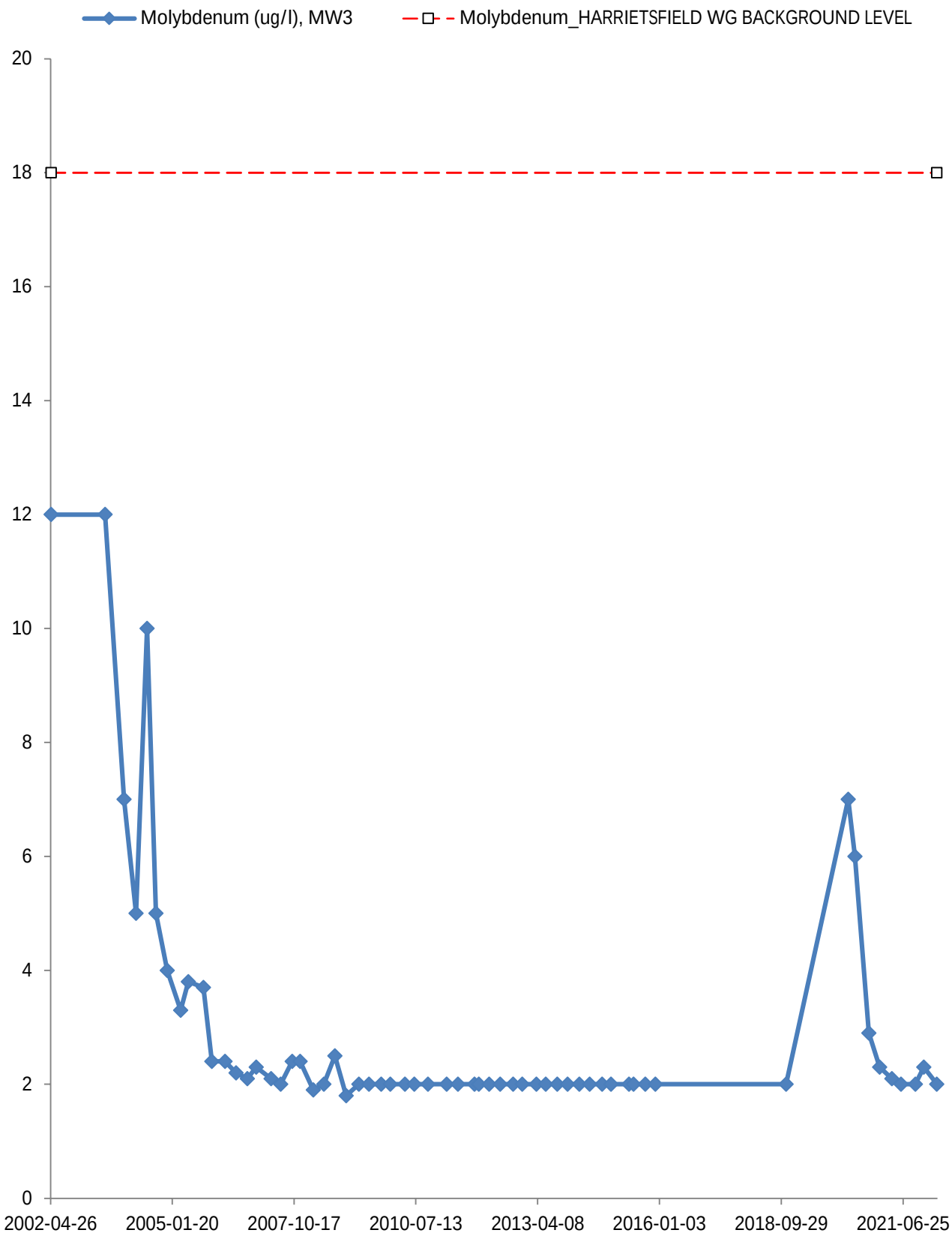
MW3-Mercury


Mercury (ug/l), MW3
Mercury_HARRIETSFIELD WG BACKGROUND LEVEL
0.03
0.025
0.02
0.015
0.01
0.005
0
2018-11-03
2019-02-11
2019-05-22
2019-08-30
2019-12-08
2020-03-17

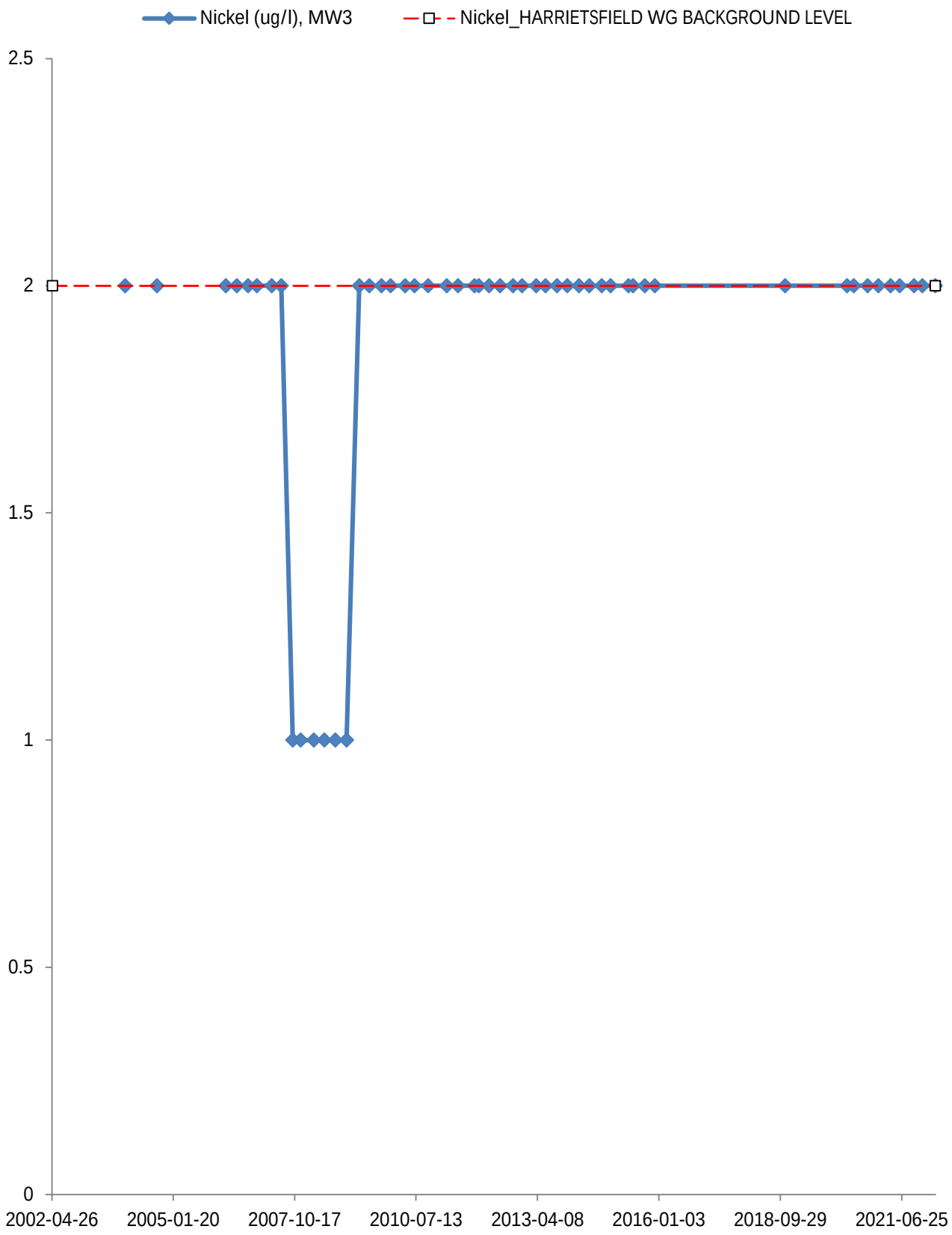
MW3-Modified TPH Tier 1



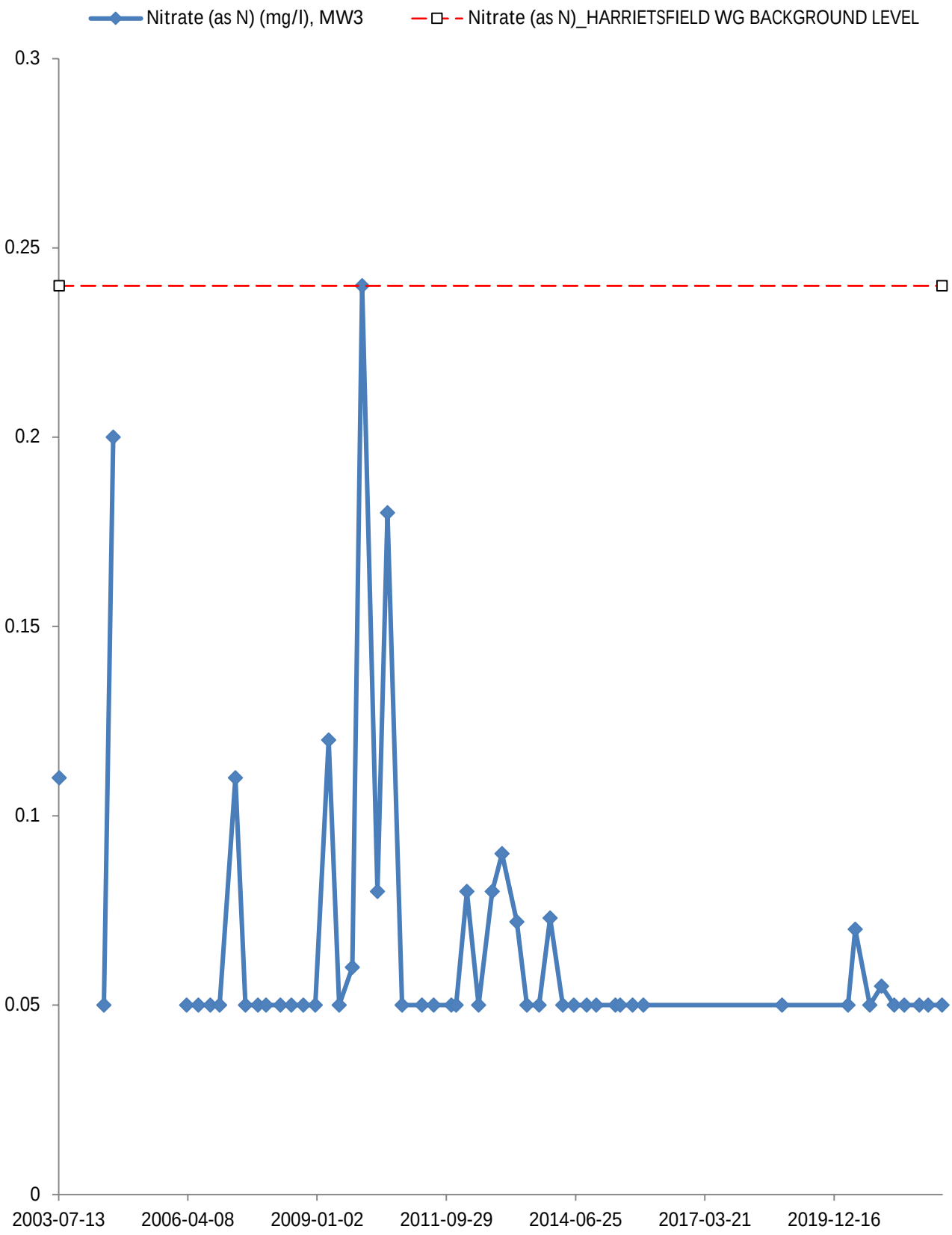
MW3-Molybdenum



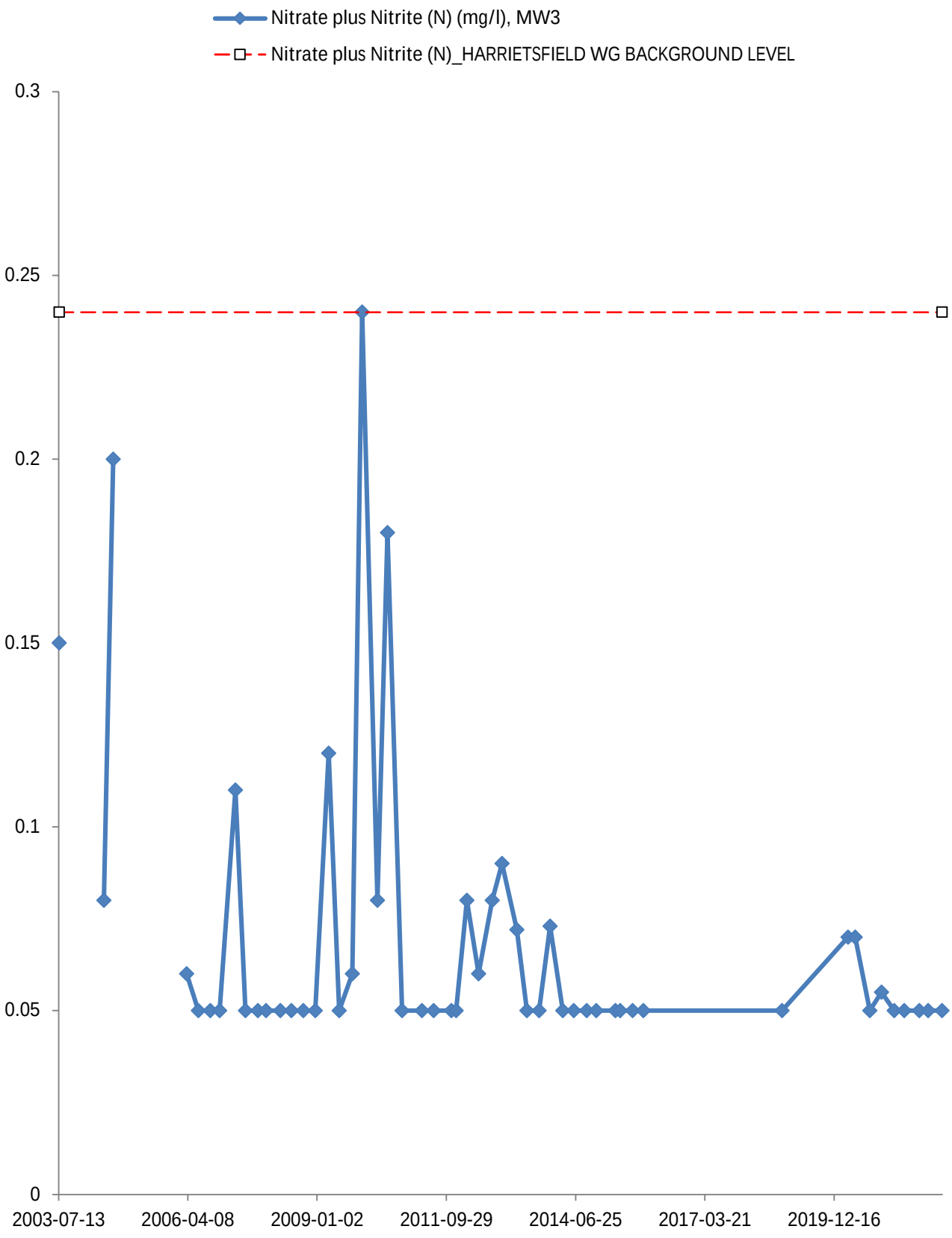
MW3-Nickel


Nickel (ug/l), MW3
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

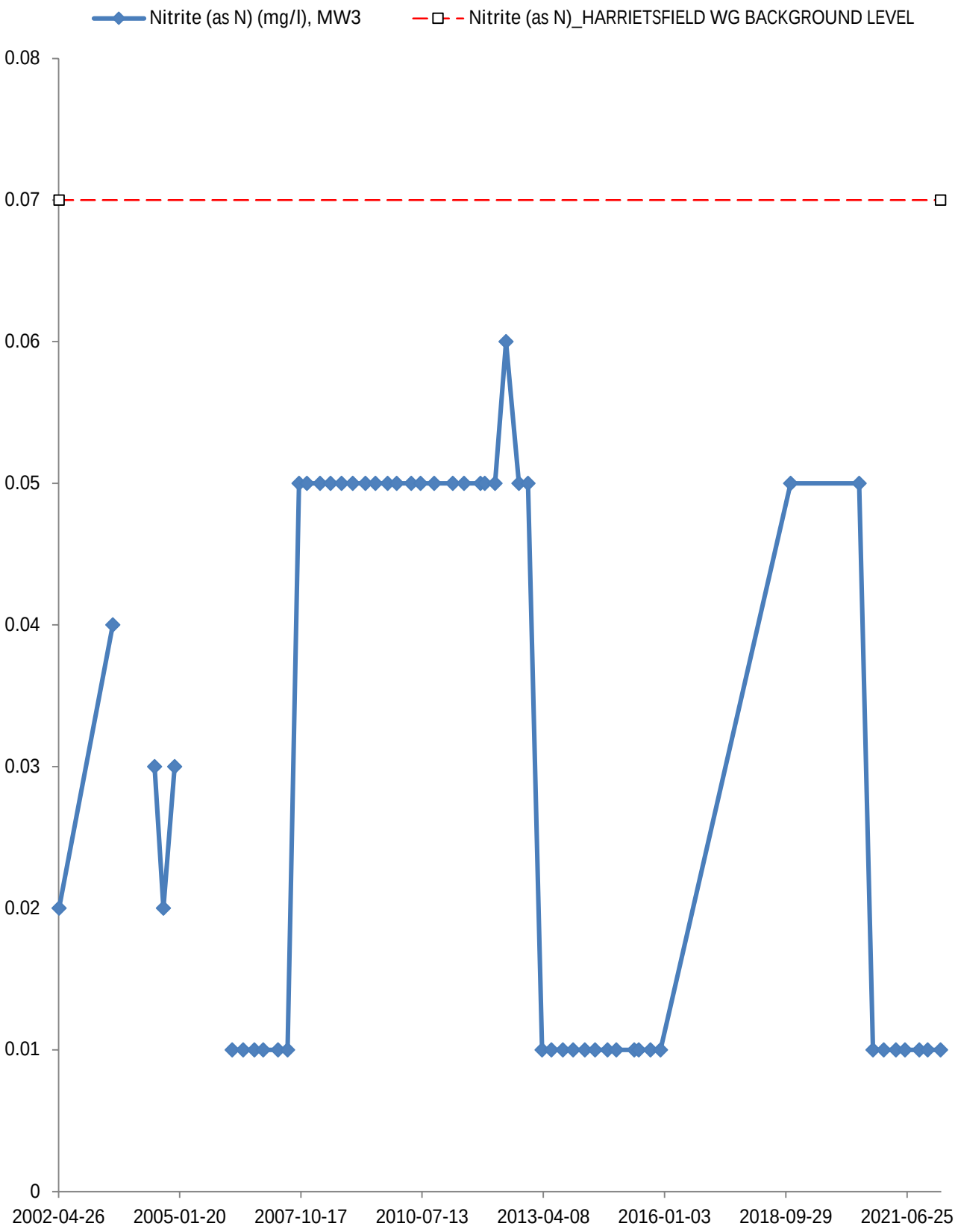
MW3-Nitrate (as N)



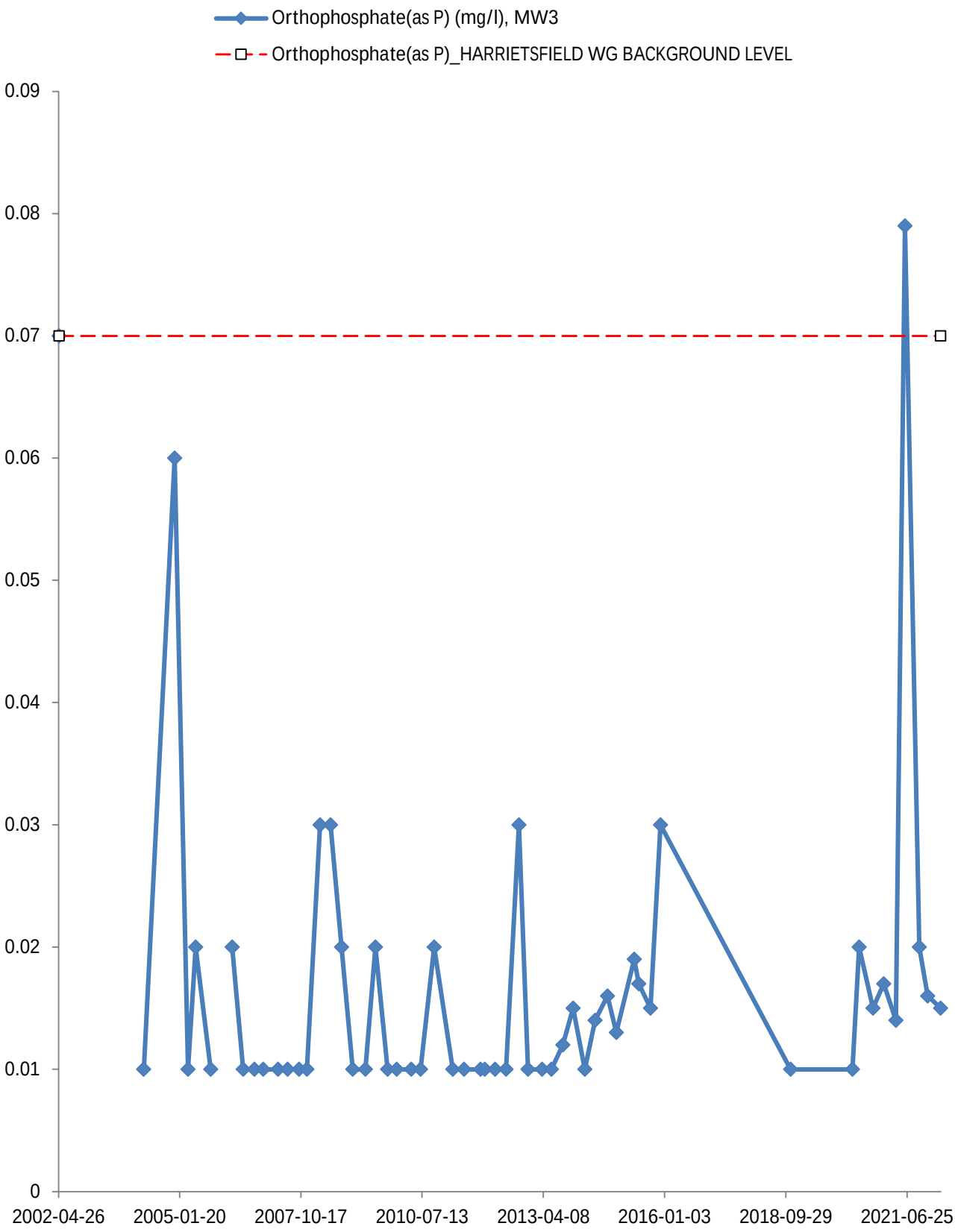
MW3-Nitrate plus Nitrite (N)



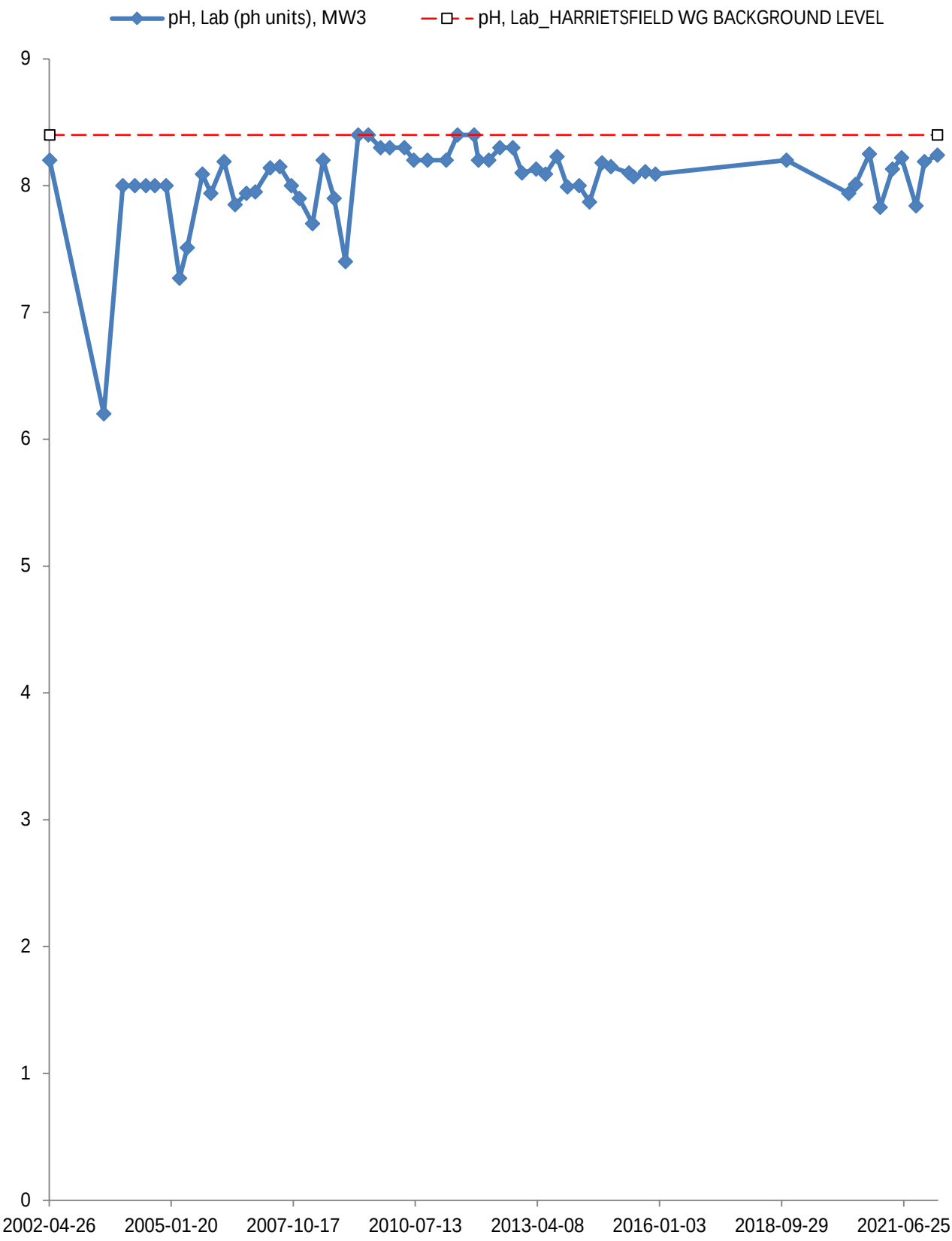
MW3-Nitrite (as N)



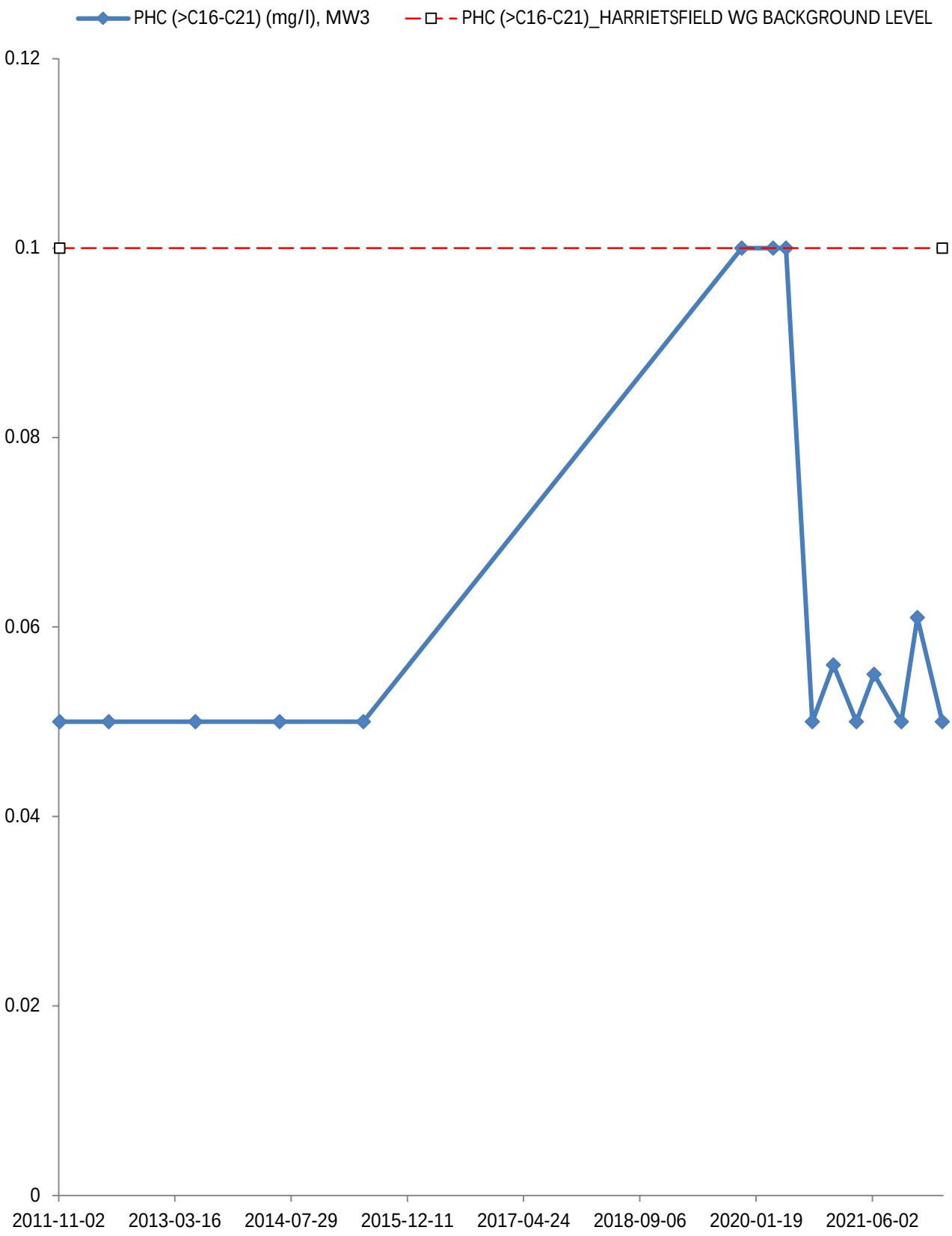
MW3-Orthophosphate(as P)



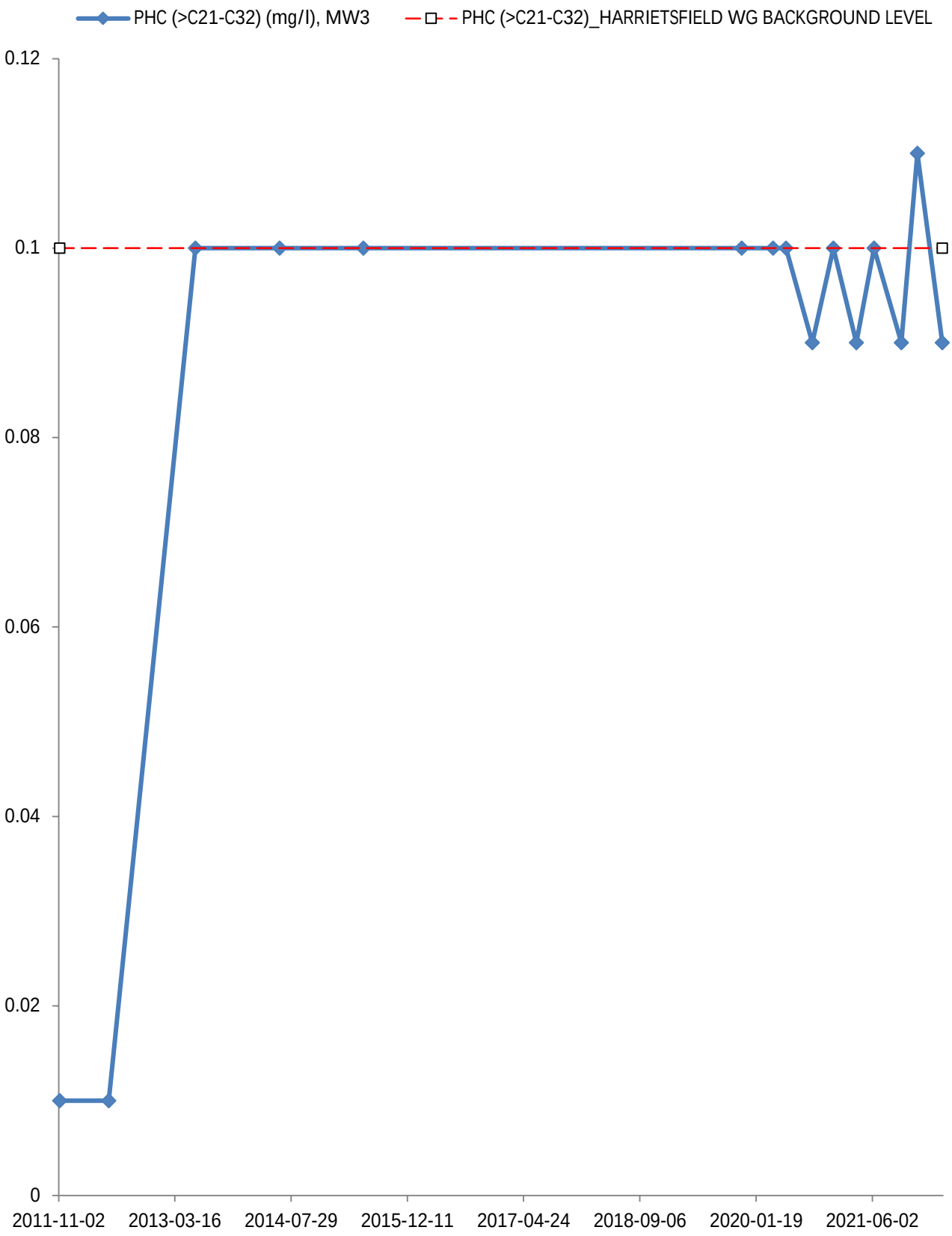
MW3-pH, Lab


pH, Lab (ph units), MW3
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

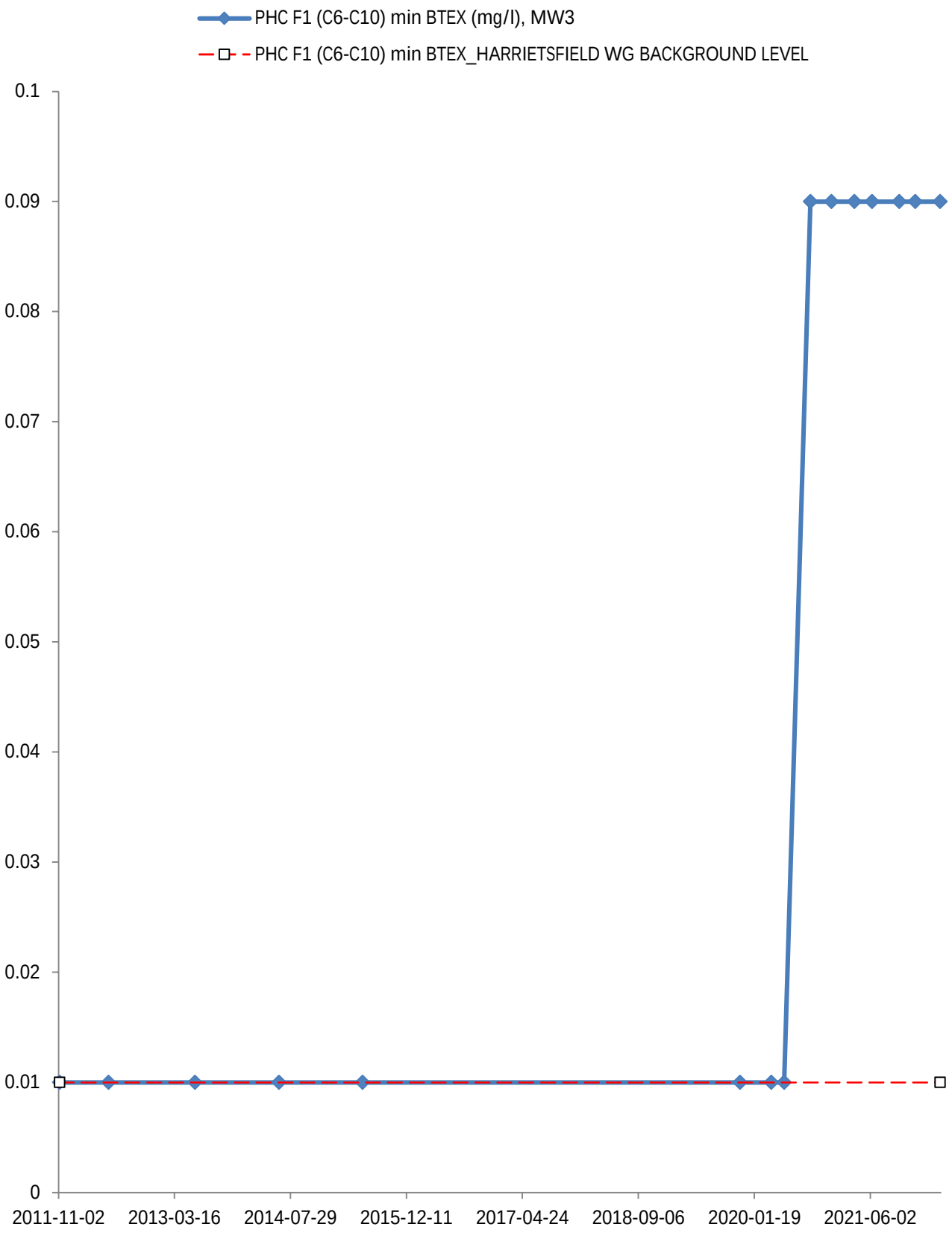
MW3-PHC (>C16-C21)



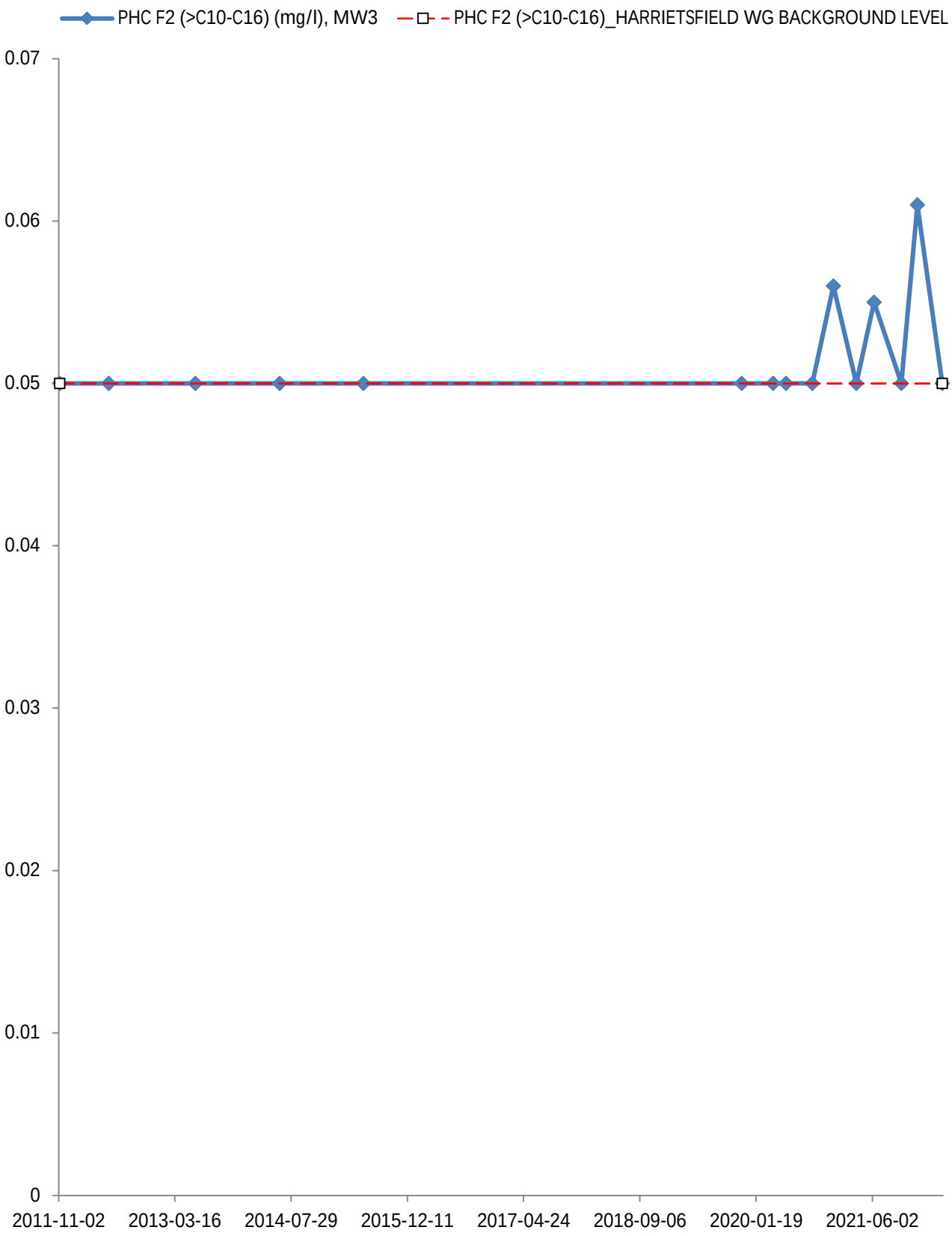
MW3-PHC (>C21-C32)



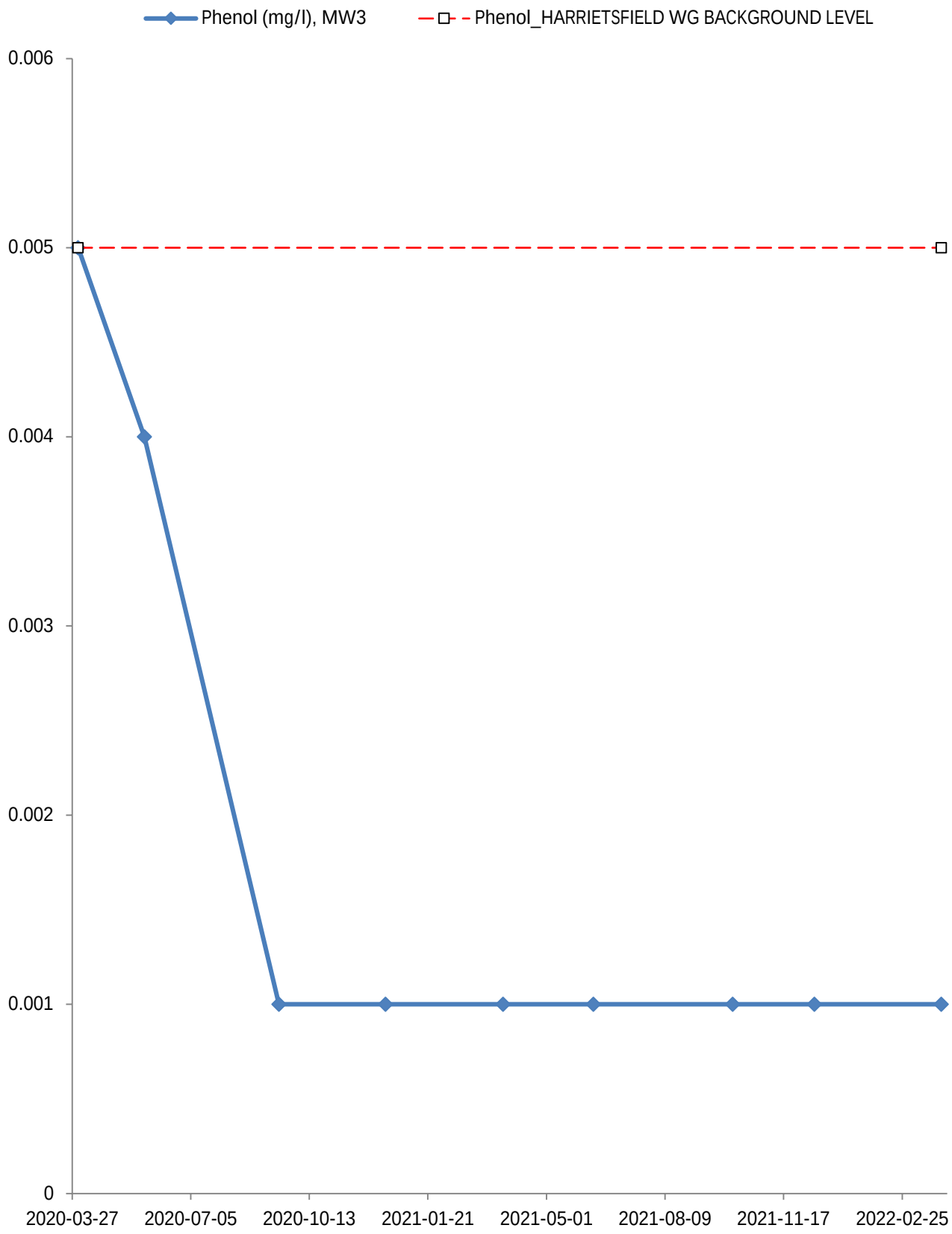
MW3-PHC F1 (C6-C10) min BTEX



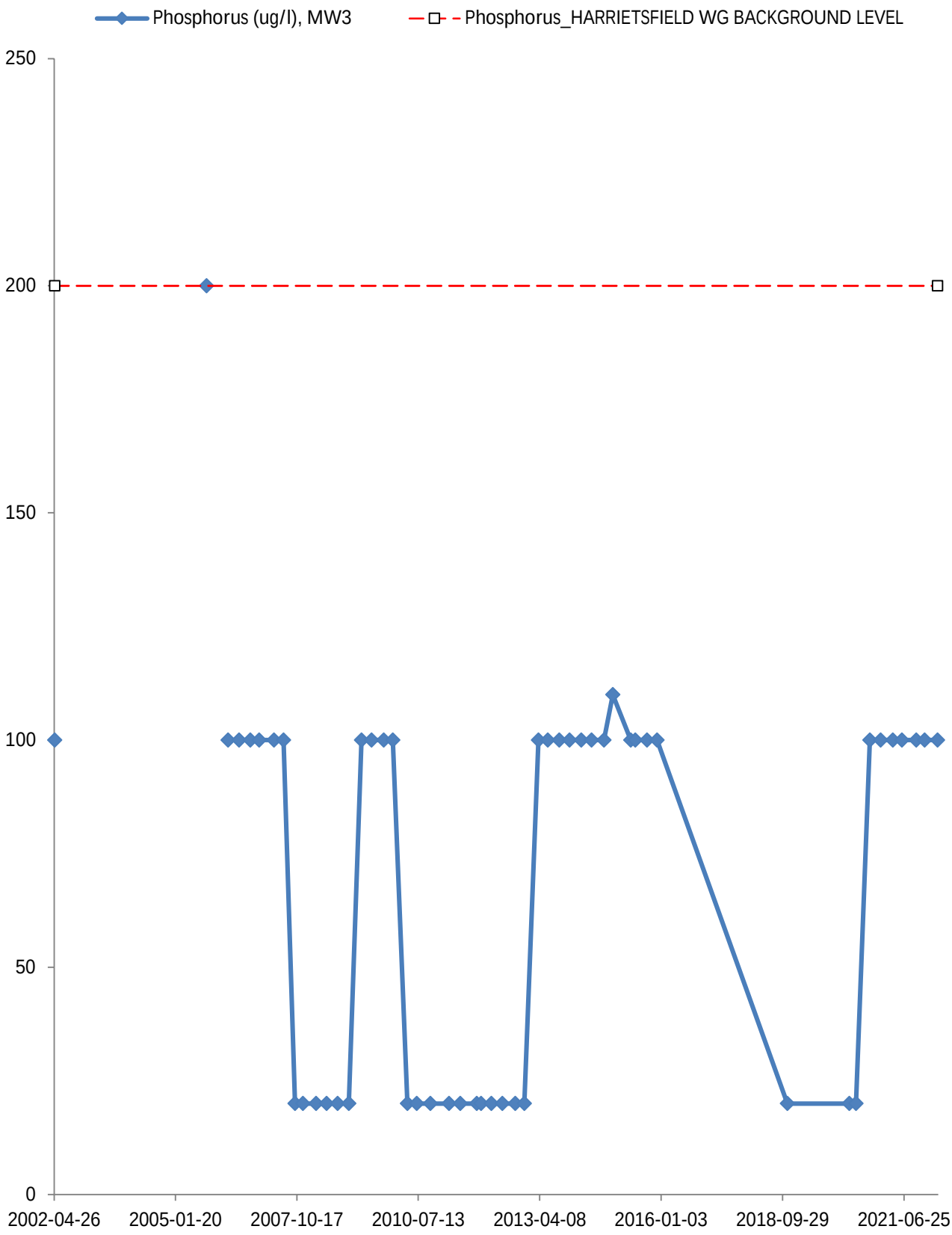
MW3-PHC F2 (>C10-C16)



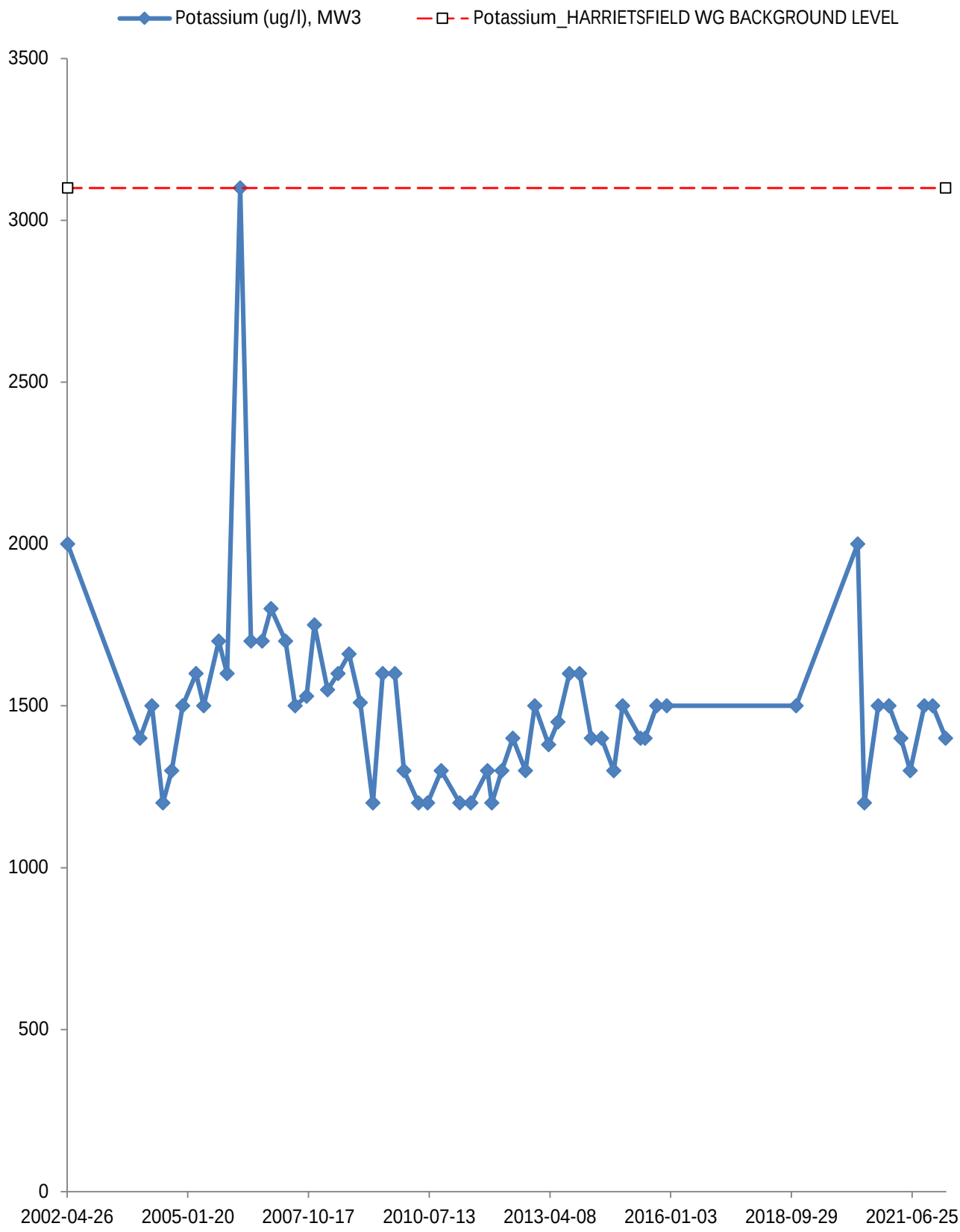
MW3-Phenol


Phenol (mg/l), MW3
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

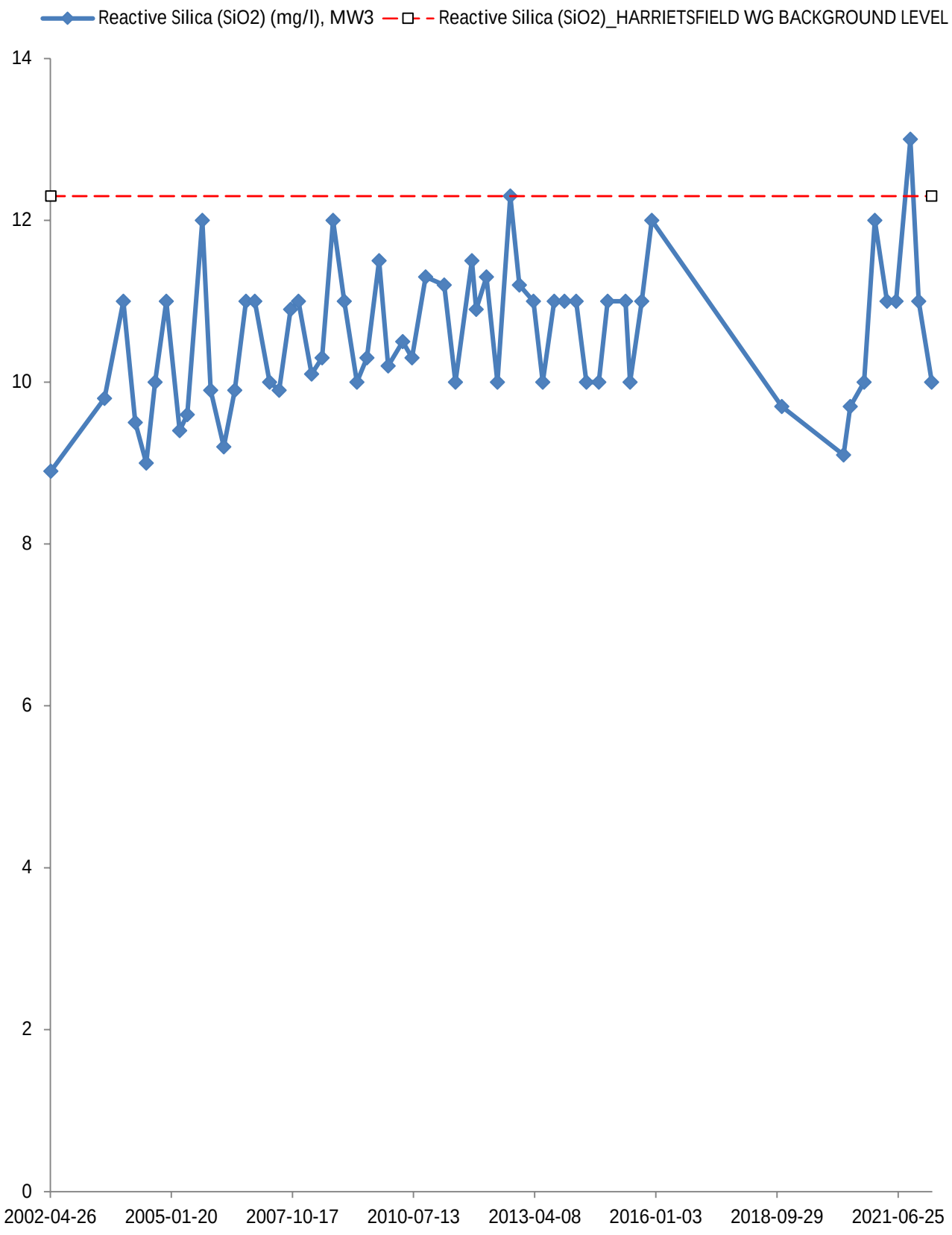
MW3-Phosphorus



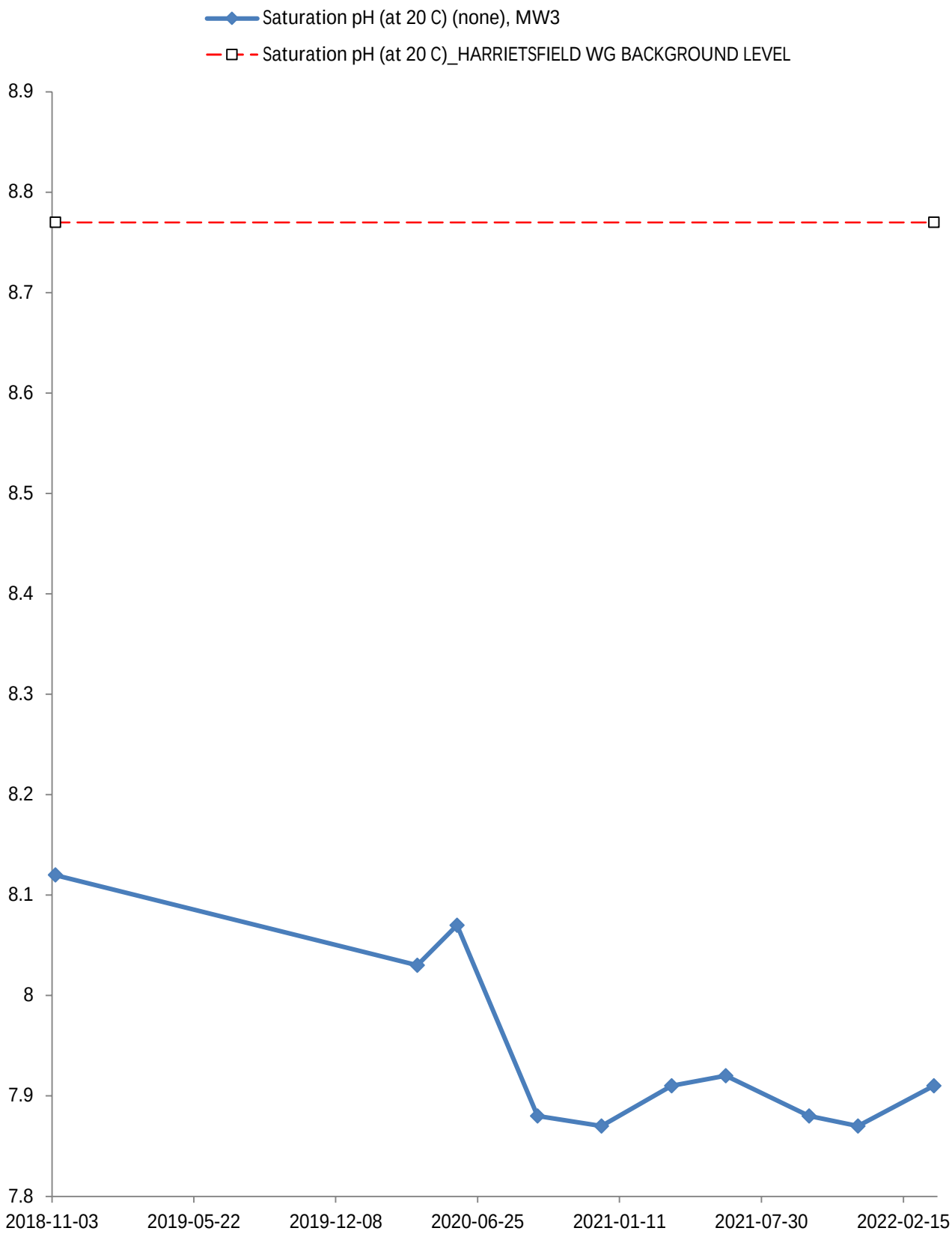
MW3-Potassium



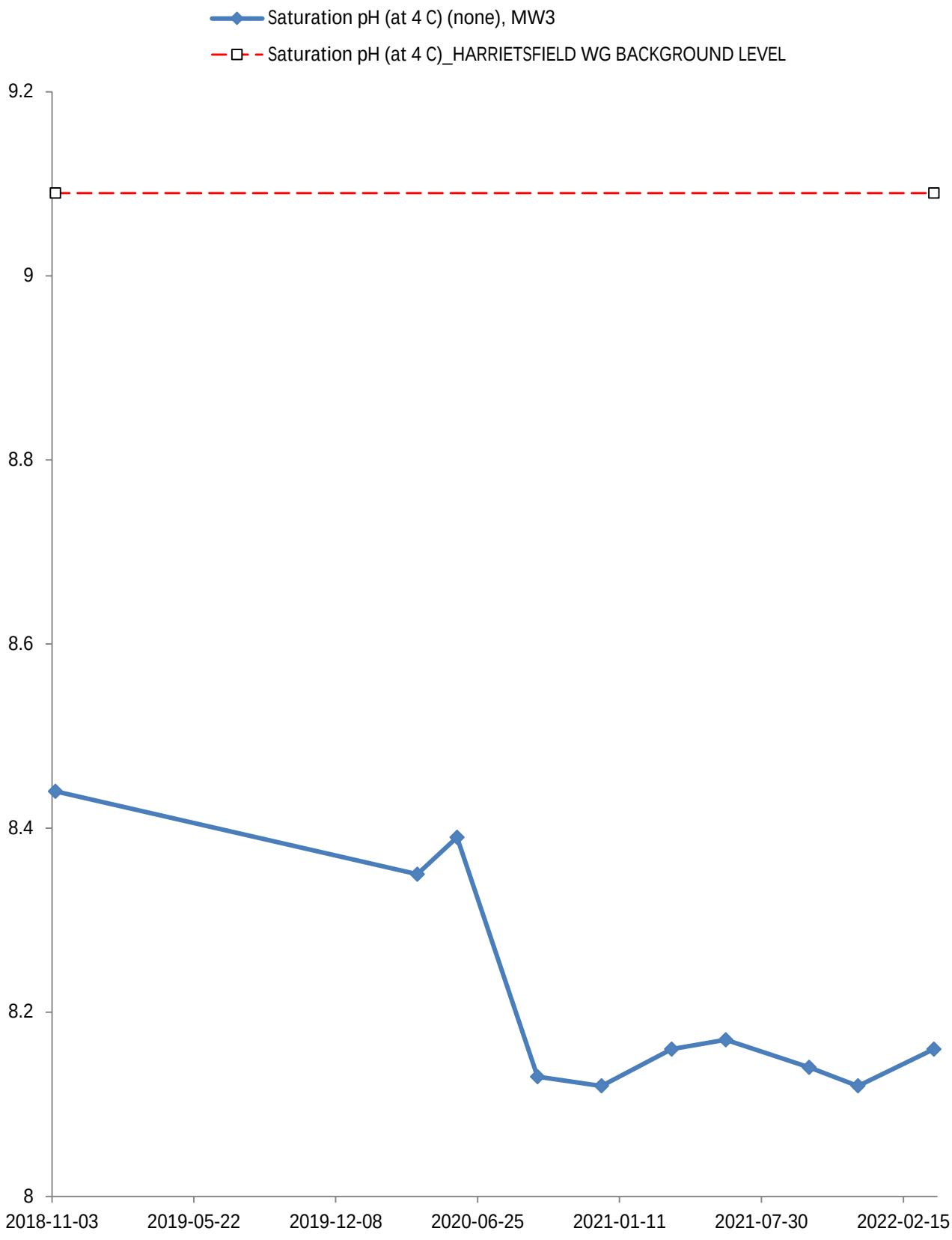
MW3-Reactive Silica (SiO2)



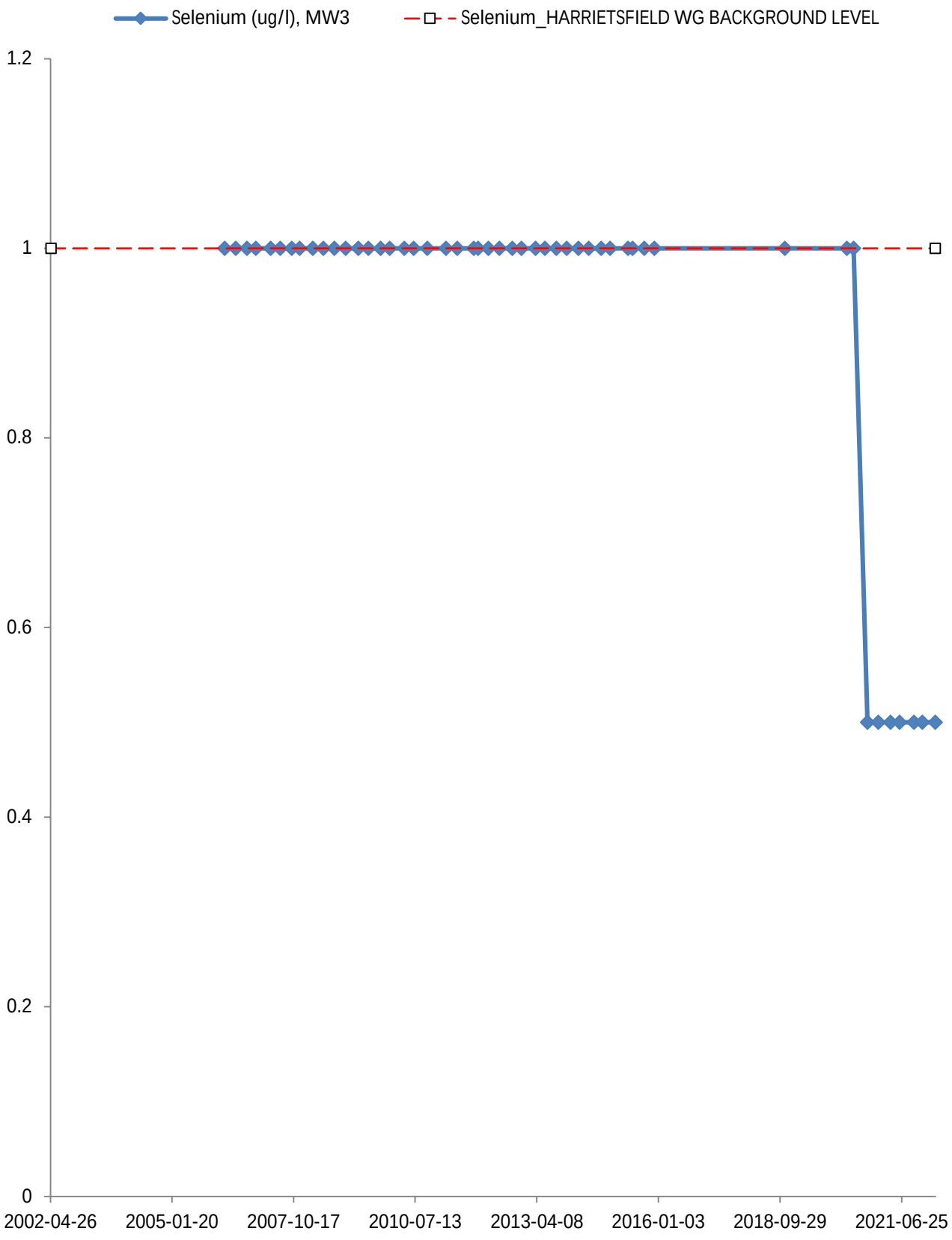
MW3-Saturation pH (at 20 C)



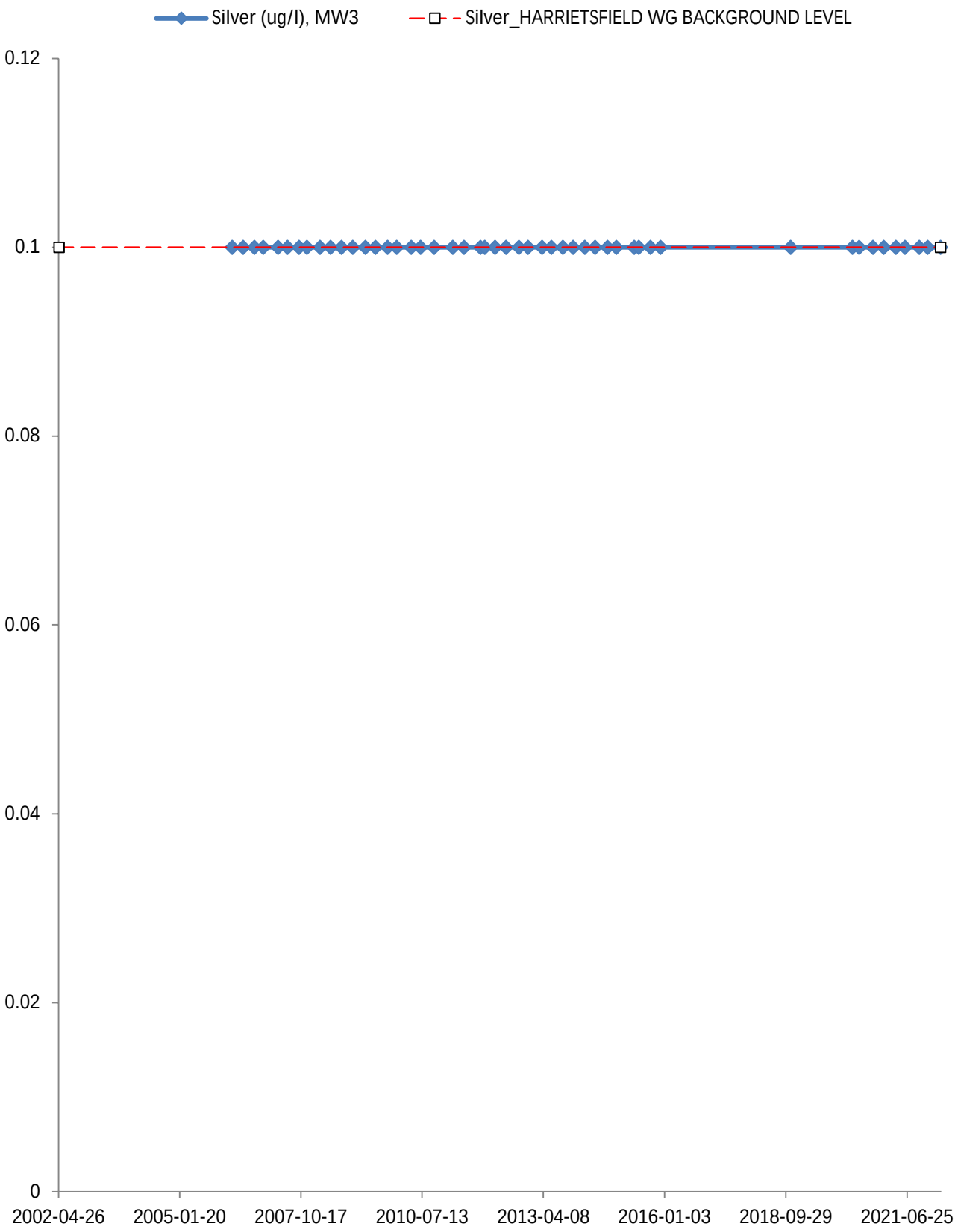
MW3-Saturation pH (at 4 C)



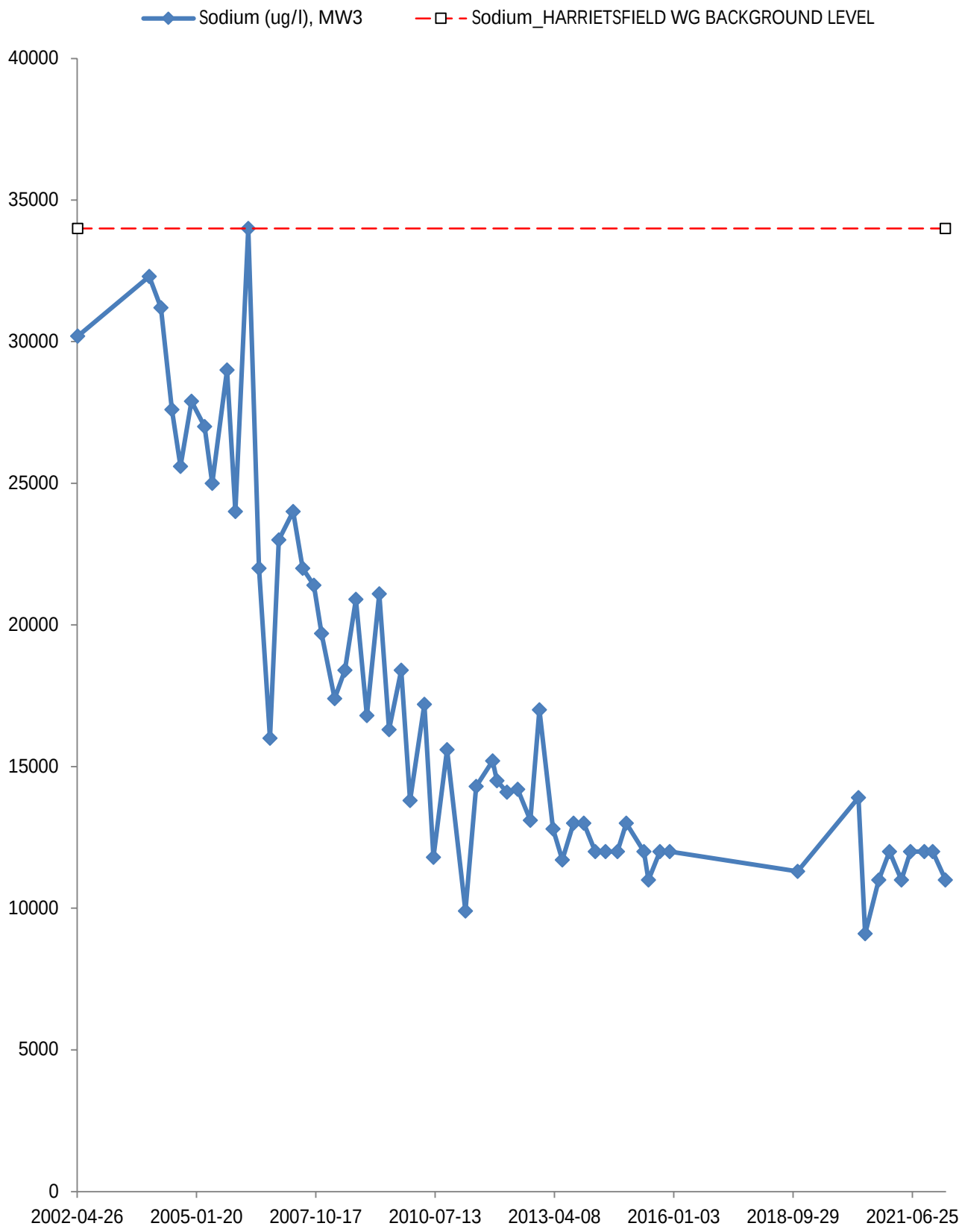
MW3-Selenium



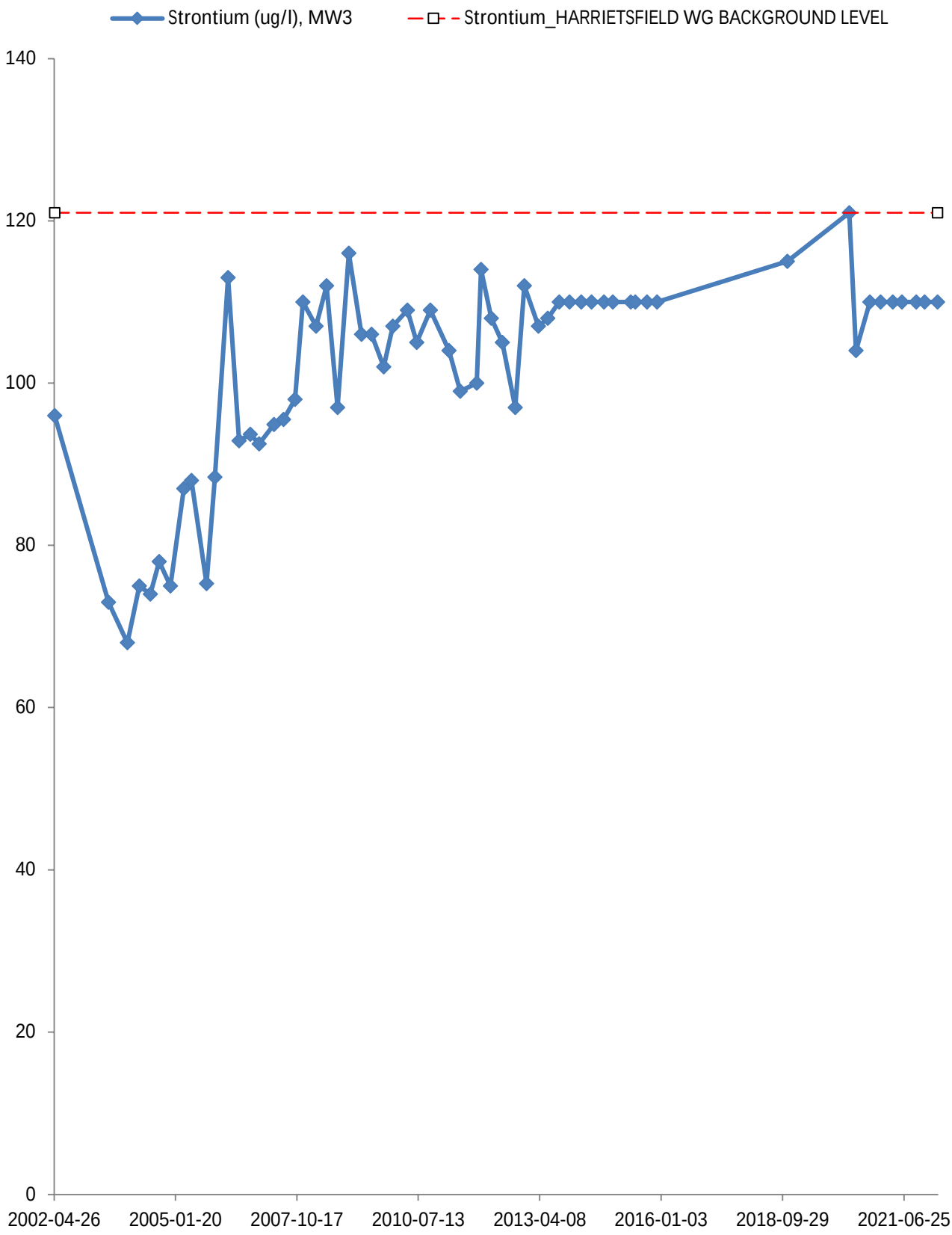
MW3-Silver


Silver (ug/l), MW3
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

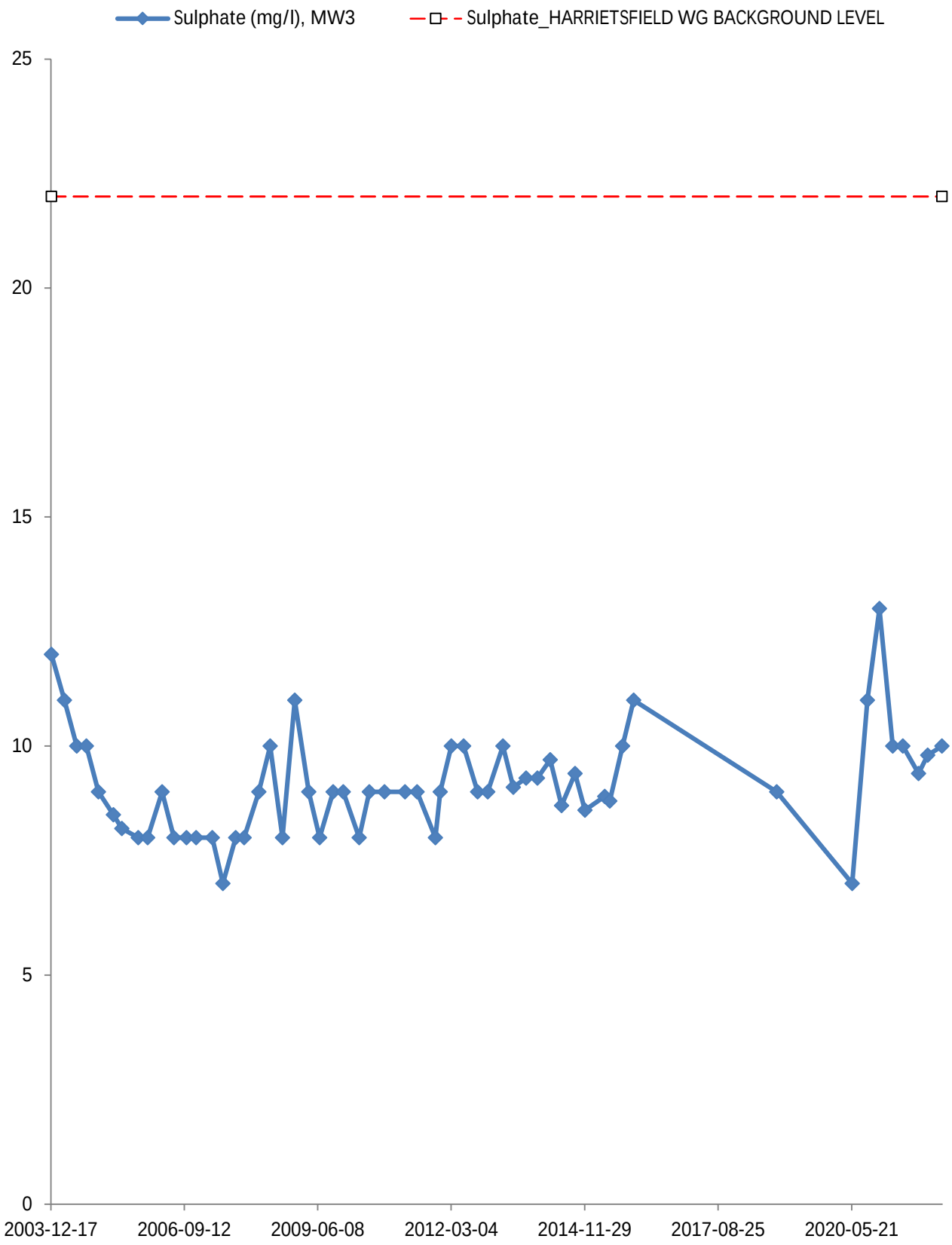
MW3-Sodium


Sodium (ug/l), MW3
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
40000
35000
30000
25000
20000
15000
10000
5000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

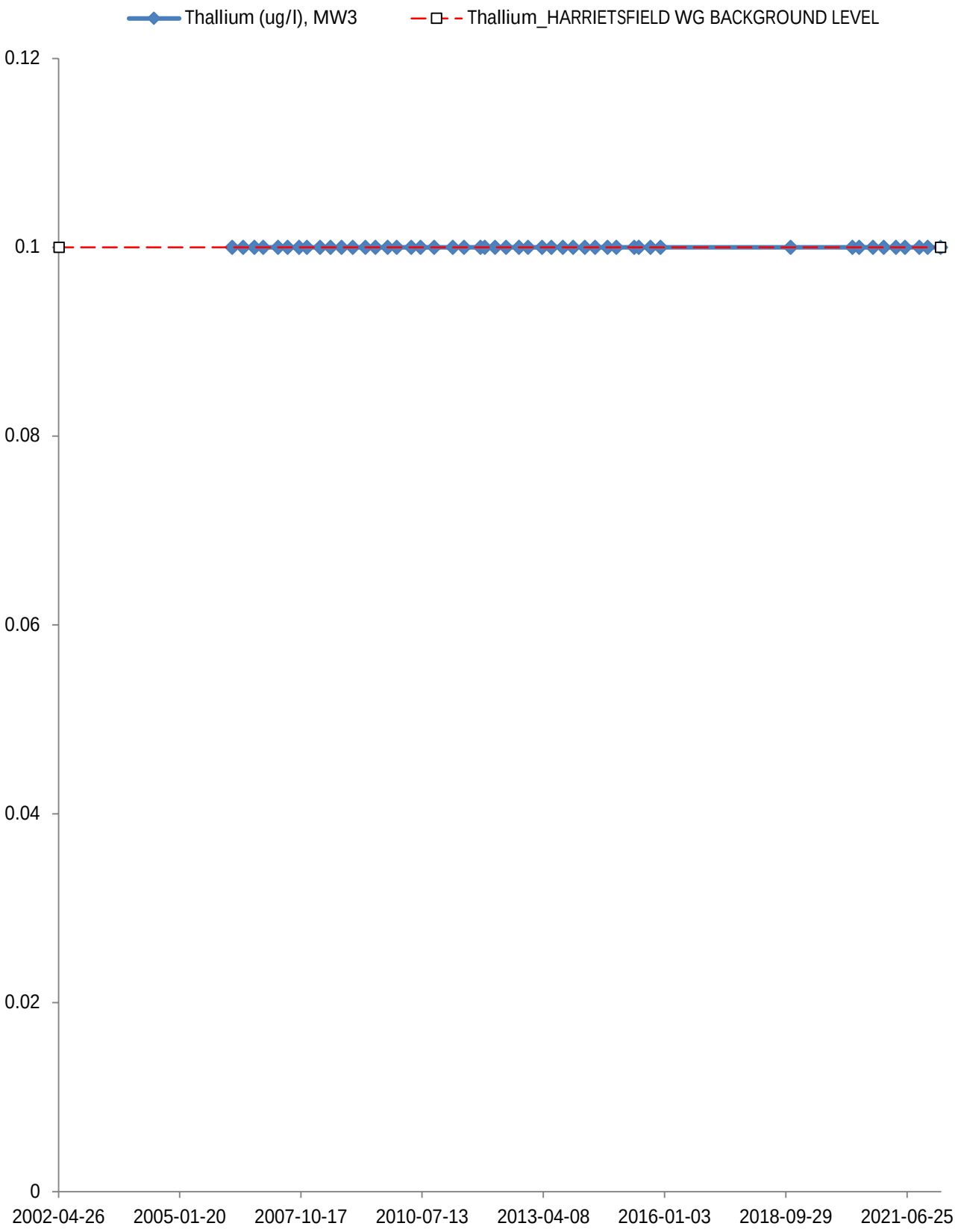
MW3-Strontium



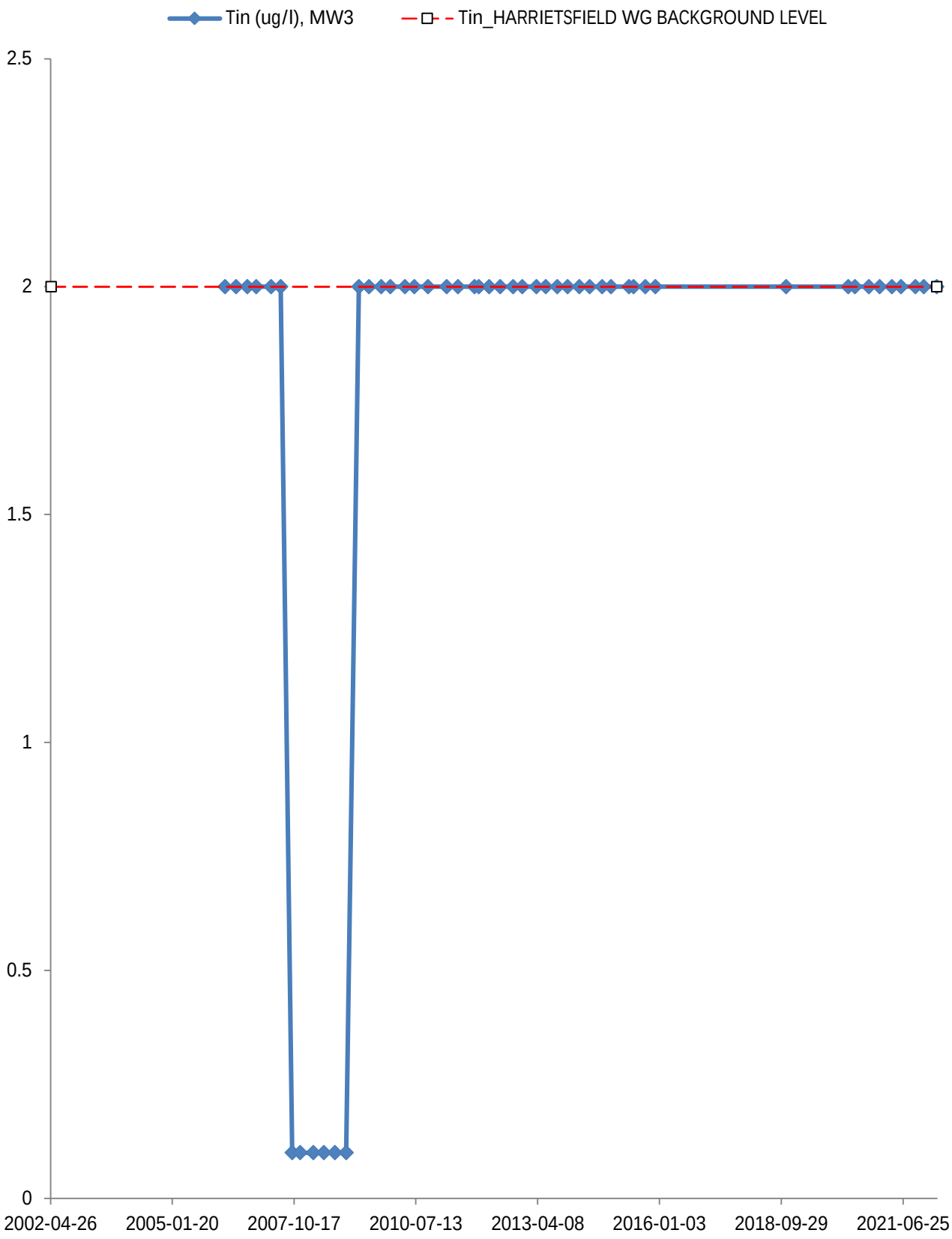
MW3-Sulphate



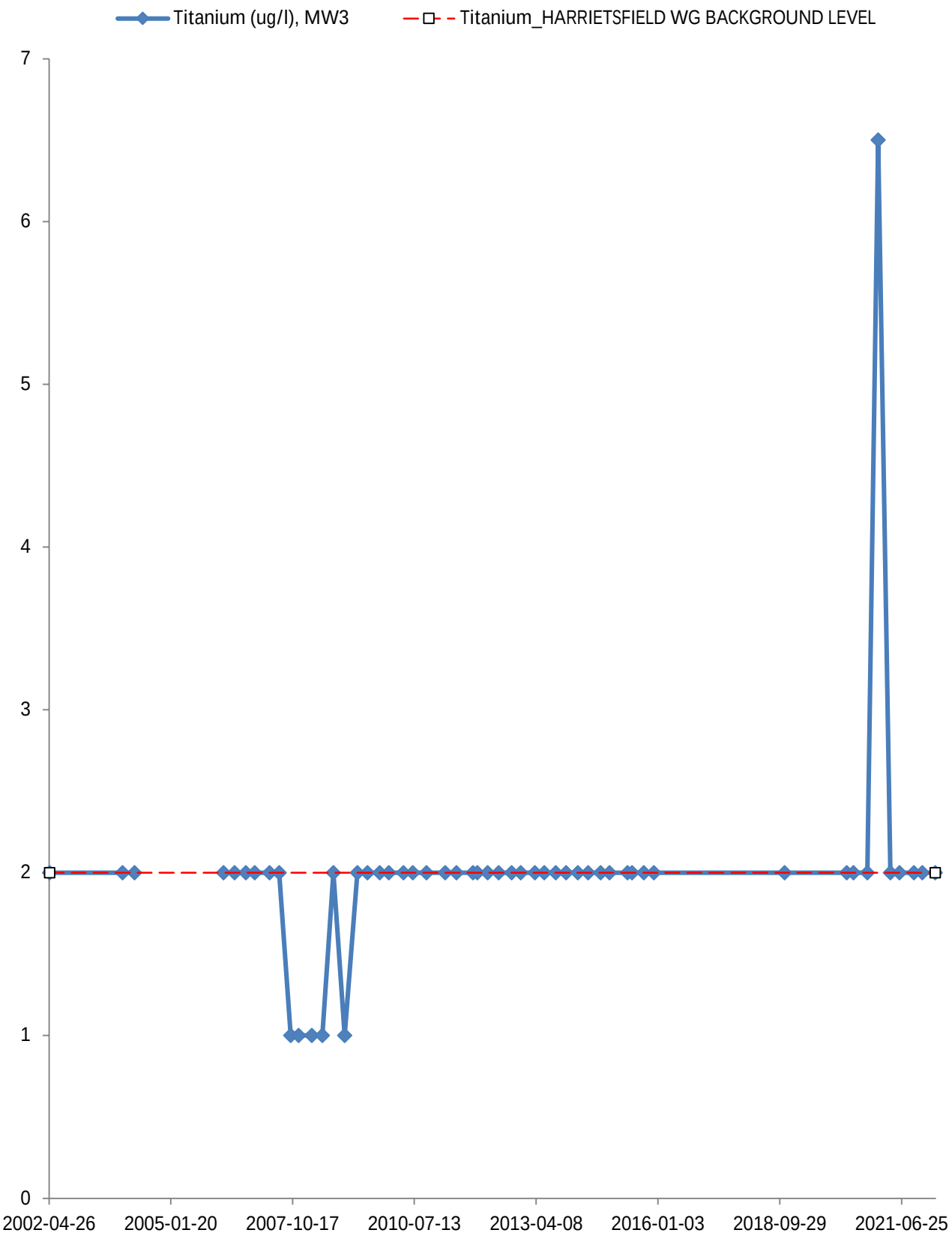
MW3-Thallium



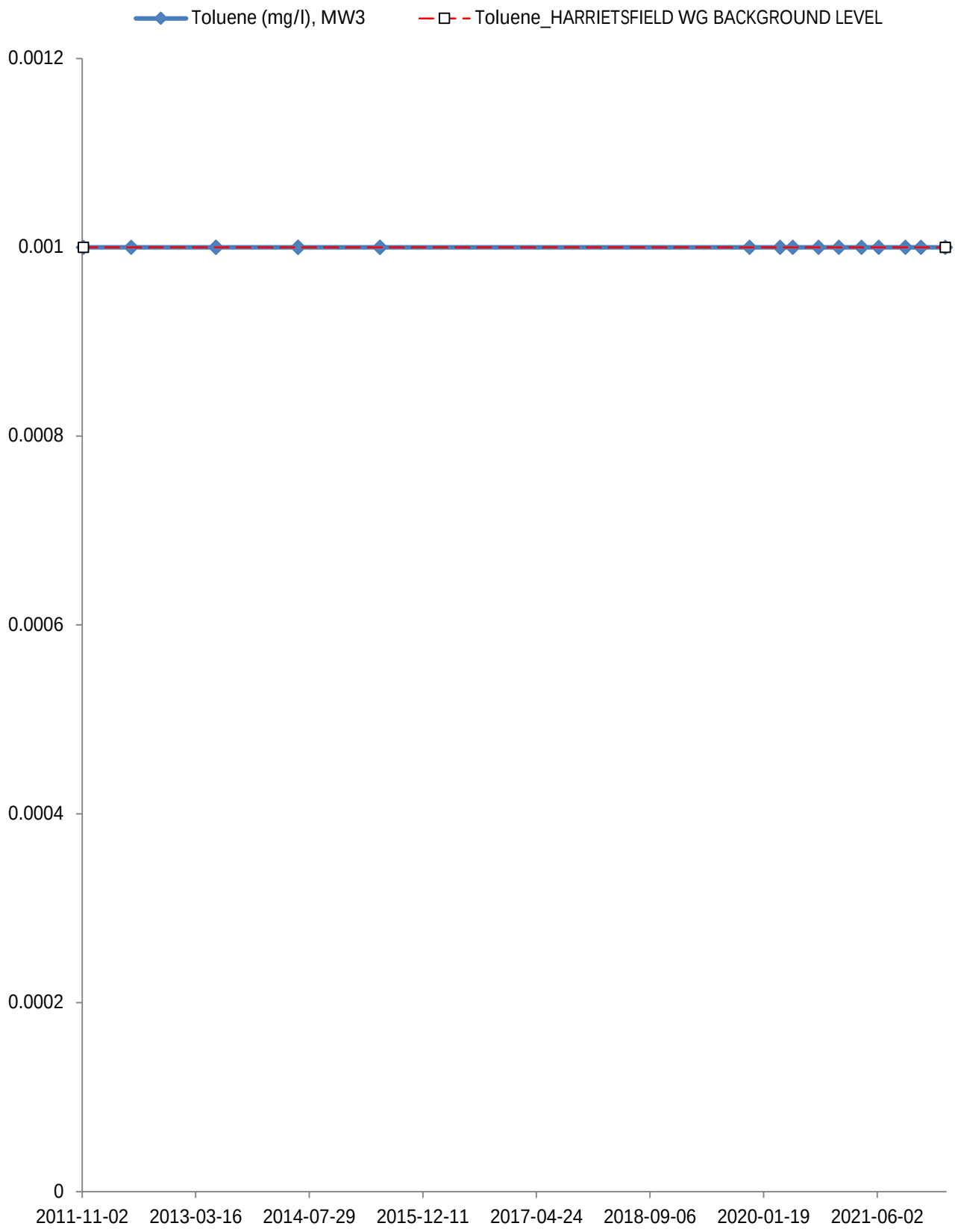
MW3-Tin


Tin (ug/l), MW3
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

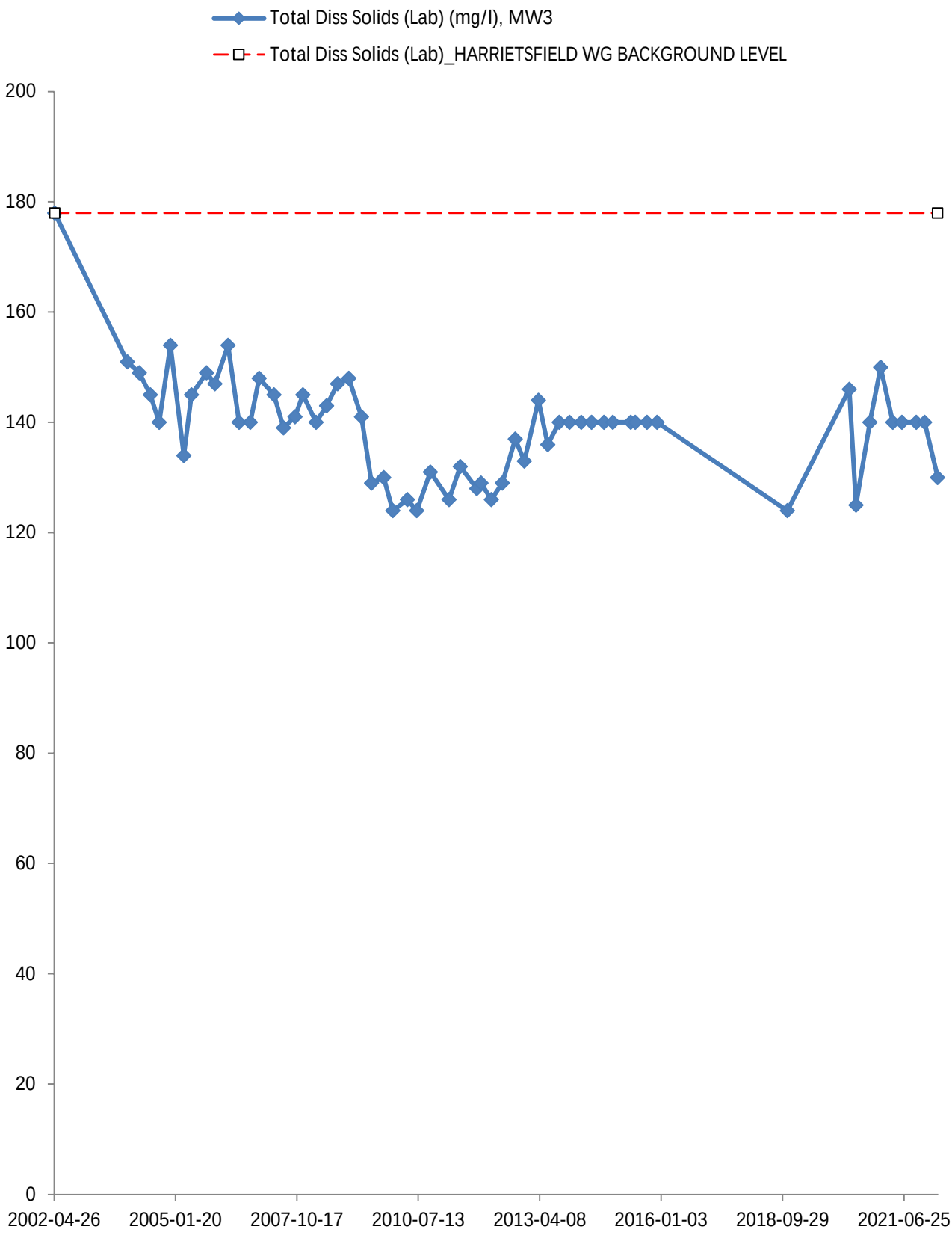
MW3-Titanium



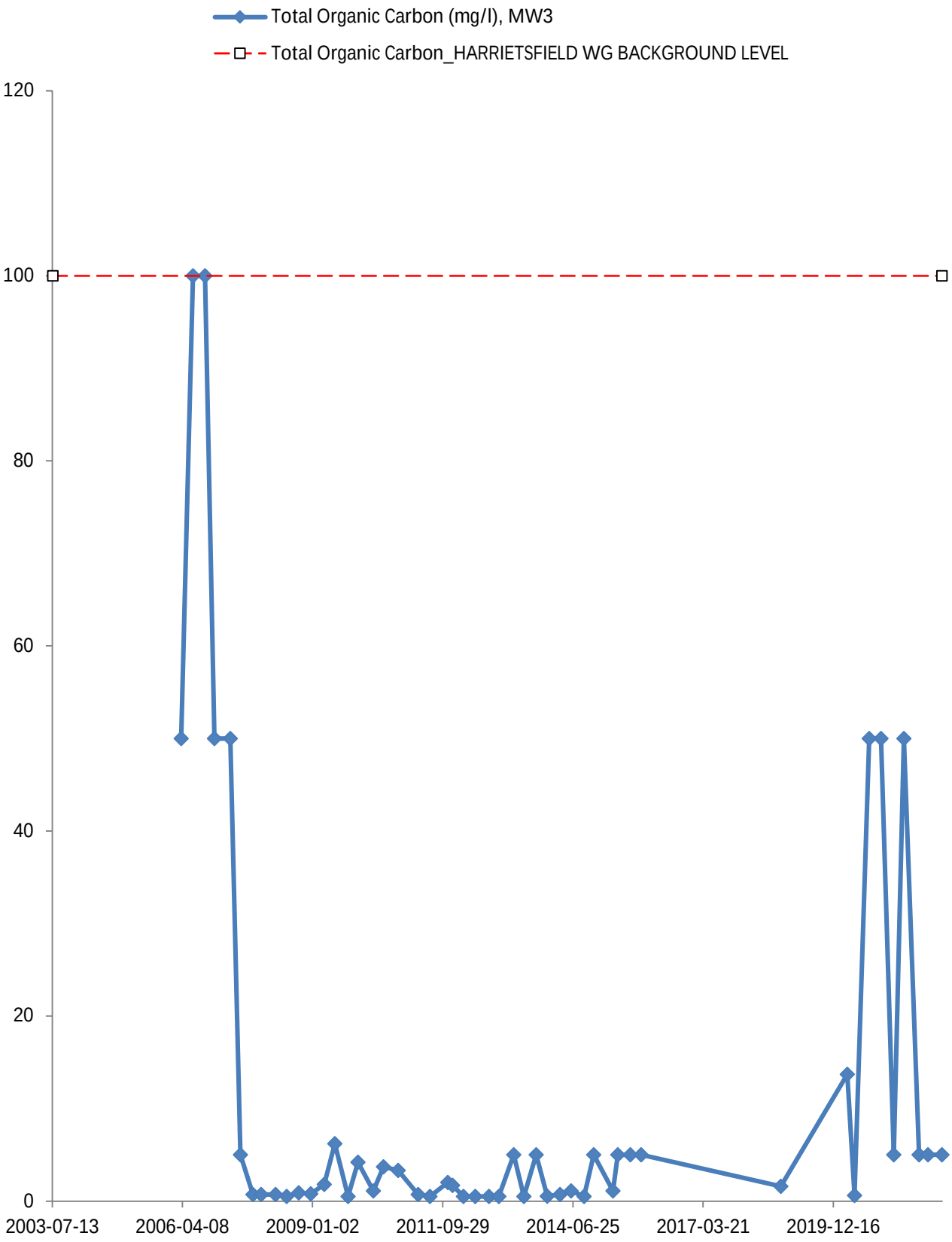
MW3-Toluene


Toluene (mg/l), MW3
Toluene_HARRIETSFIELD WG BACKGROUND LEVEL
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
2011-11-02
2013-03-16
2014-07-29
2015-12-11
2017-04-24
2018-09-06
2020-01-19
2021-06-02

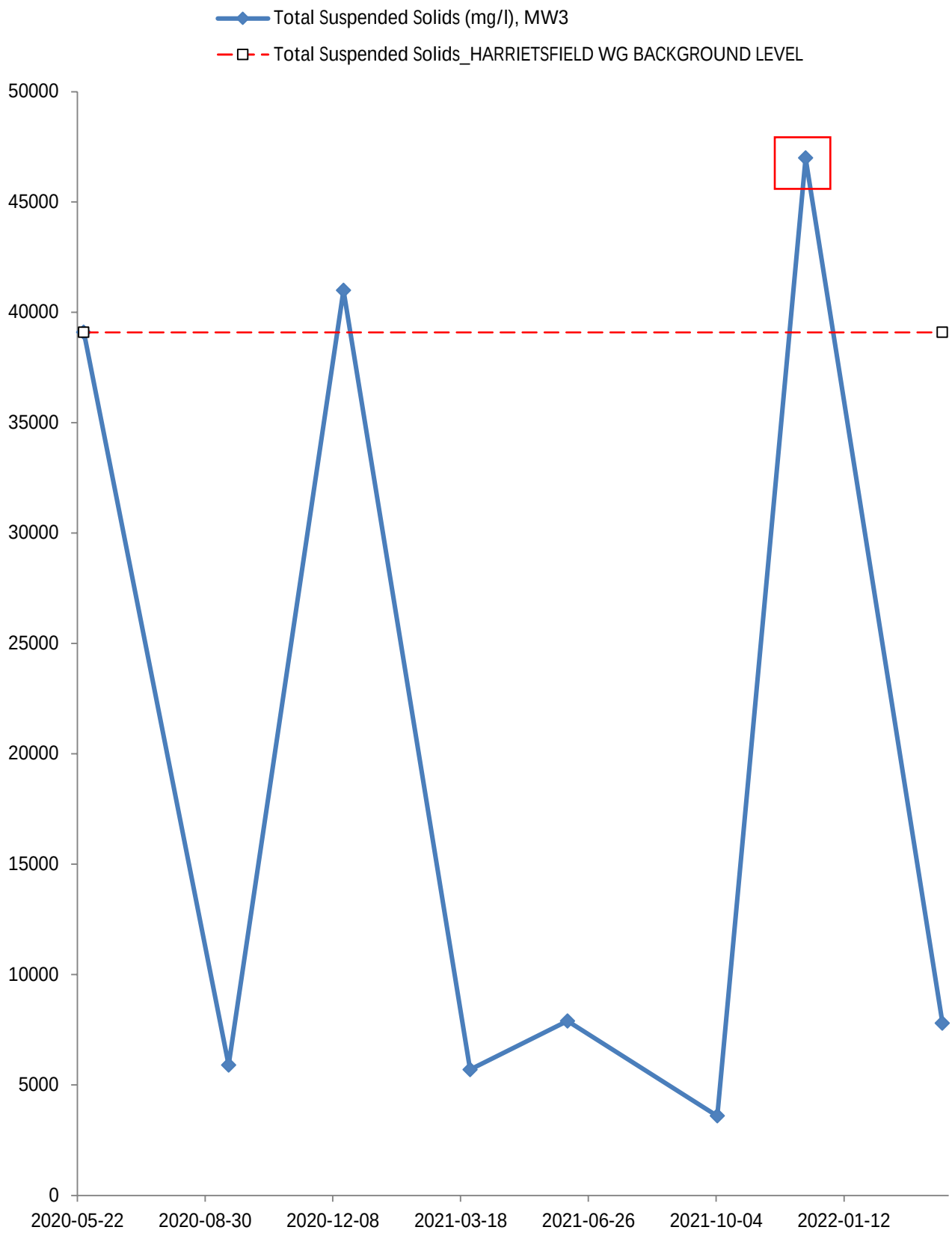
MW3-Total Diss Solids (Lab)



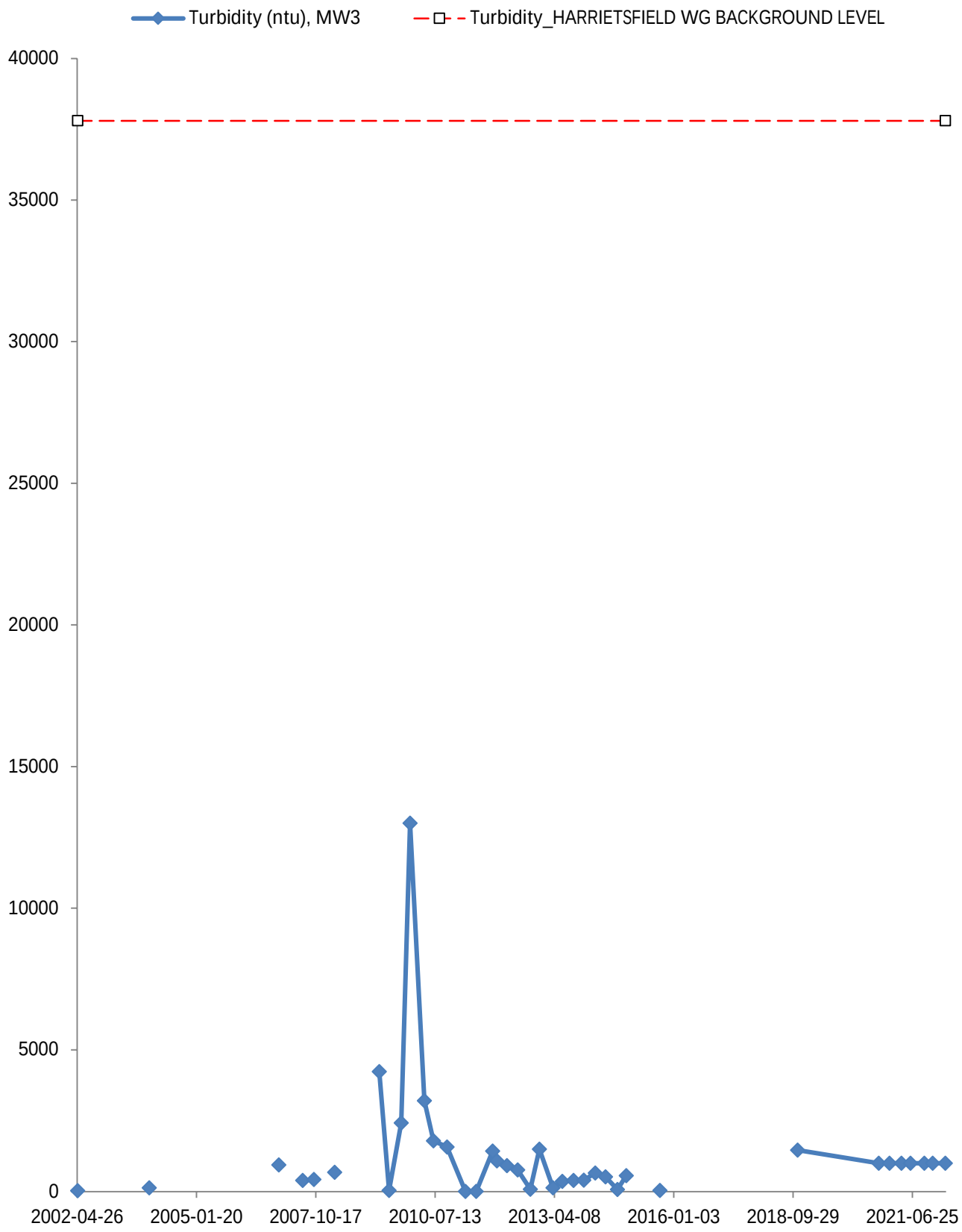
MW3-Total Organic Carbon



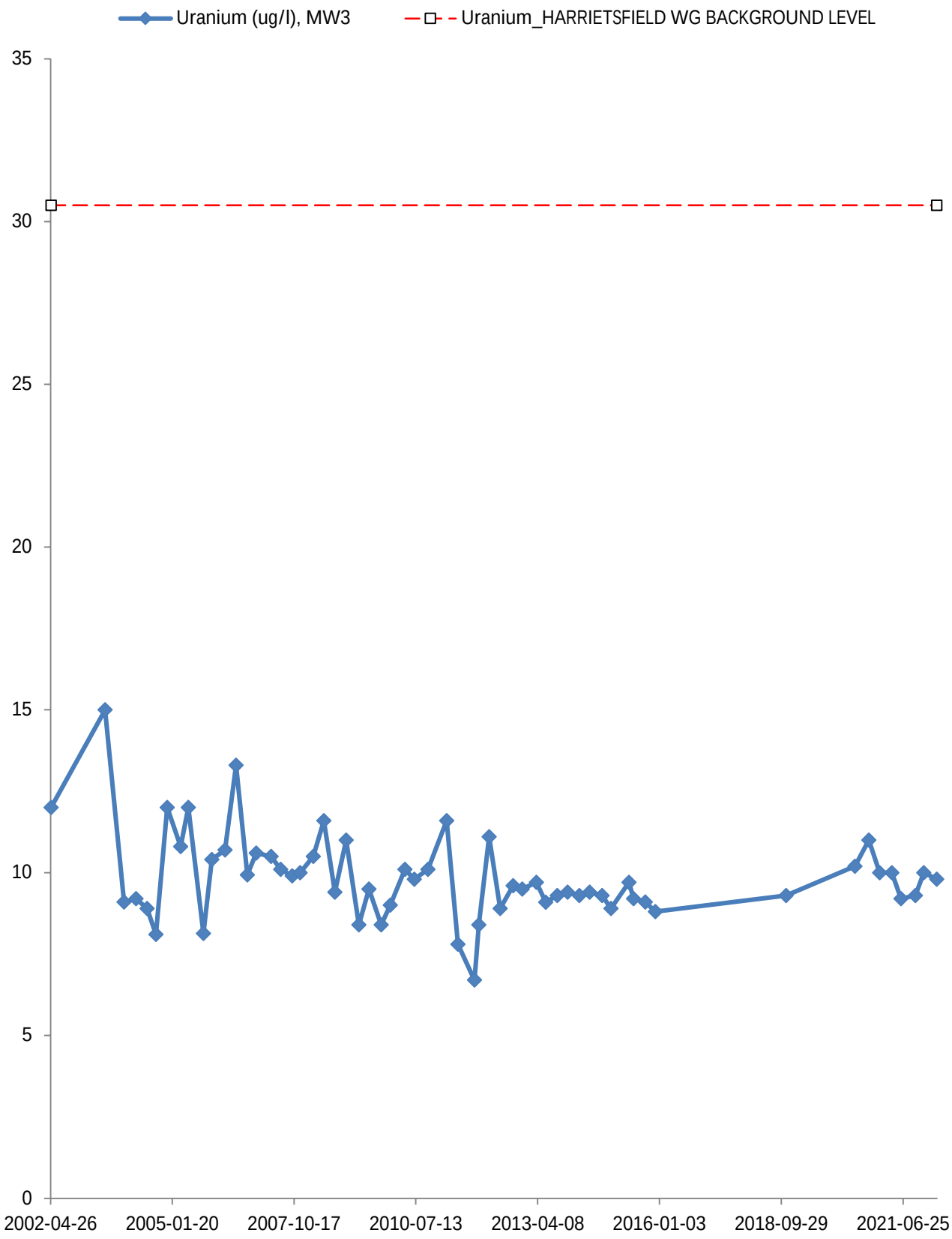
MW3-Total Suspended Solids



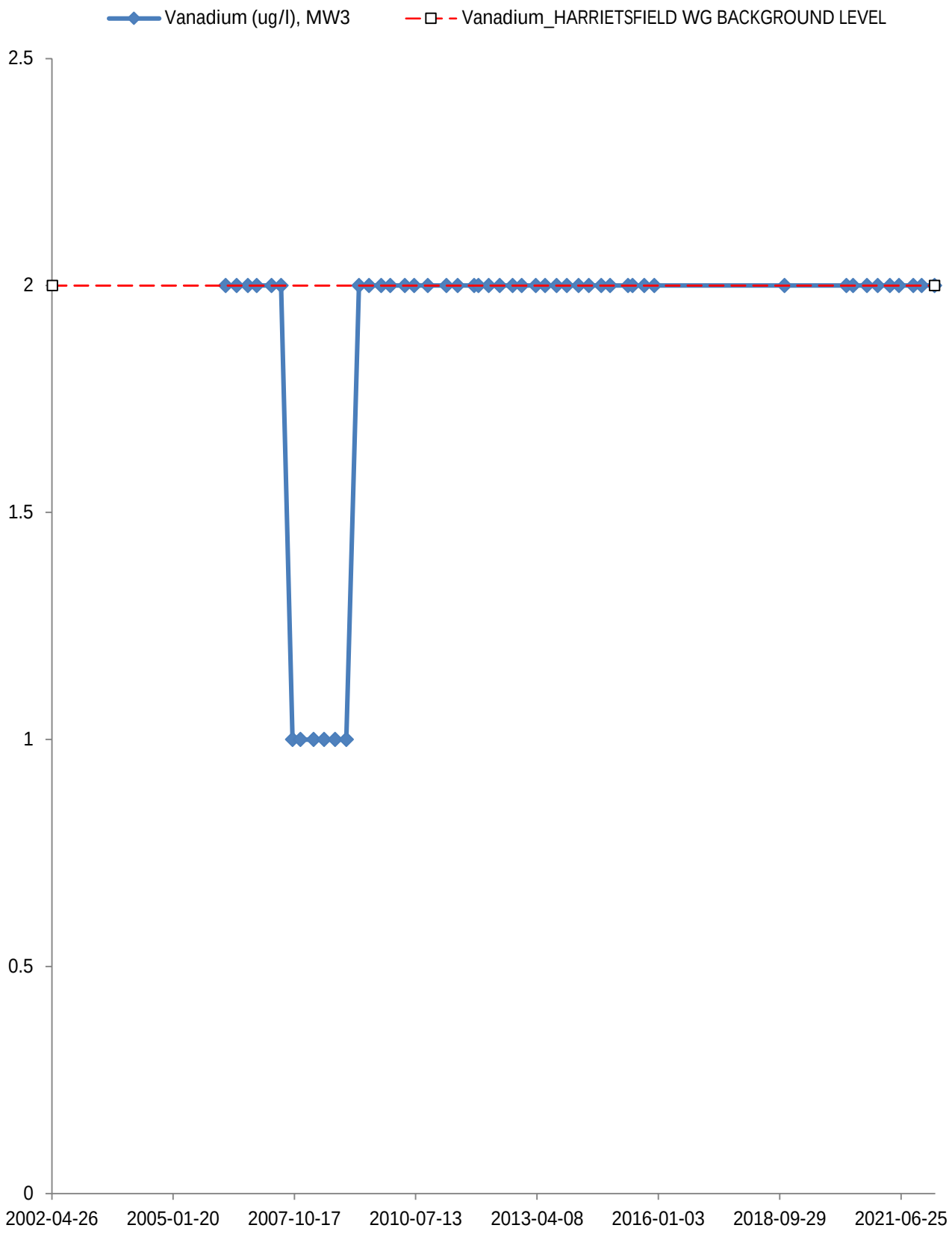
MW3-Turbidity



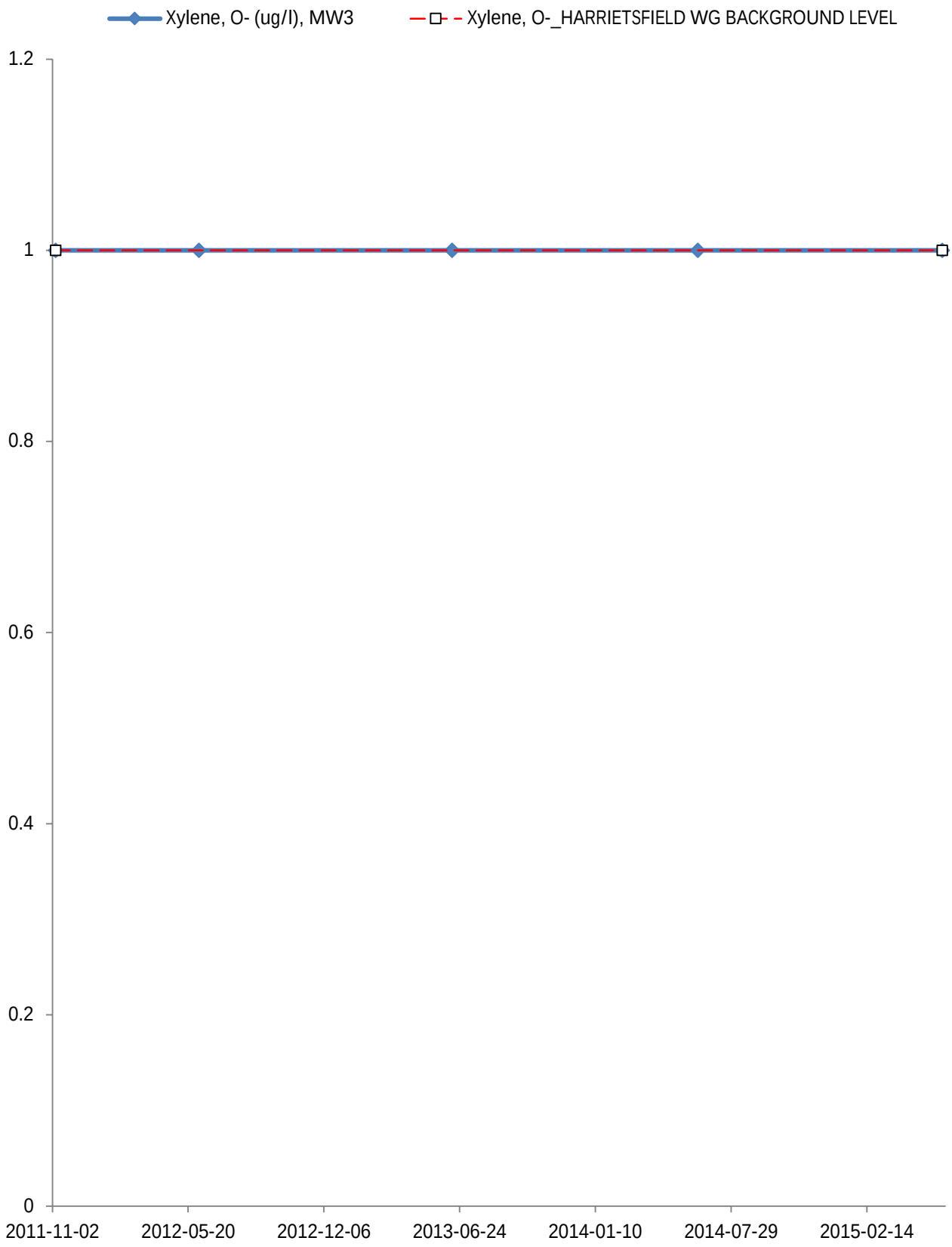
MW3-Uranium


Uranium (ug/l), MW3
Uranium_HARRIETSFIELD WG BACKGROUND LEVEL
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

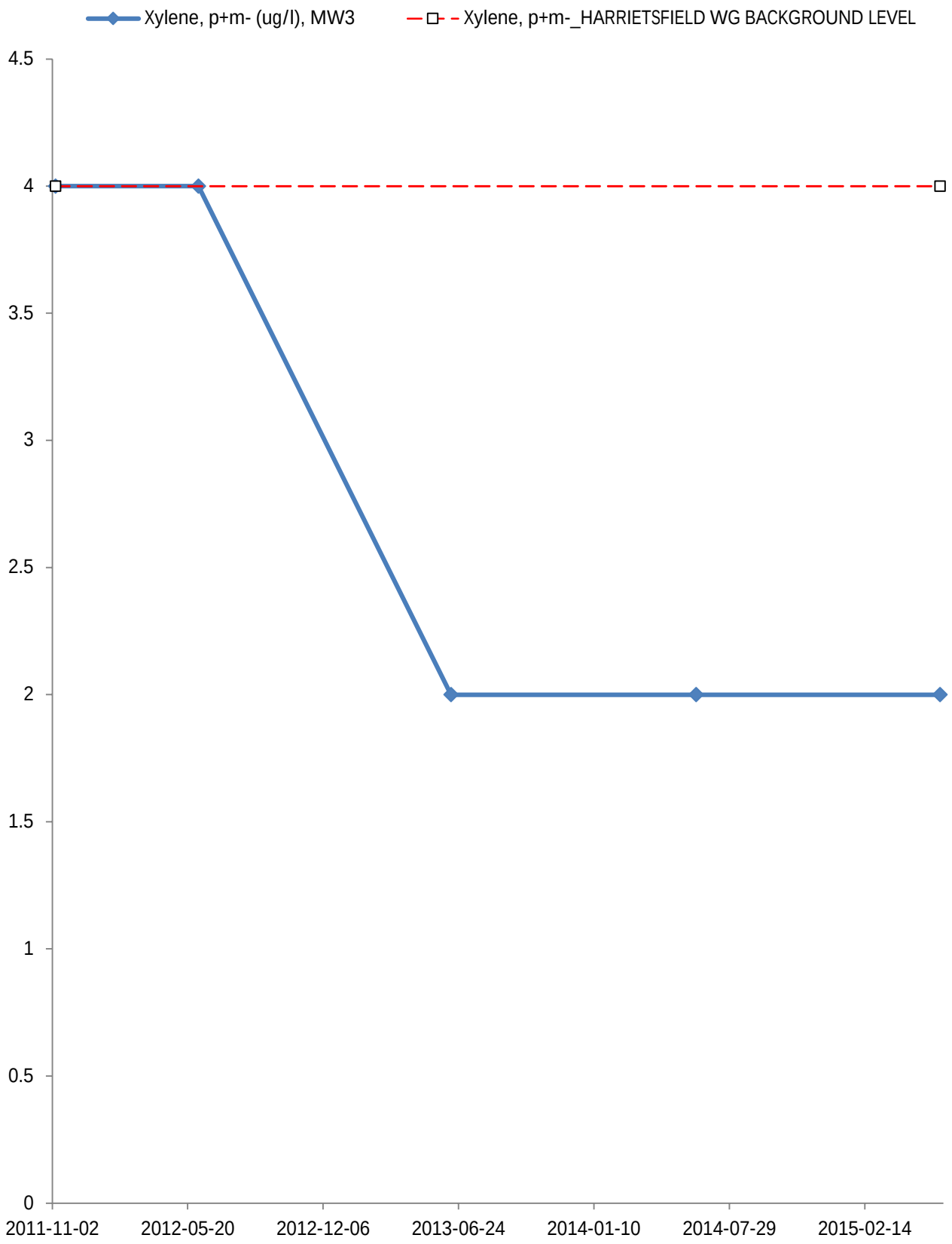
MW3-Vanadium



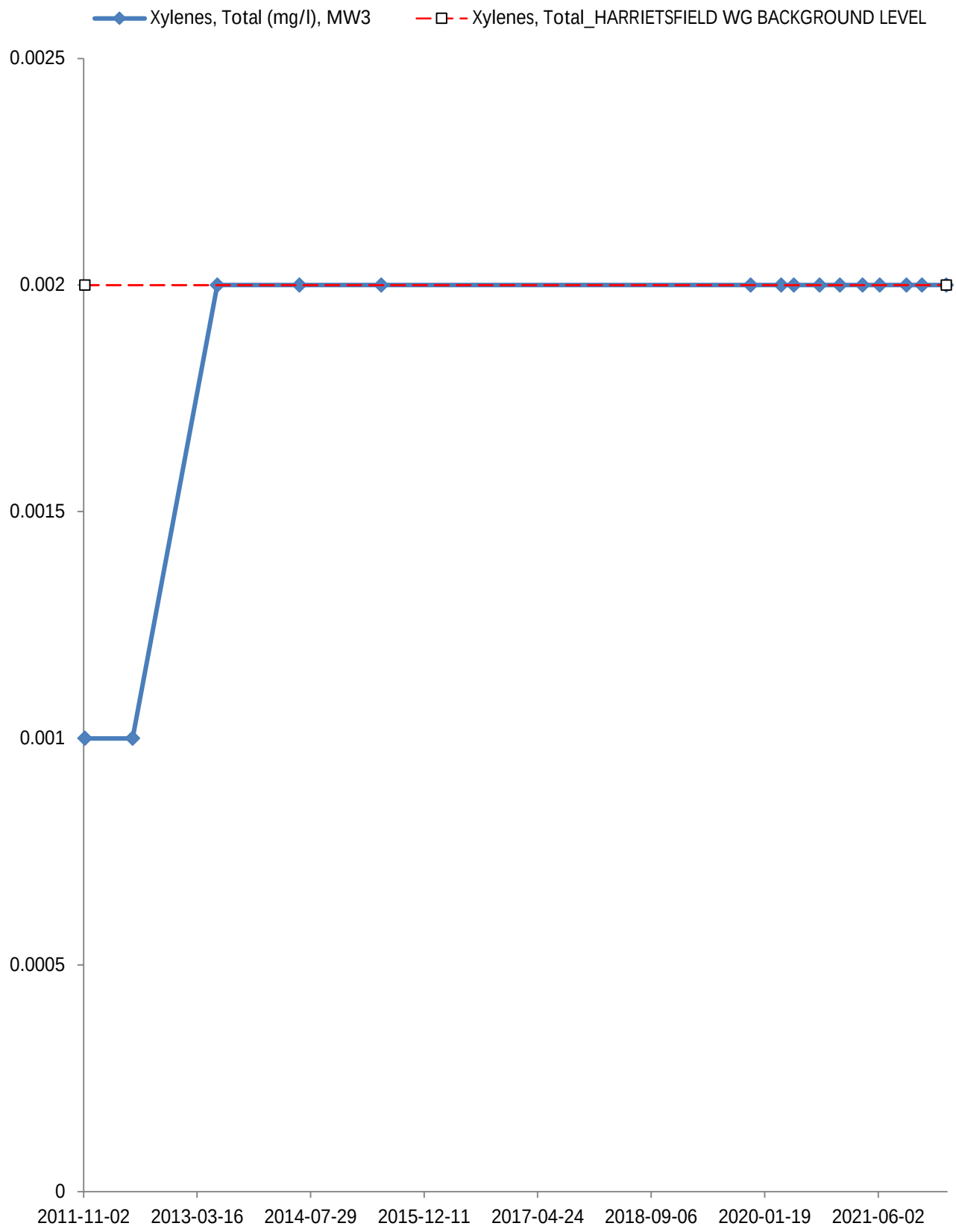
MW3-Xylene, O-


Xylene, O- (ug/l), MW3
Xylene, O-_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2011-11-02
2012-05-20
2012-12-06
2013-06-24
2014-01-10
2014-07-29
2015-02-14

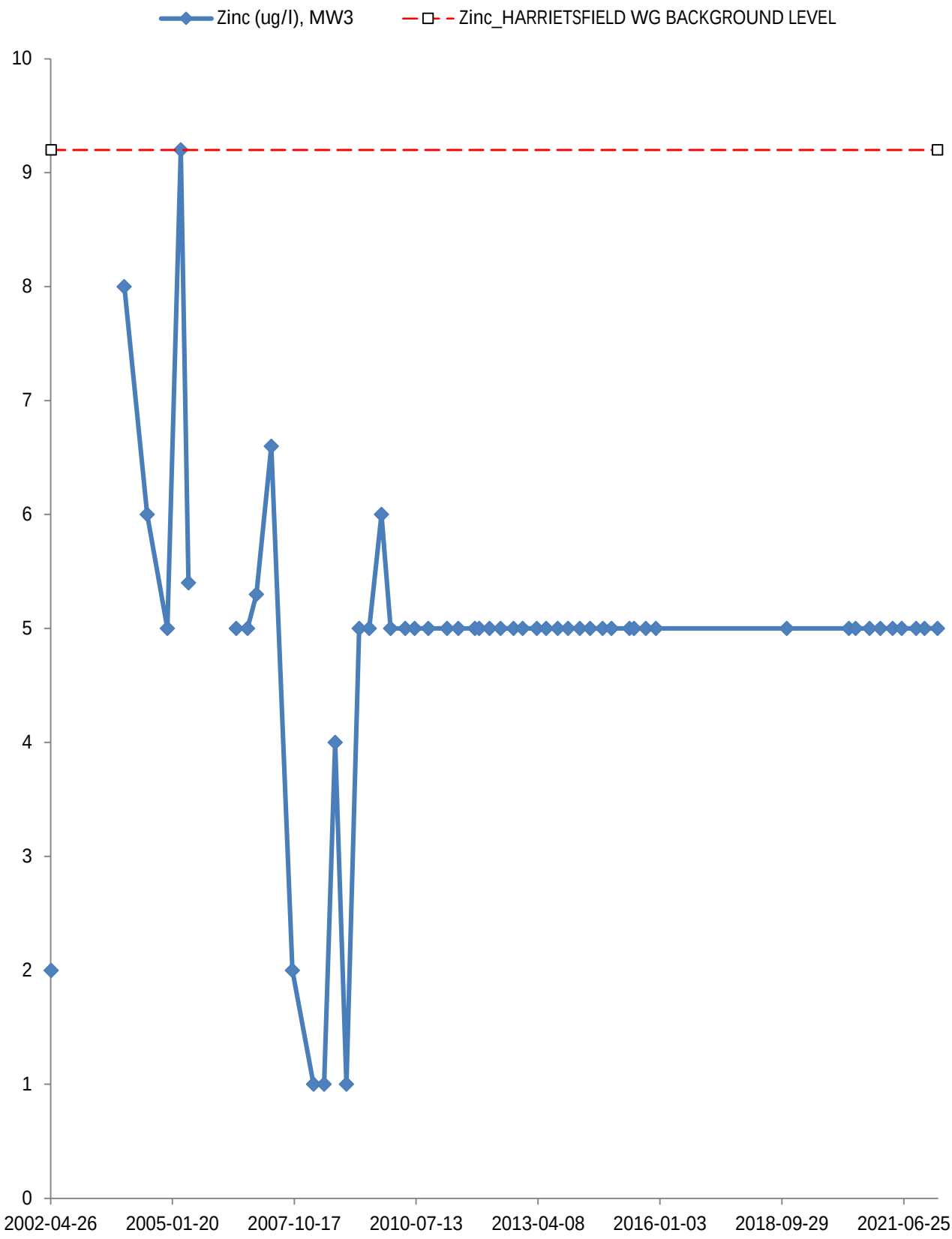
MW3-Xylene, p+m-



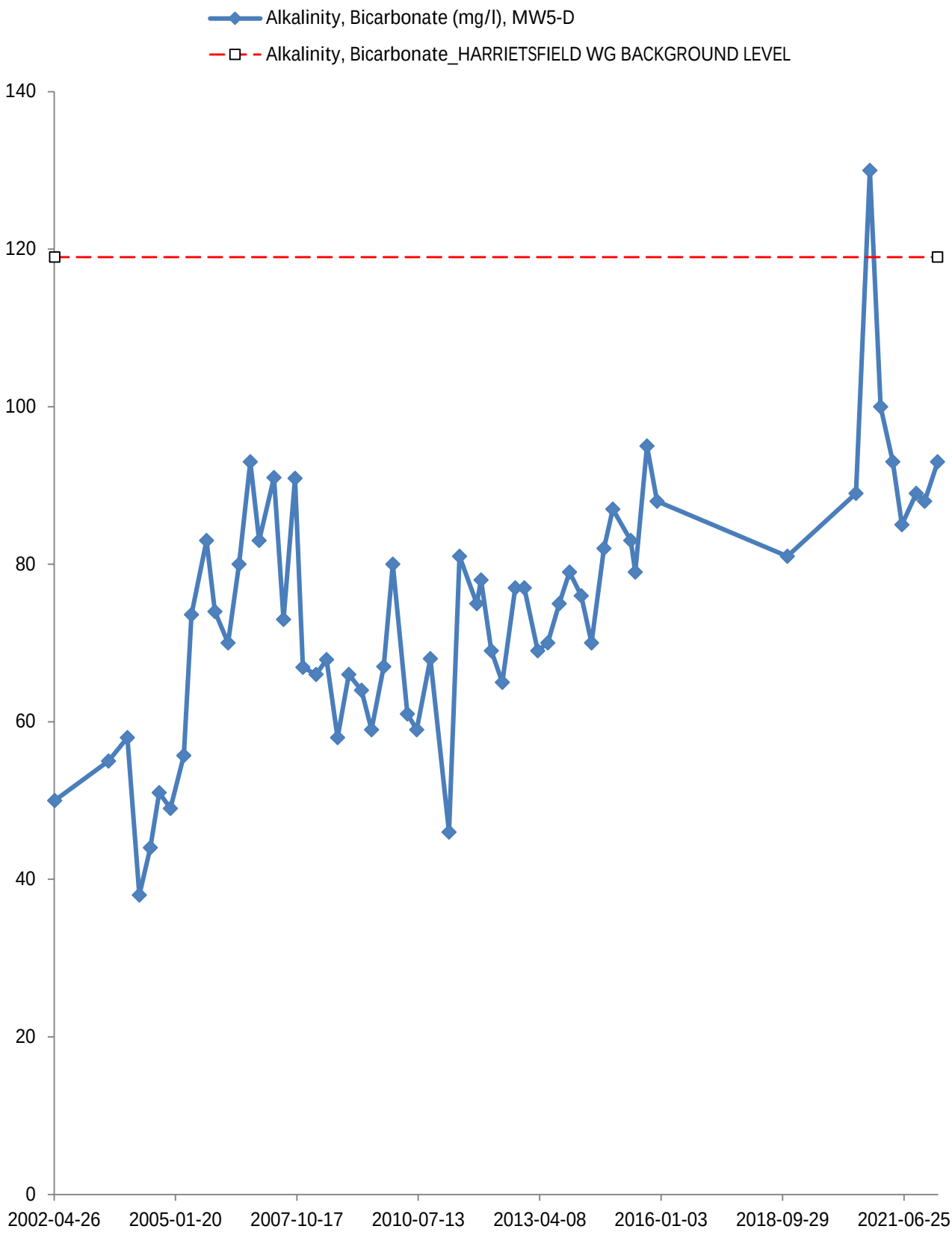
MW3-Xylenes, Total



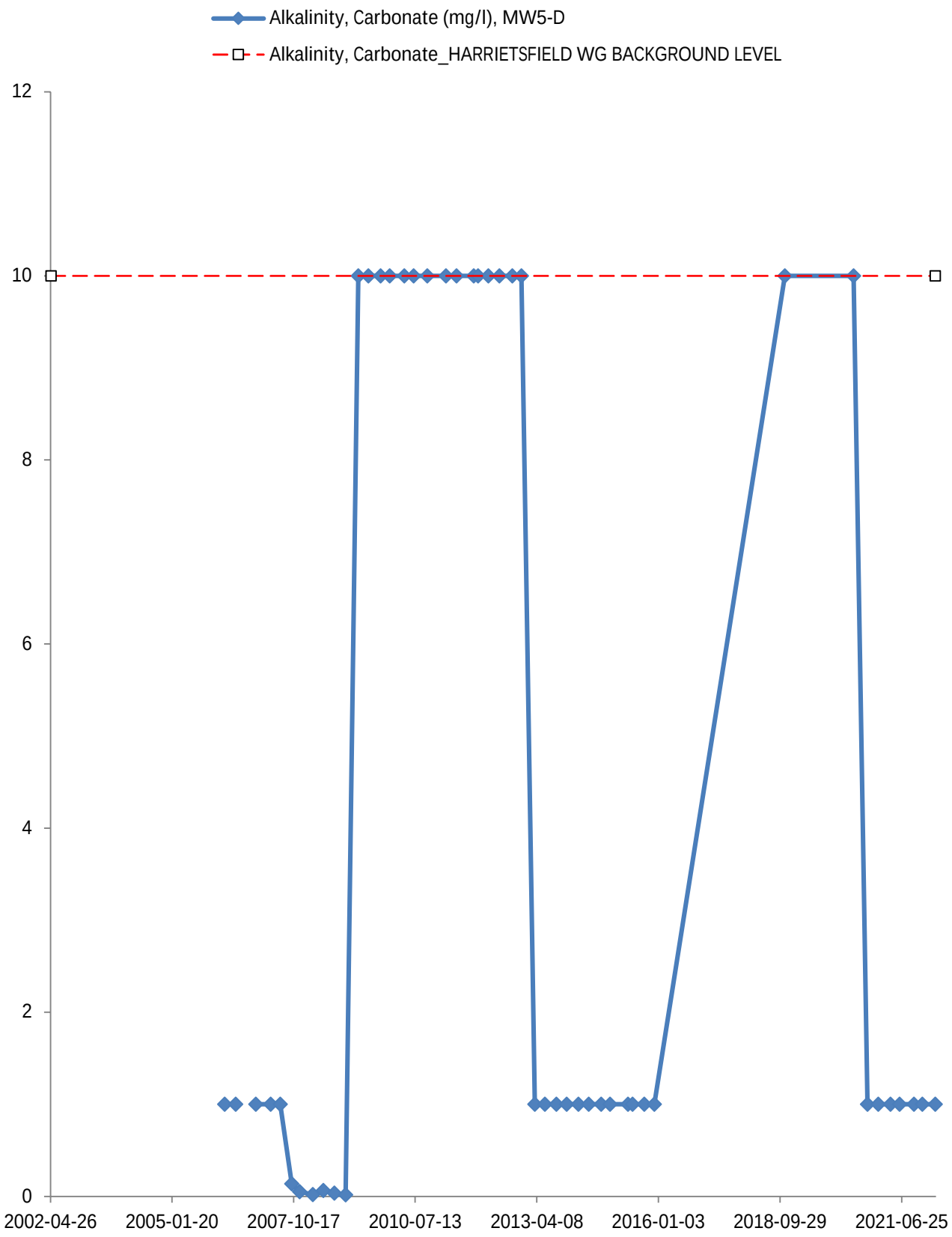
MW3-Zinc


Zinc (ug/l), MW3
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

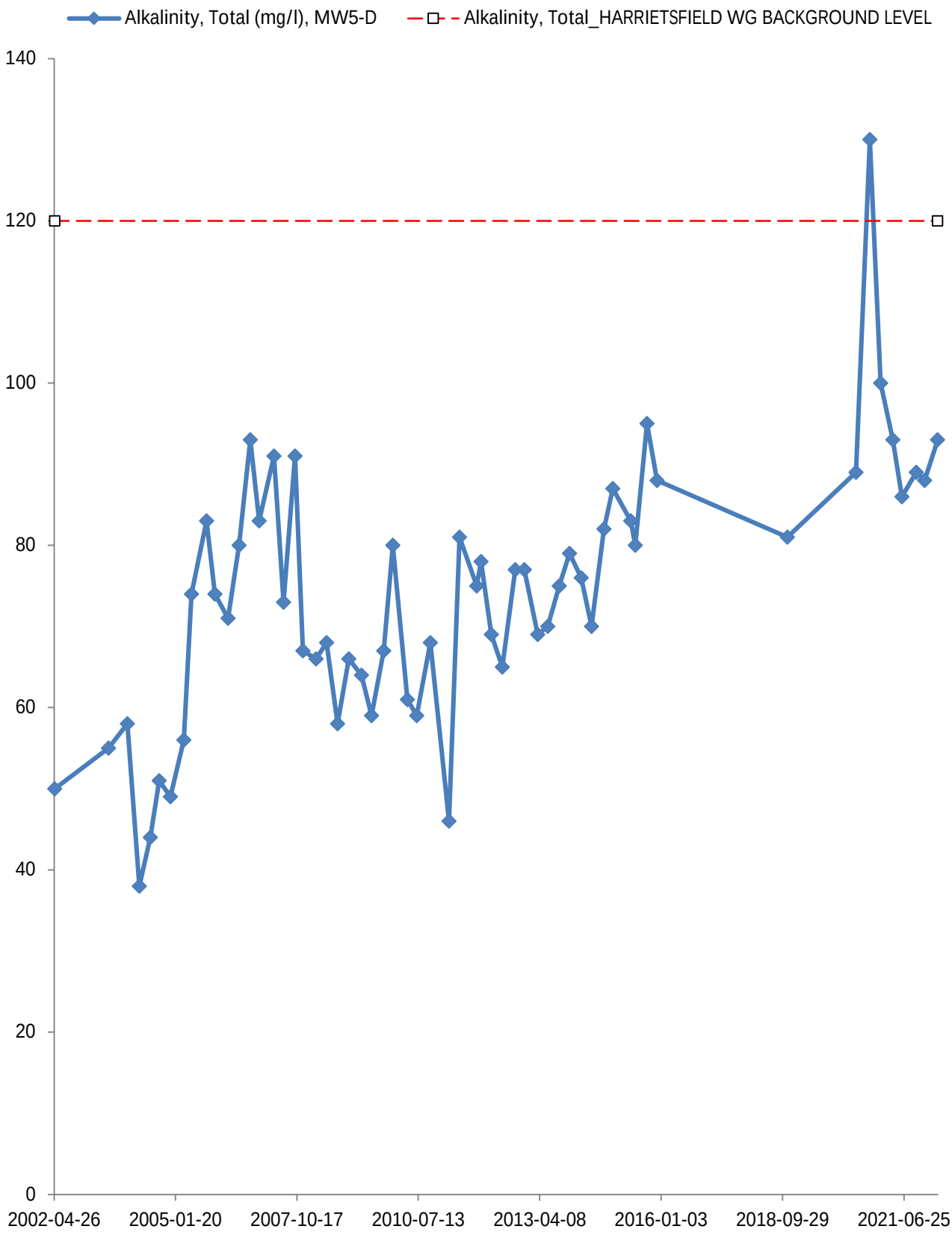
MW5-D-Alkalinity, Bicarbonate



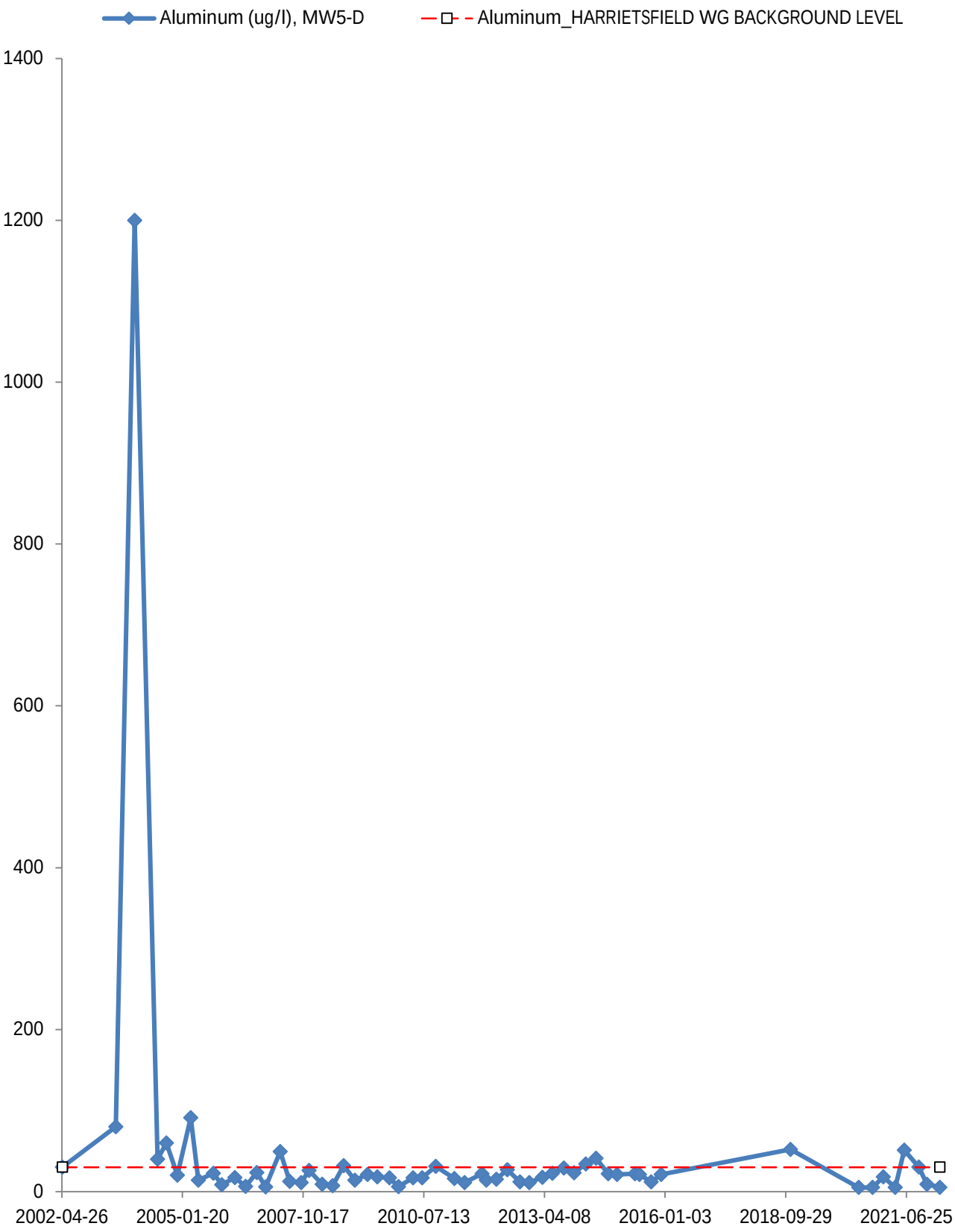
MW5-D-Alkalinity, Carbonate



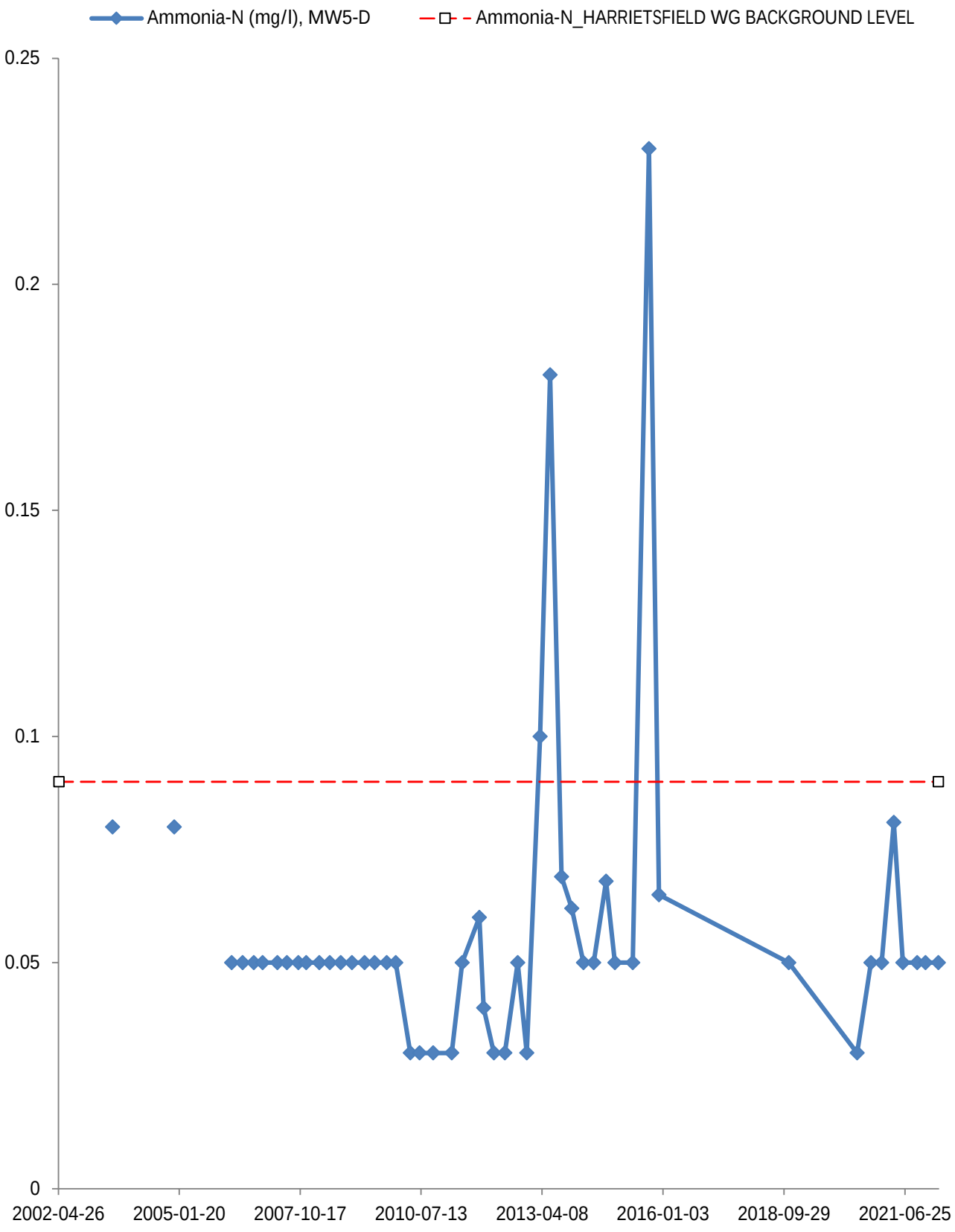
MW5-D-Alkalinity, Total



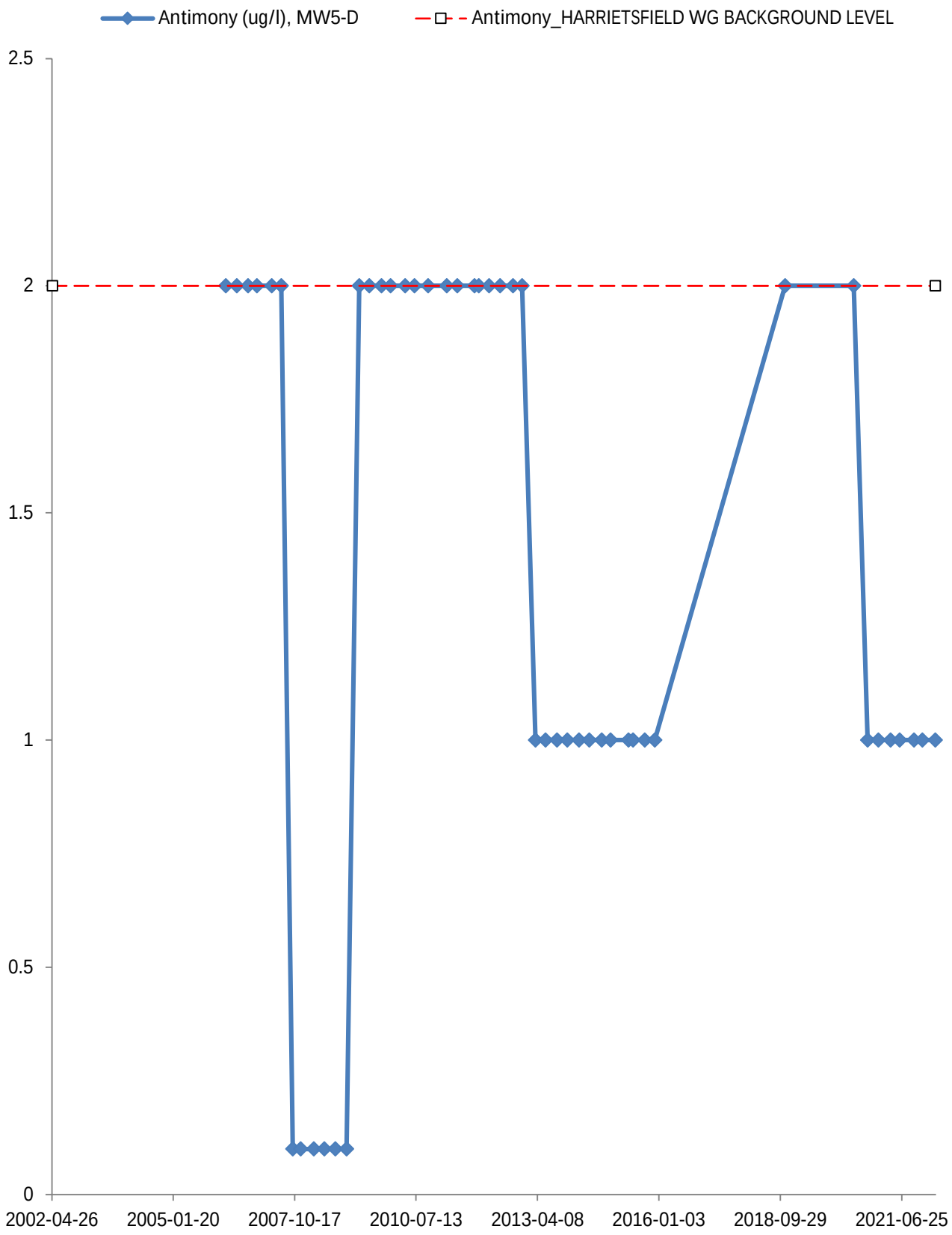
MW5-D-Aluminum



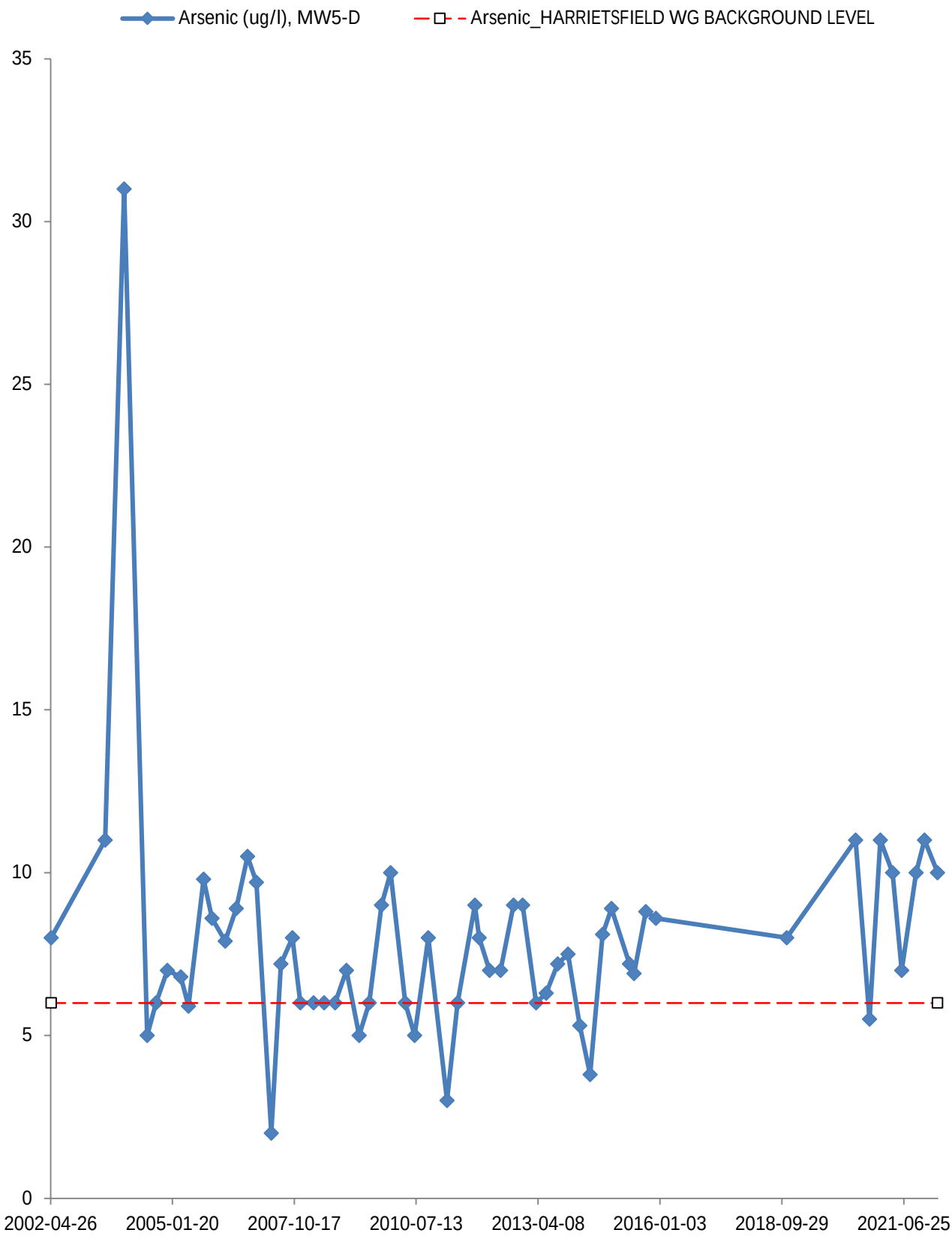
MW5-D-Ammonia-N



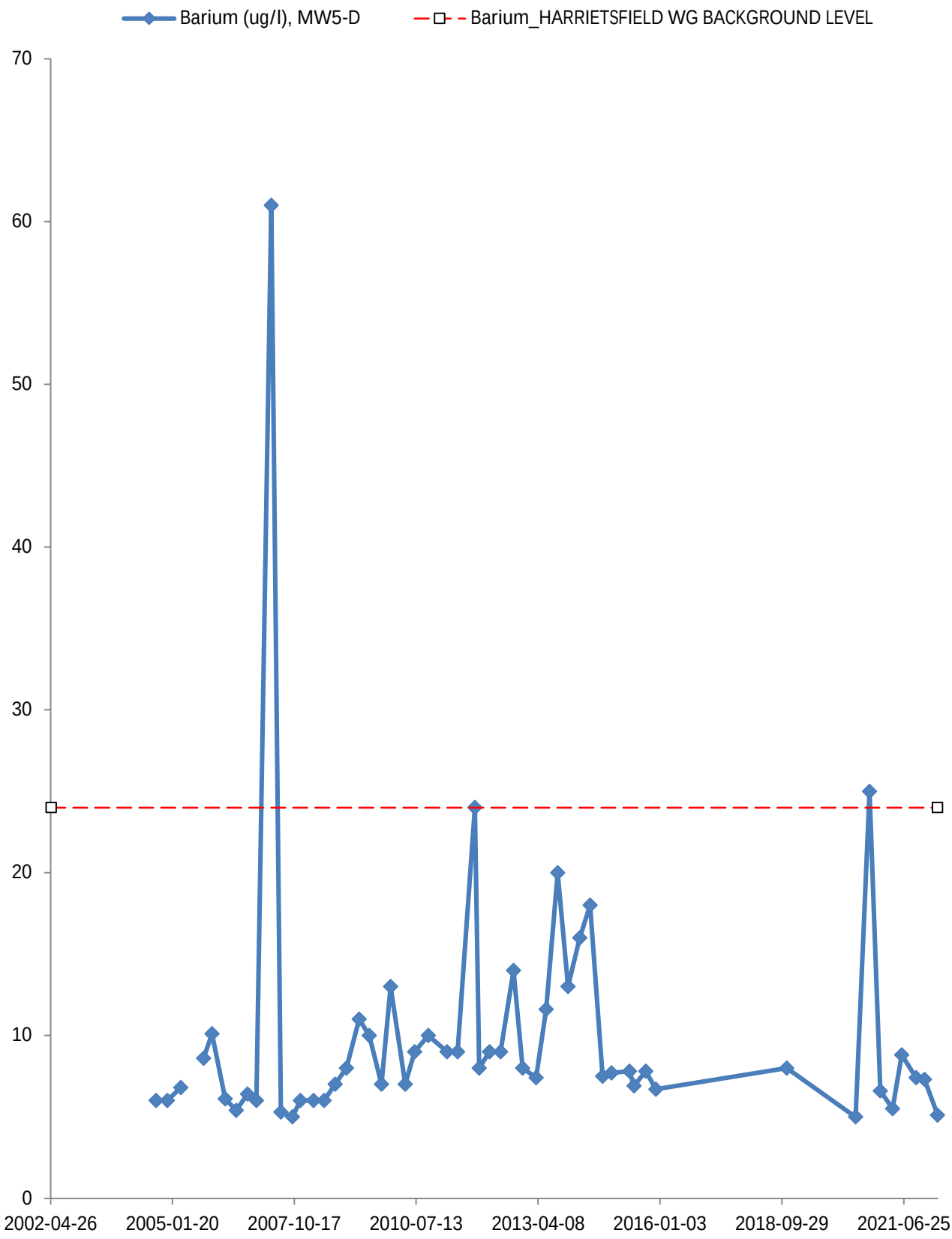
MW5-D-Antimony



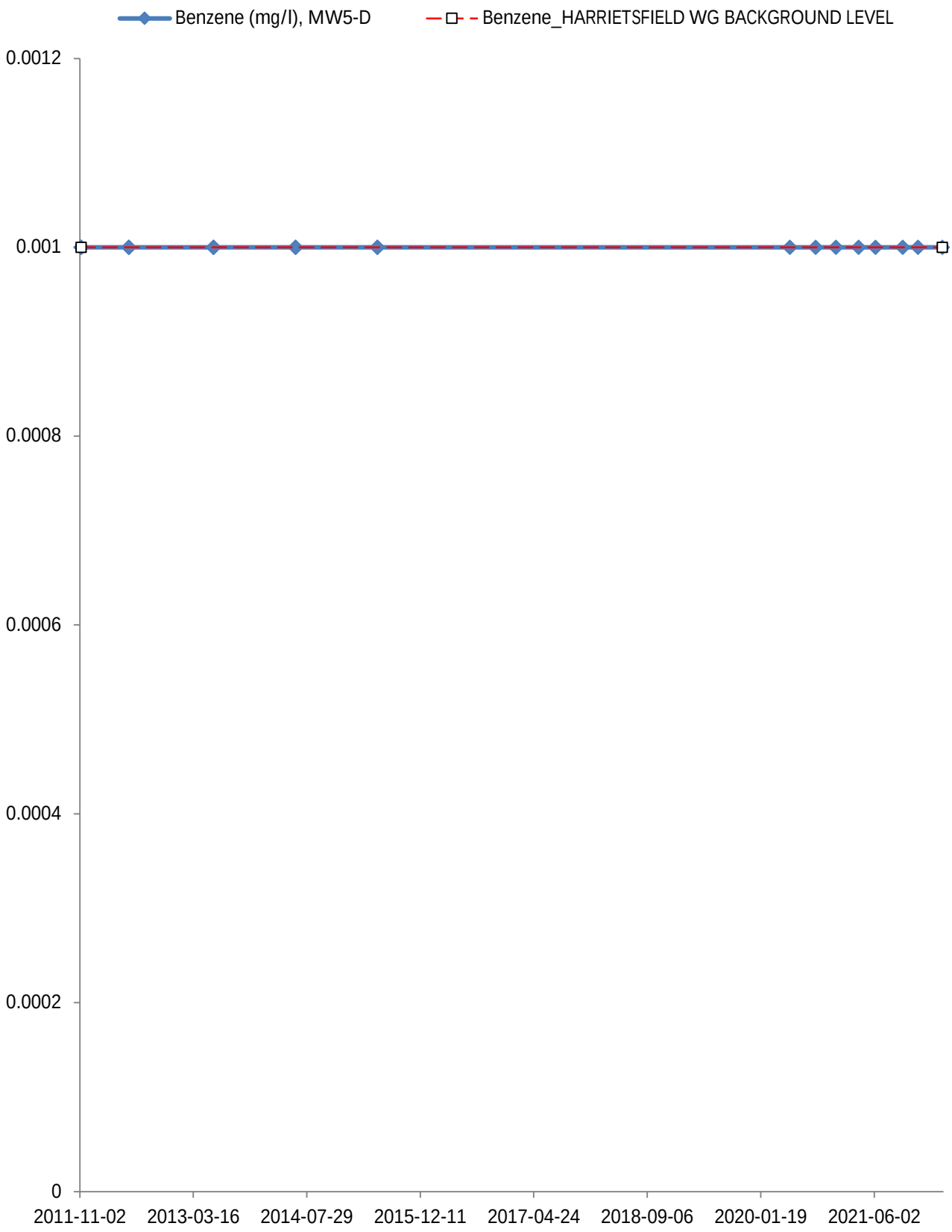
MW5-D-Arsenic



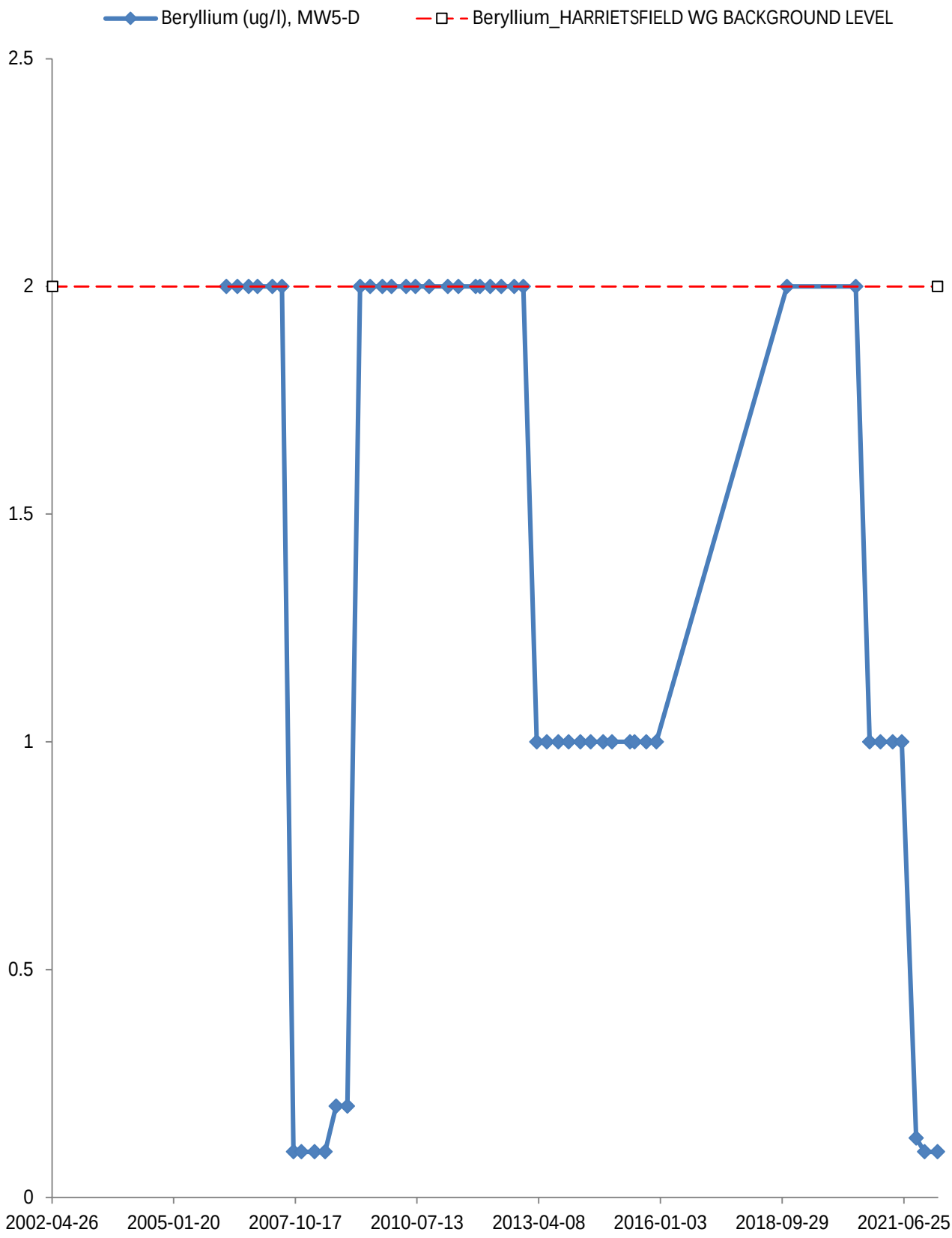
MW5-D-Barium


Barium (ug/l), MW5-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

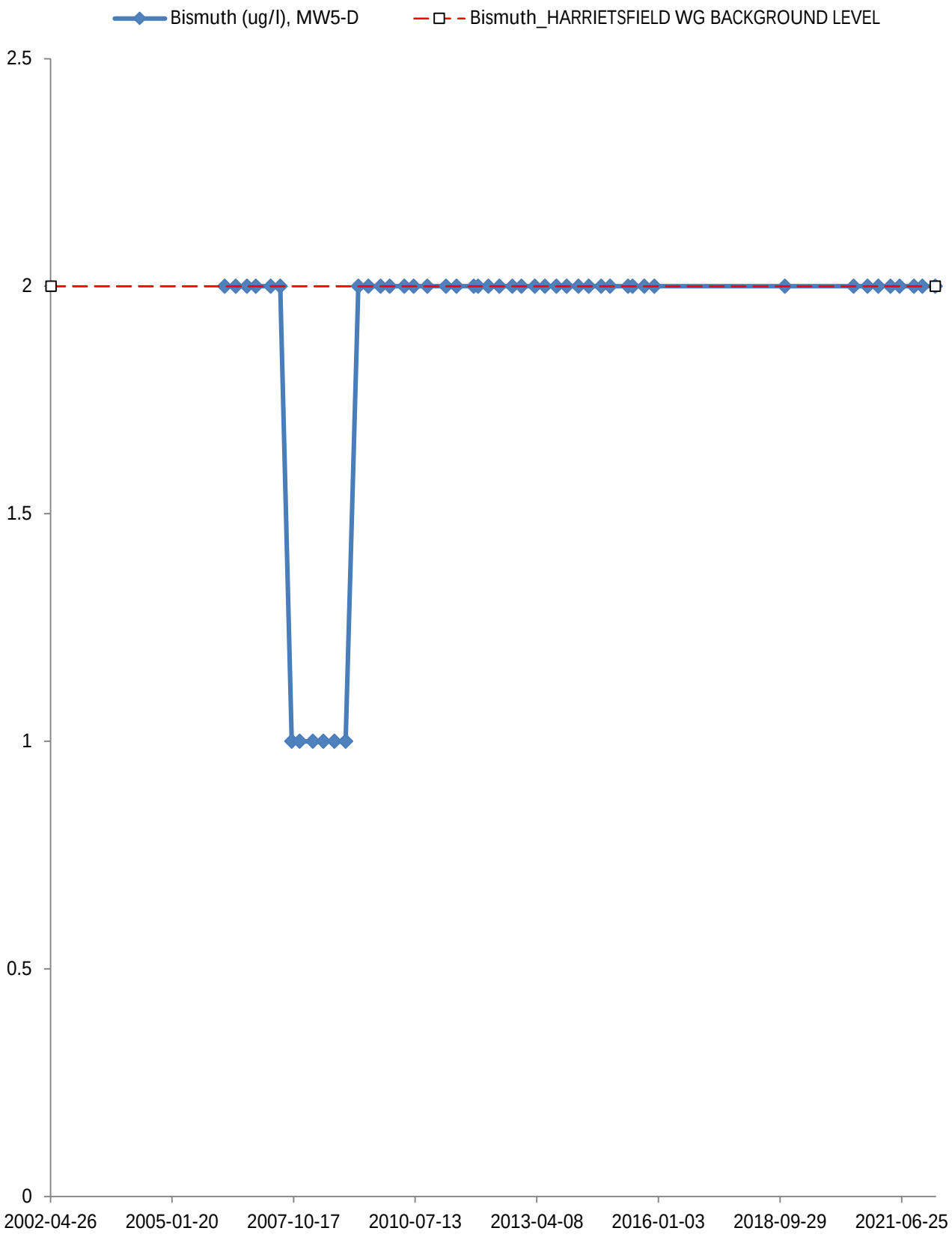
MW5-D-Benzene



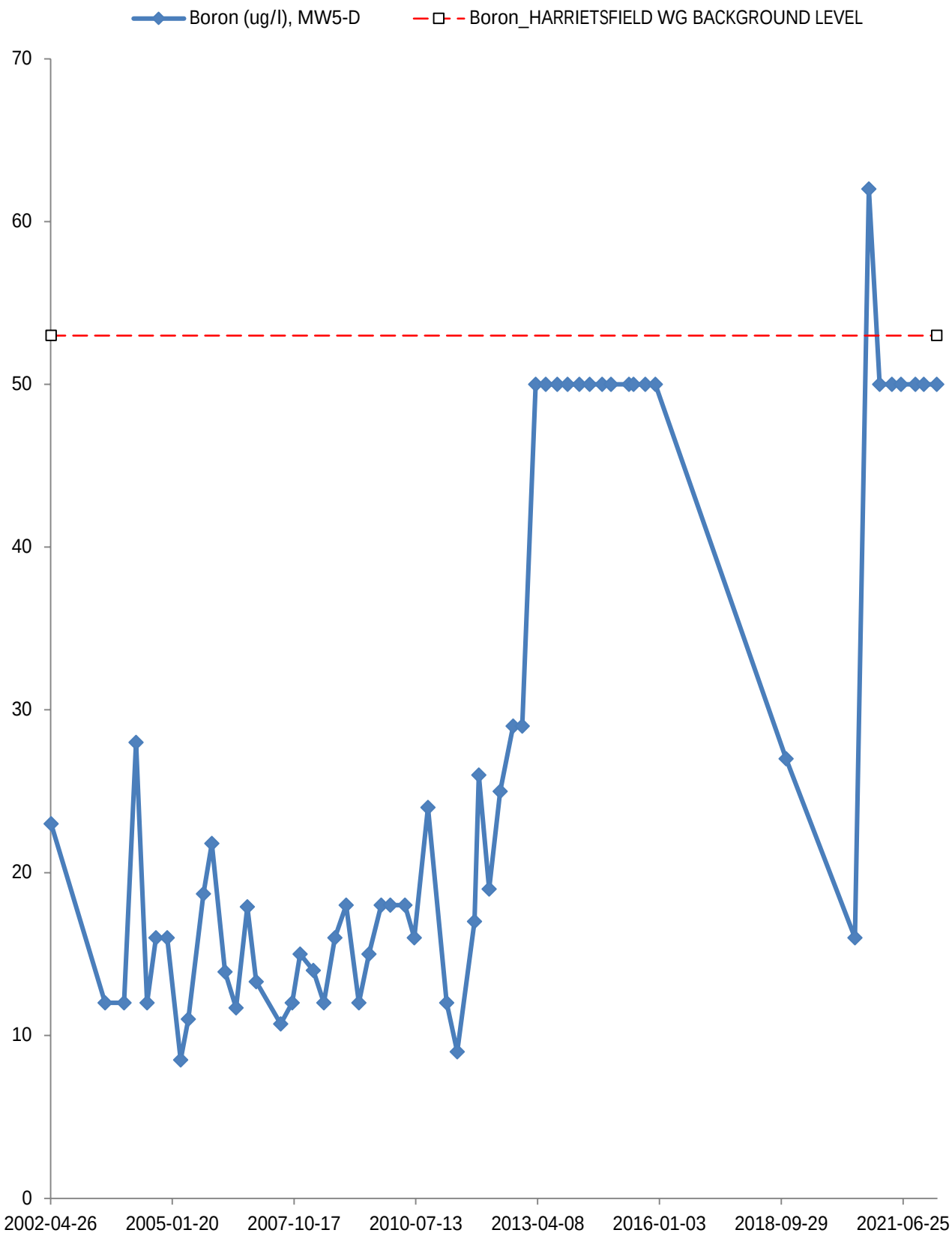
MW5-D-Beryllium



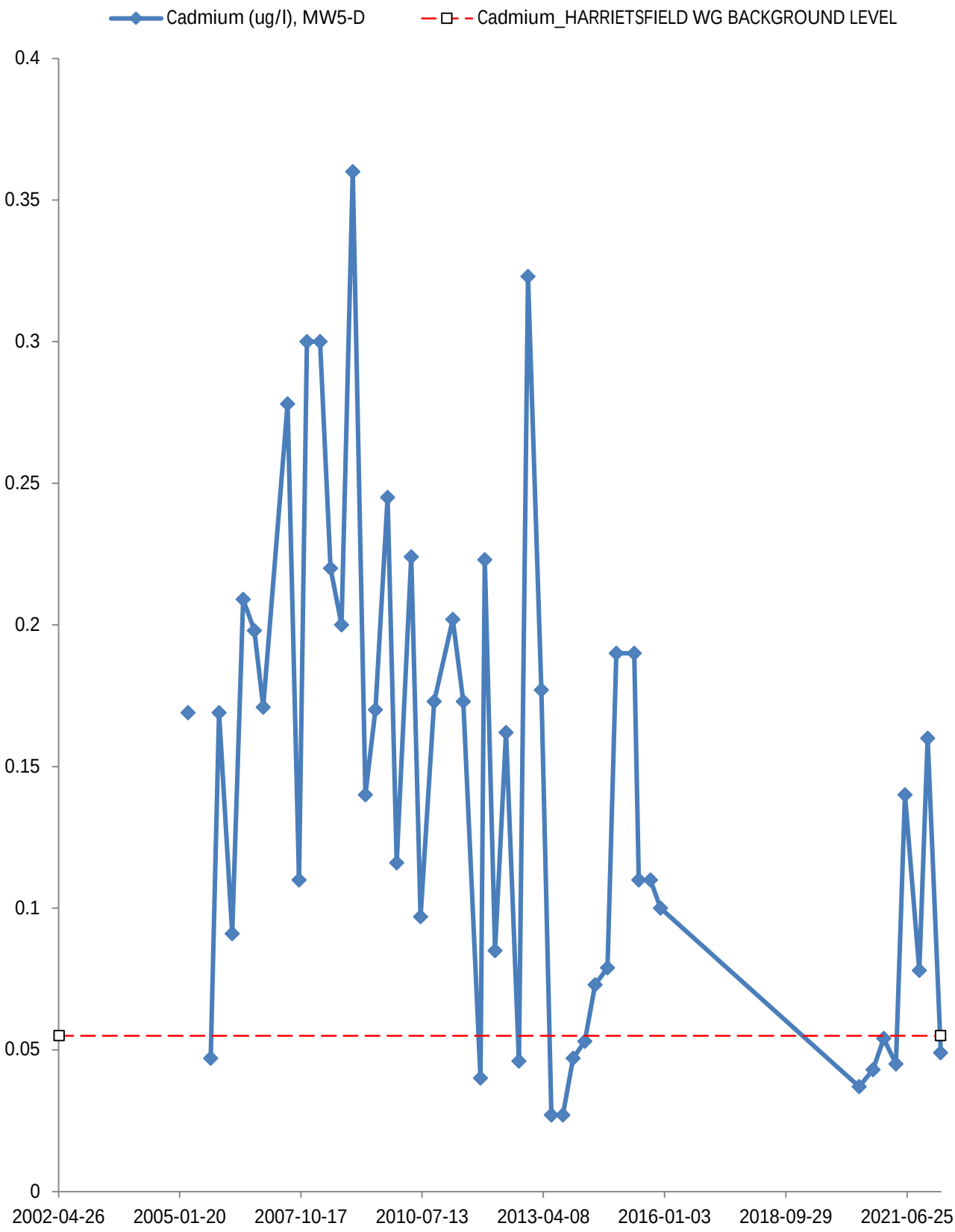
MW5-D-Bismuth



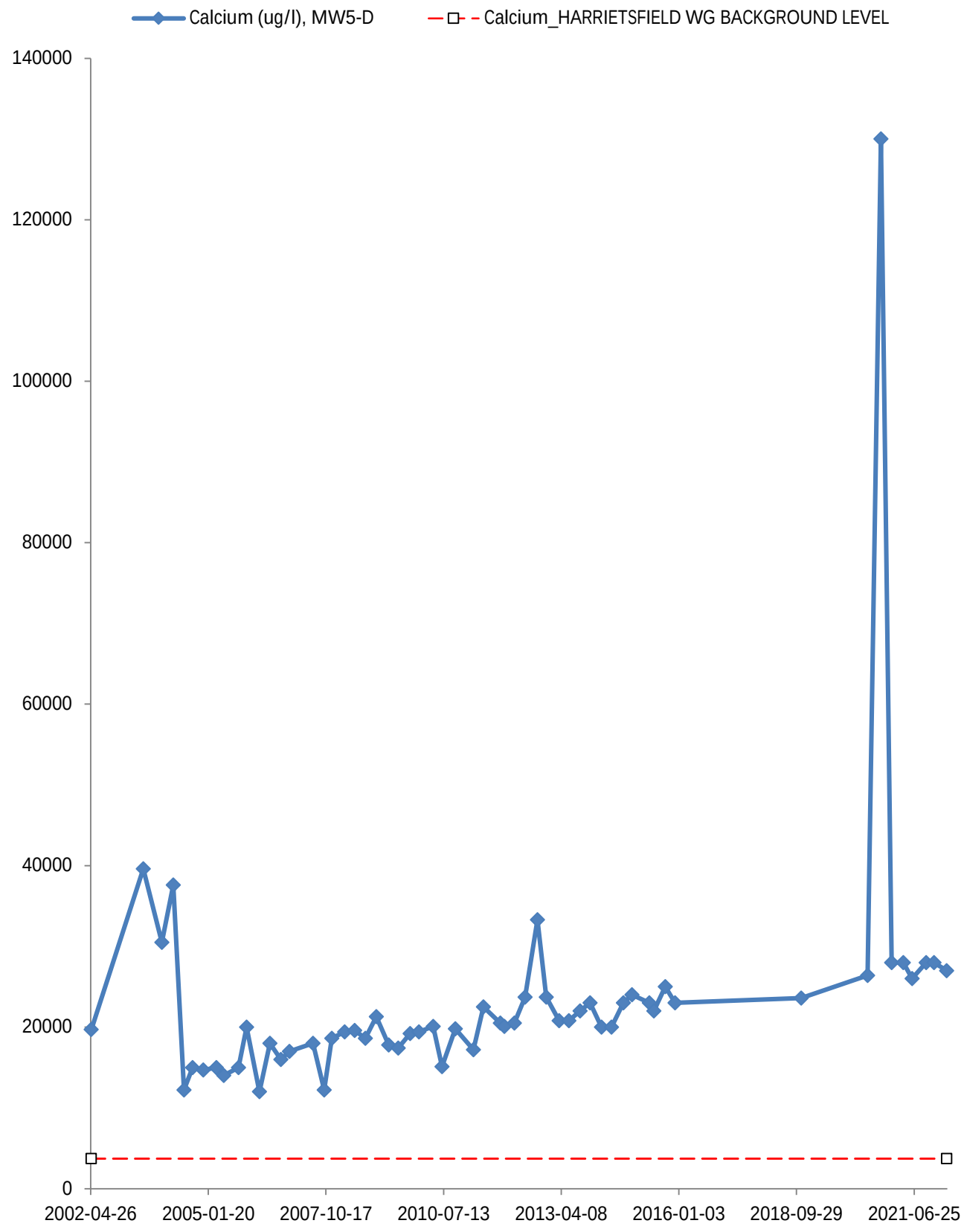
MW5-D-Boron


Boron (ug/l), MW5-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

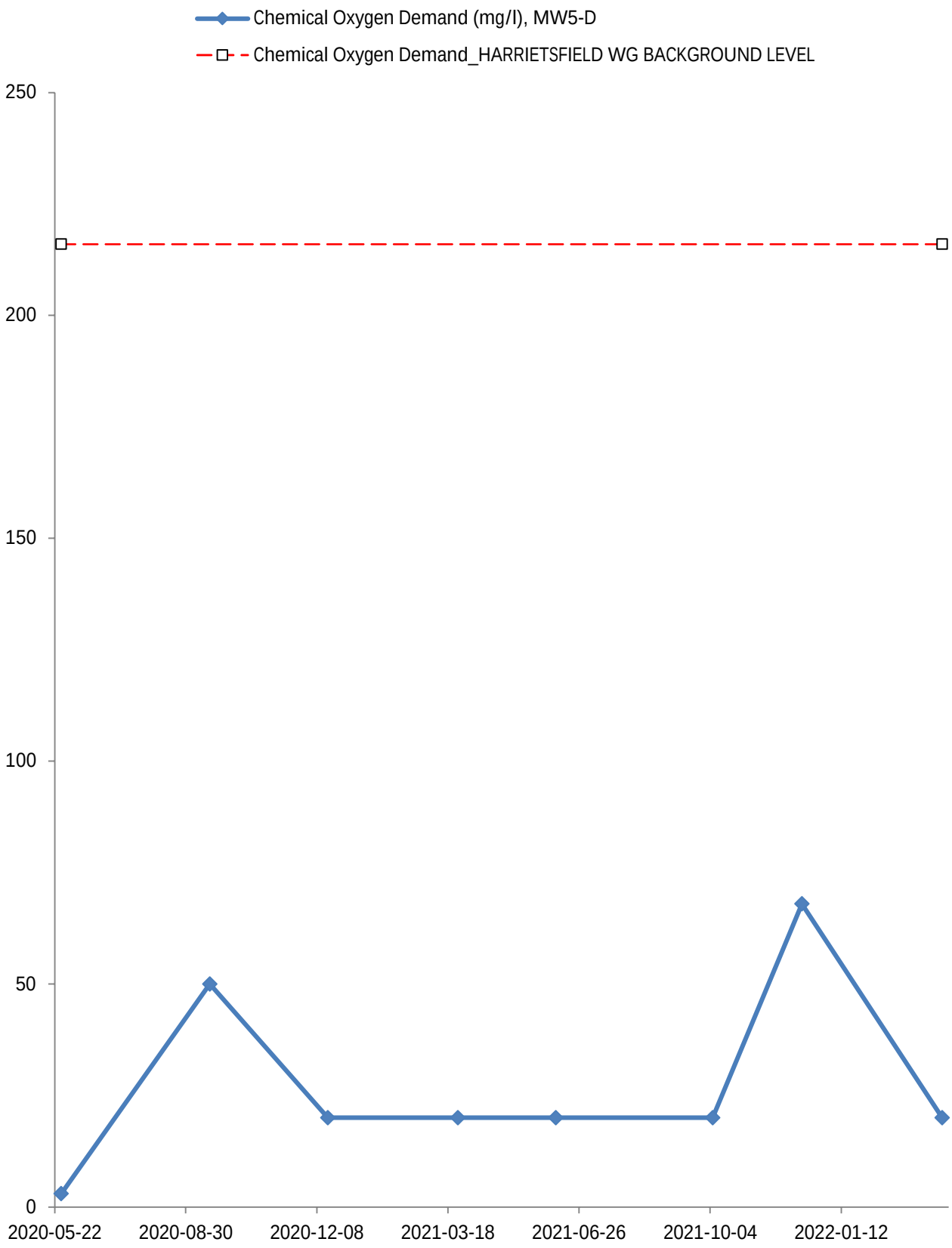
MW5-D-Cadmium



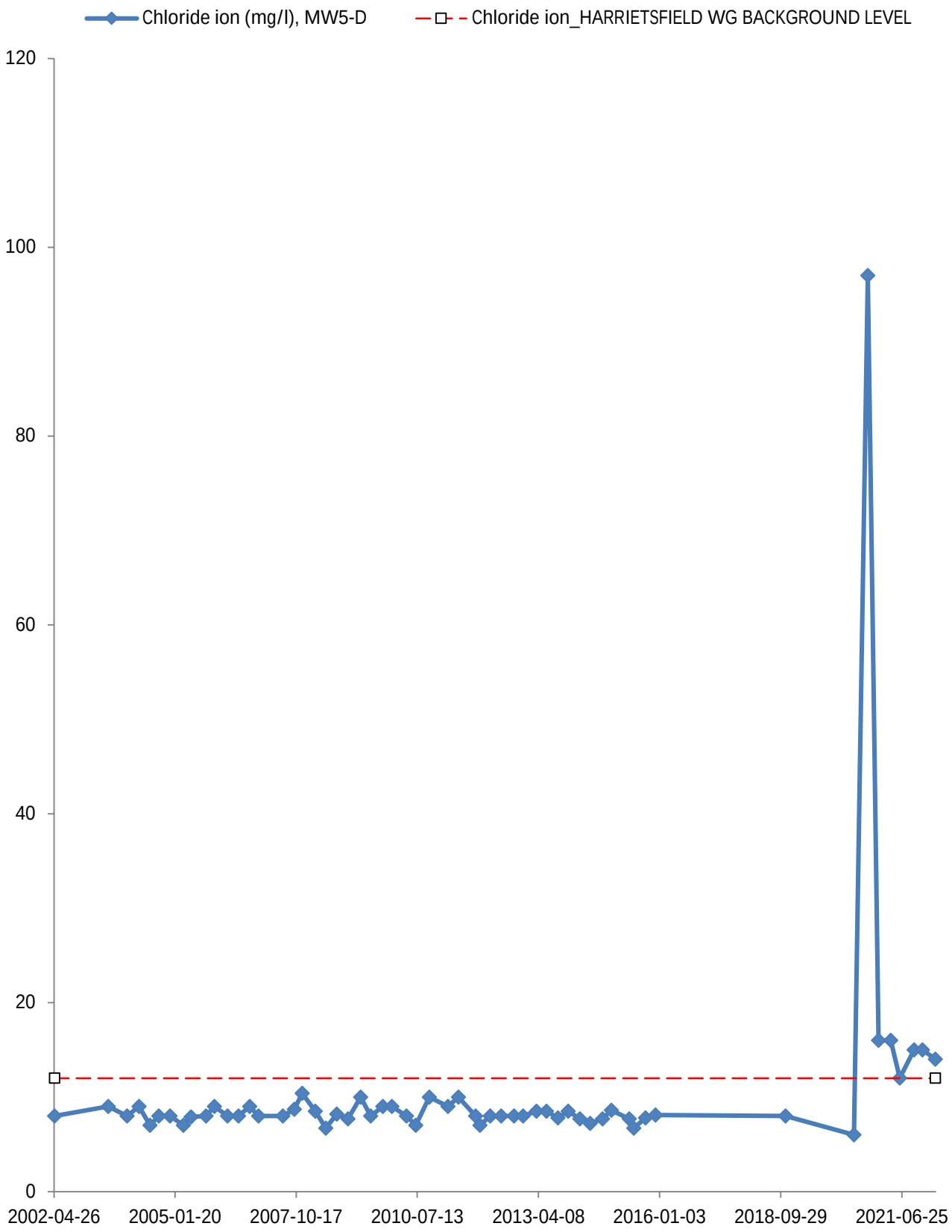
MW5-D-Calcium



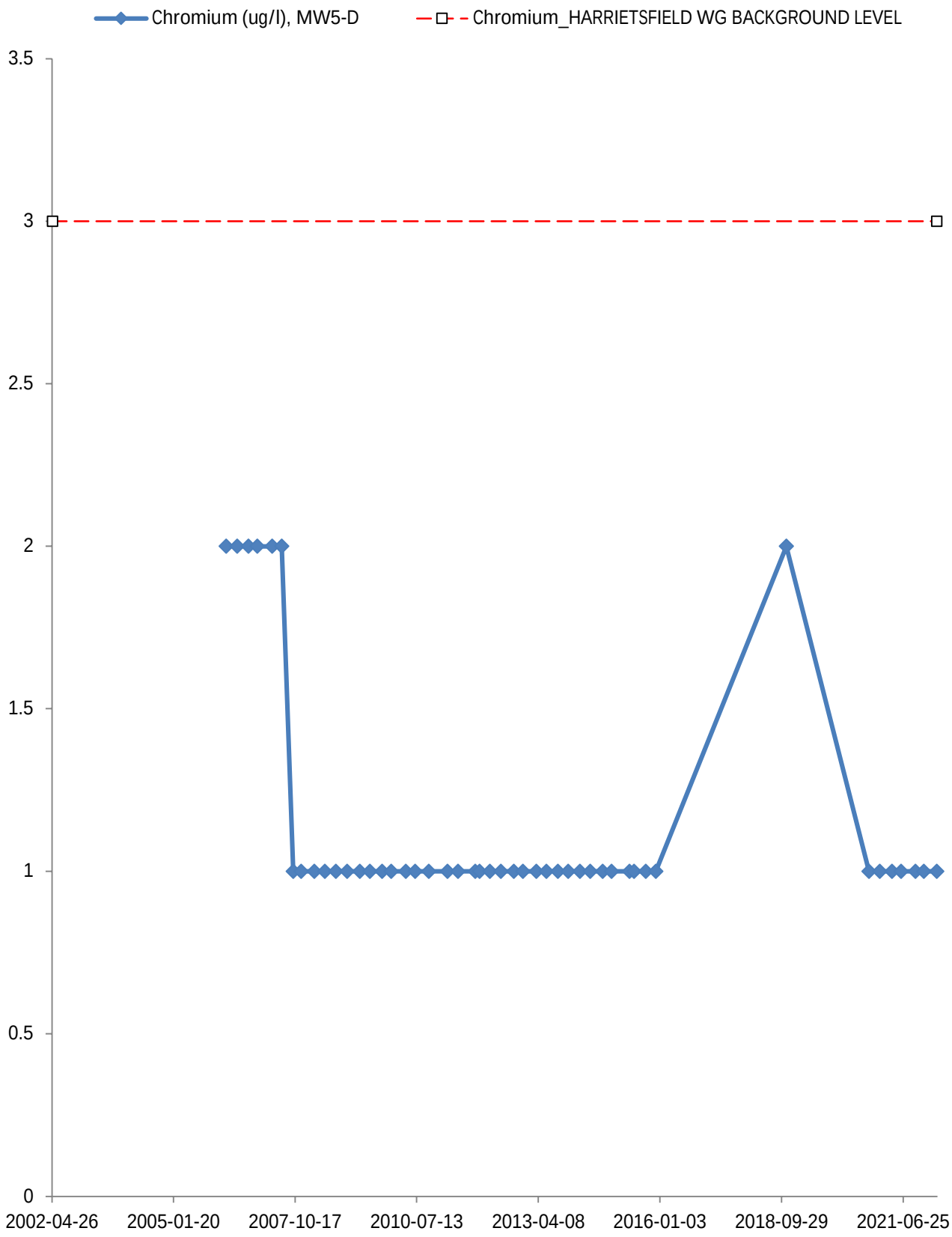
MW5-D-Chemical Oxygen Demand



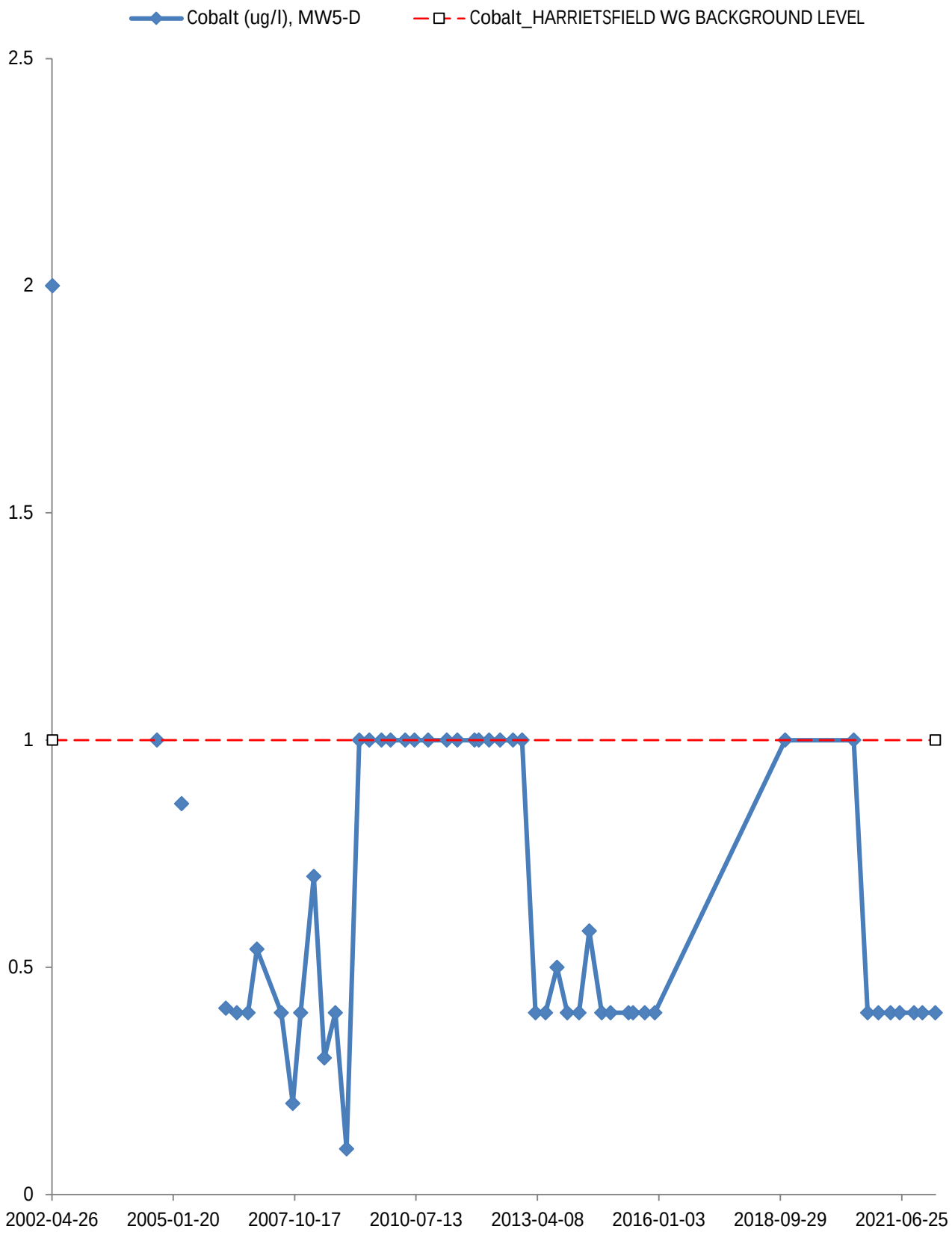
MW5-D-Chloride ion



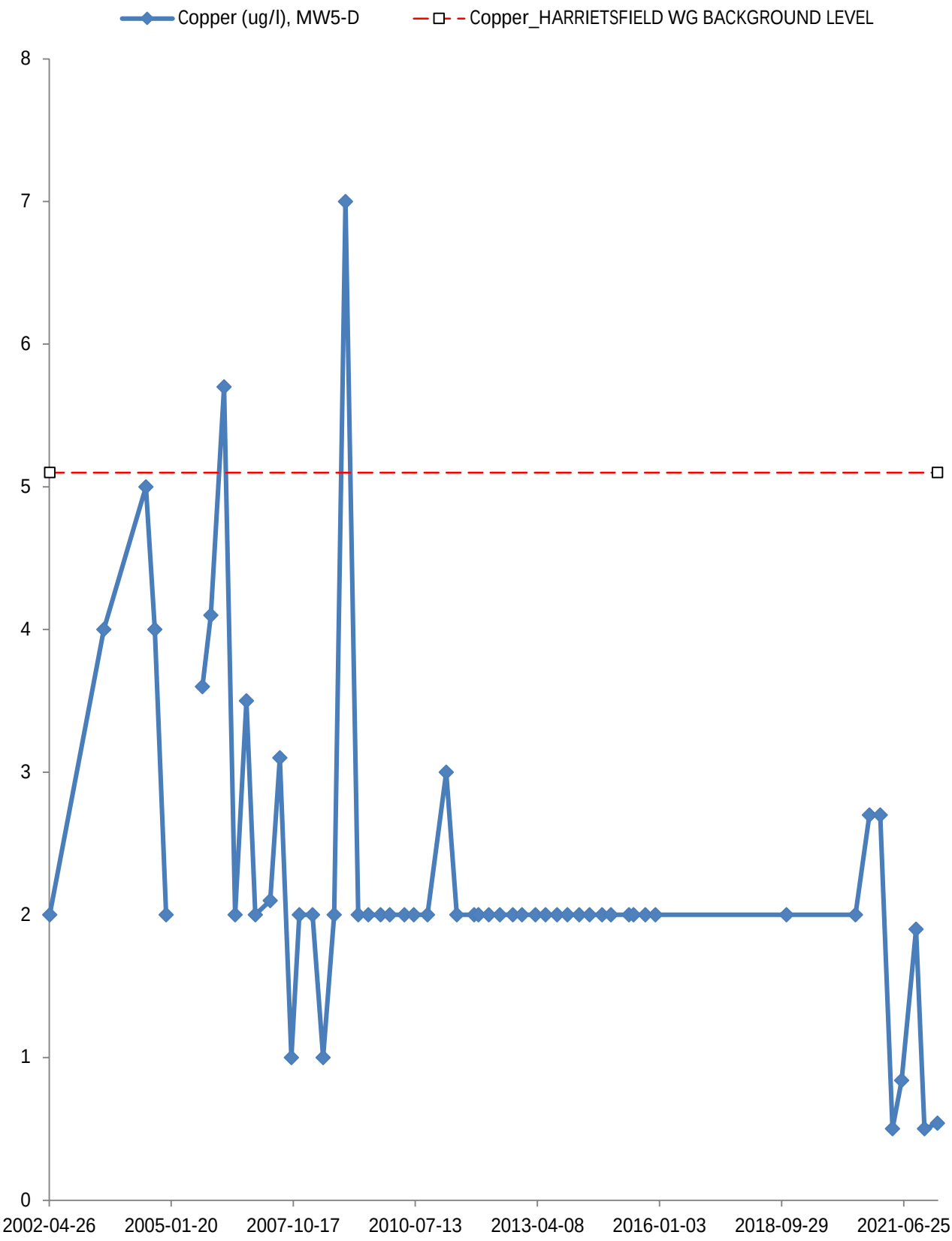
MW5-D-Chromium



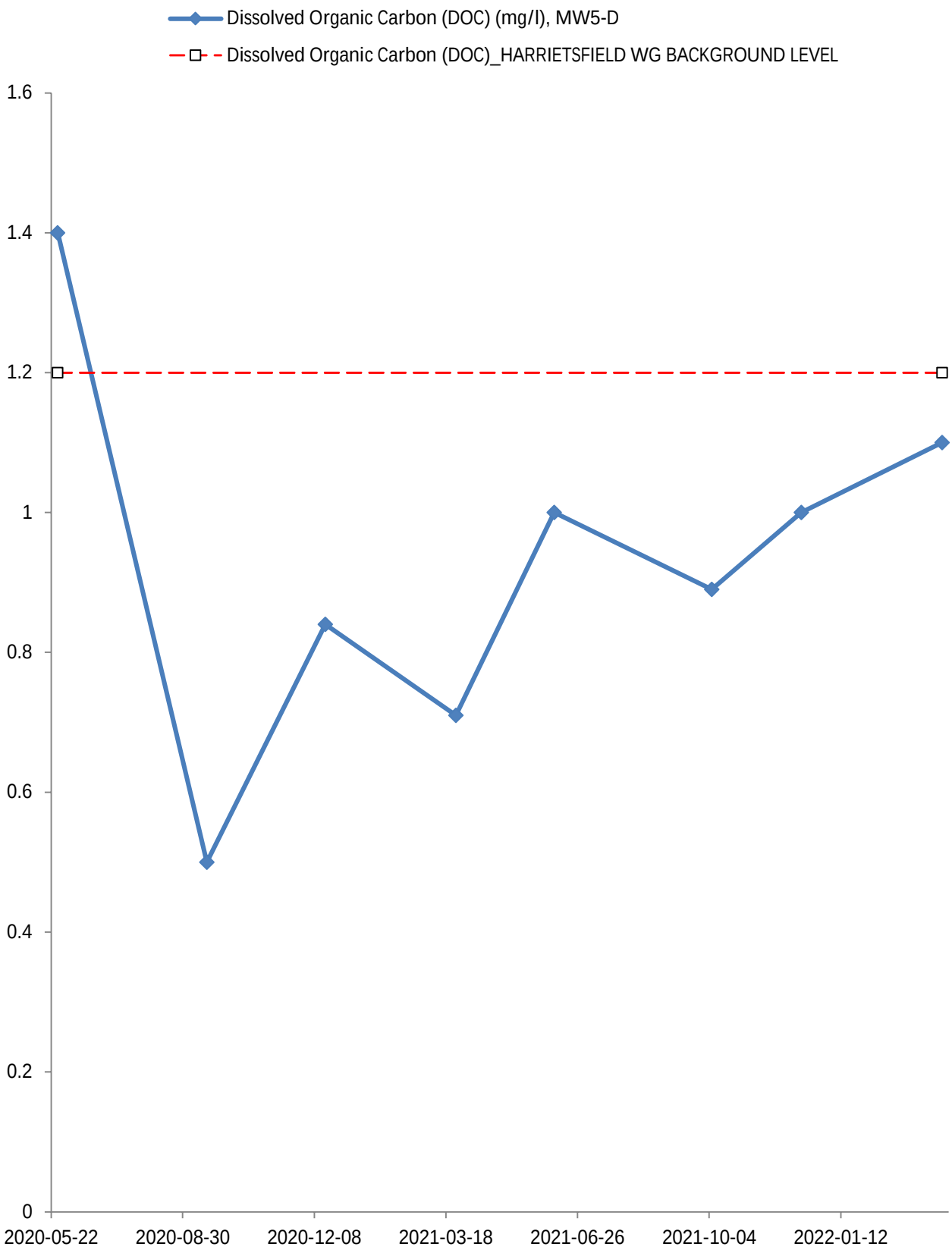
MW5-D-Cobalt


Cobalt (ug/l), MW5-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

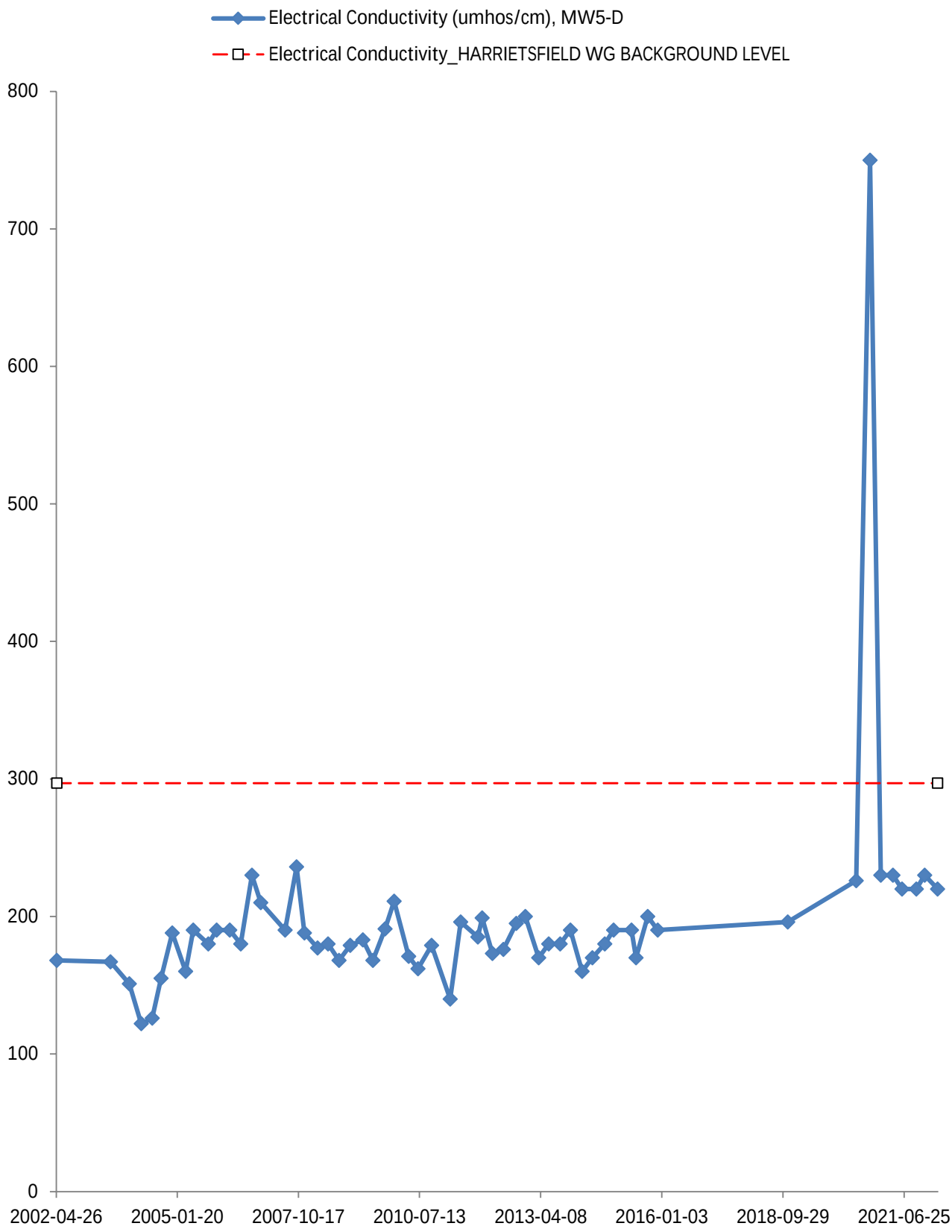
MW5-D-Copper


Copper (ug/l), MW5-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

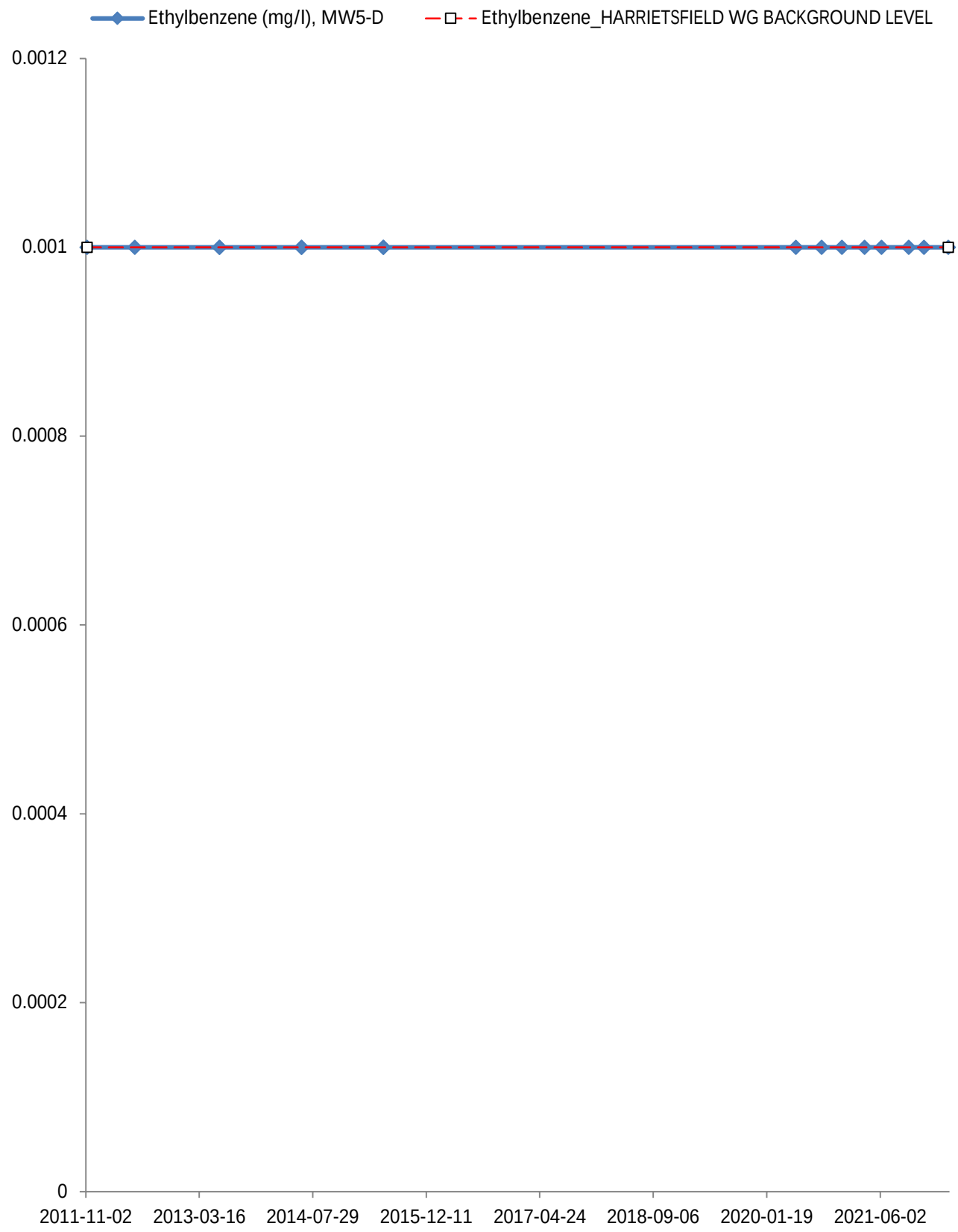
MW5-D-Dissolved Organic Carbon7



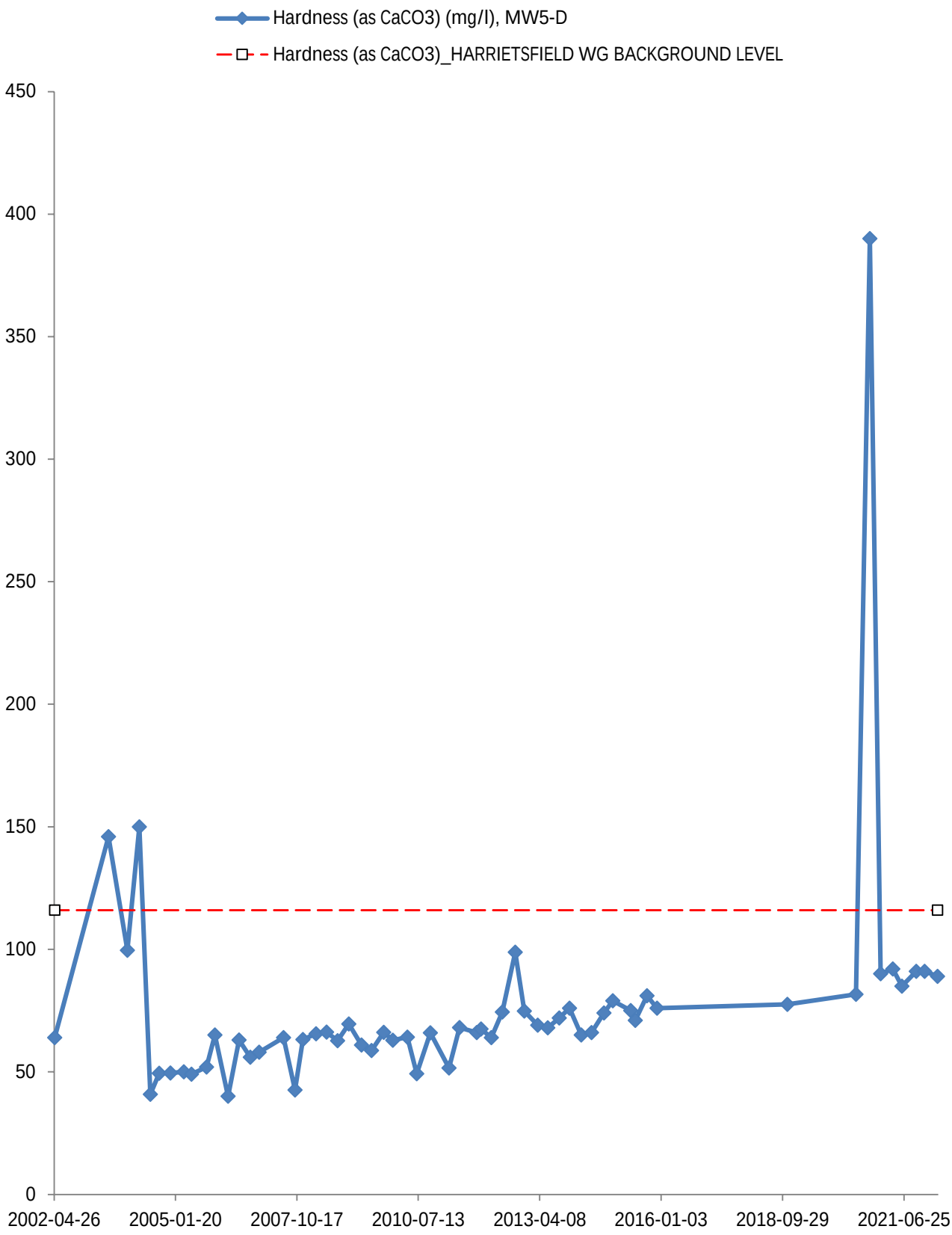
MW5-D-Electrical Conductivity



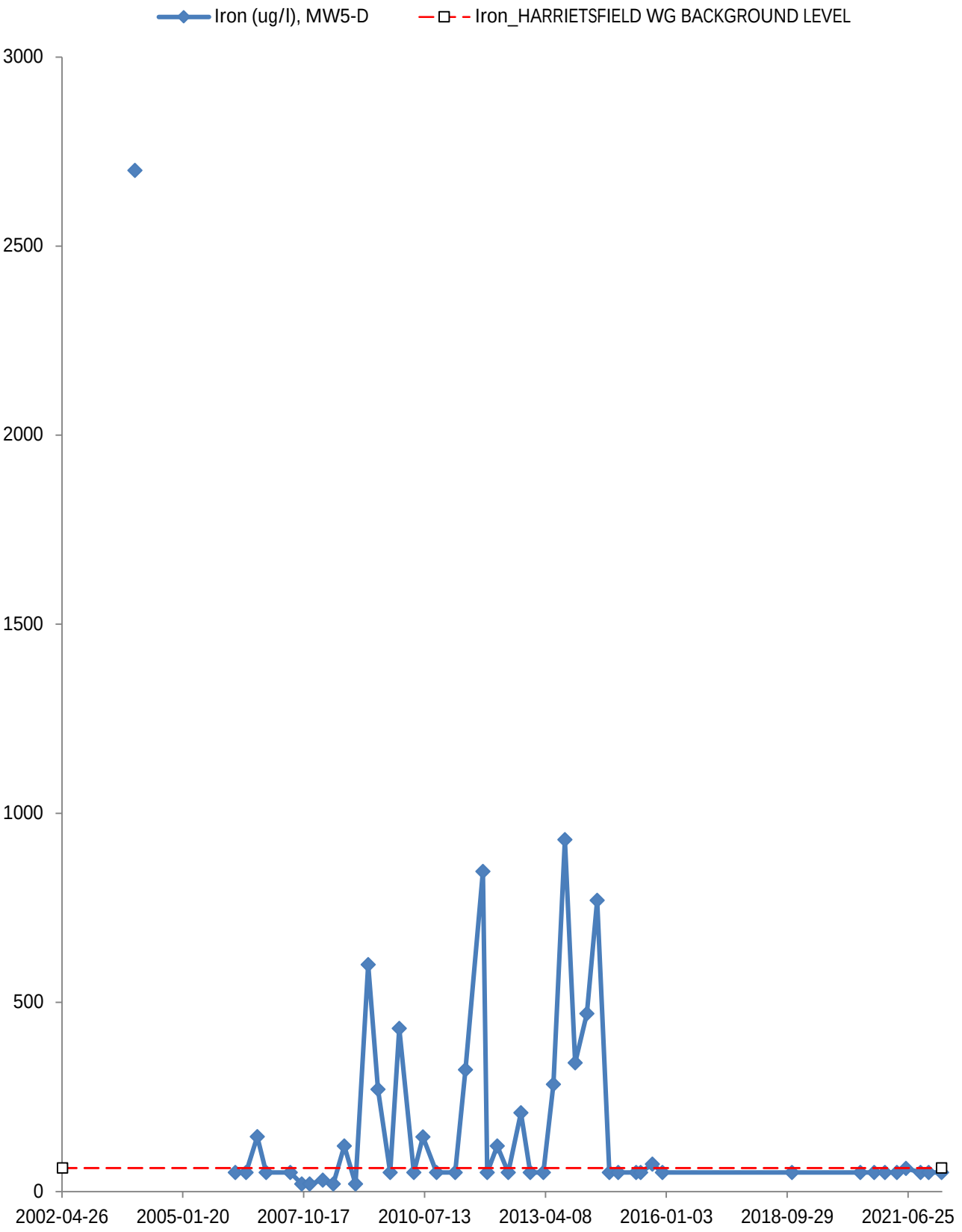
MW5-D-Ethylbenzene



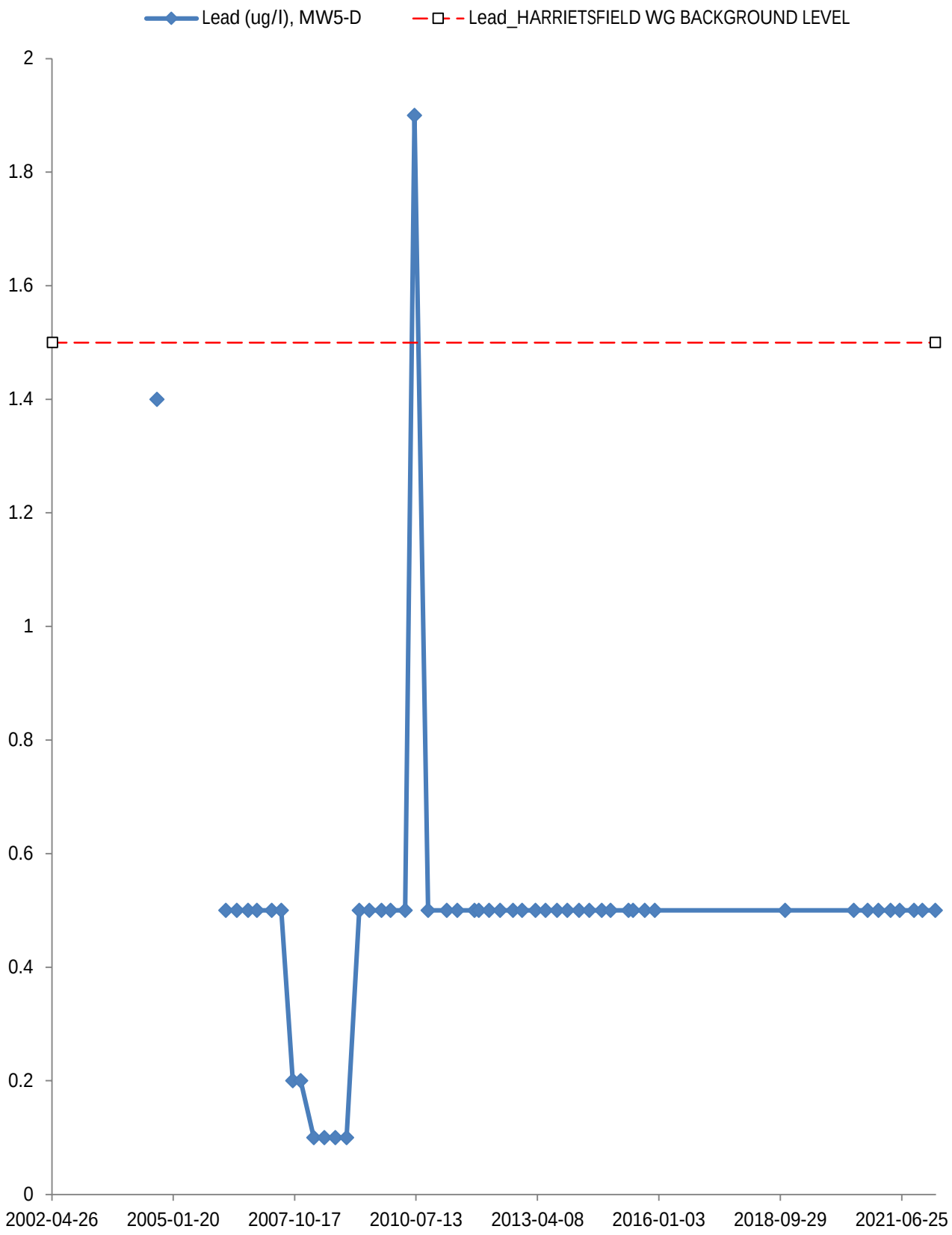
MW5-D-Hardness (as CaCO3)



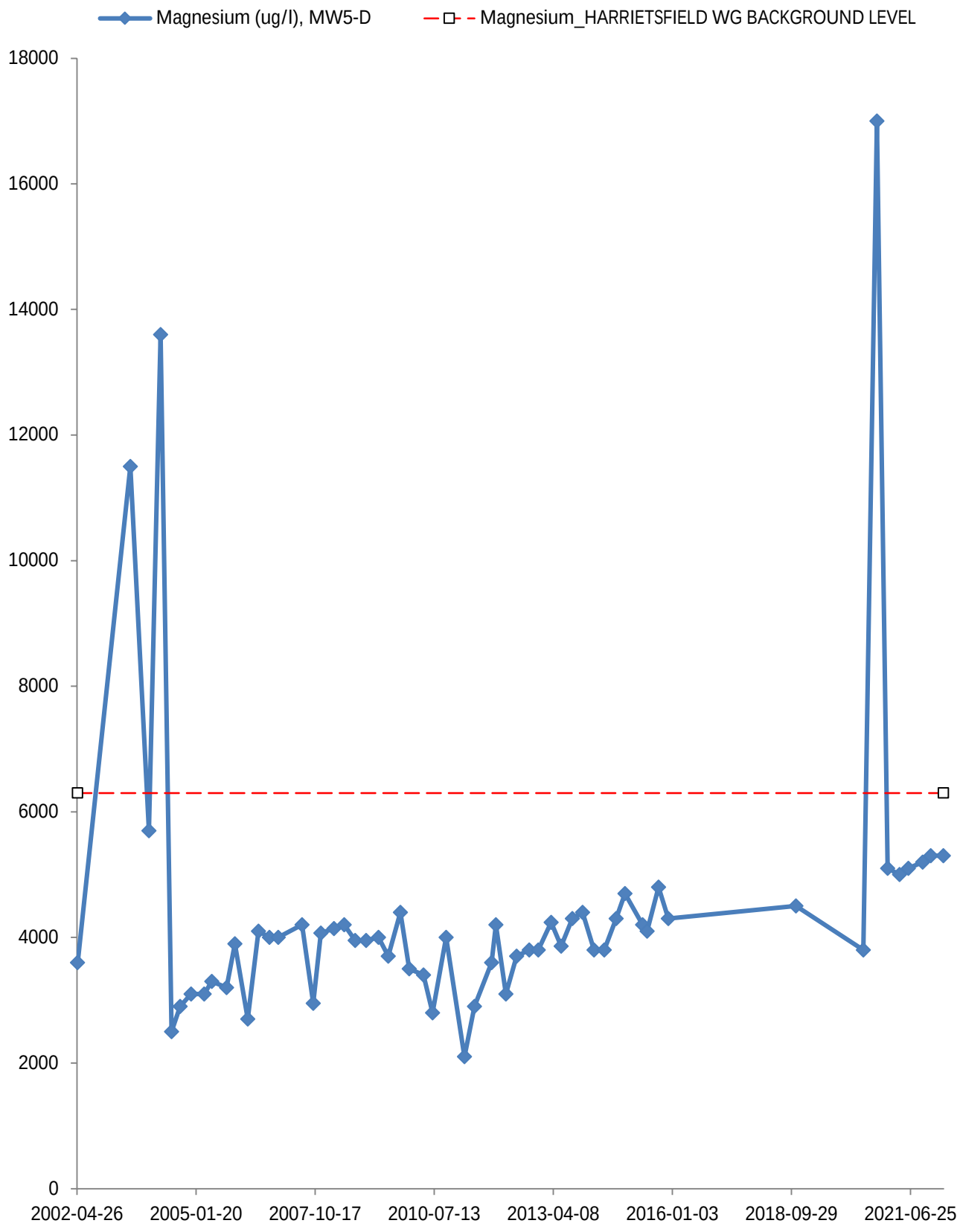
MW5-D-Iron


Iron (ug/l), MW5-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
3000
2500
2000
1500
1000
500
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

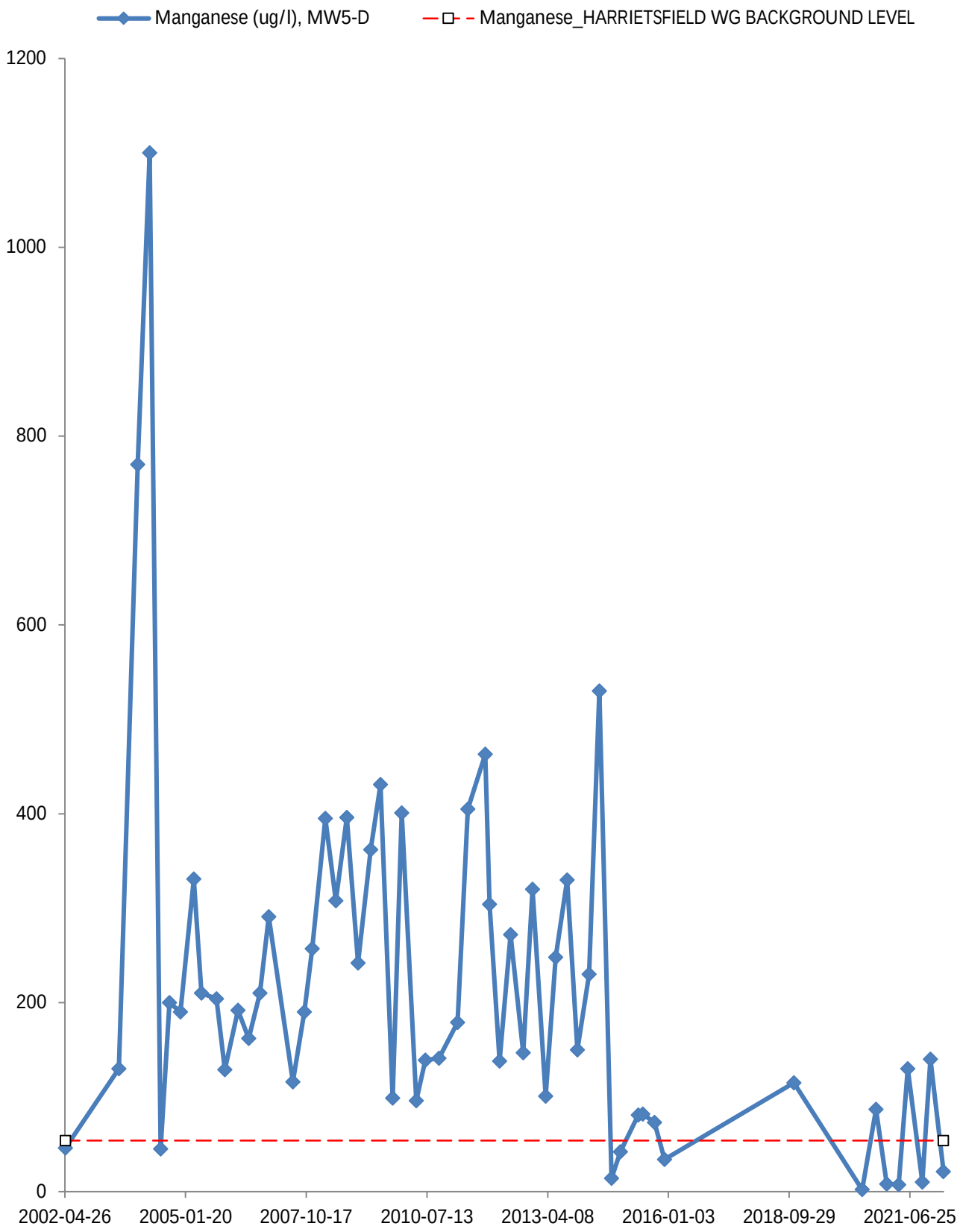
MW5-D-Lead


Lead (ug/l), MW5-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

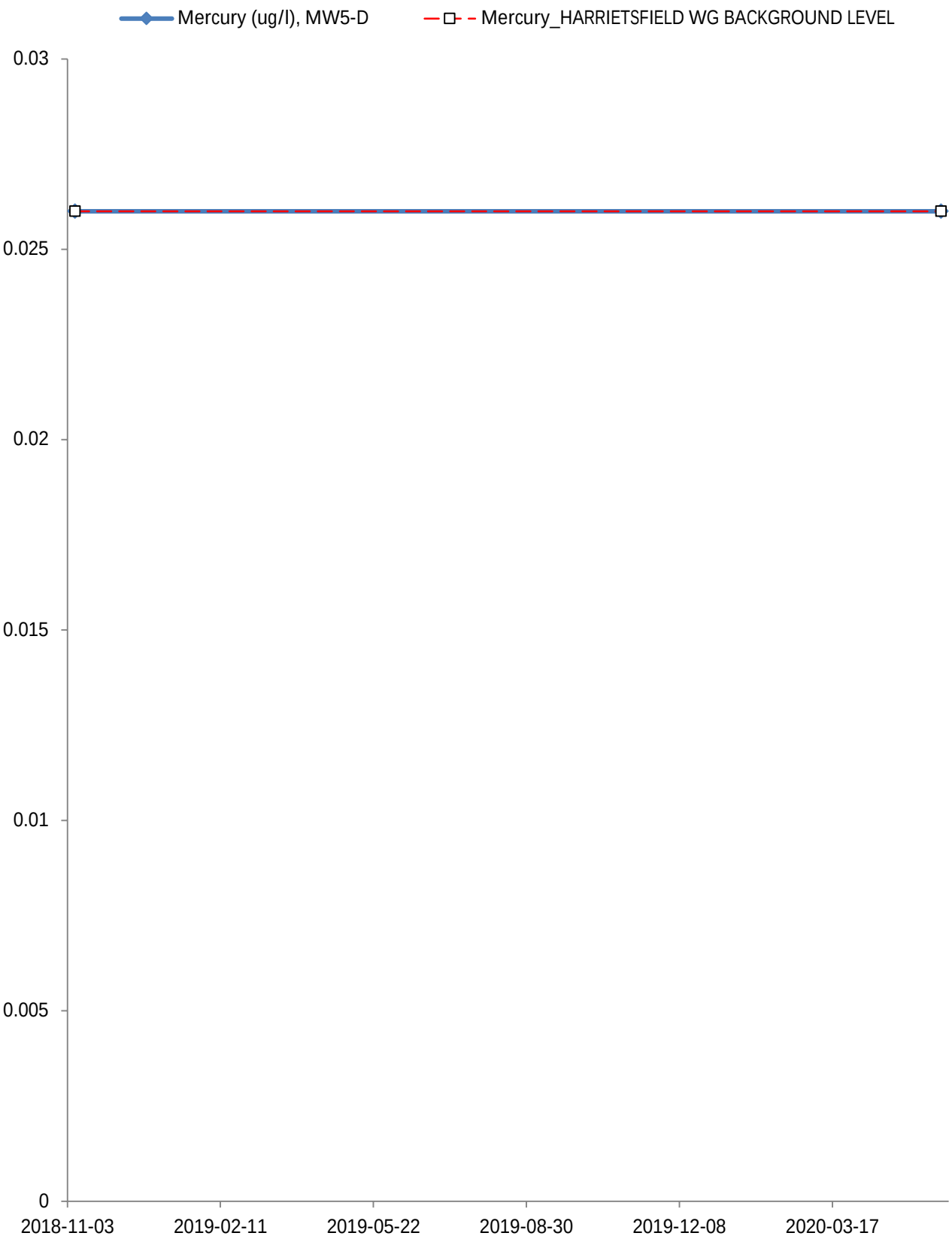
MW5-D-Magnesium



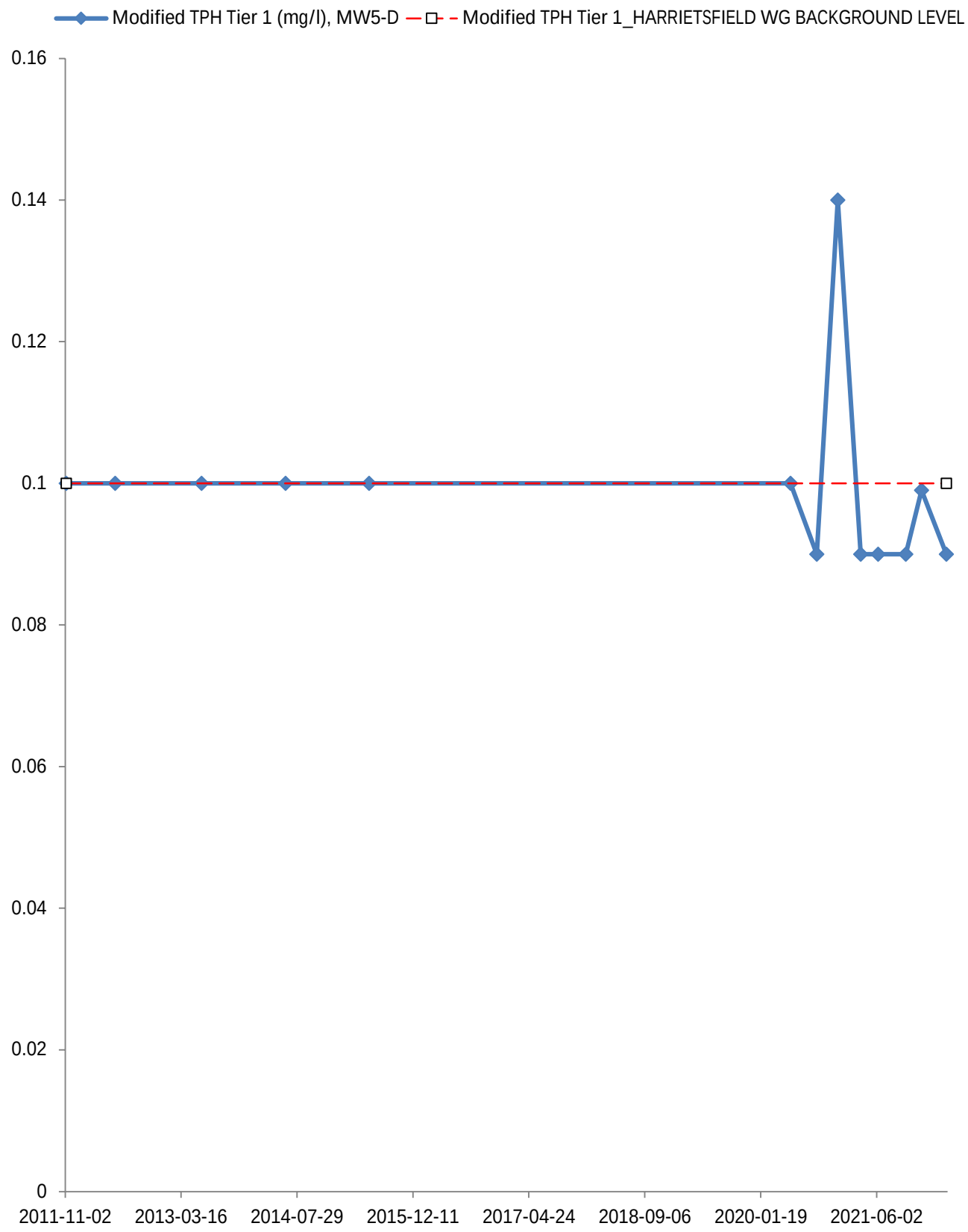
MW5-D-Manganese



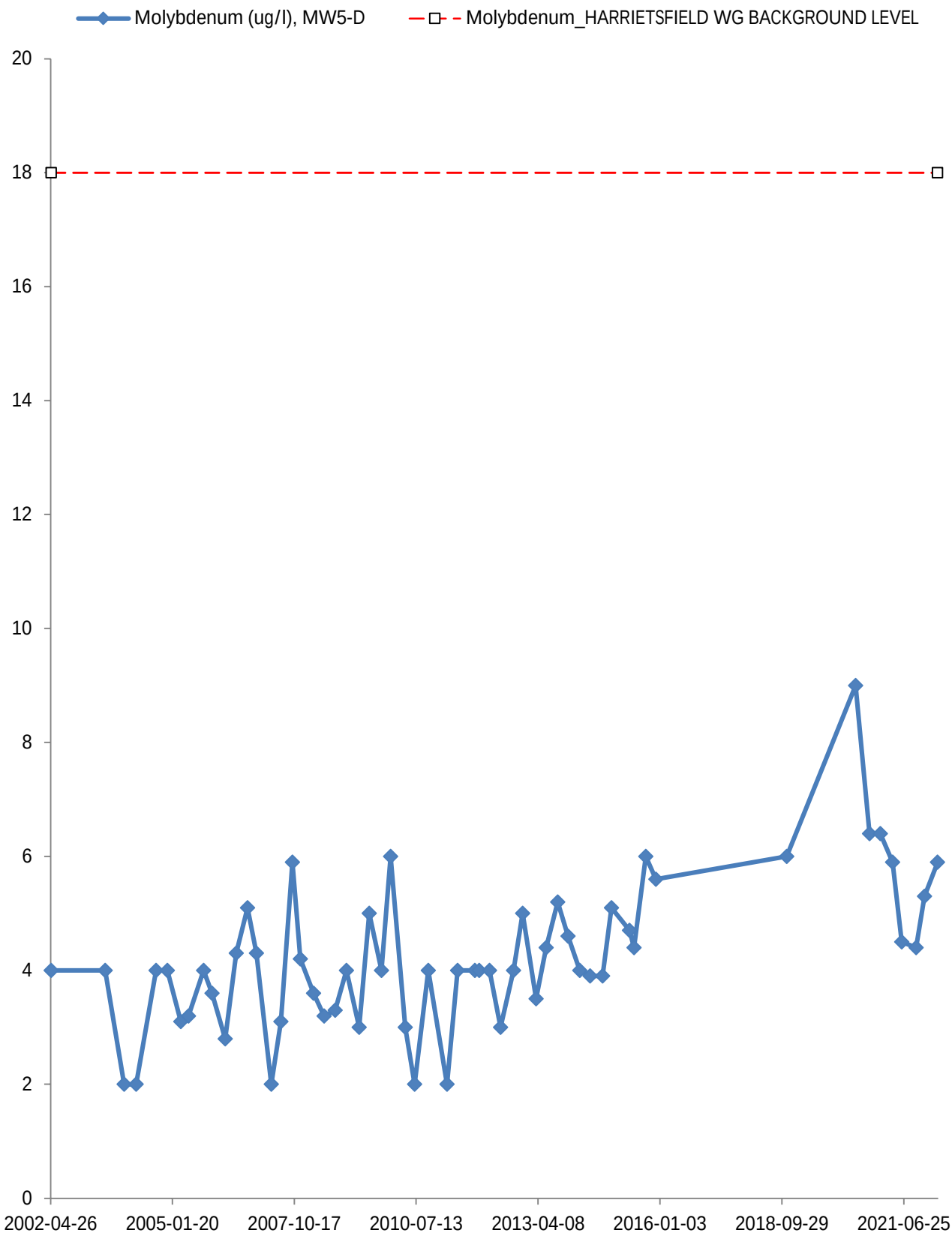
MW5-D-Mercury



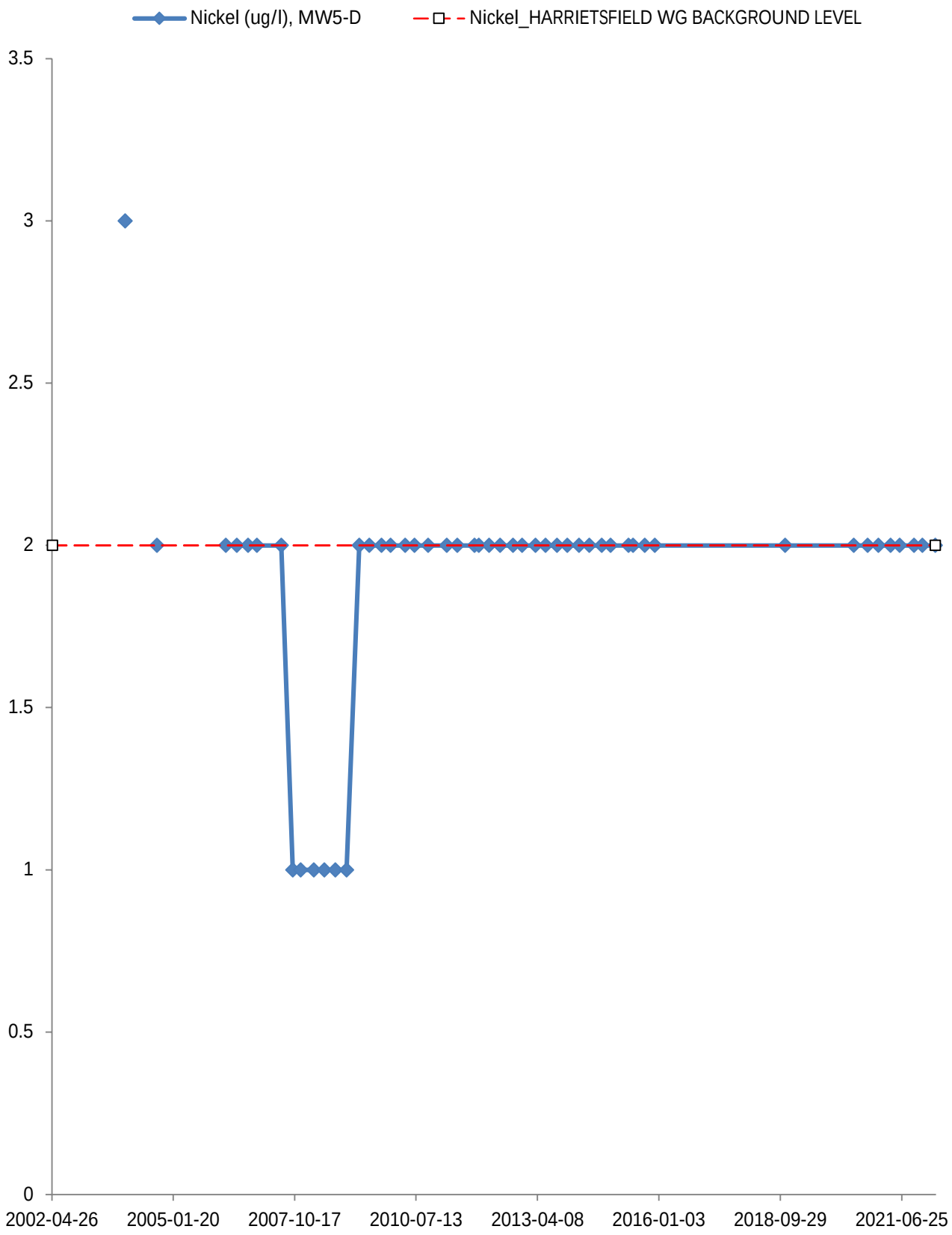
MW5-D-Modified TPH Tier 1



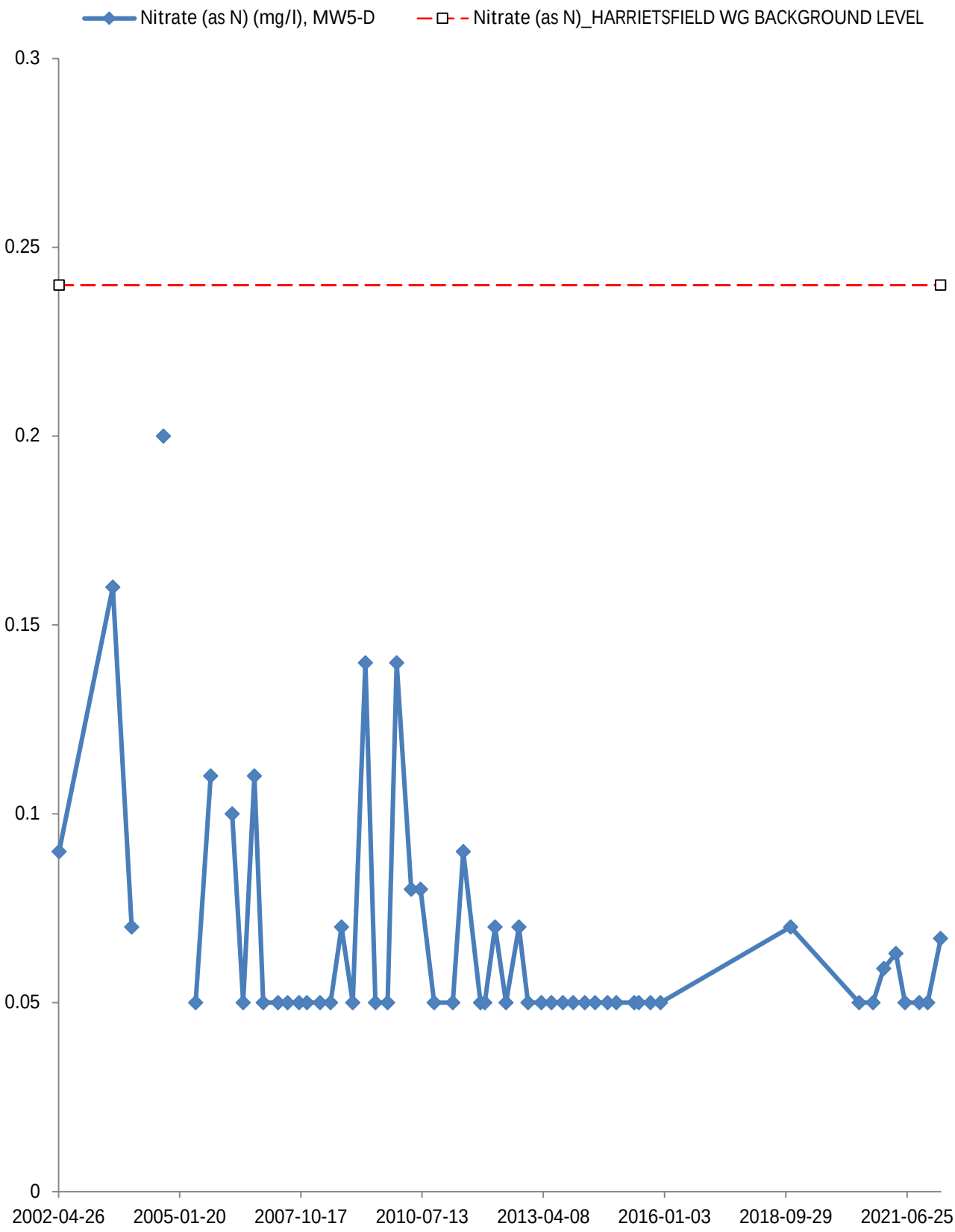
MW5-D-Molybdenum



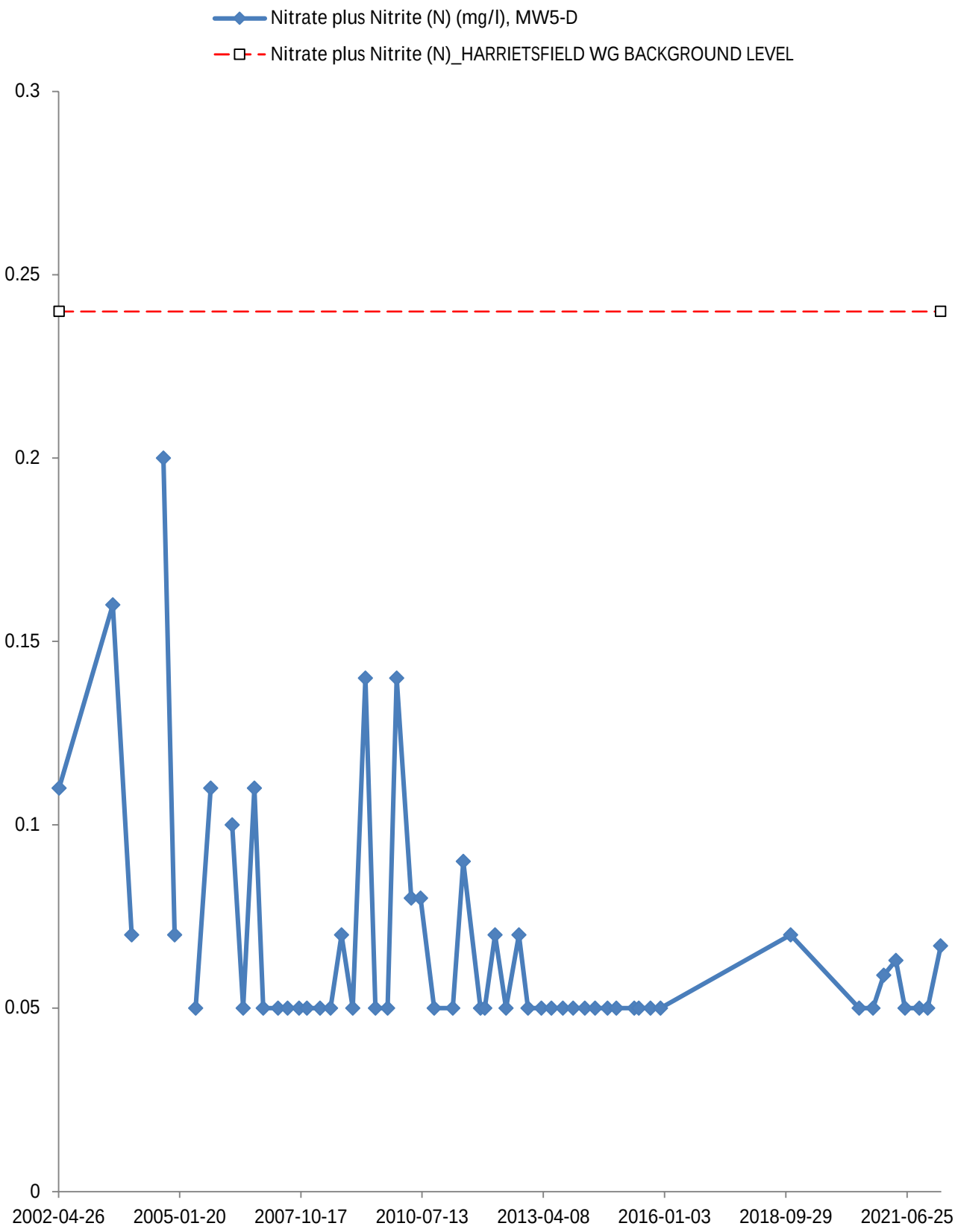
MW5-D-Nickel


Nickel (ug/l), MW5-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
3.5
3
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

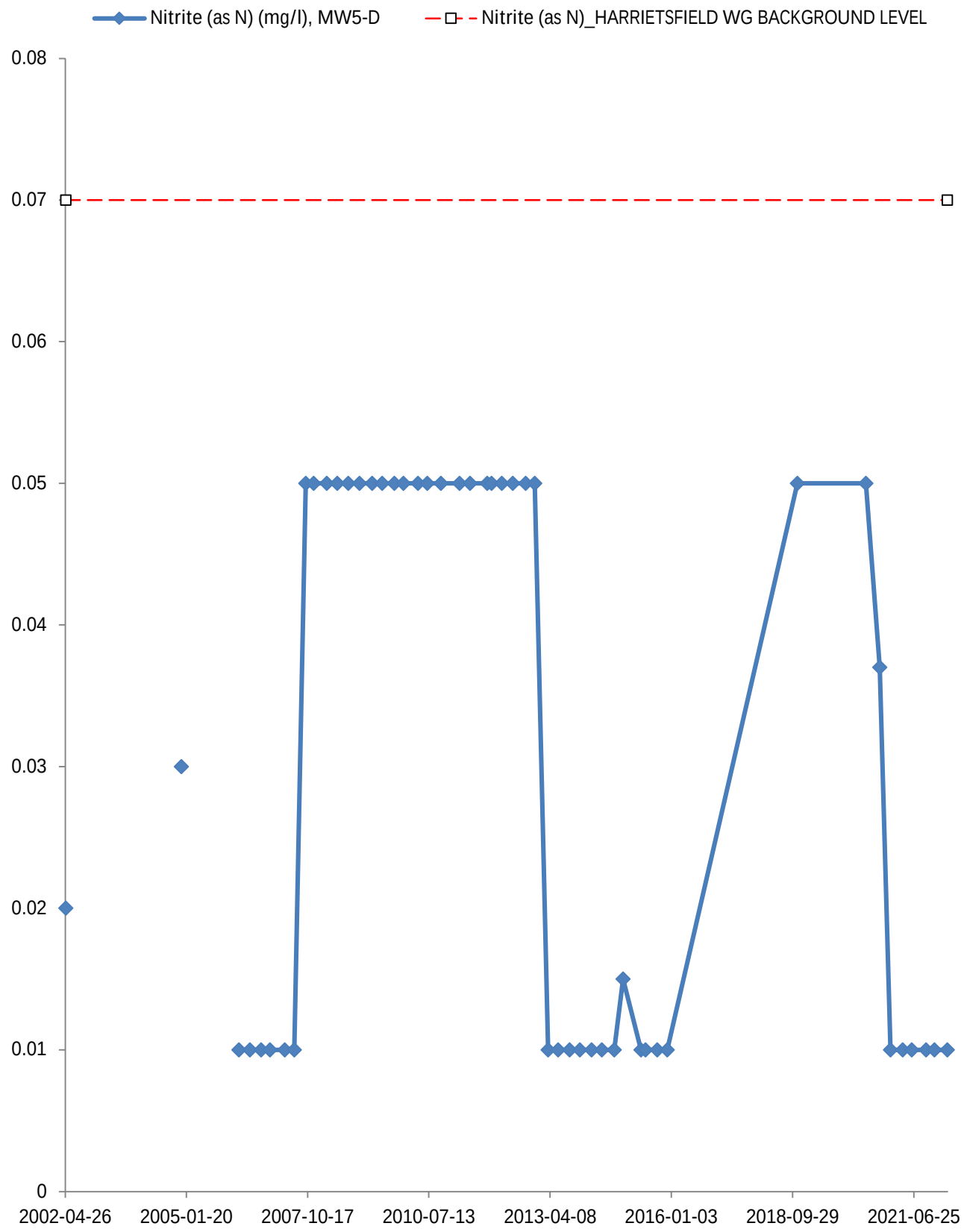
MW5-D-Nitrate (as N)



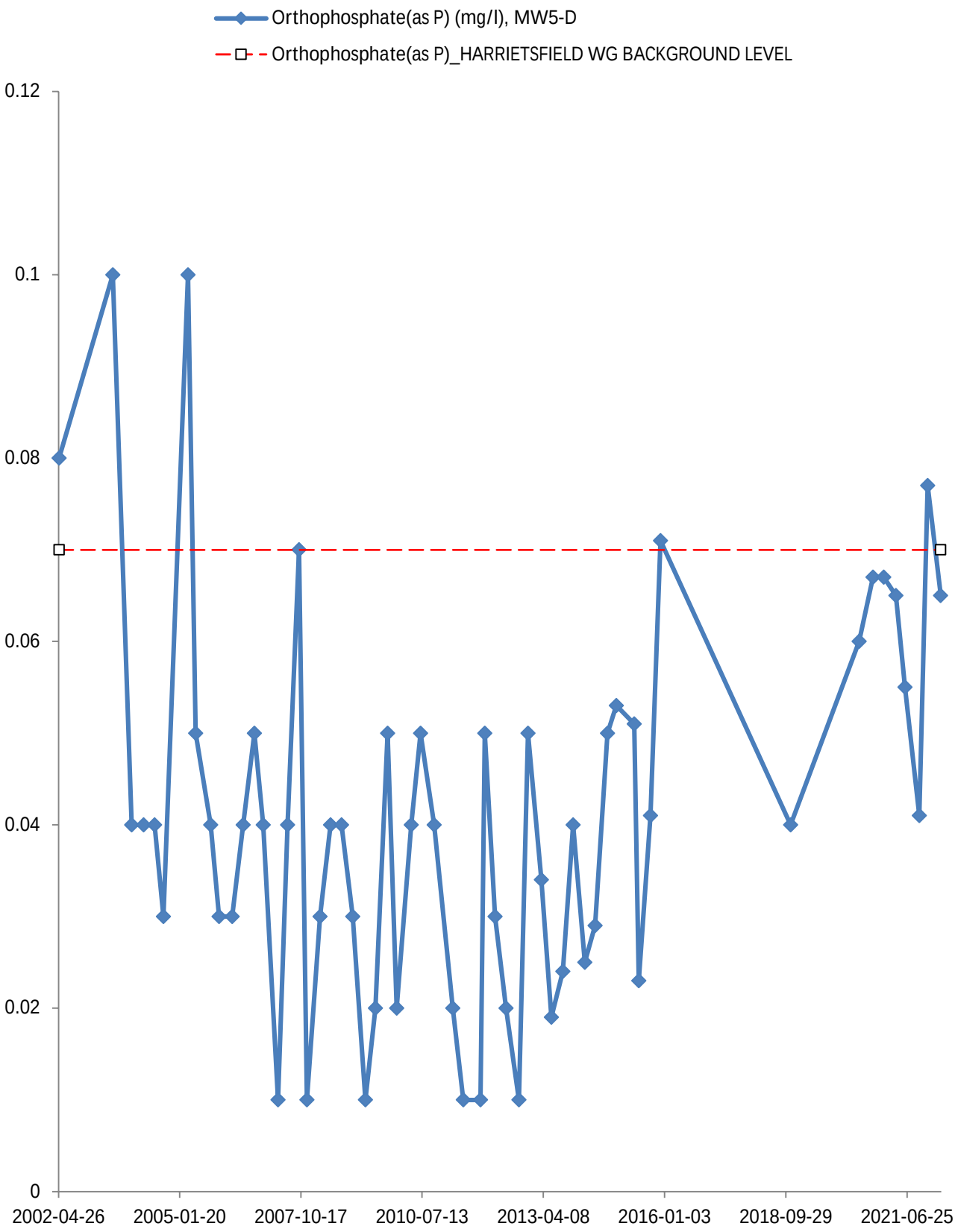
MW5-D-Nitrate plus Nitrite (N)



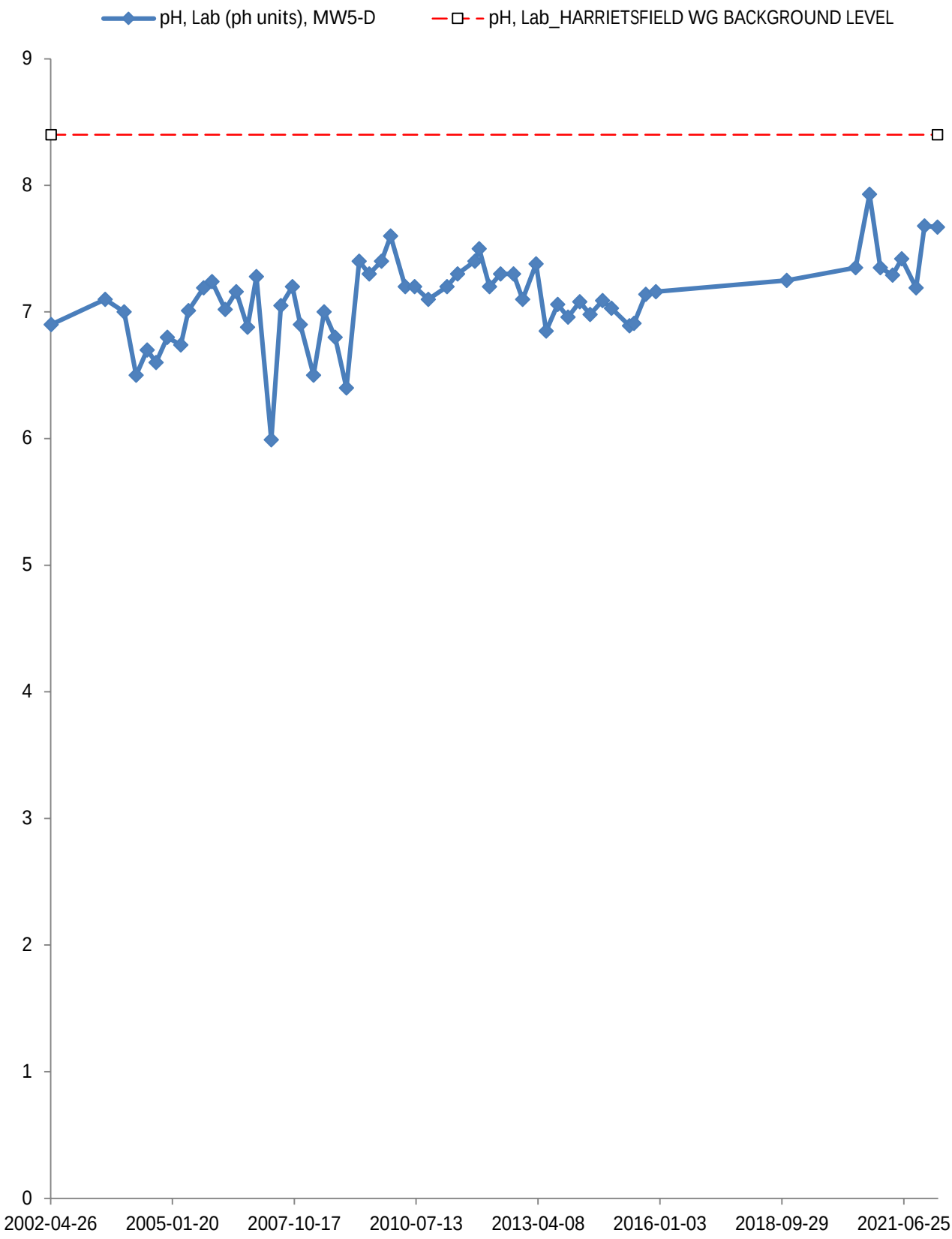
MW5-D-Nitrite (as N)



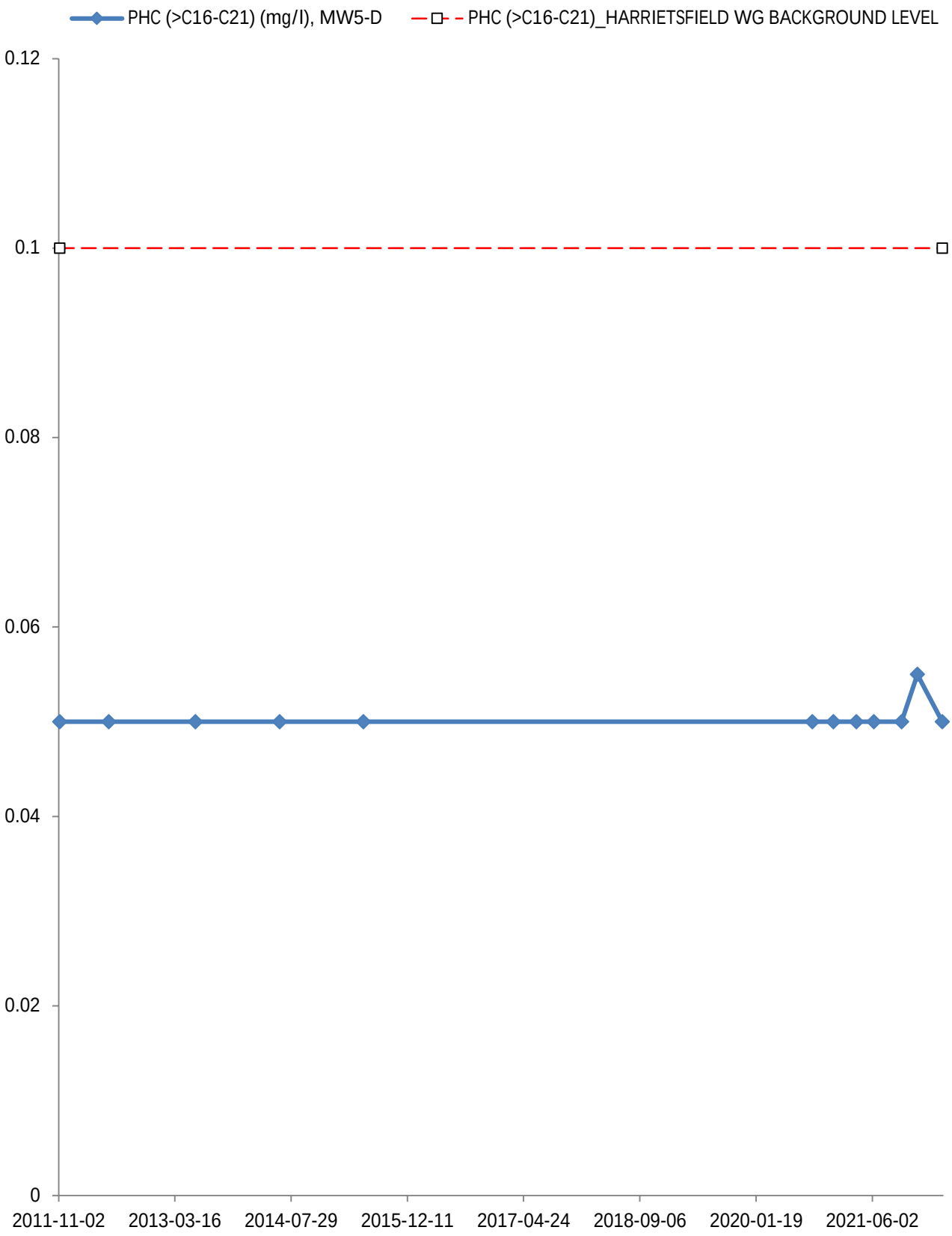
MW5-D-Orthophosphate(as P)



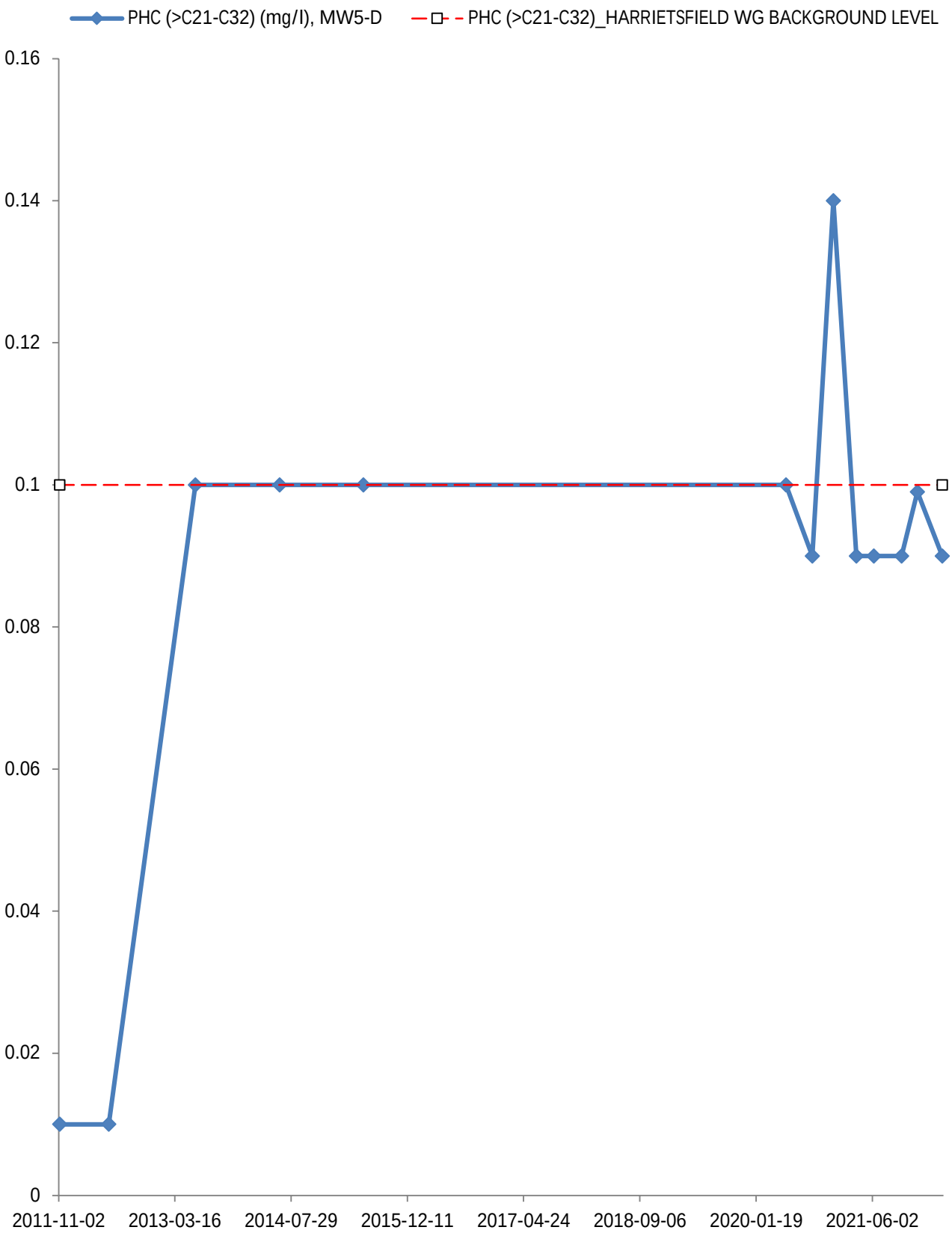
MW5-D-pH, Lab


pH, Lab (ph units), MW5-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

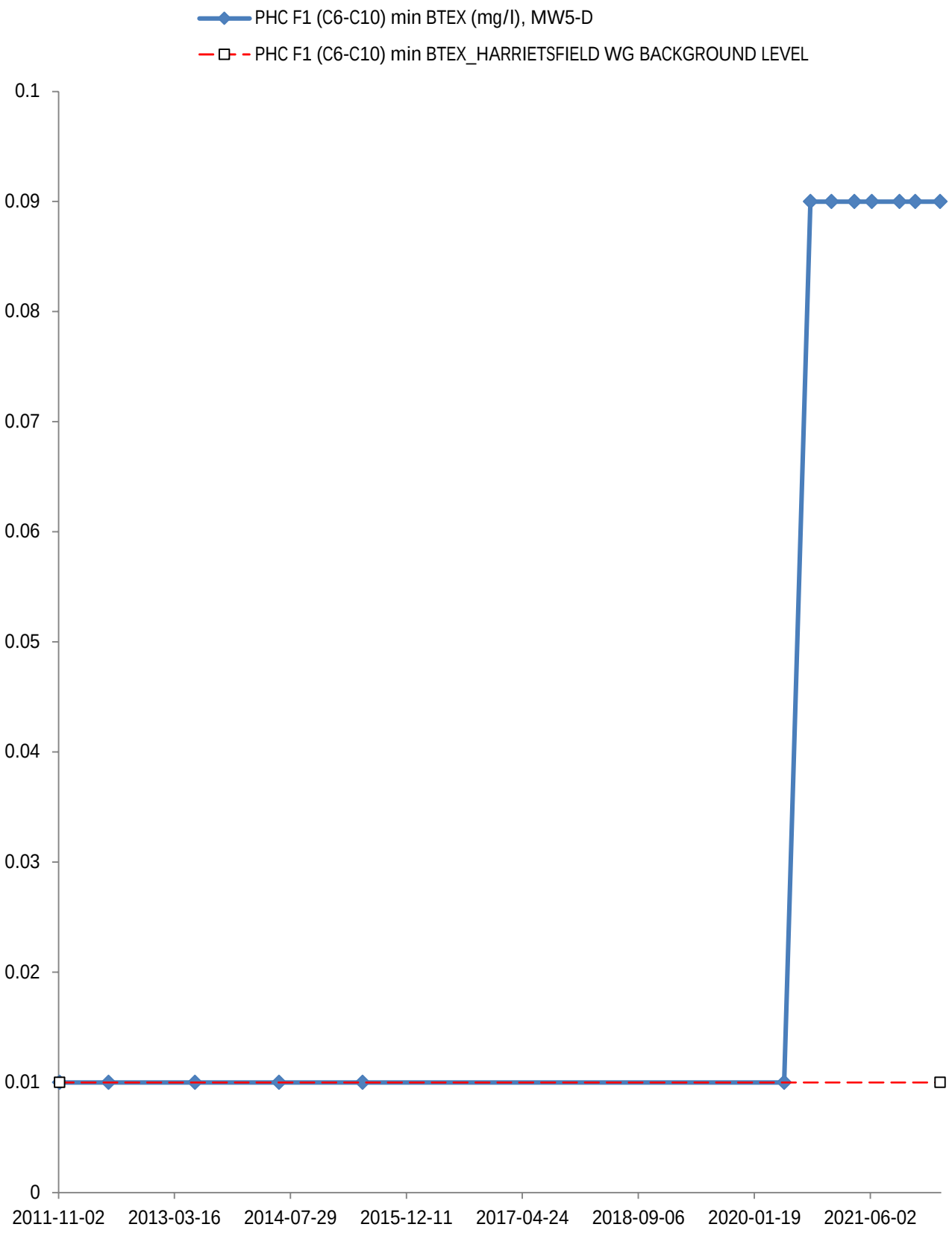
MW5-D-PHC (>C16-C21)



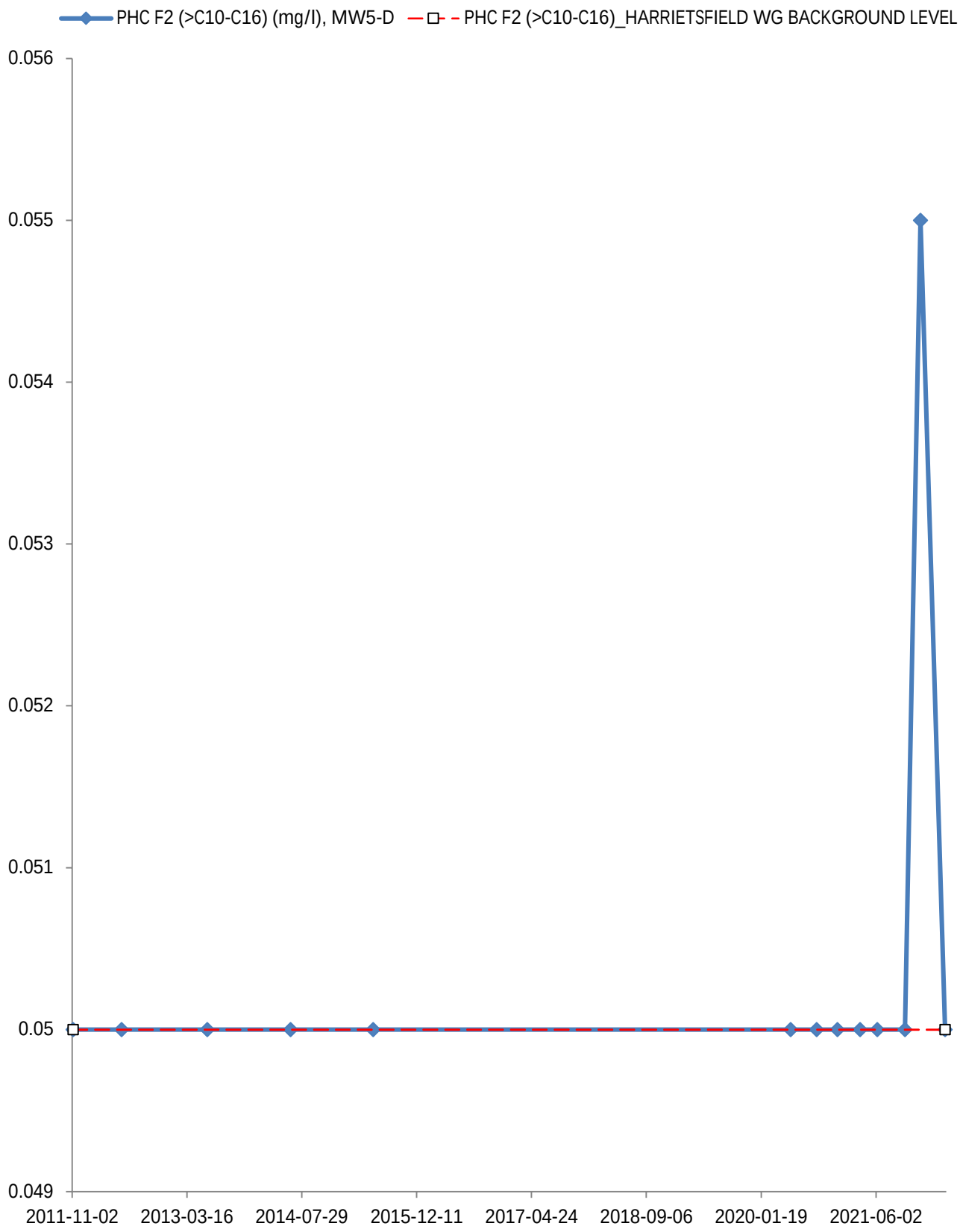
MW5-D-PHC (>C21-C32)



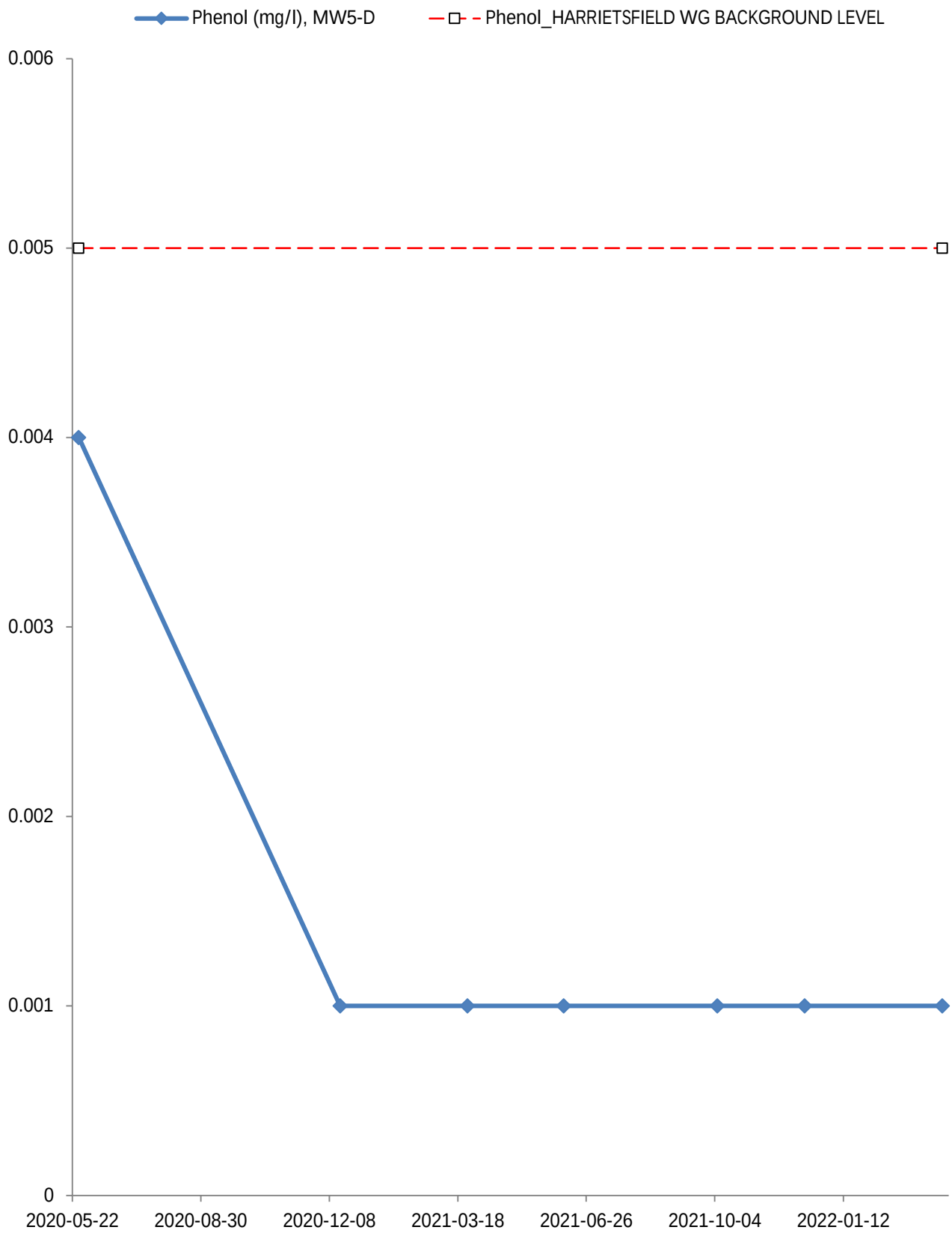
MW5-D-PHC F1 (C6-C10) min BTEX



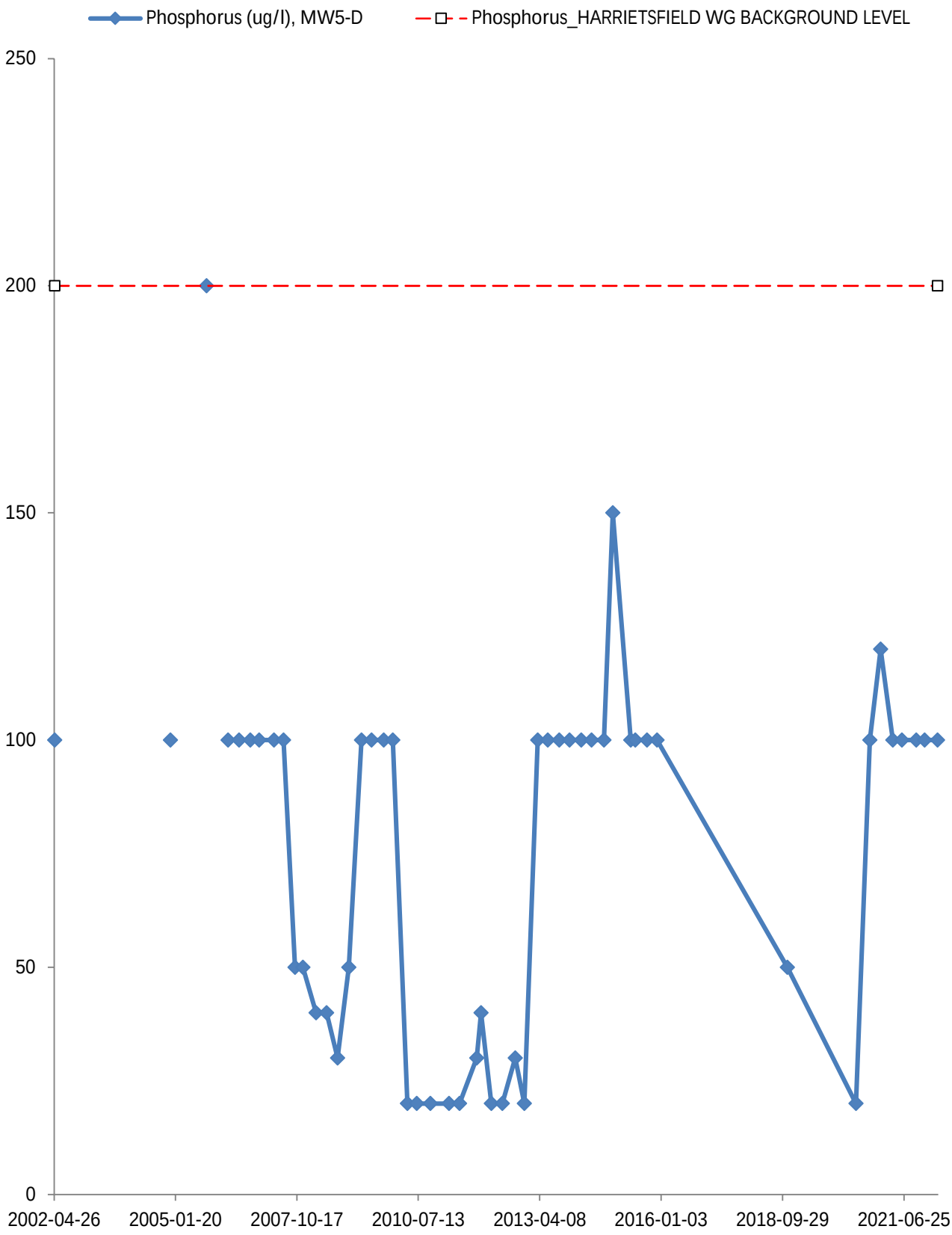
MW5-D-PHC F2 (>C10-C16)



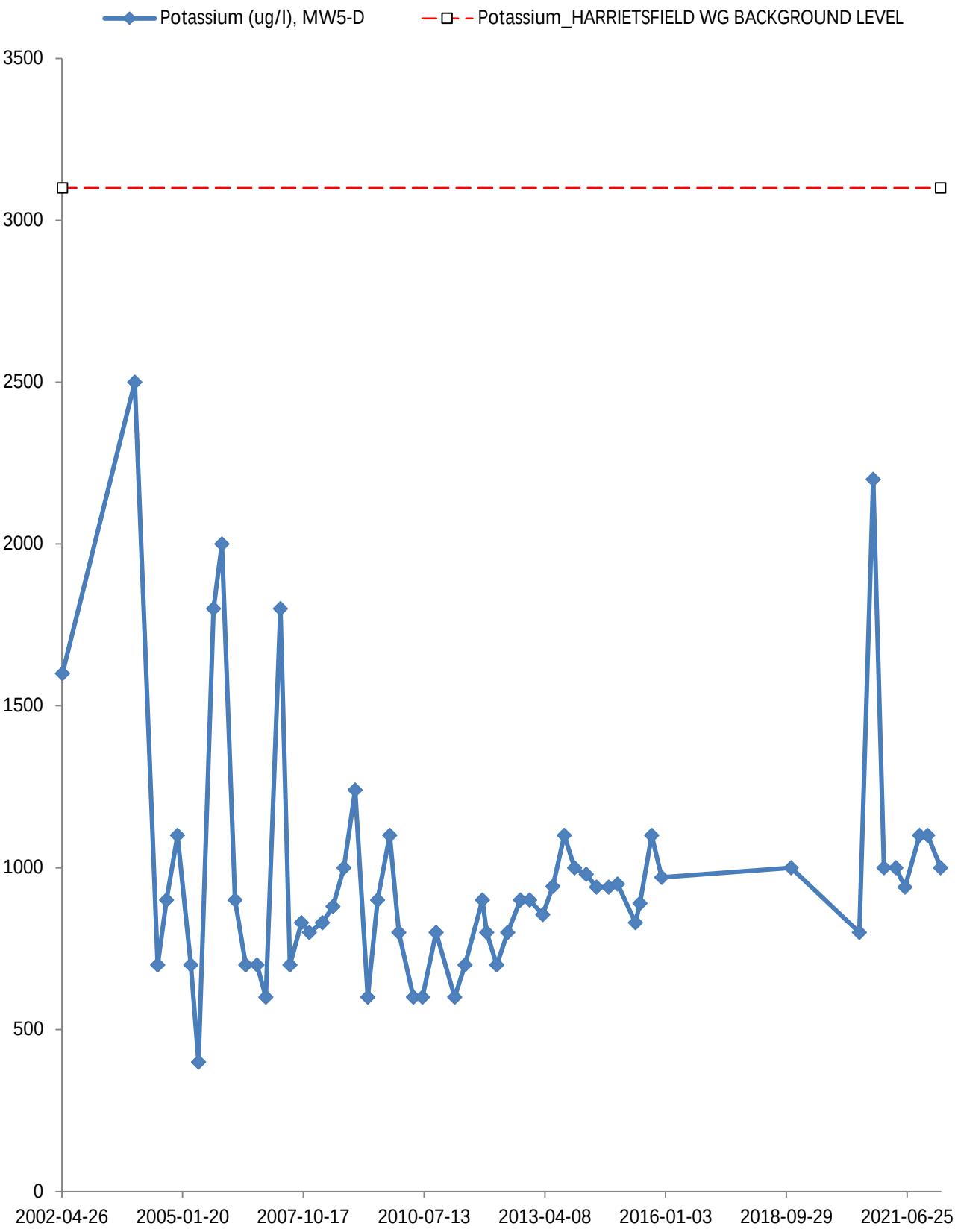
MW5-D-Phenol


Phenol (mg/l), MW5-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-22
2020-08-30
2020-12-08
2021-03-18
2021-06-26
2021-10-04
2022-01-12

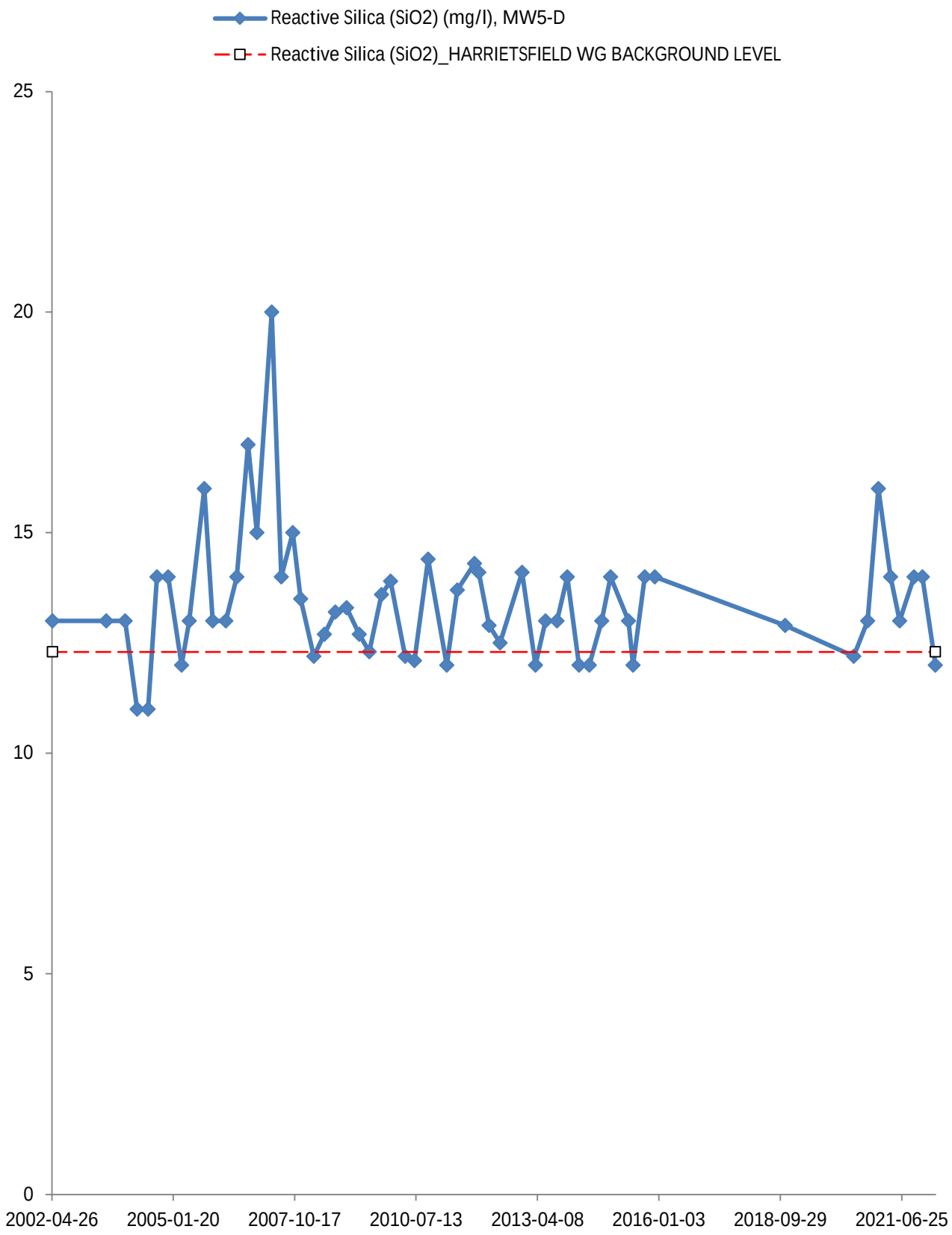
MW5-D-Phosphorus



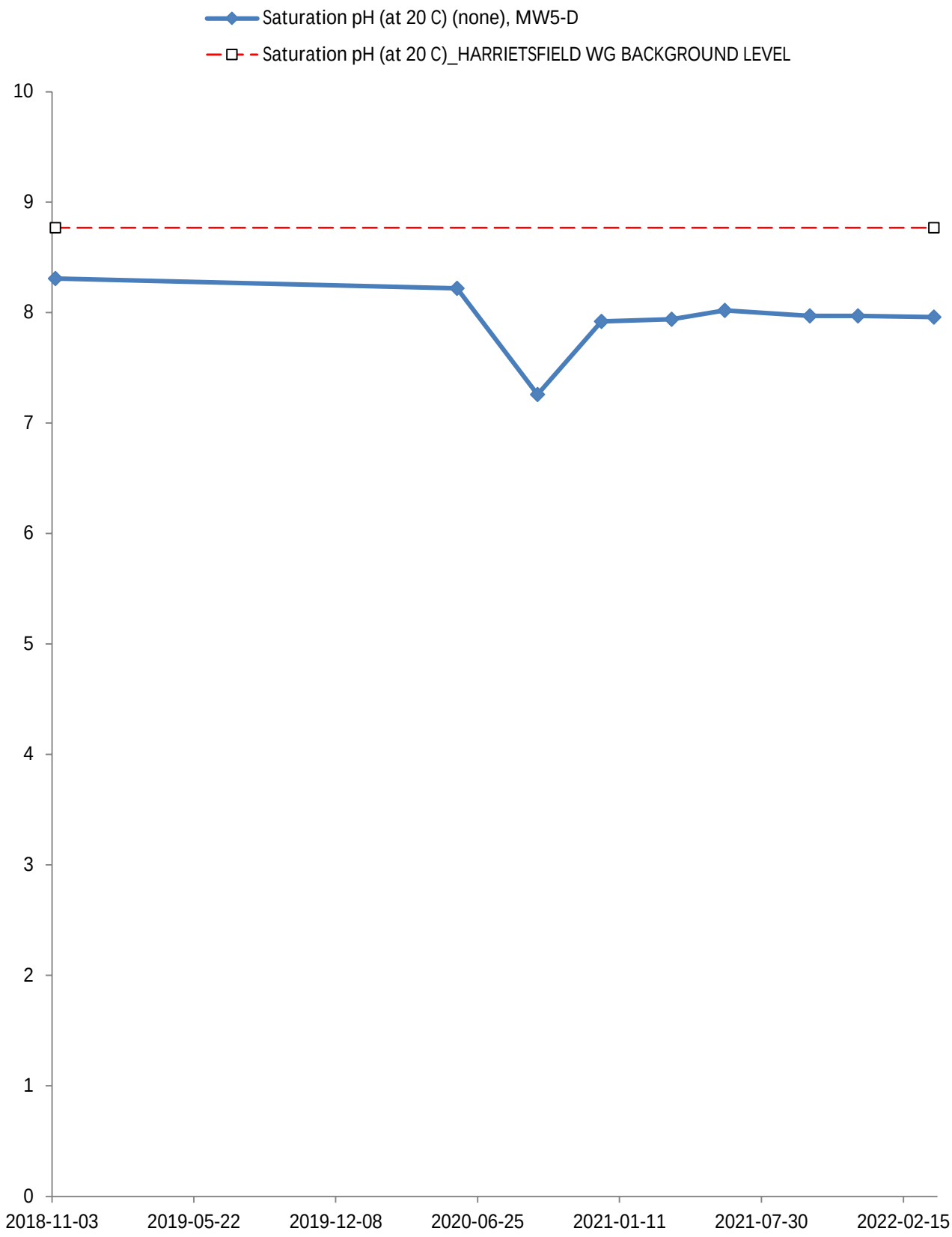
MW5-D-Potassium



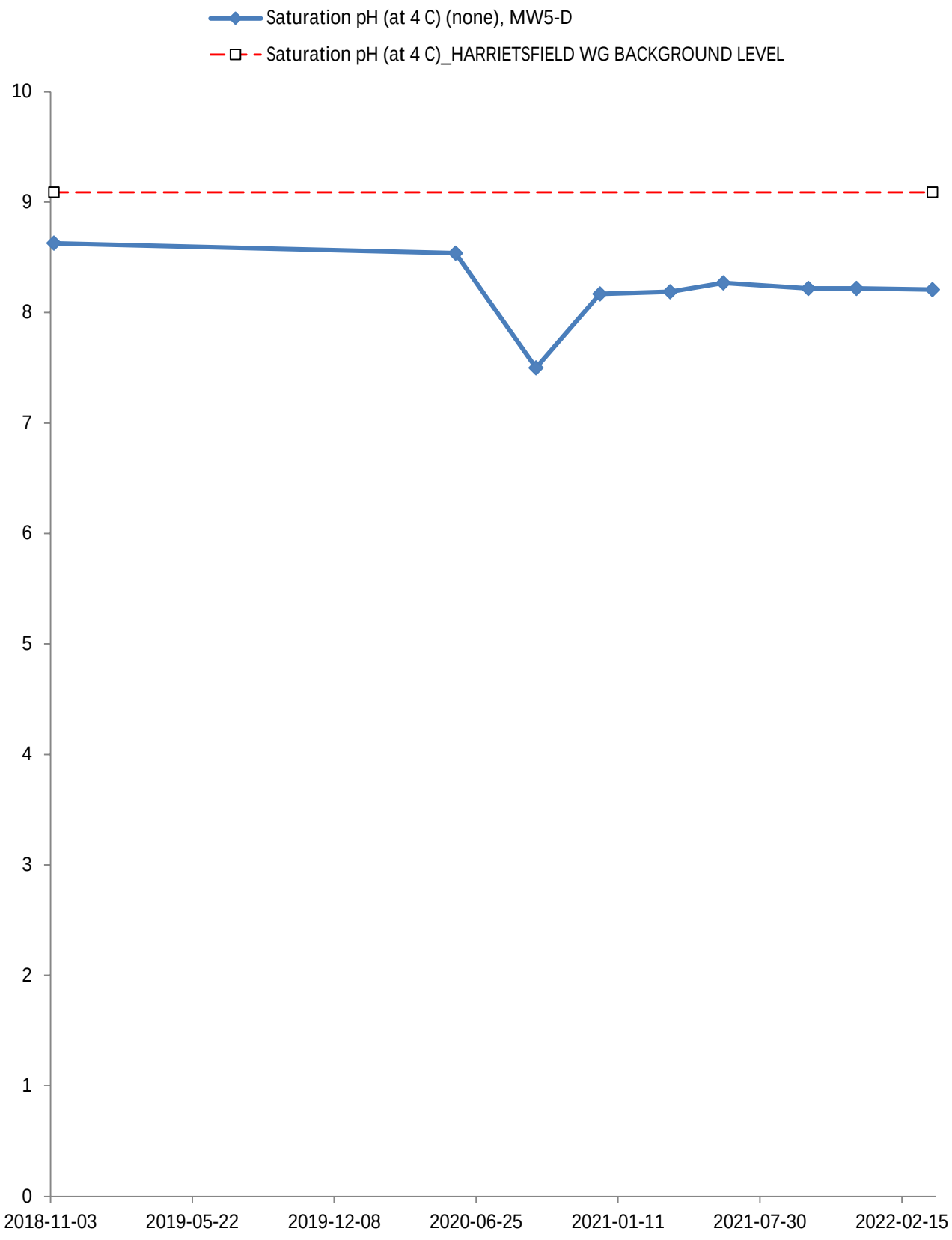
MW5-D-Reactive Silica (SiO2)



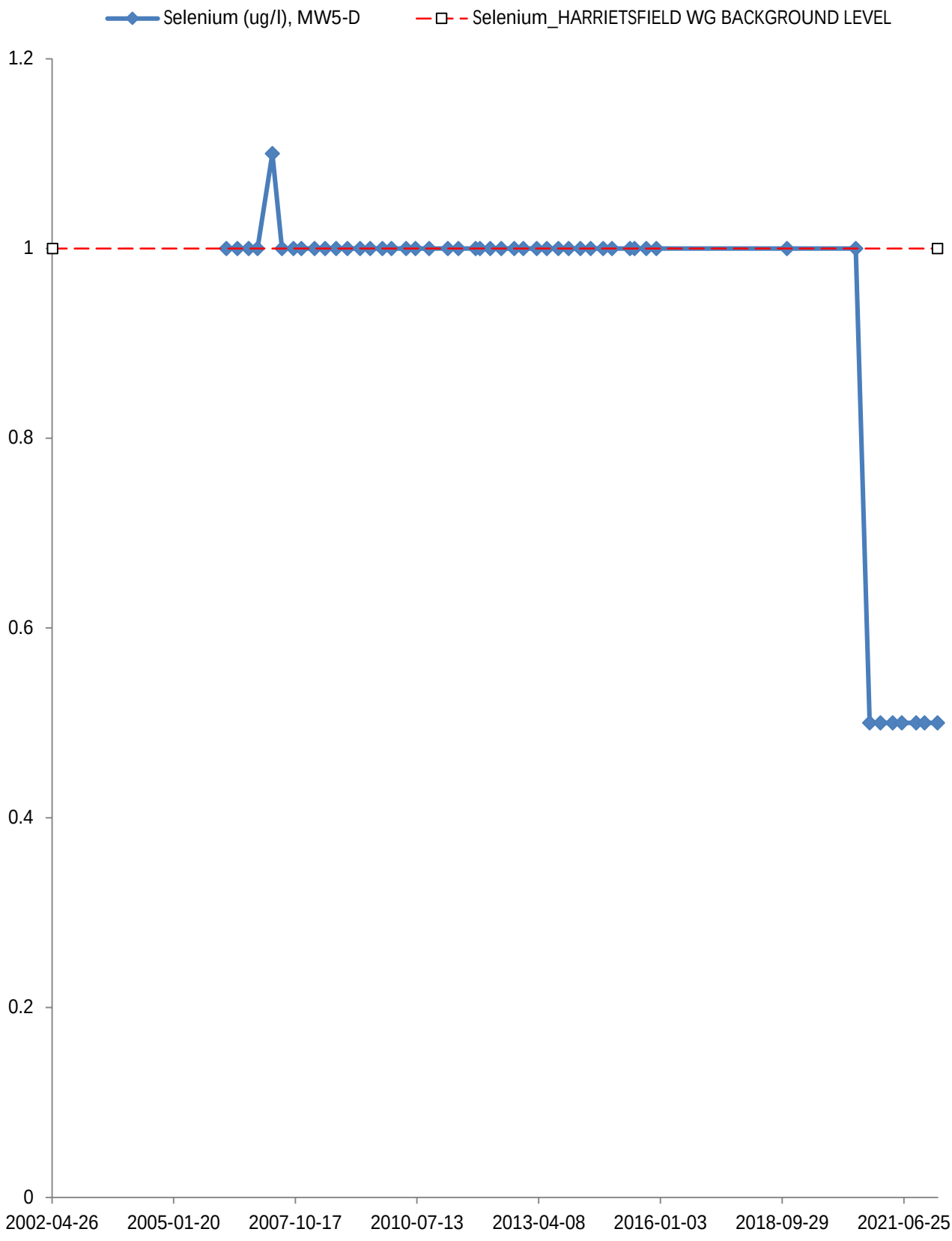
MW5-D-Saturation pH (at 20 C)



MW5-D-Saturation pH (at 4 C)

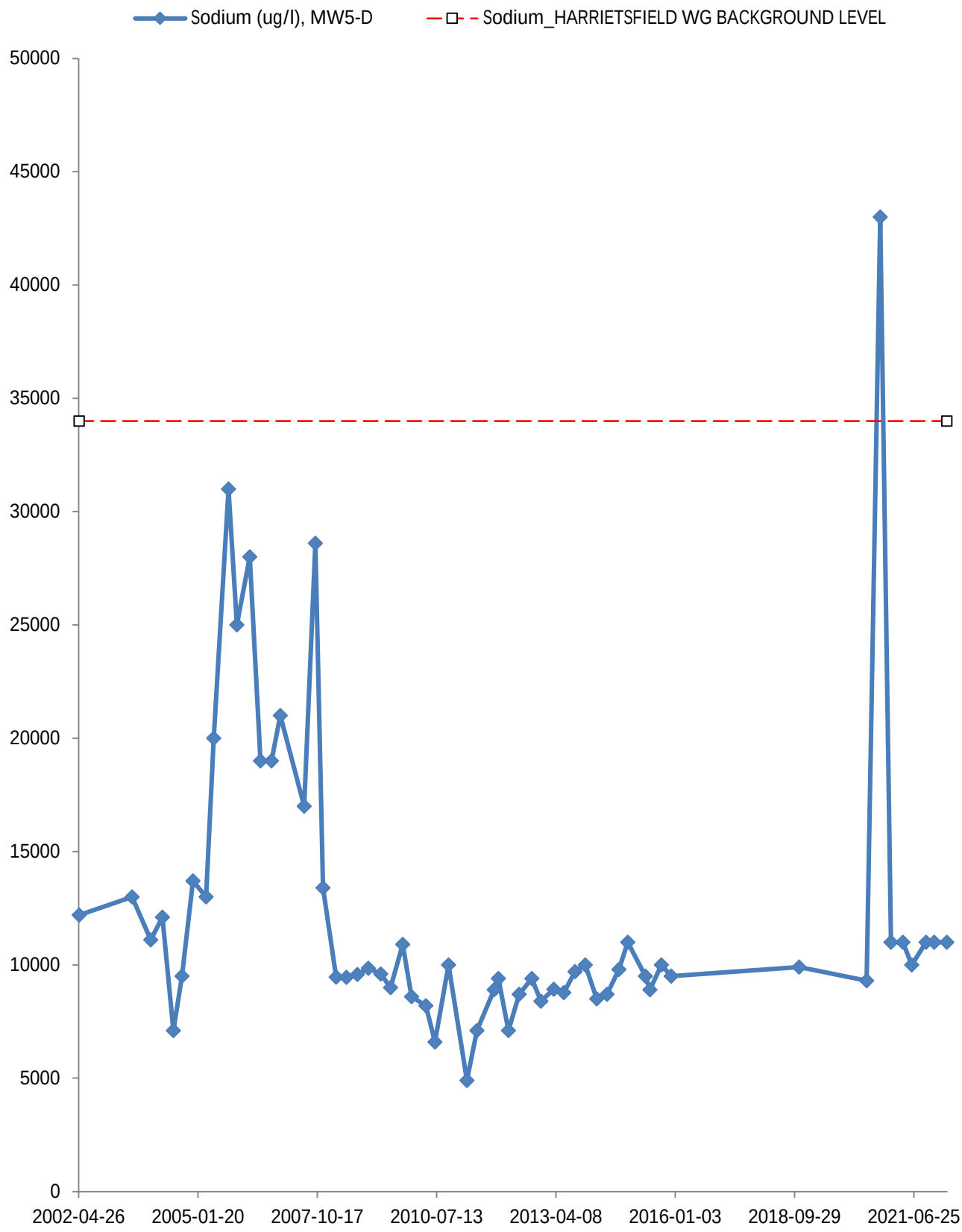


MW5-D-Selenium

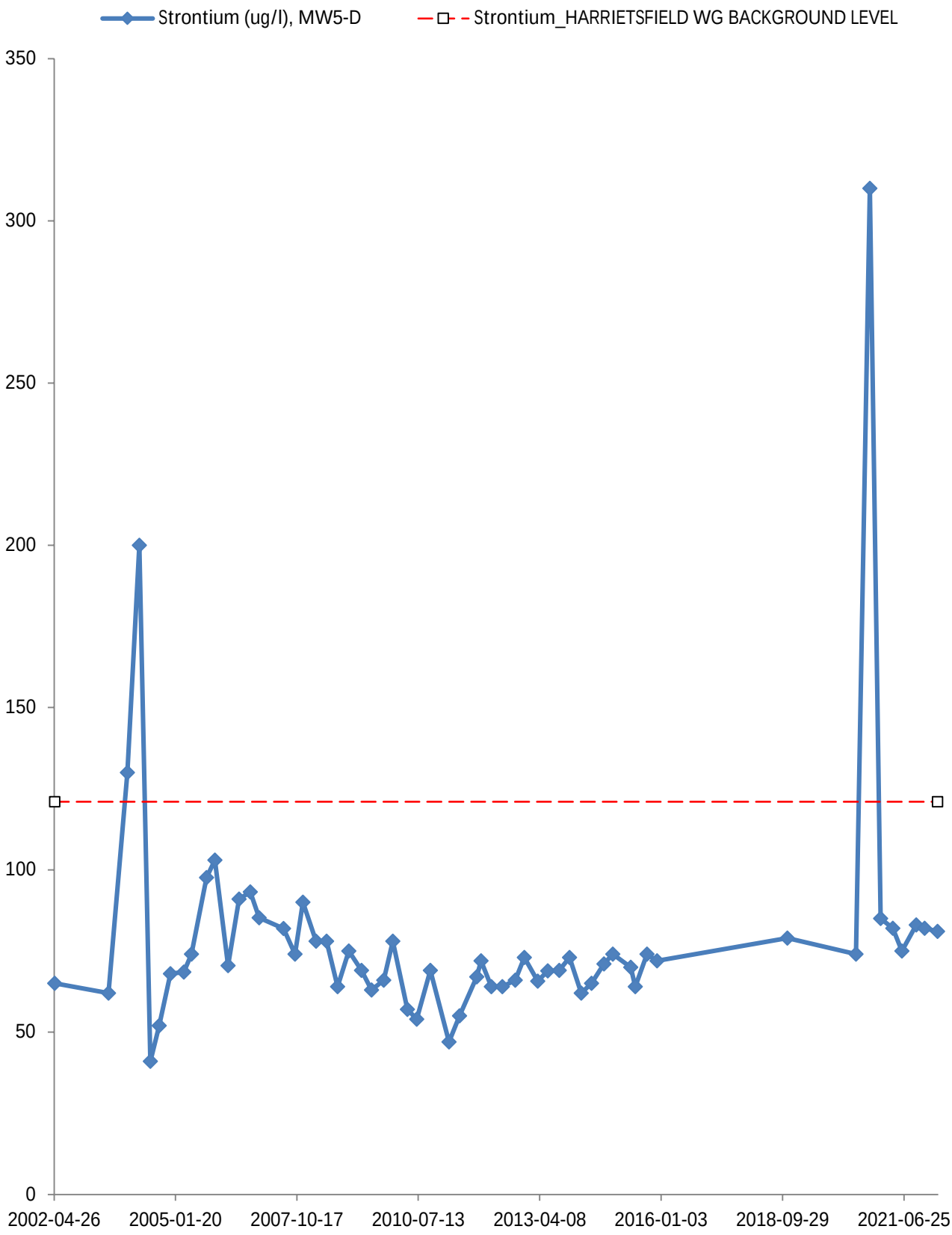



Silver (ug/l), MW5-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

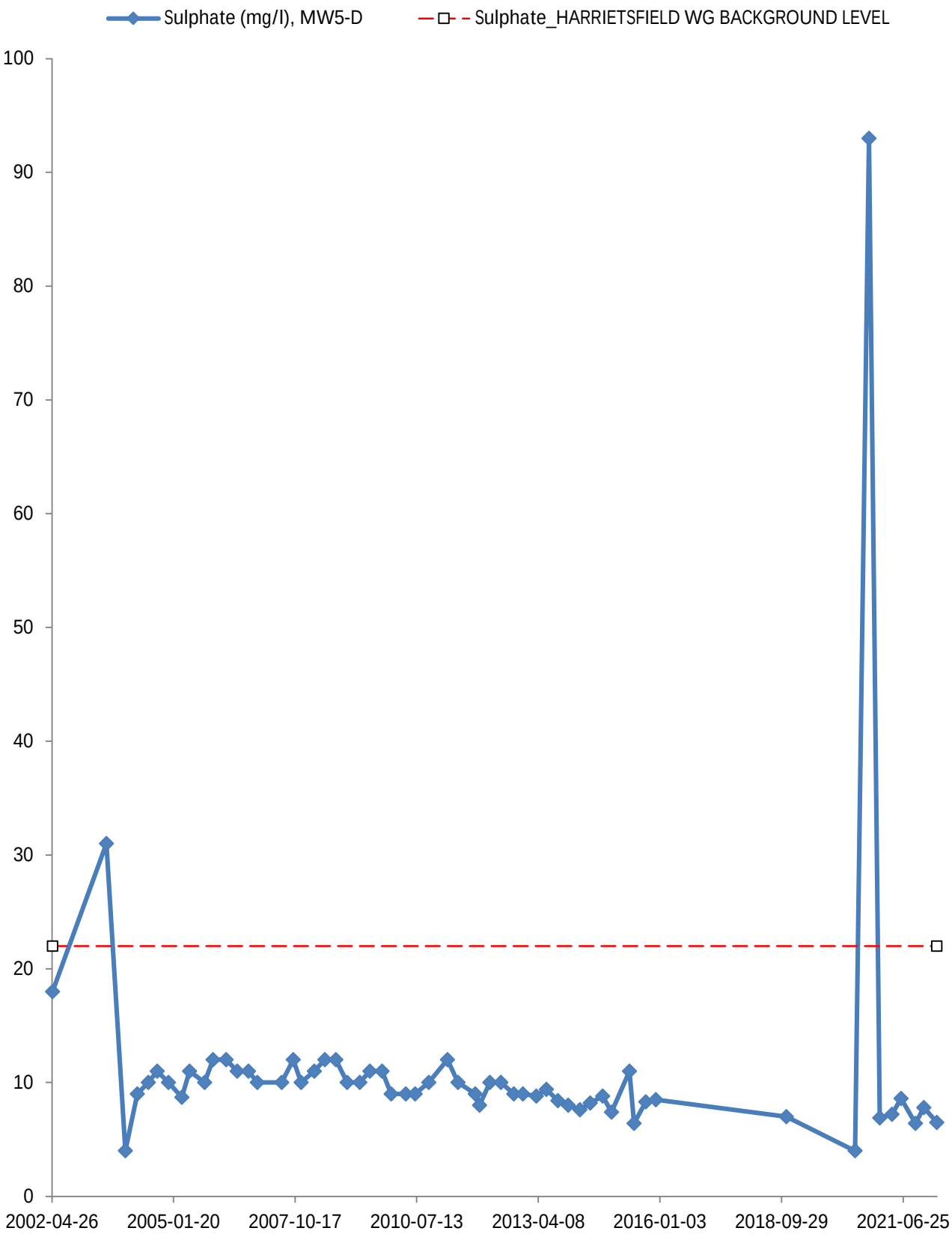
MW5-D-Sodium


Sodium (ug/l), MW5-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

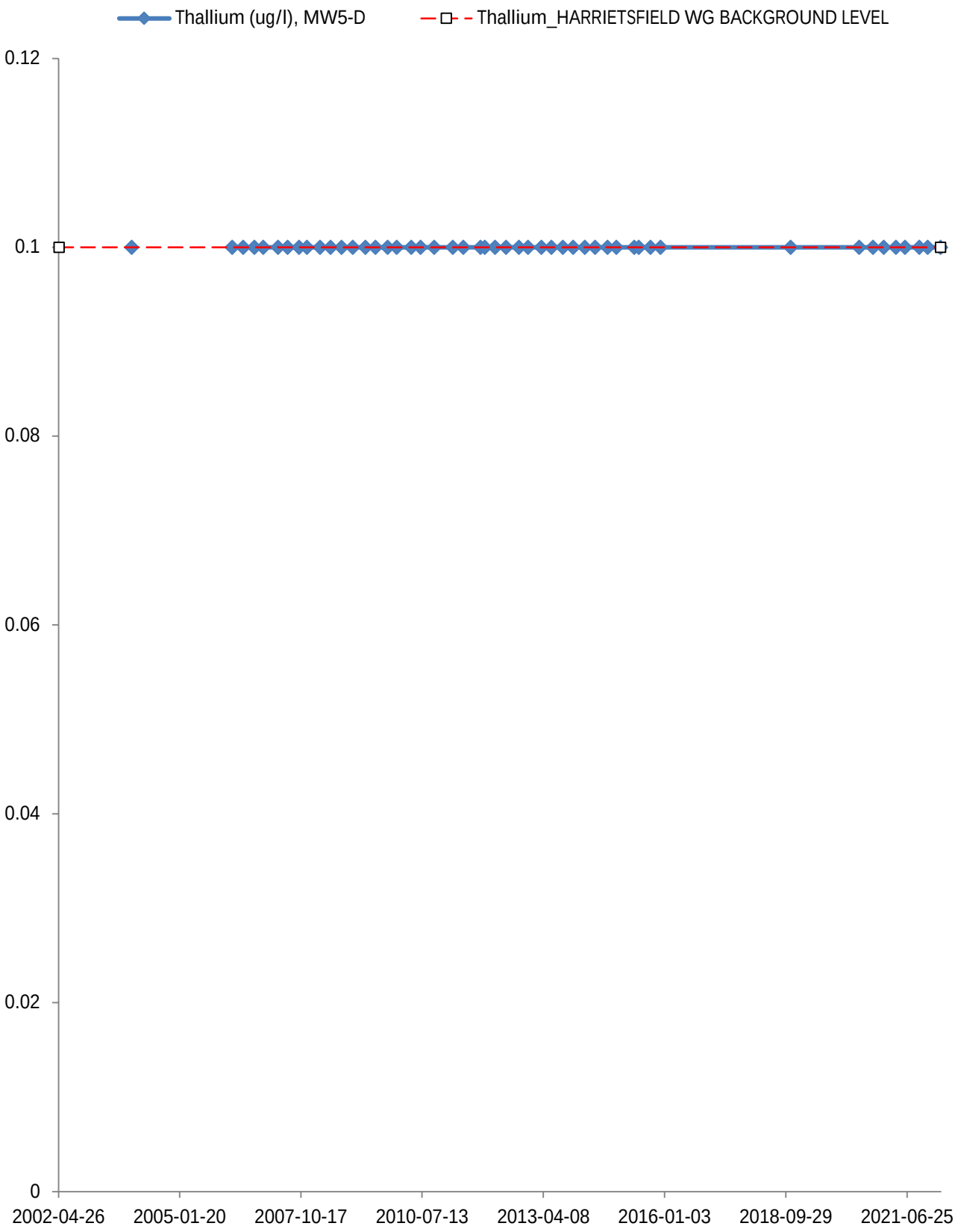
MW5-D-Strontium



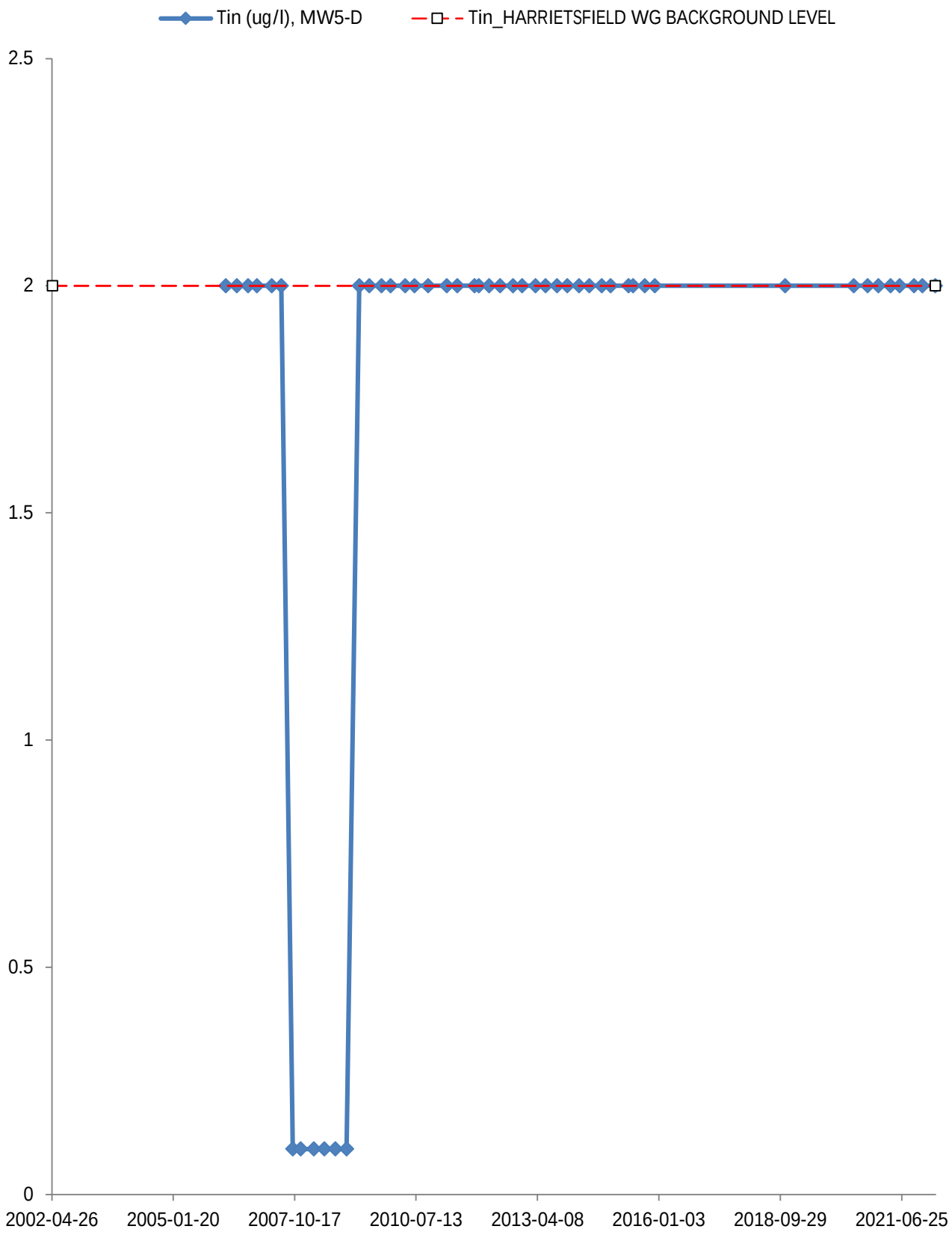
MW5-D-Sulphate



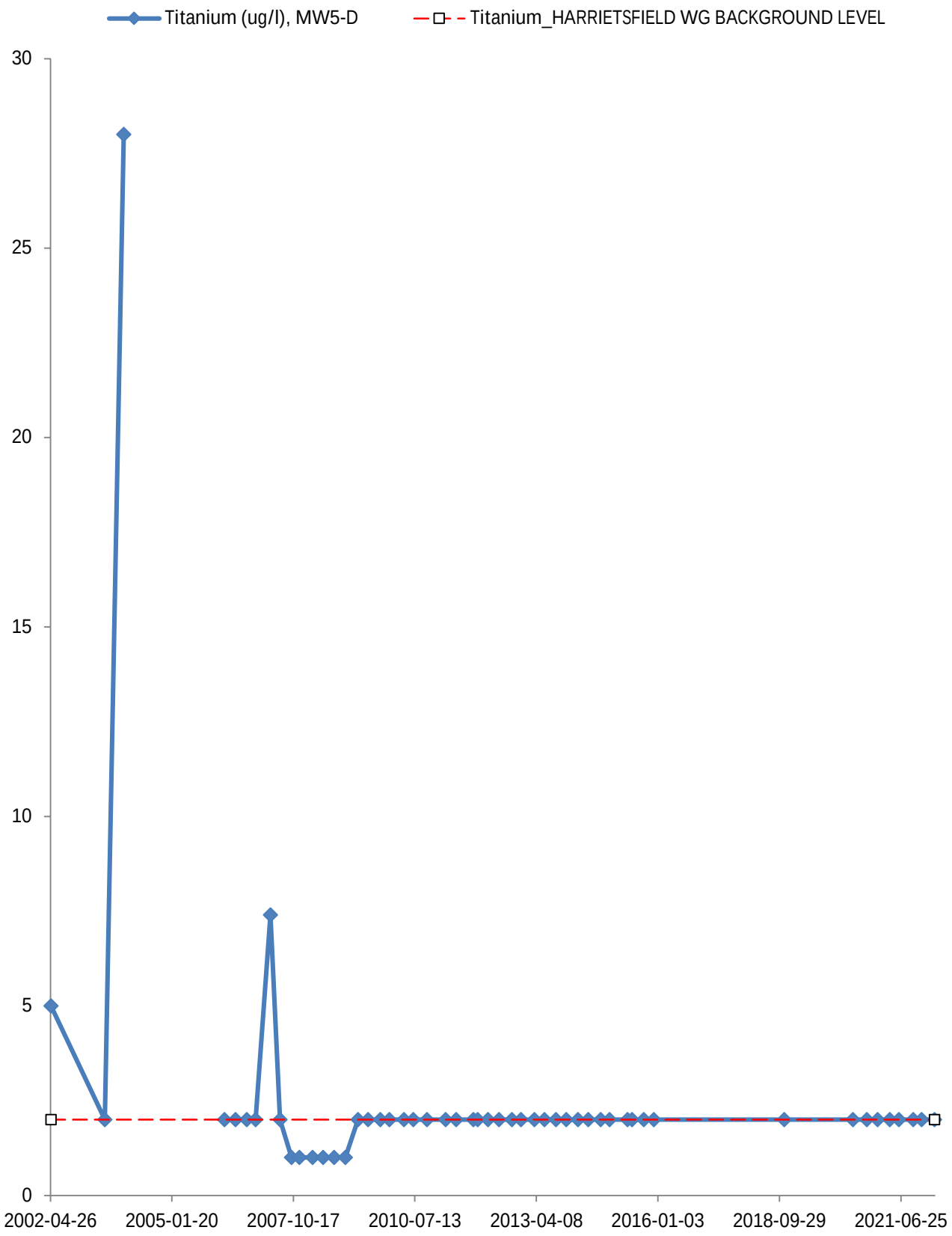
MW5-D-Thallium



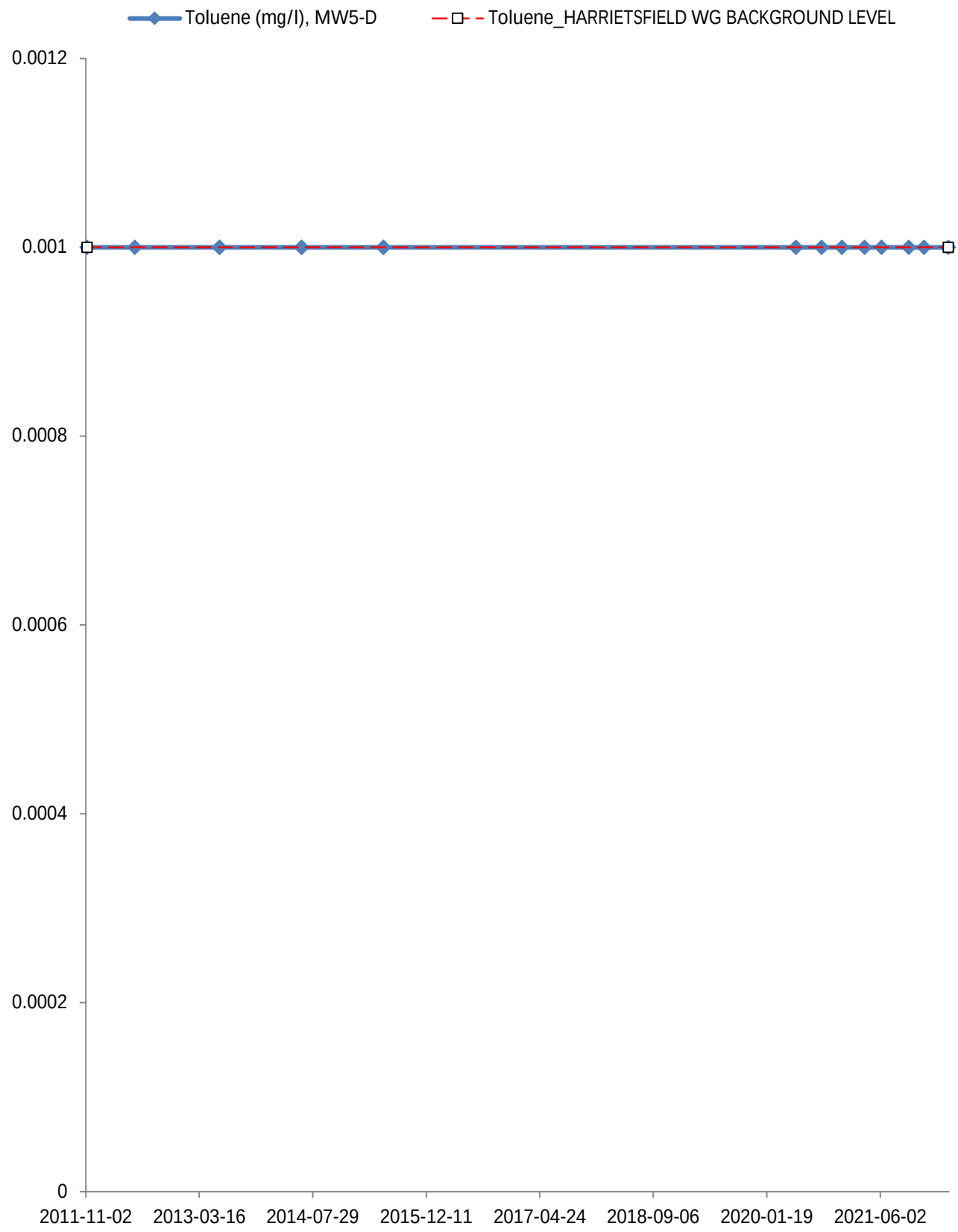
MW5-D-Tin


Tin (ug/l), MW5-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

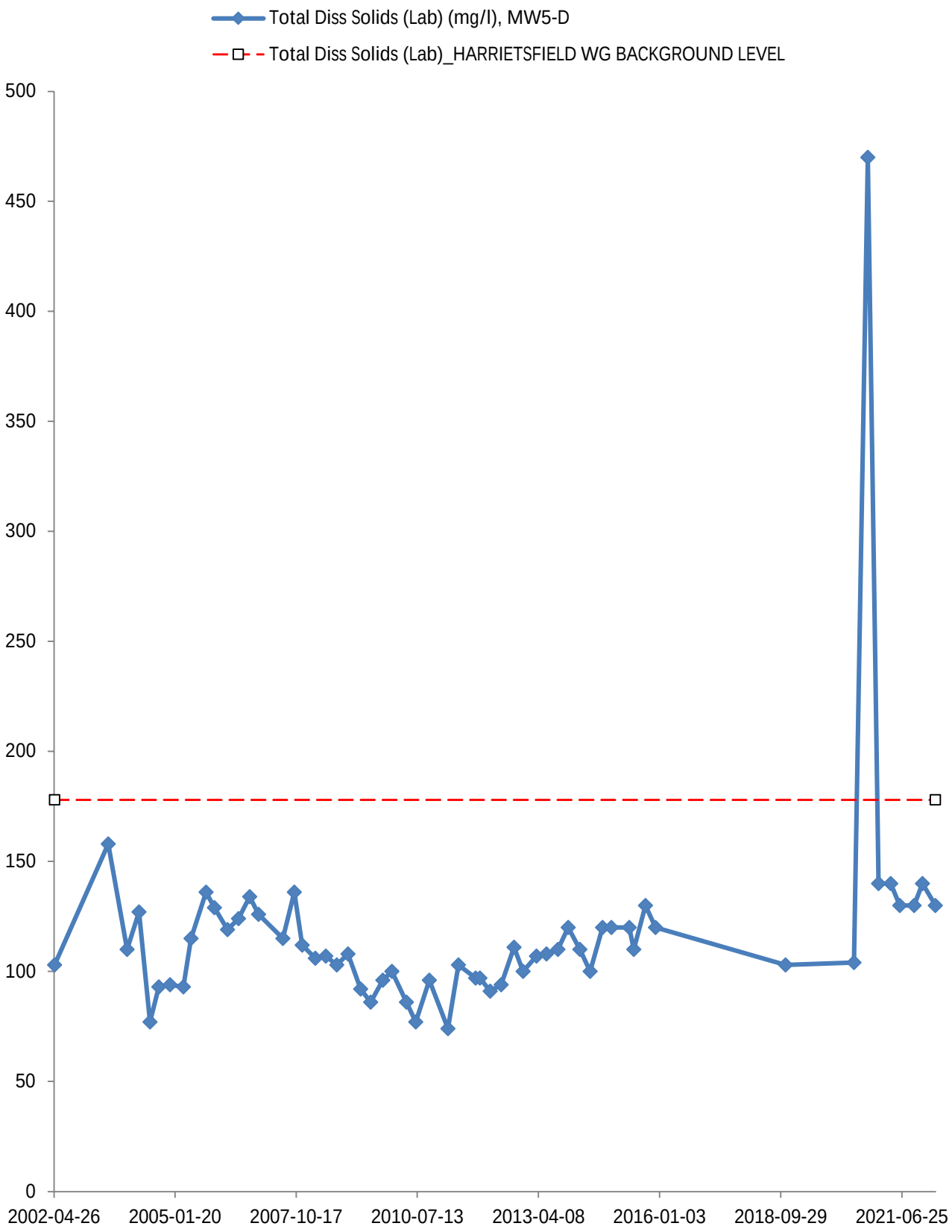
MW5-D-Titanium



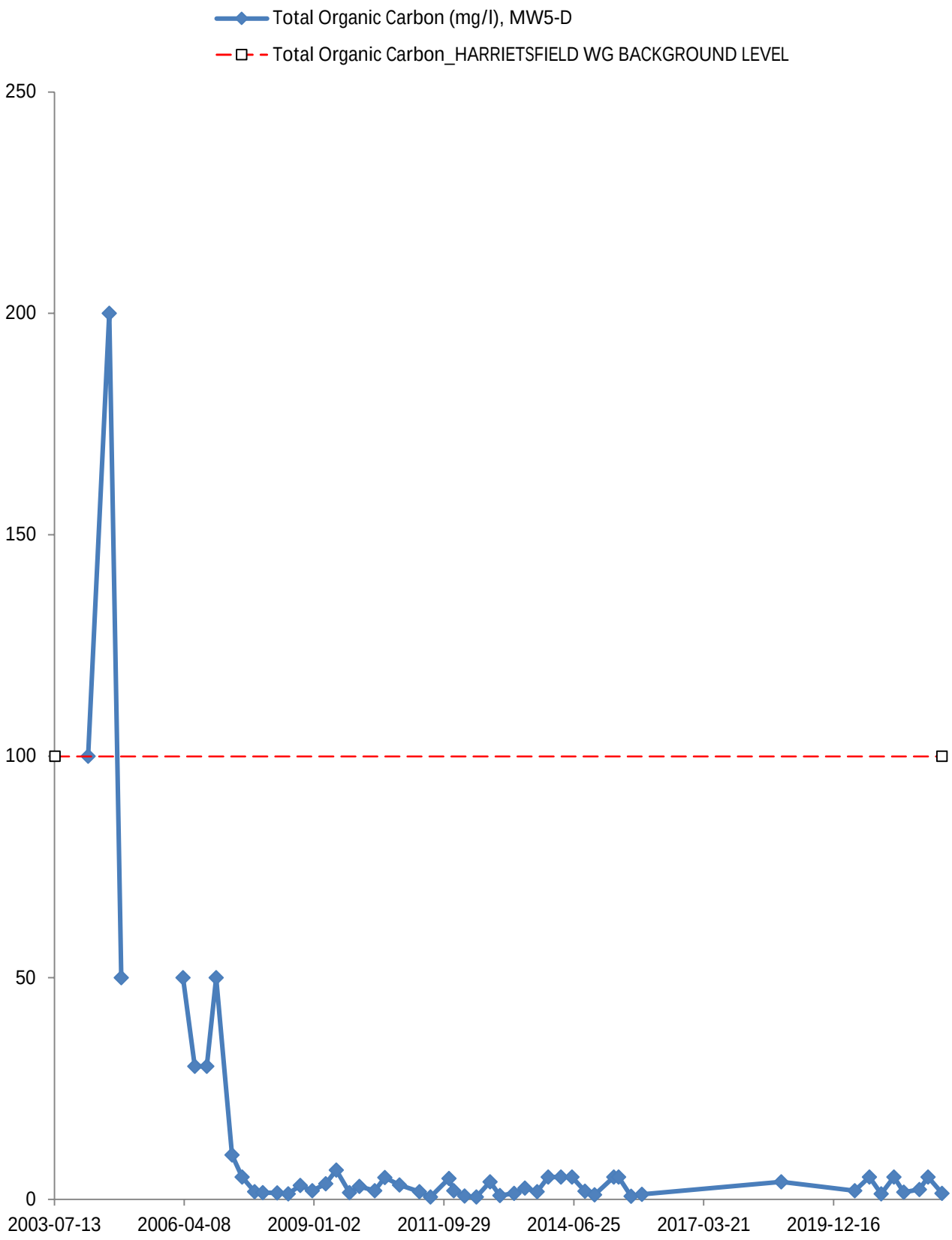
MW5-D-Toluene



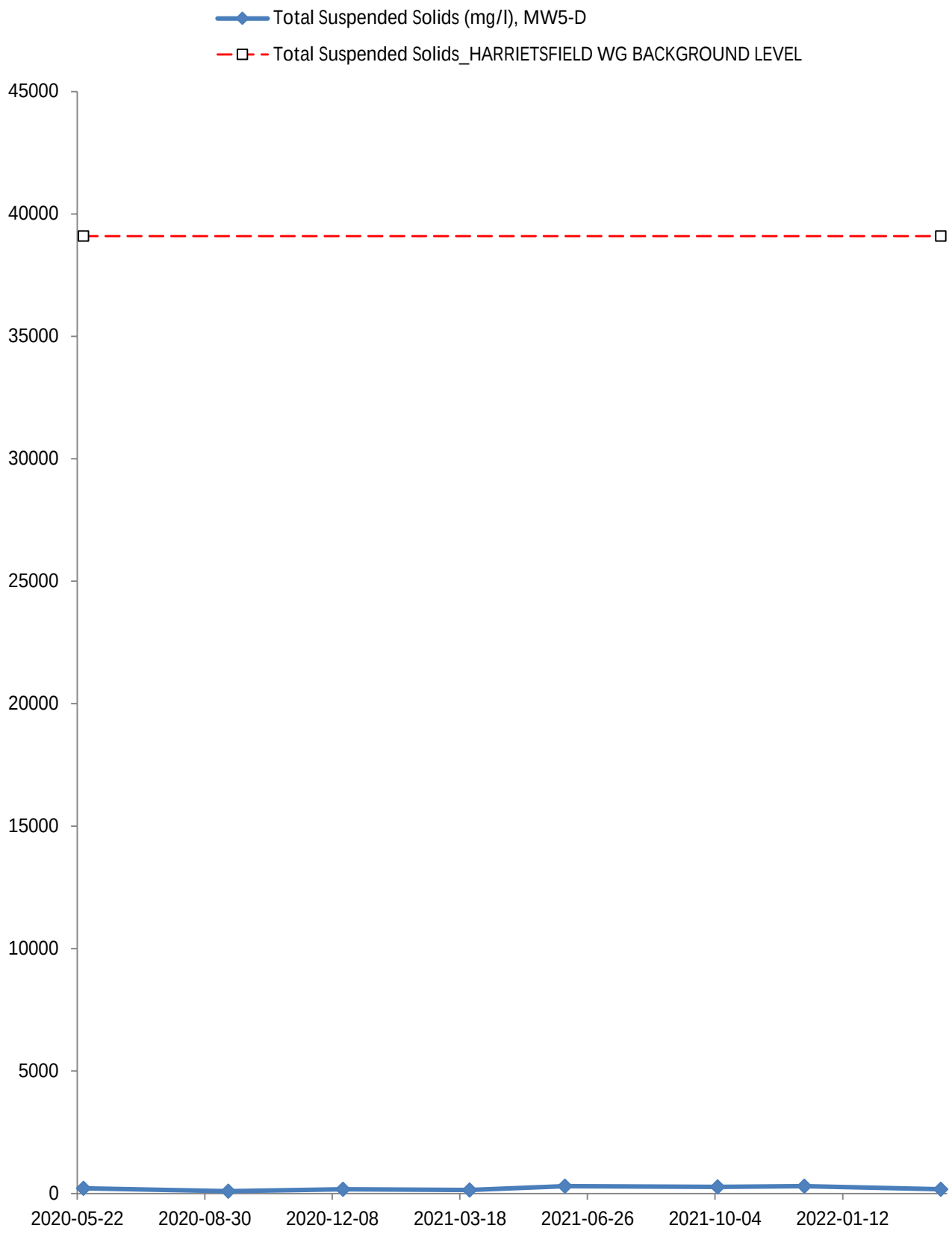
MW5-D-Total Diss Solids (Lab)



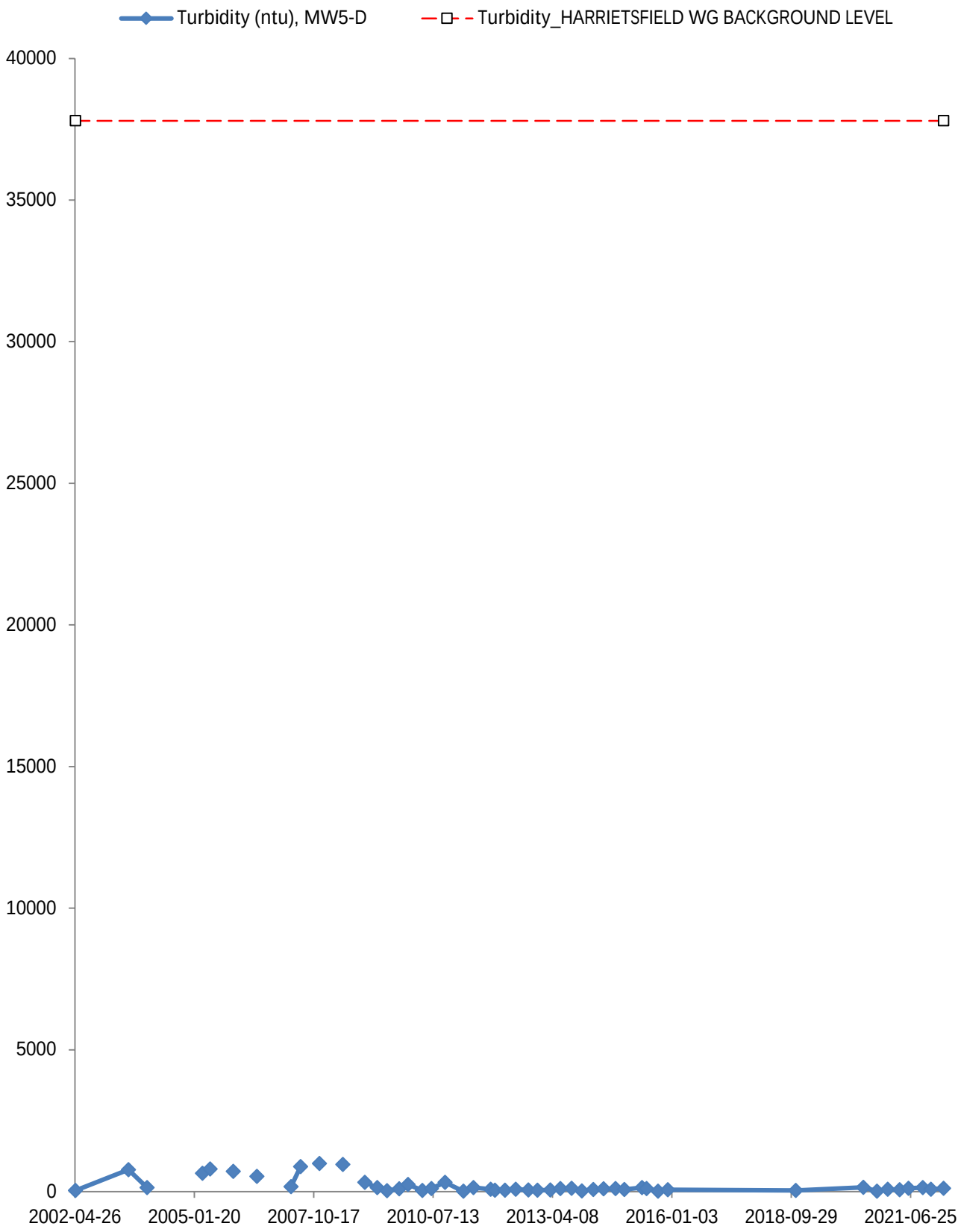
MW5-D-Total Organic Carbon

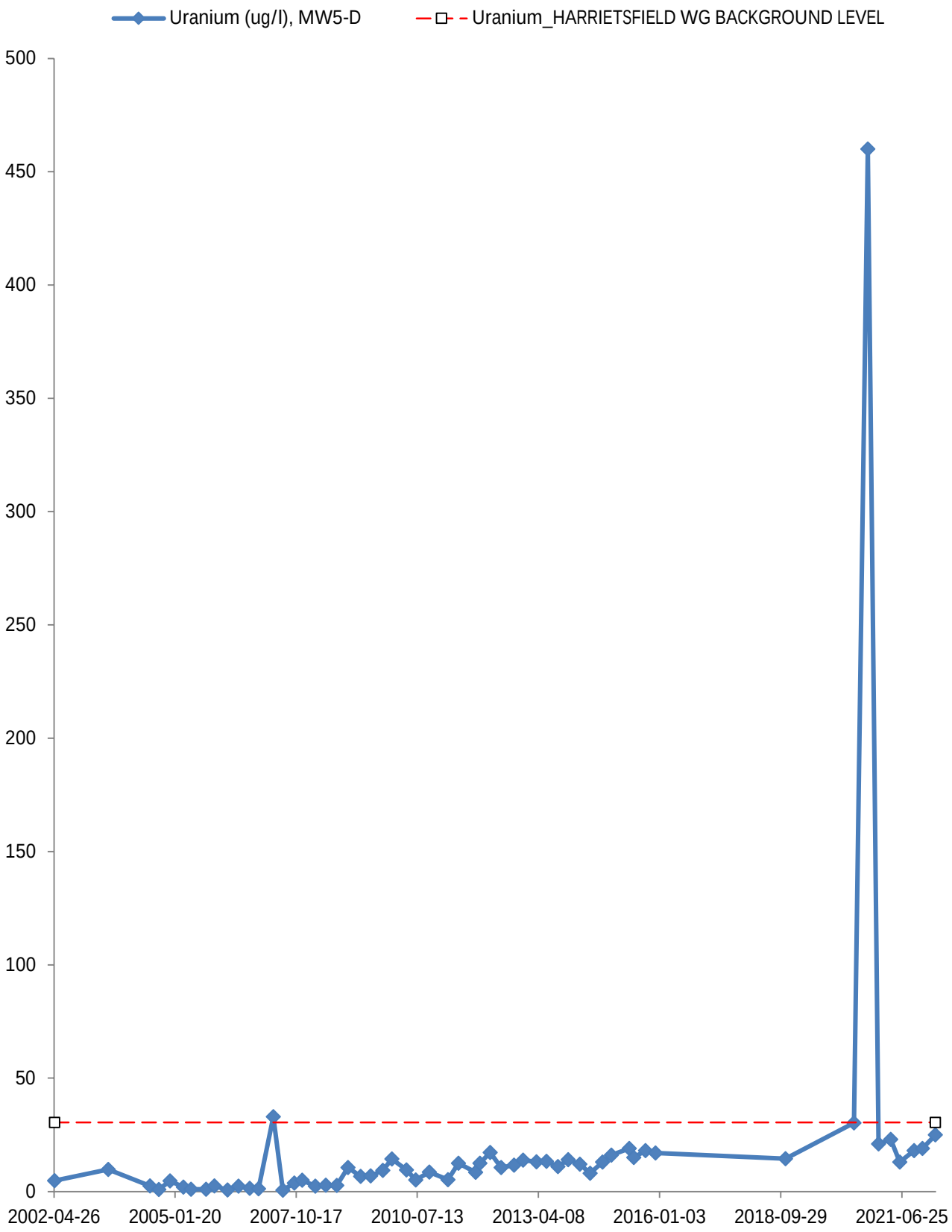


MW5-D-Total Suspended Solids

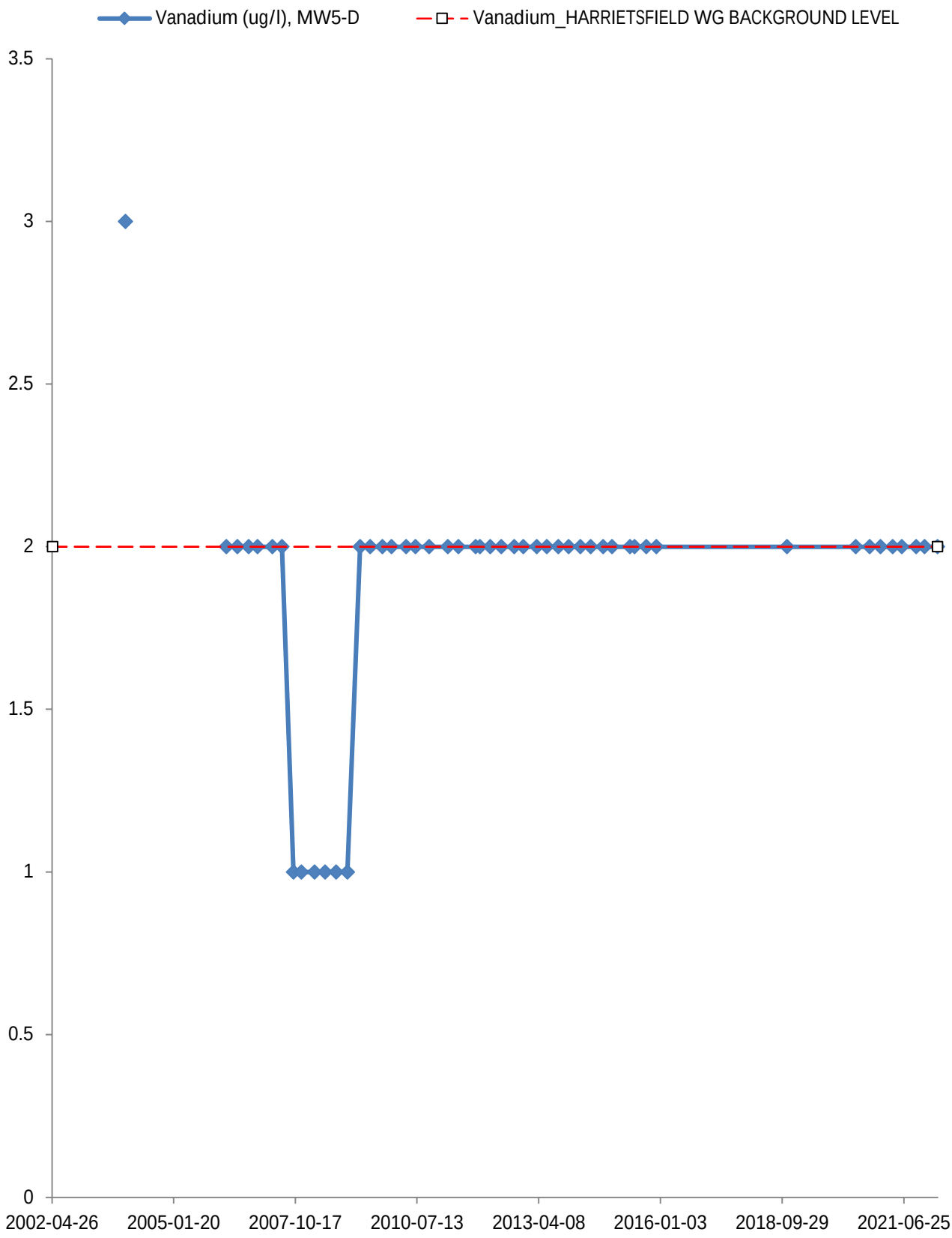


MW5-D-Turbidity

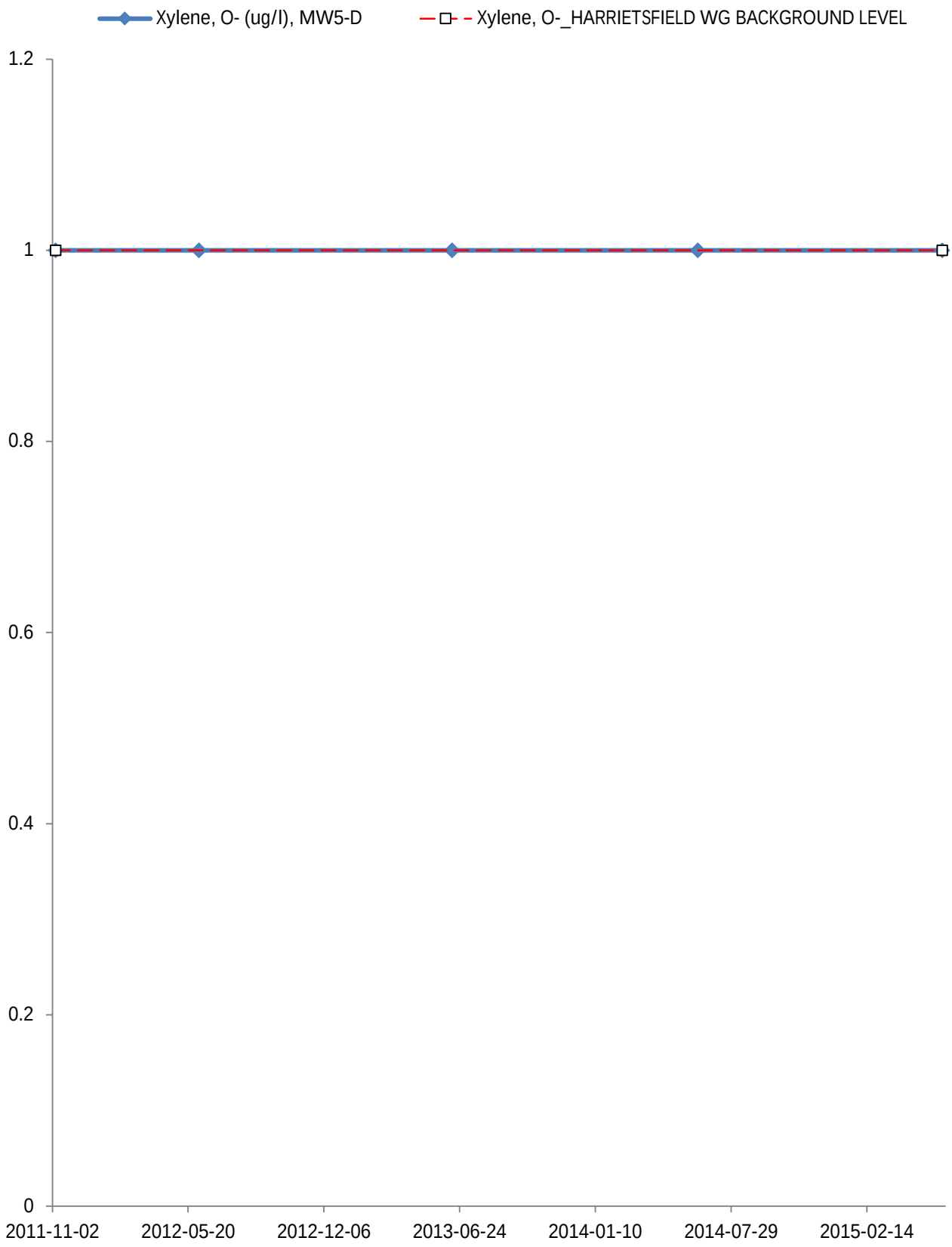



Uranium (ug/l), MW5-D
Uranium_HARRIETSFIELD WG BACKGROUND LEVEL
500
450
400
350
300
250
200
150
100
50
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

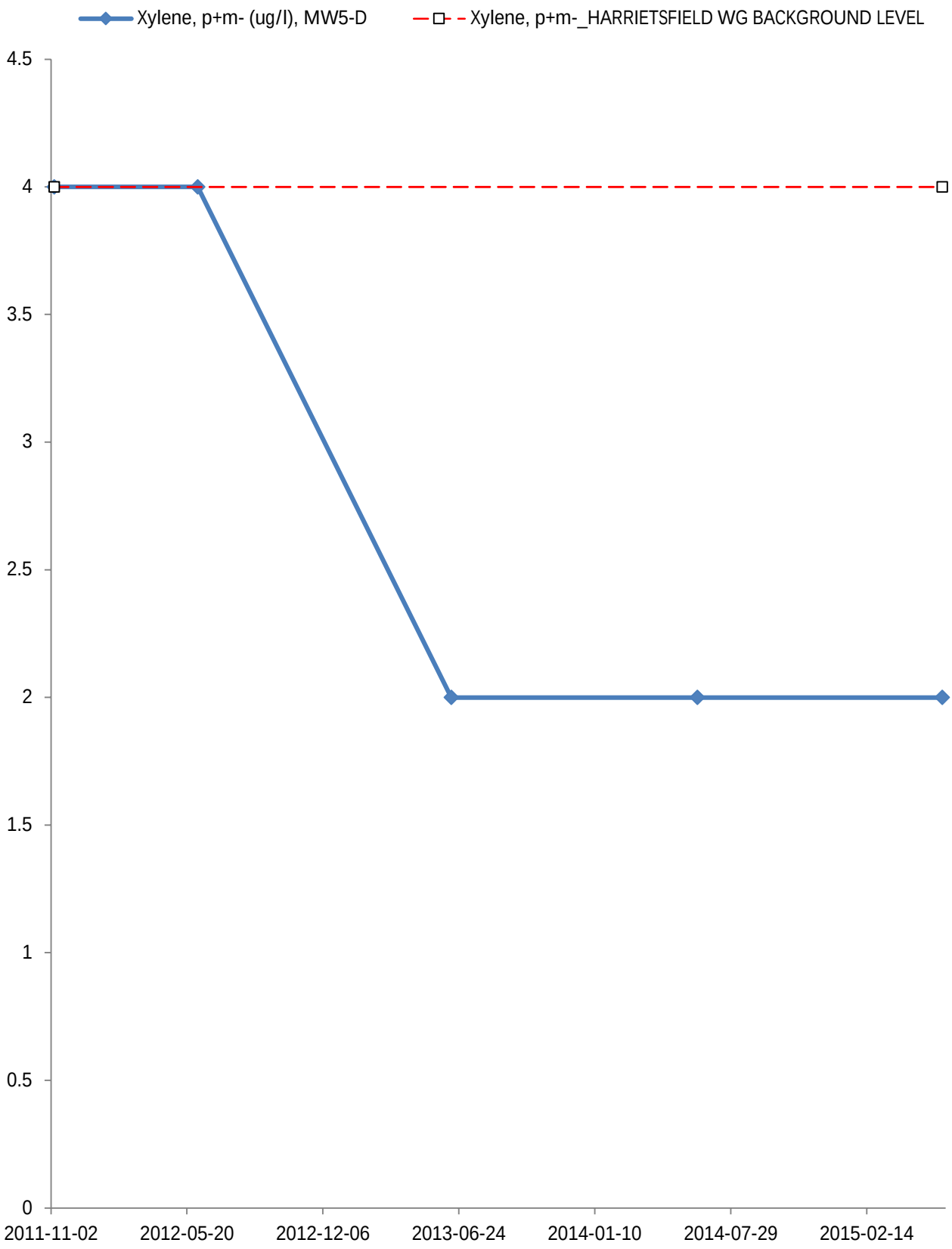
MW5-D-Vanadium



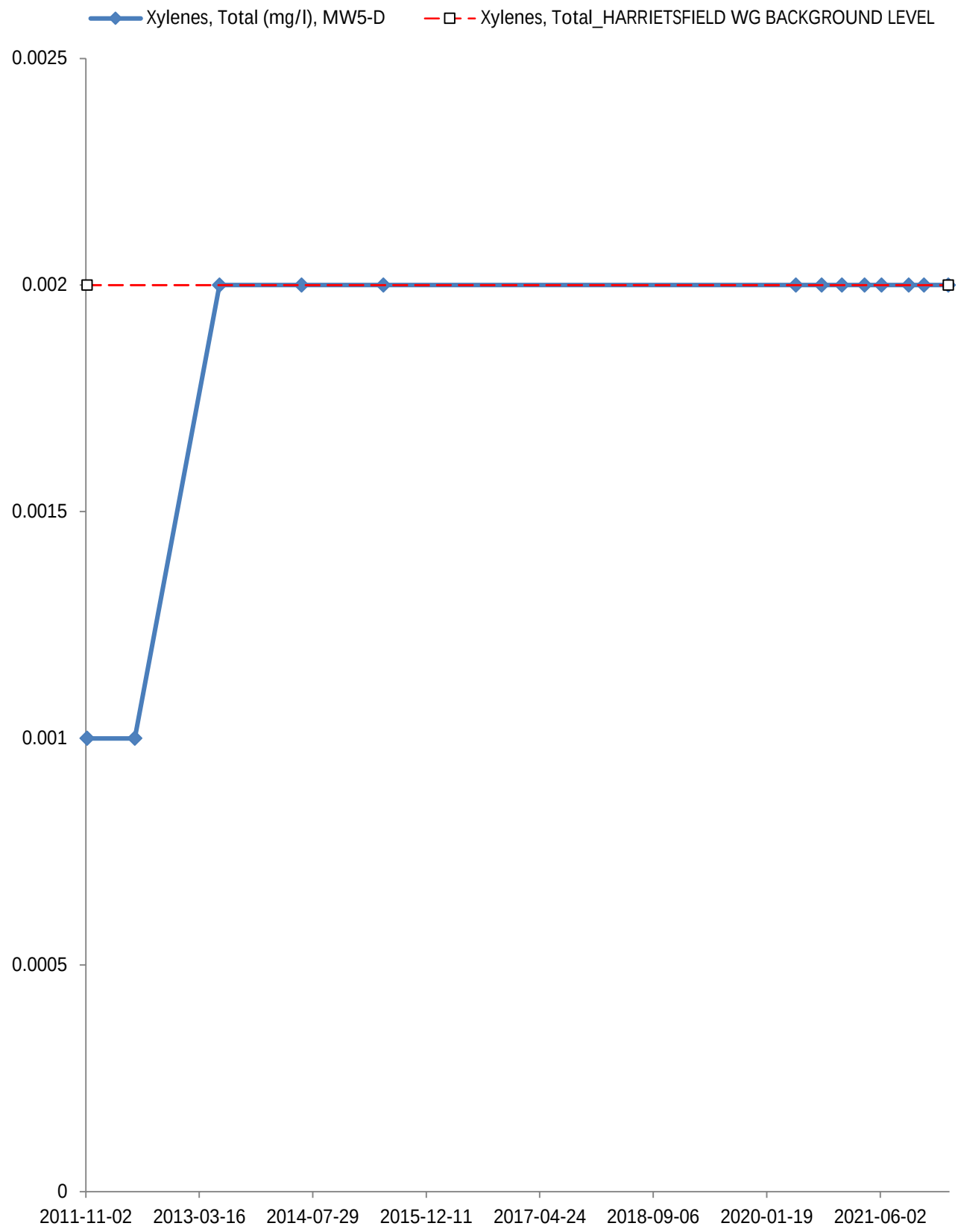
MW5-D-Xylene, O-



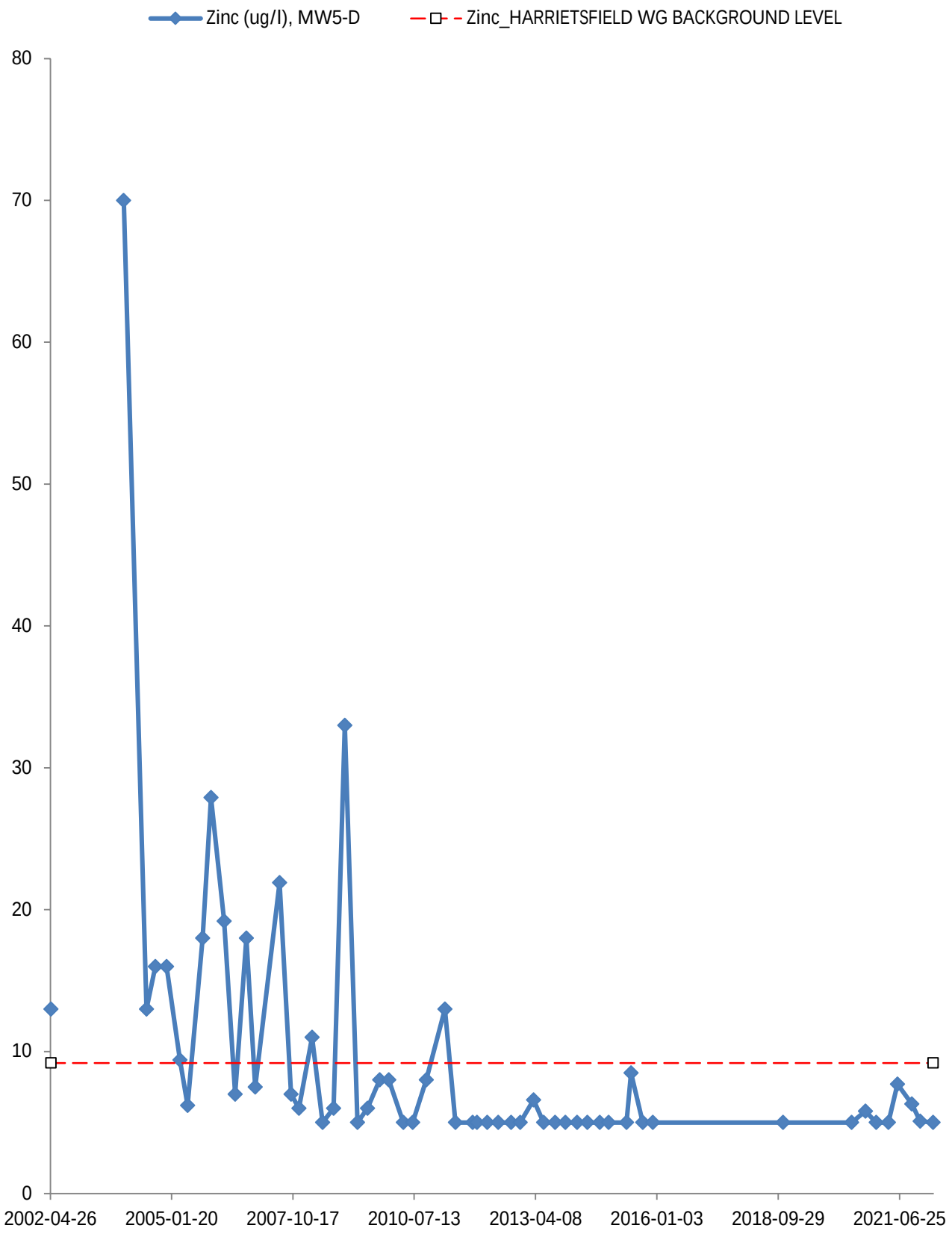
MW5-D-Xylene, p+m-



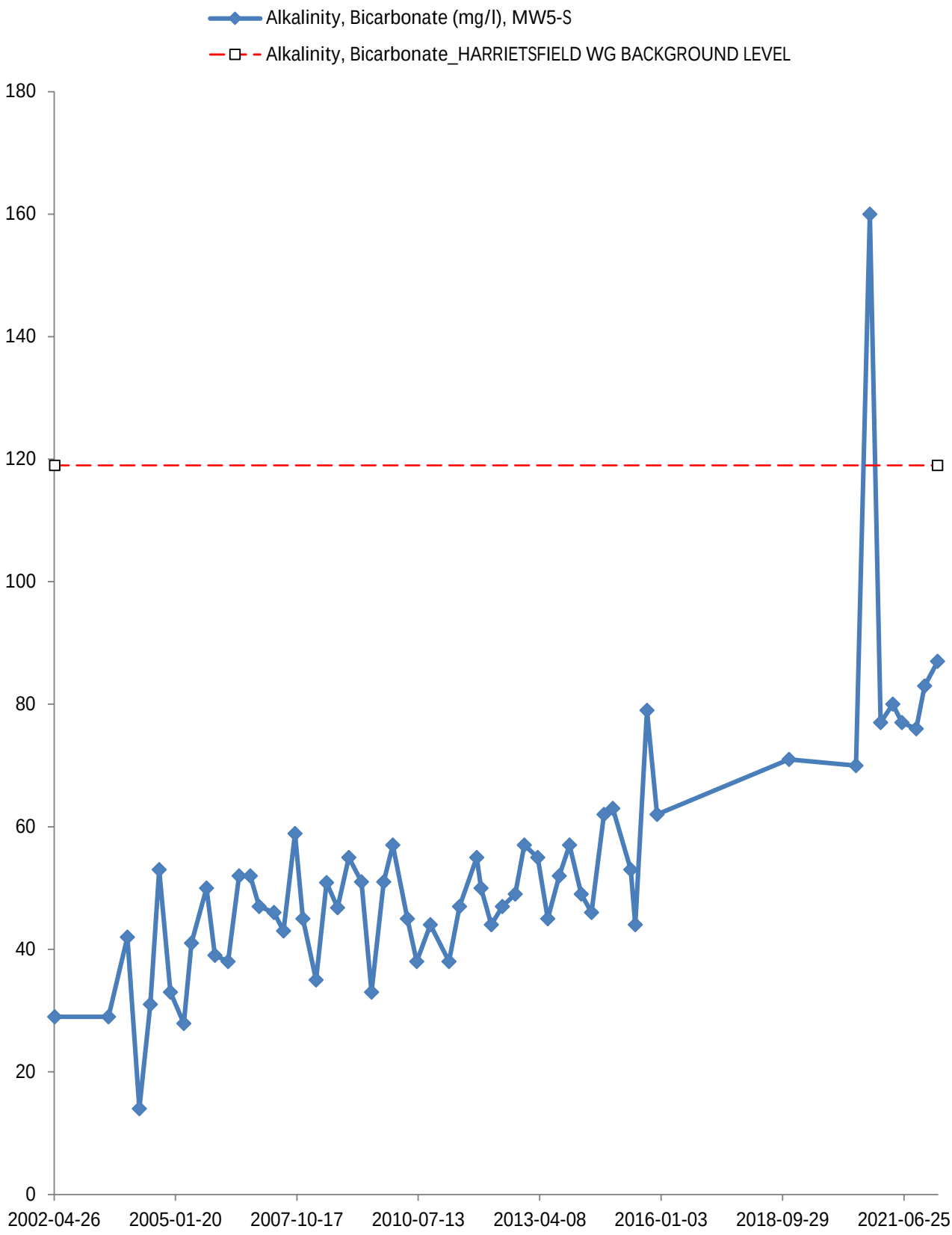
MW5-D-Xylenes, Total



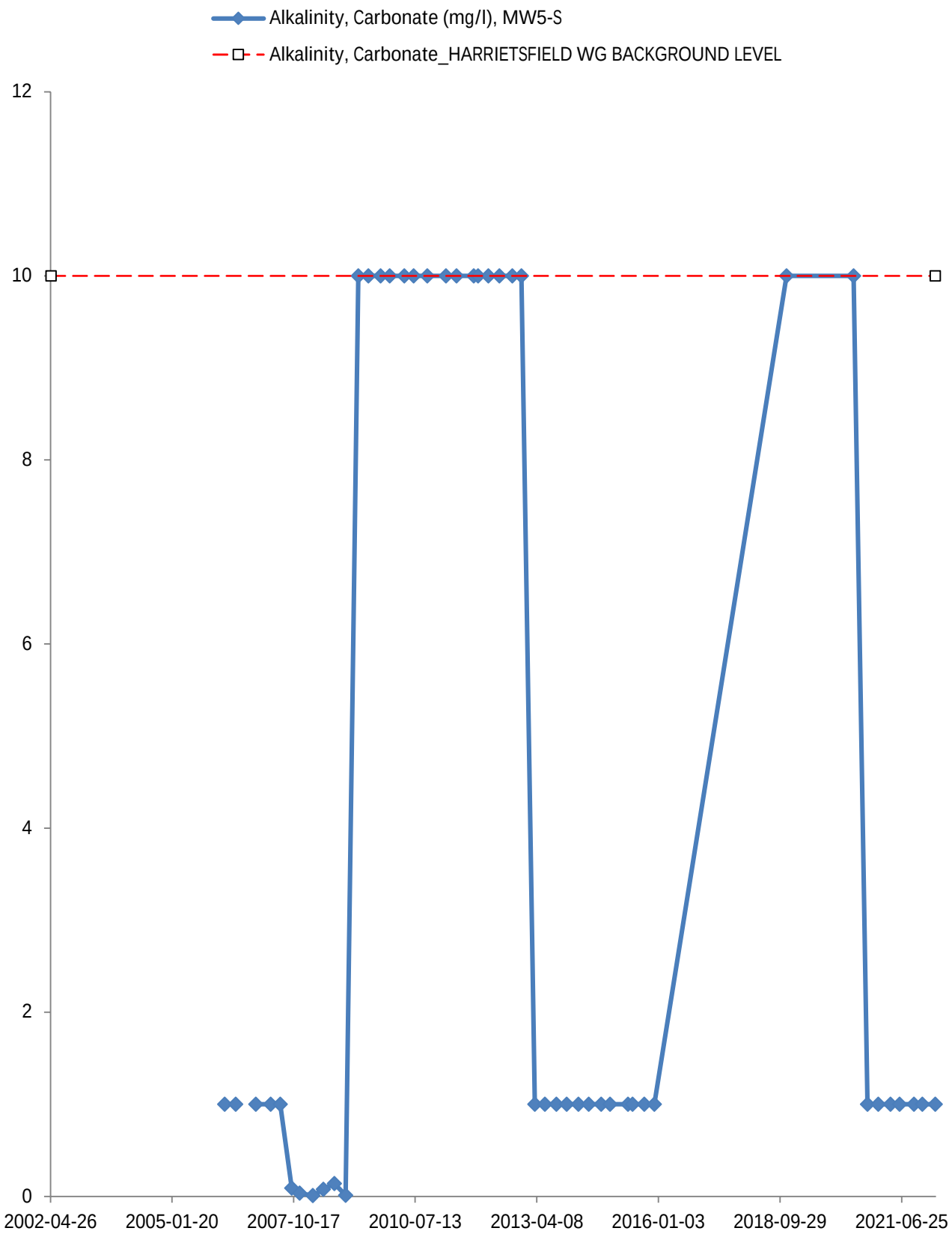
MW5-D-Zinc


Zinc (ug/l), MW5-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

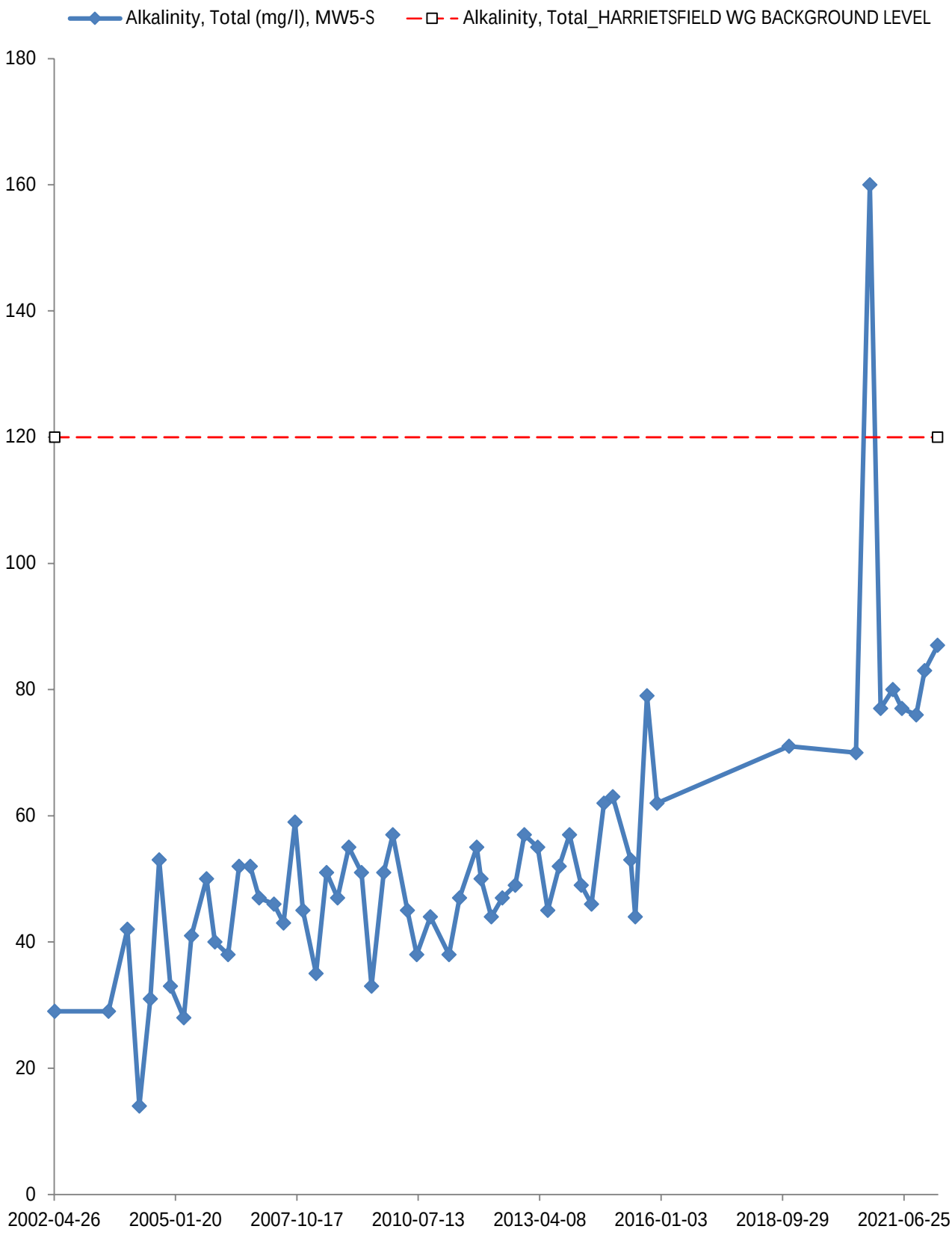
MW5-S-Alkalinity, Bicarbonate



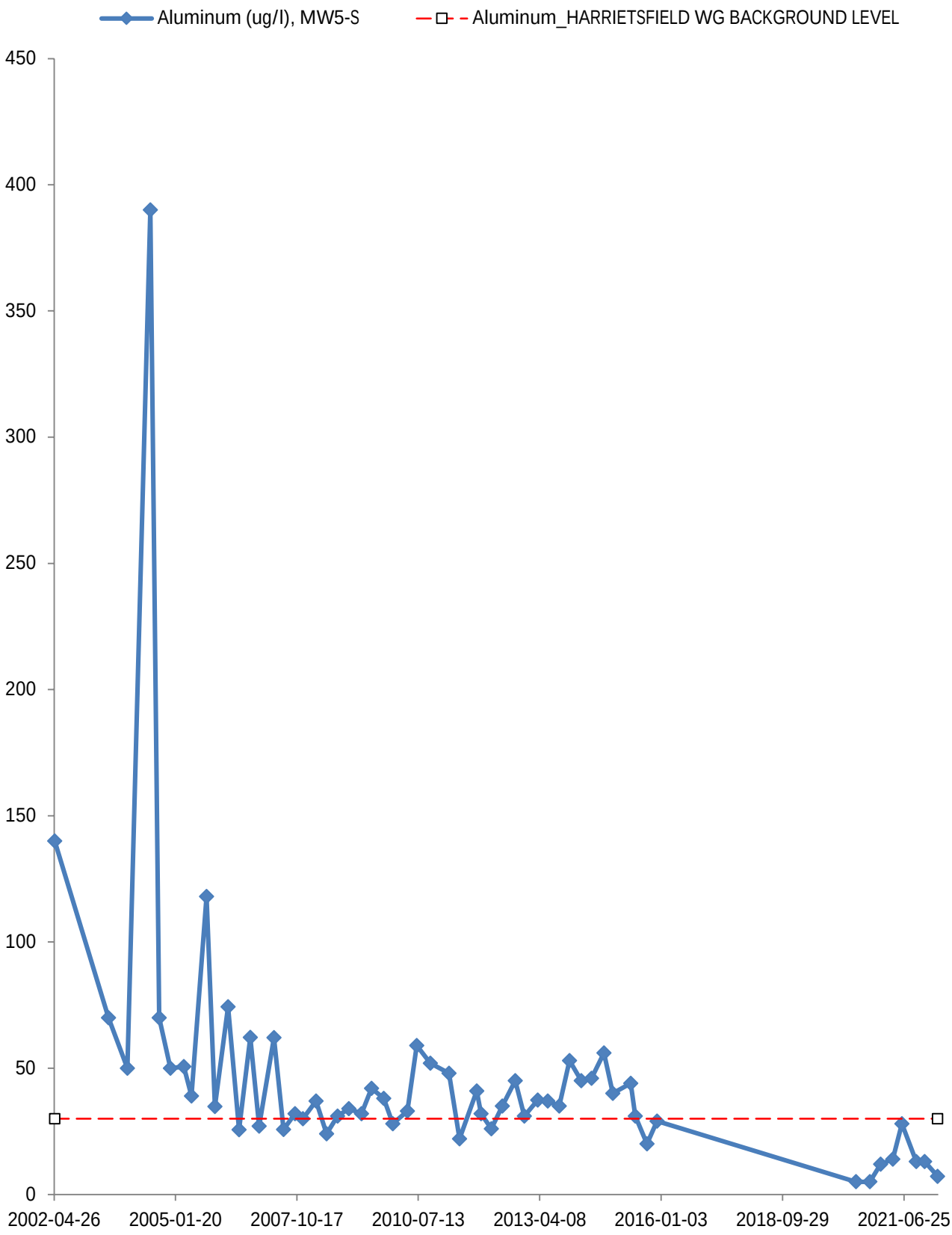
MW5-S-Alkalinity, Carbonate



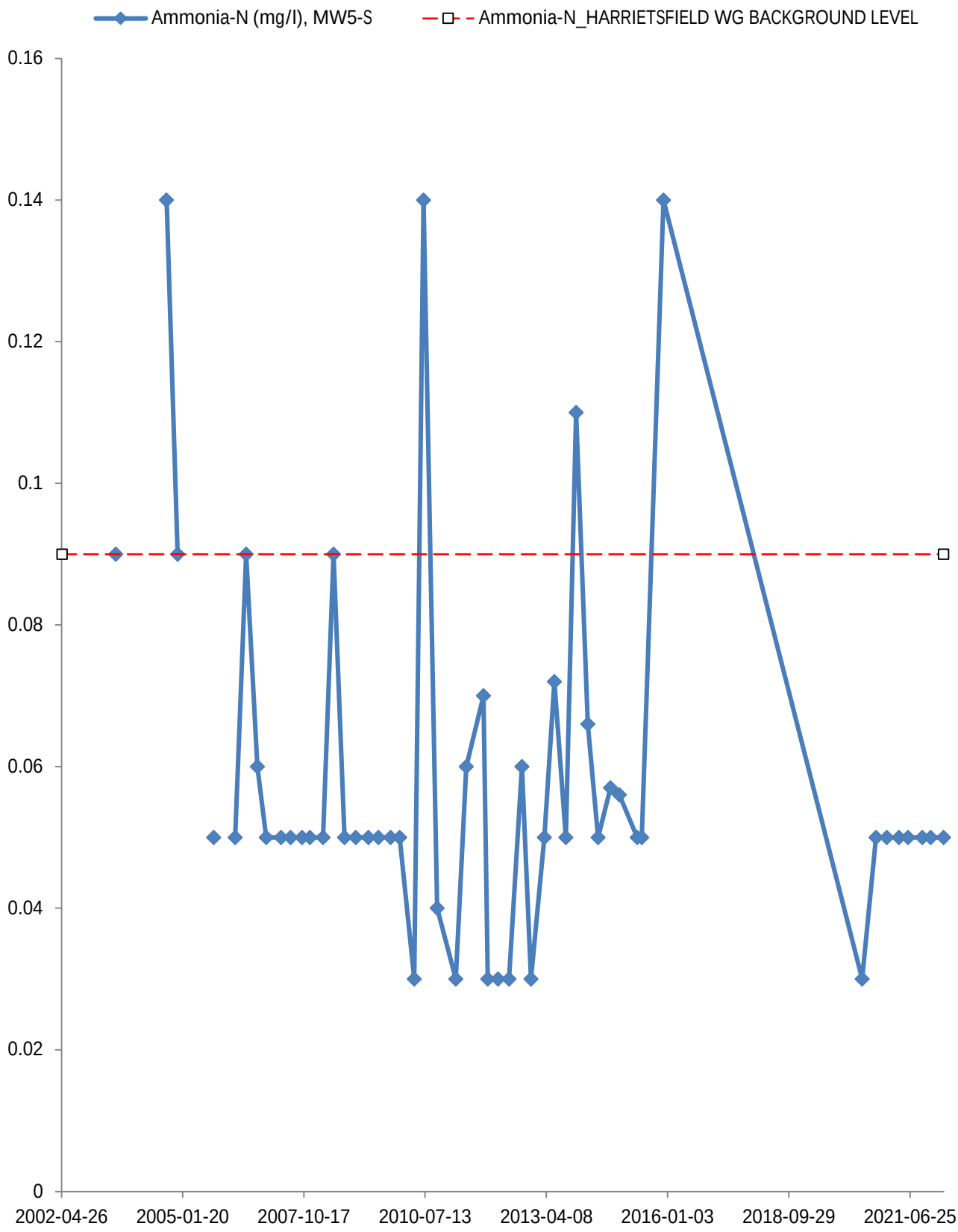
MW5-S-Alkalinity, Total



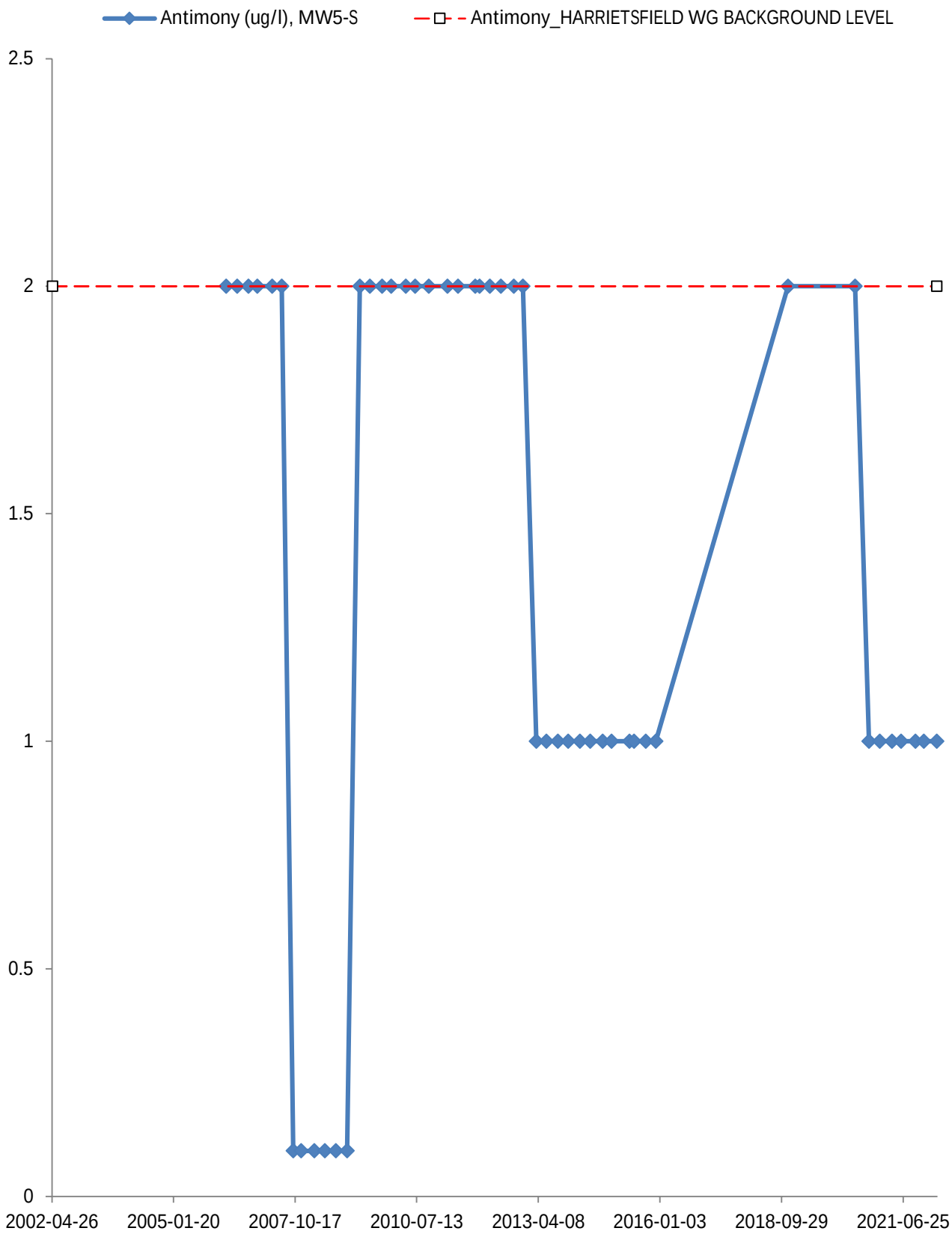
MW5-S-Aluminum



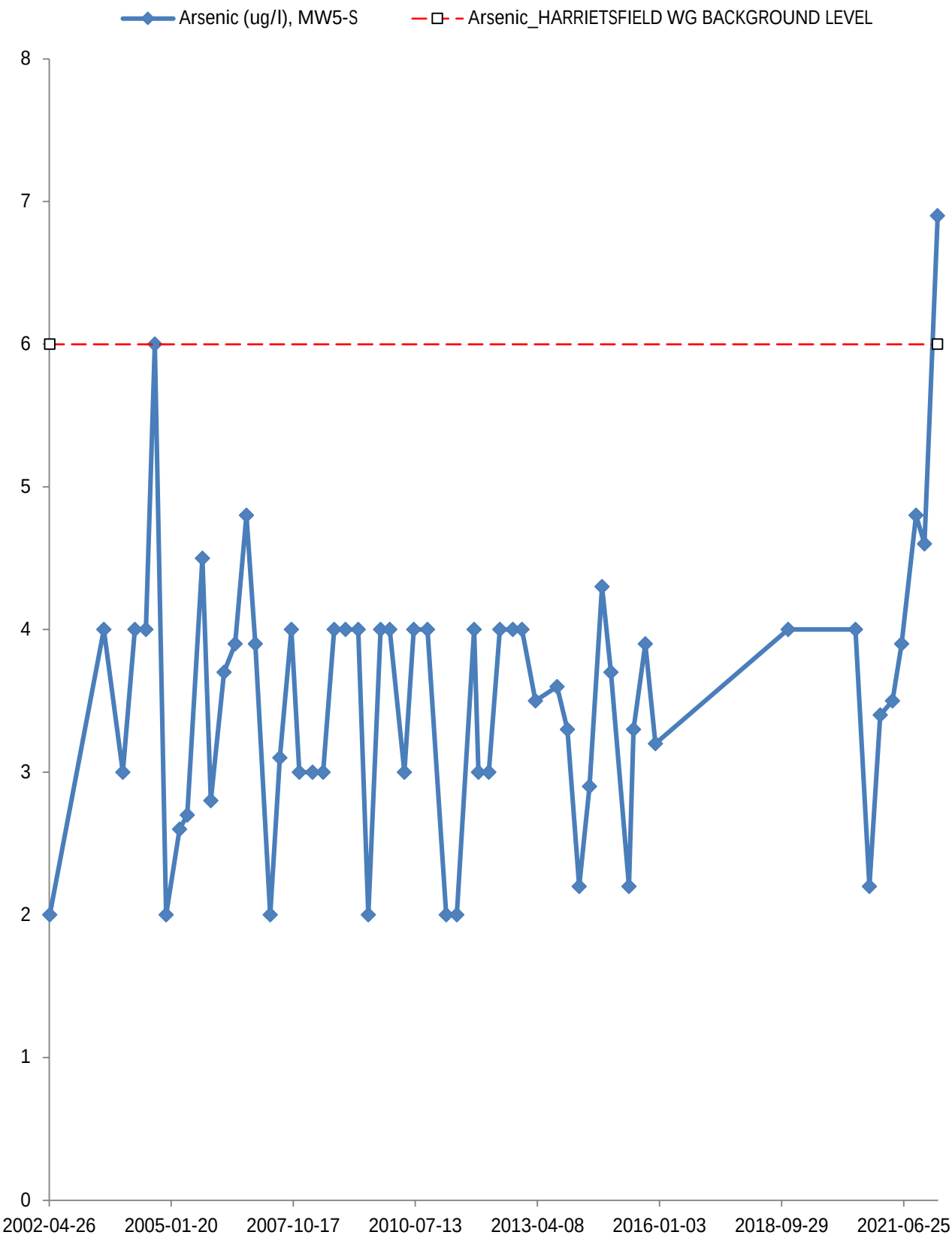
MW5-S-Ammonia-N



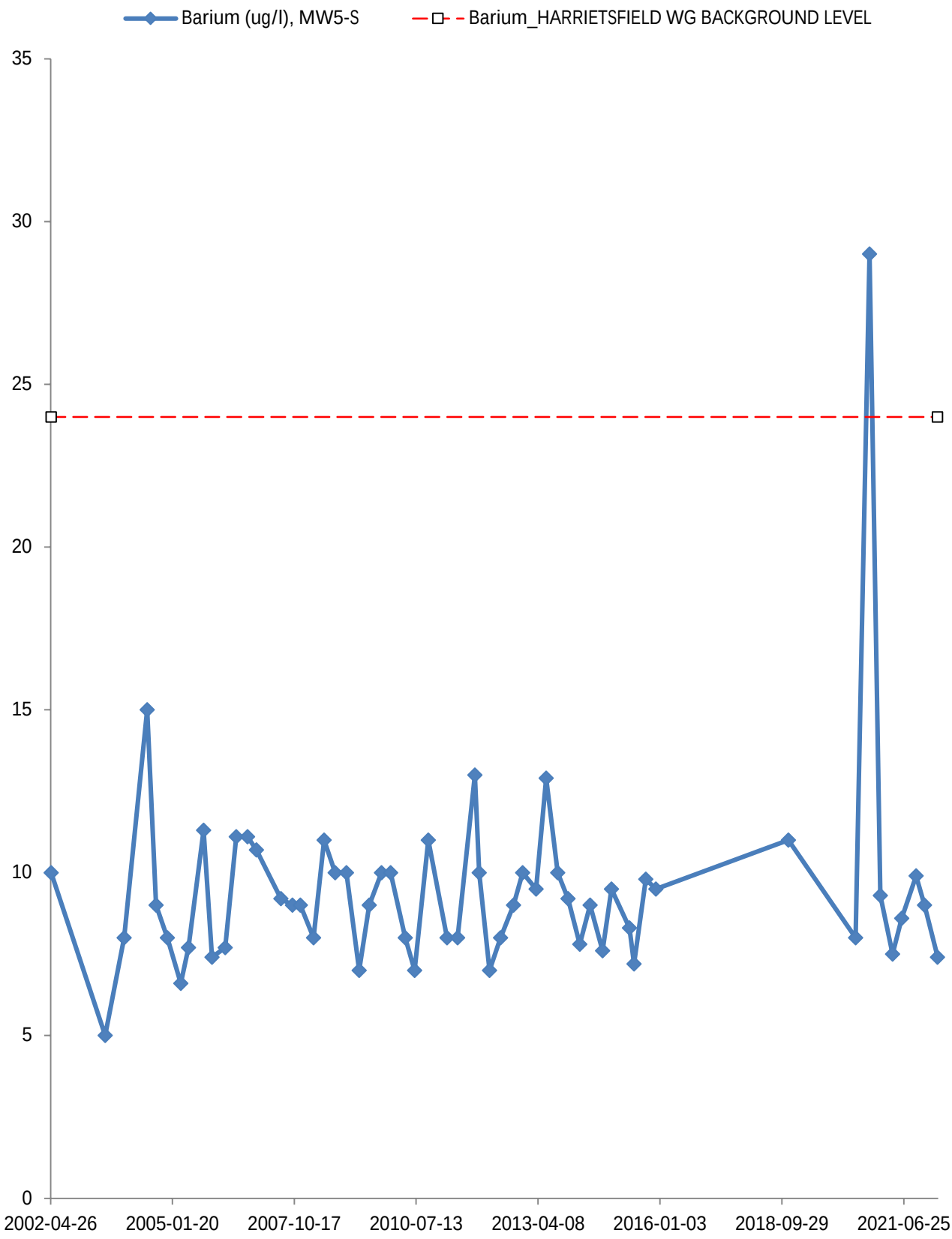
MW5-S-Antimony



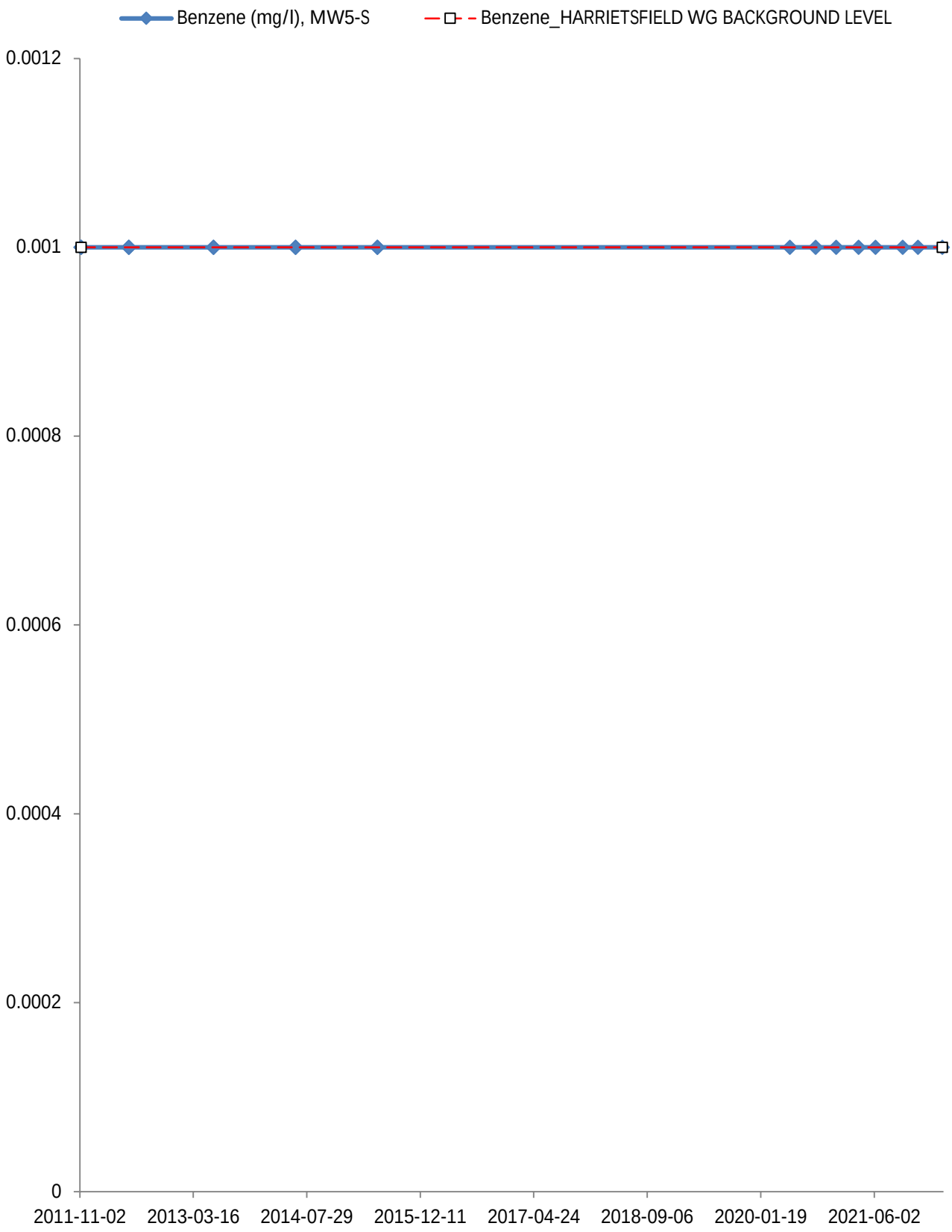
MW5-S-Arsenic



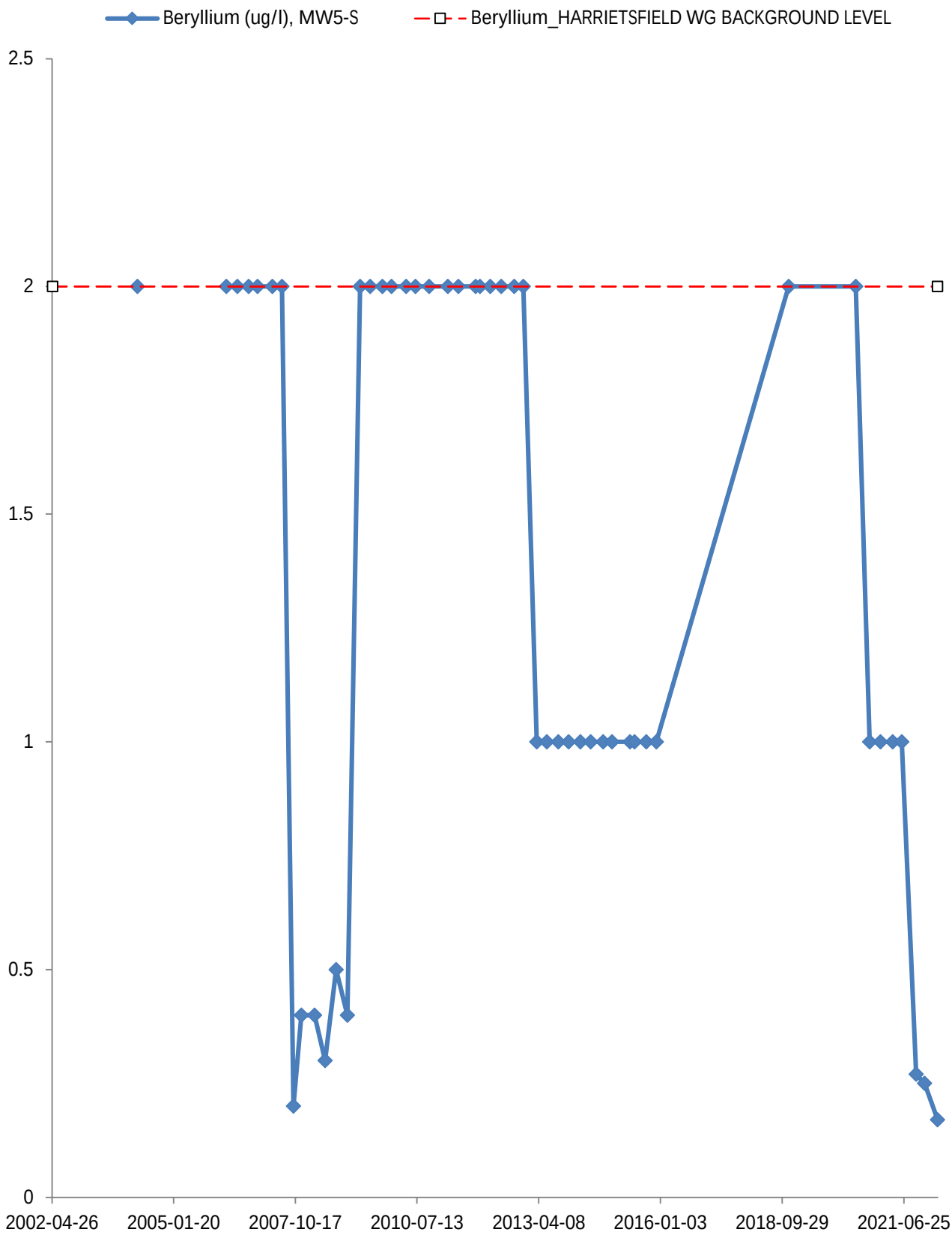
MW5-S-Barium


Barium (ug/l), MW5-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

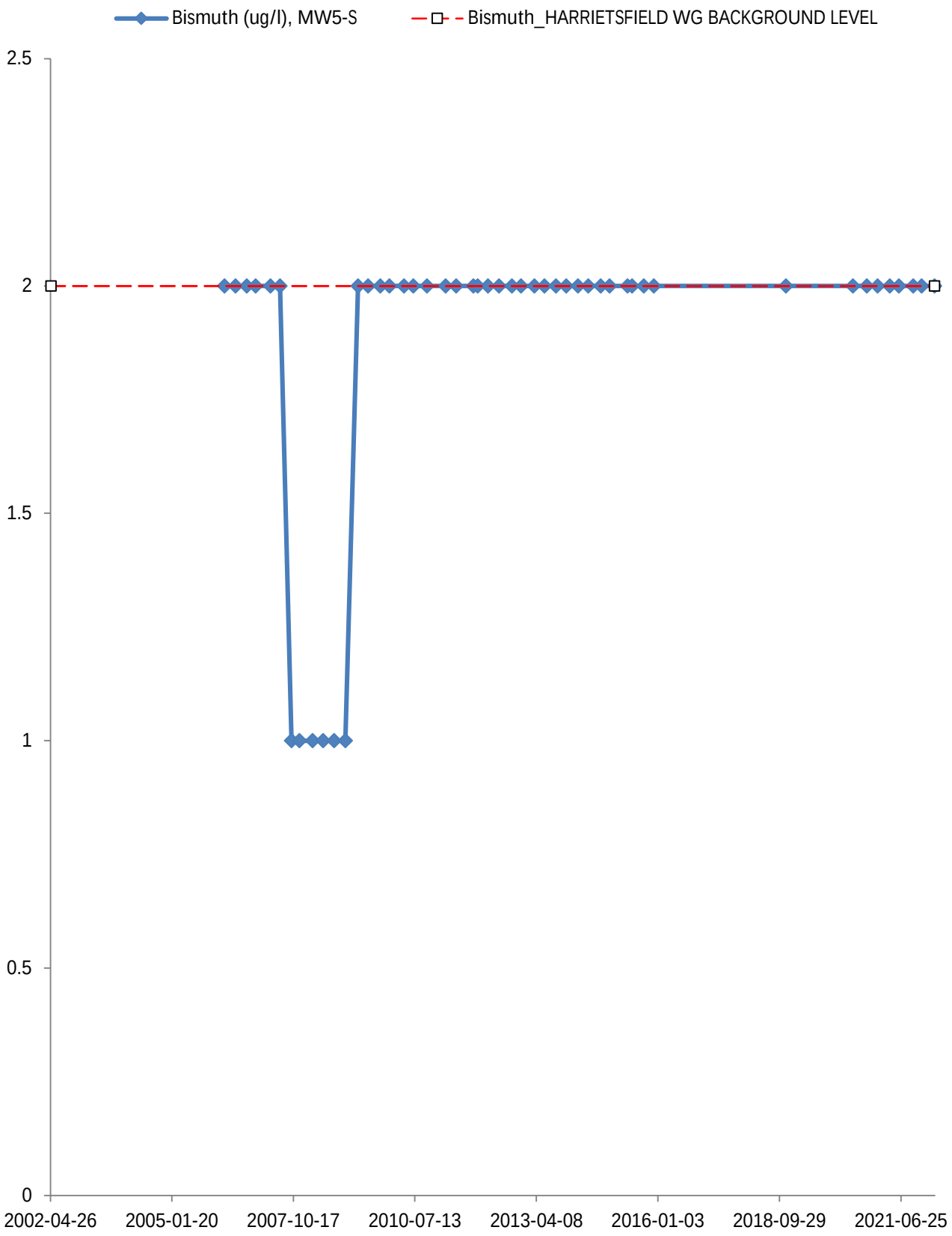
MW5-S-Benzene



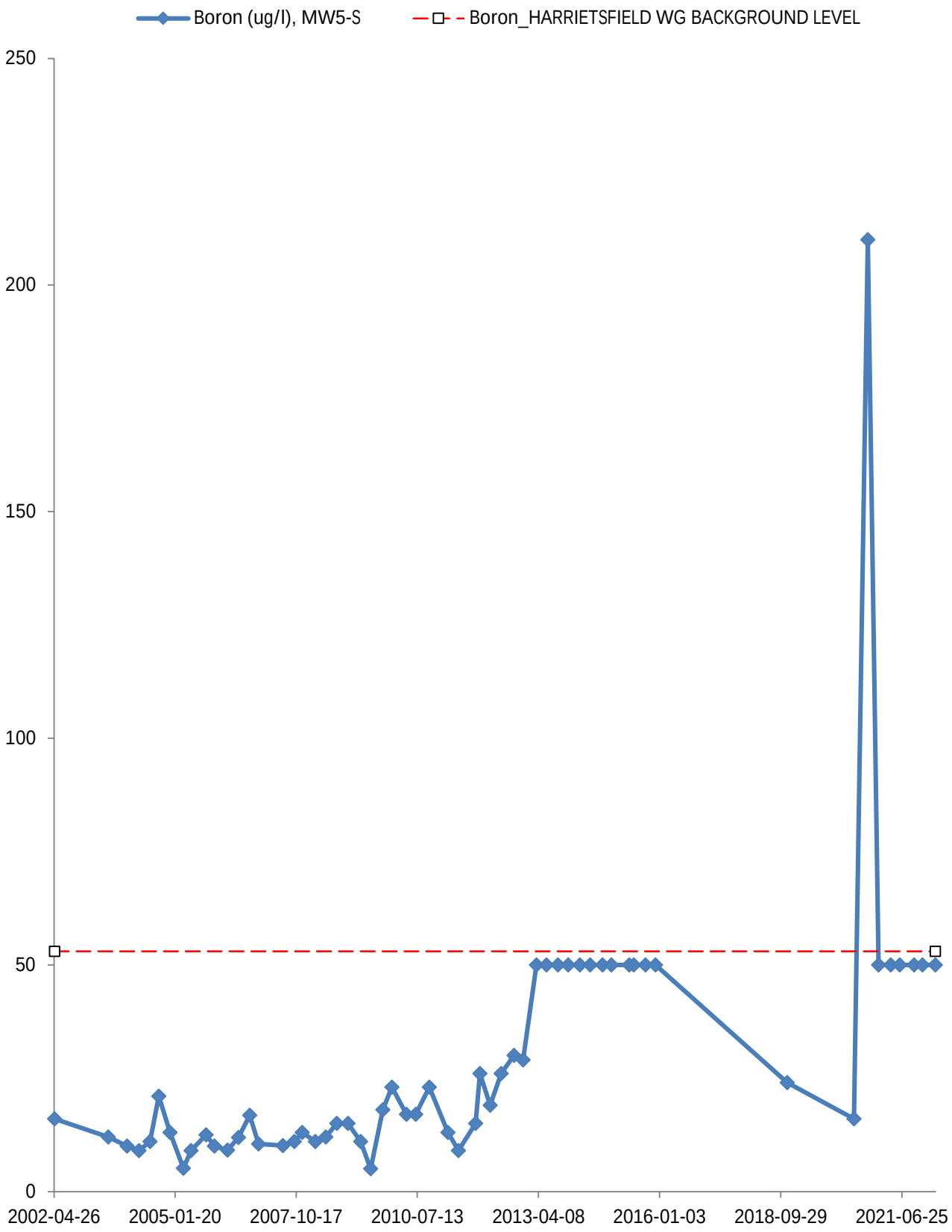
MW5-S-Beryllium



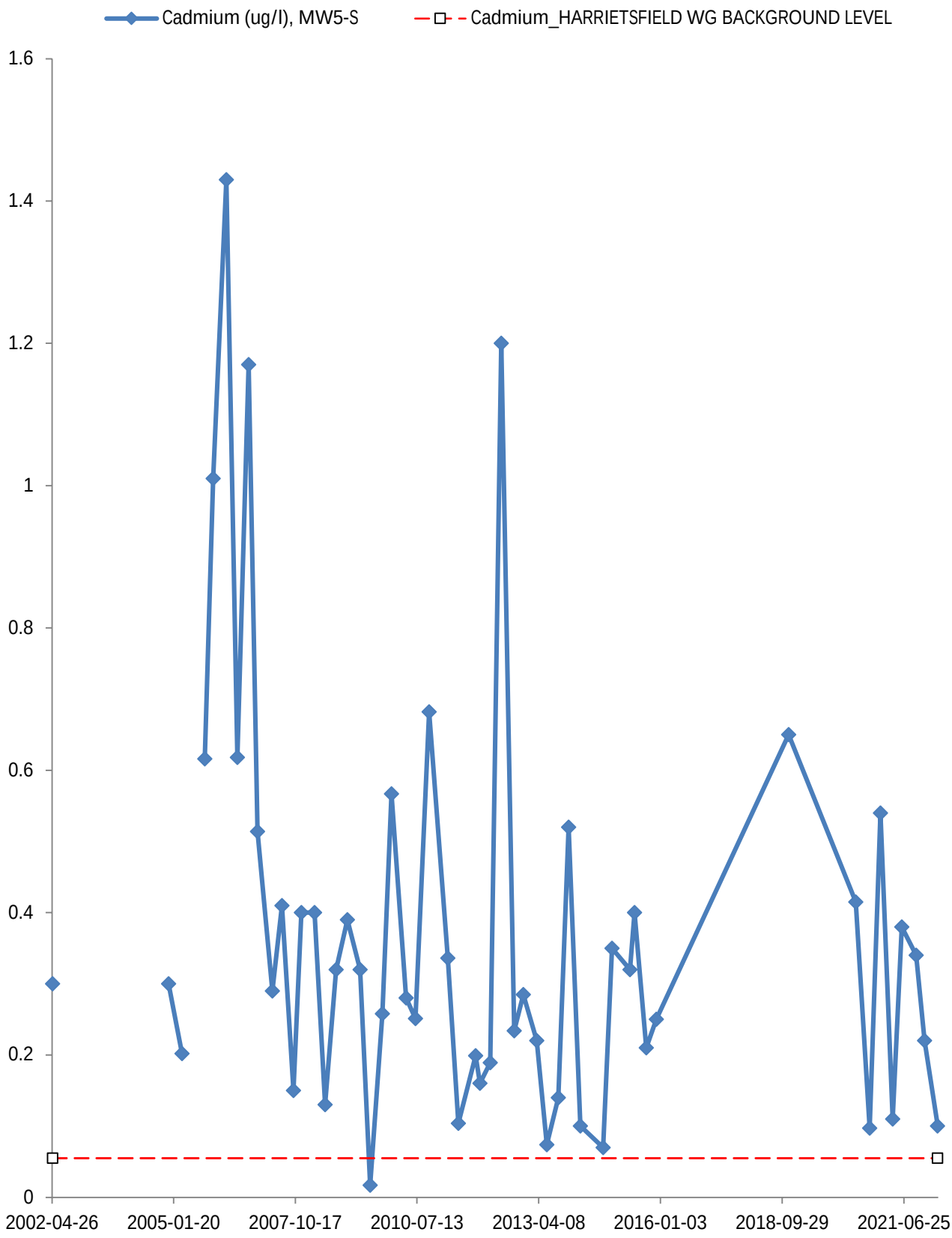
MW5-S-Bismuth



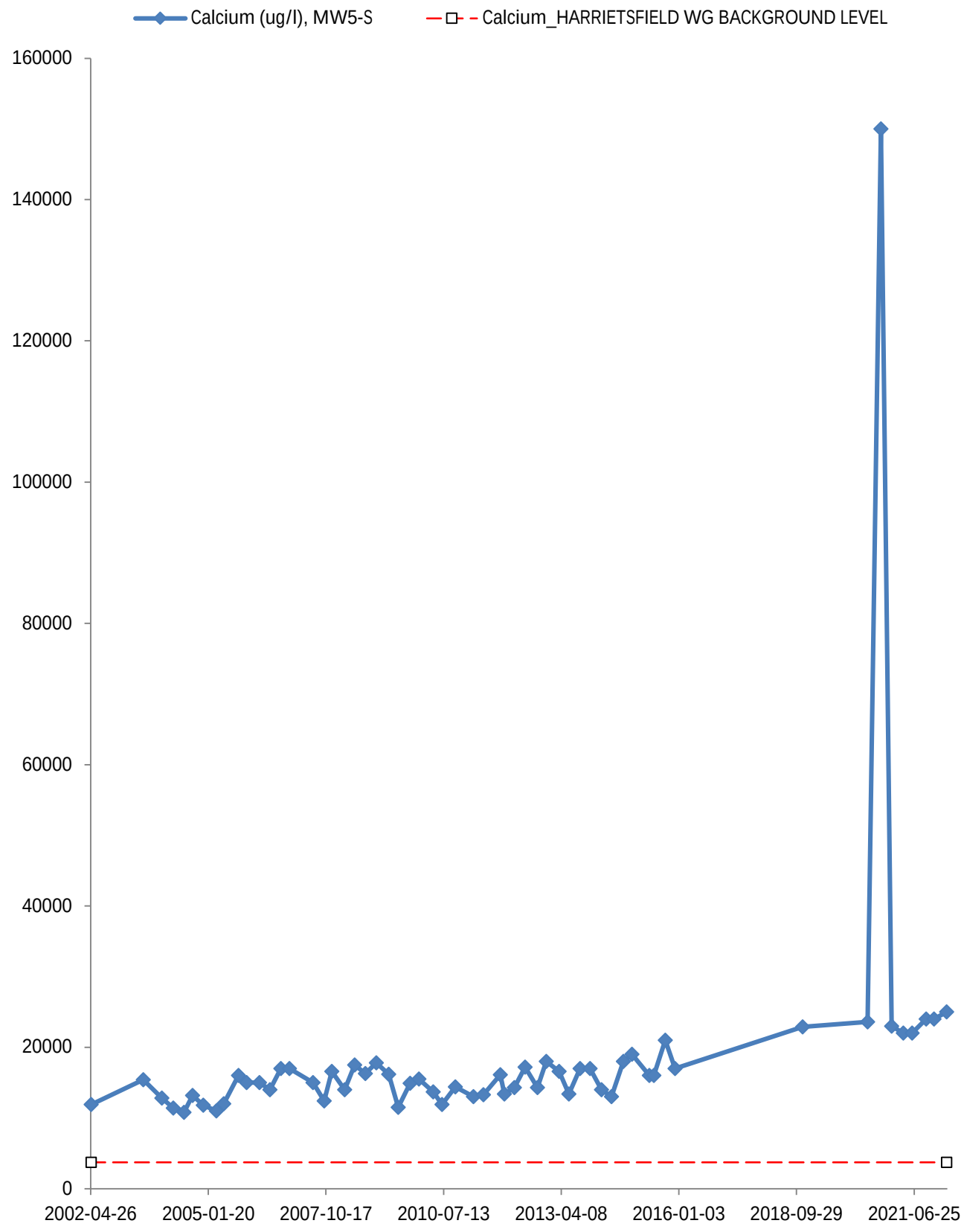
MW5-S-Boron


Boron (ug/l), MW5-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
250
200
150
100
50
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

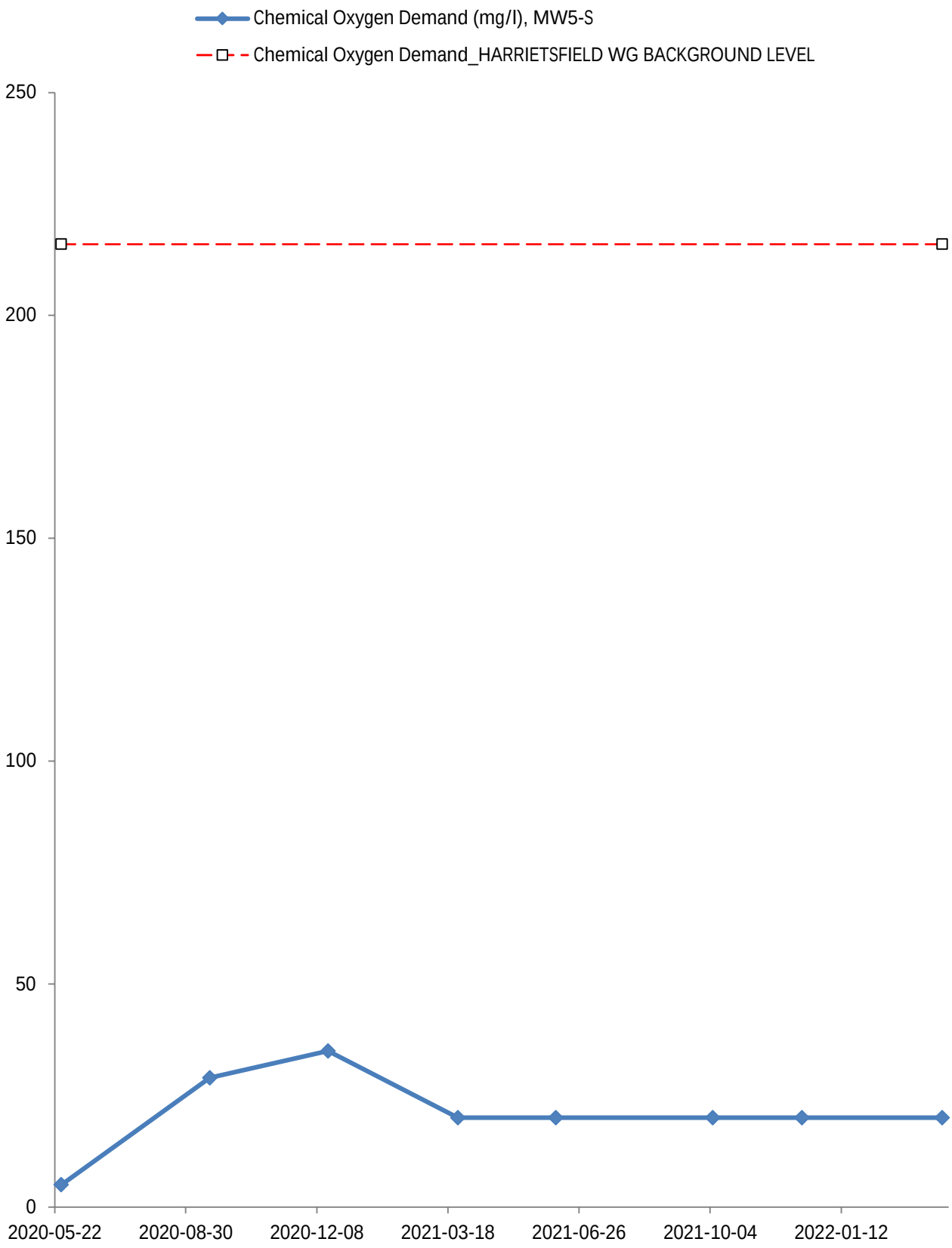
MW5-S-Cadmium



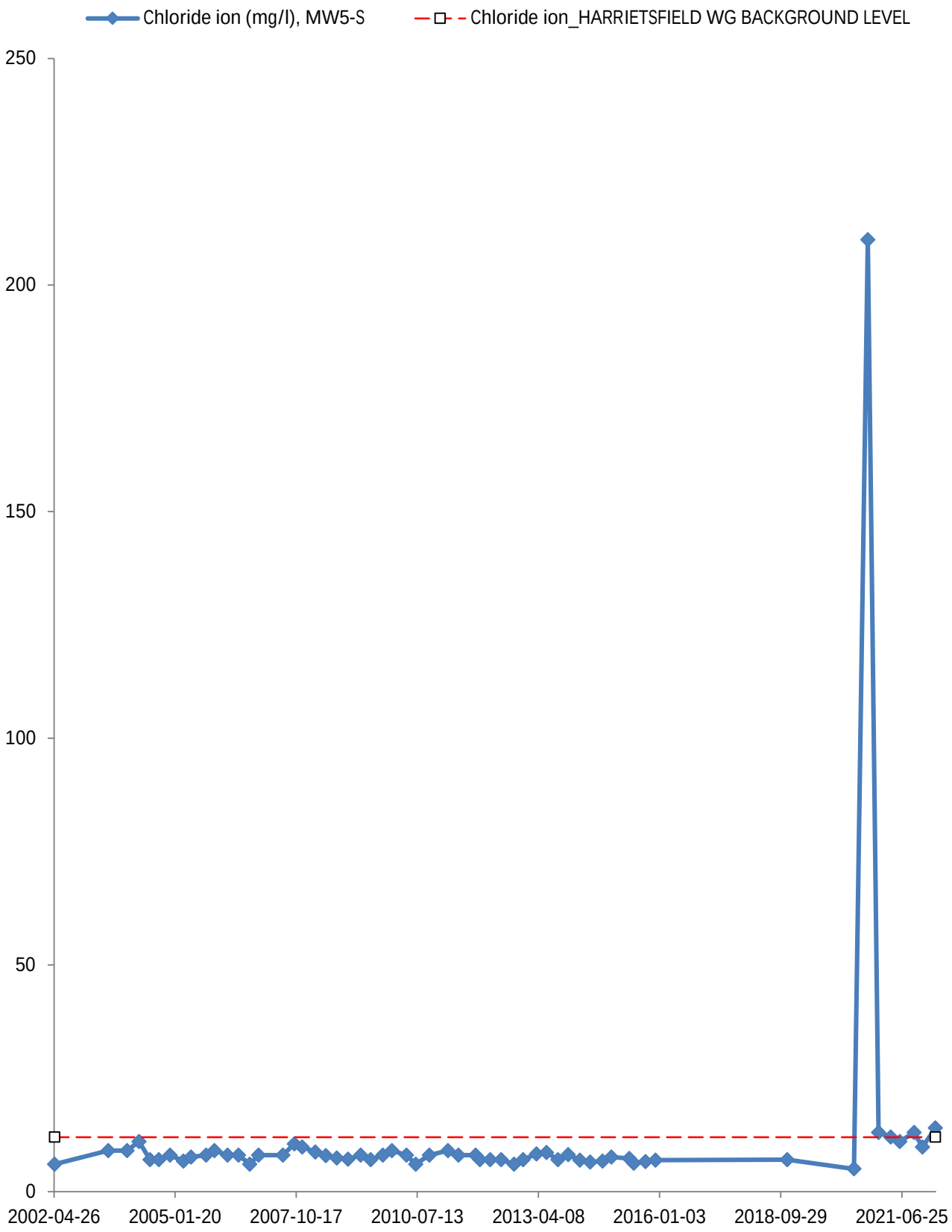
MW5-S-Calcium



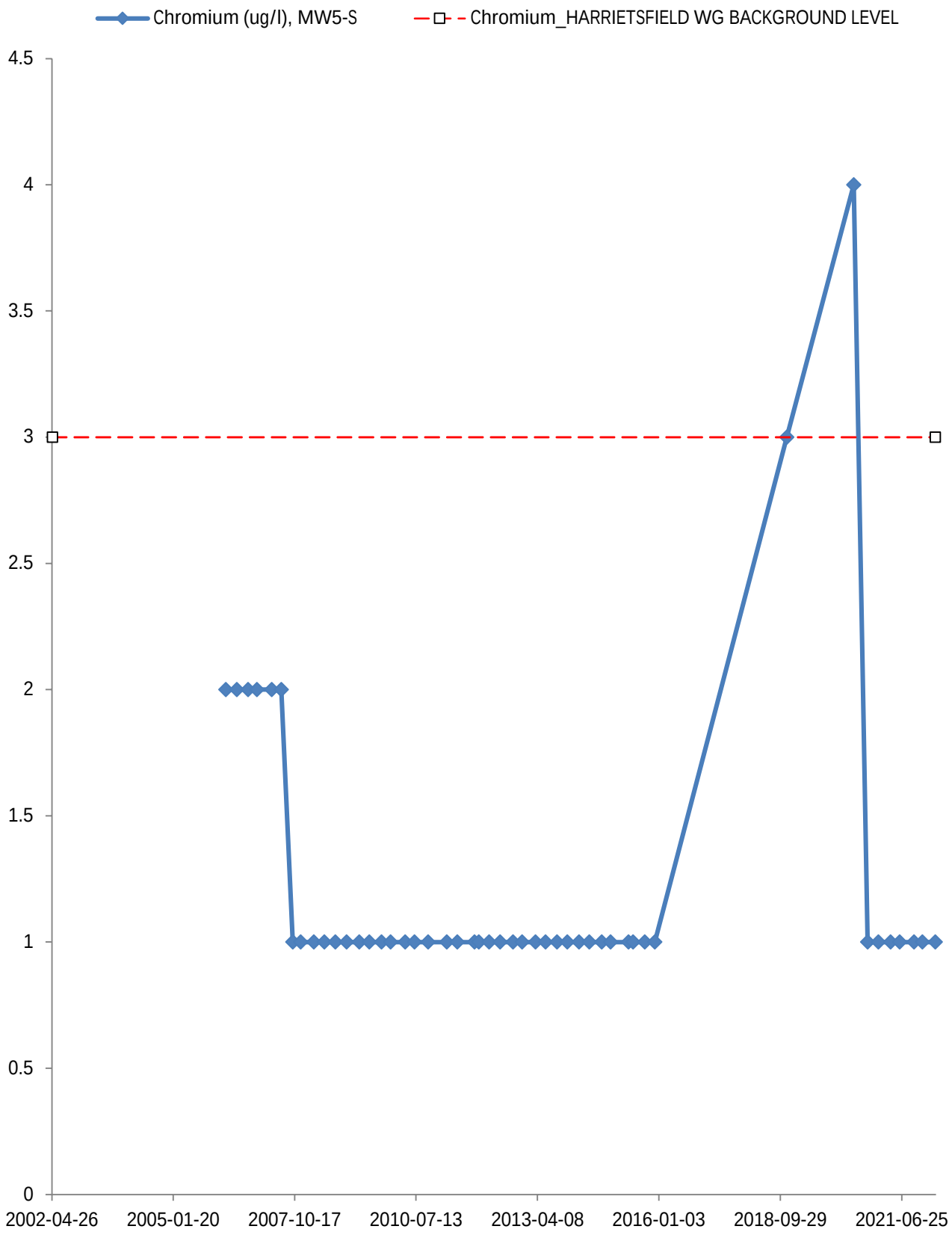
MW5-S-Chemical Oxygen Demand



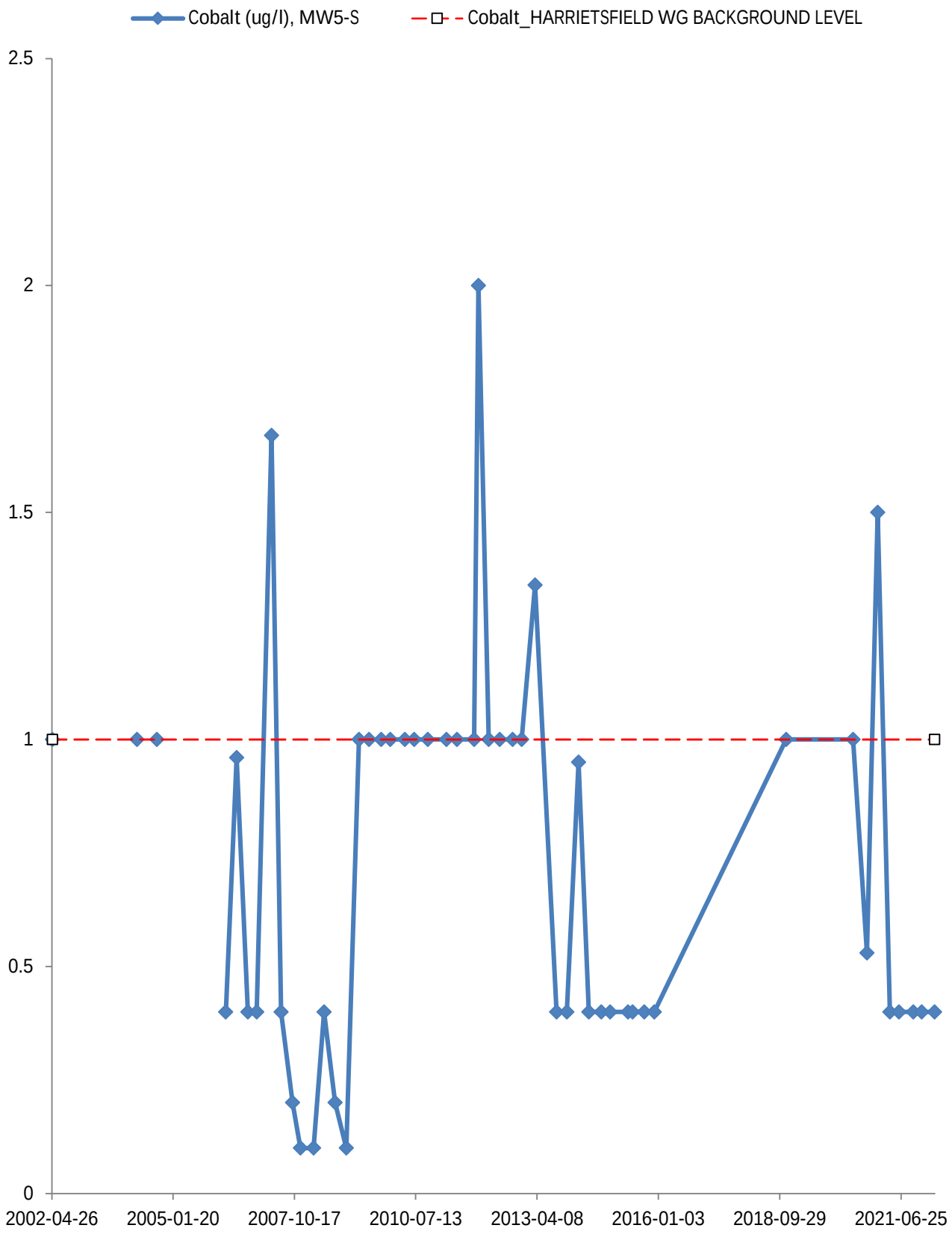
MW5-S-Chloride ion



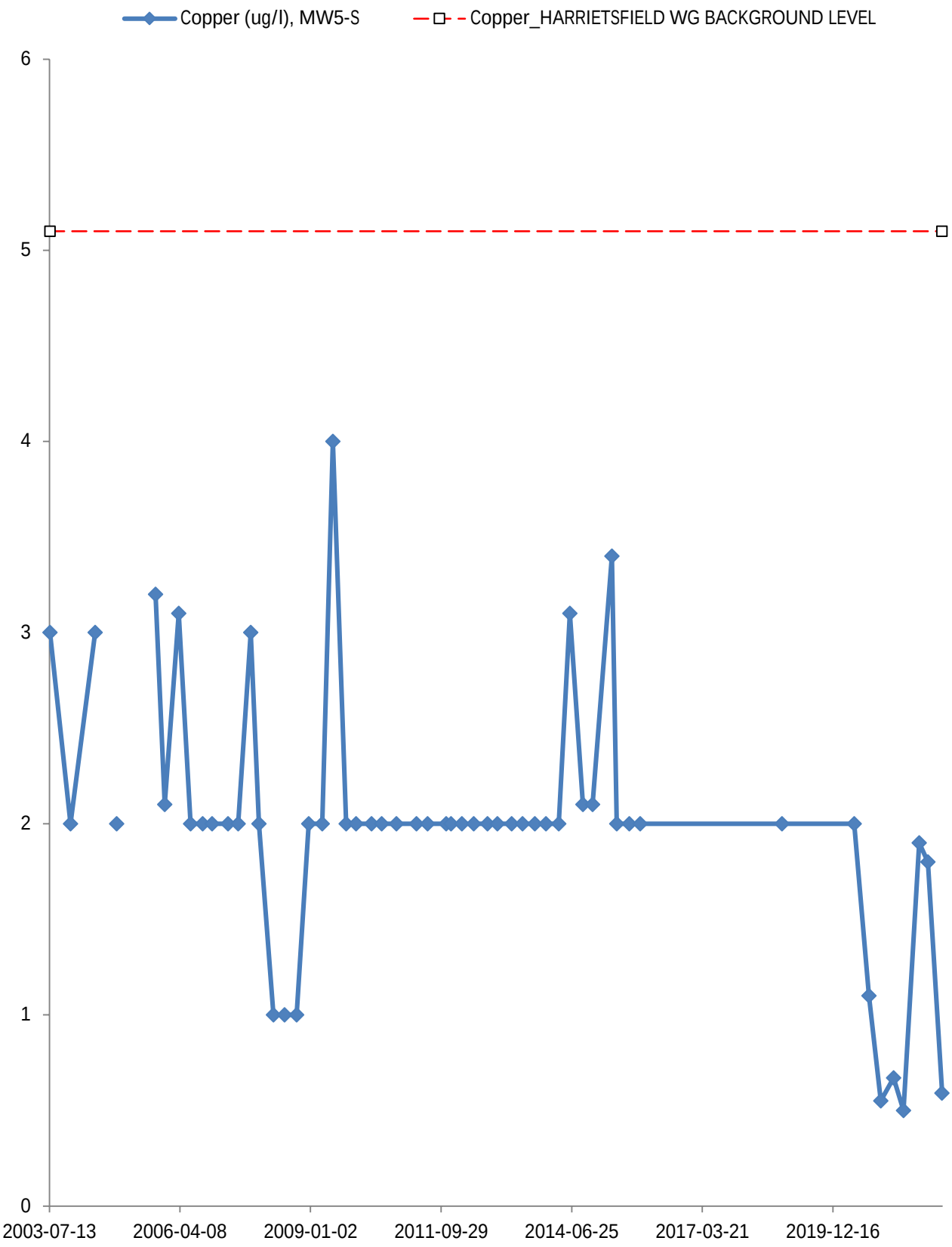
MW5-S-Chromium



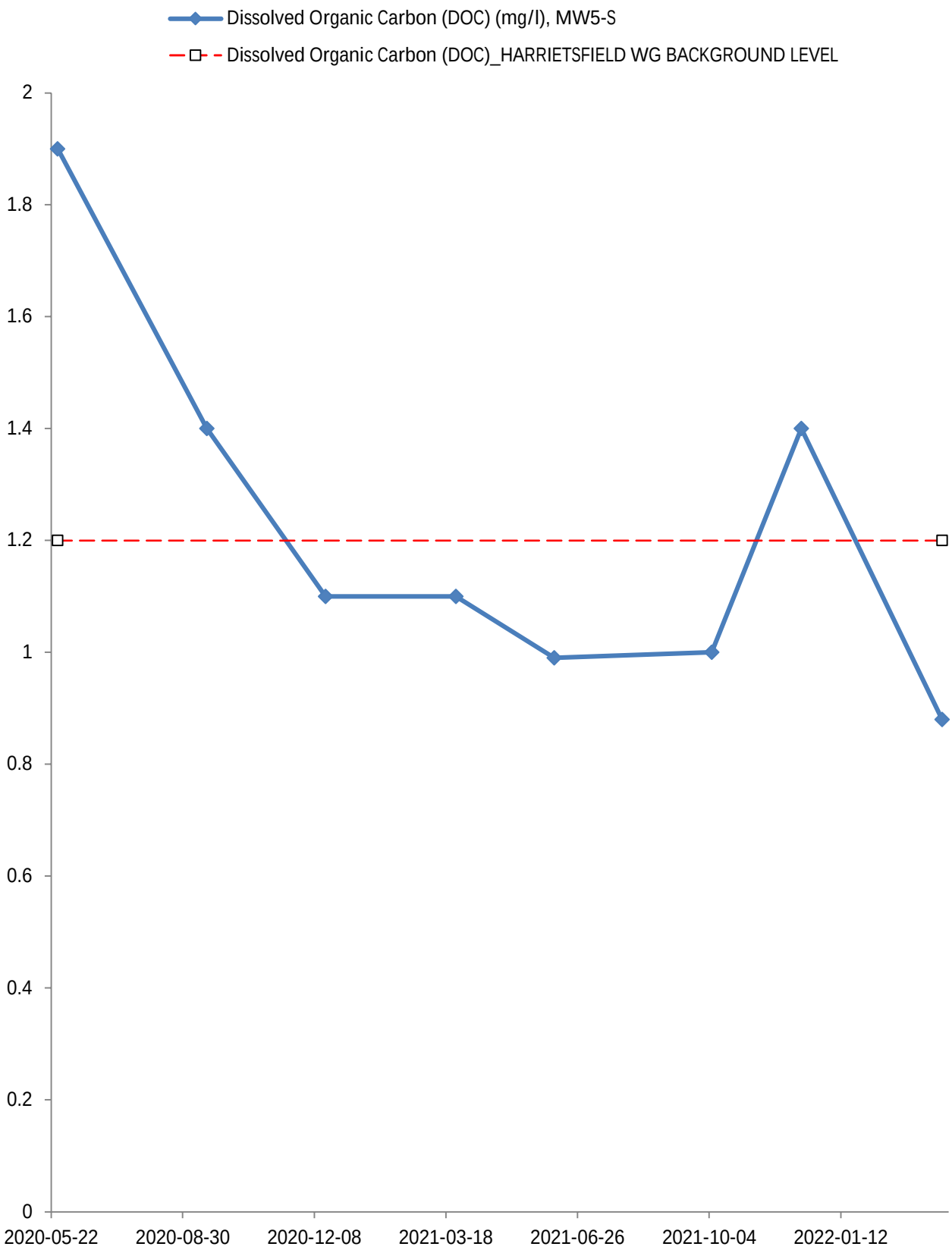
MW5-S-Cobalt


Cobalt (ug/l), MW5-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

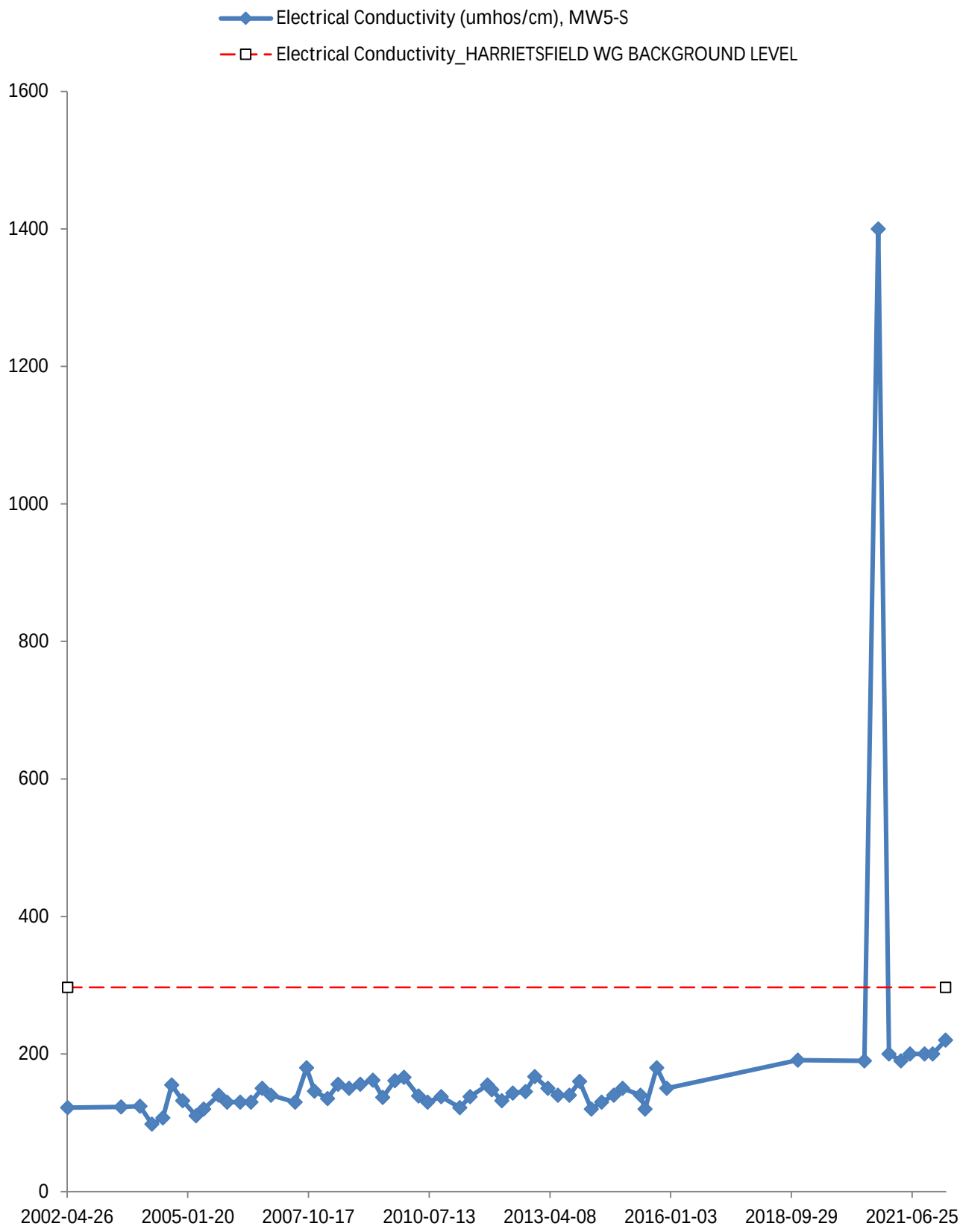
MW5-S-Copper


Copper (ug/l), MW5-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2003-07-13
2006-04-08
2009-01-02
2011-09-29
2014-06-25
2017-03-21
2019-12-16

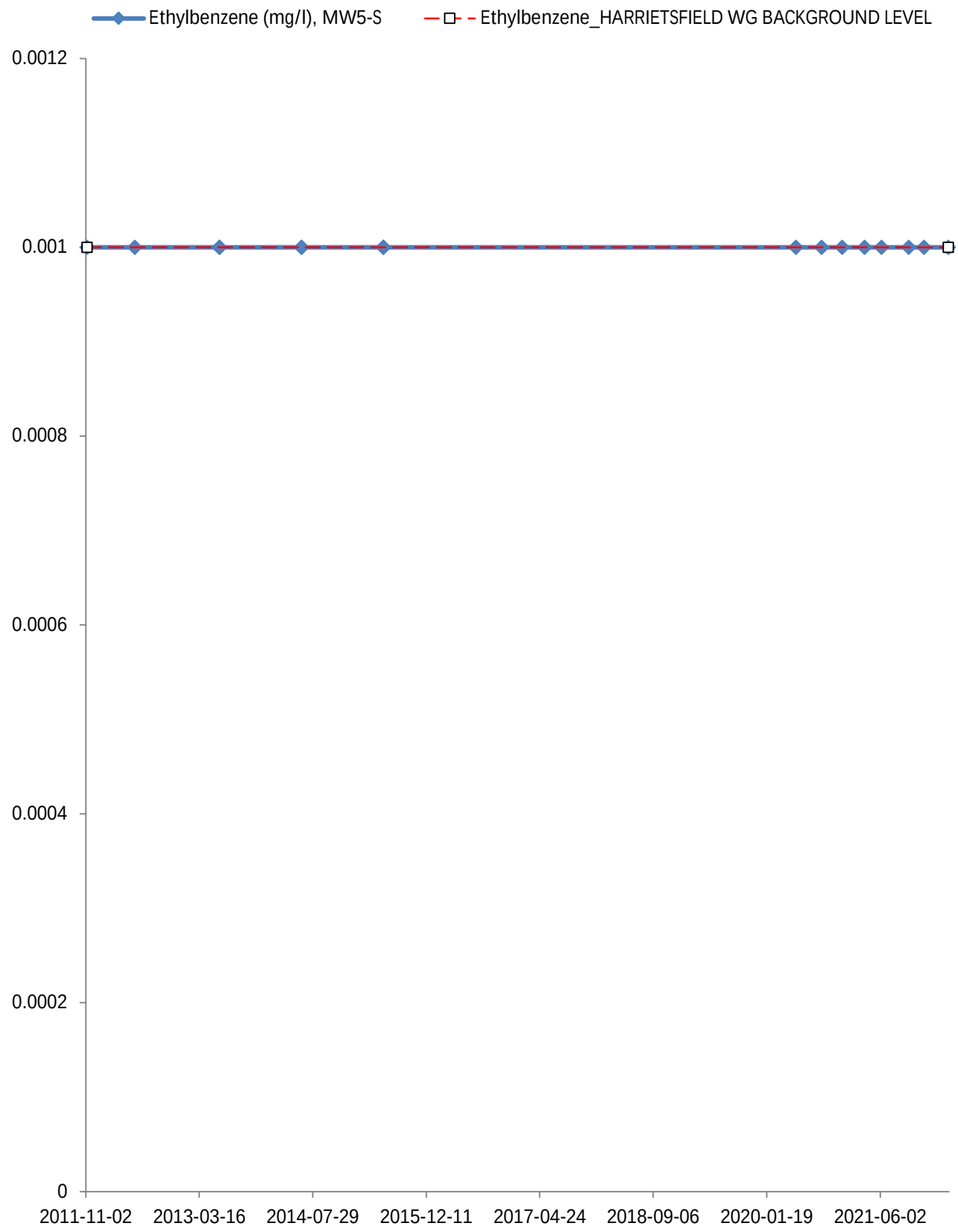
MW5-S-Dissolved Organic Carbon7



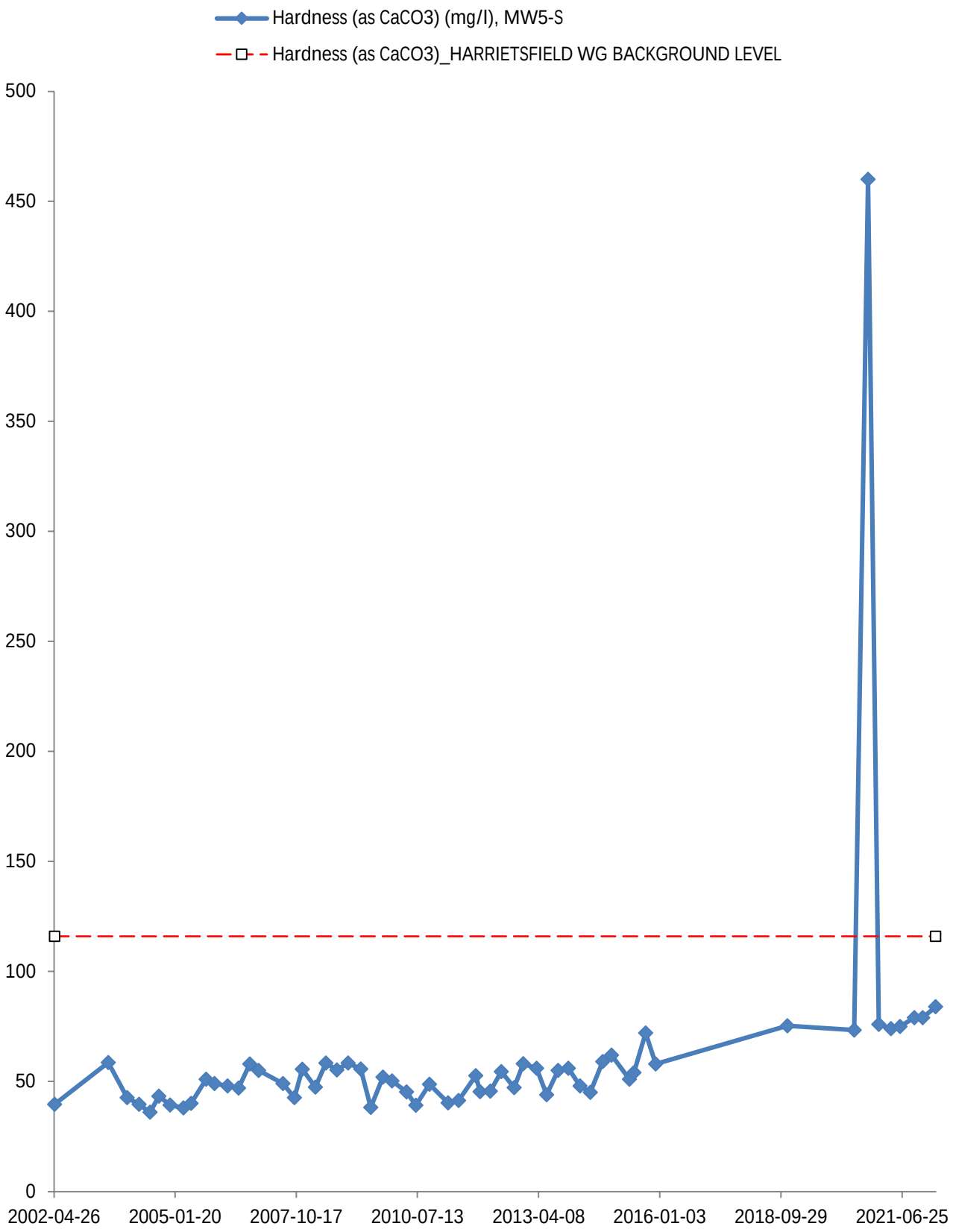
MW5-S-Electrical Conductivity



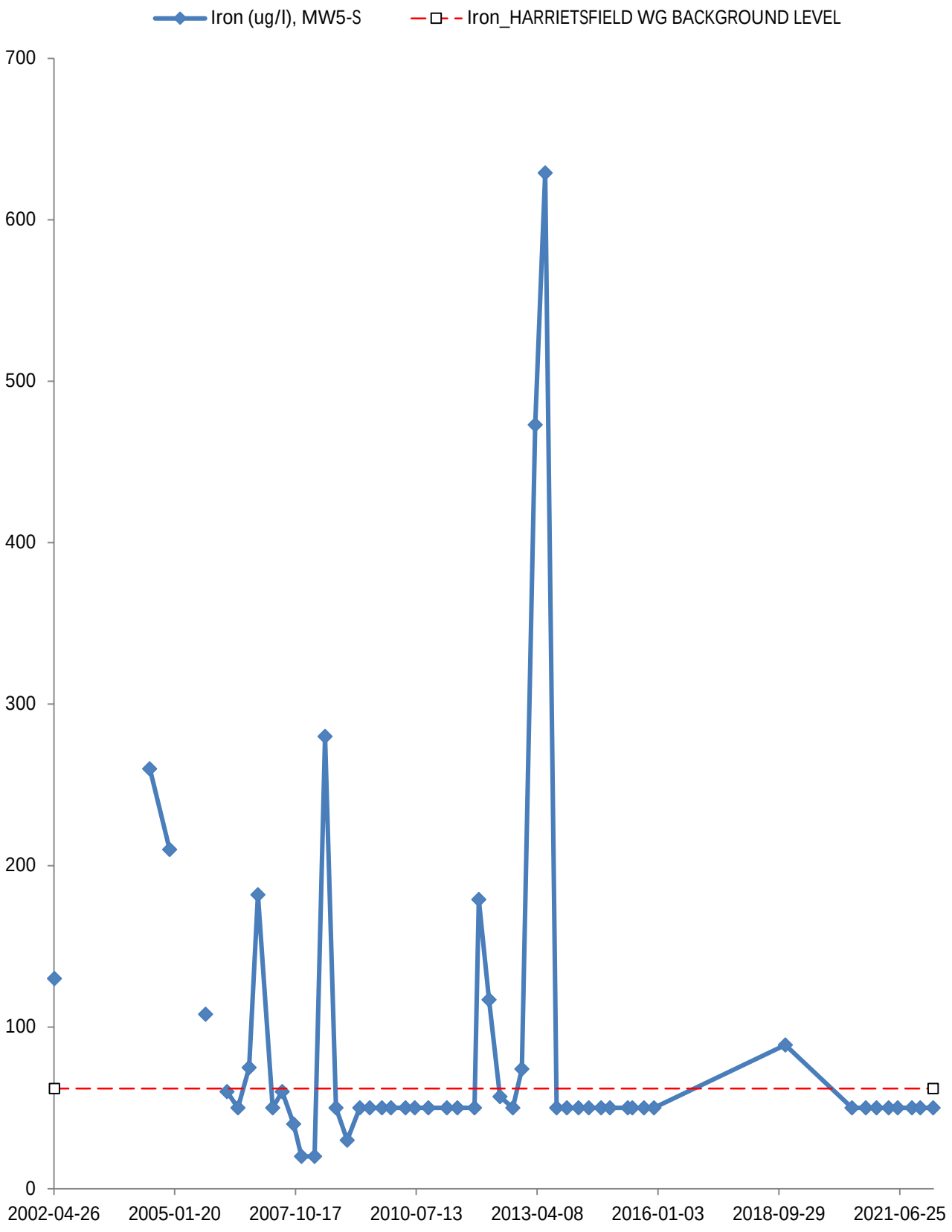
MW5-S-Ethylbenzene



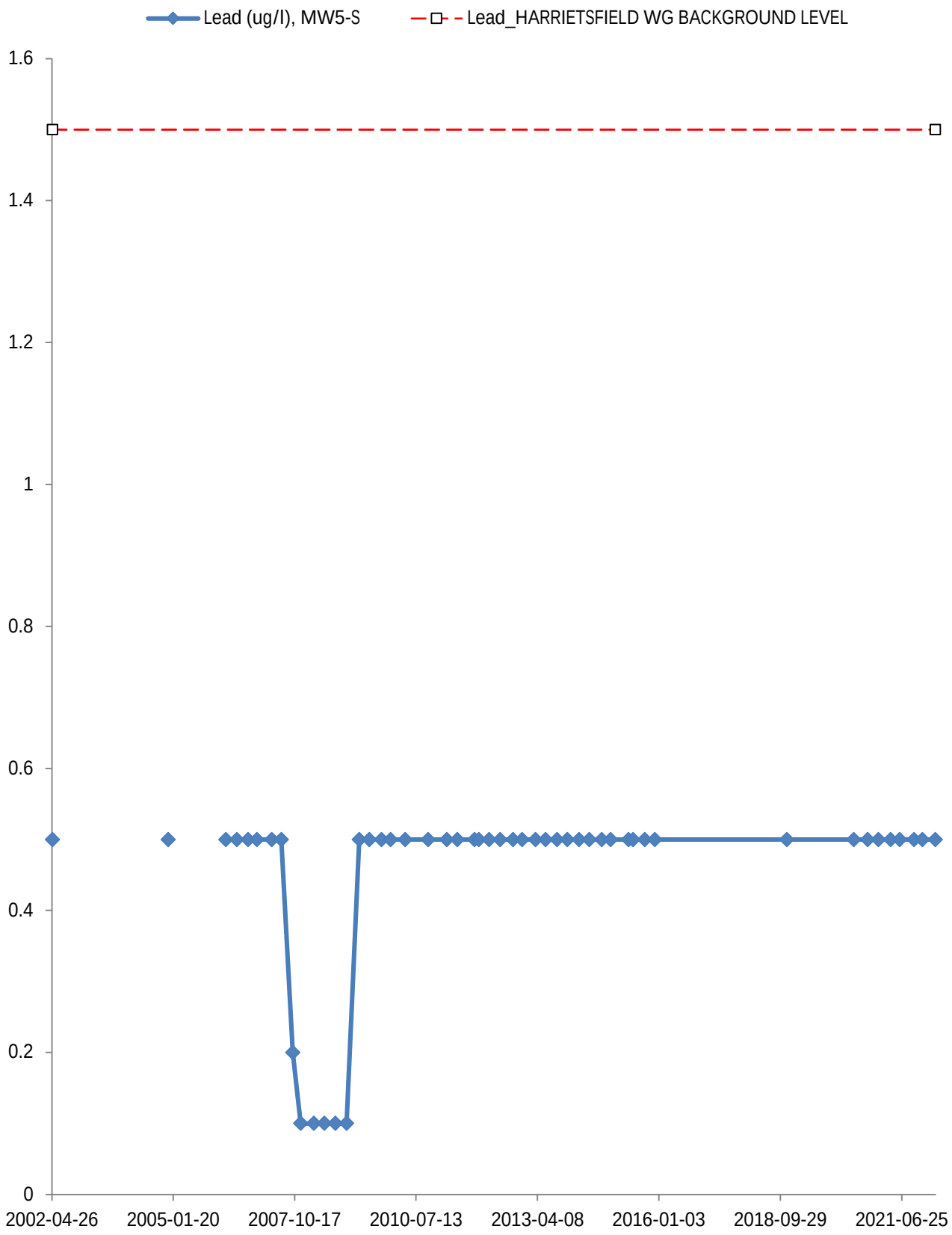
MW5-S-Hardness (as CaCO3)



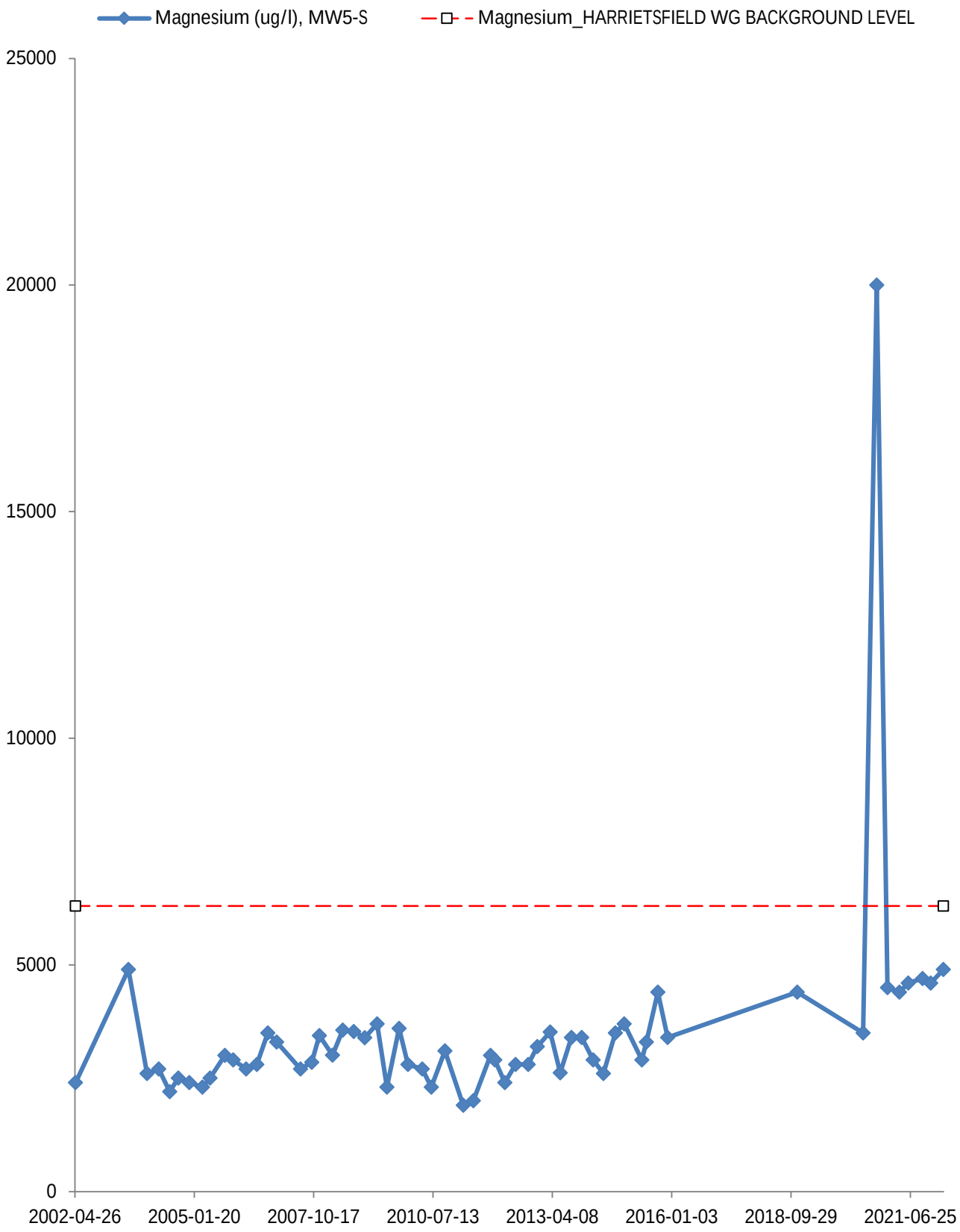
MW5-S-Iron


Iron (ug/l), MW5-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
700
600
500
400
300
200
100
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

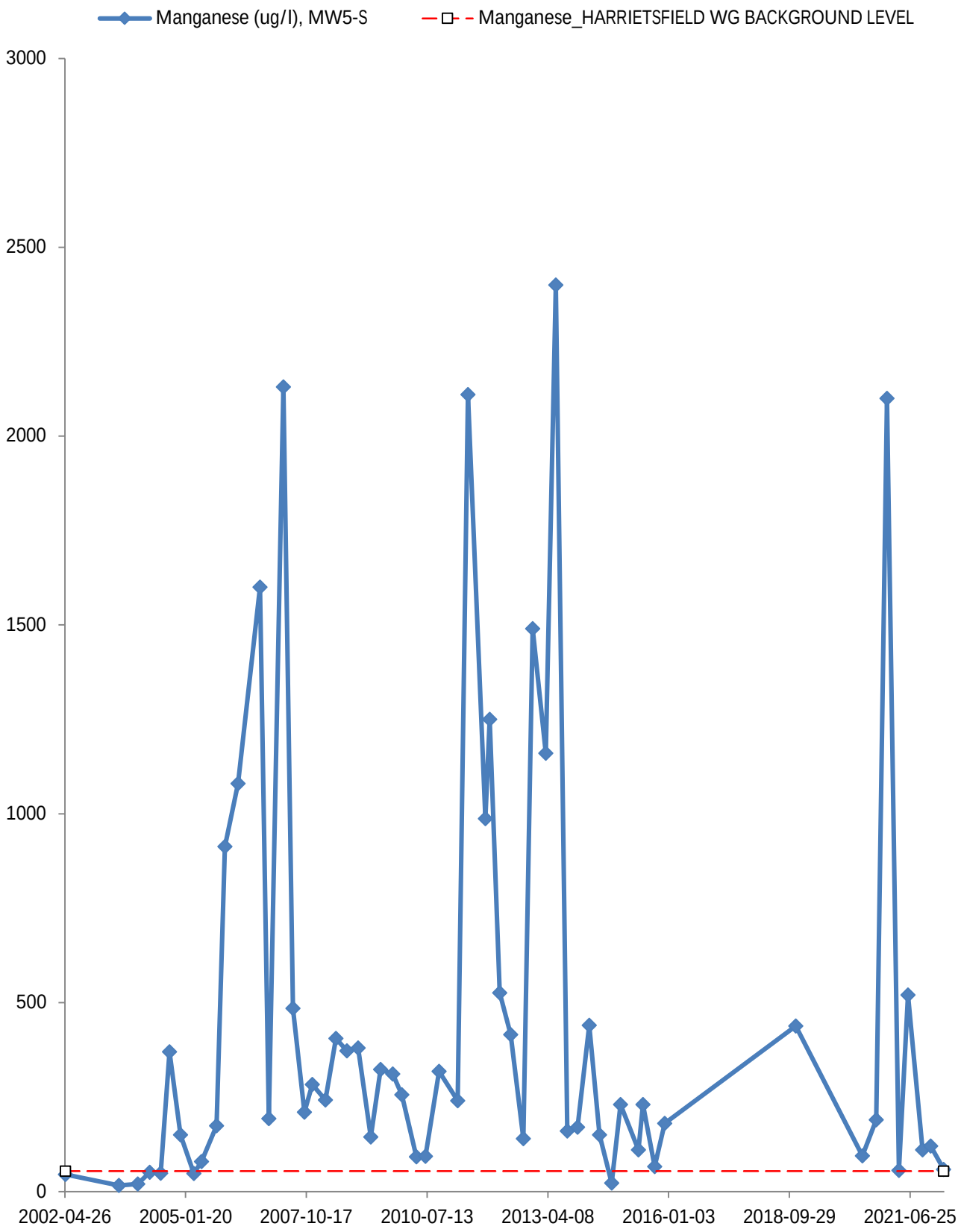
MW5-S-Lead


Lead (ug/l), MW5-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

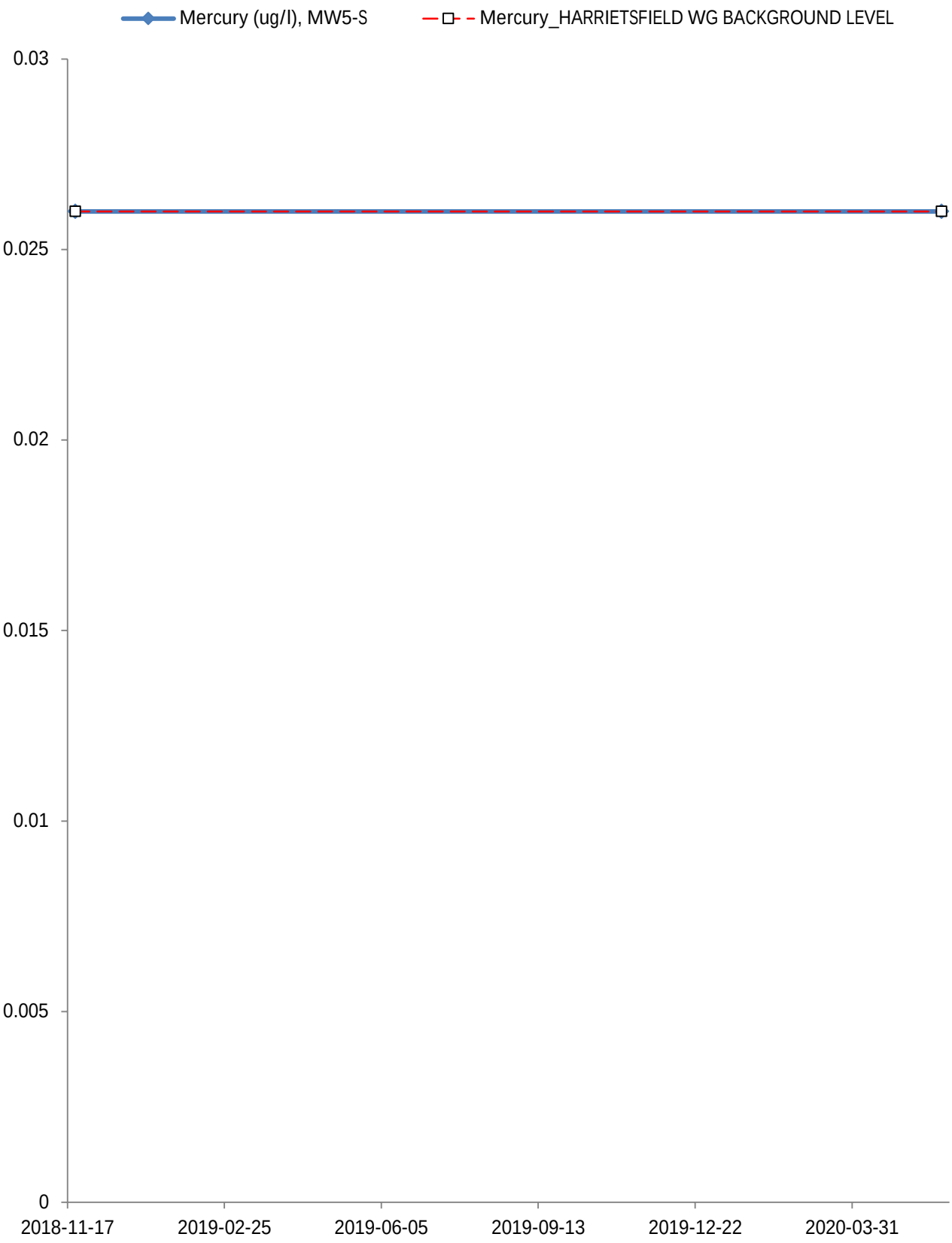
MW5-S-Magnesium



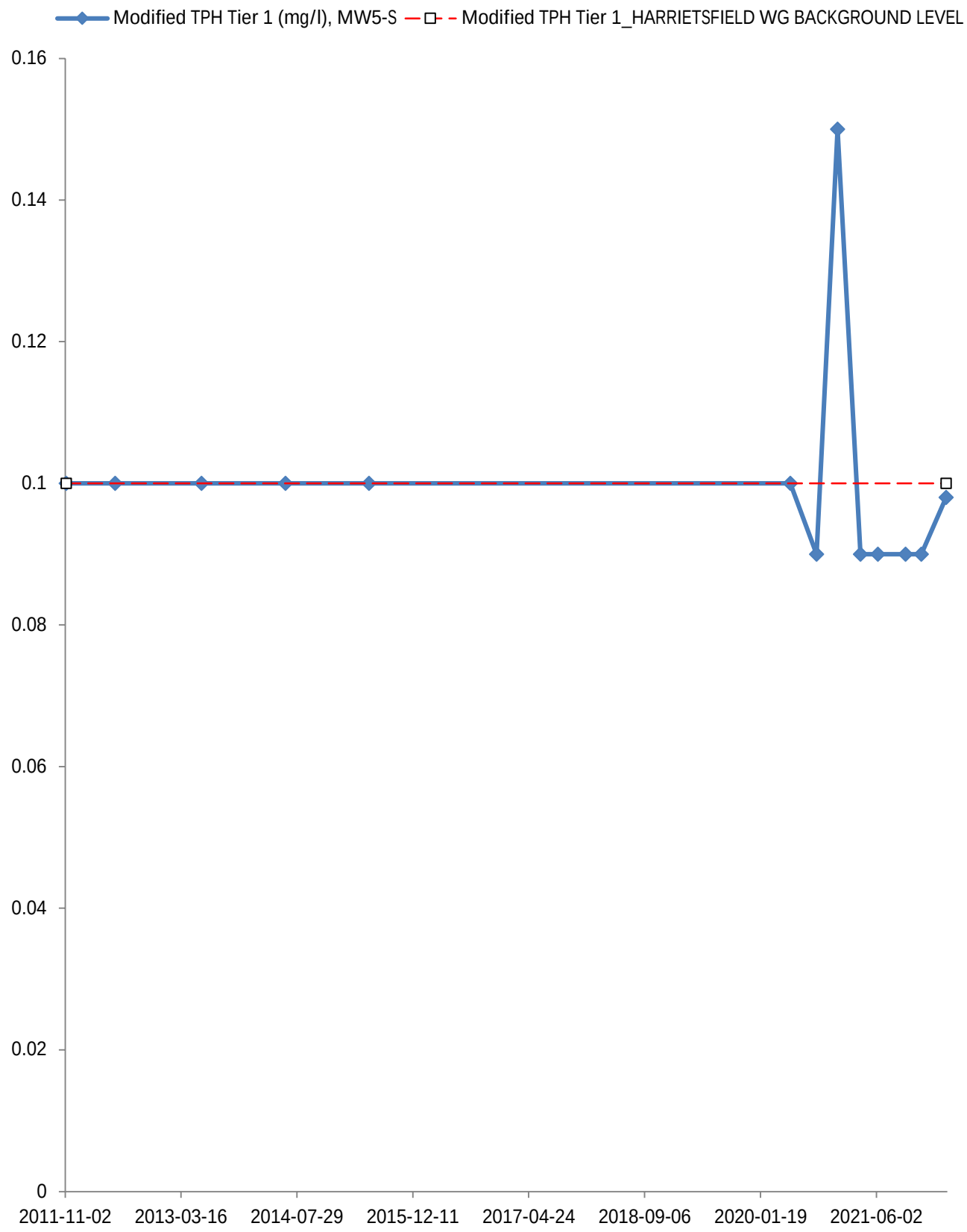
MW5-S-Manganese



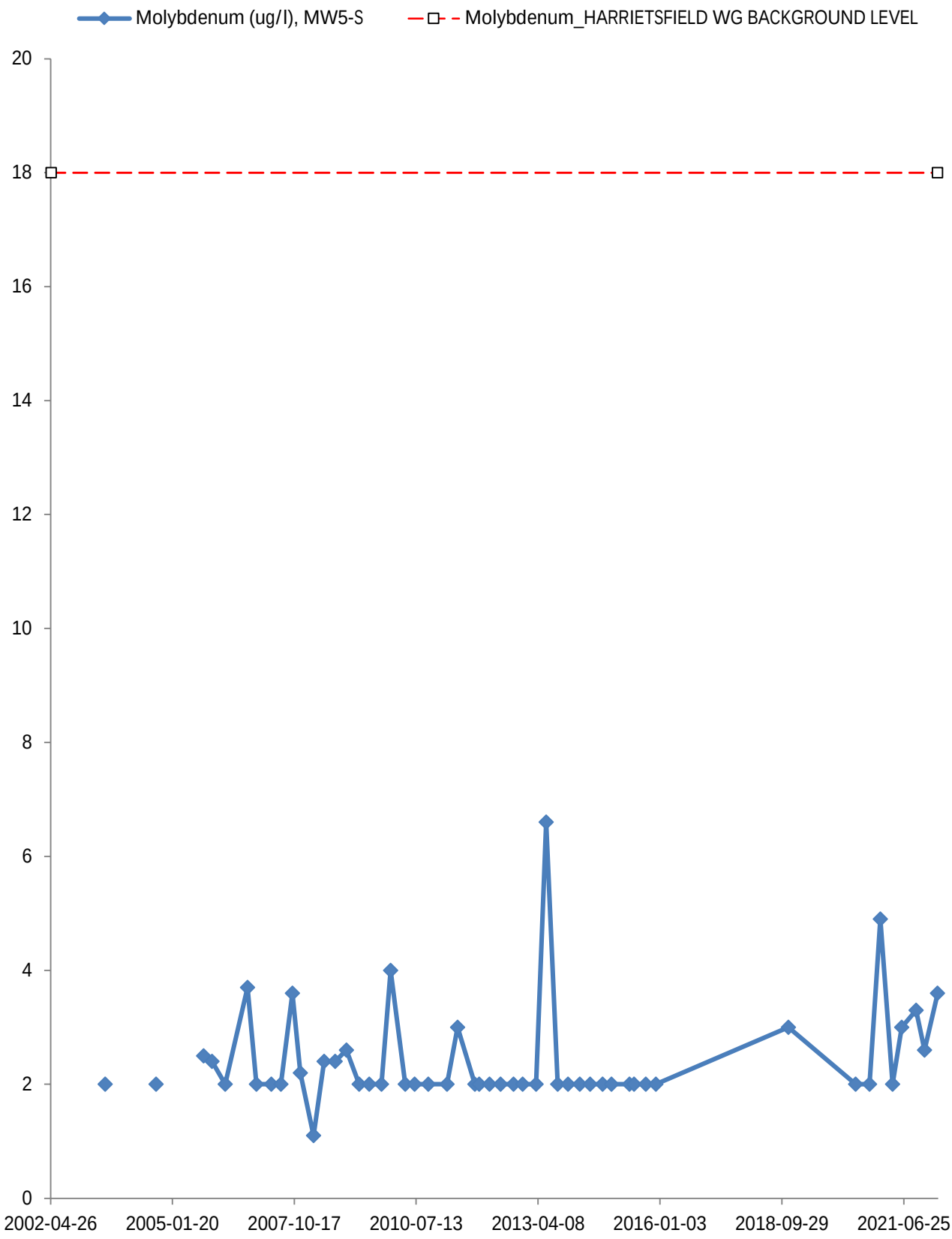
MW5-S-Mercury



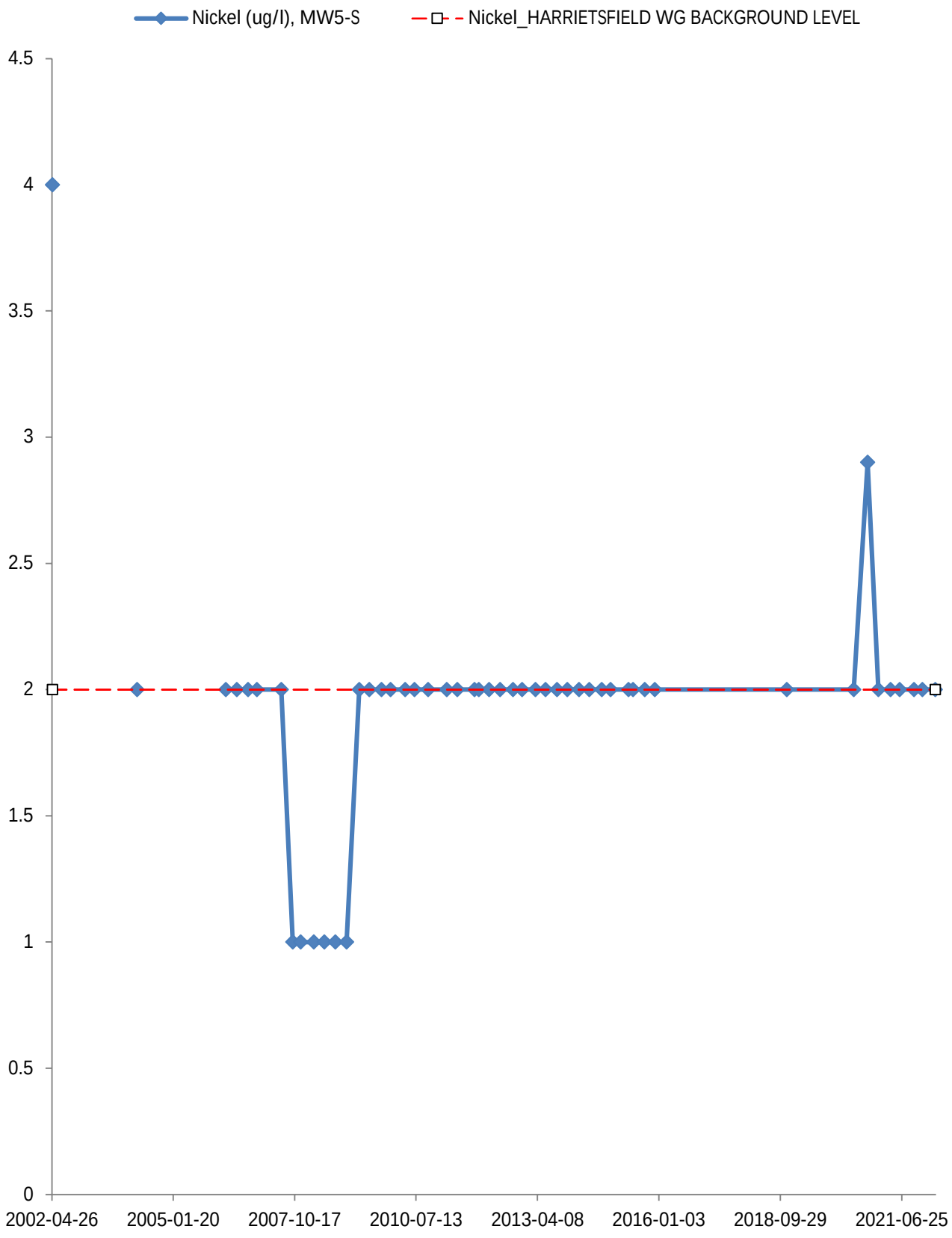
MW5-S-Modified TPH Tier 1



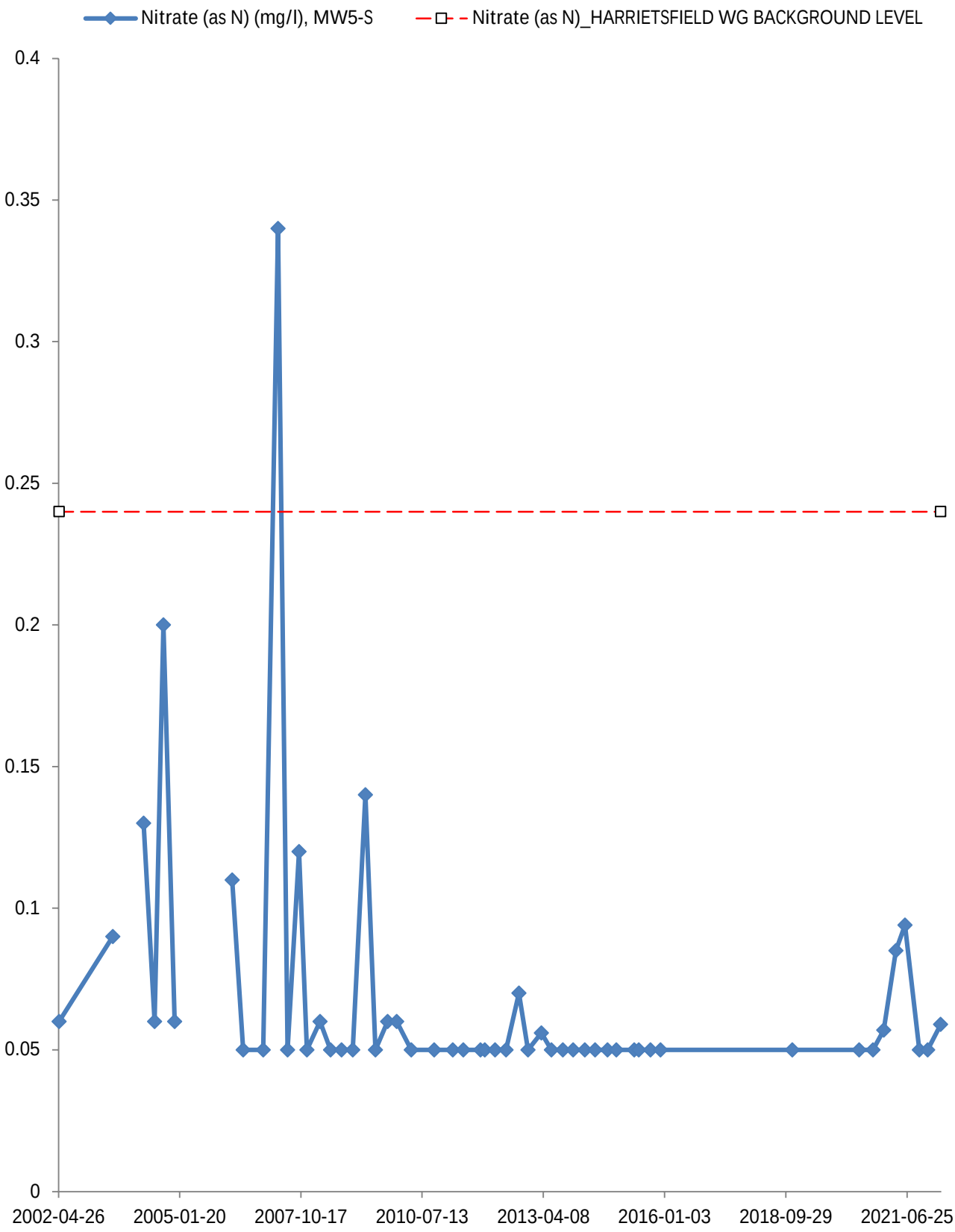
MW5-S-Molybdenum



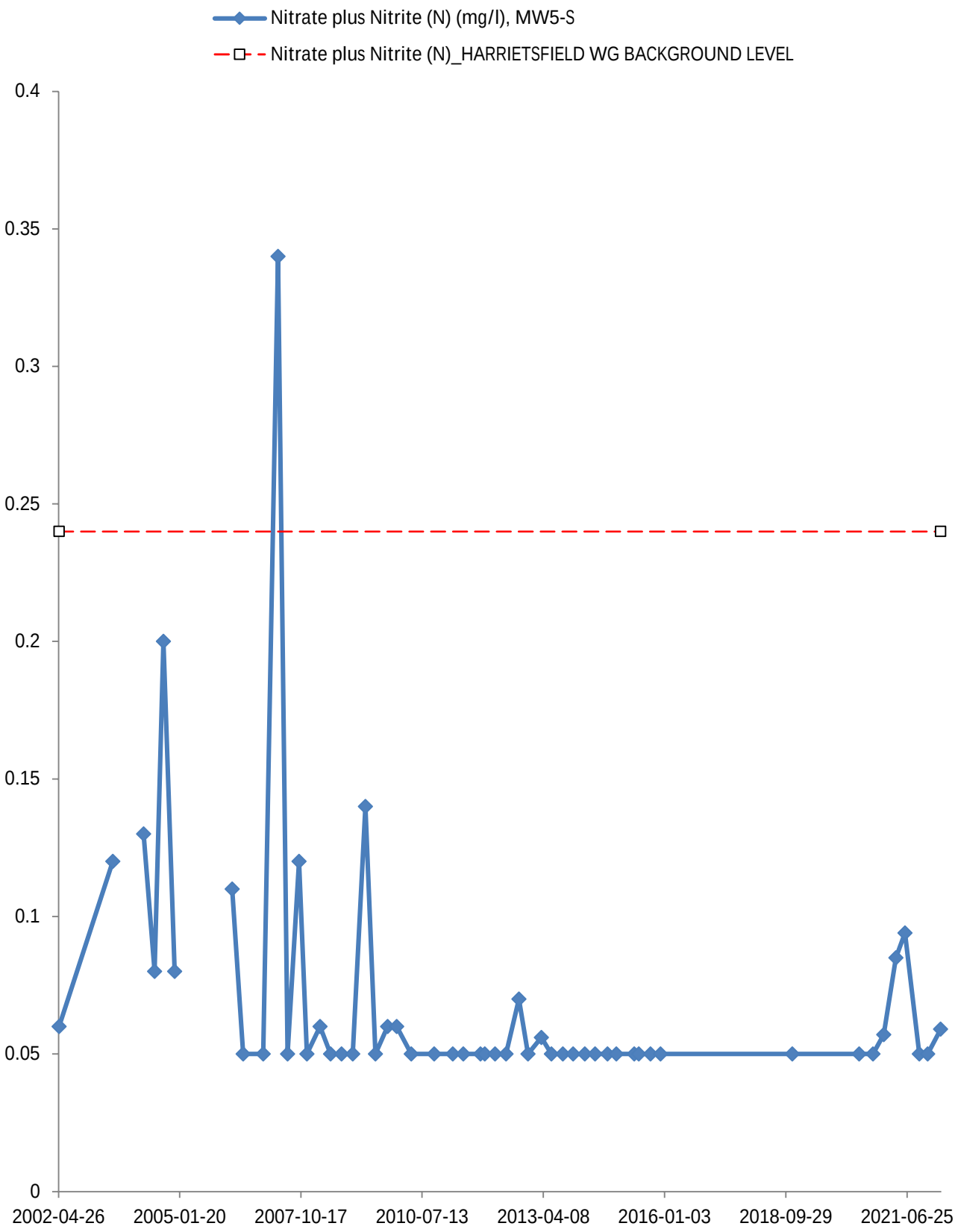
MW5-S-Nickel


Nickel (ug/l), MW5-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

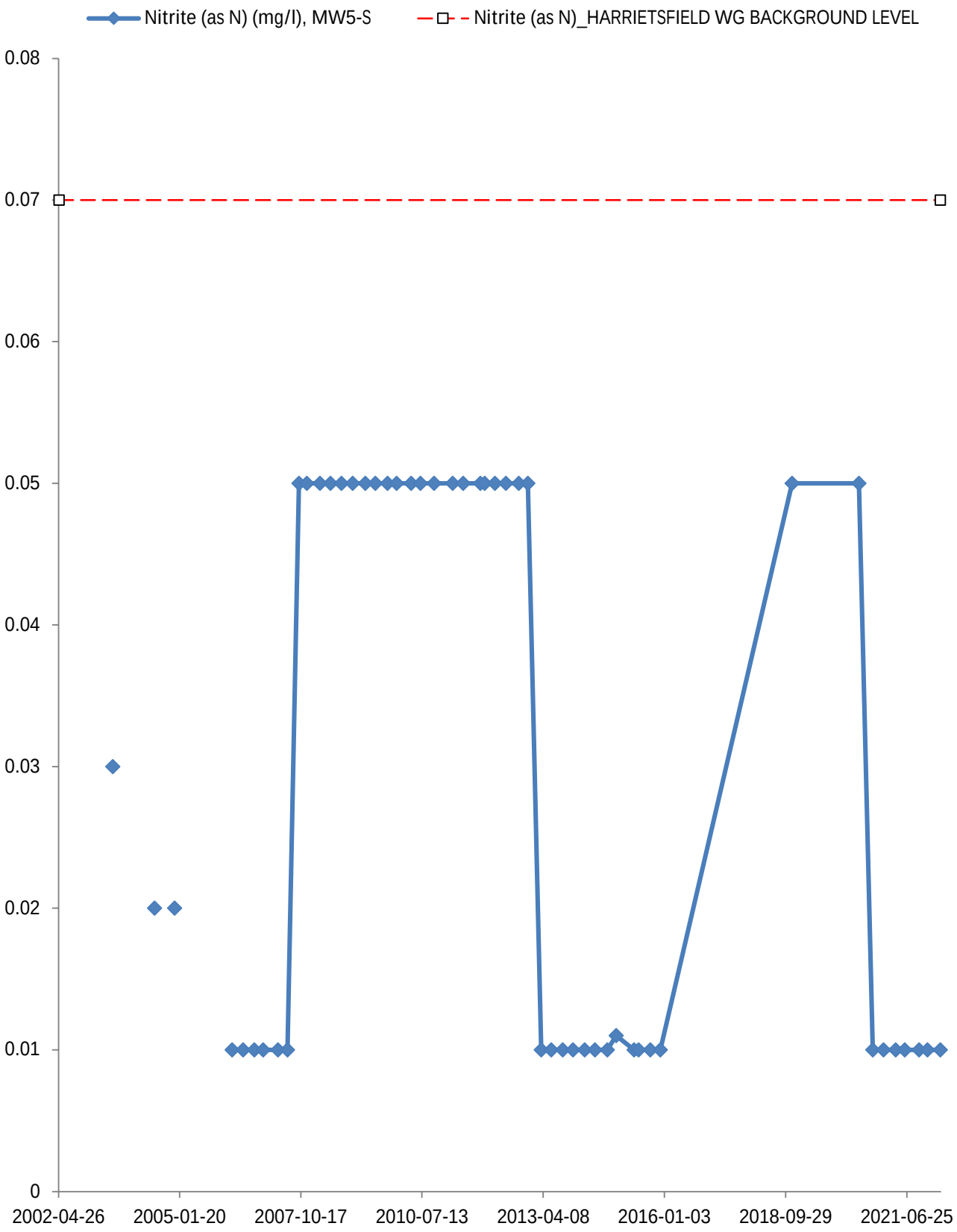
MW5-S-Nitrate (as N)



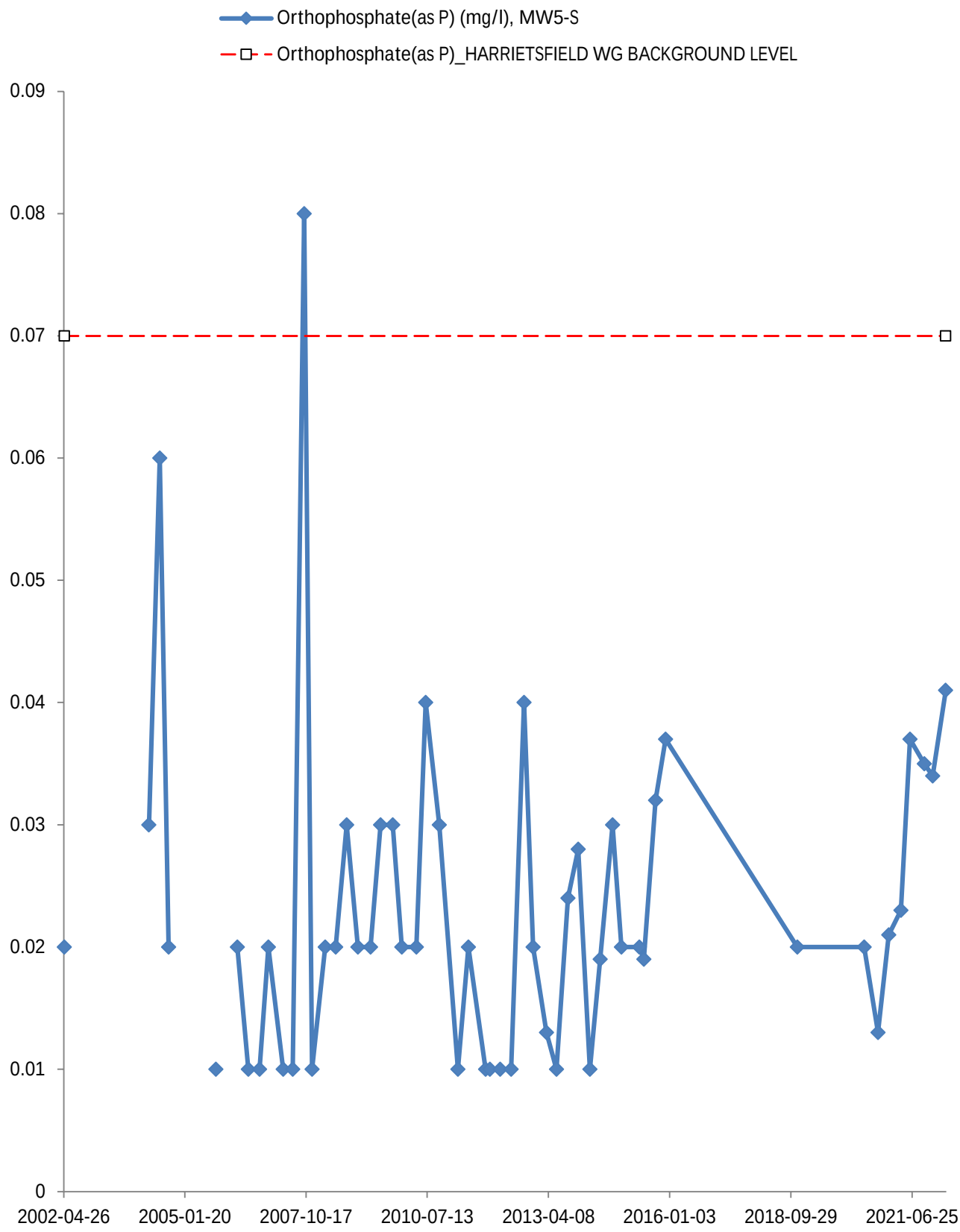
MW5-S-Nitrate plus Nitrite (N)



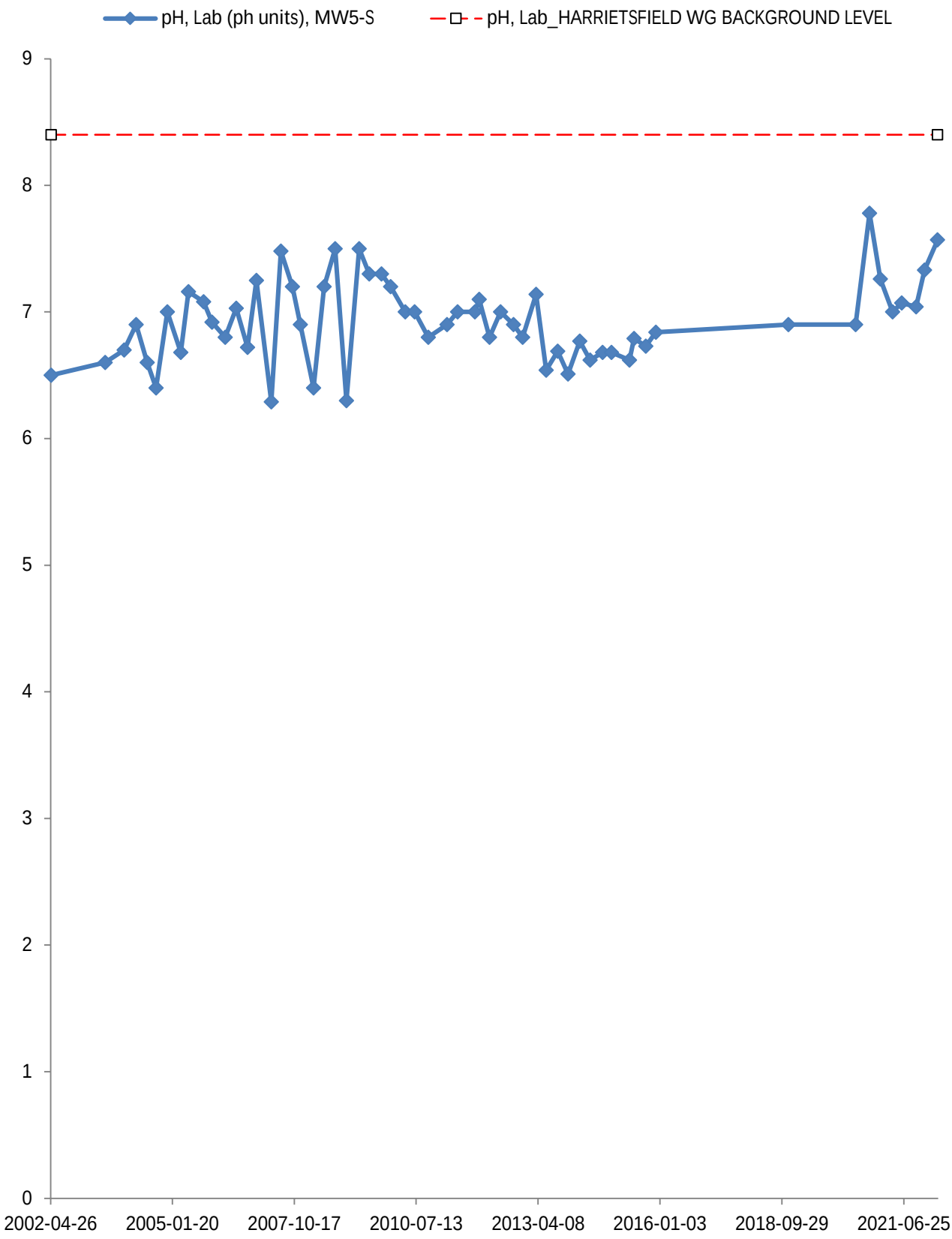
MW5-S-Nitrite (as N)



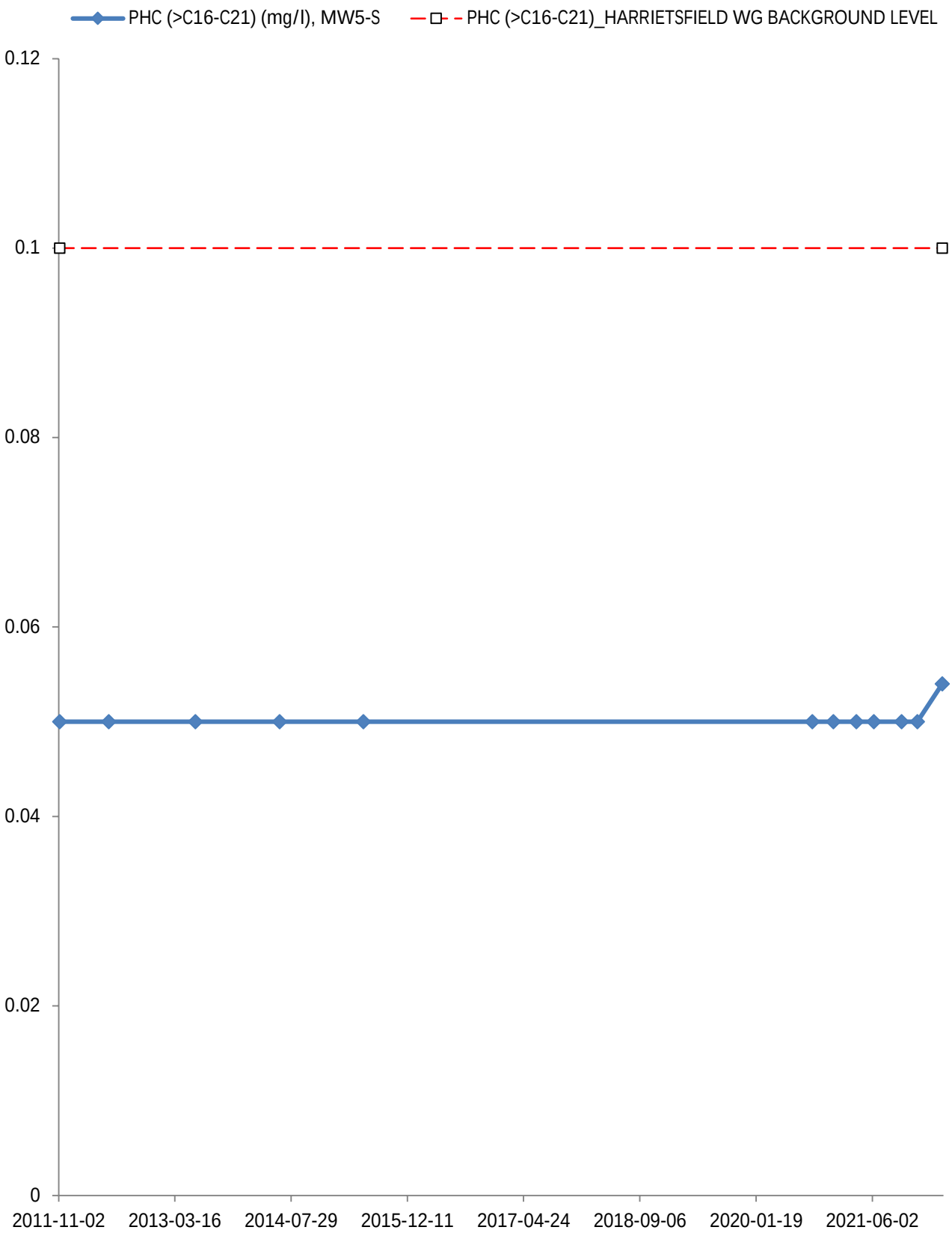
MW5-S-Orthophosphate(as P)



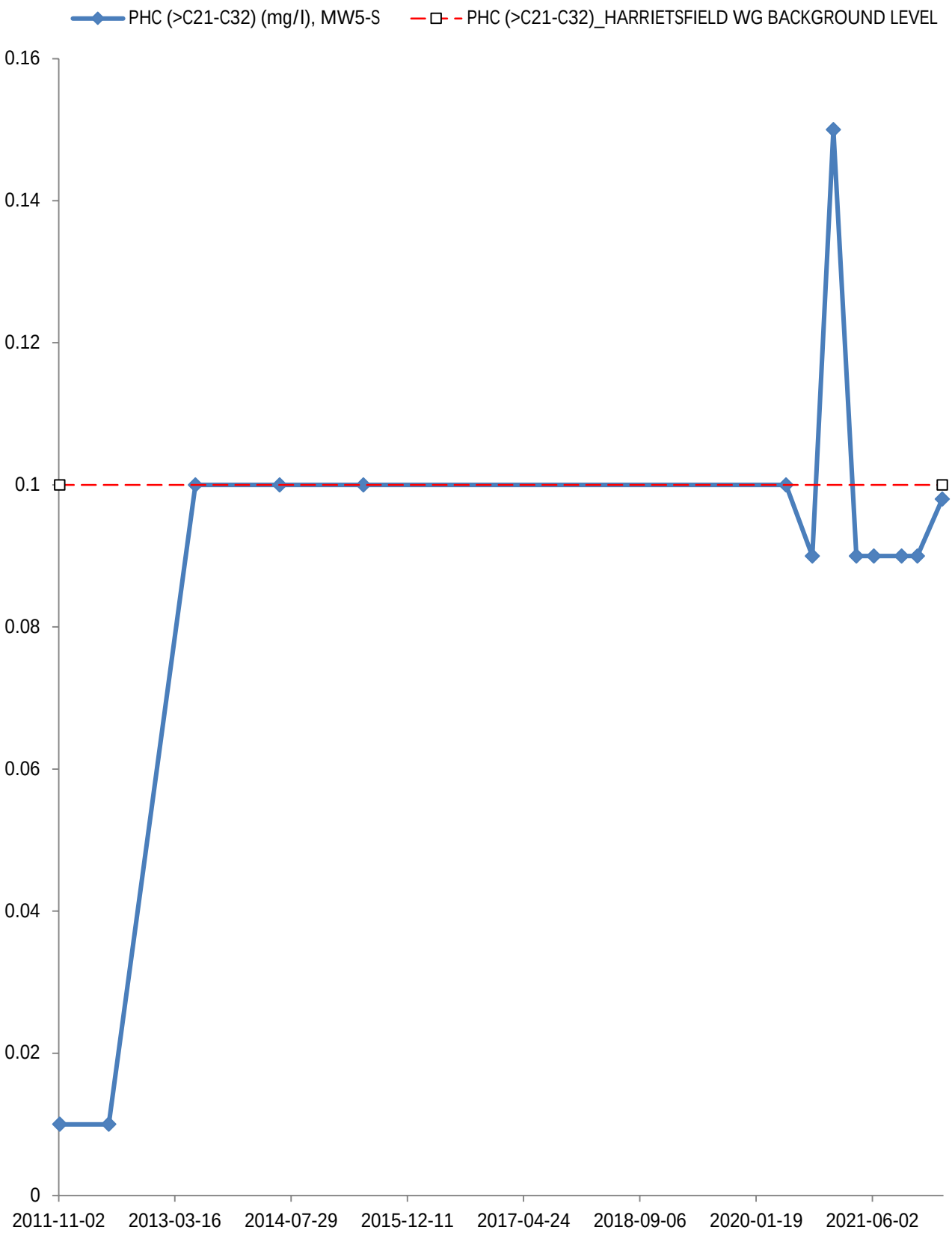
MW5-S-pH, Lab


pH, Lab (ph units), MW5-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

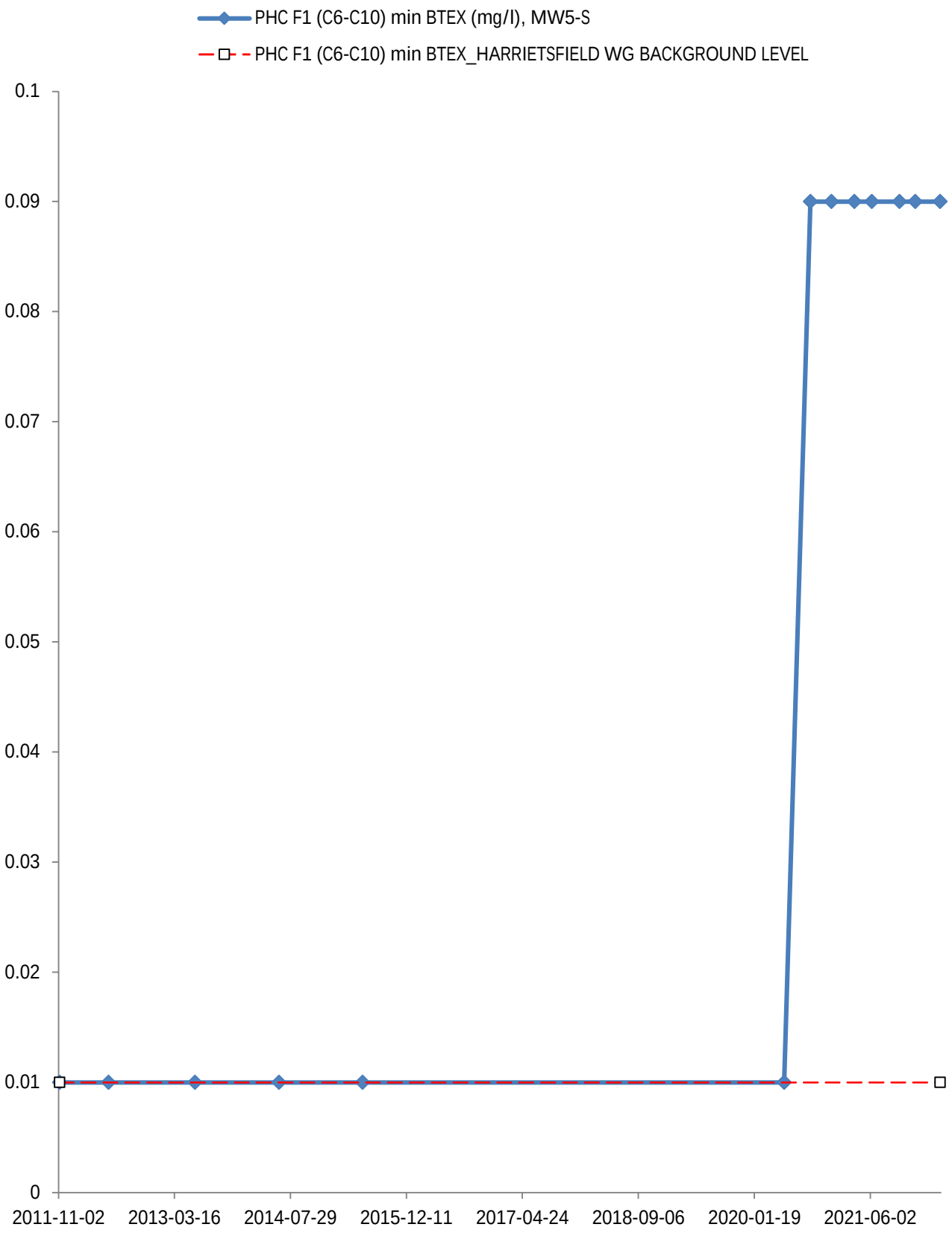
MW5-S-PHC (>C16-C21)



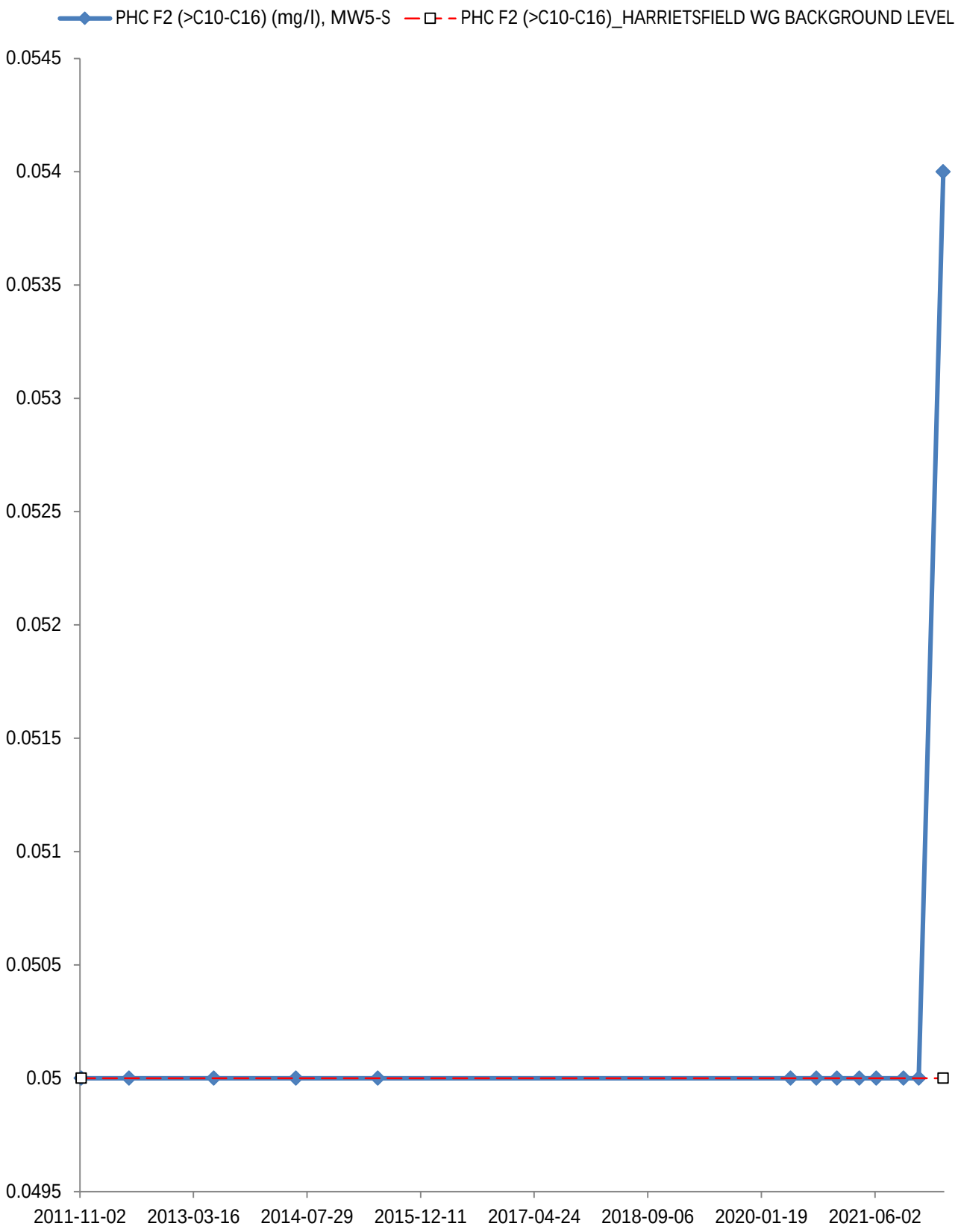
MW5-S-PHC (>C21-C32)



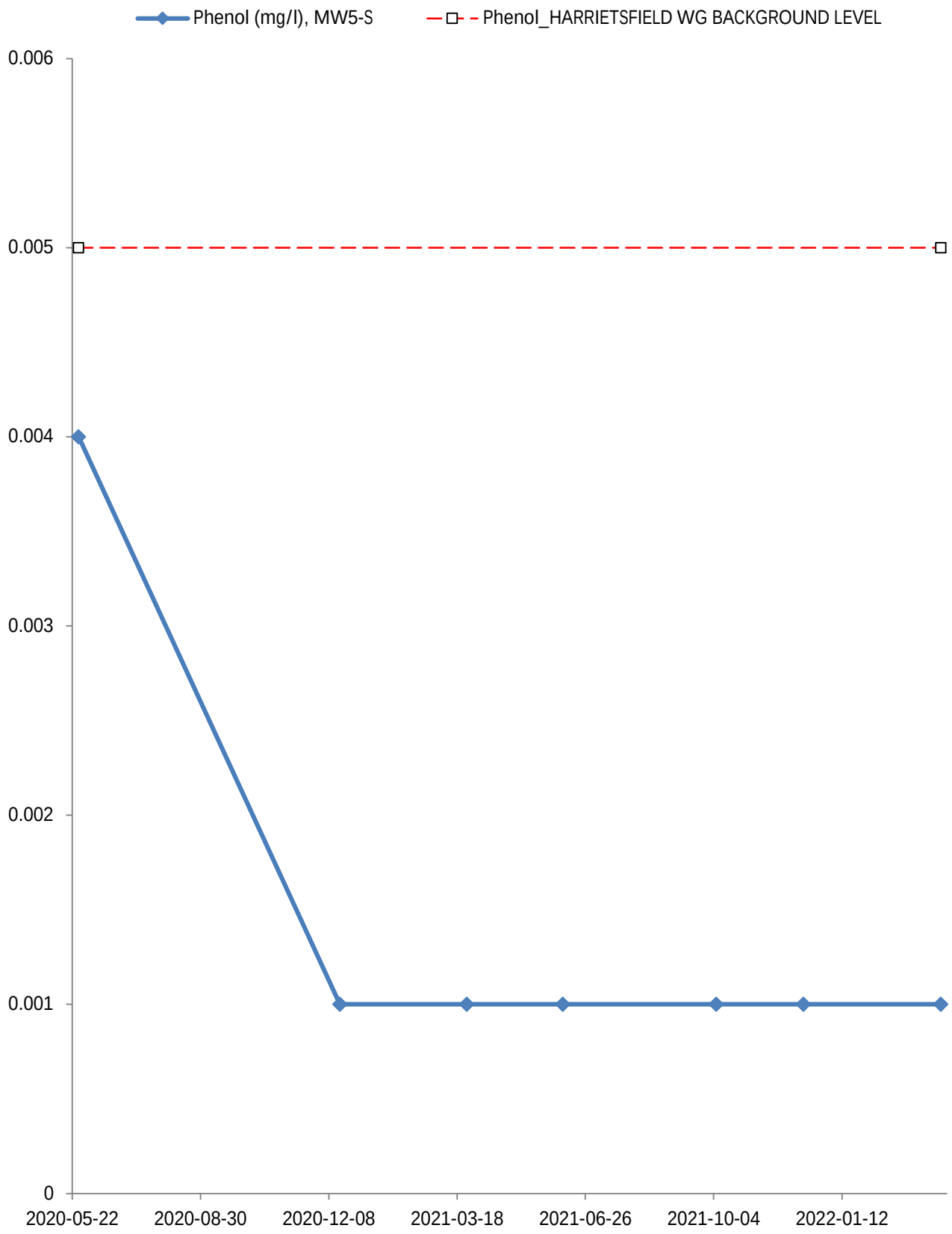
MW5-S-PHC F1 (C6-C10) min BTEX



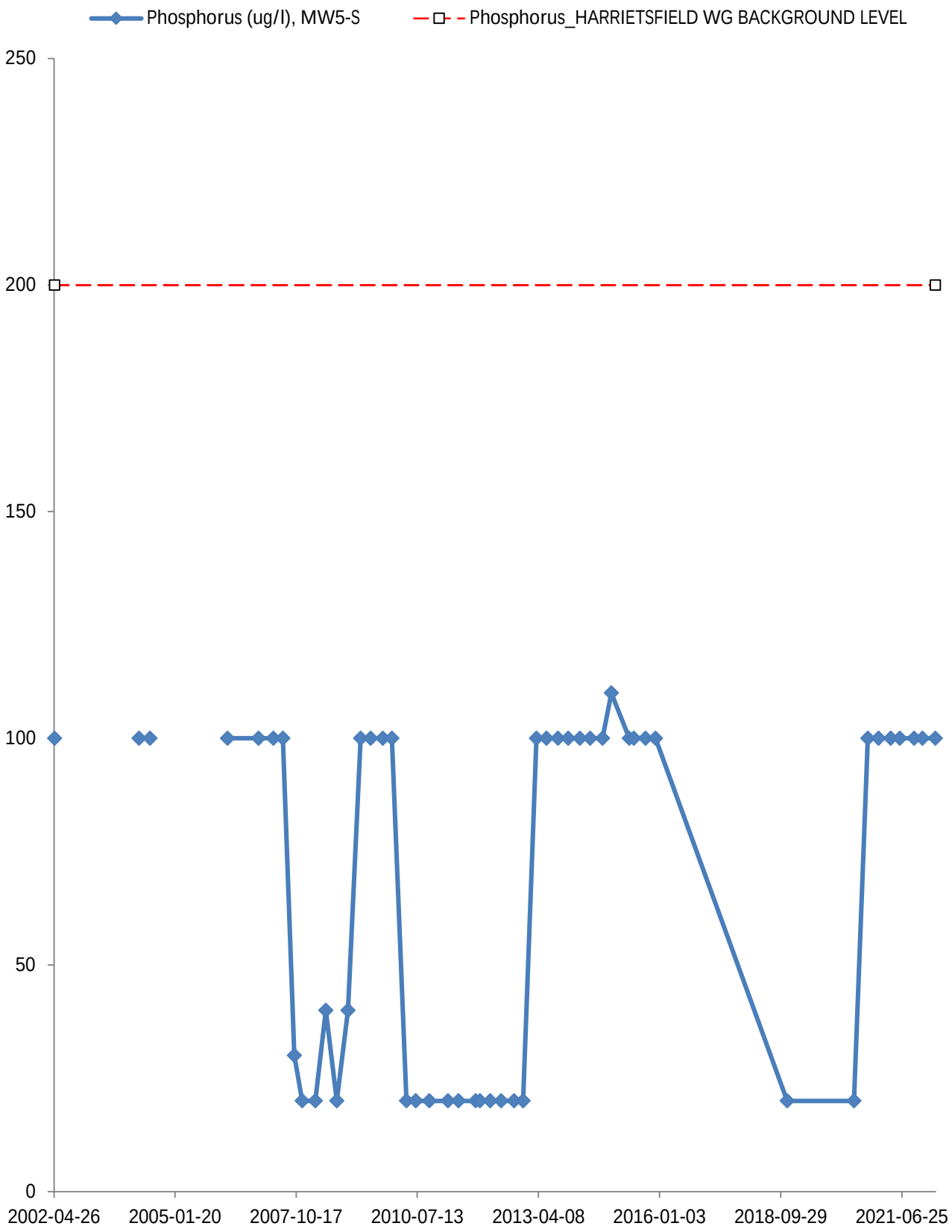
MW5-S-PHC F2 (>C10-C16)



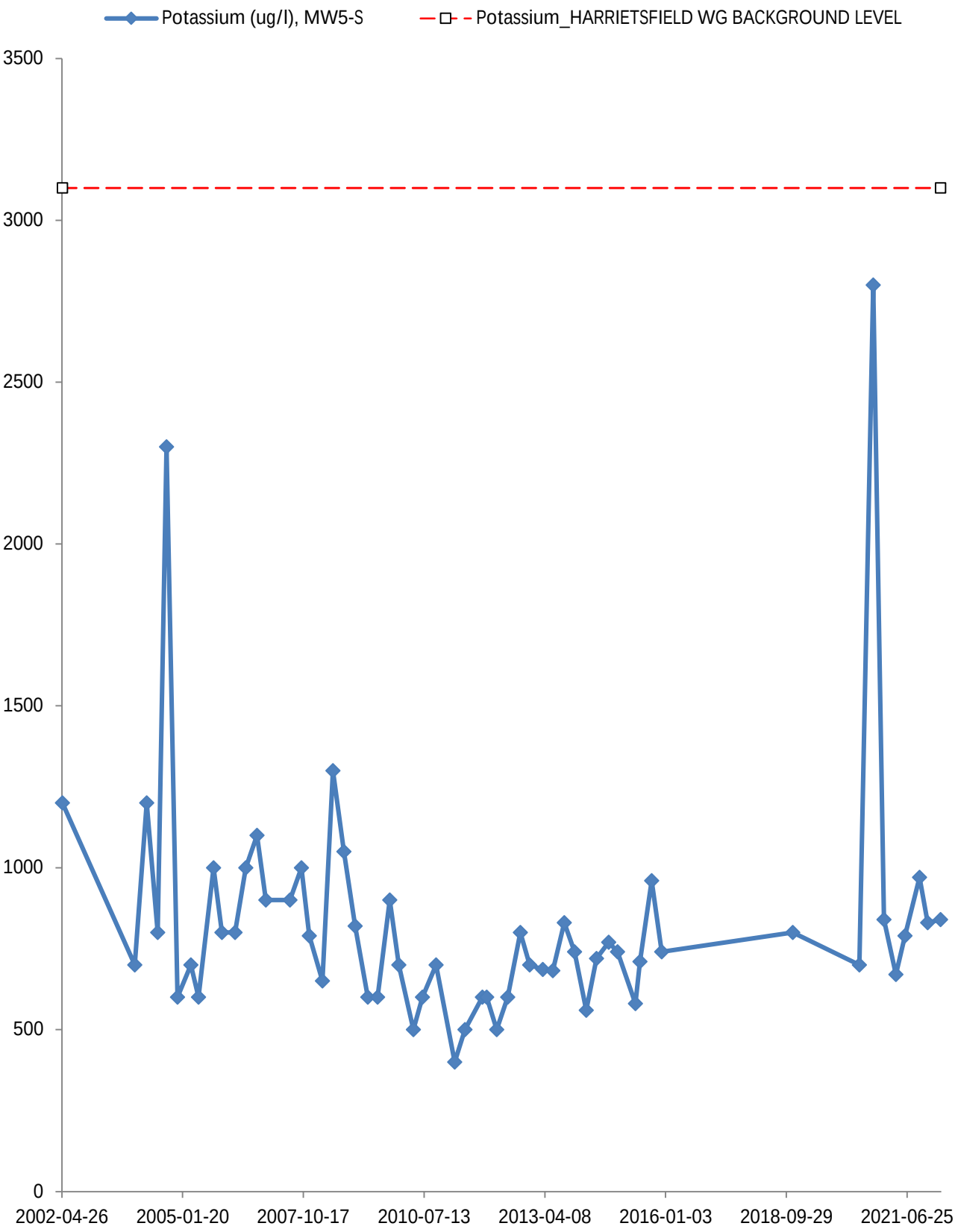
MW5-S-Phenol


Phenol (mg/l), MW5-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-22
2020-08-30
2020-12-08
2021-03-18
2021-06-26
2021-10-04
2022-01-12

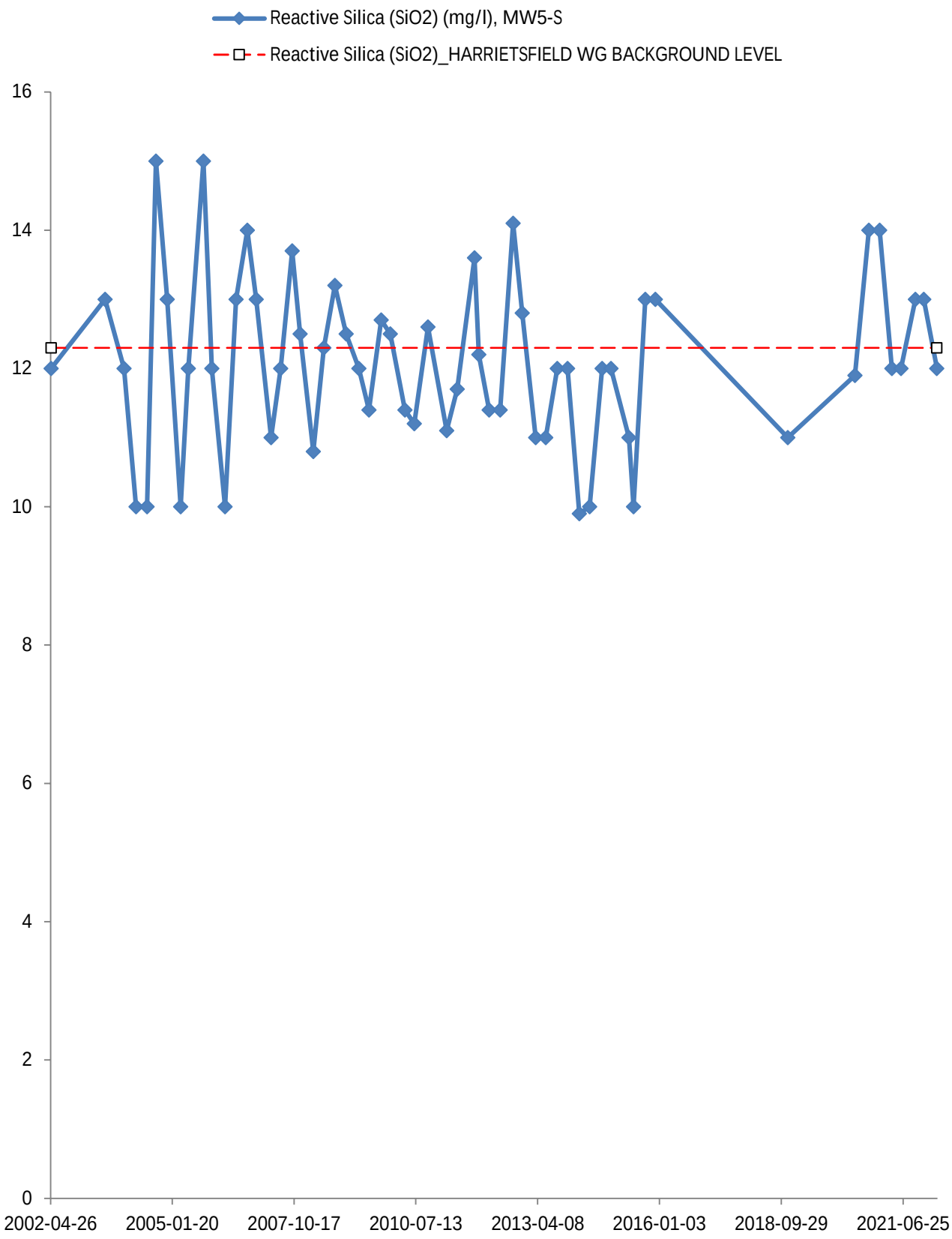
MW5-S-Phosphorus



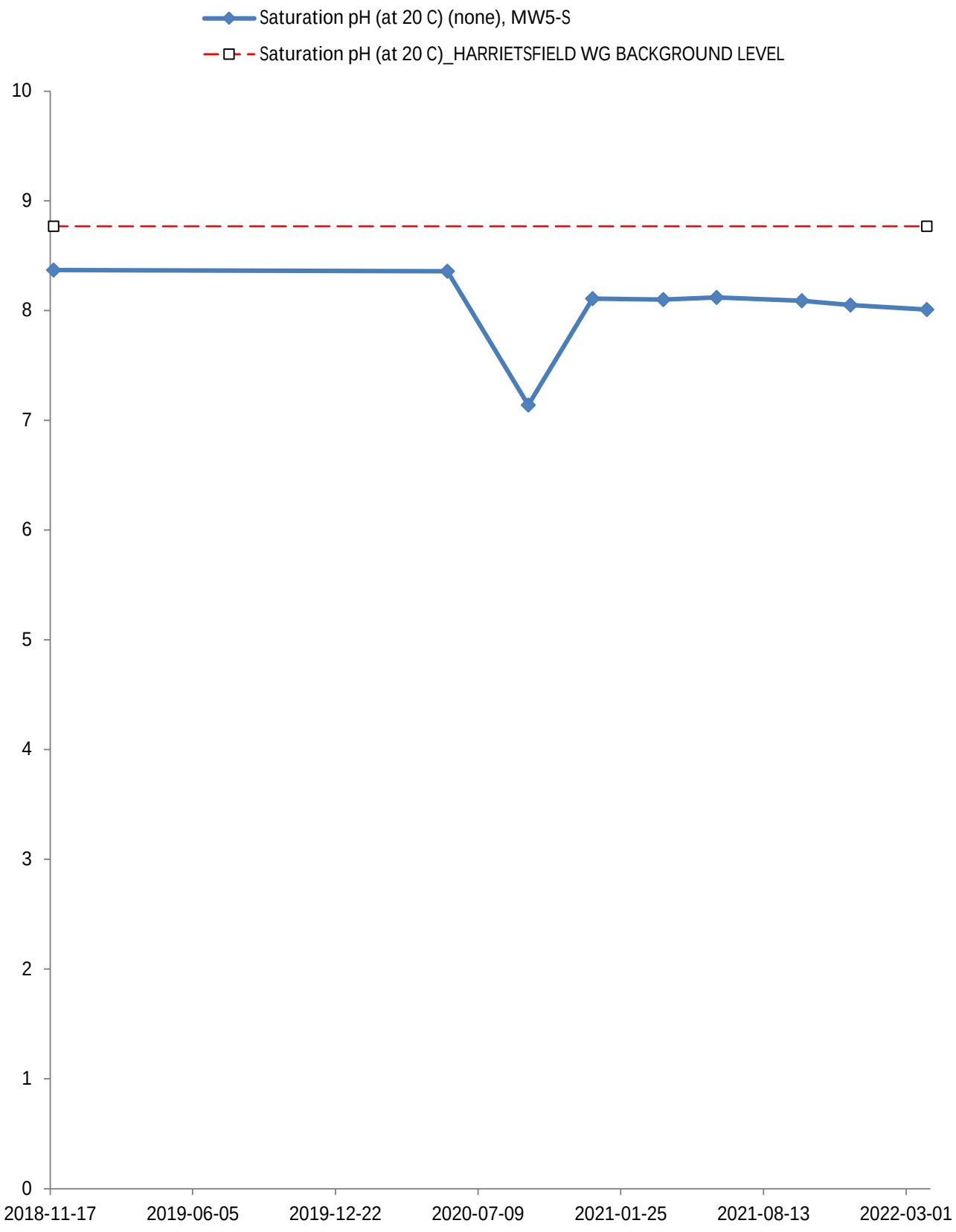
MW5-S-Potassium



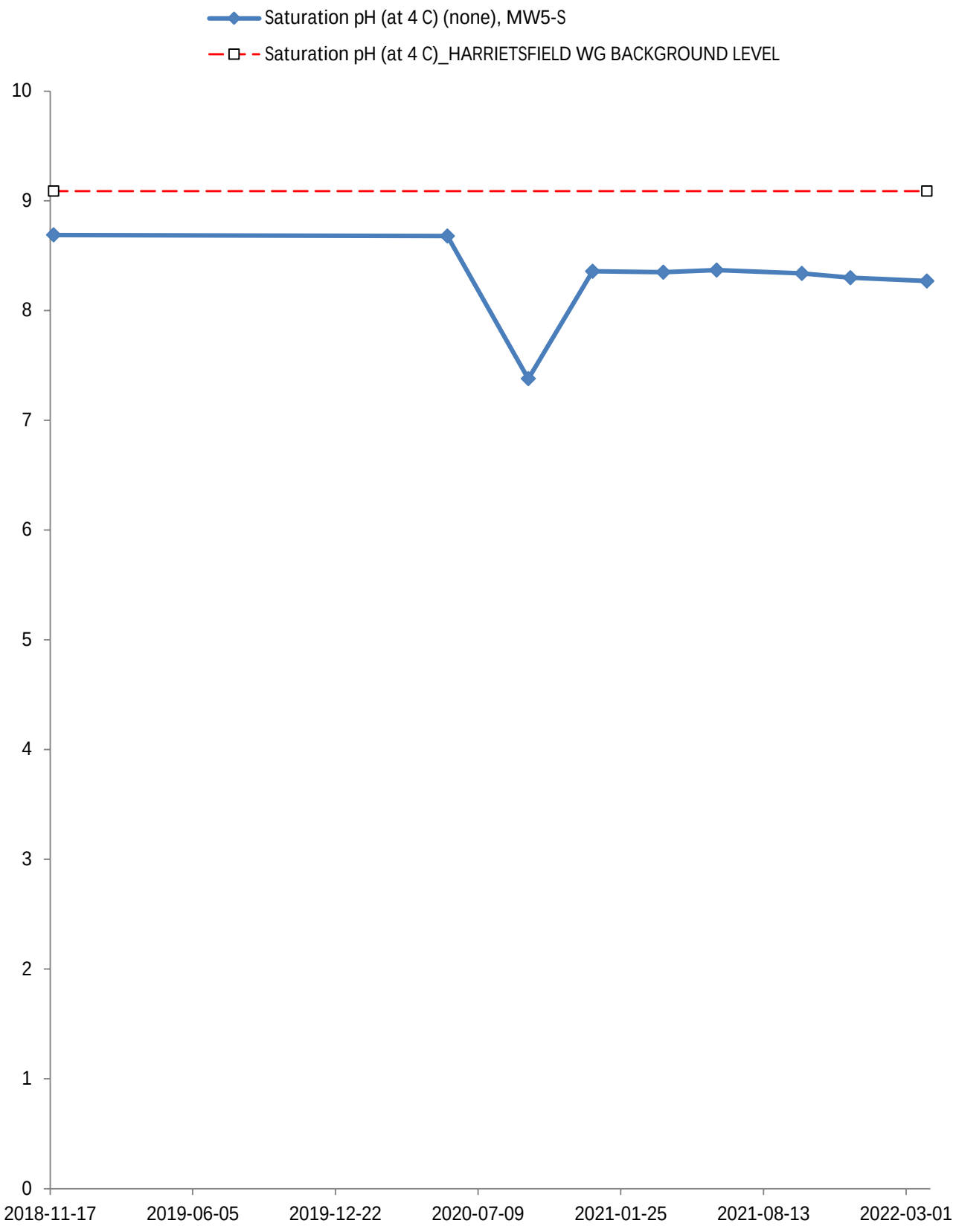
MW5-S-Reactive Silica (SiO2)



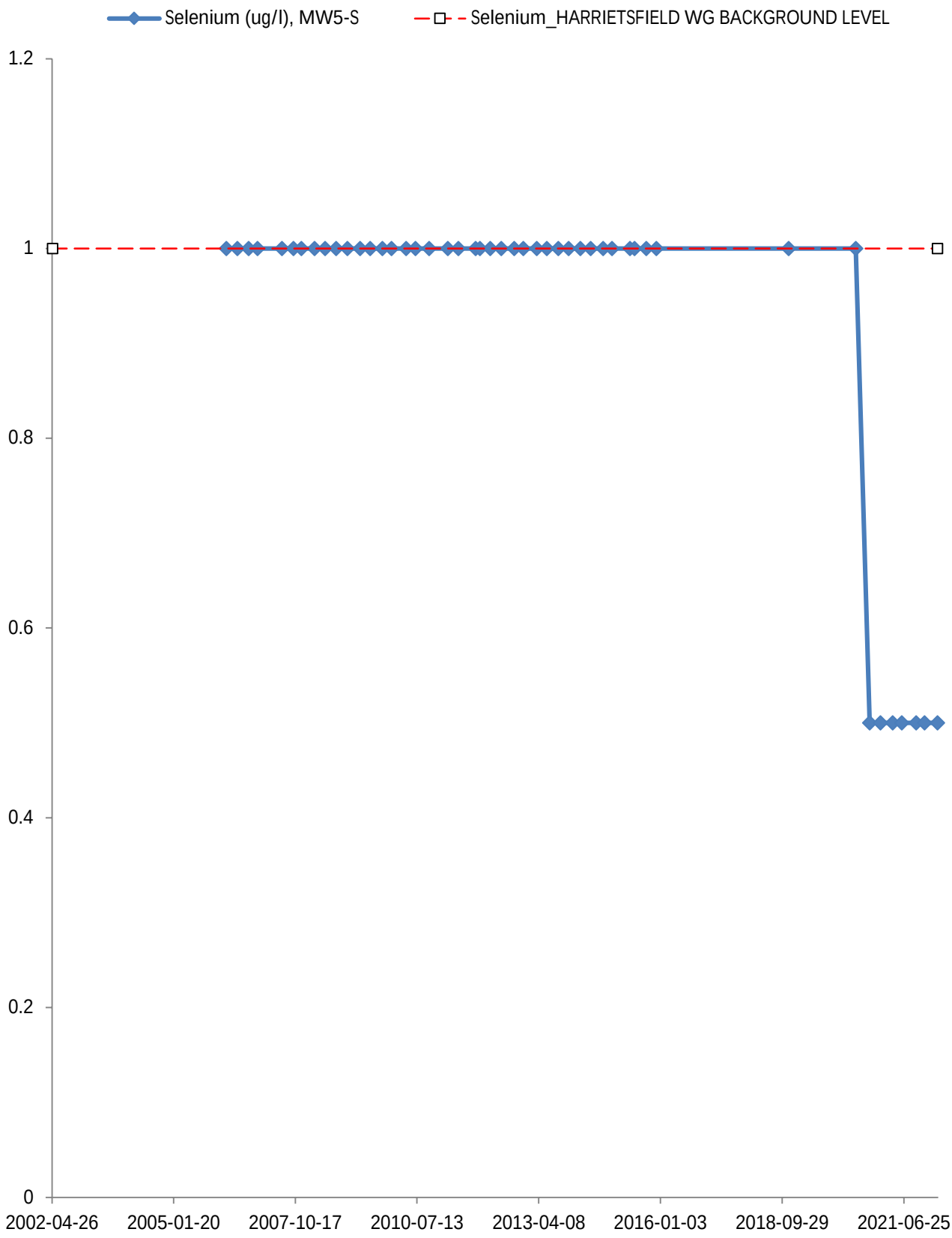
MW5-S-Saturation pH (at 20 C)



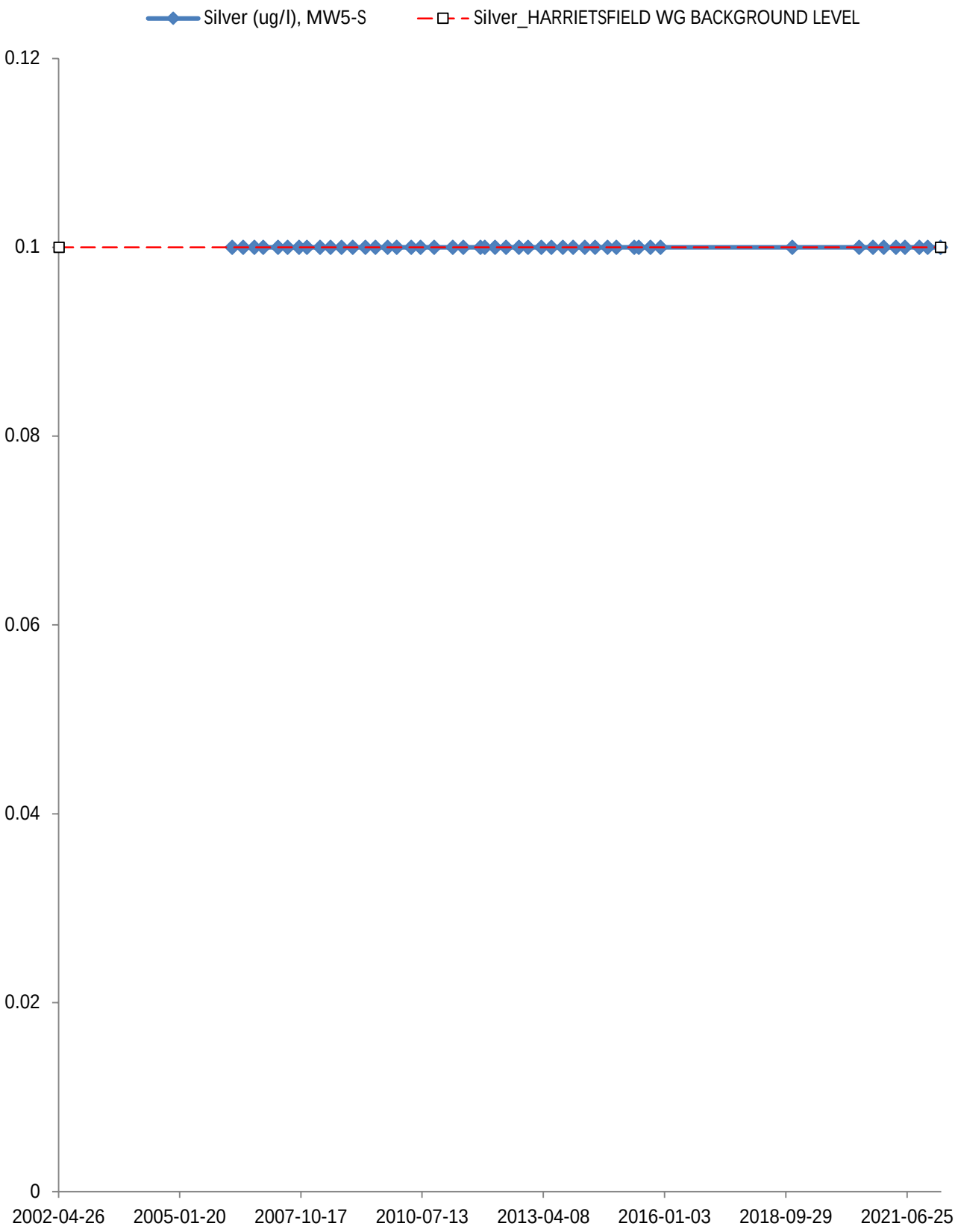
MW5-S-Saturation pH (at 4 C)



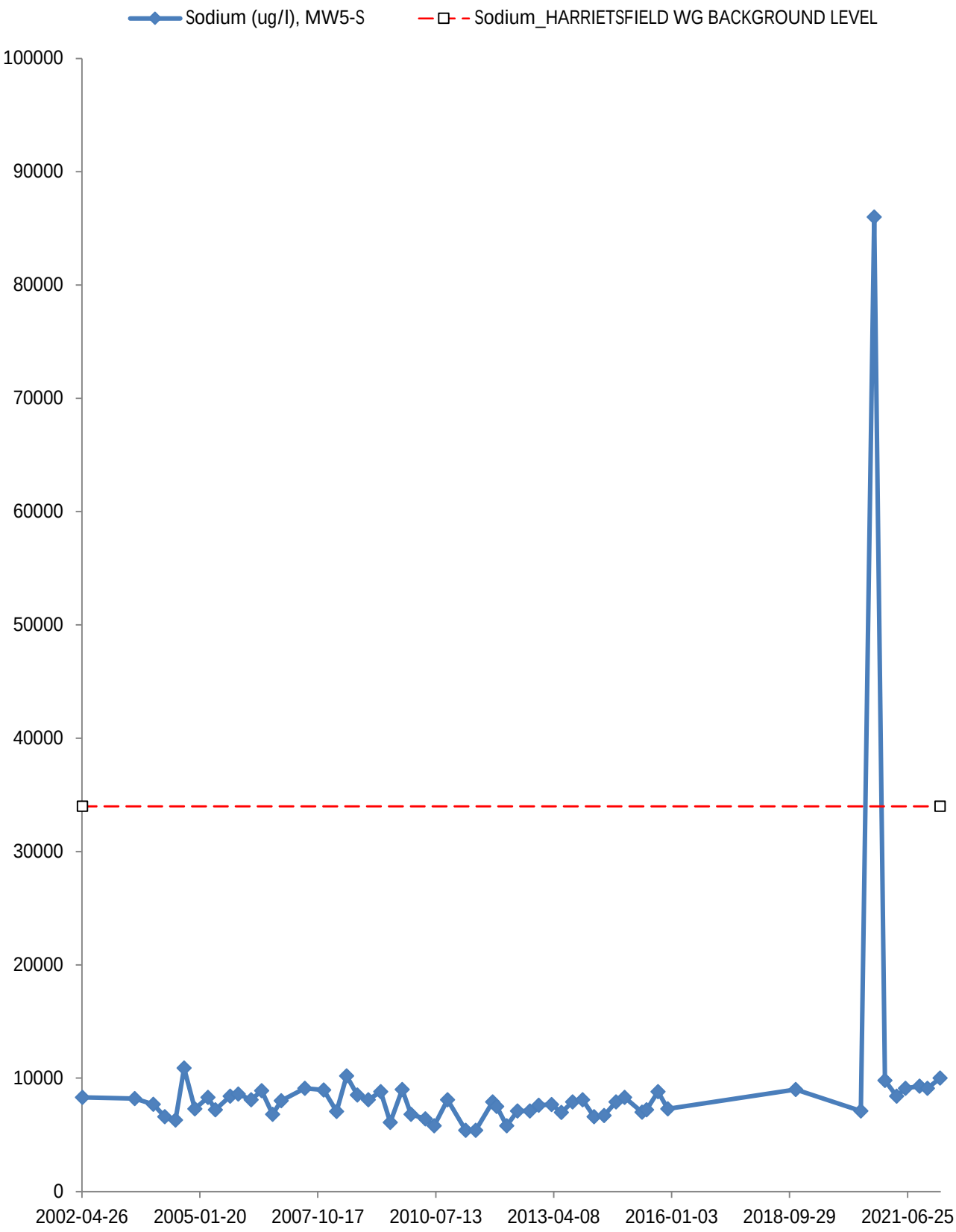
MW5-S-Selenium



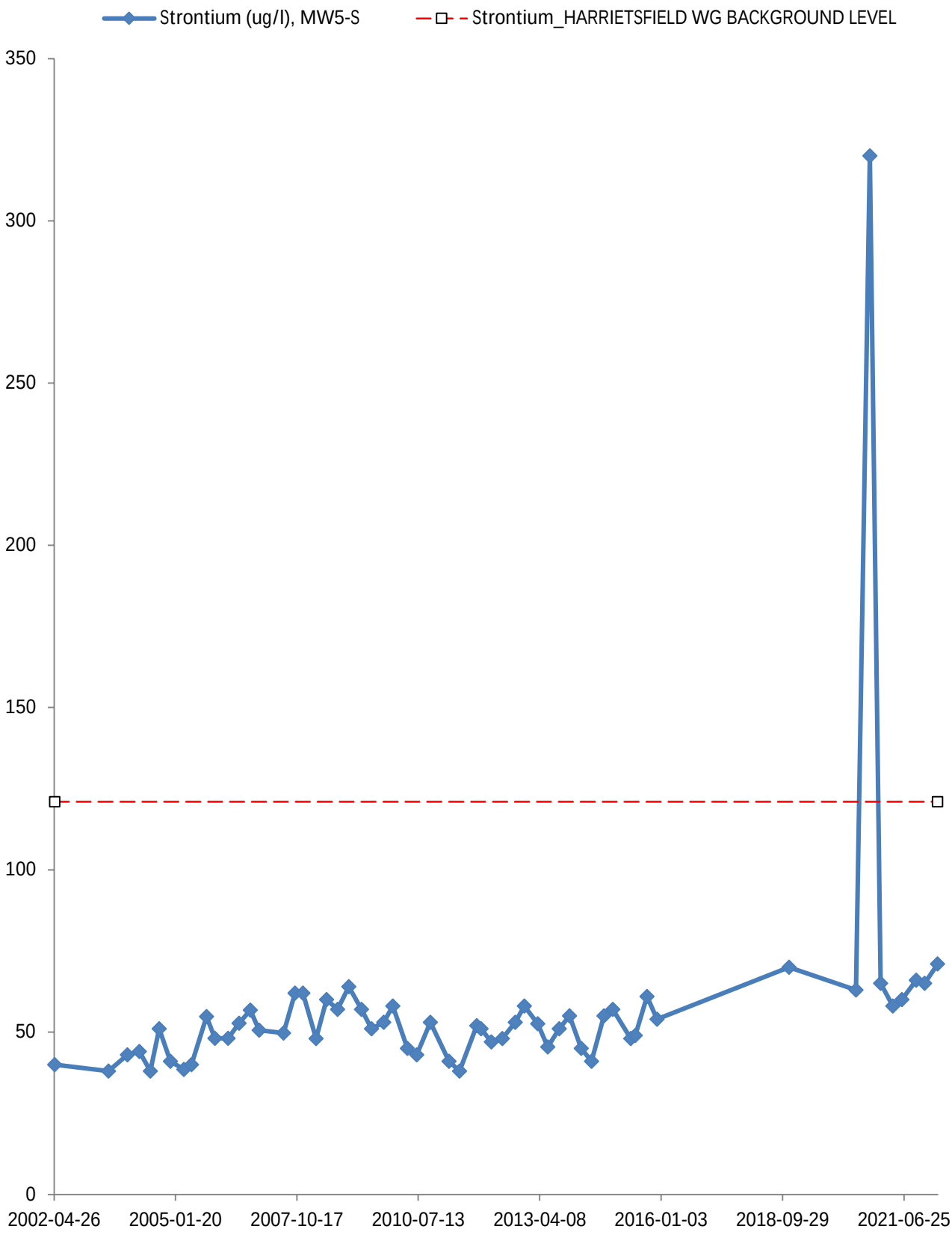
MW5-S-Silver


Silver (ug/l), MW5-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

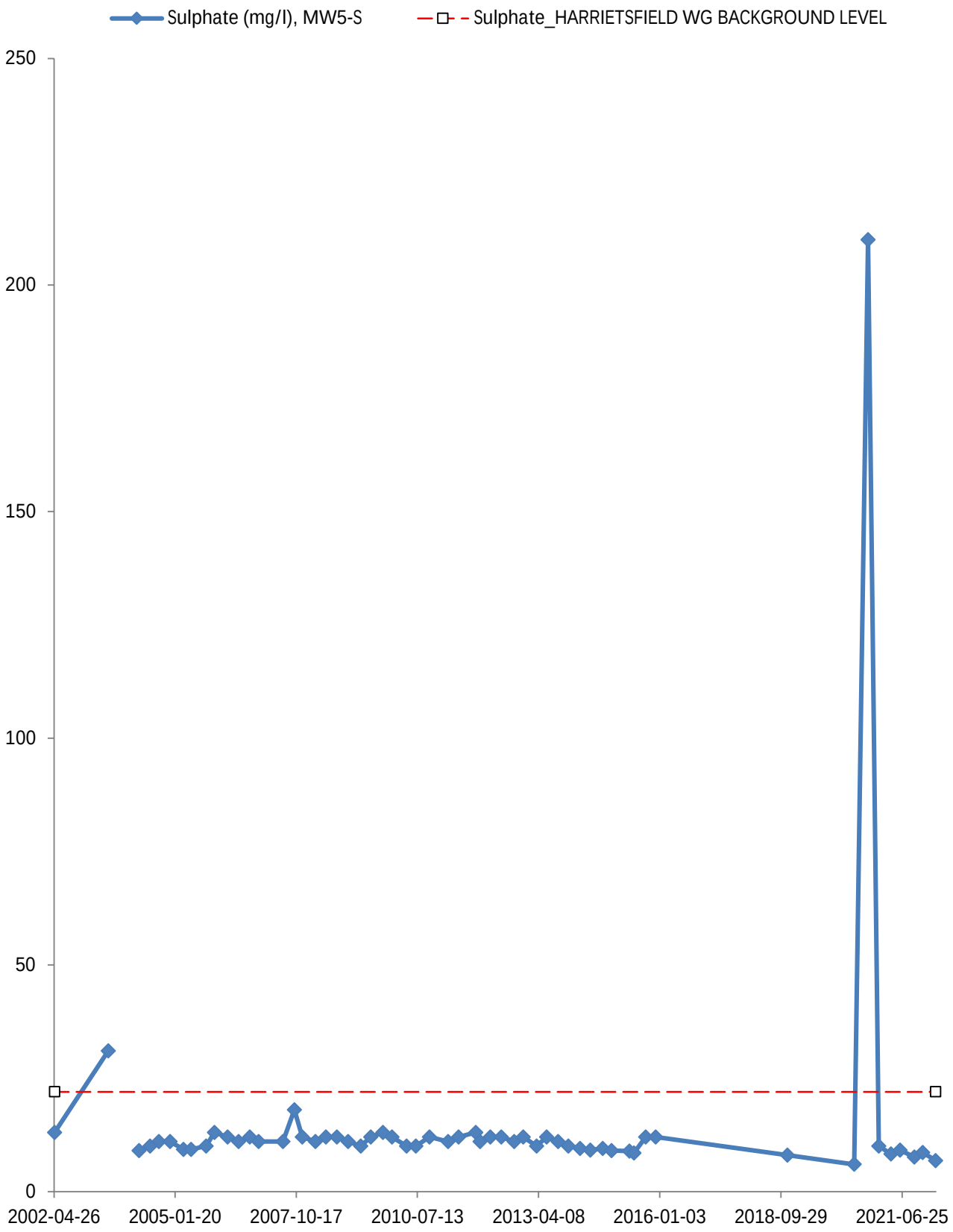
MW5-S-Sodium


Sodium (ug/l), MW5-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

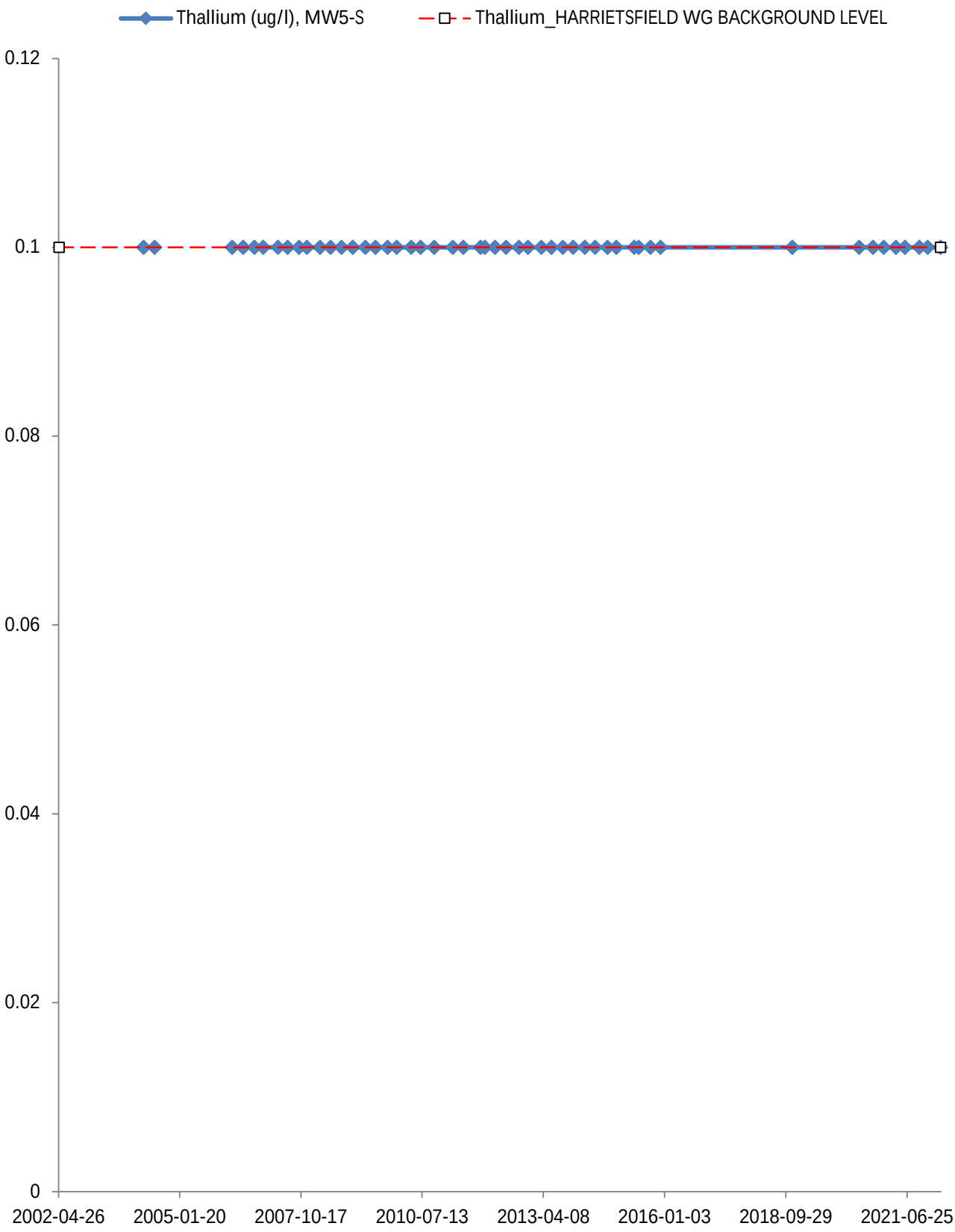
MW5-S-Strontium



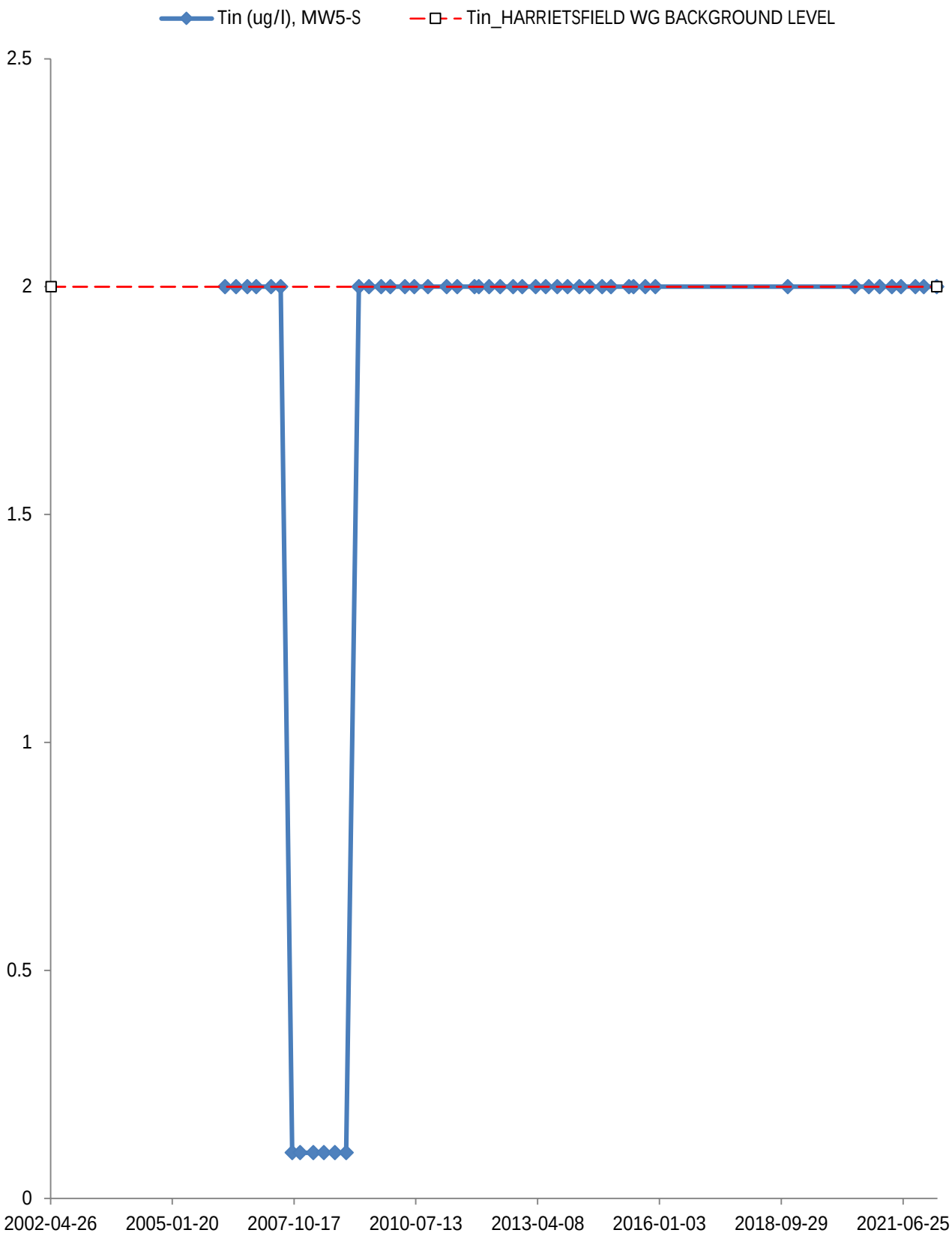
MW5-S-Sulphate



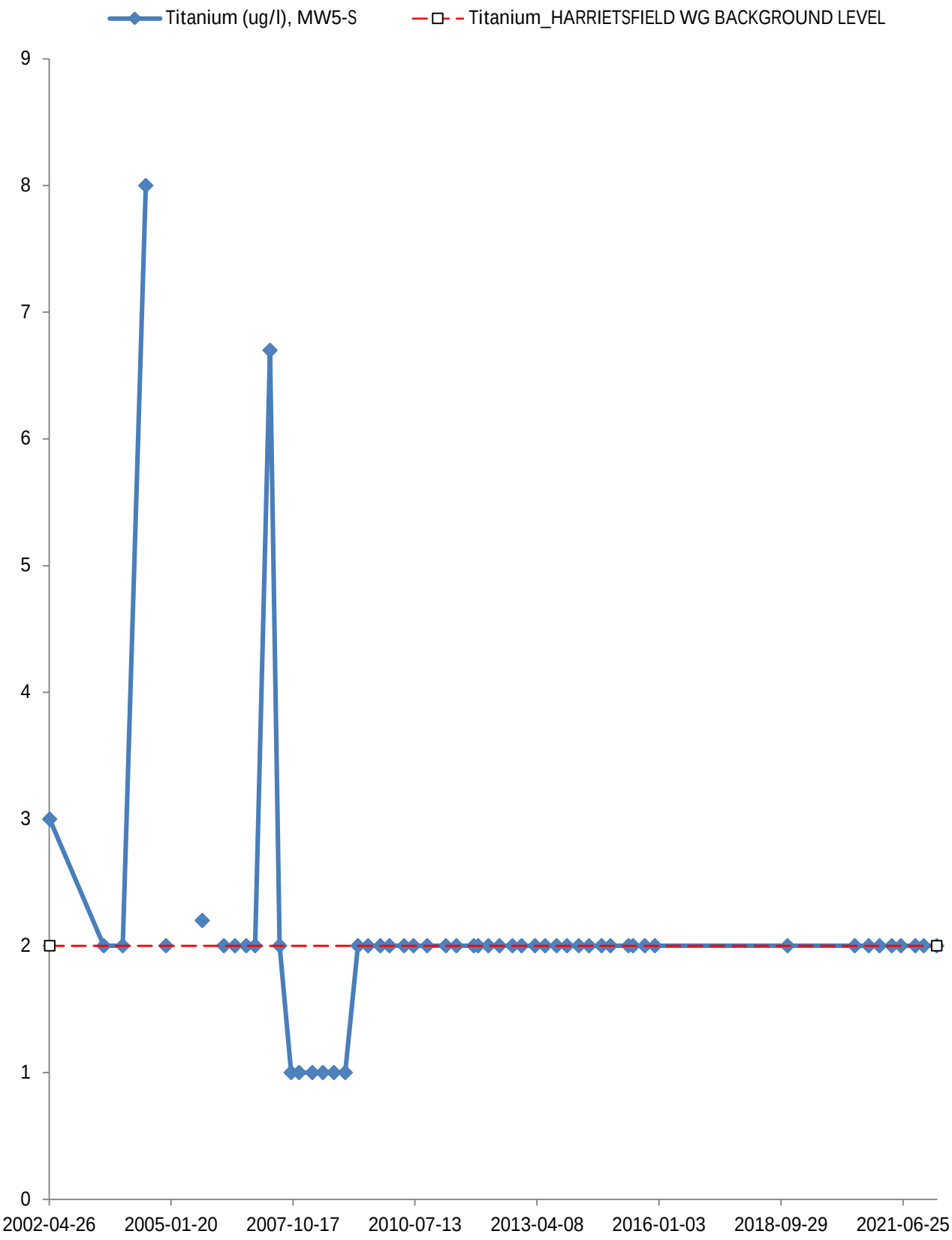
MW5-S-Thallium



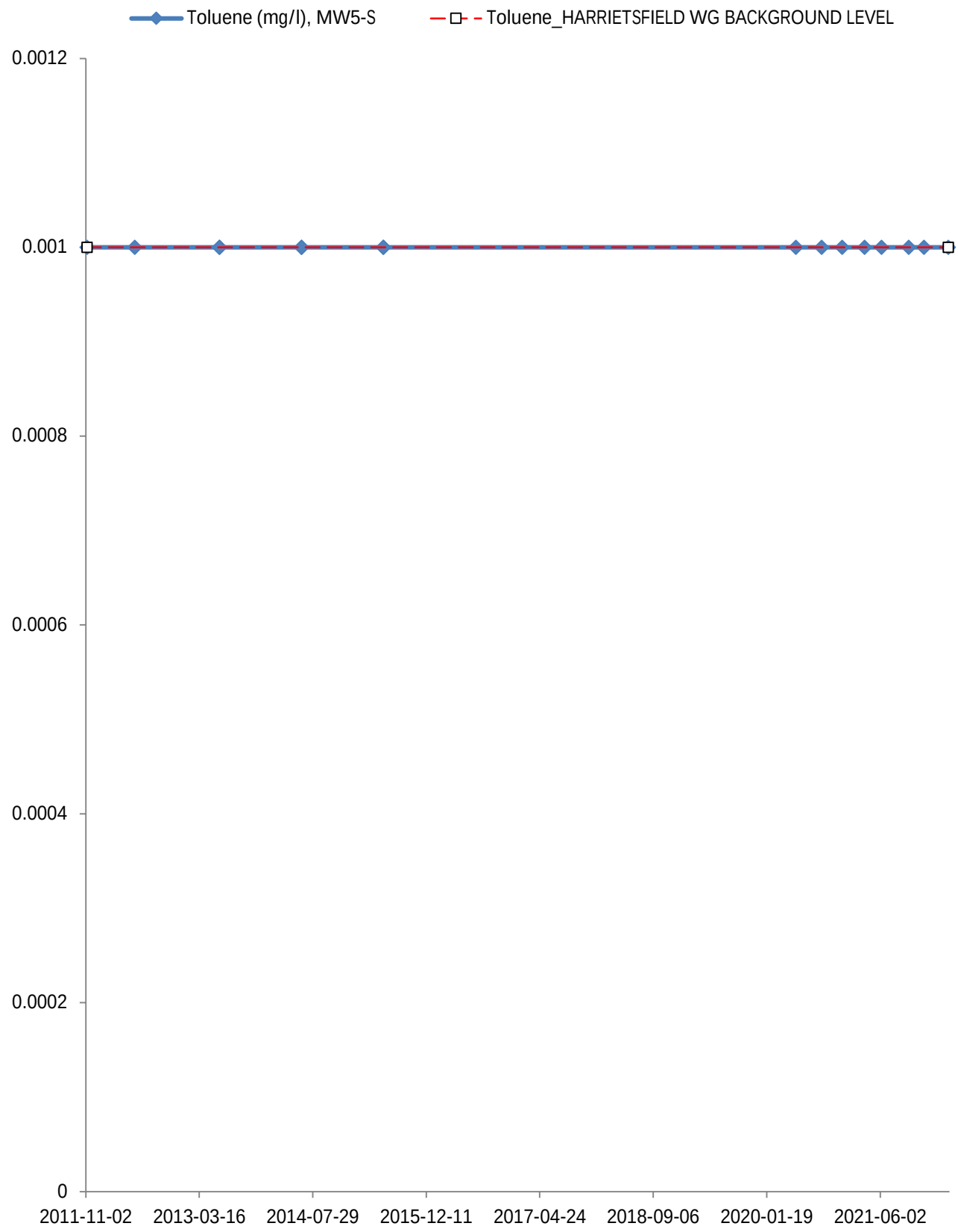
MW5-S-Tin


Tin (ug/l), MW5-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

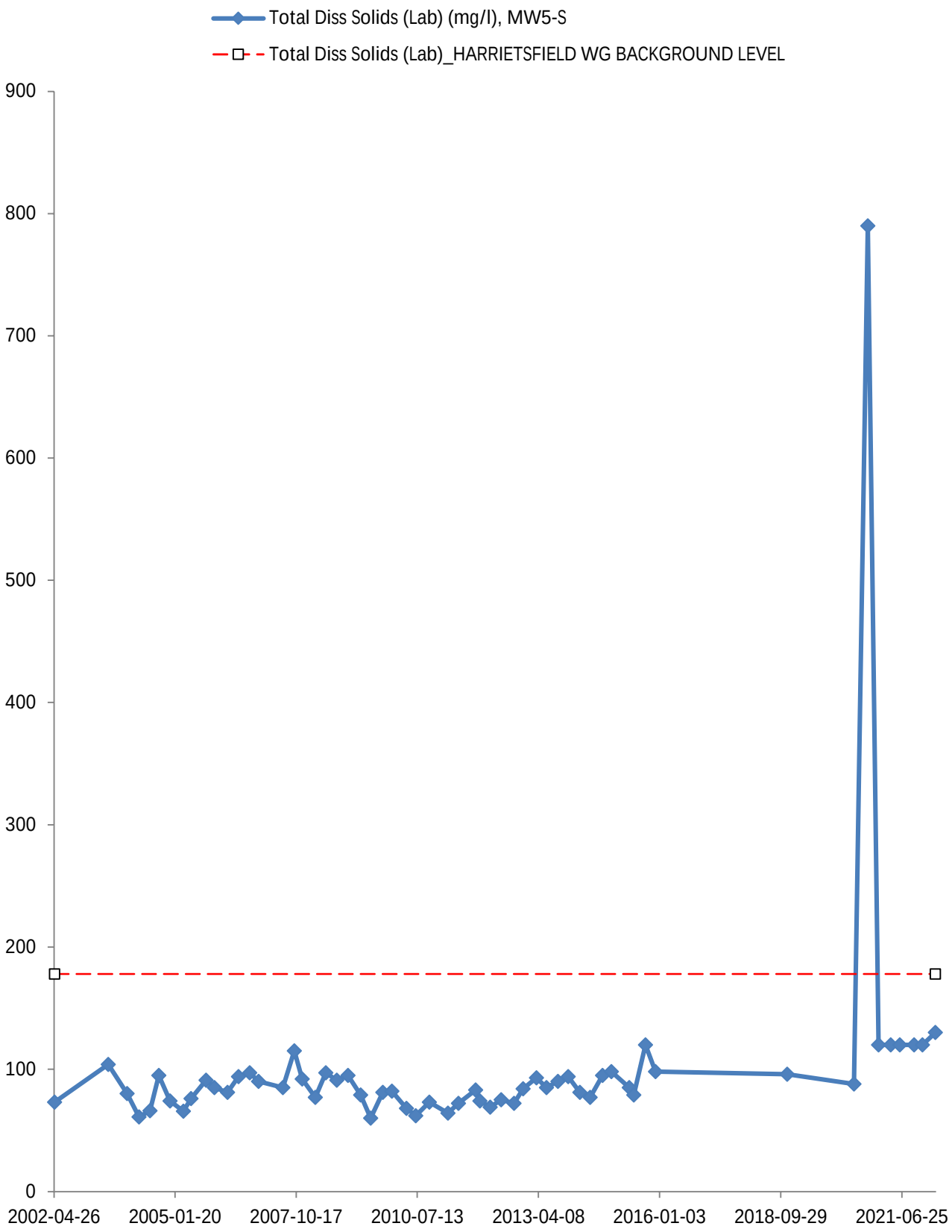
MW5-S-Titanium



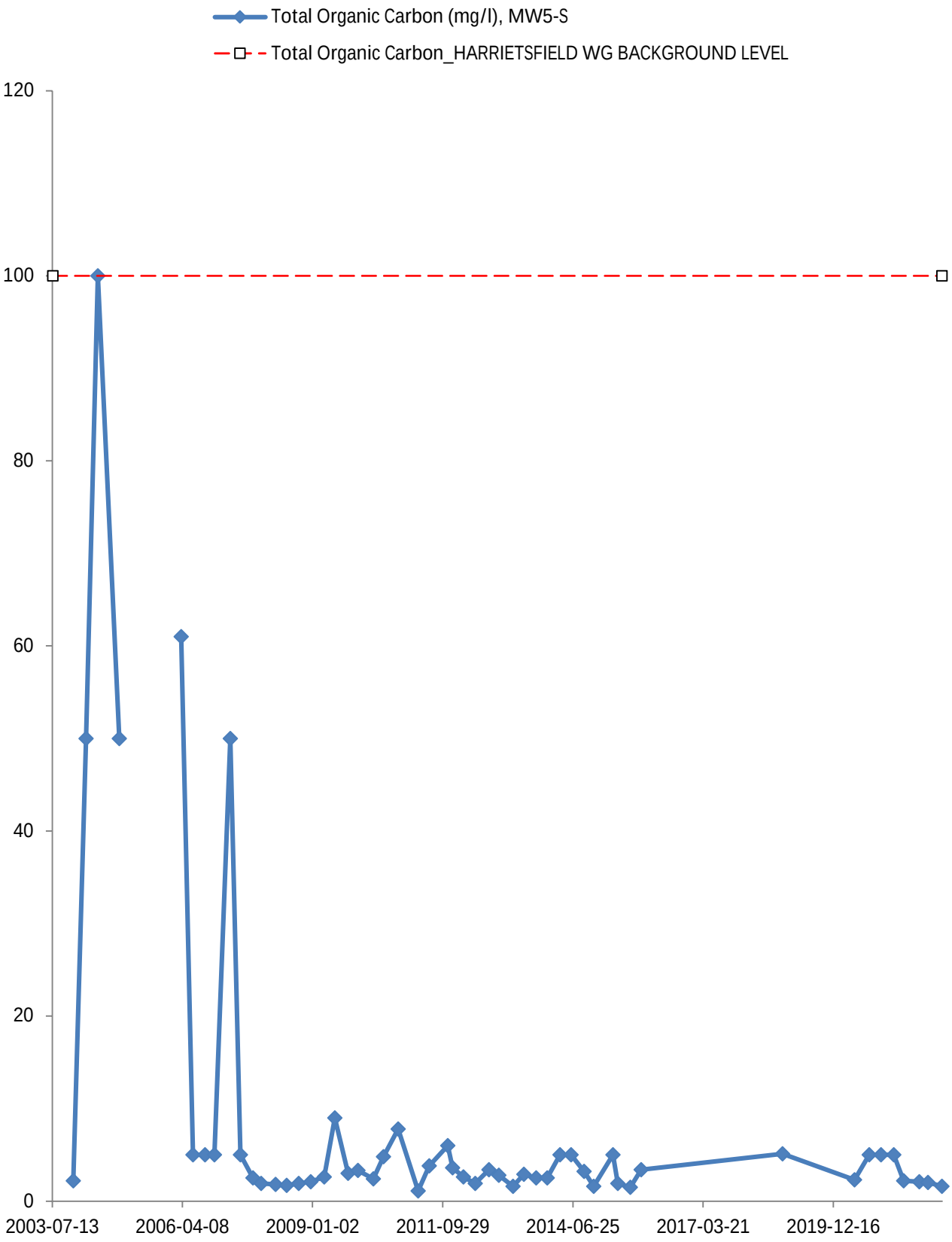
MW5-S-Toluene



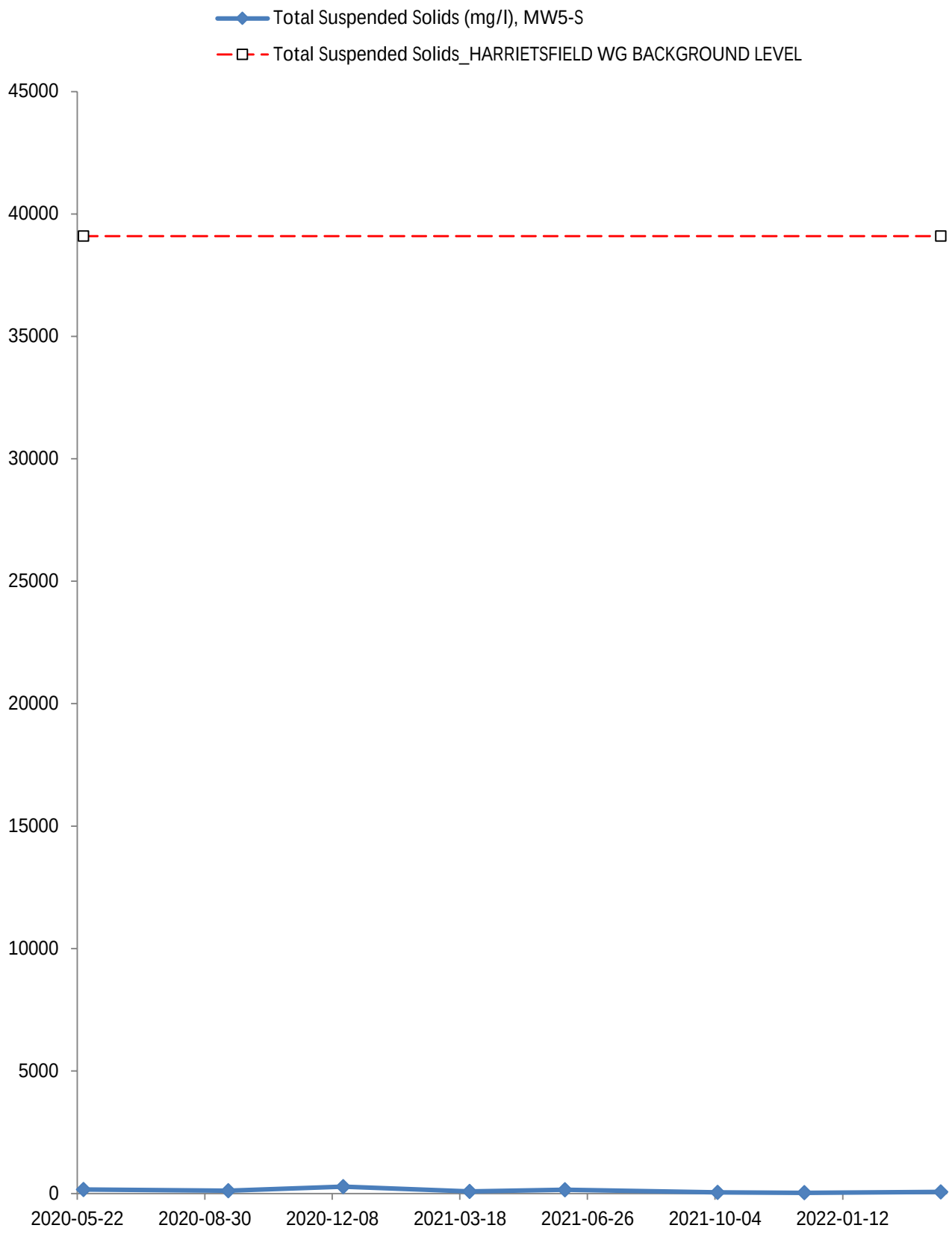
MW5-S-Total Diss Solids (Lab)



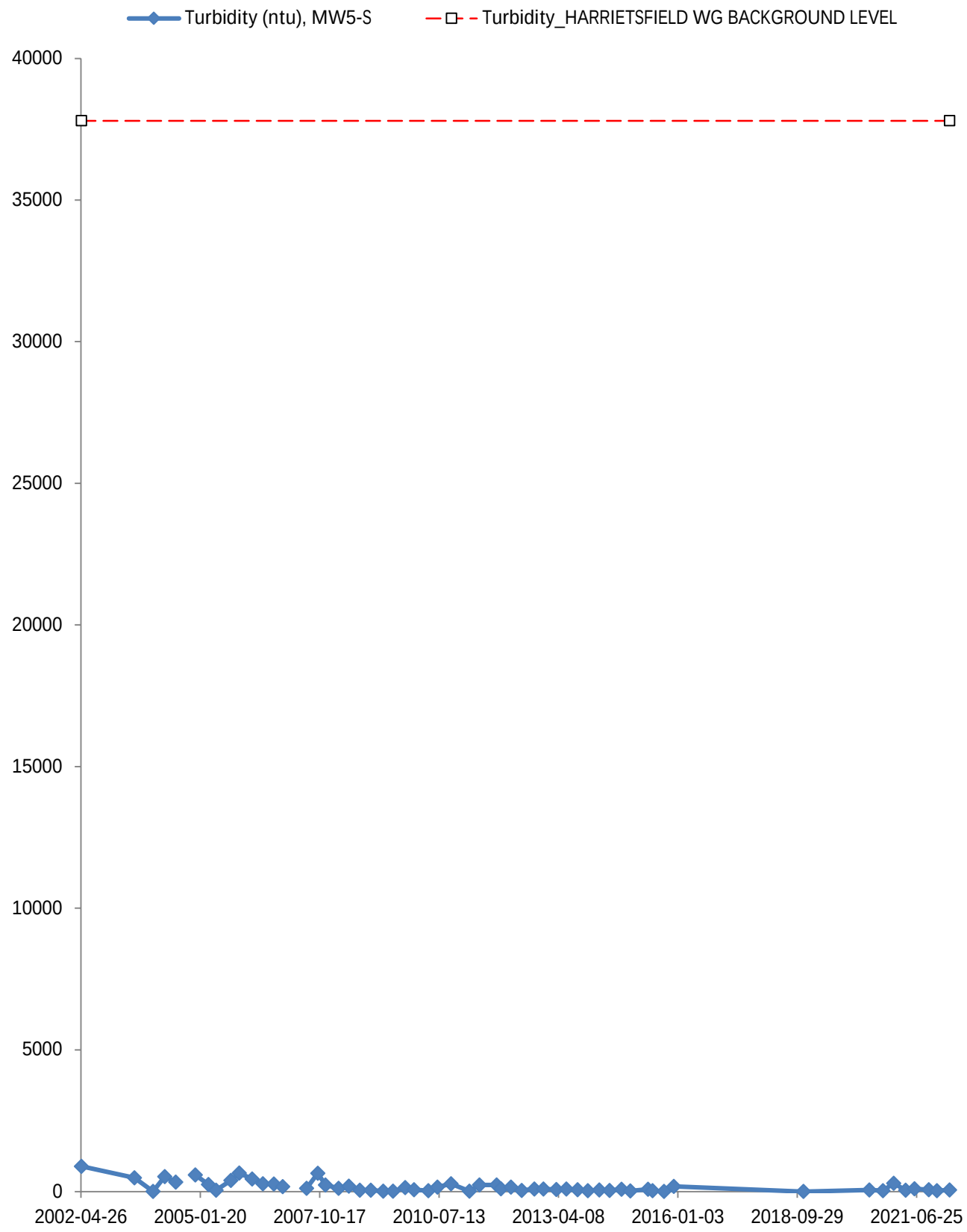
MW5-S-Total Organic Carbon



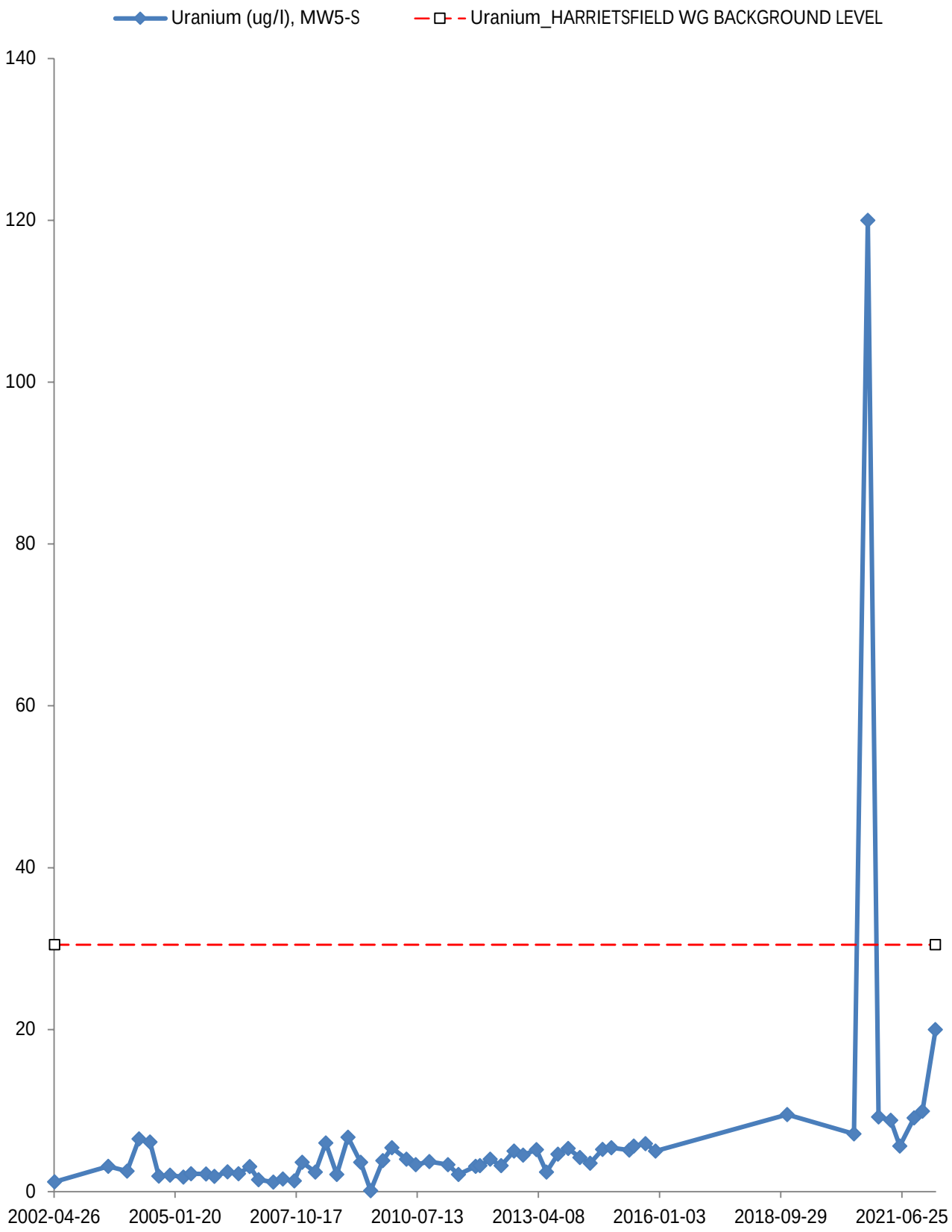
MW5-S-Total Suspended Solids



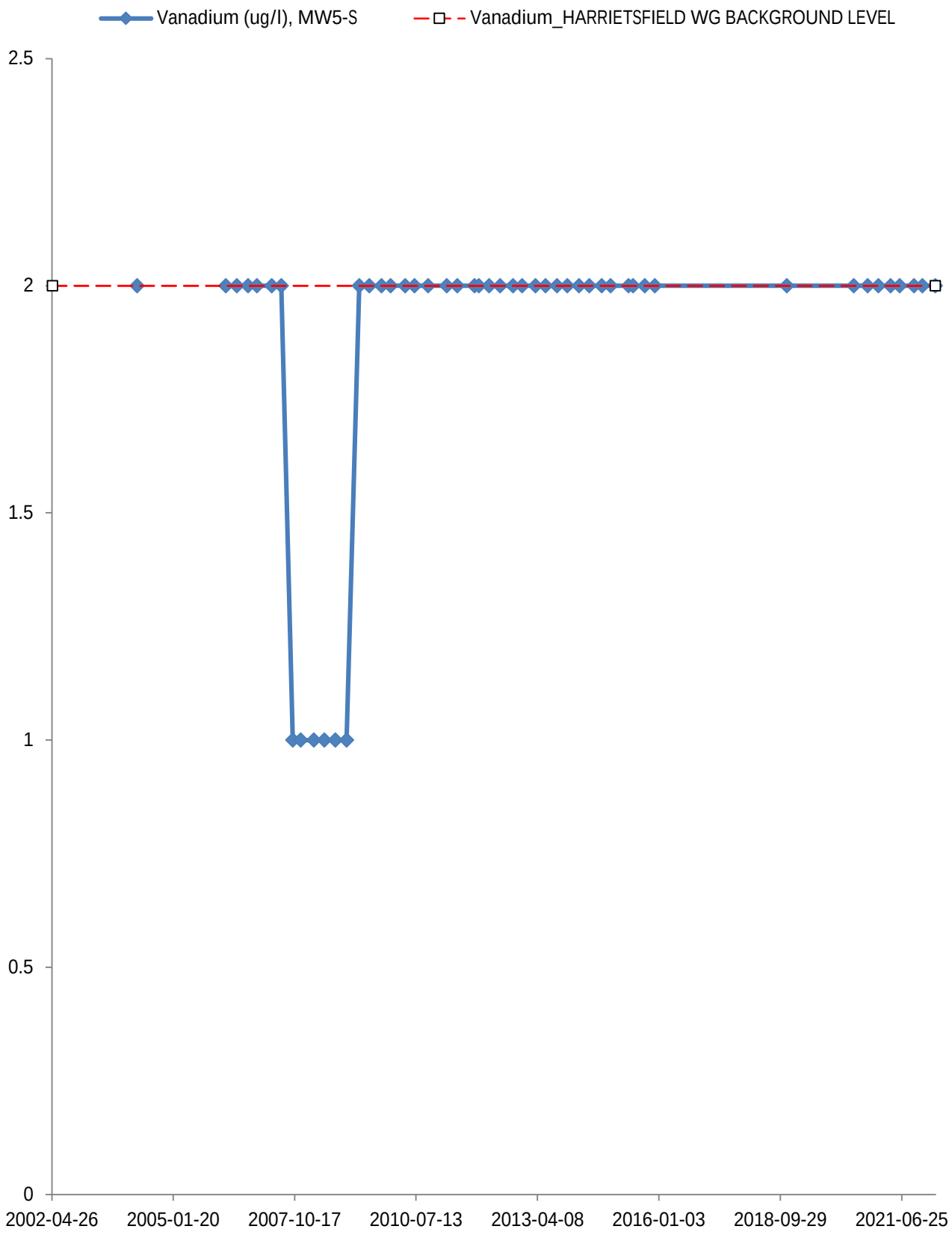
MW5-S-Turbidity



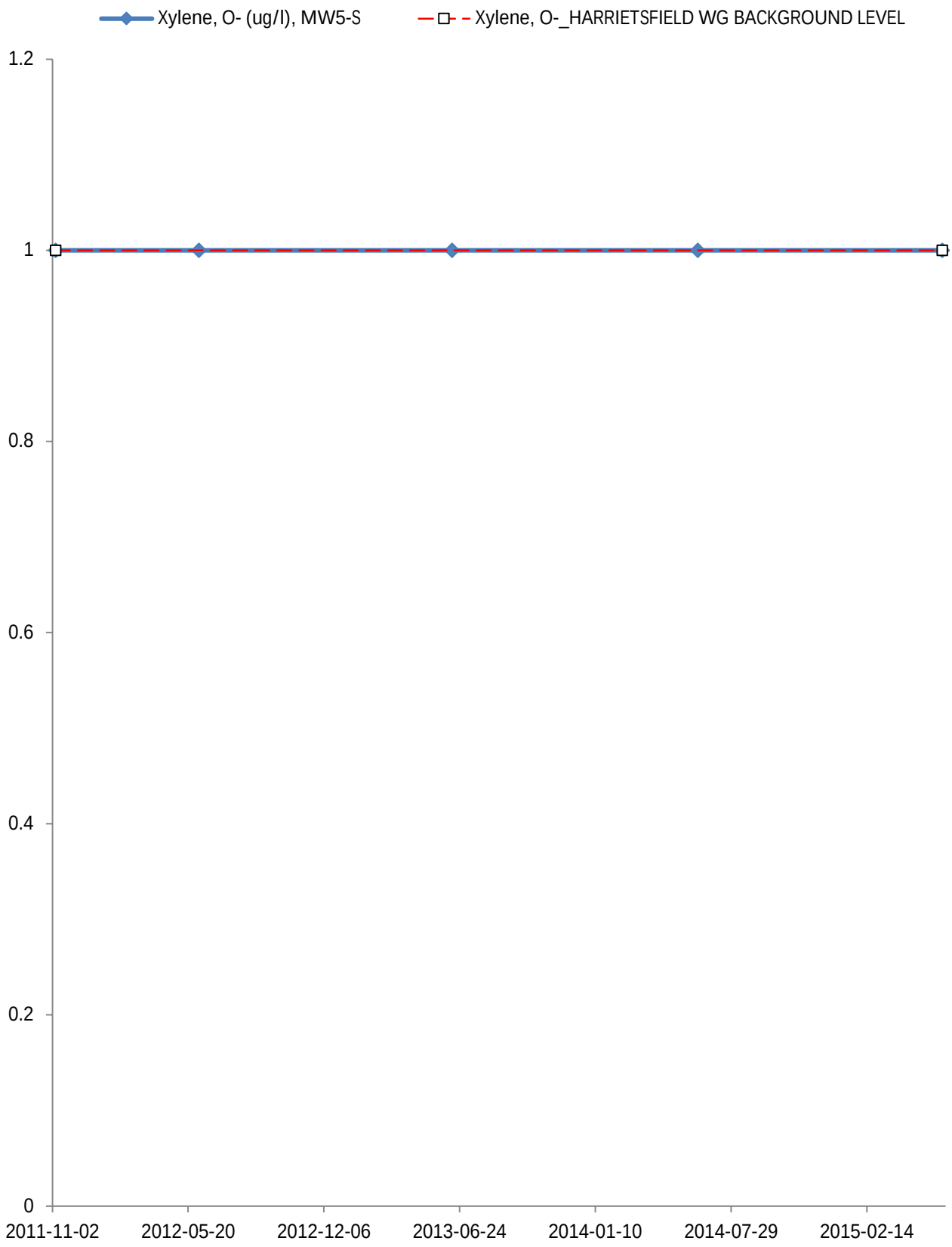
MW5-S-Uranium



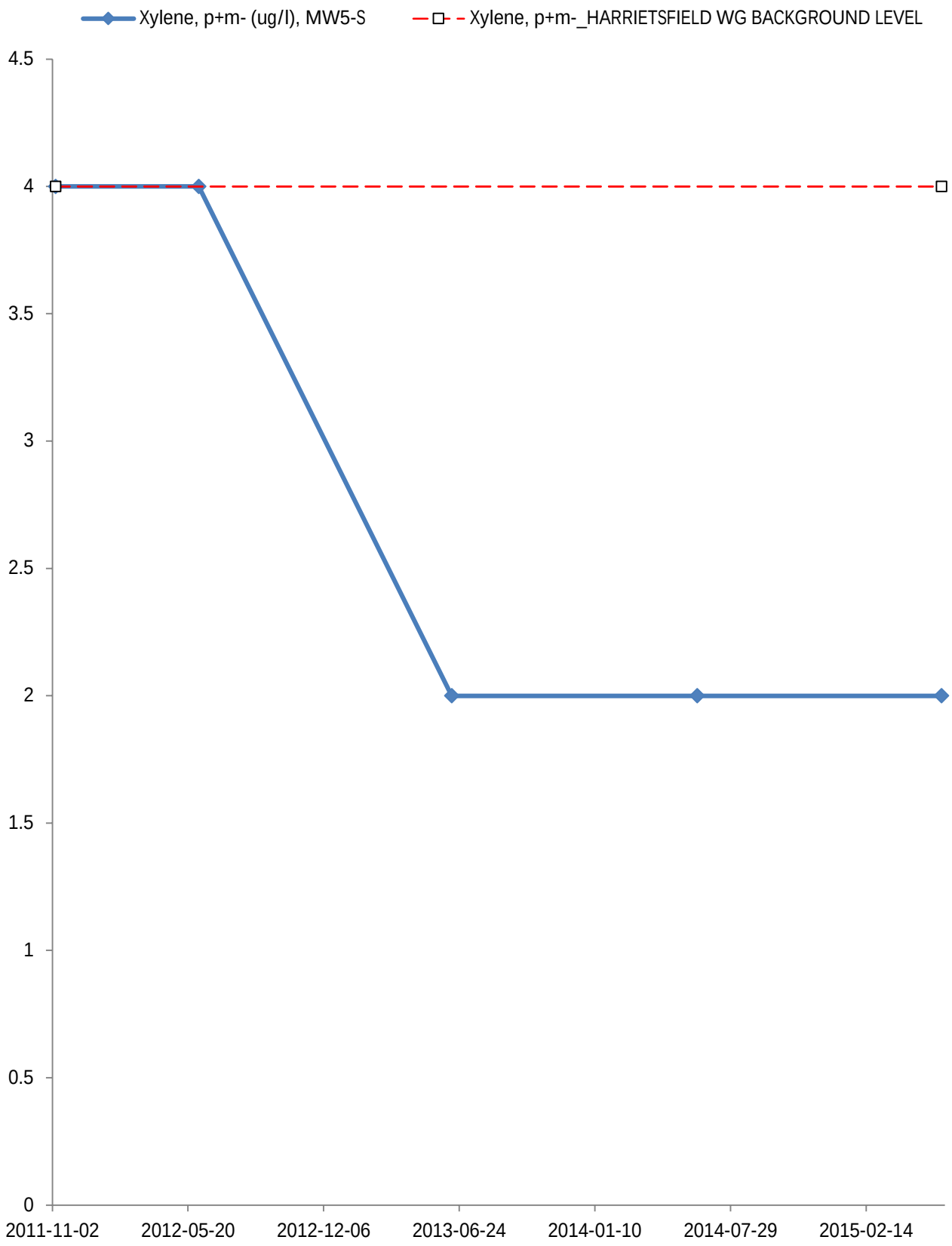
MW5-S-Vanadium



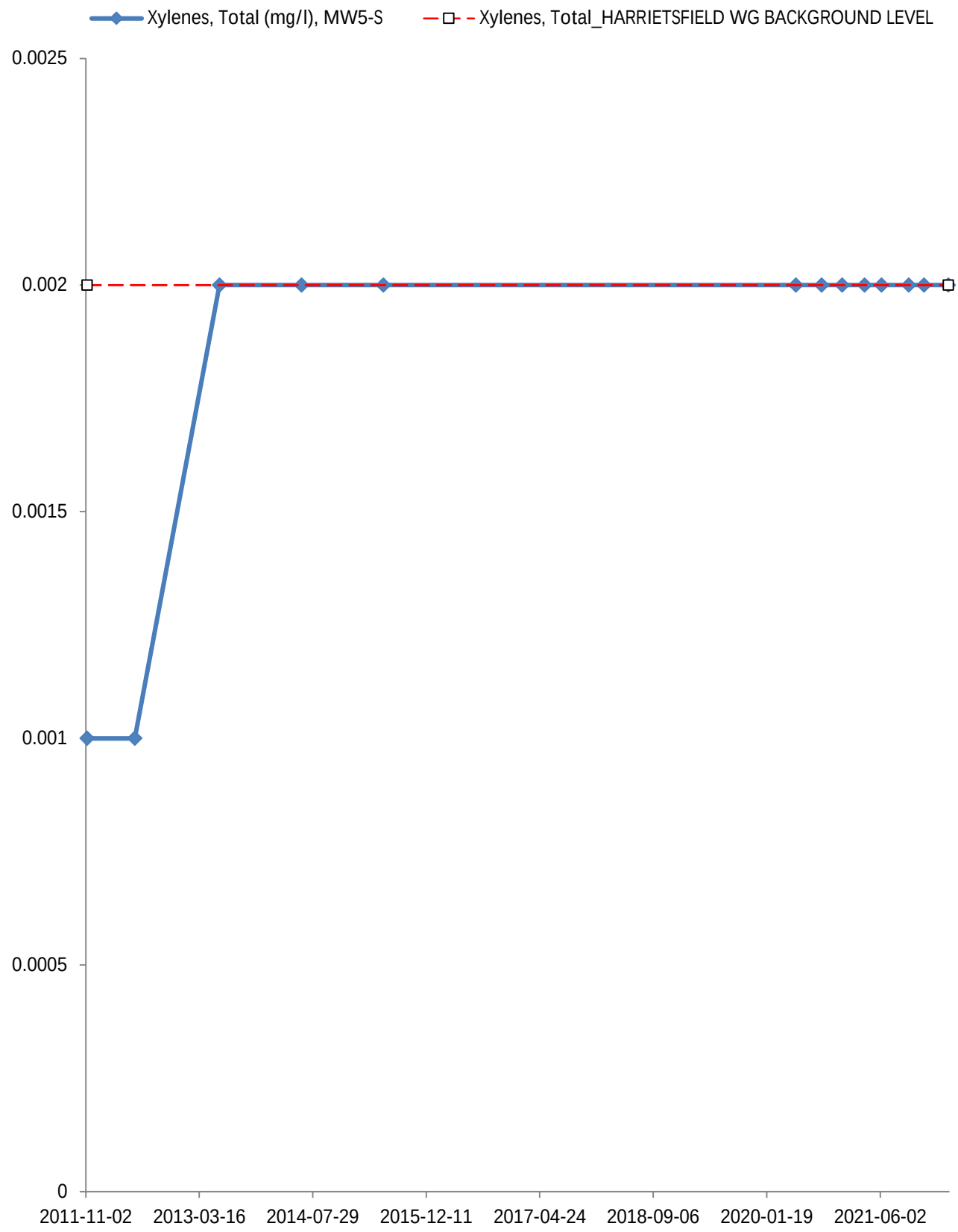
MW5-S-Xylene, O-



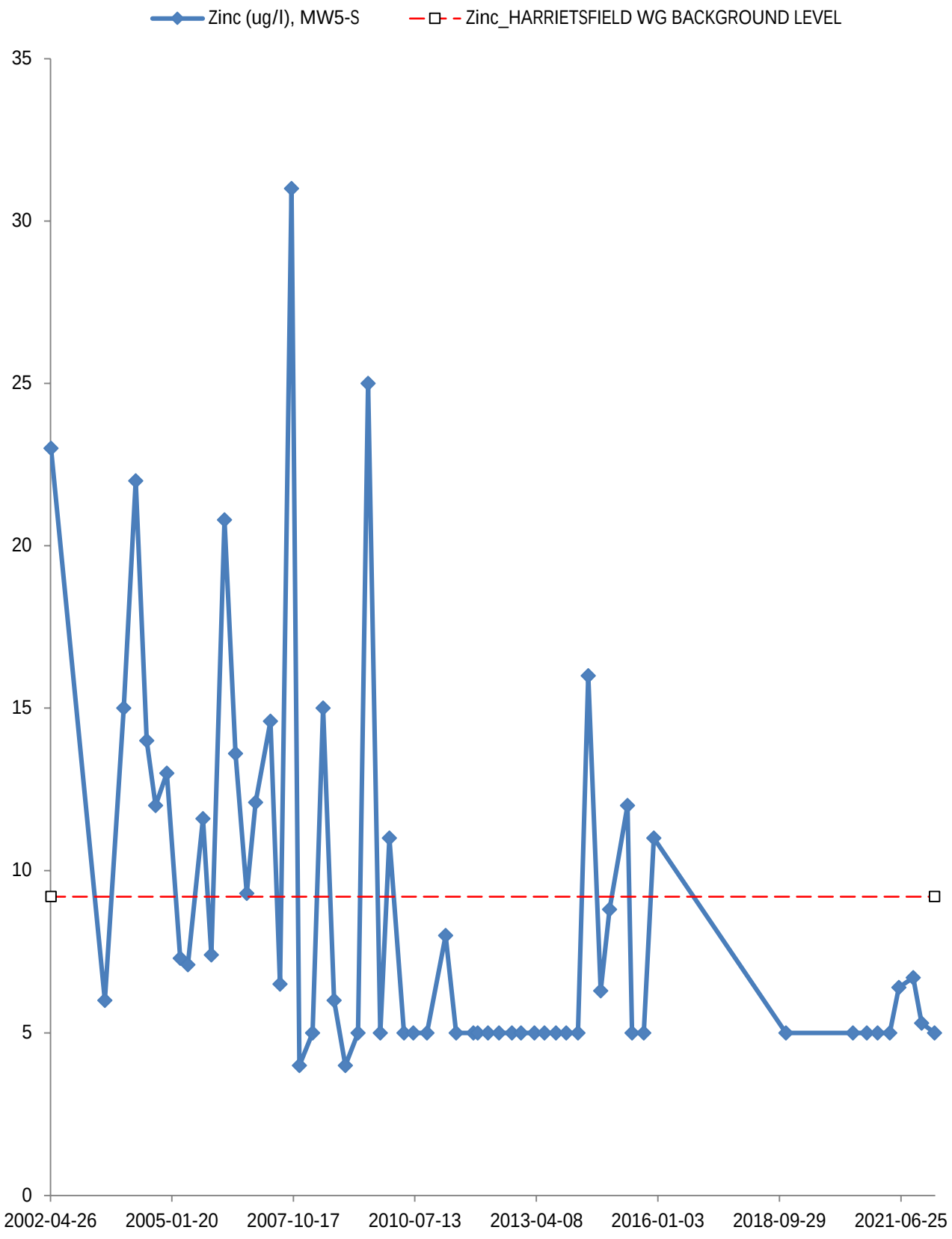
MW5-S-Xylene, p+m-



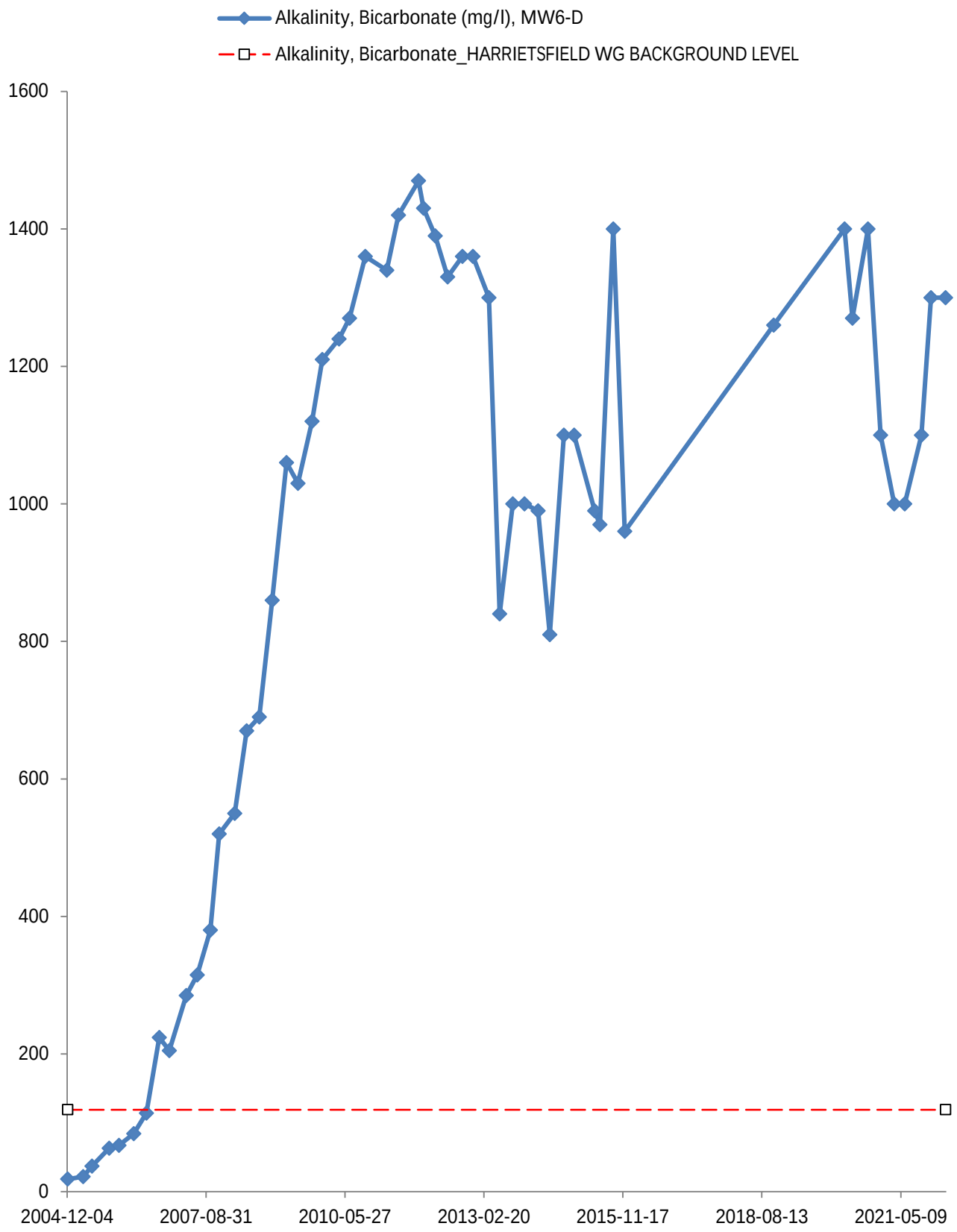
MW5-S-Xylenes, Total



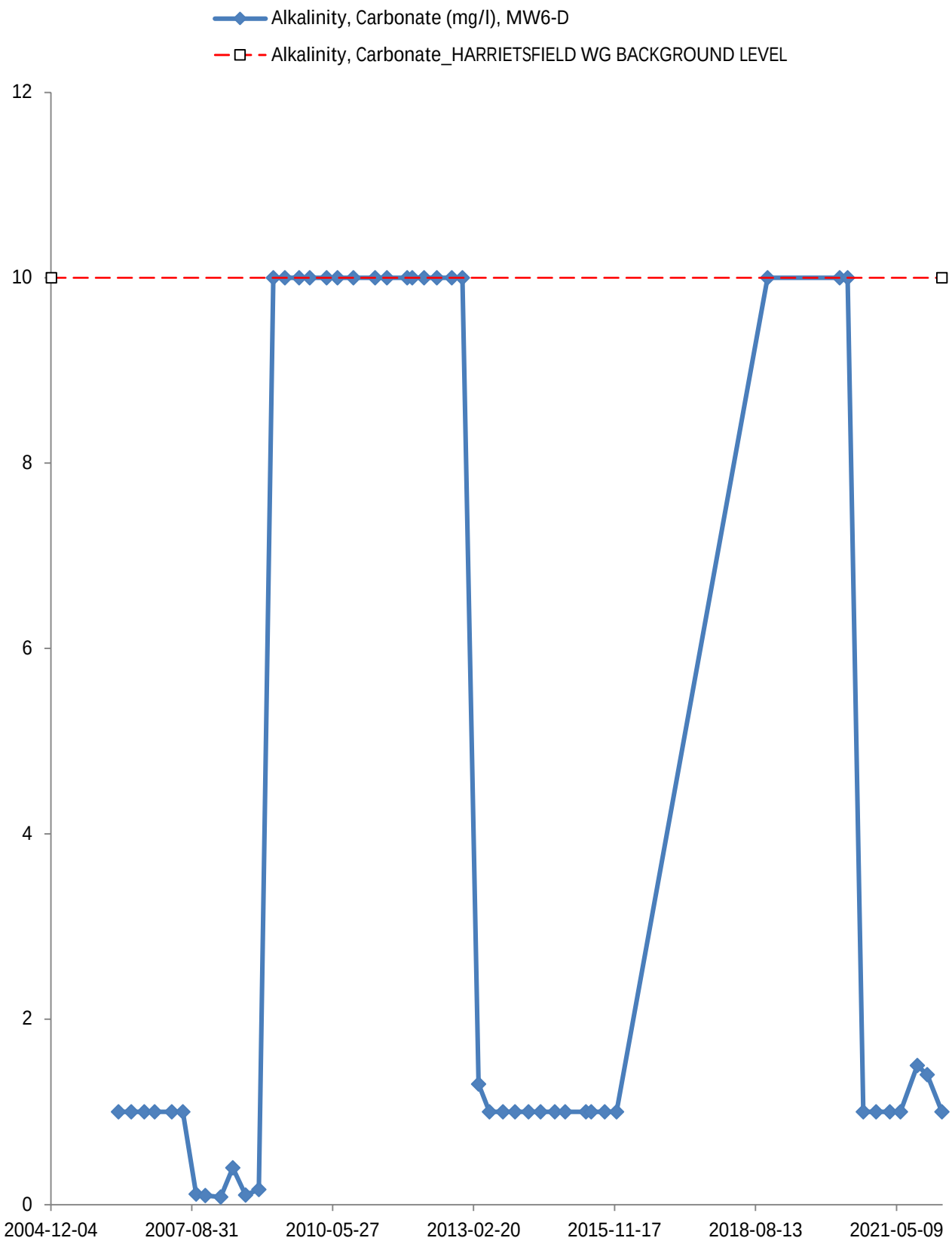
MW5-S-Zinc


Zinc (ug/l), MW5-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
35
30
25
20
15
10
5
0
2002-04-26
2005-01-20
2007-10-17
2010-07-13
2013-04-08
2016-01-03
2018-09-29
2021-06-25

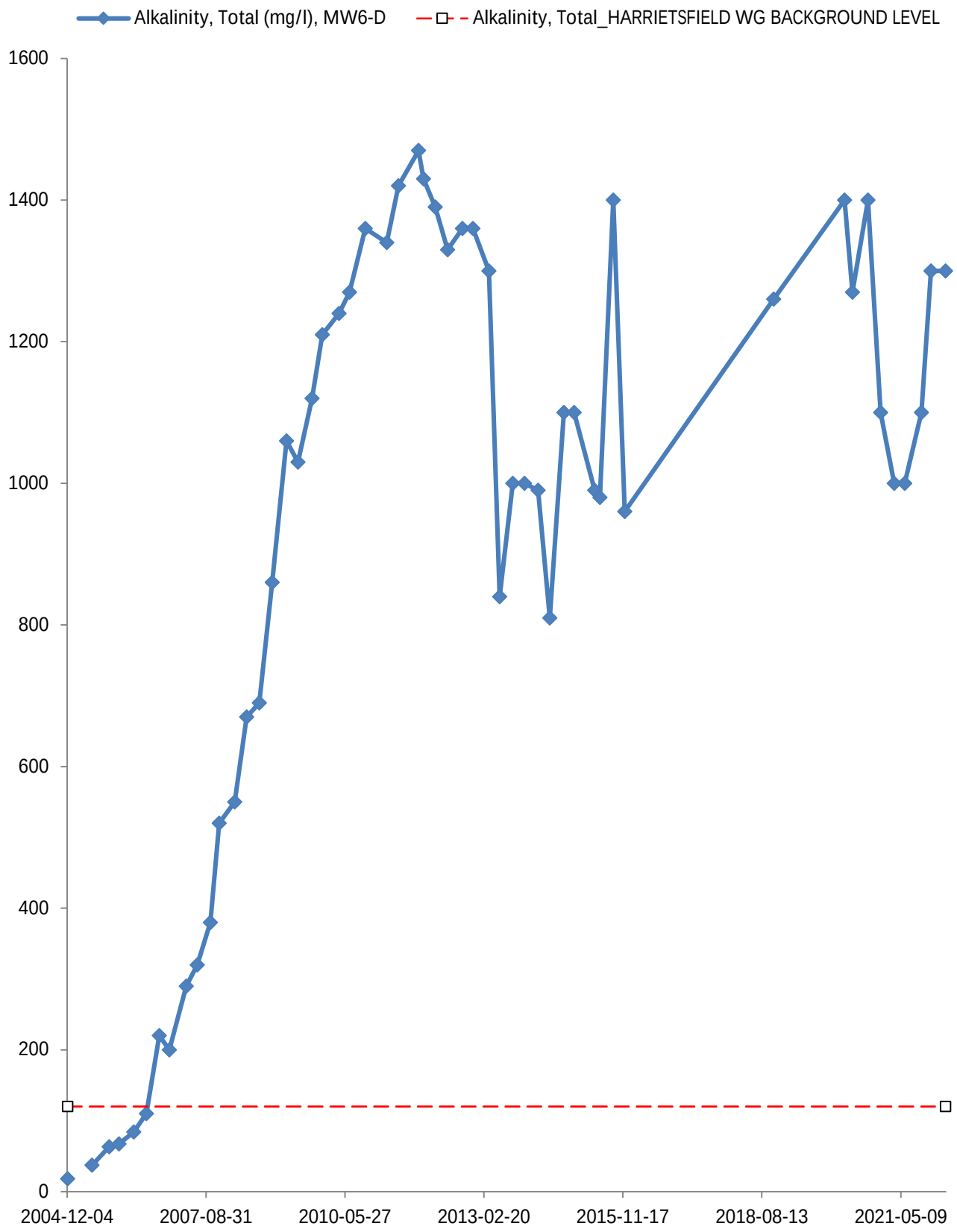
MW6-D-Alkalinity, Bicarbonate



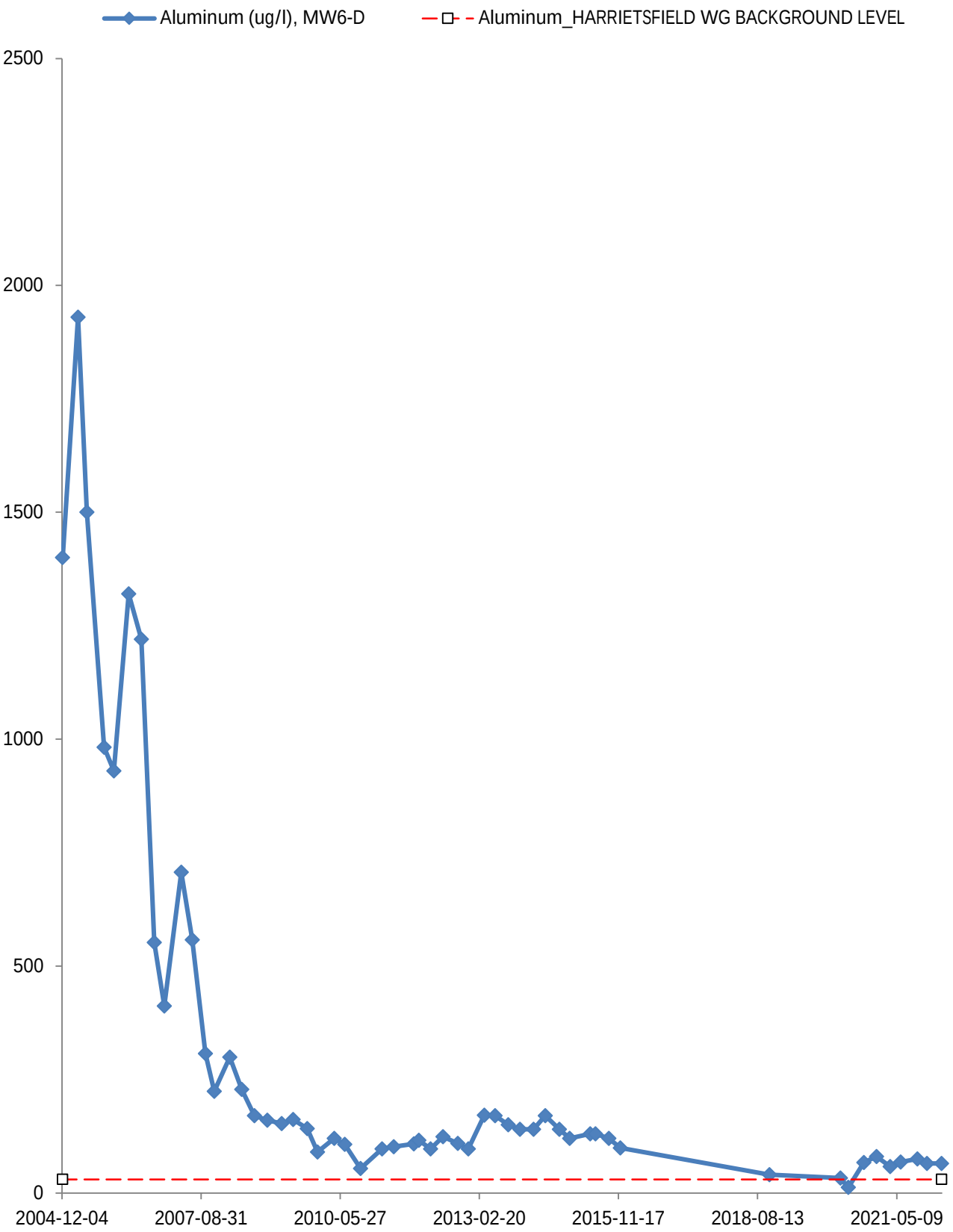
MW6-D-Alkalinity, Carbonate



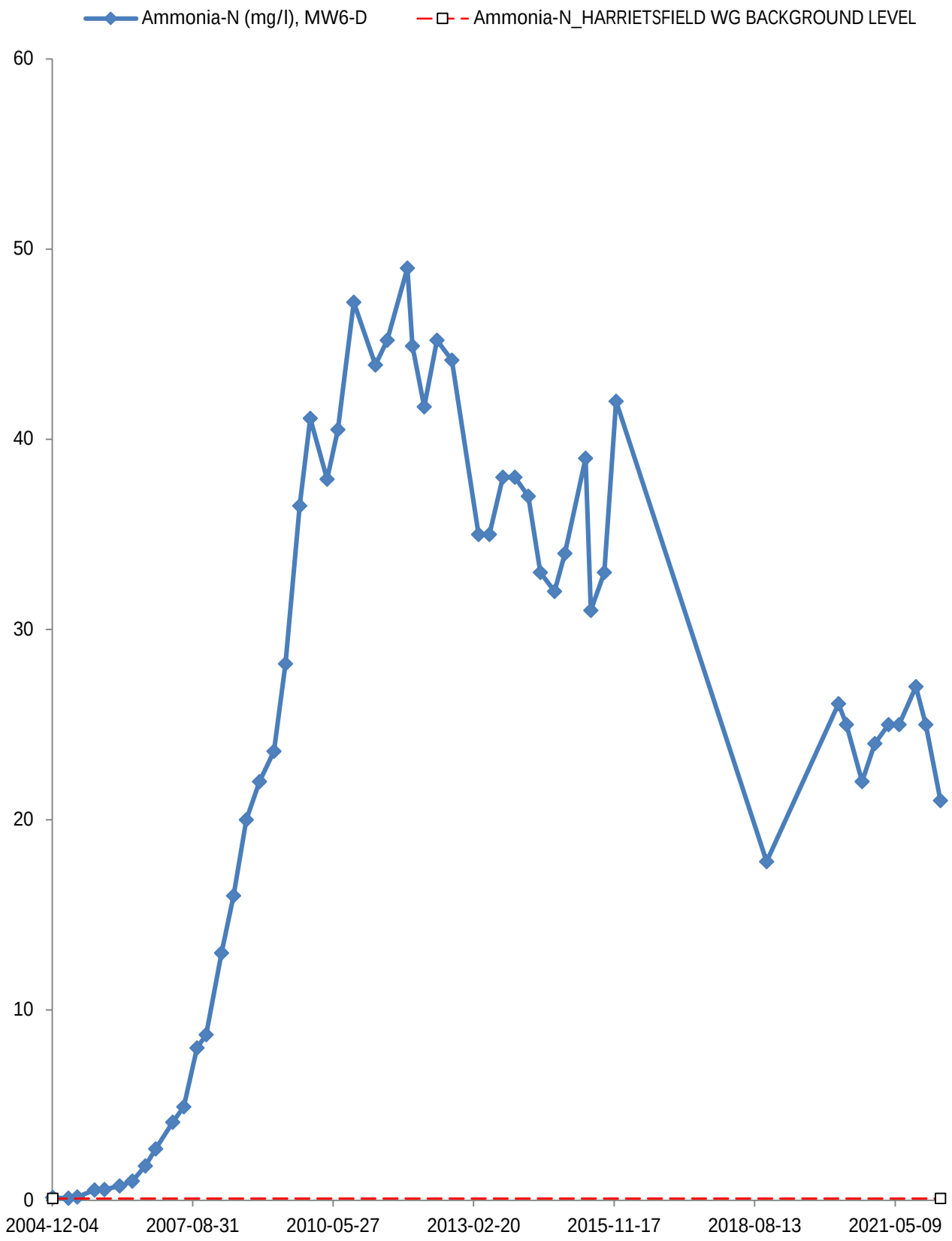
MW6-D-Alkalinity, Total



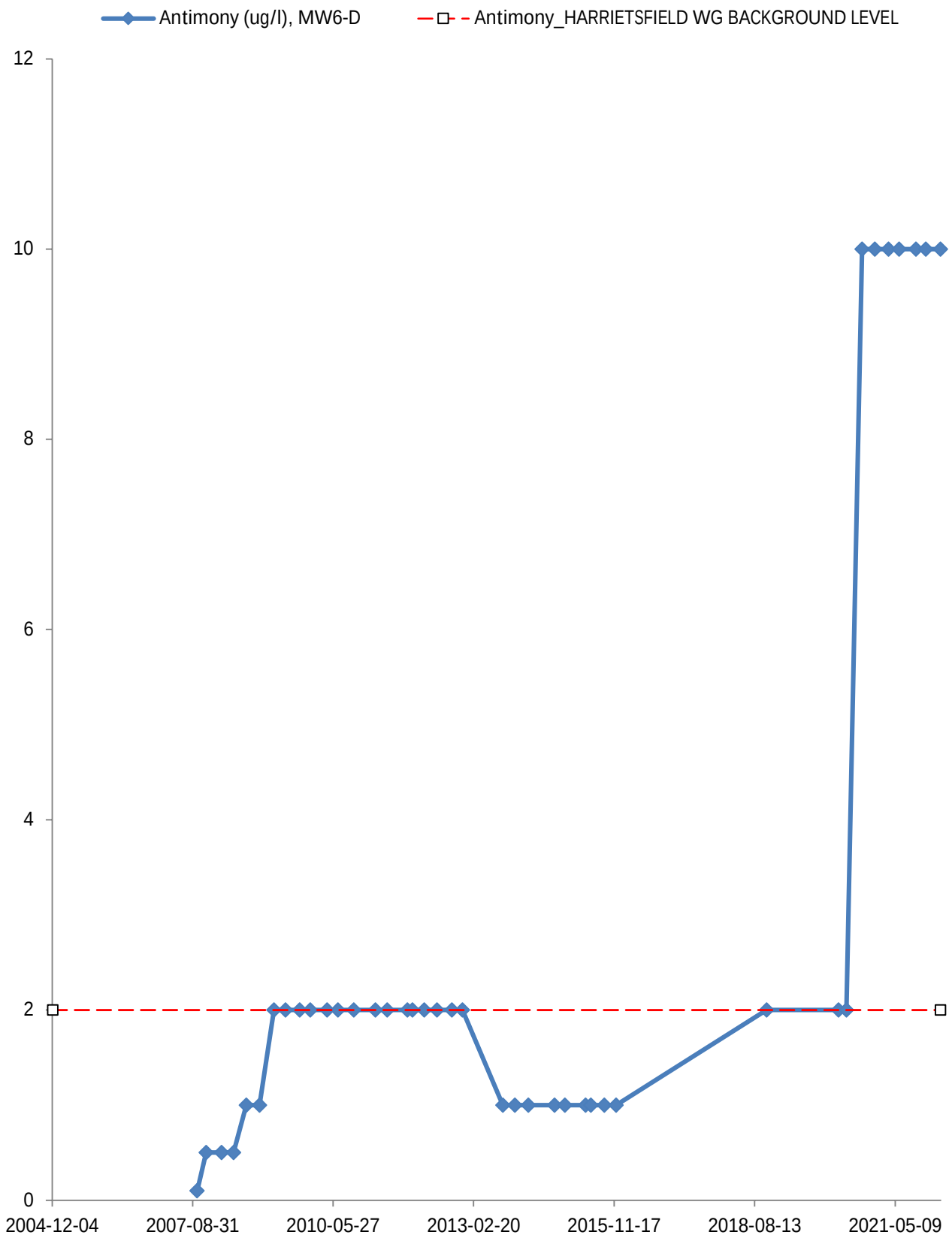
MW6-D-Aluminum



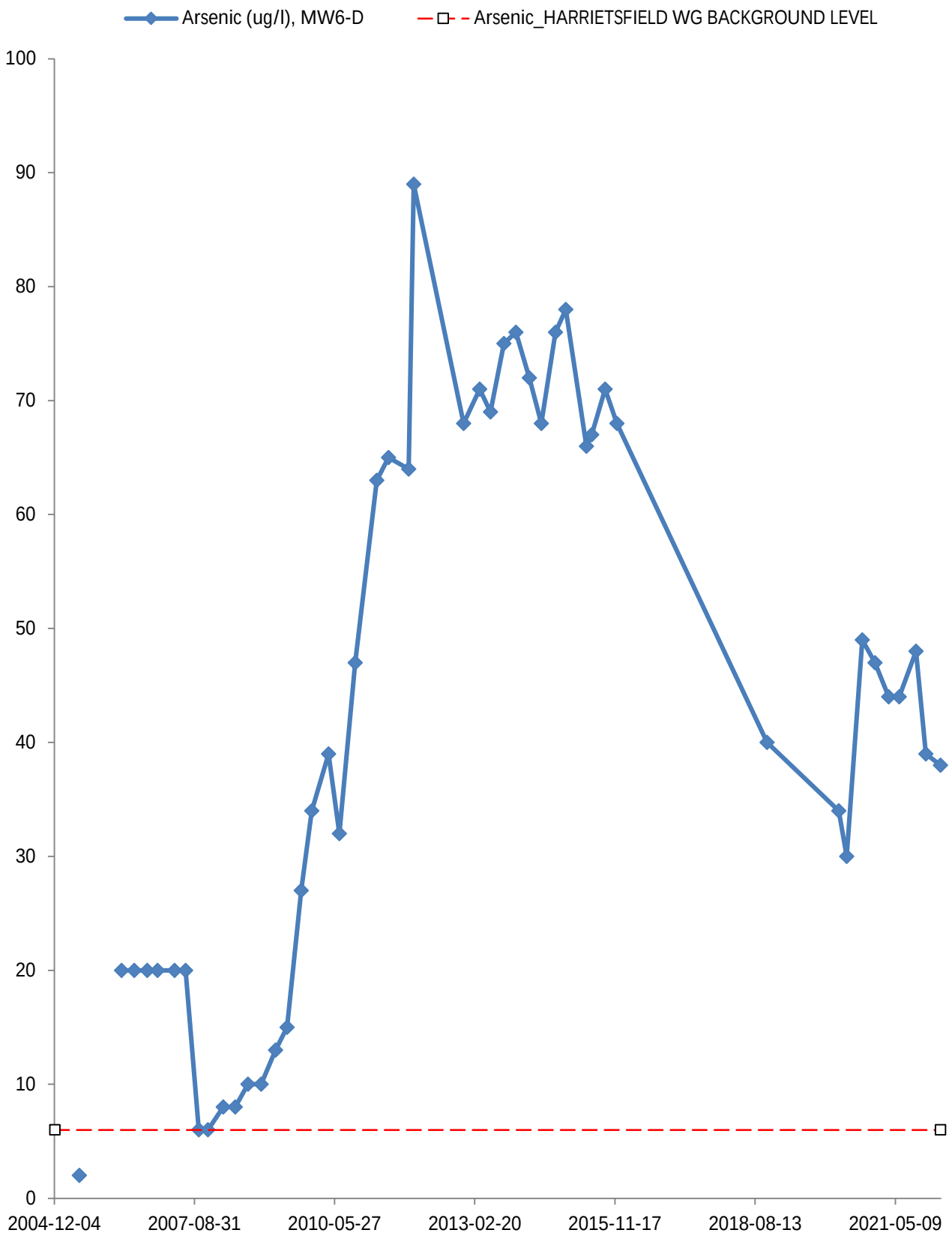
MW6-D-Ammonia-N



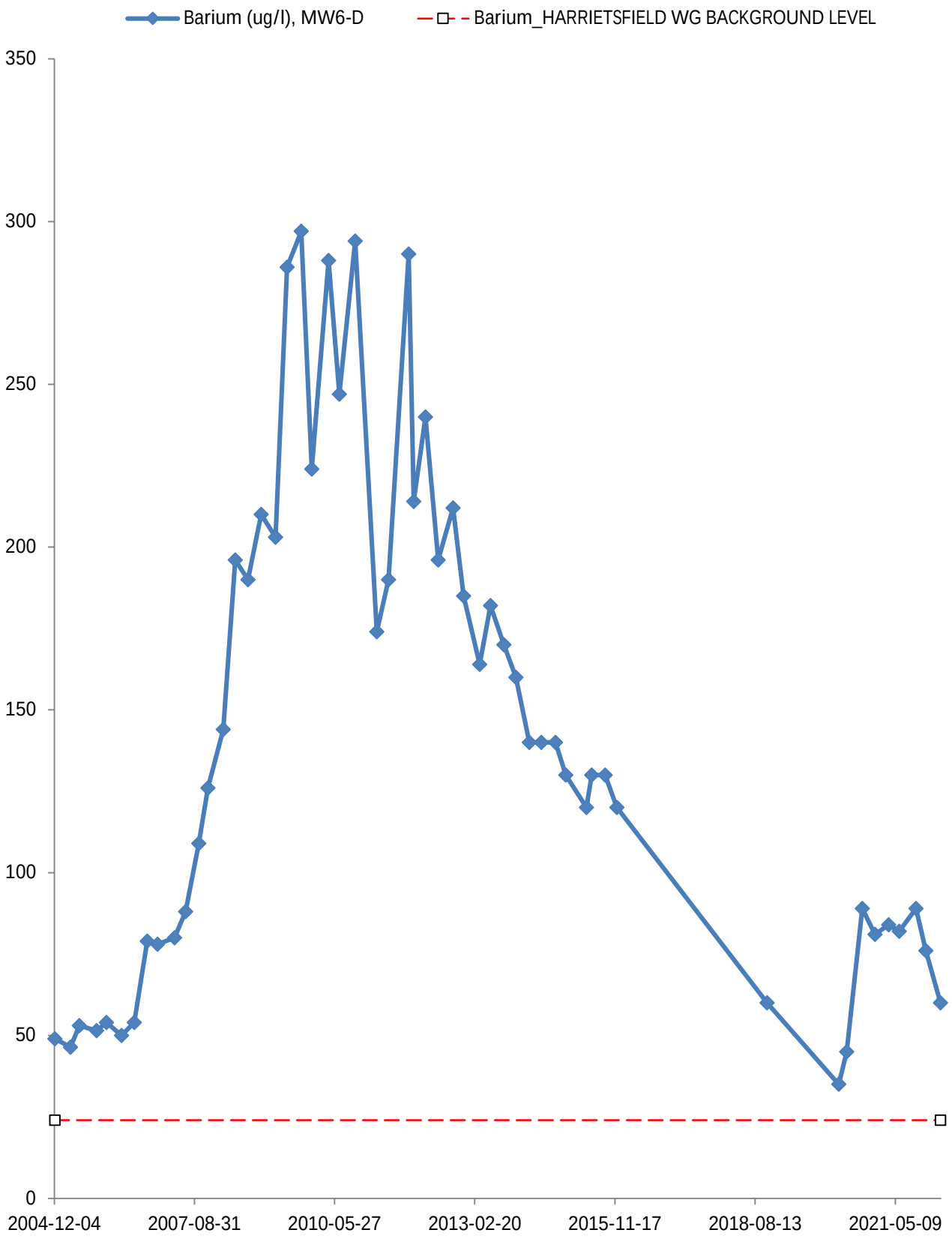
MW6-D-Antimony



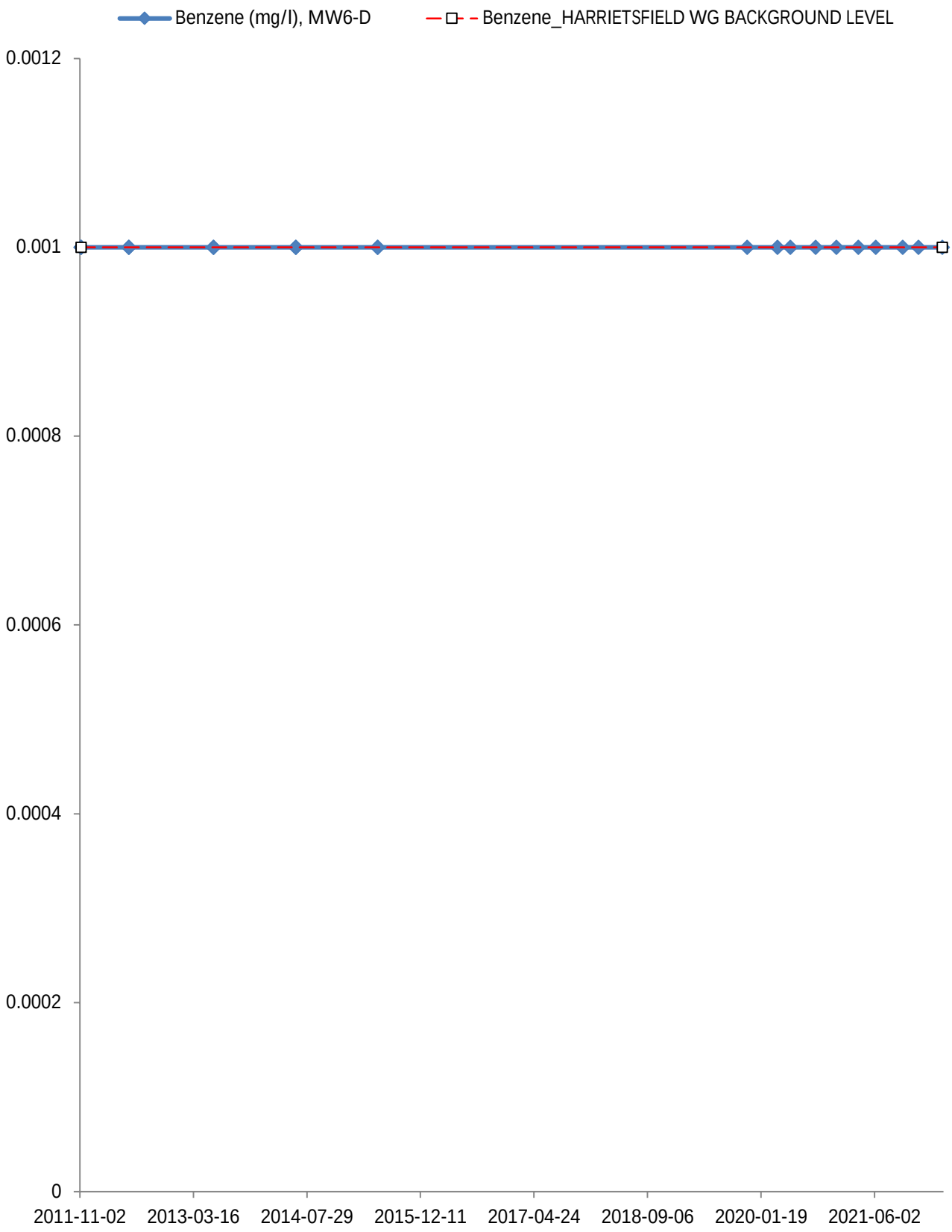
MW6-D-Arsenic



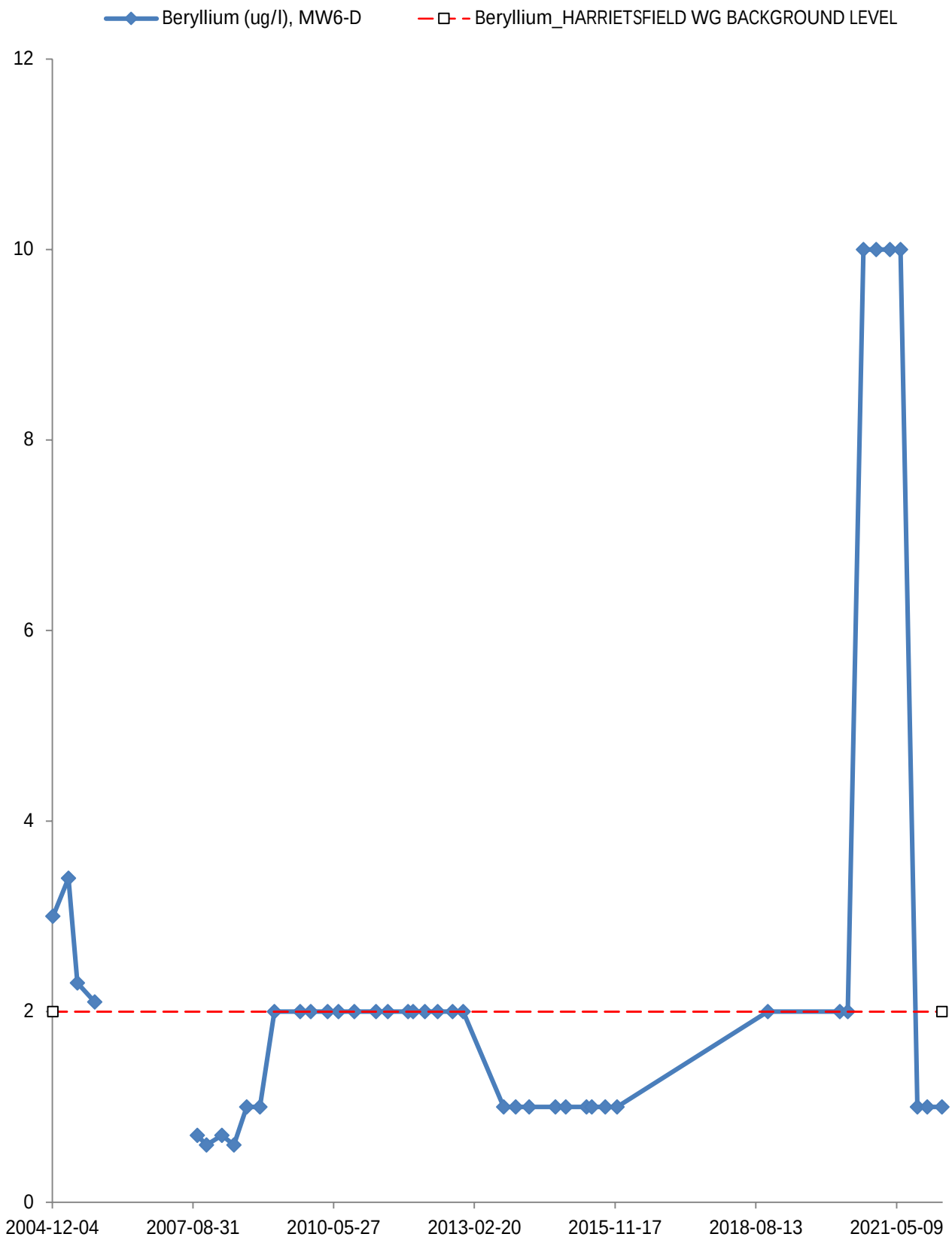
MW6-D-Barium


Barium (ug/l), MW6-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
350
300
250
200
150
100
50
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

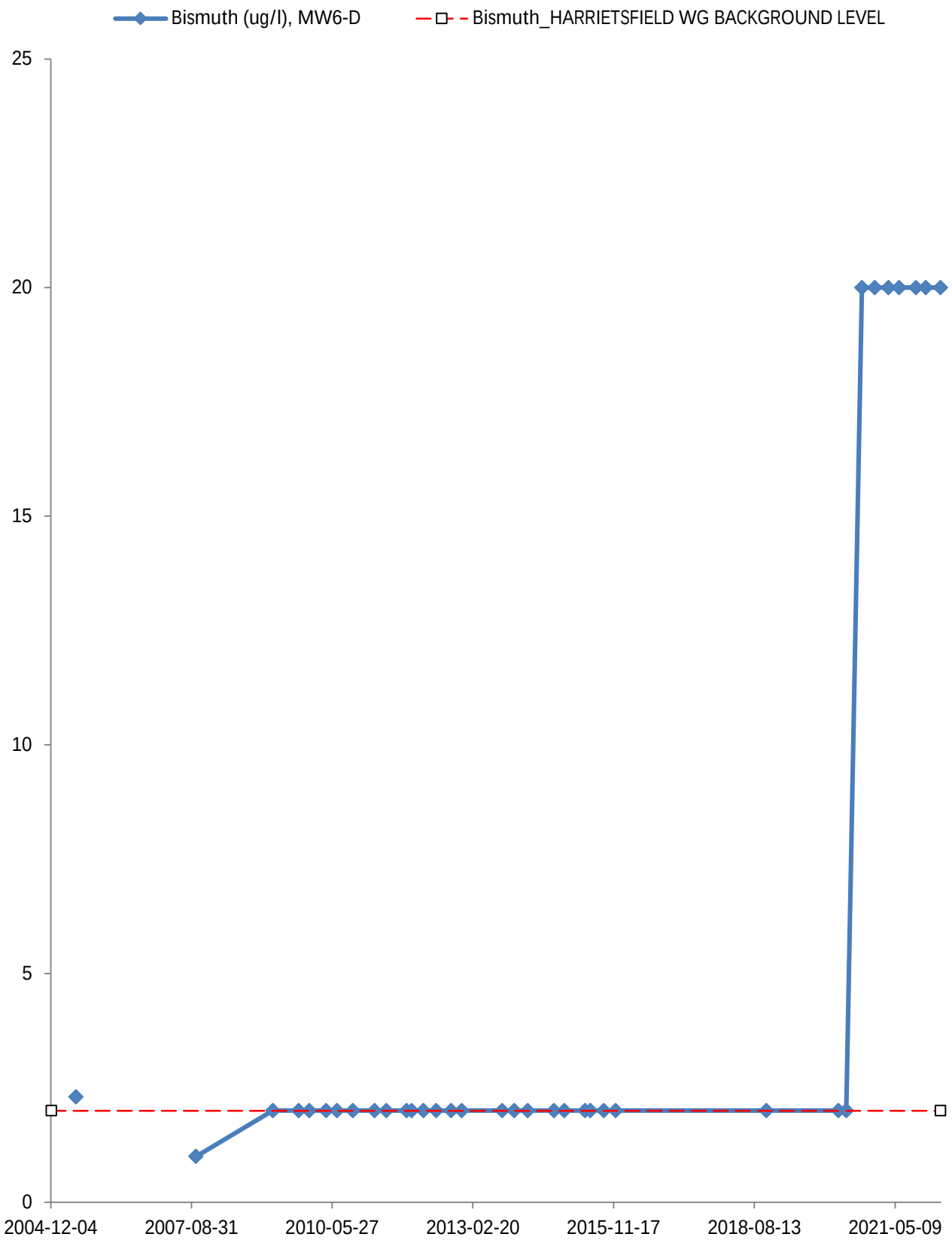
MW6-D-Benzene



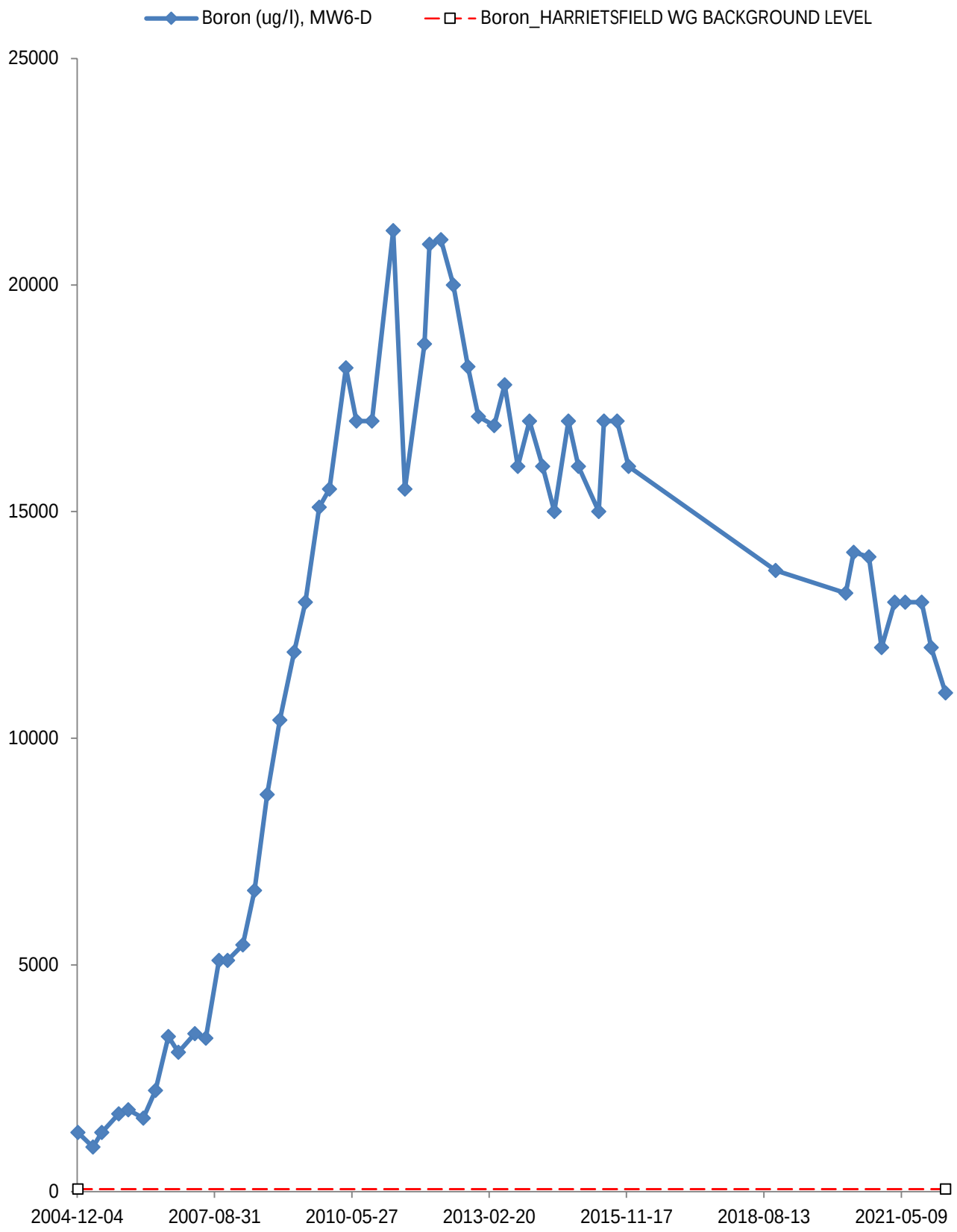
MW6-D-Beryllium



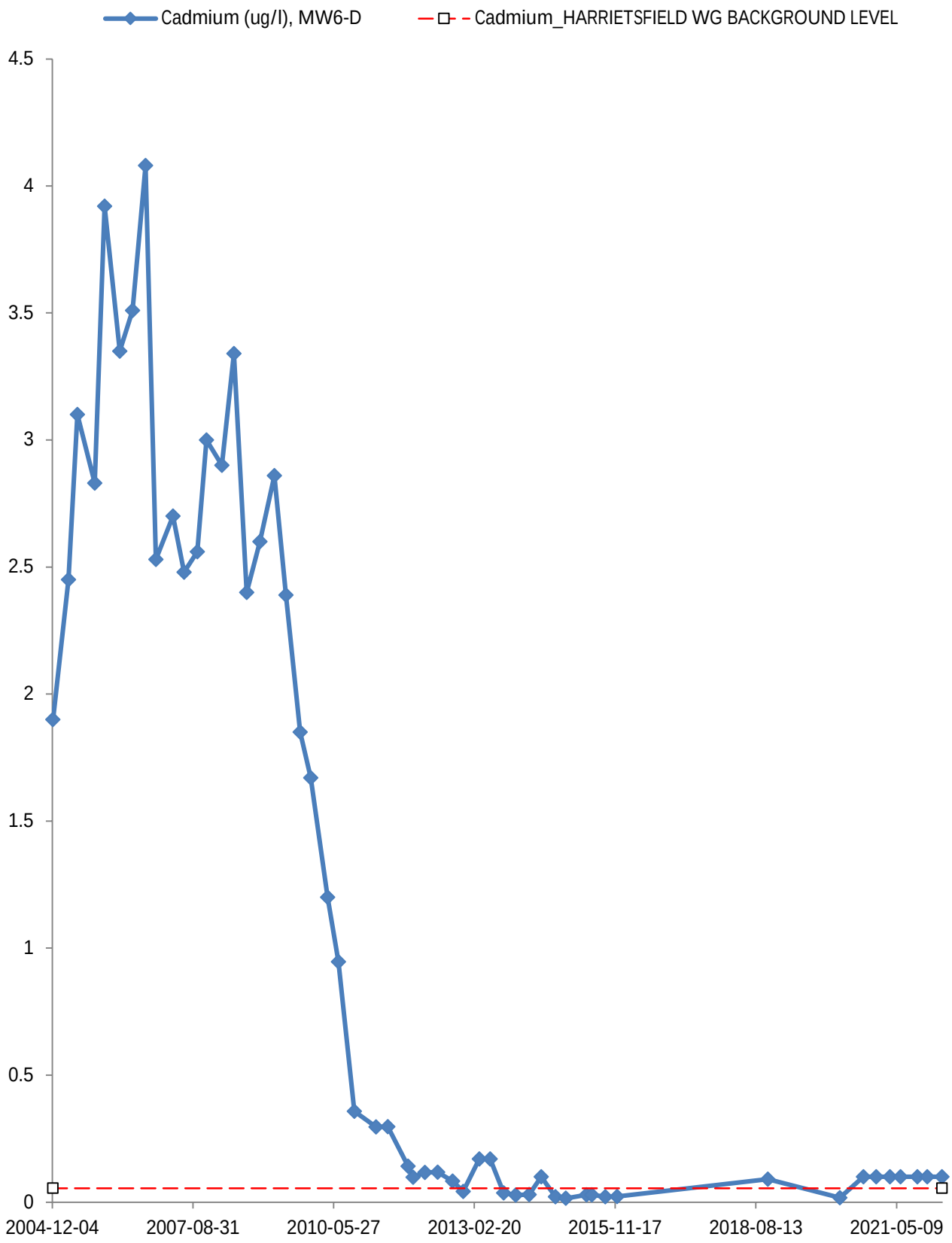
MW6-D-Bismuth



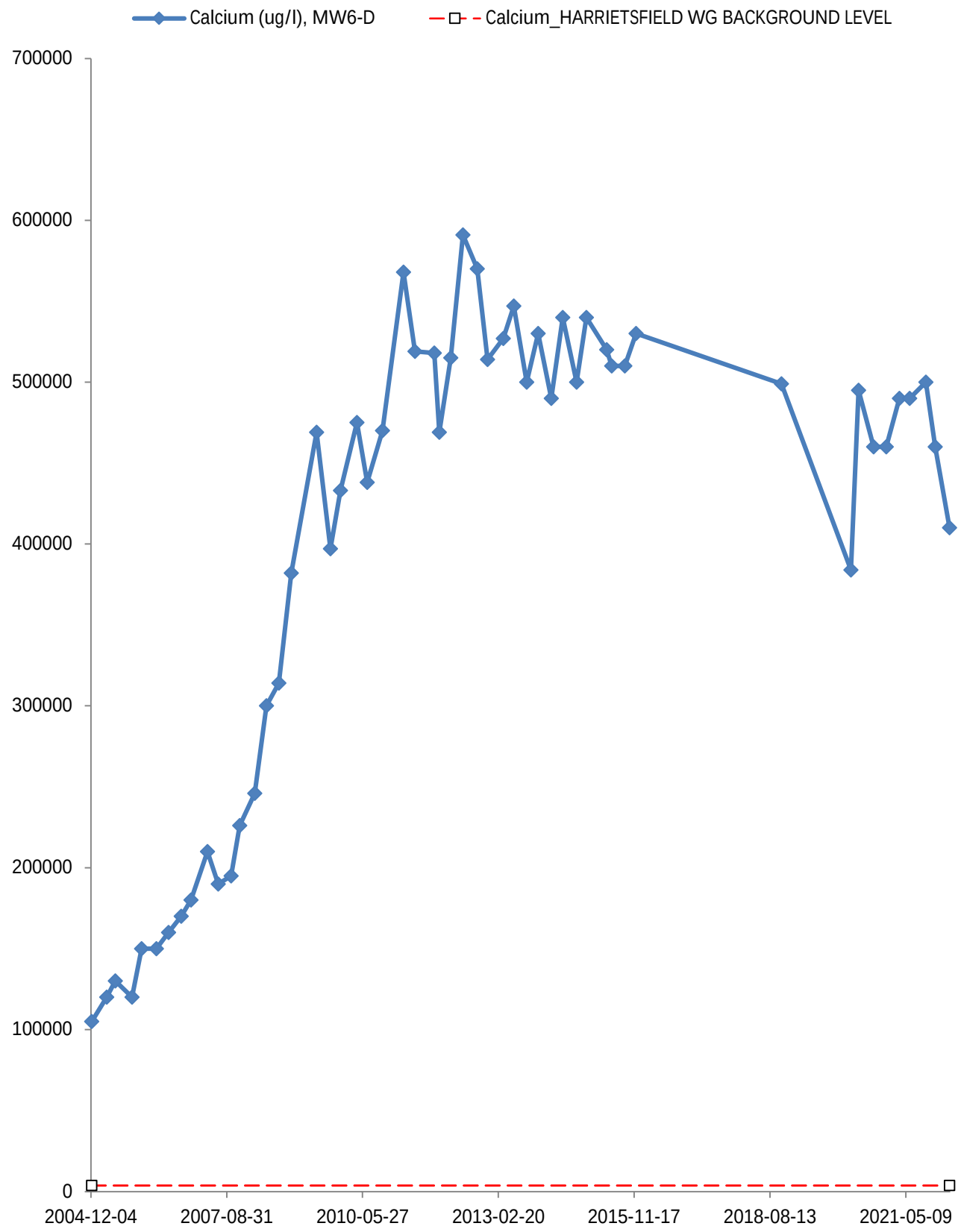
MW6-D-Boron


Boron (ug/l), MW6-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
25000
20000
15000
10000
5000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

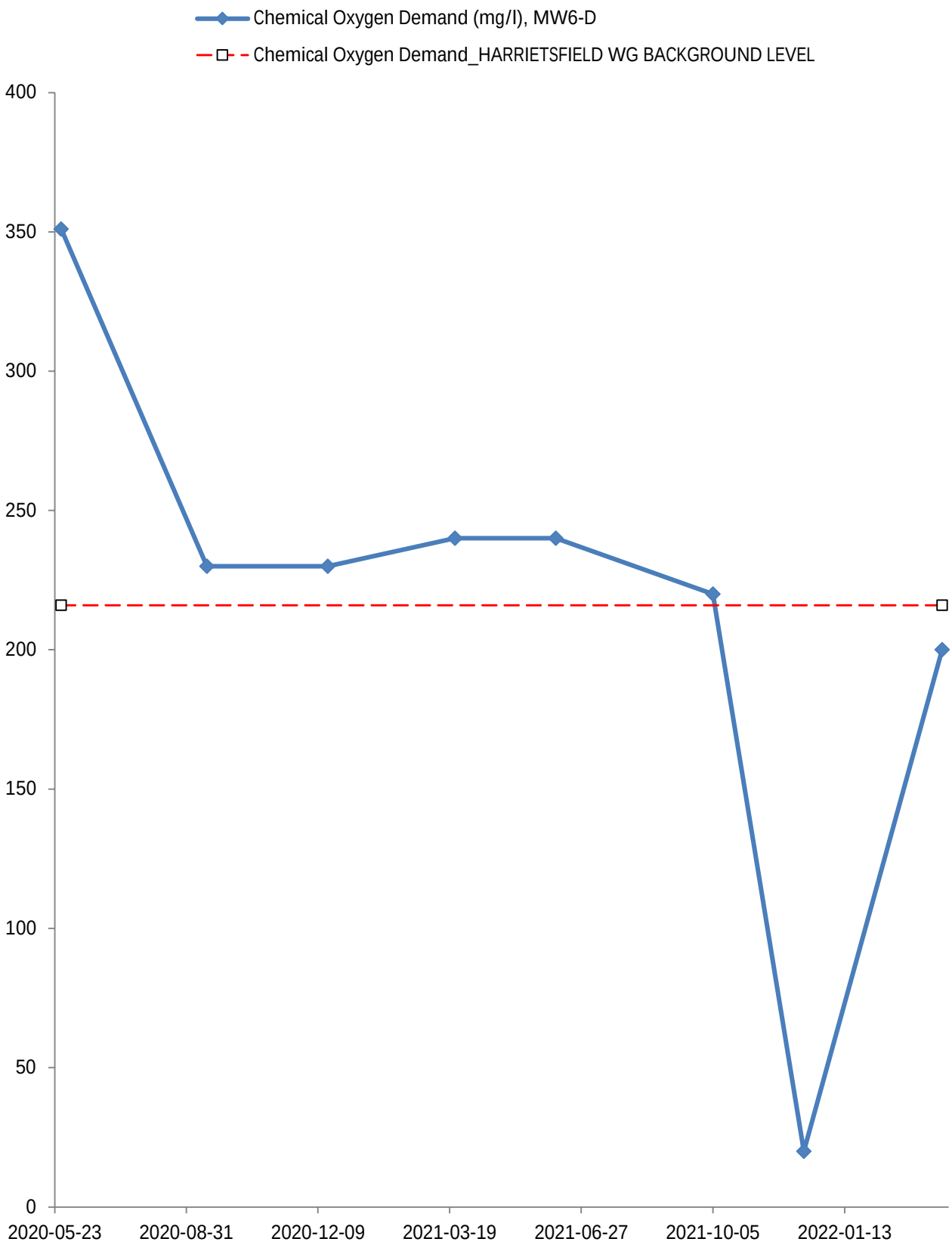
MW6-D-Cadmium



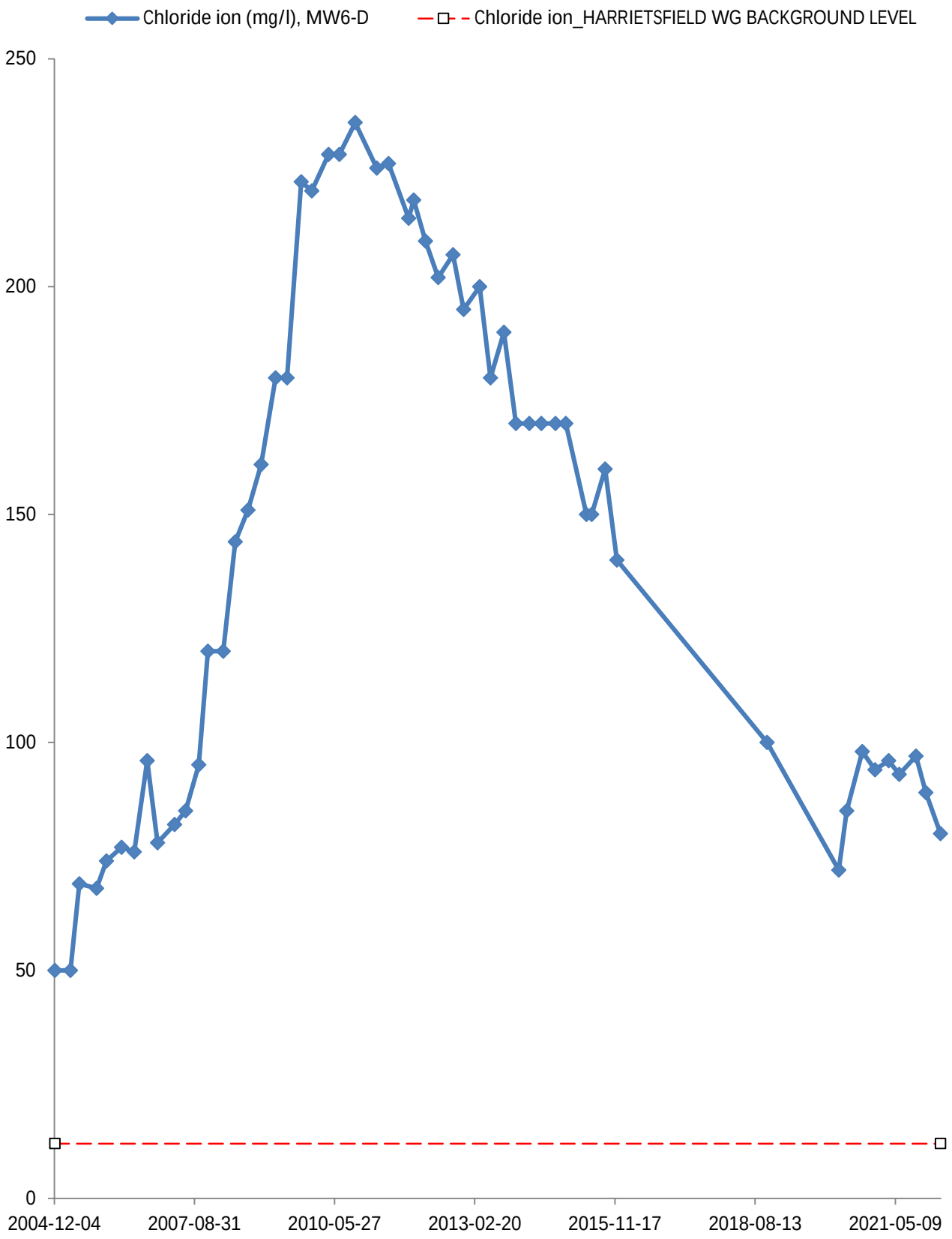
MW6-D-Calcium



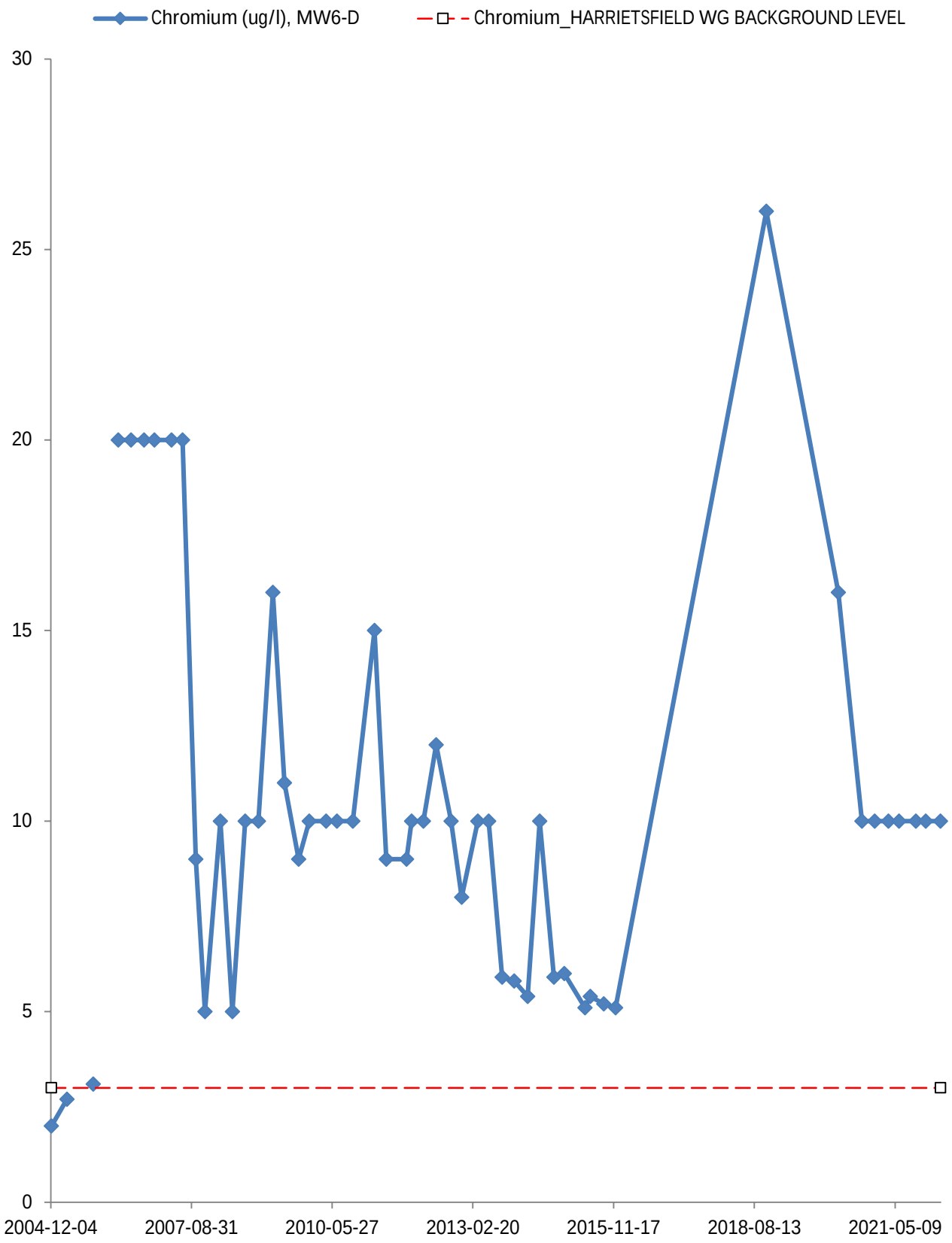
MW6-D-Chemical Oxygen Demand



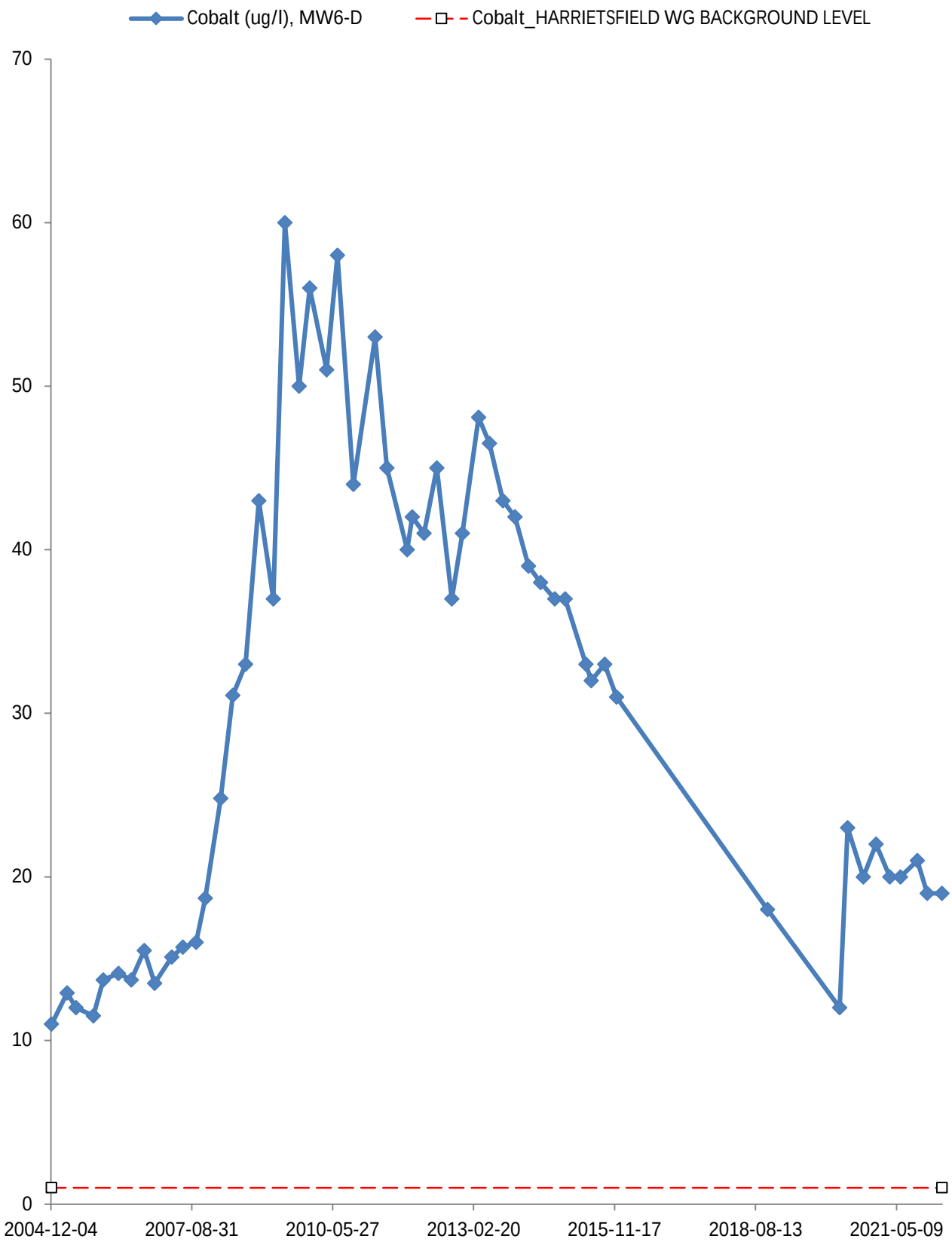
MW6-D-Chloride ion



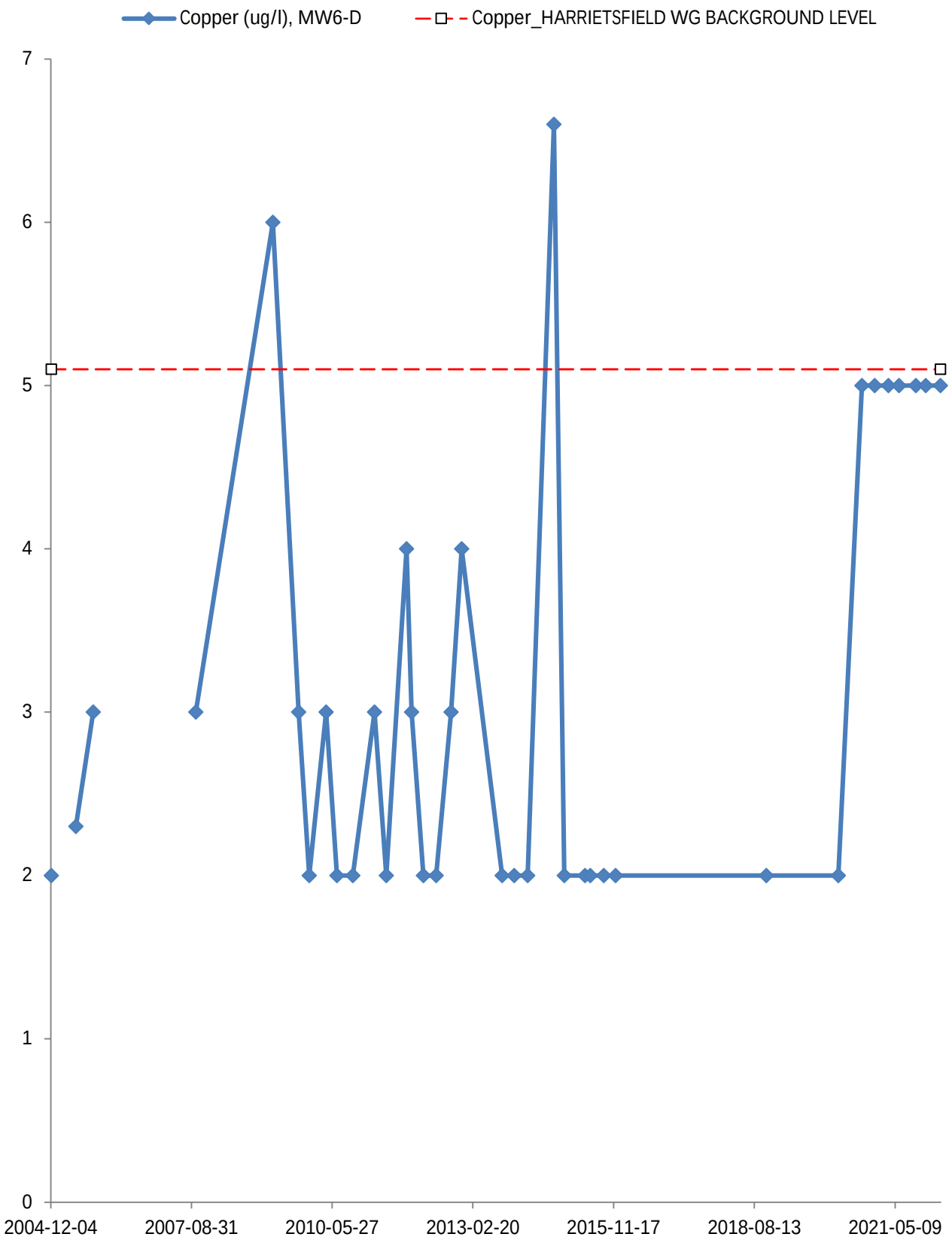
MW6-D-Chromium



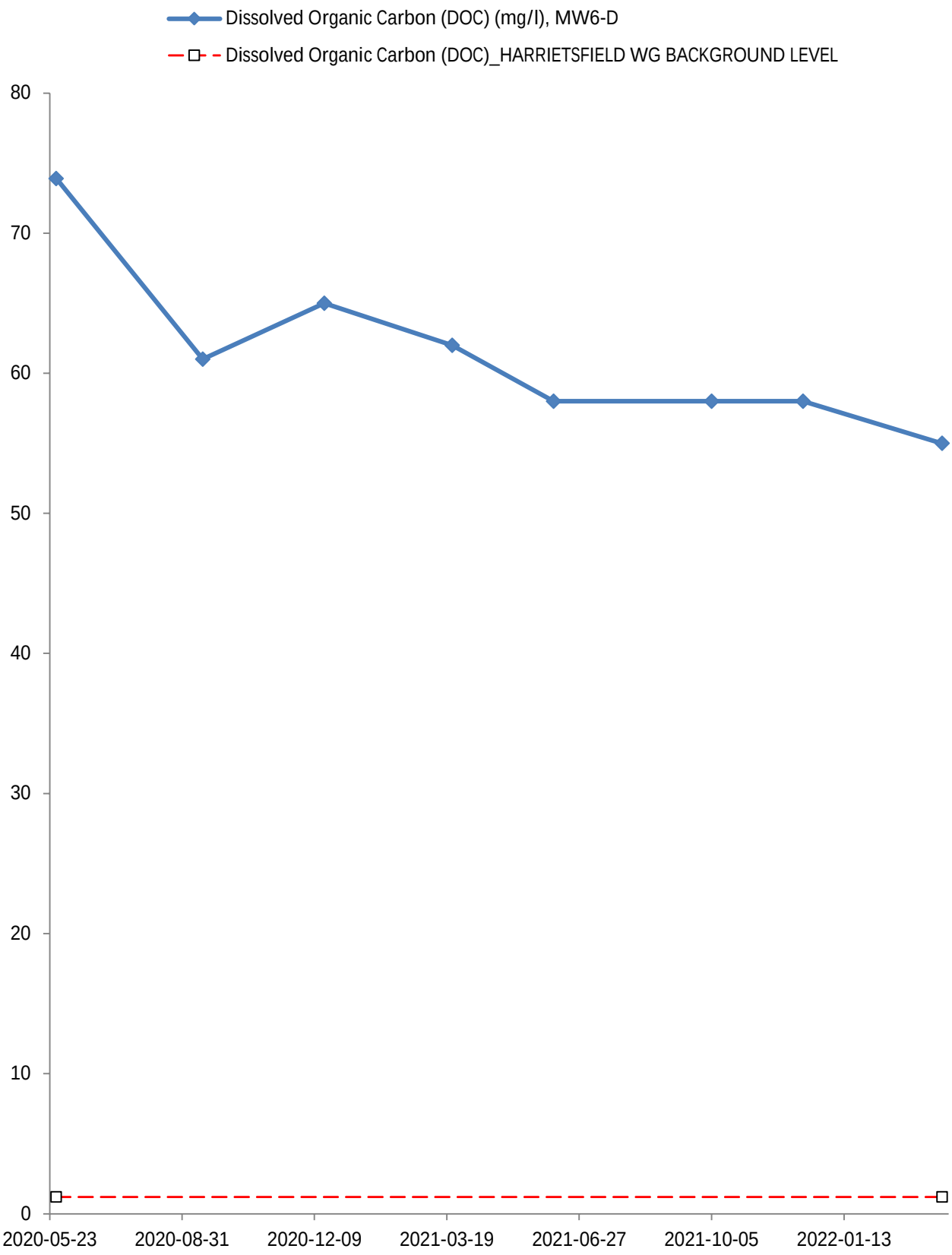
MW6-D-Cobalt


Cobalt (ug/l), MW6-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

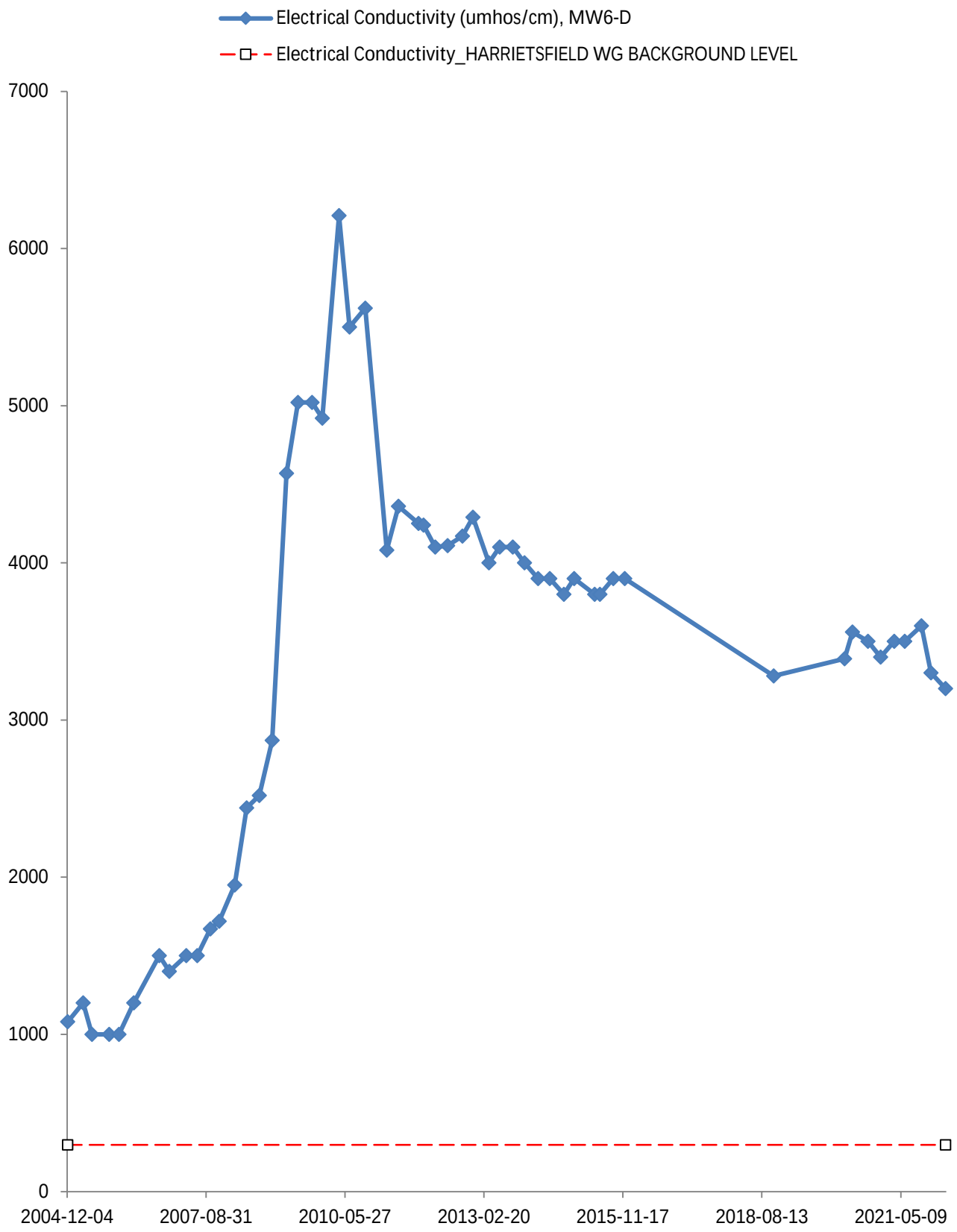
MW6-D-Copper


Copper (ug/l), MW6-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
7
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

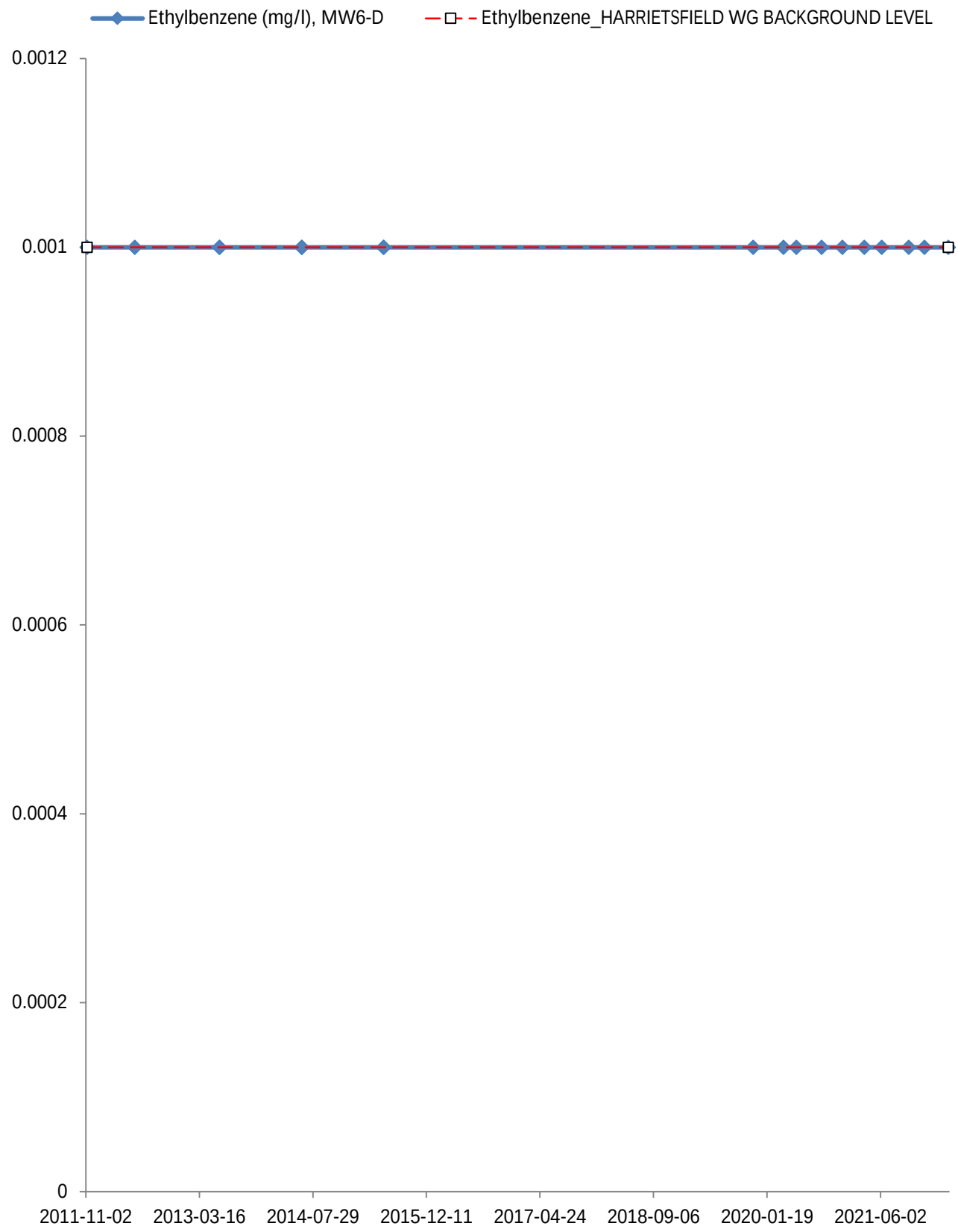
MW6-D-Dissolved Organic Carbon7



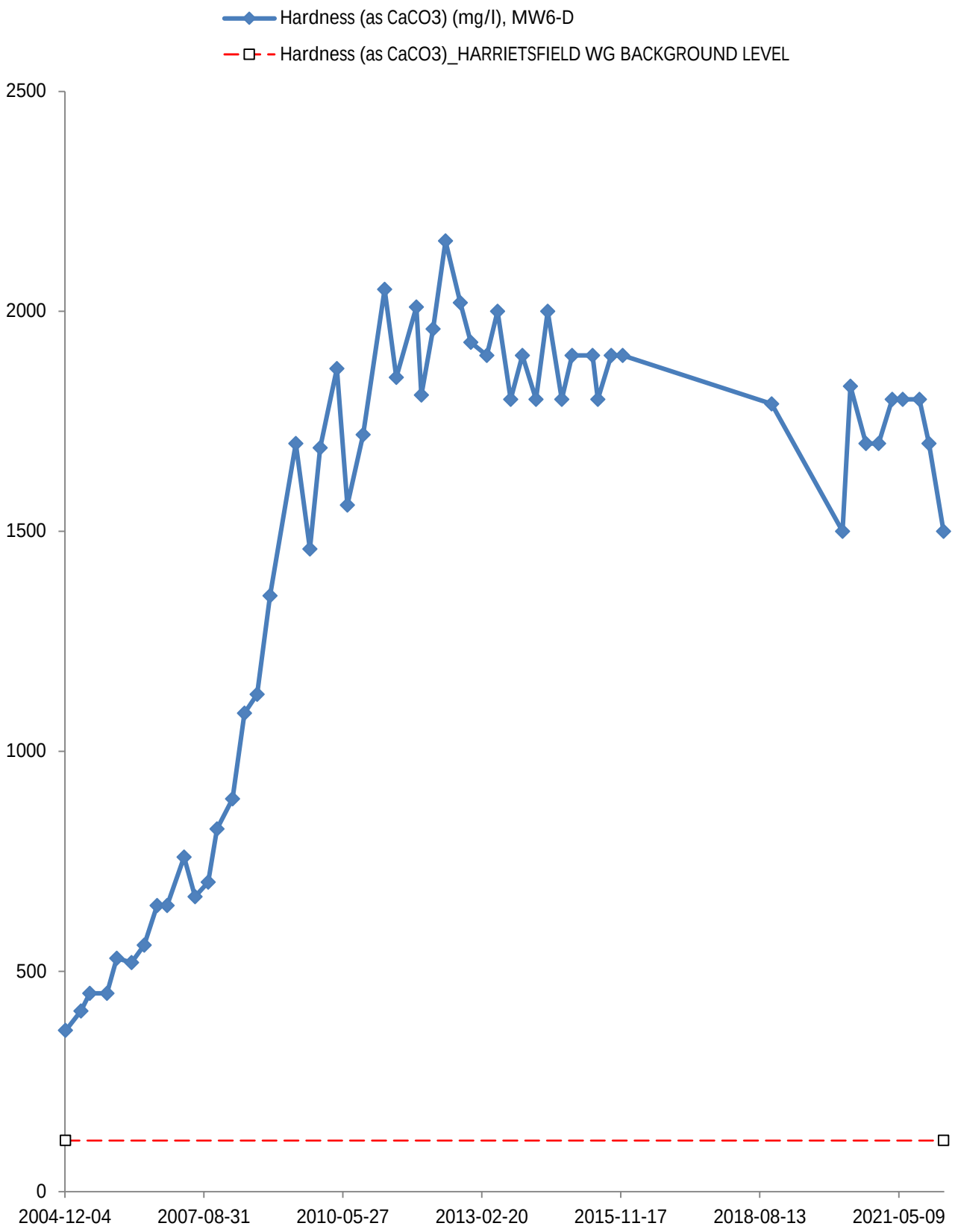
MW6-D-Electrical Conductivity



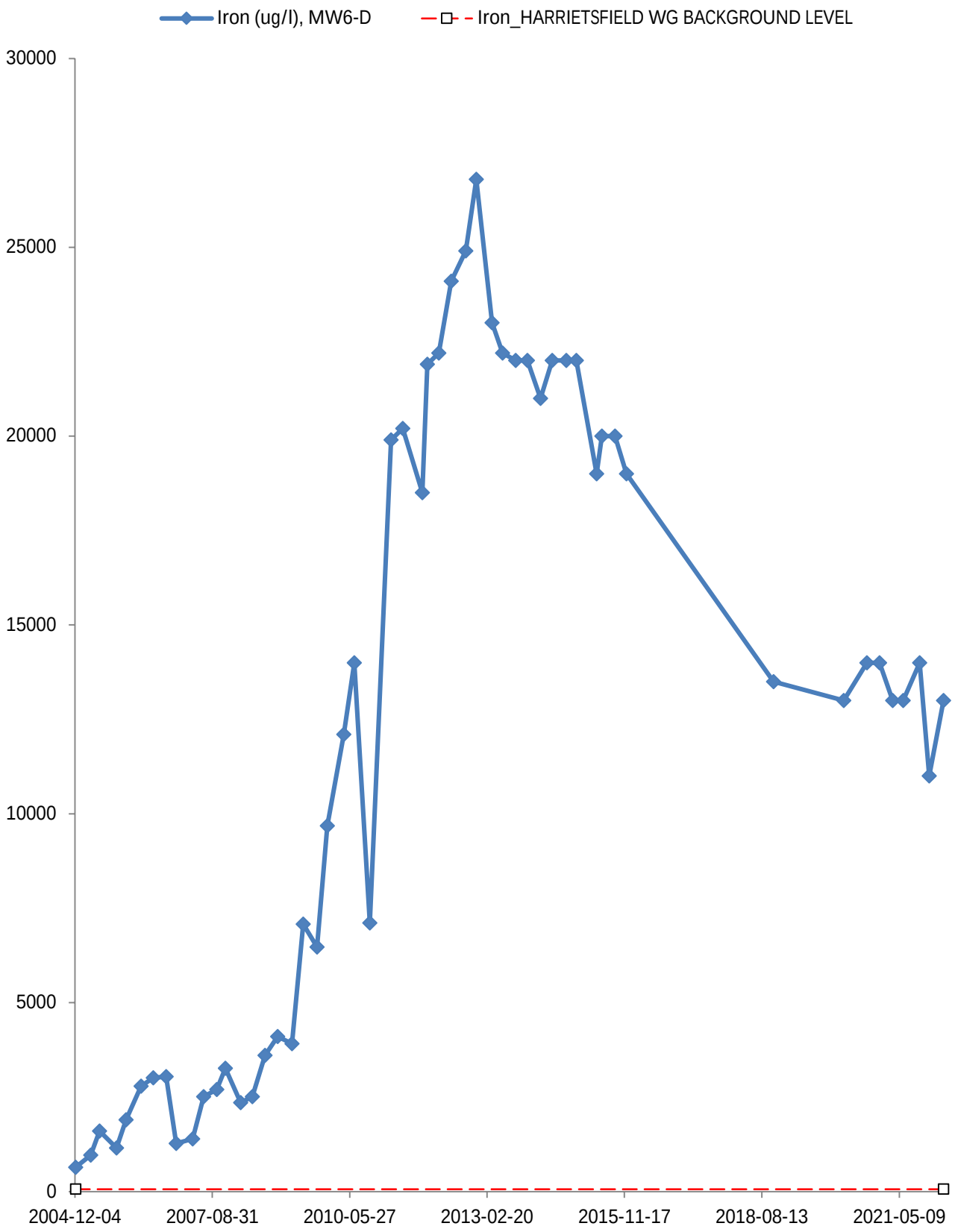
MW6-D-Ethylbenzene



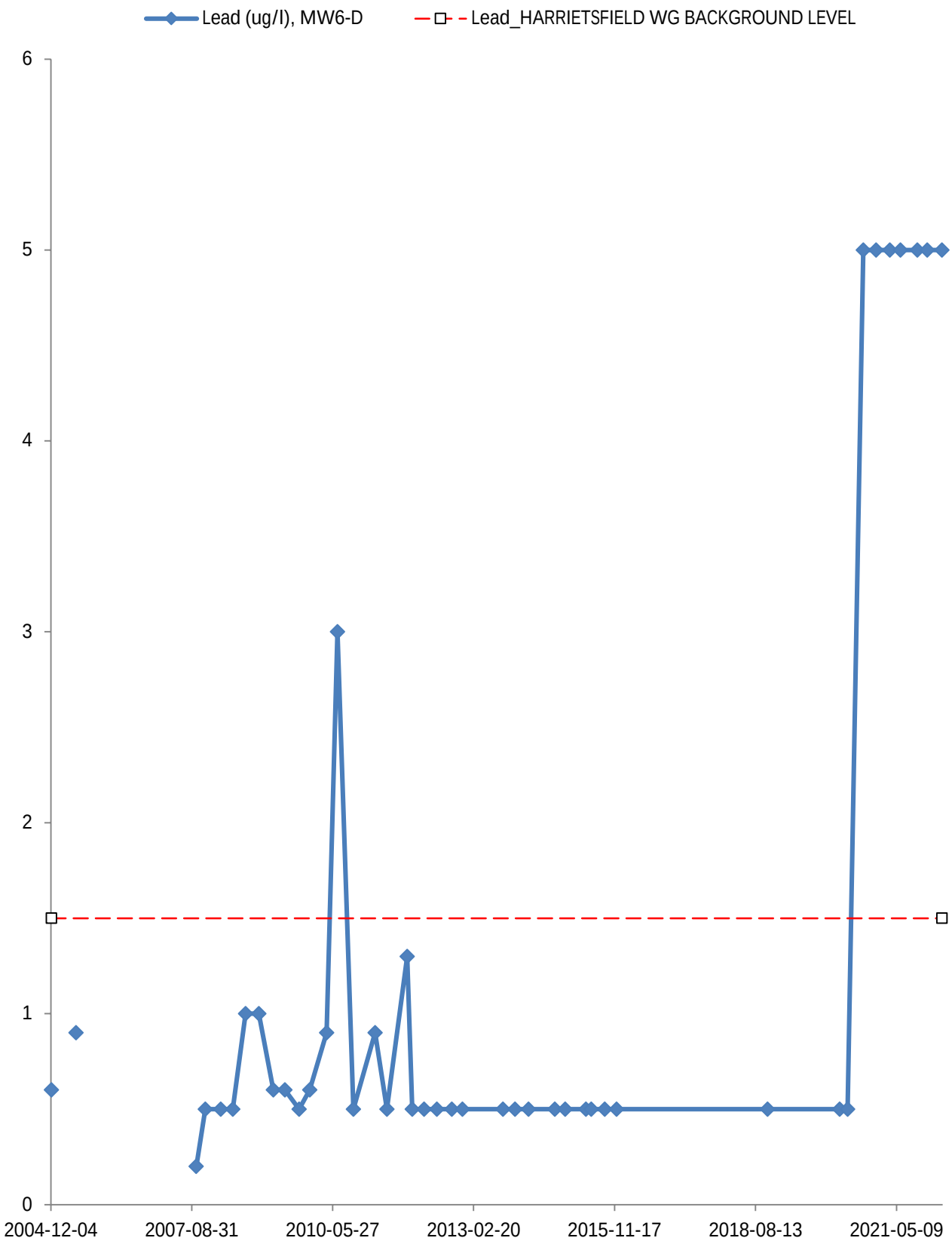
MW6-D-Hardness (as CaCO3)



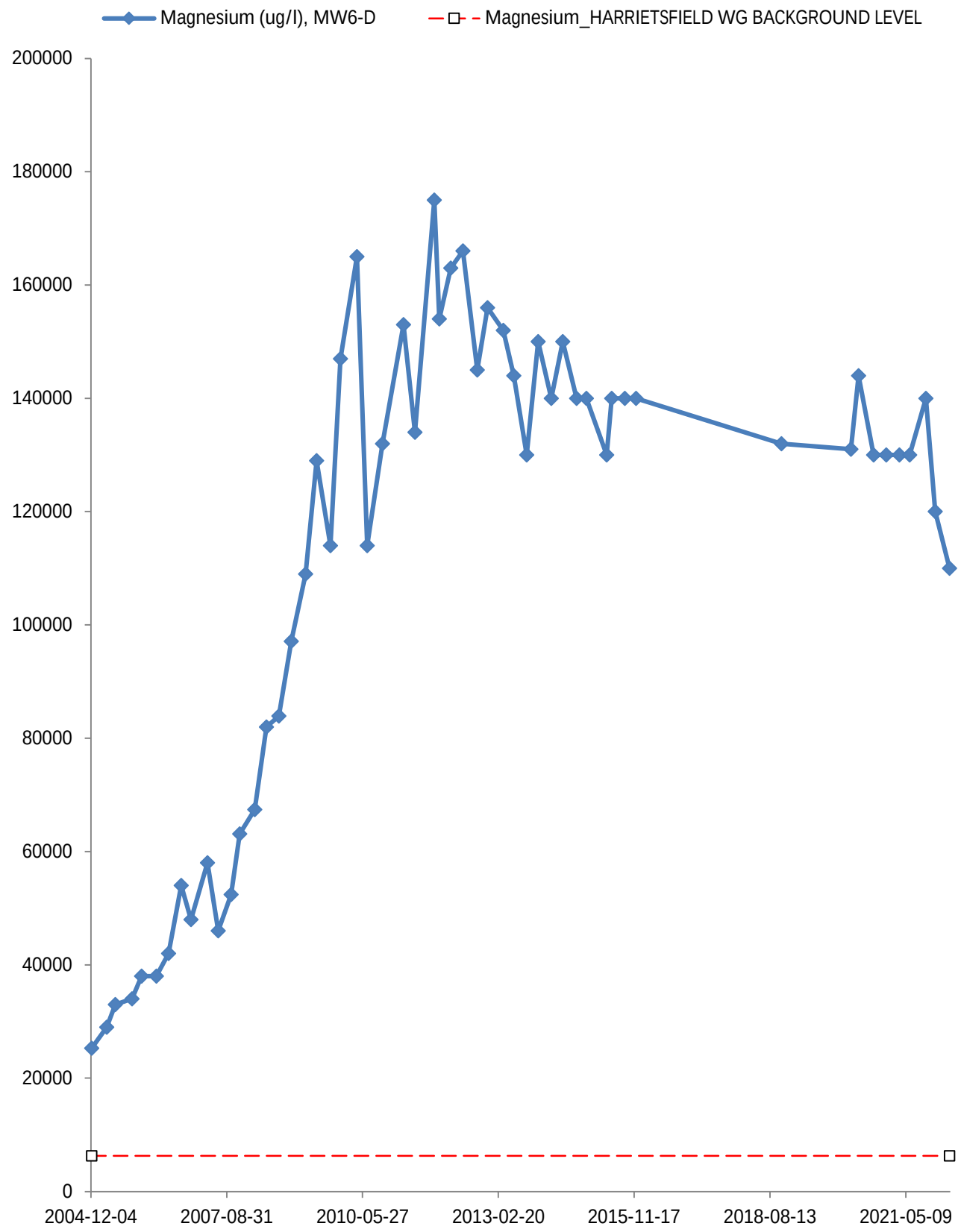
MW6-D-Iron


Iron (ug/l), MW6-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
30000
25000
20000
15000
10000
5000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

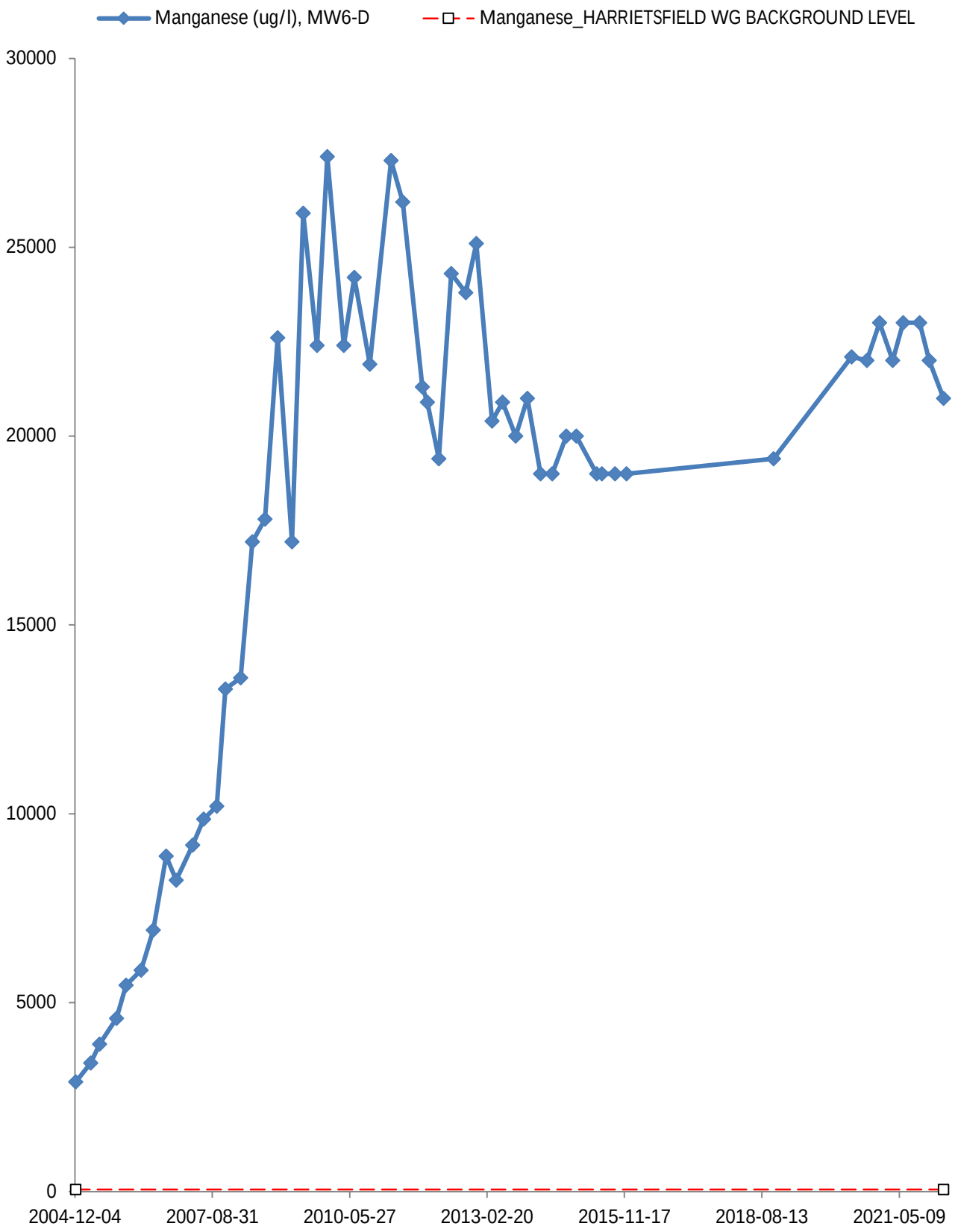
MW6-D-Lead


Lead (ug/l), MW6-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

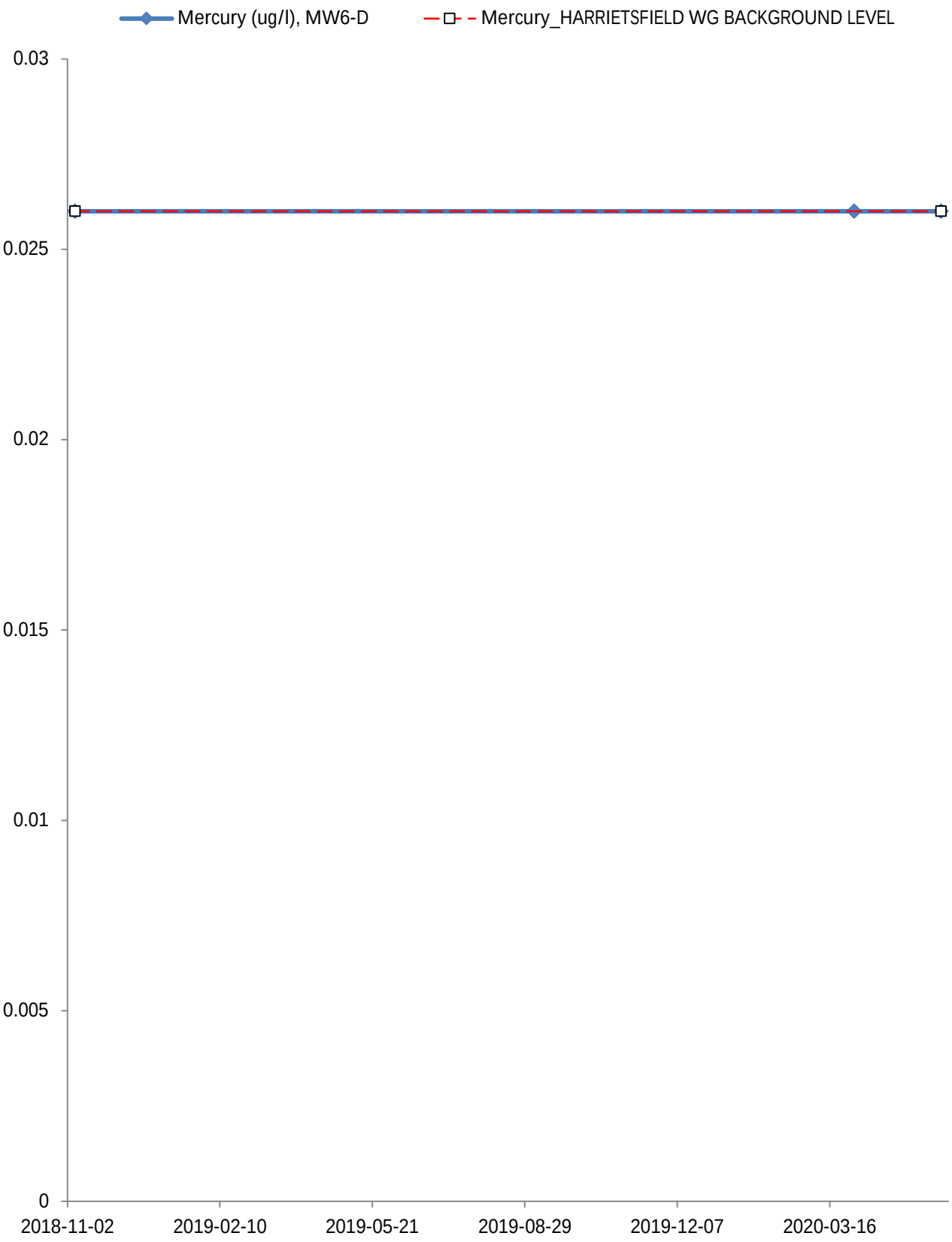
MW6-D-Magnesium



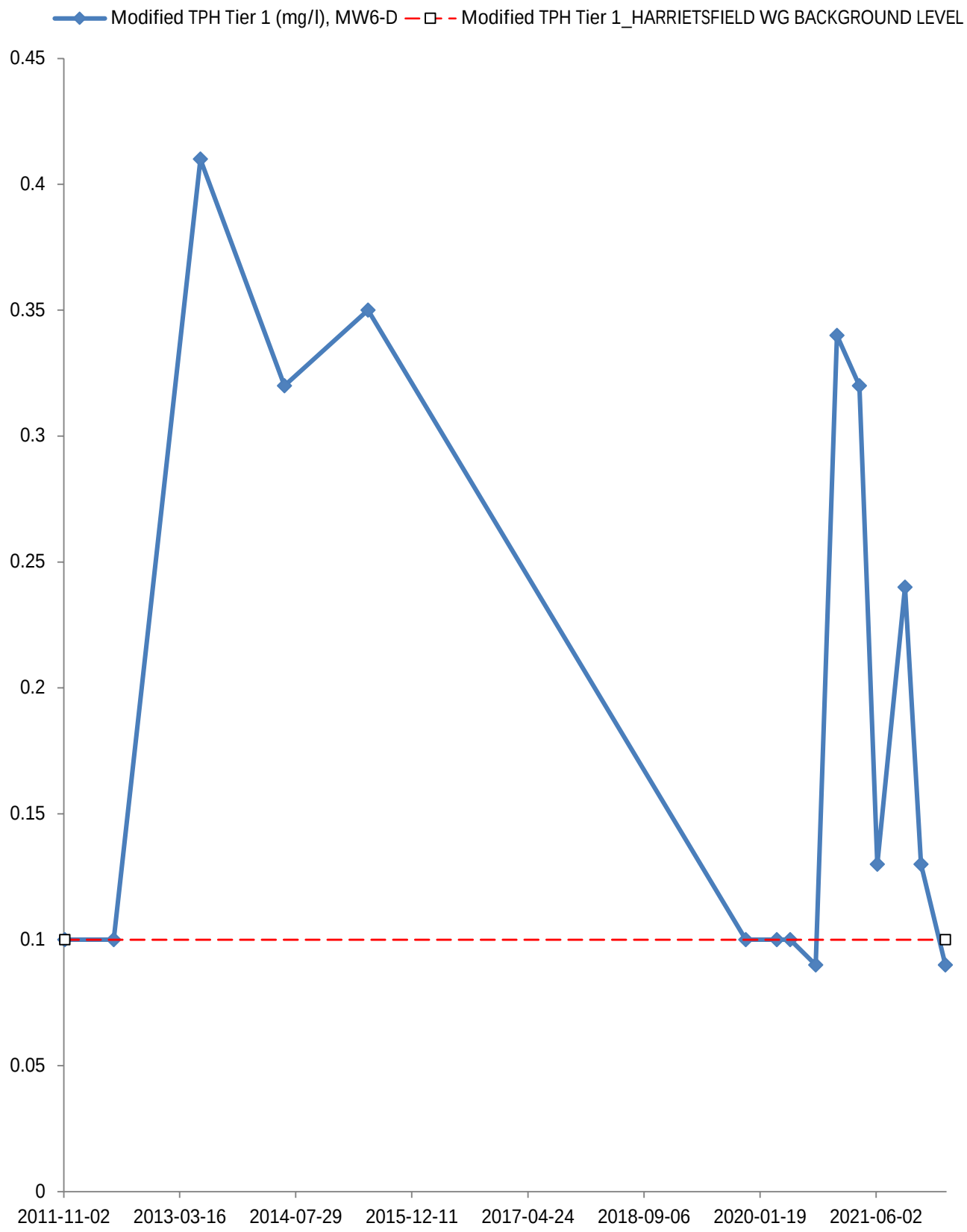
MW6-D-Manganese



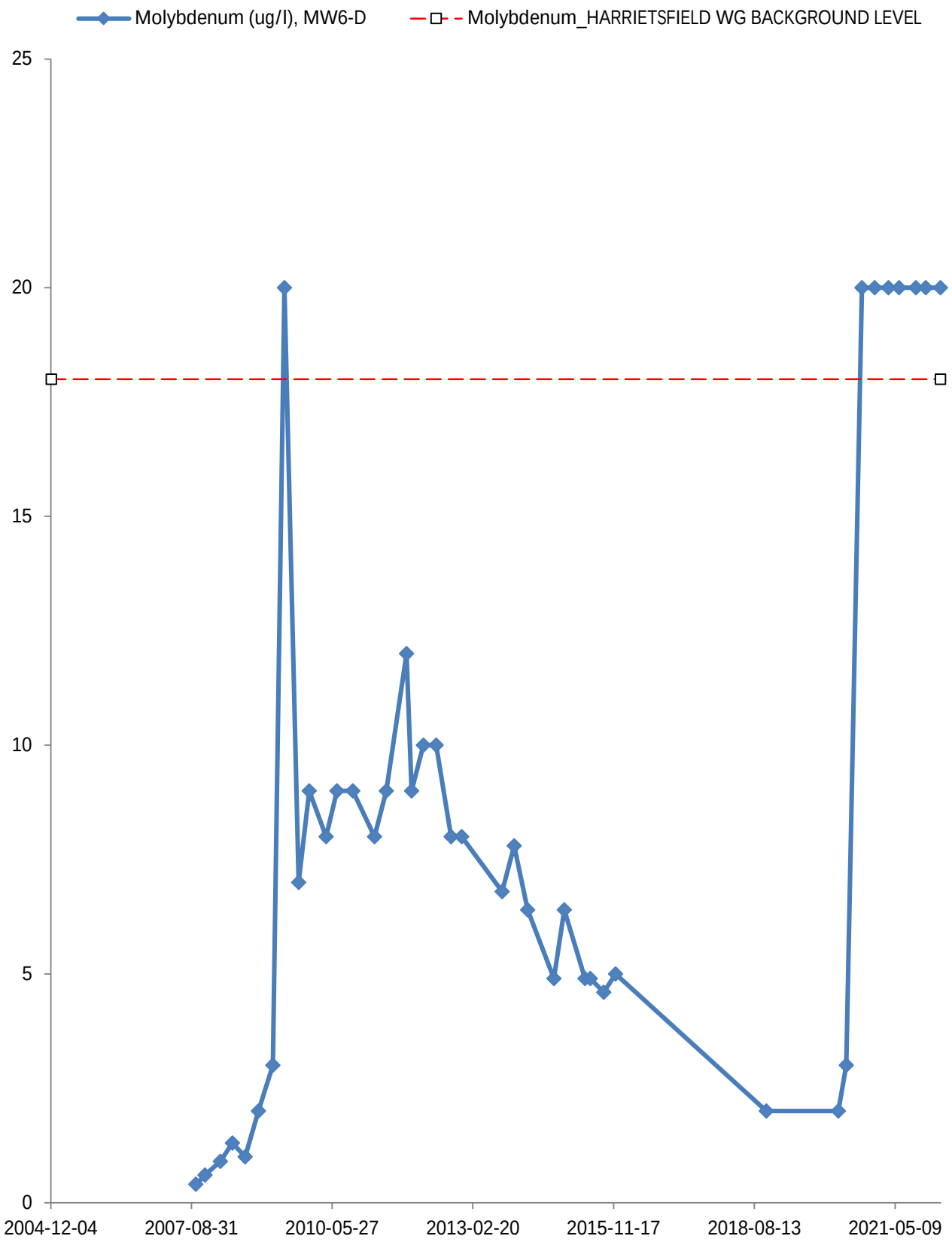
MW6-D-Mercury

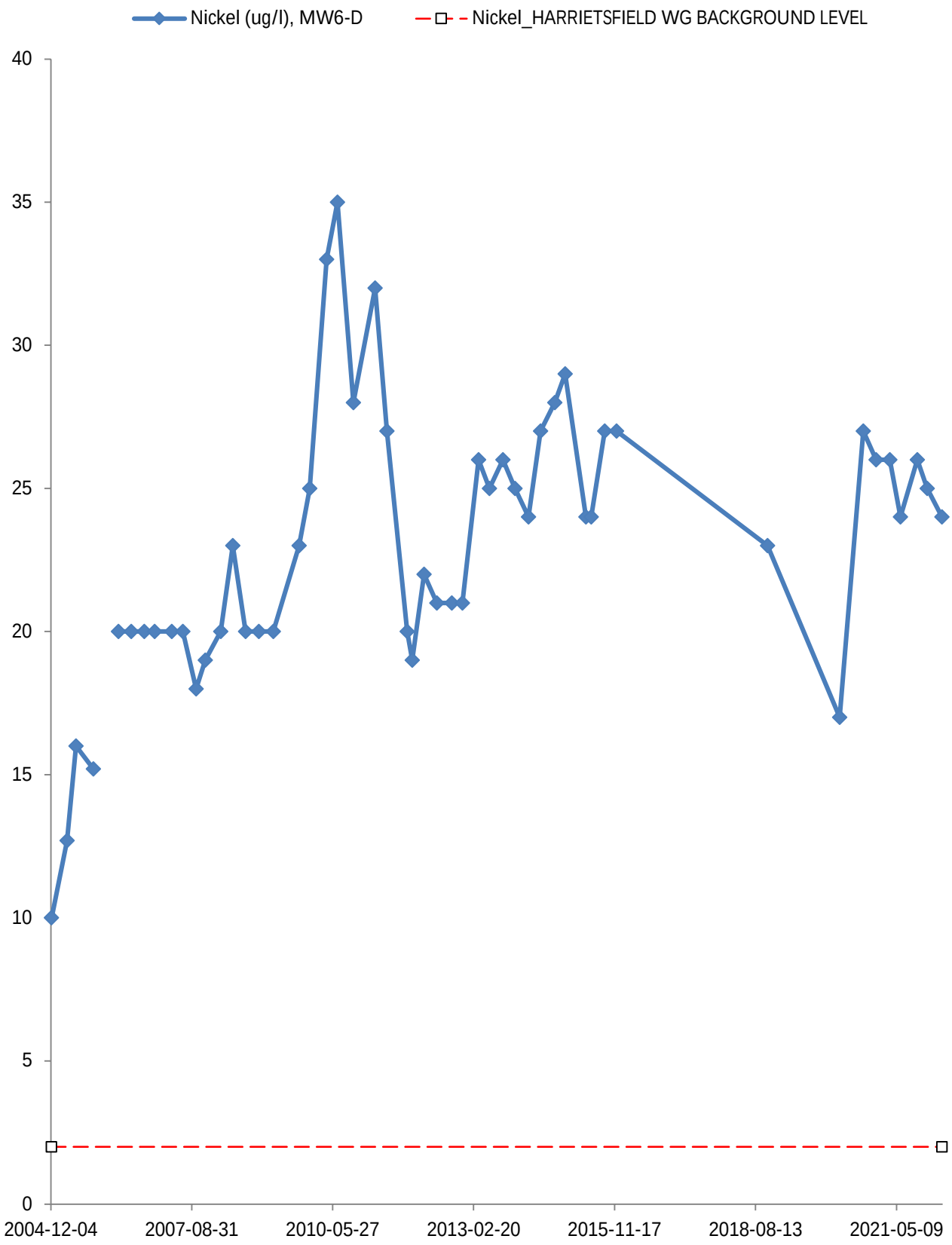


MW6-D-Modified TPH Tier 1

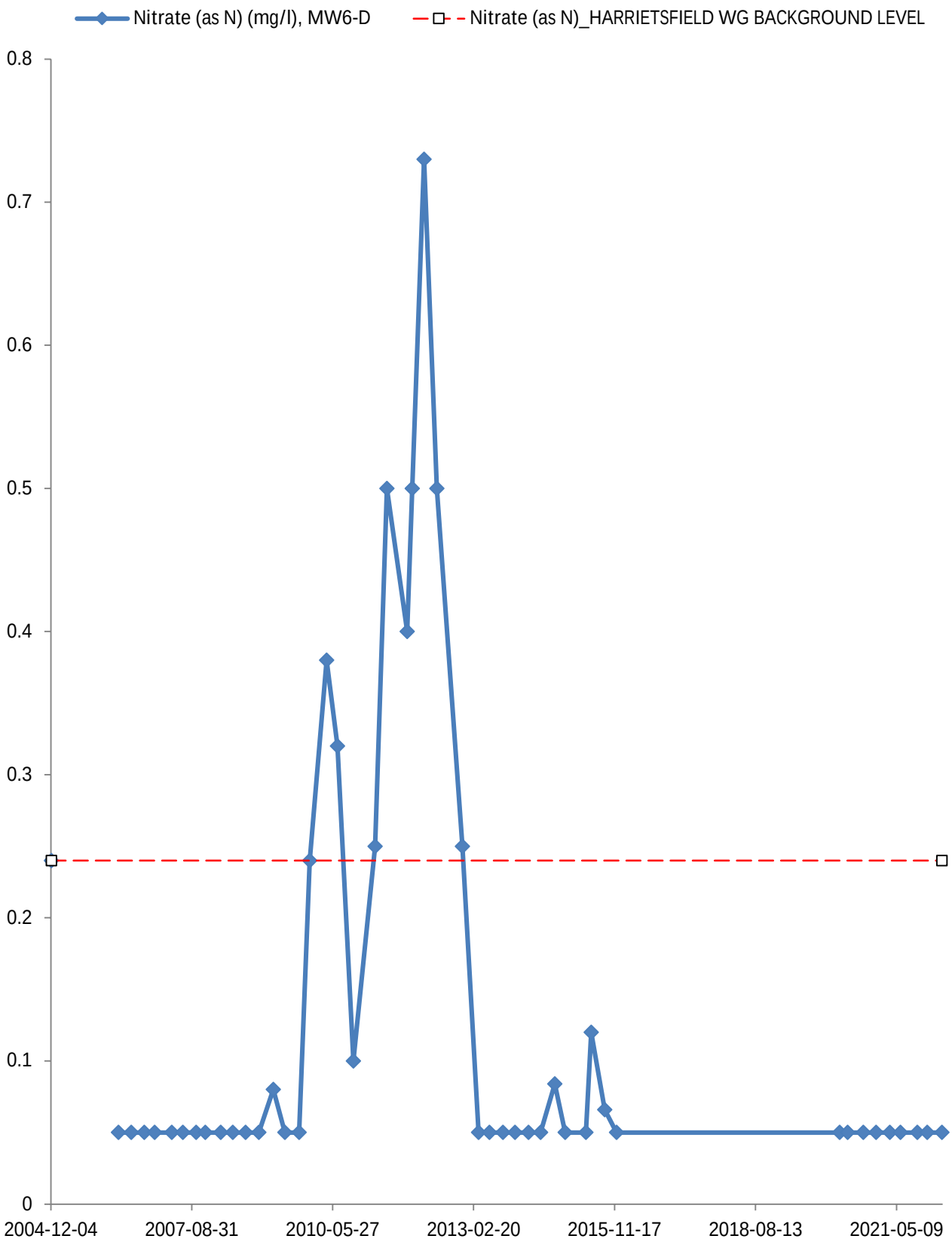


MW6-D-Molybdenum

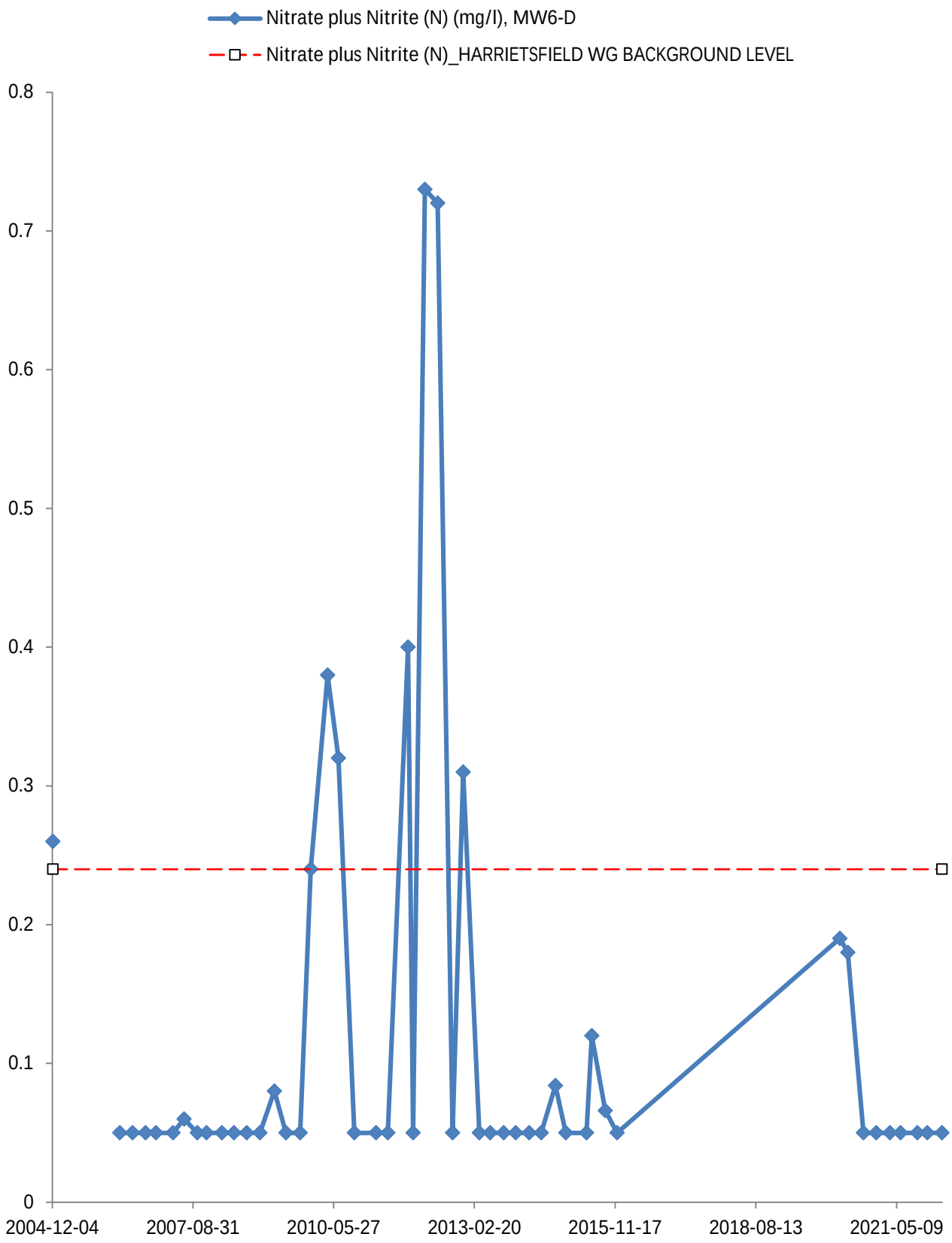



Nickel (ug/l), MW6-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
40
35
30
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

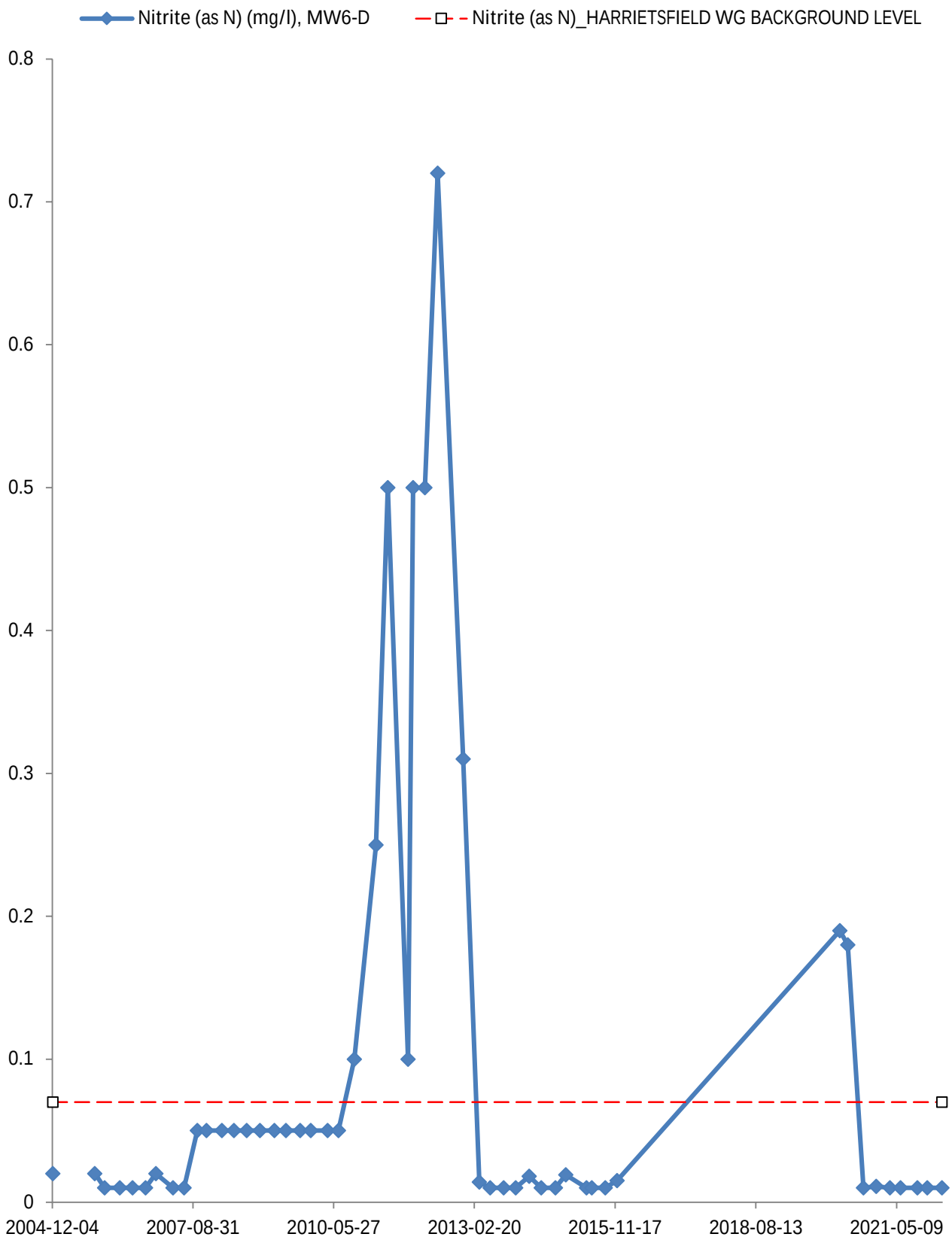
MW6-D-Nitrate (as N)



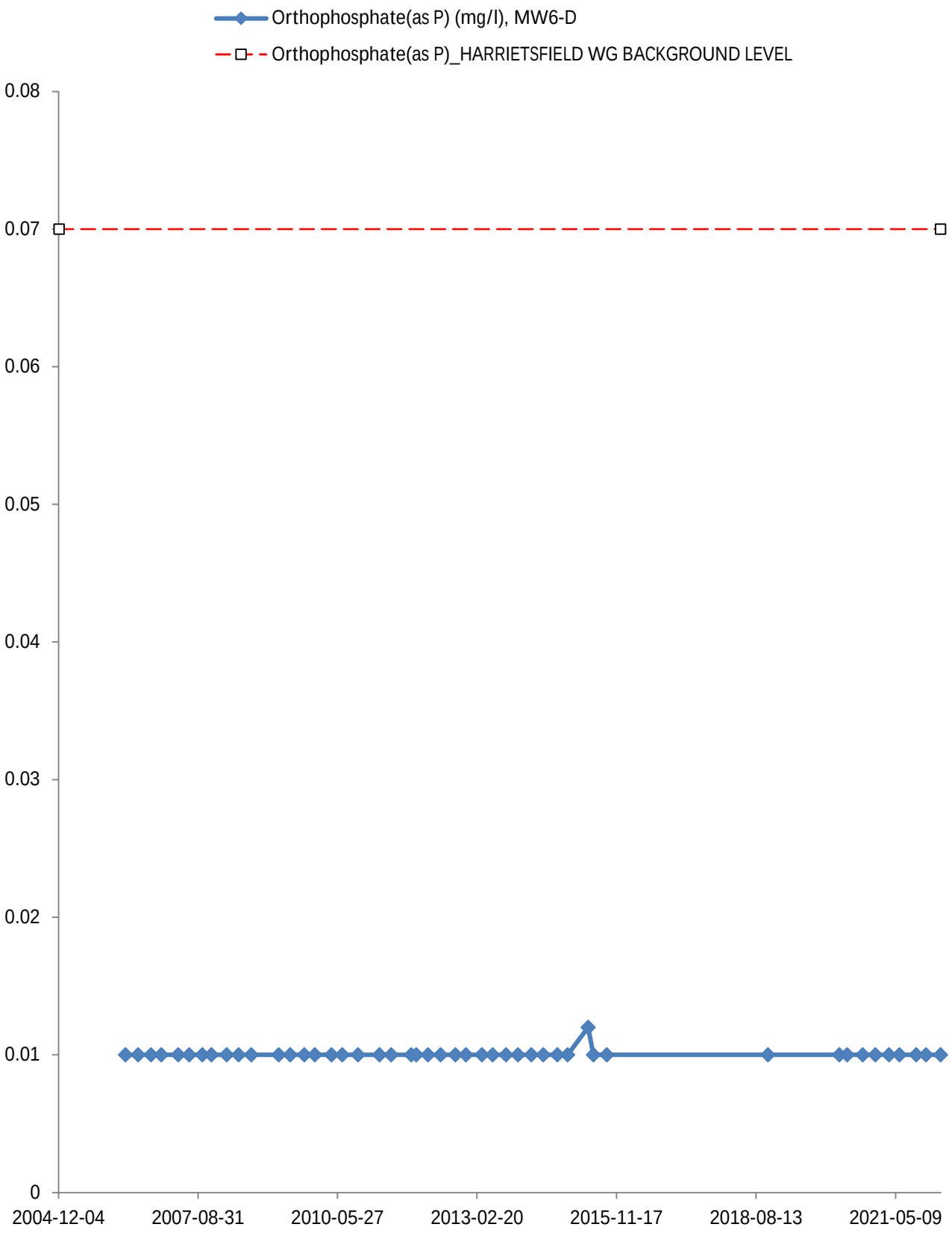
MW6-D-Nitrate plus Nitrite (N)



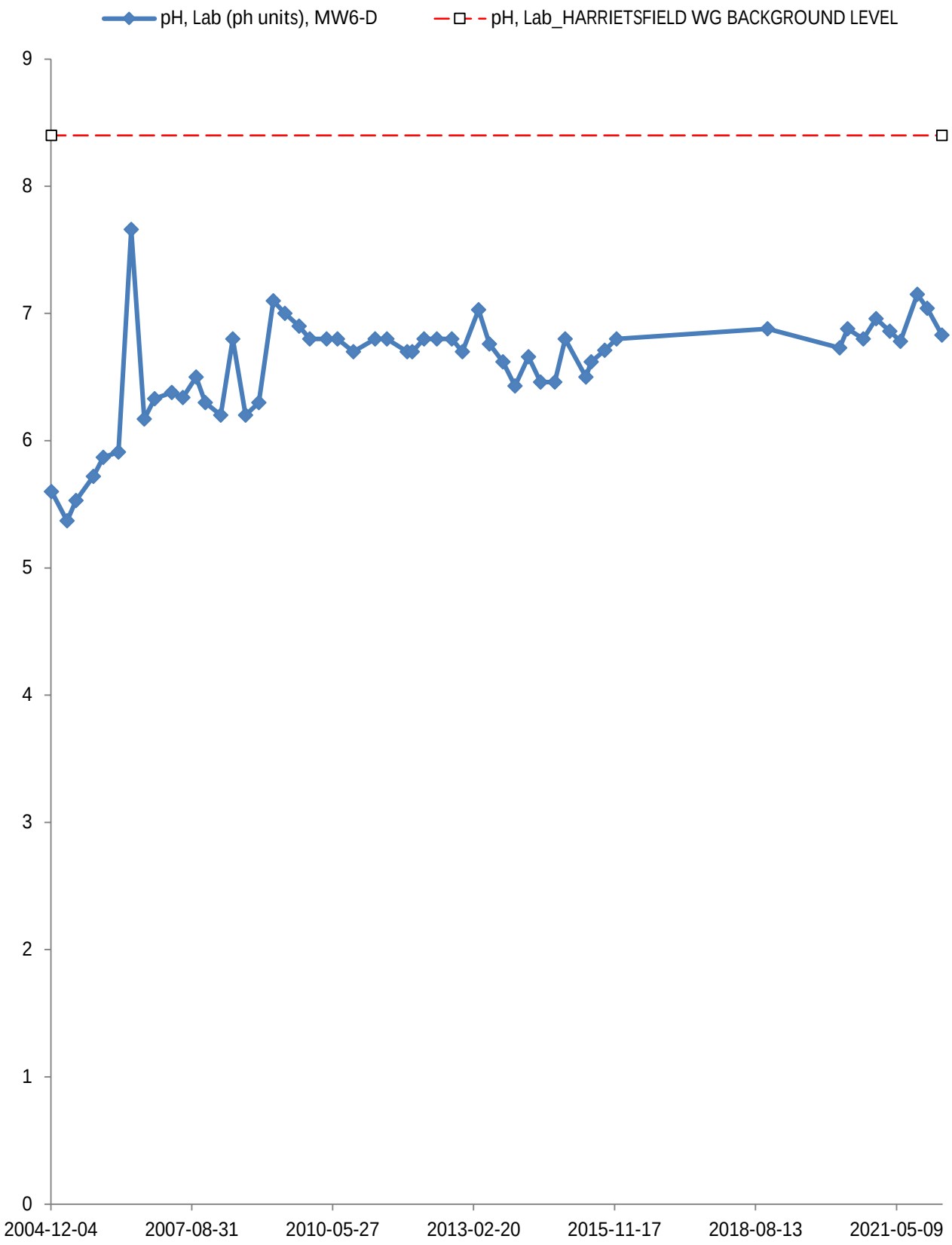
MW6-D-Nitrite (as N)



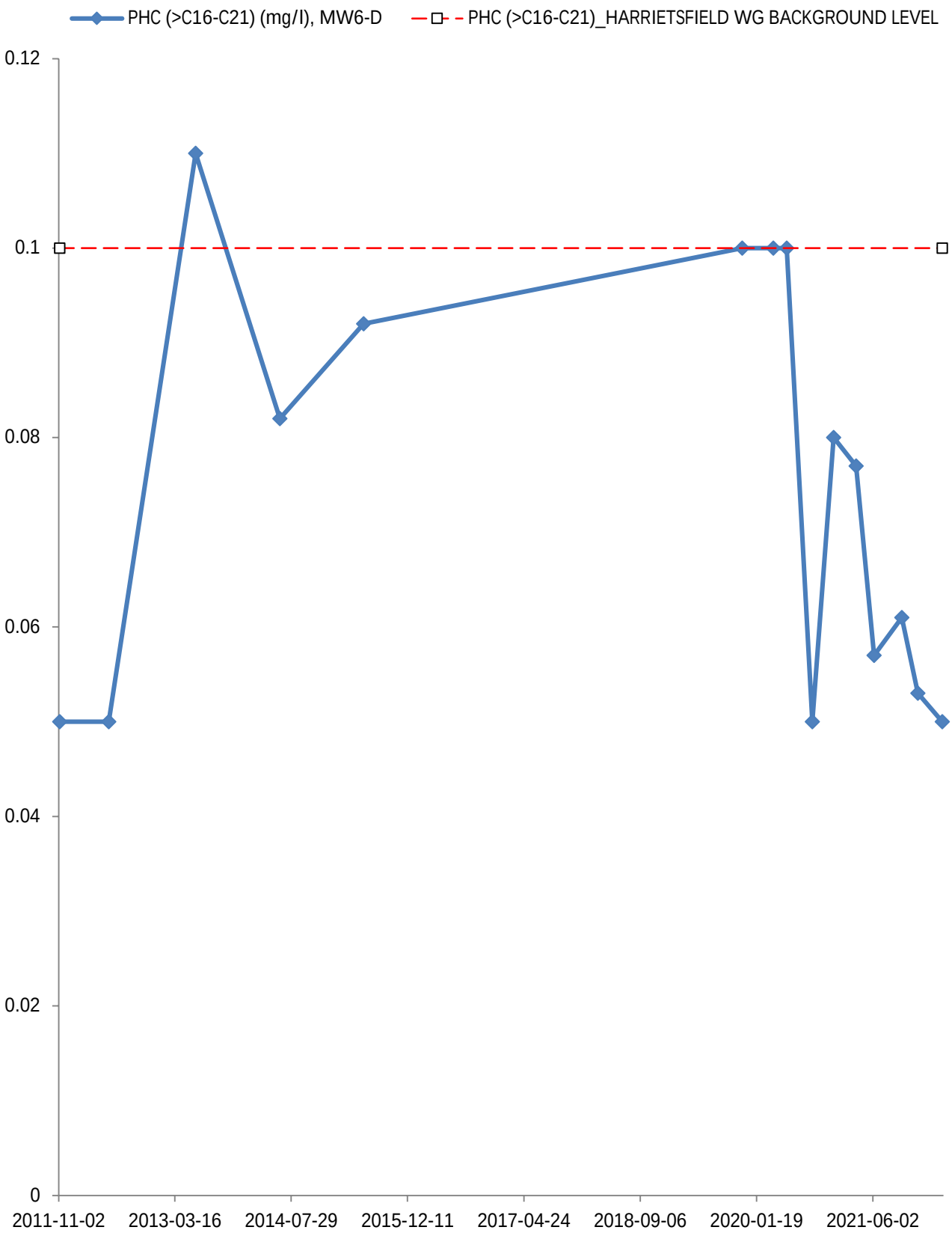
MW6-D-Orthophosphate(as P)



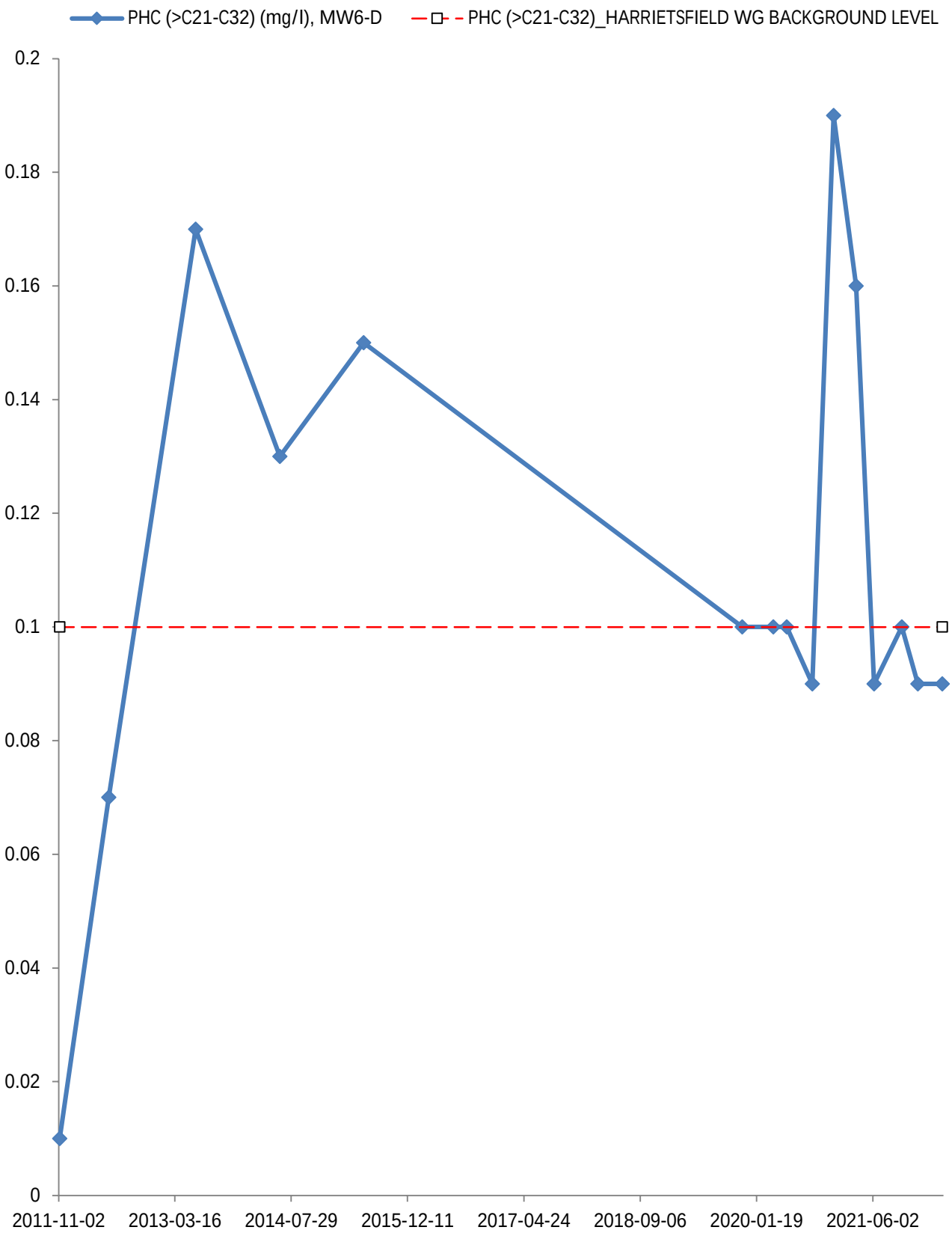
MW6-D-pH, Lab


pH, Lab (ph units), MW6-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

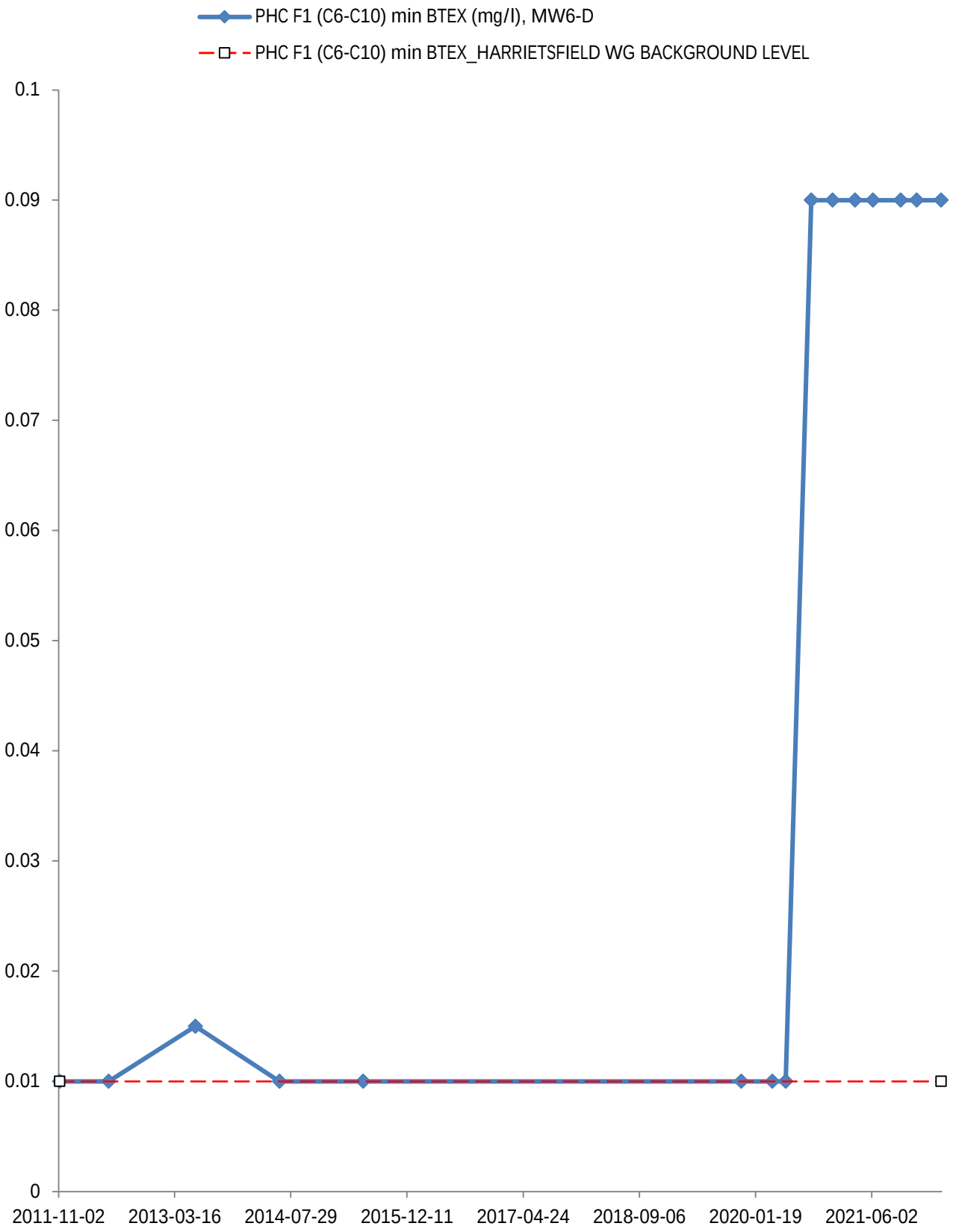
MW6-D-PHC (>C16-C21)



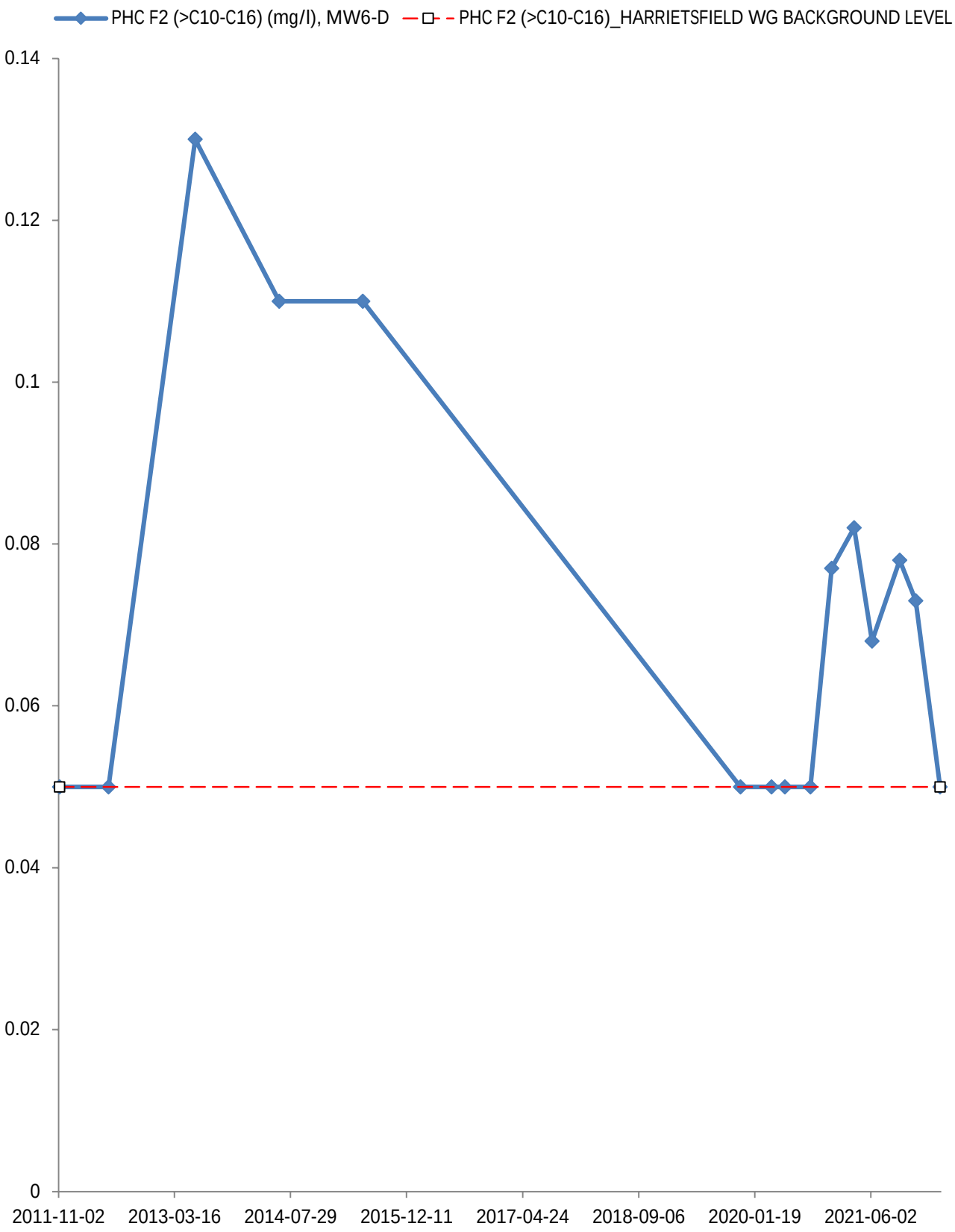
MW6-D-PHC (>C21-C32)



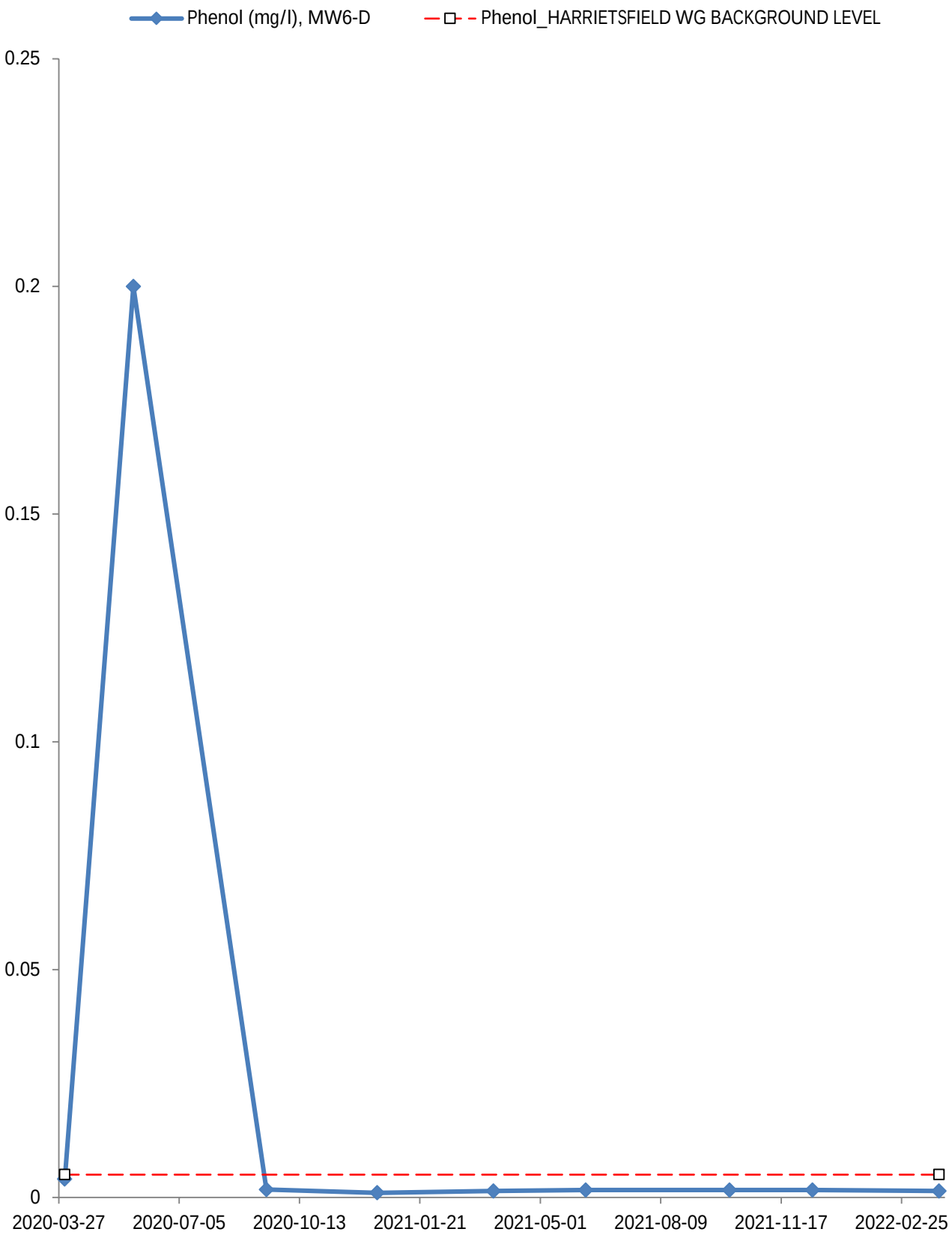
MW6-D-PHC F1 (C6-C10) min BTEX



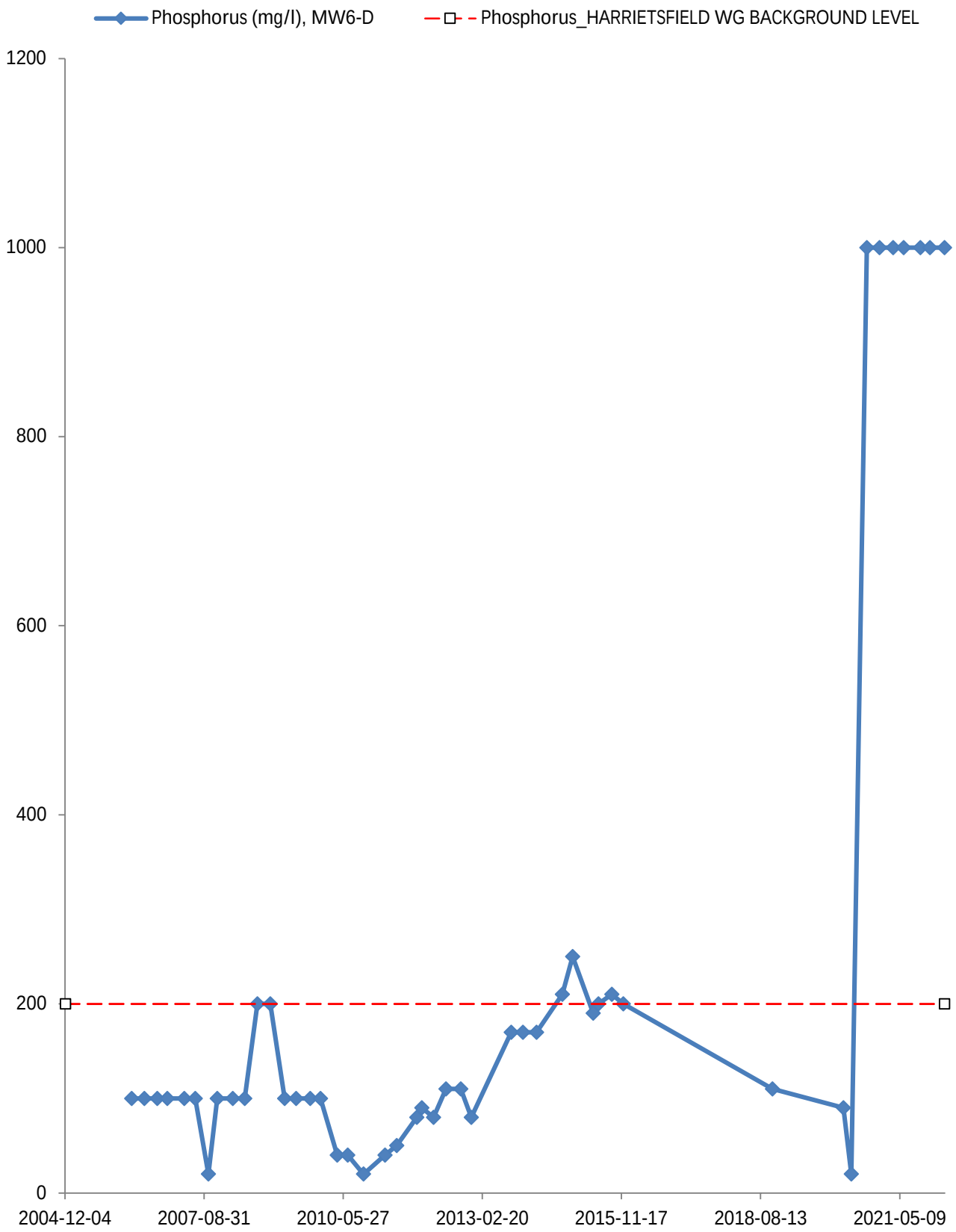
MW6-D-PHC F2 (>C10-C16)



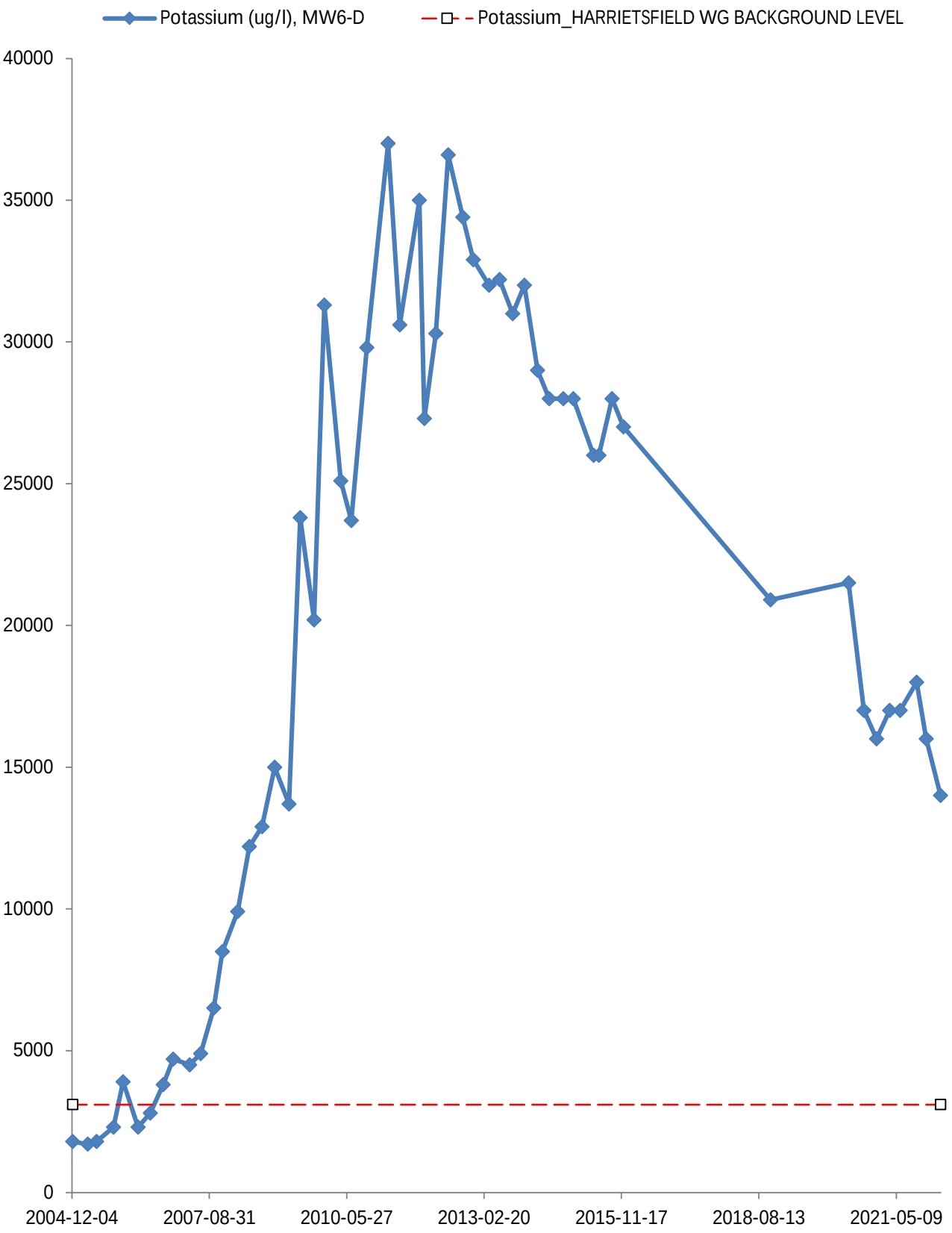
MW6-D-Phenol


Phenol (mg/l), MW6-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.25
0.2
0.15
0.1
0.05
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

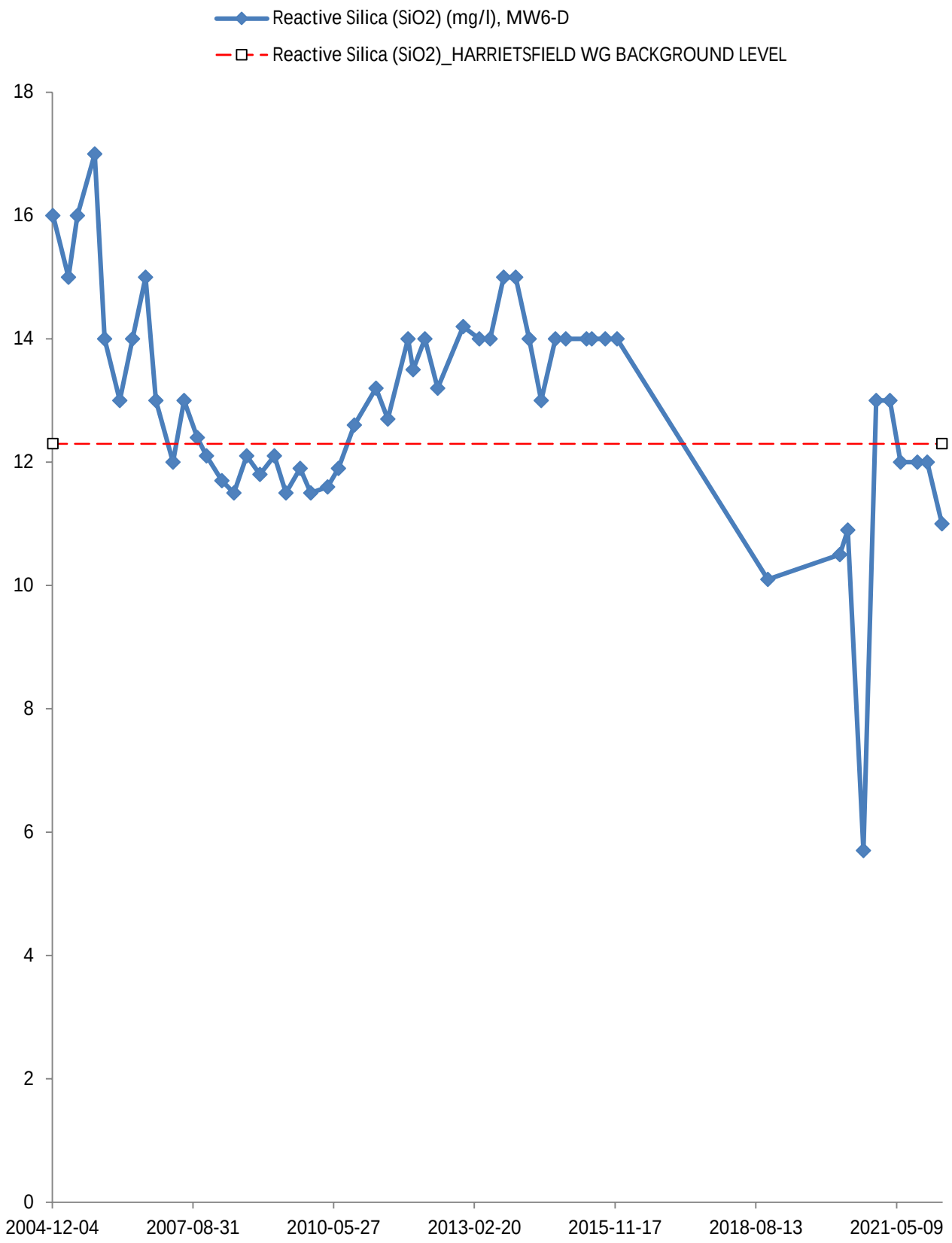
MW6-D-Phosphorus



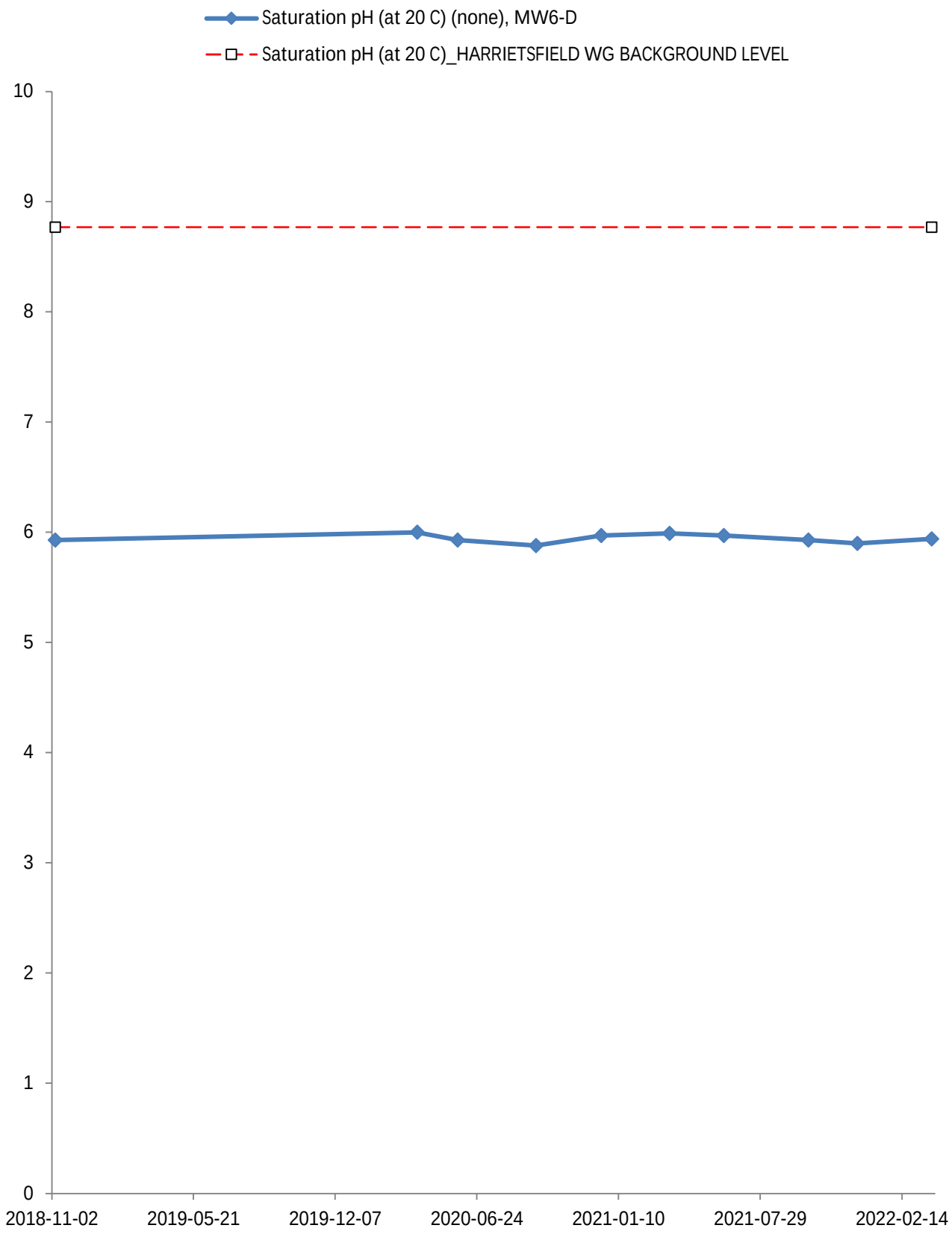
MW6-D-Potassium



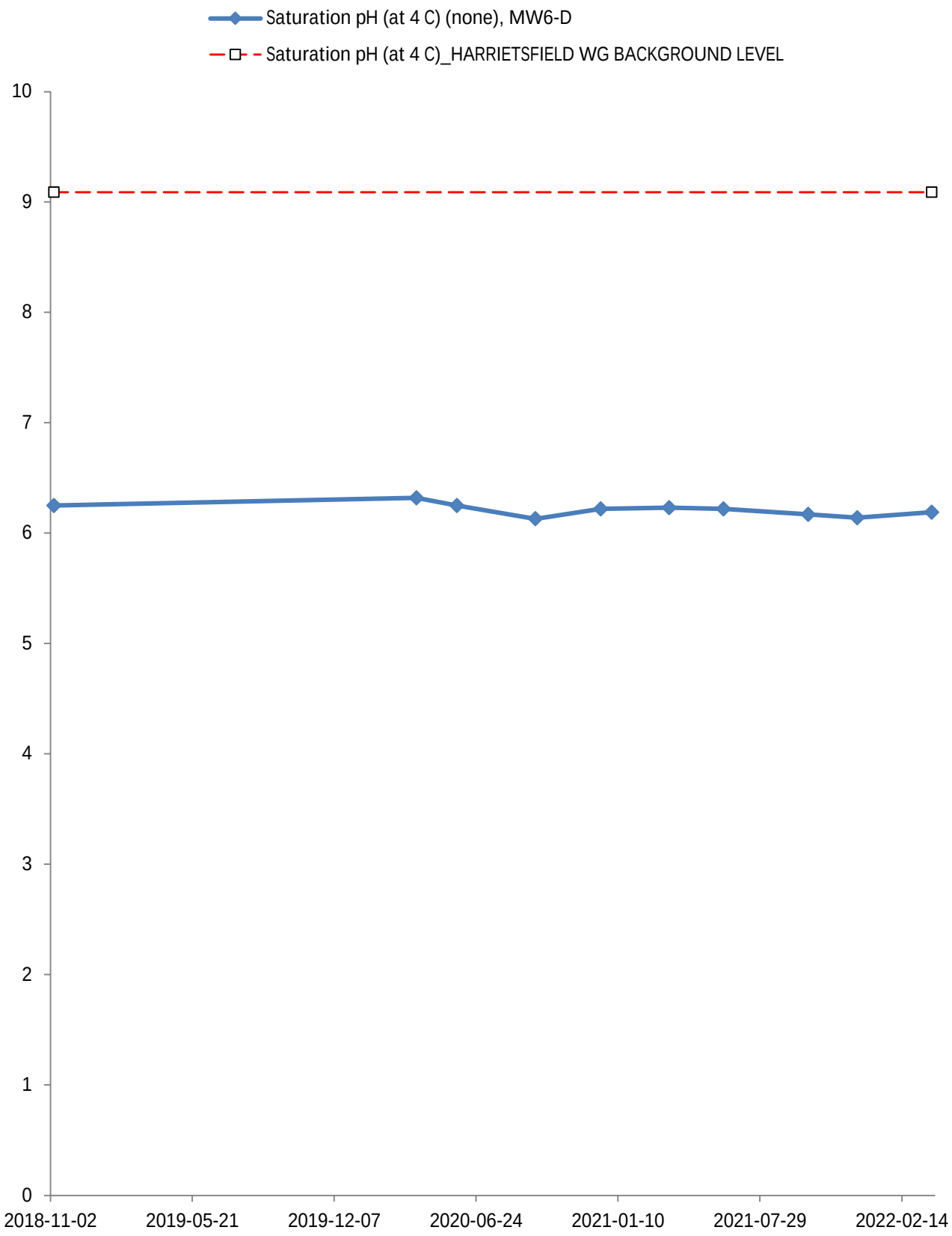
MW6-D-Reactive Silica (SiO2)



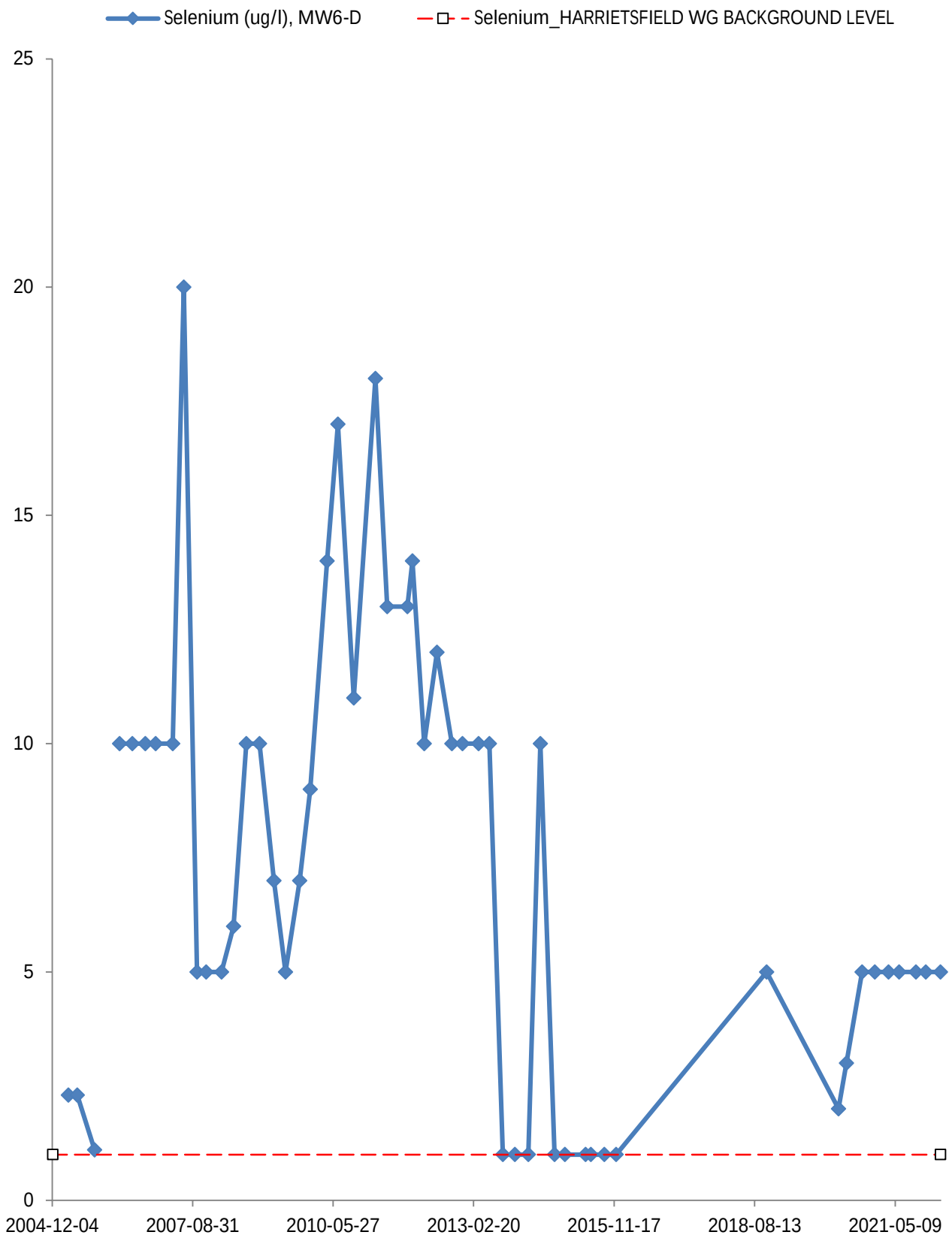
MW6-D-Saturation pH (at 20 C)

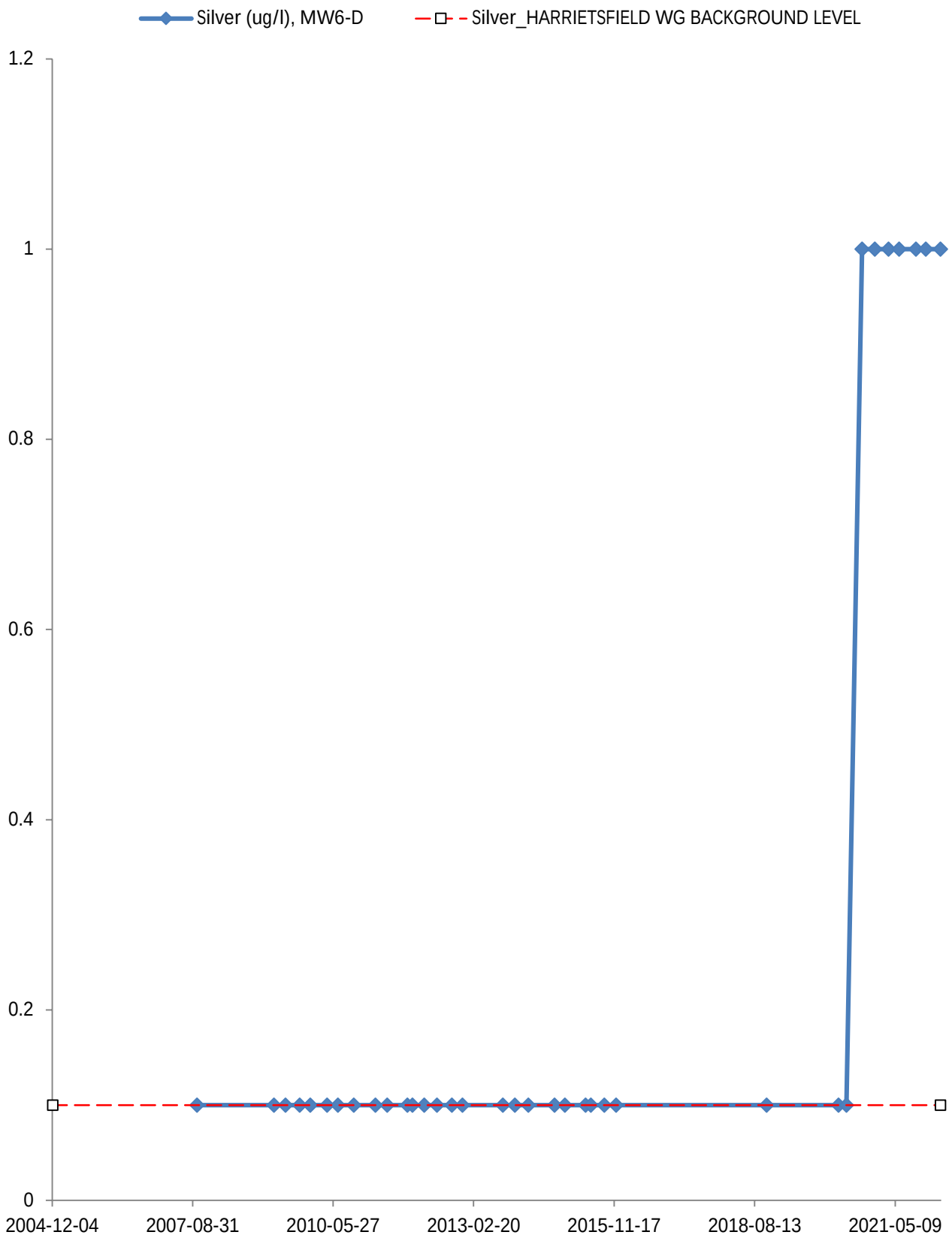


MW6-D-Saturation pH (at 4 C)

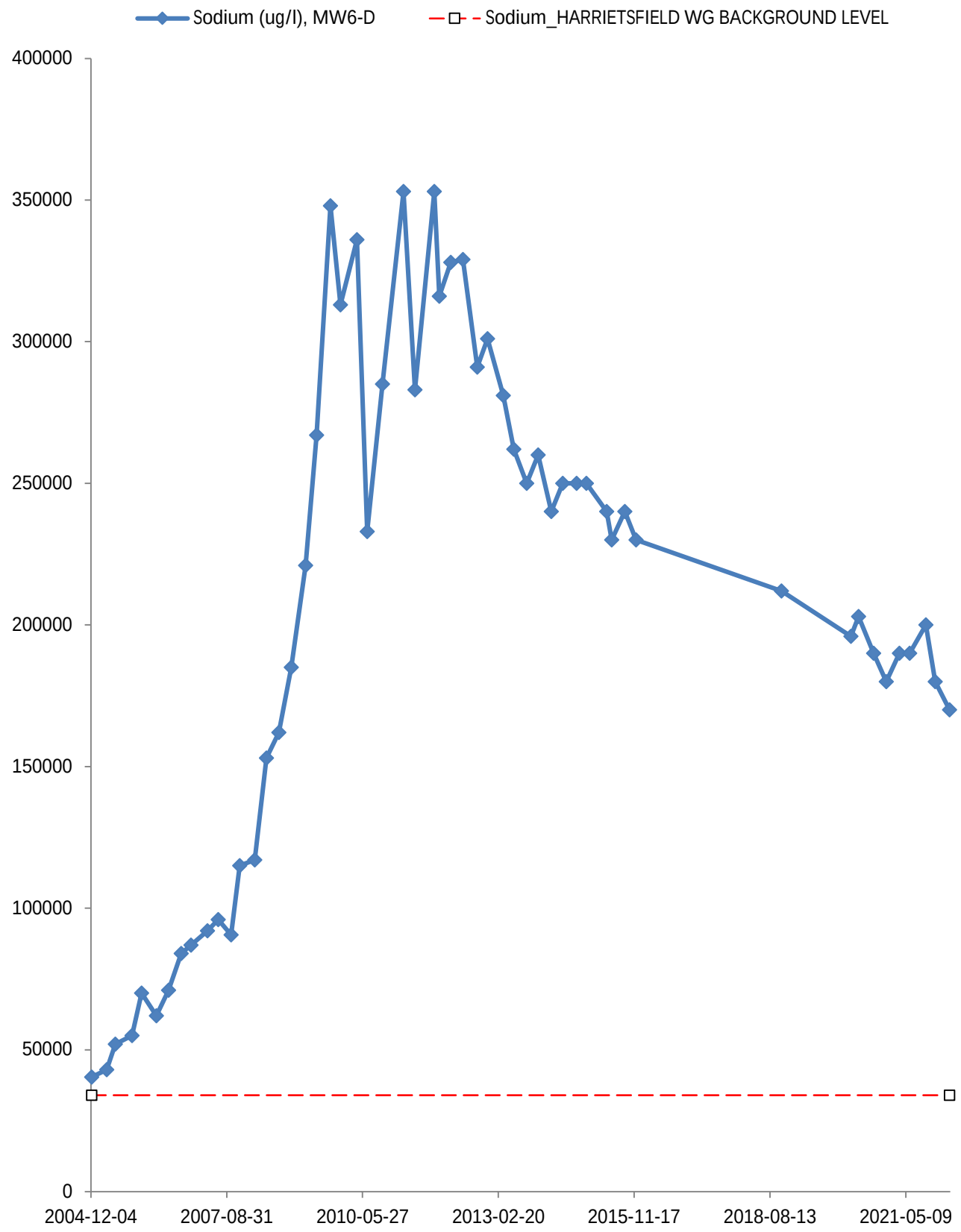


MW6-D-Selenium

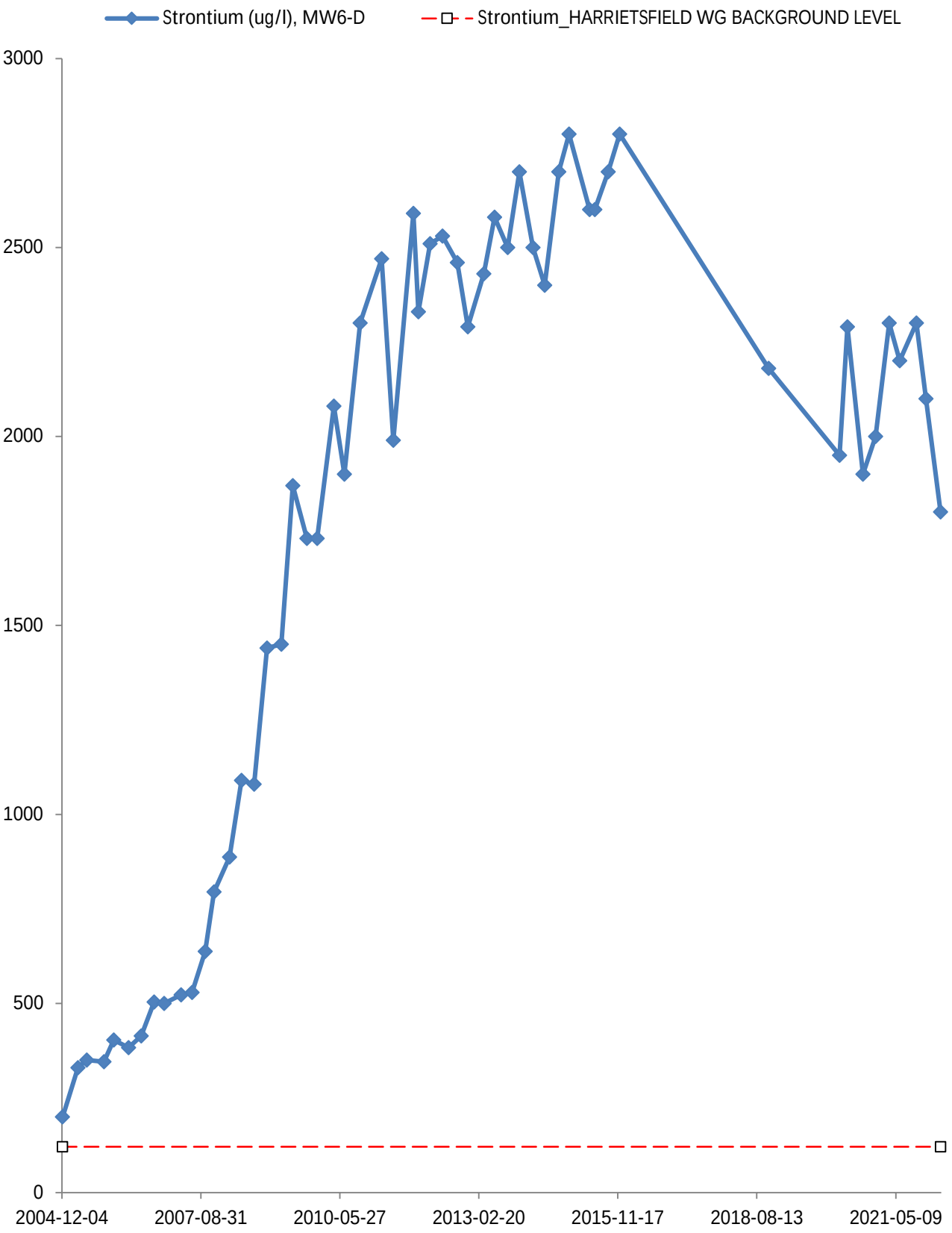



Silver (ug/l), MW6-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

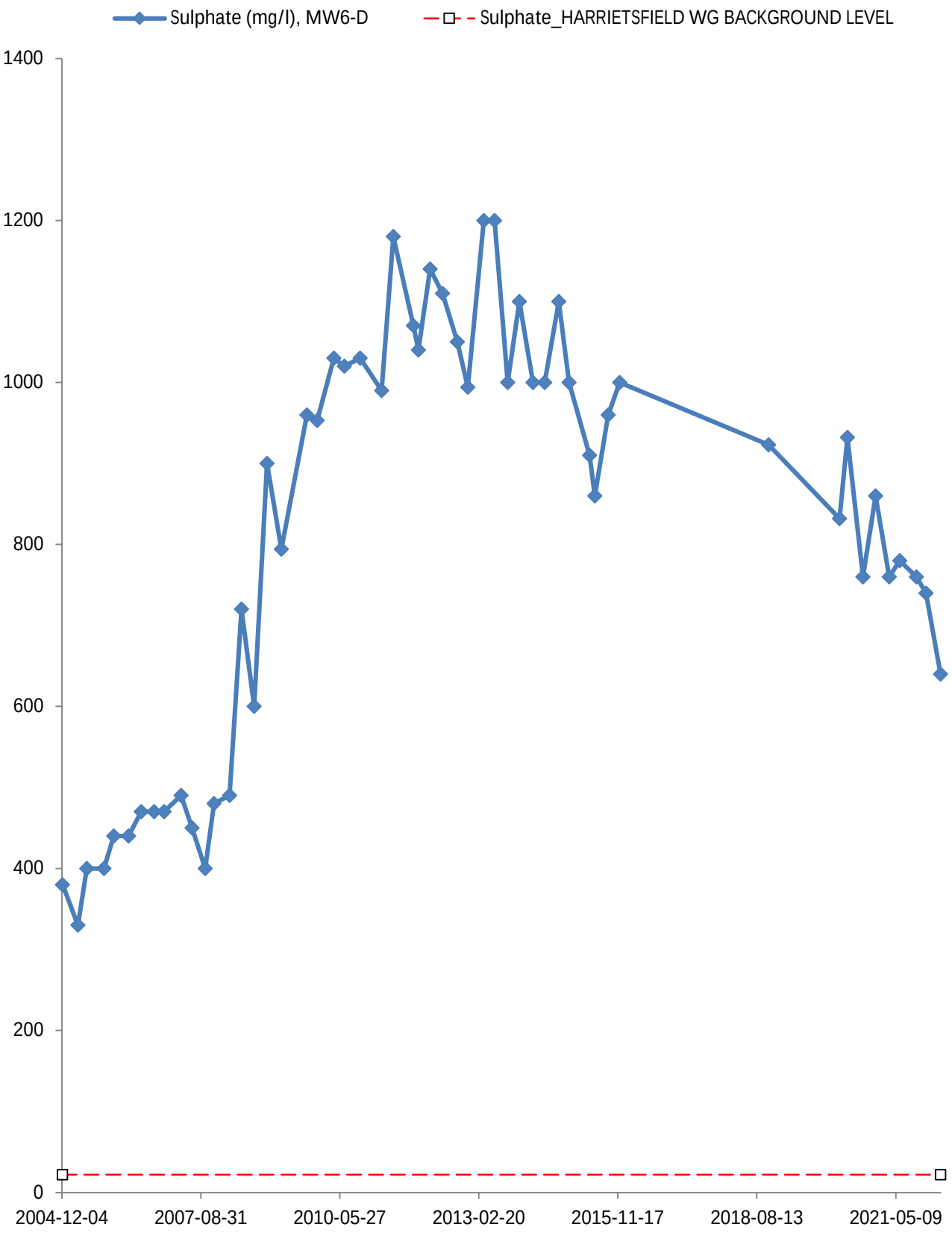
MW6-D-Sodium


Sodium (ug/l), MW6-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
400000
350000
300000
250000
200000
150000
100000
50000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

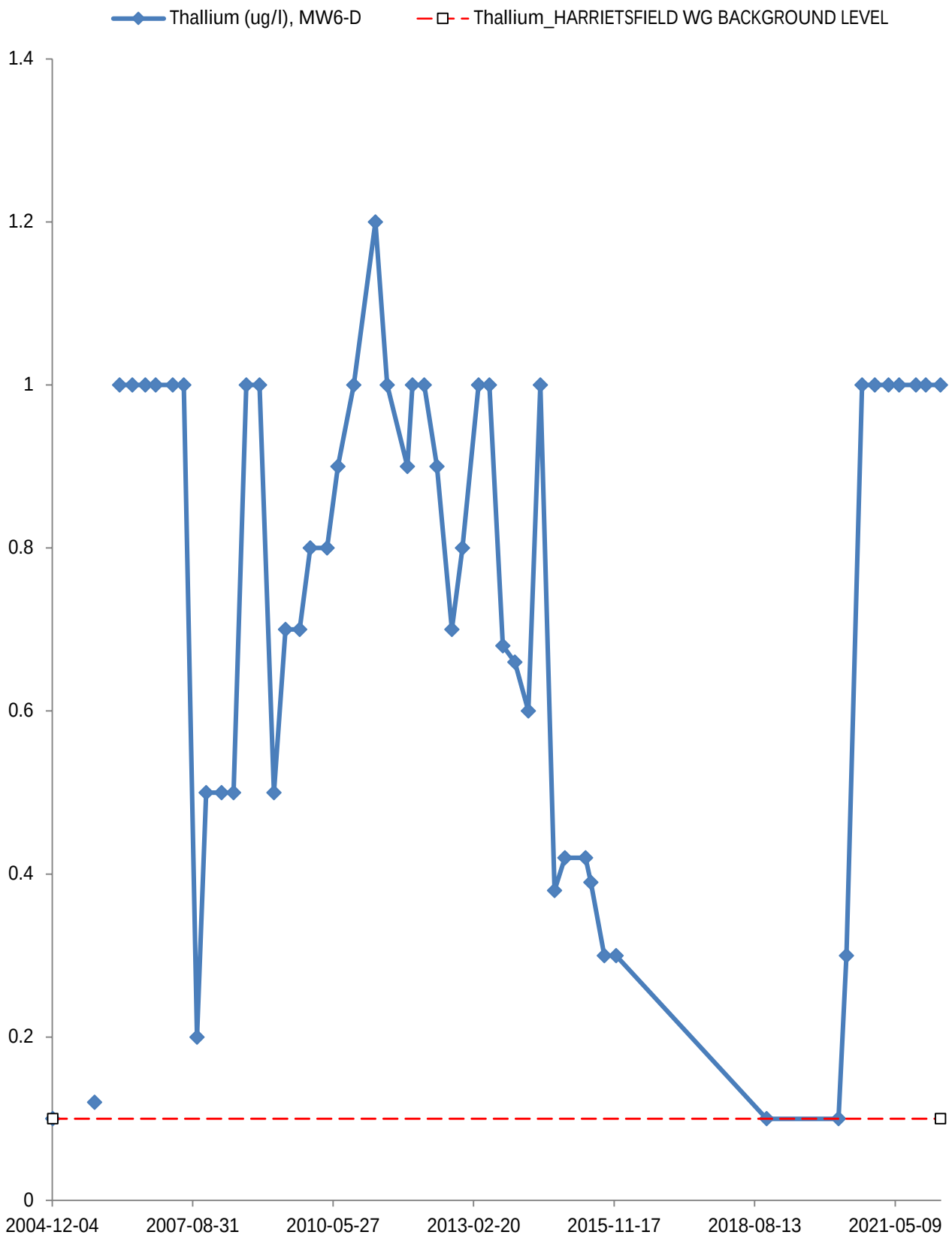
MW6-D-Strontium

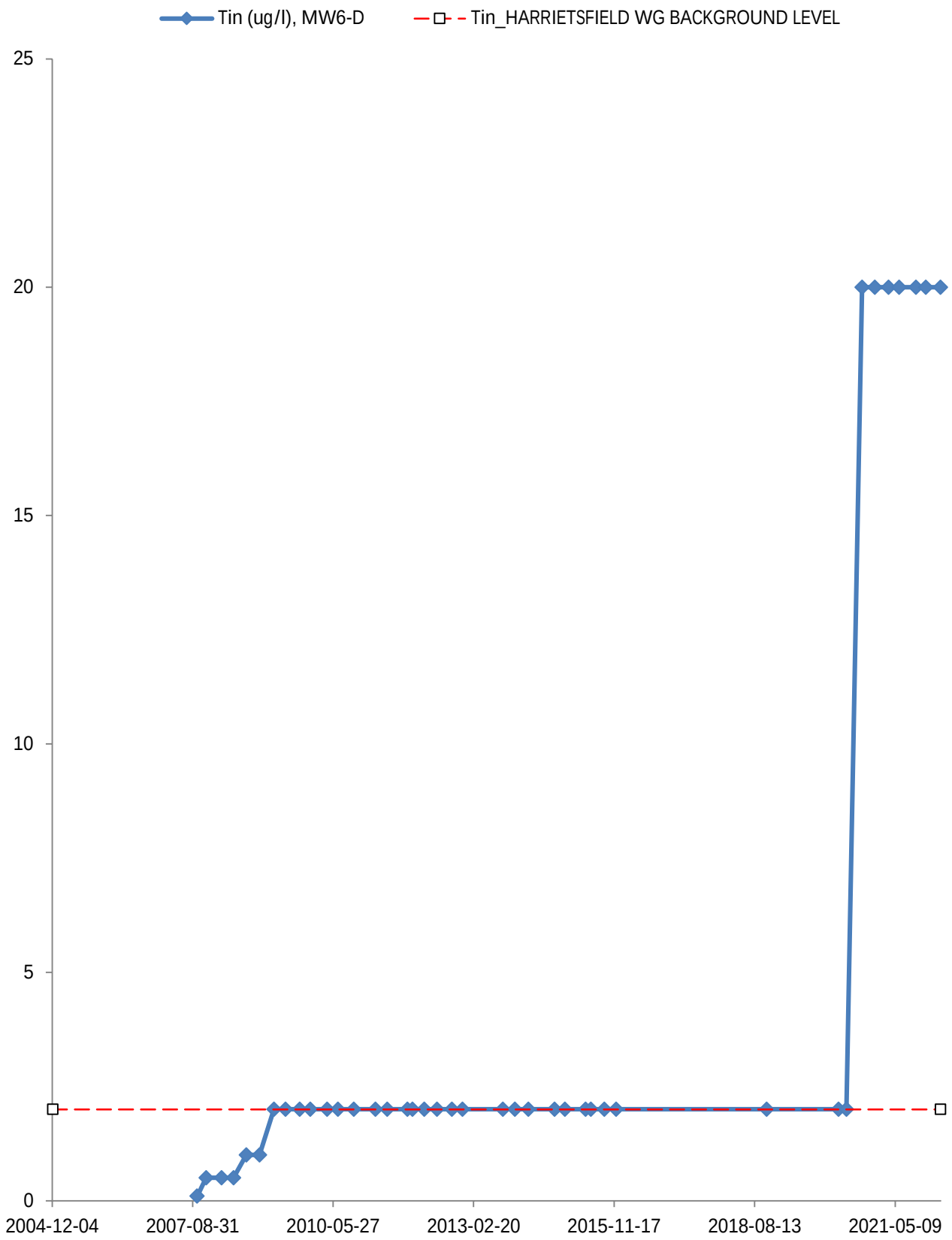


MW6-D-Sulphate

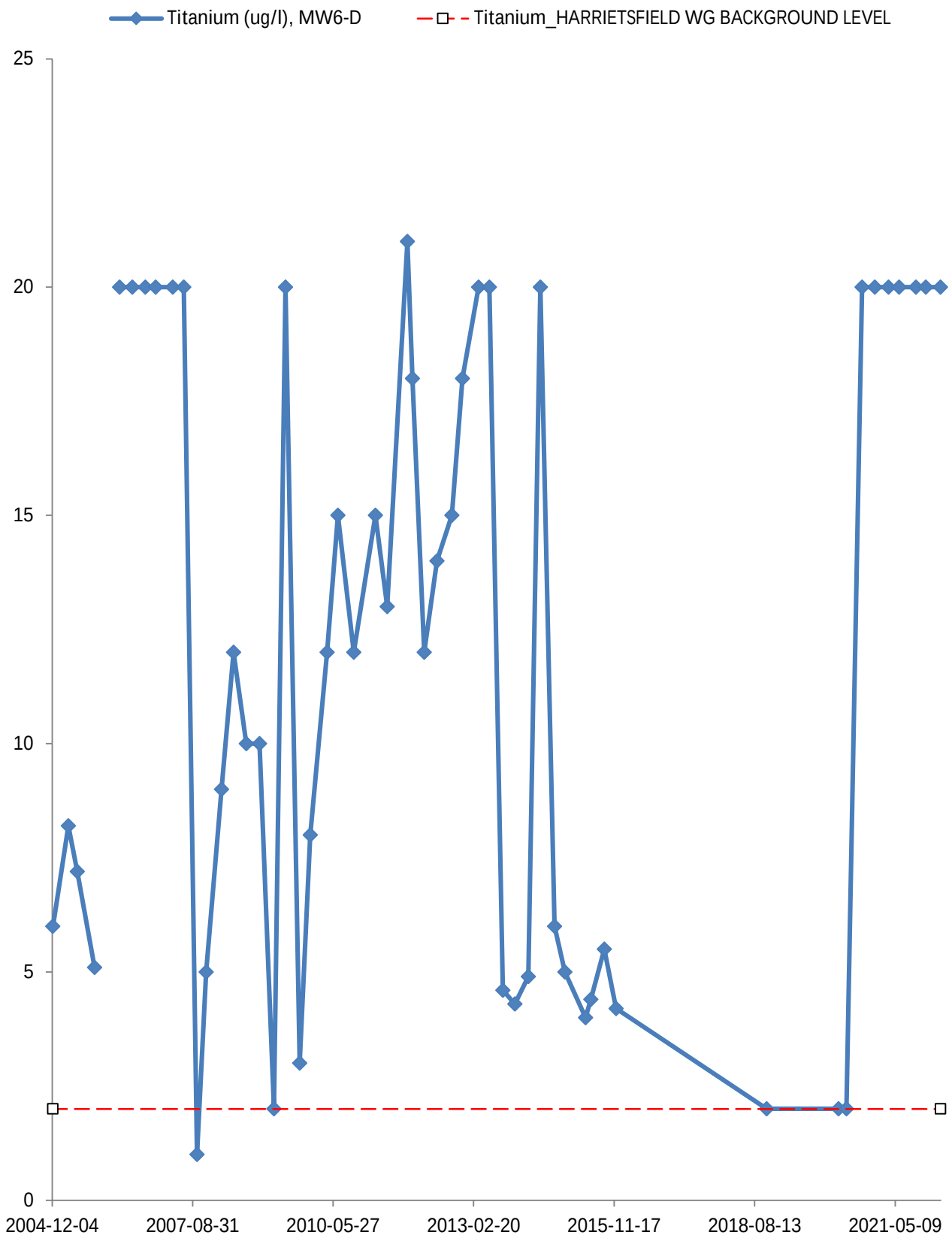


MW6-D-Thallium

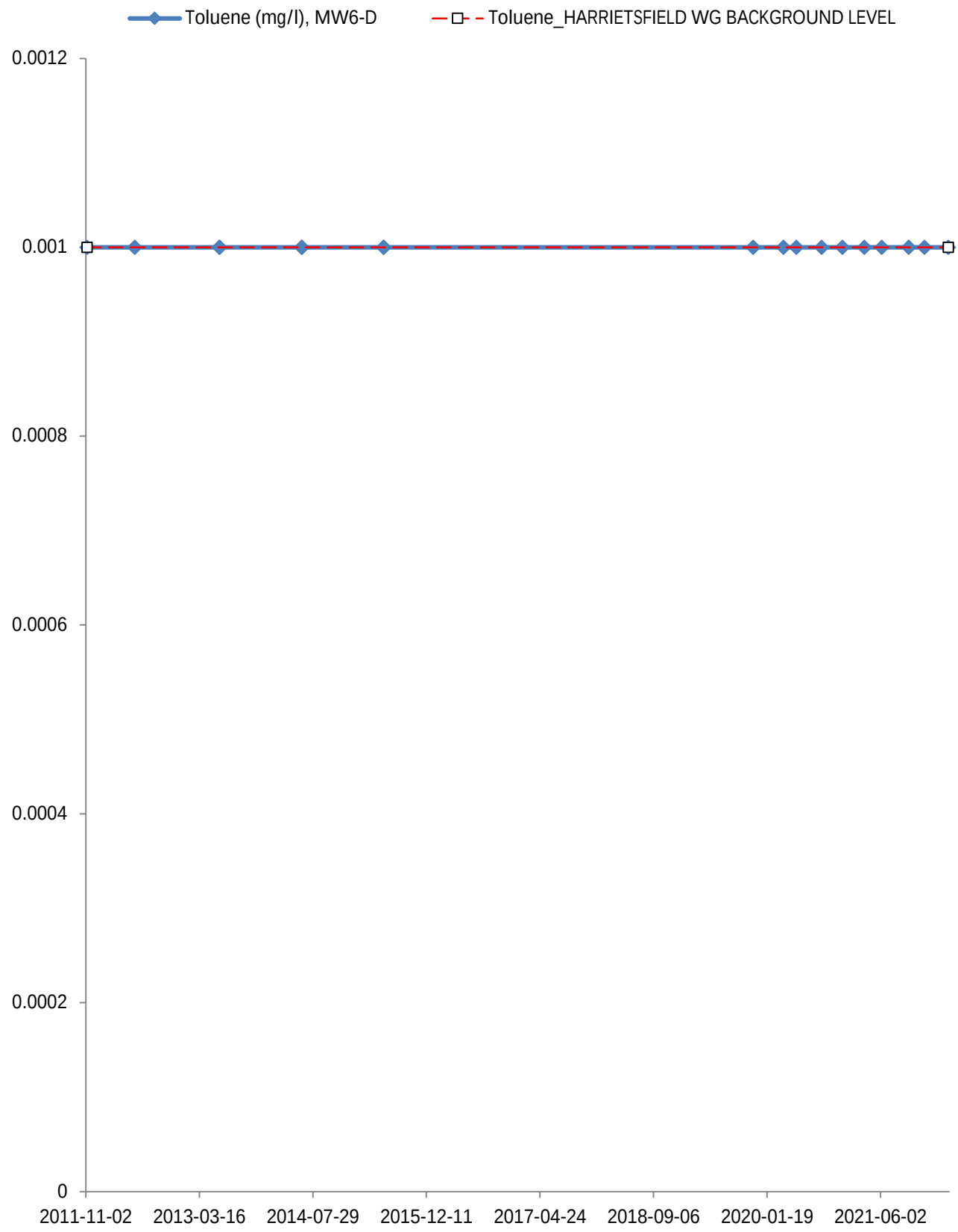



Tin (ug/l), MW6-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

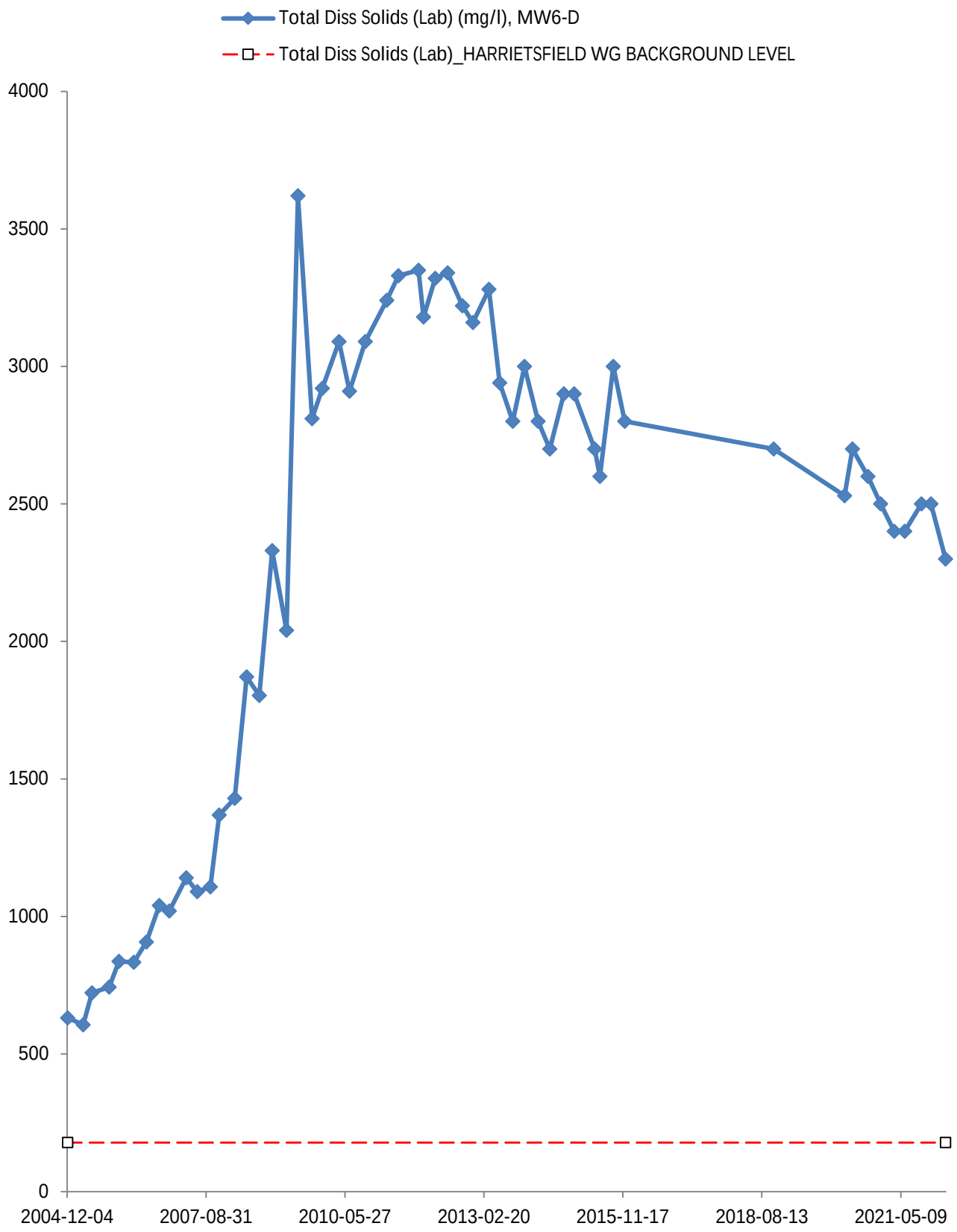
MW6-D-Titanium



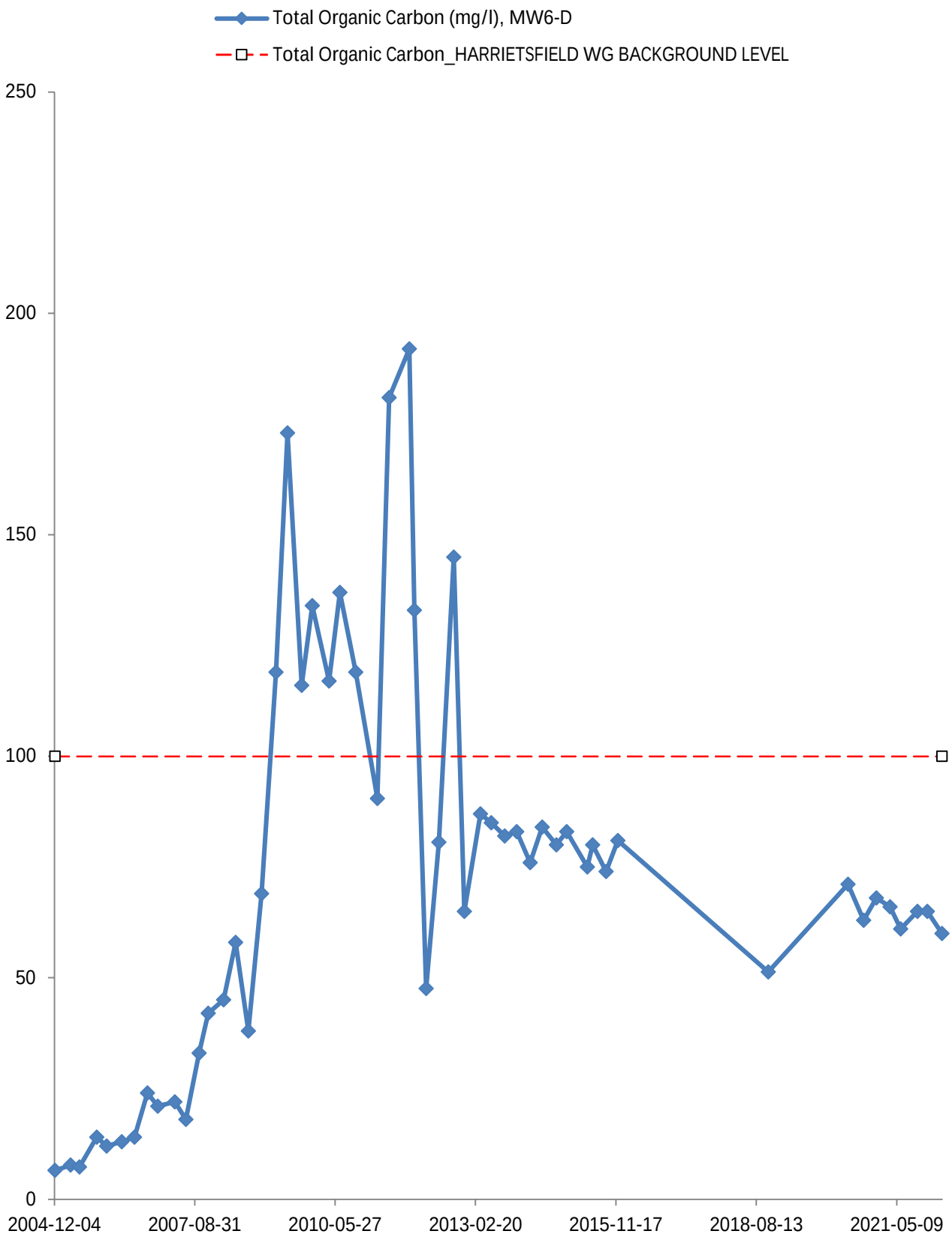
MW6-D-Toluene



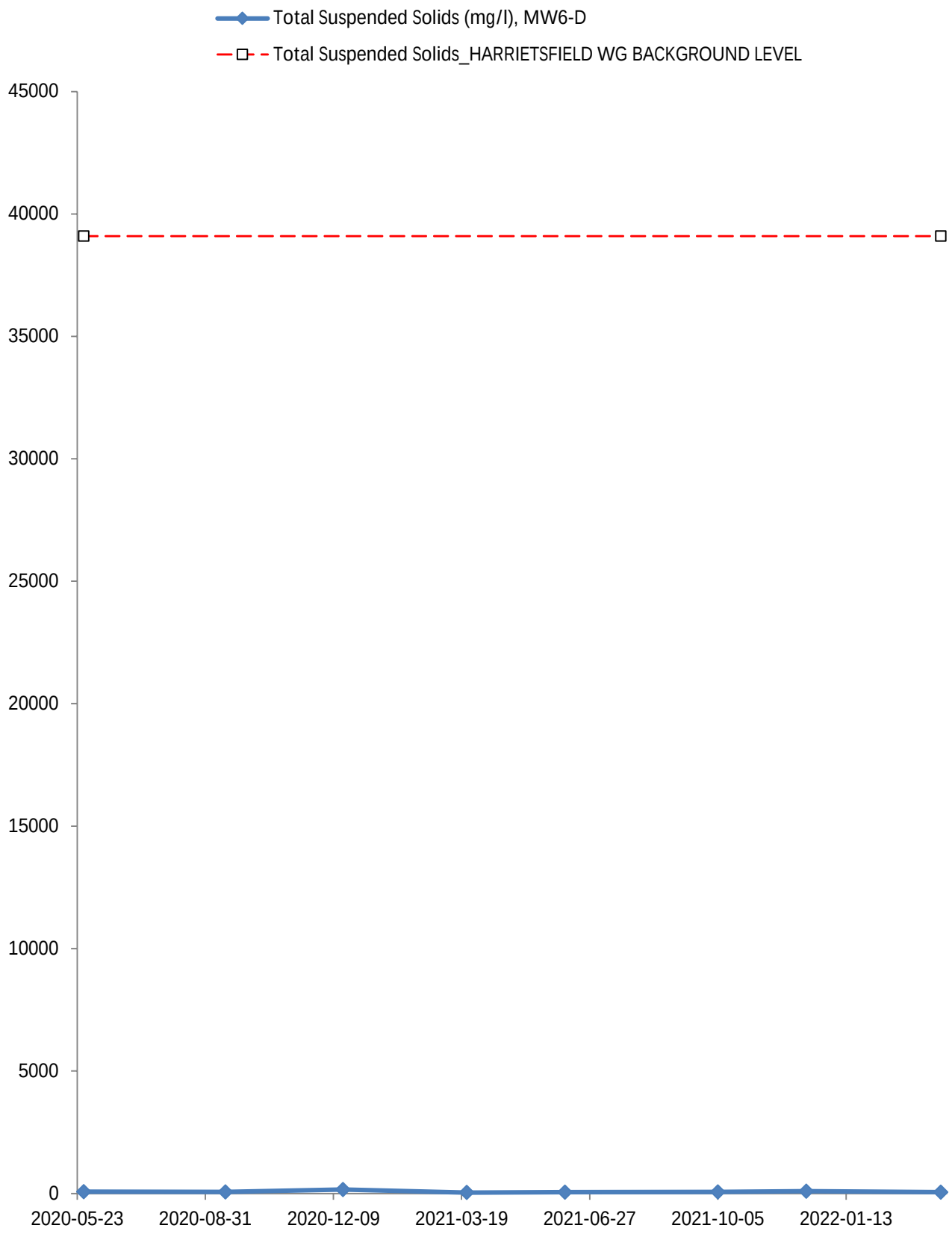
MW6-D-Total Diss Solids (Lab)



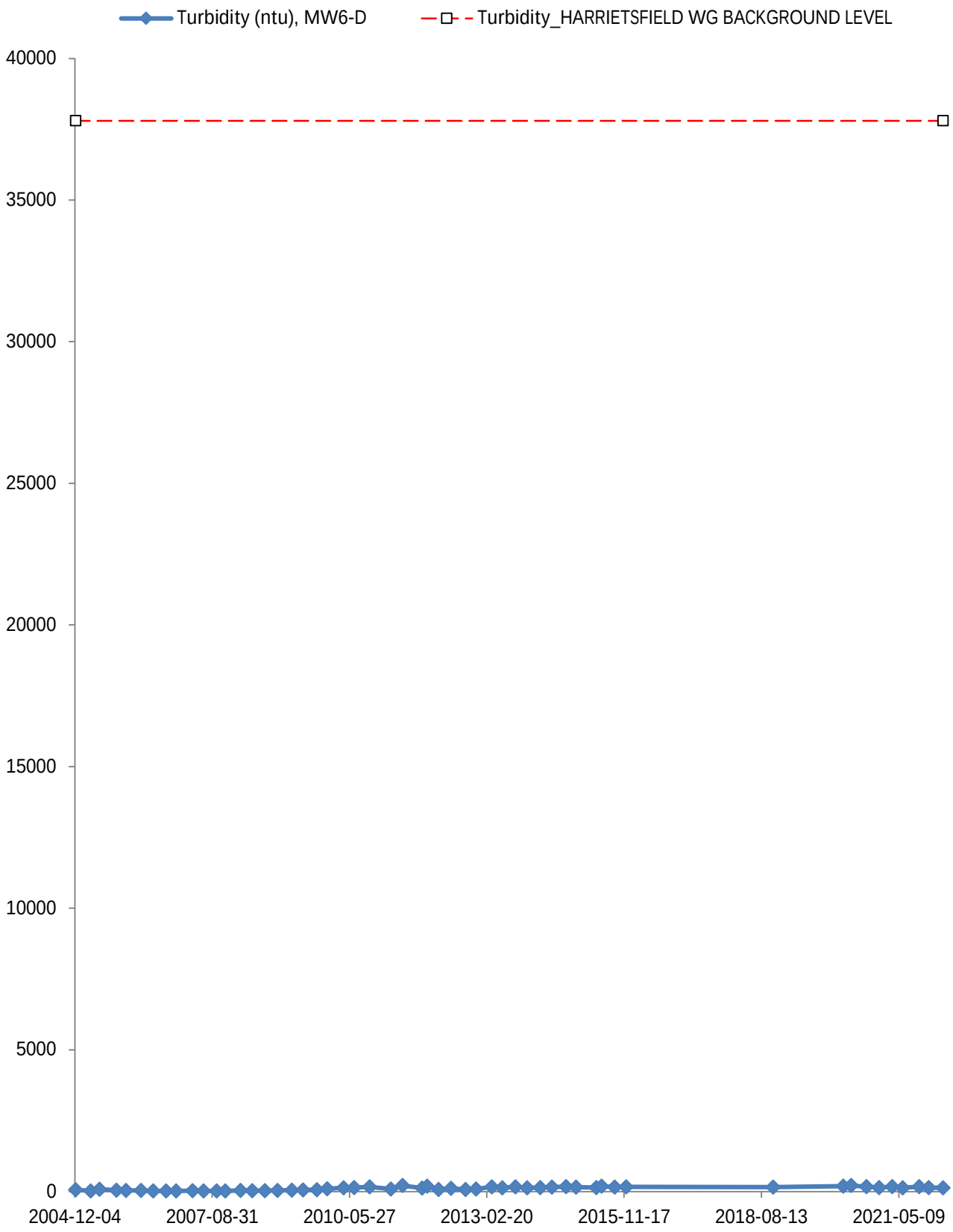
MW6-D-Total Organic Carbon



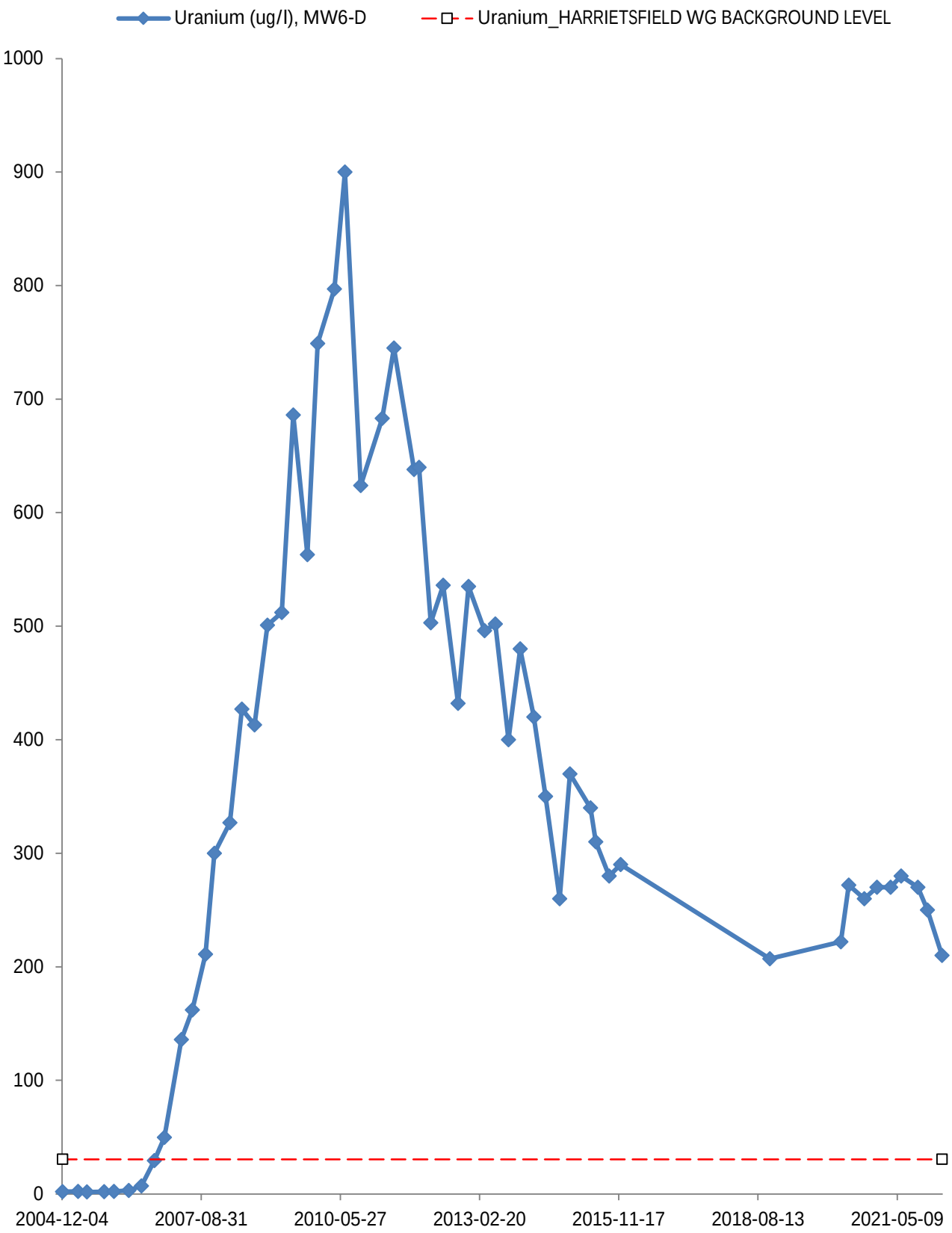
MW6-D-Total Suspended Solids



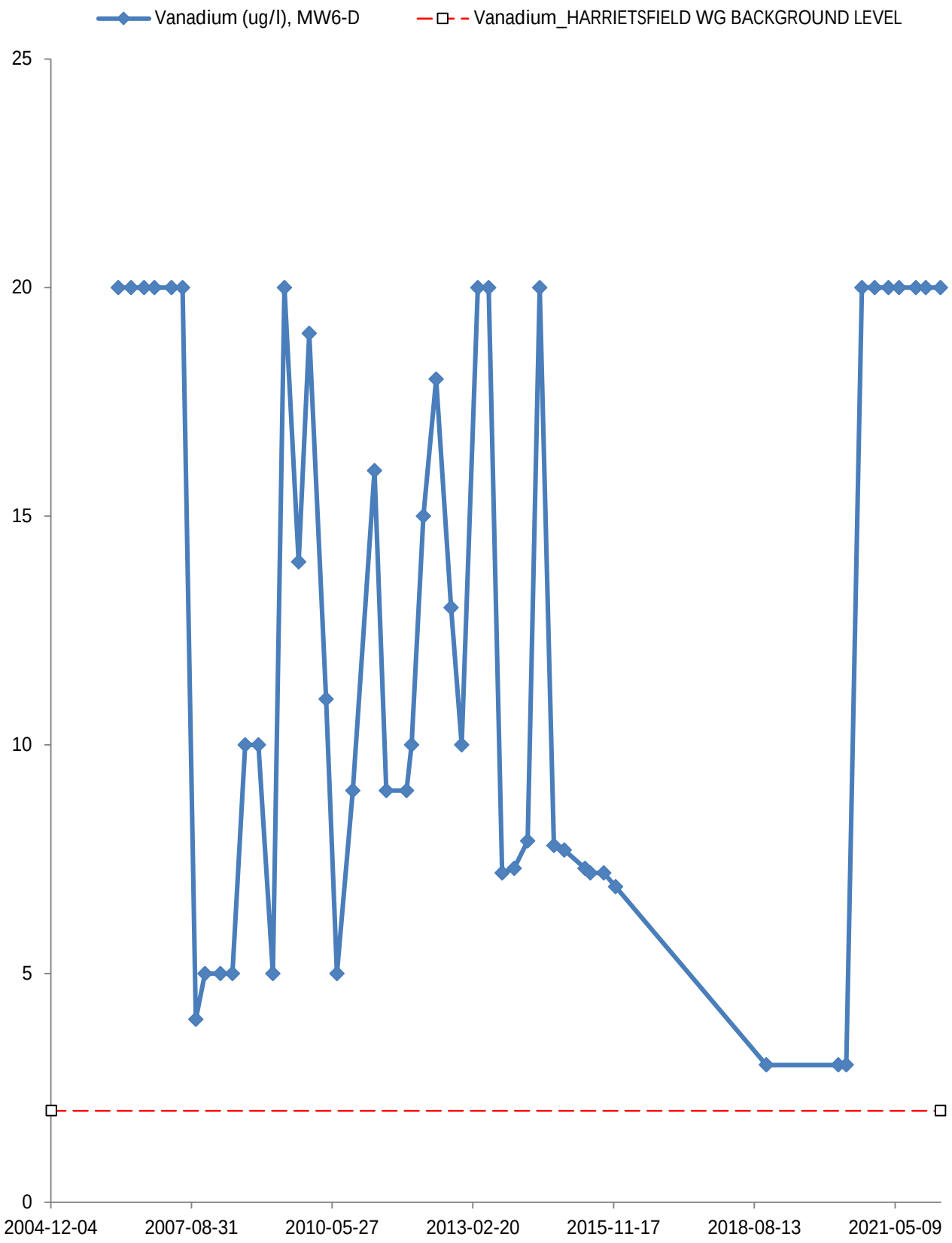
MW6-D-Turbidity



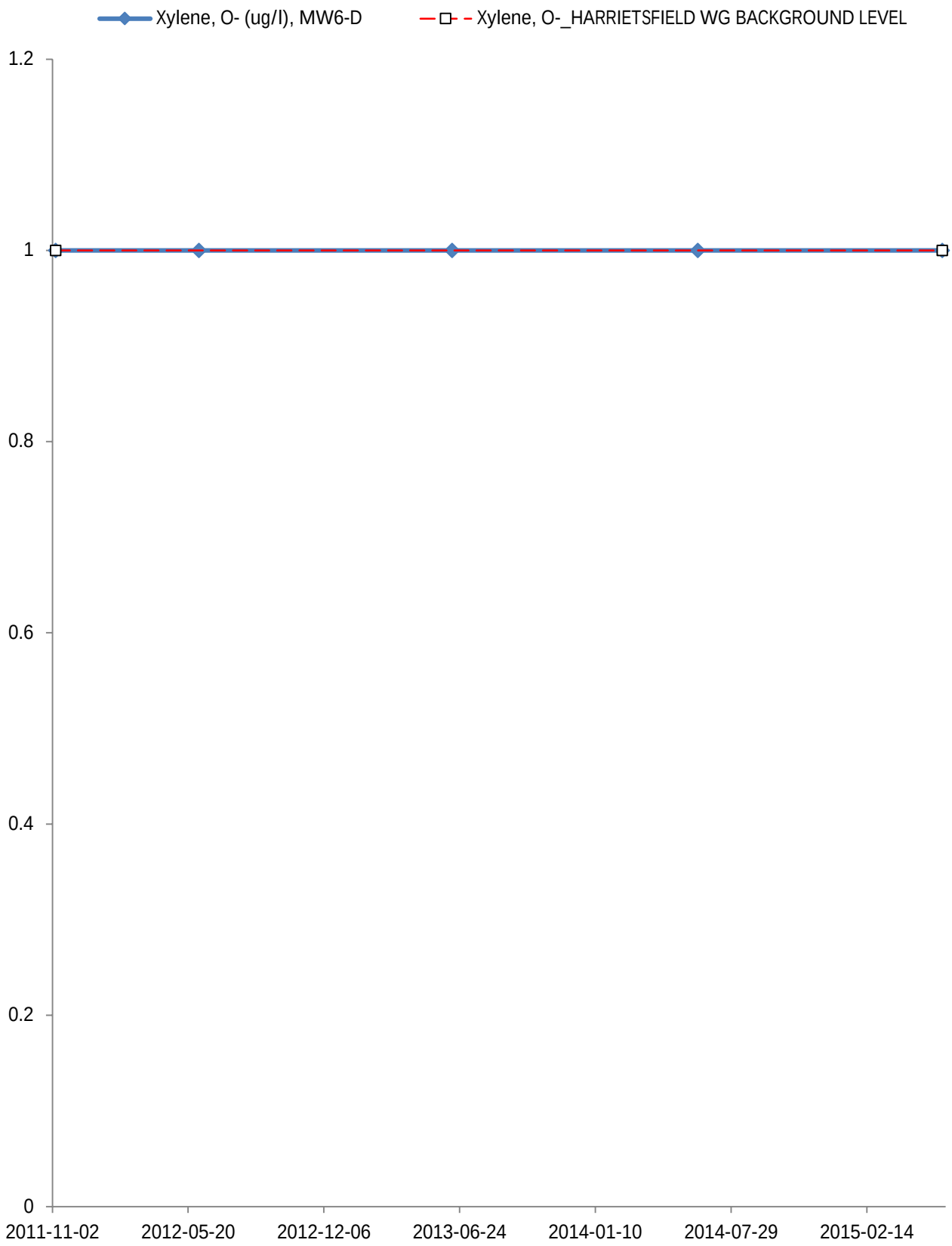
MW6-D-Uranium



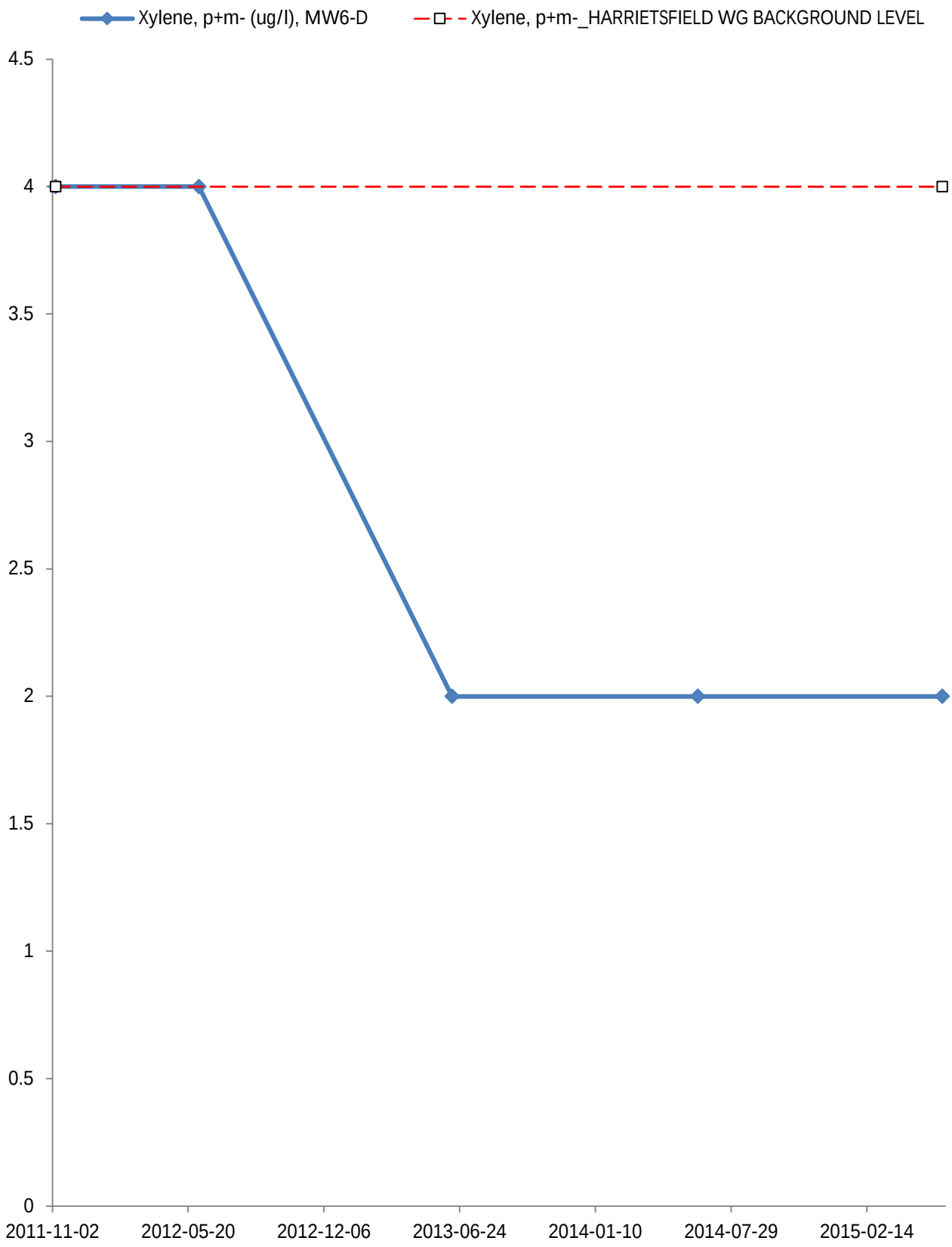
MW6-D-Vanadium



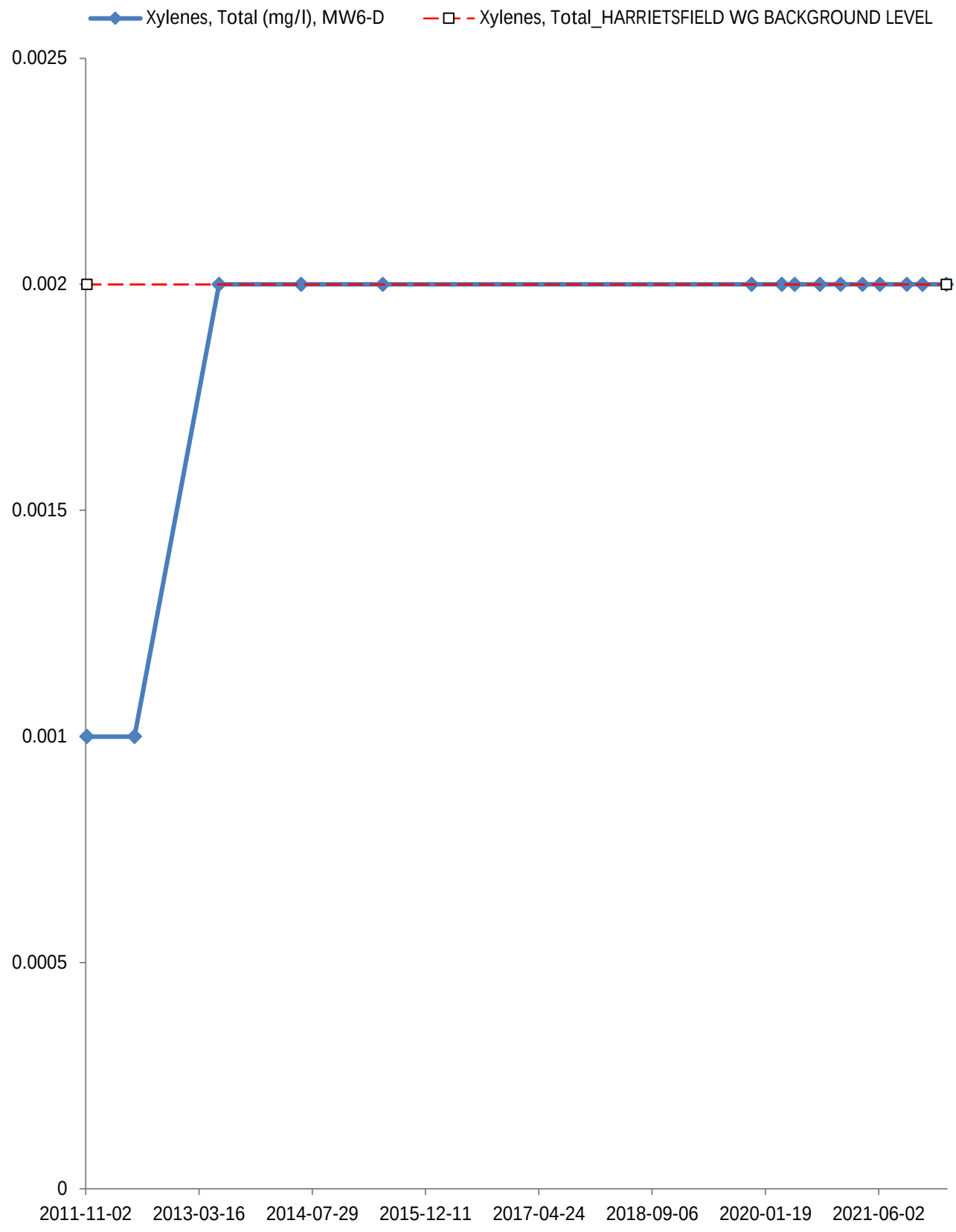
MW6-D-Xylene, O-



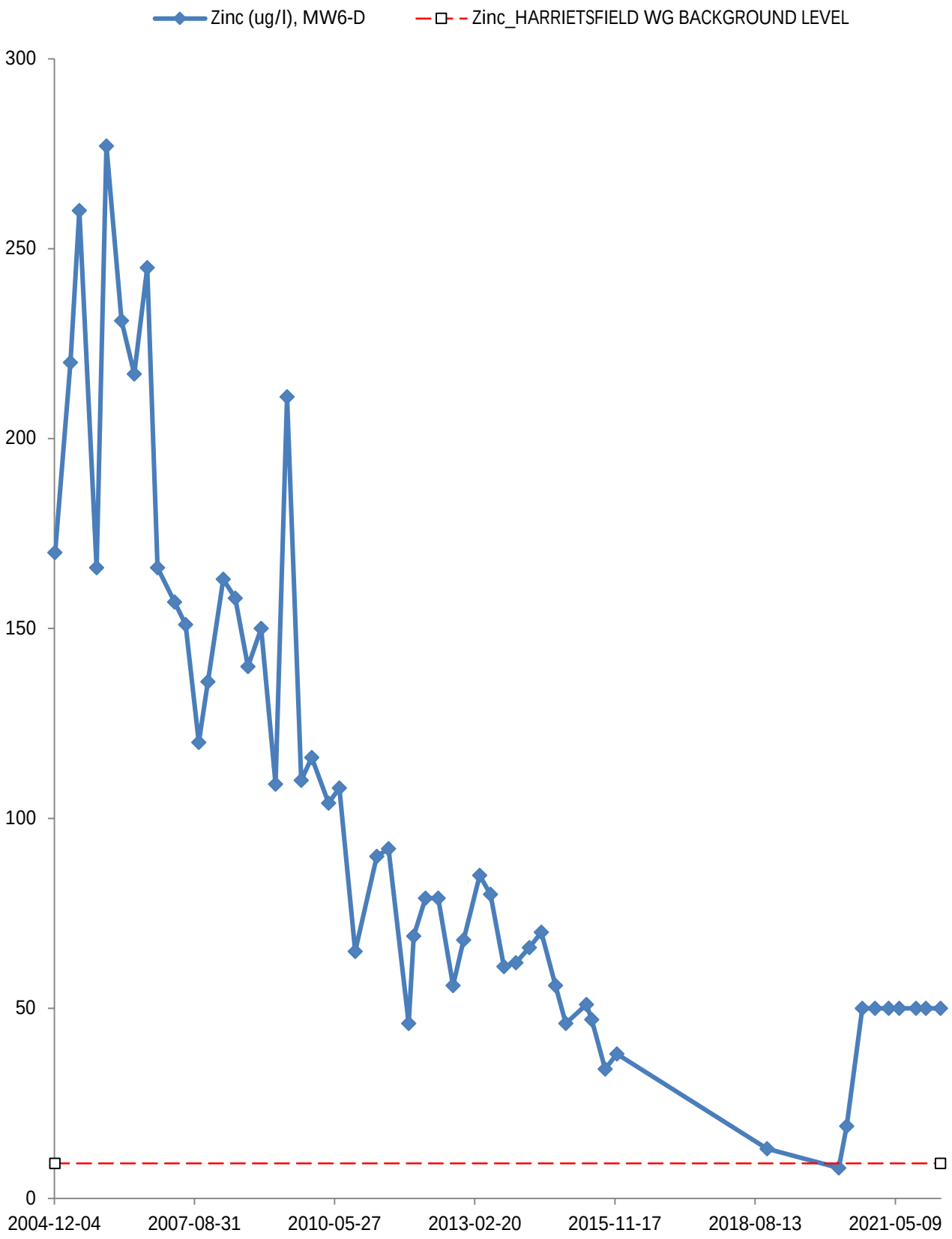
MW6-D-Xylene, p+m-



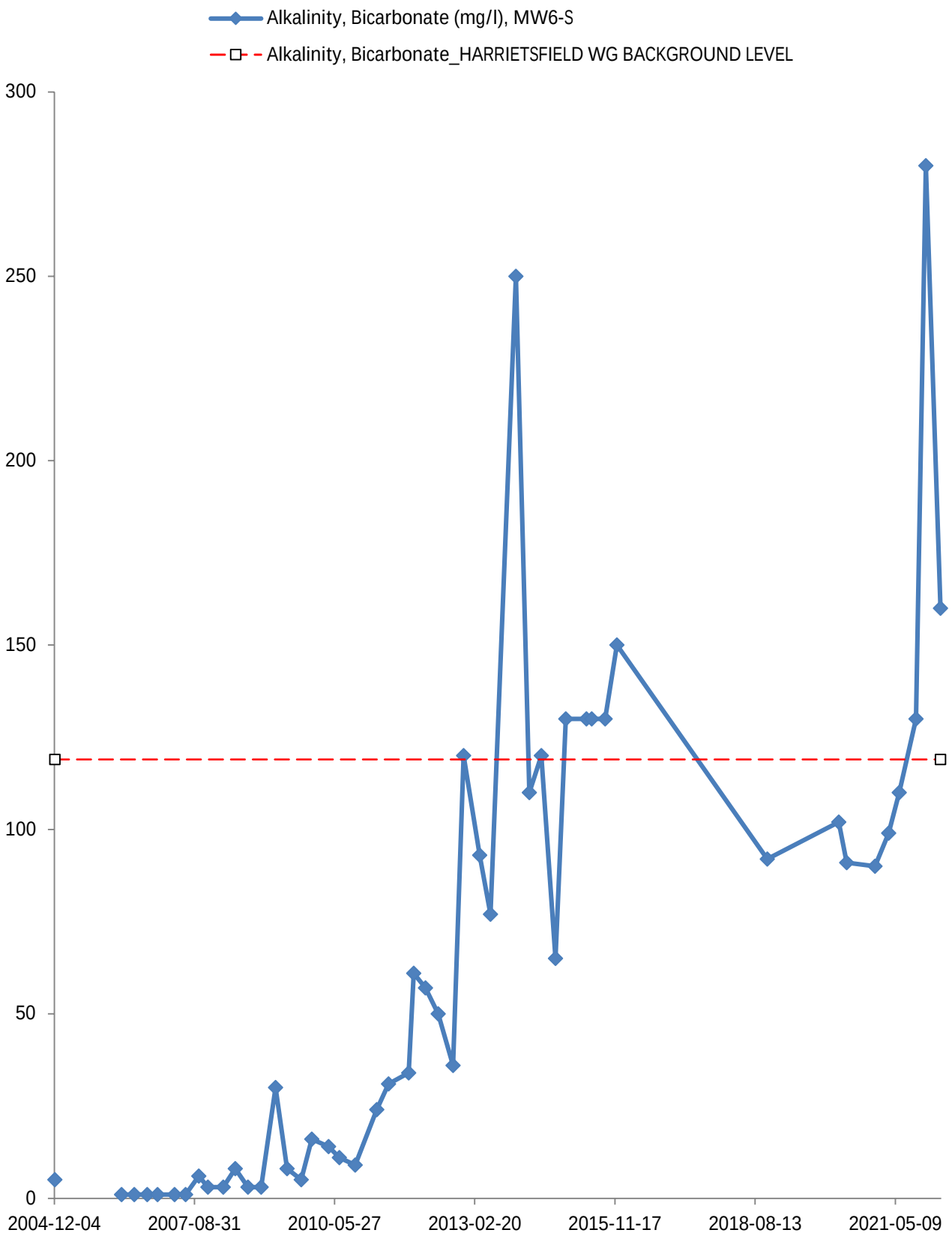
MW6-D-Xylenes, Total



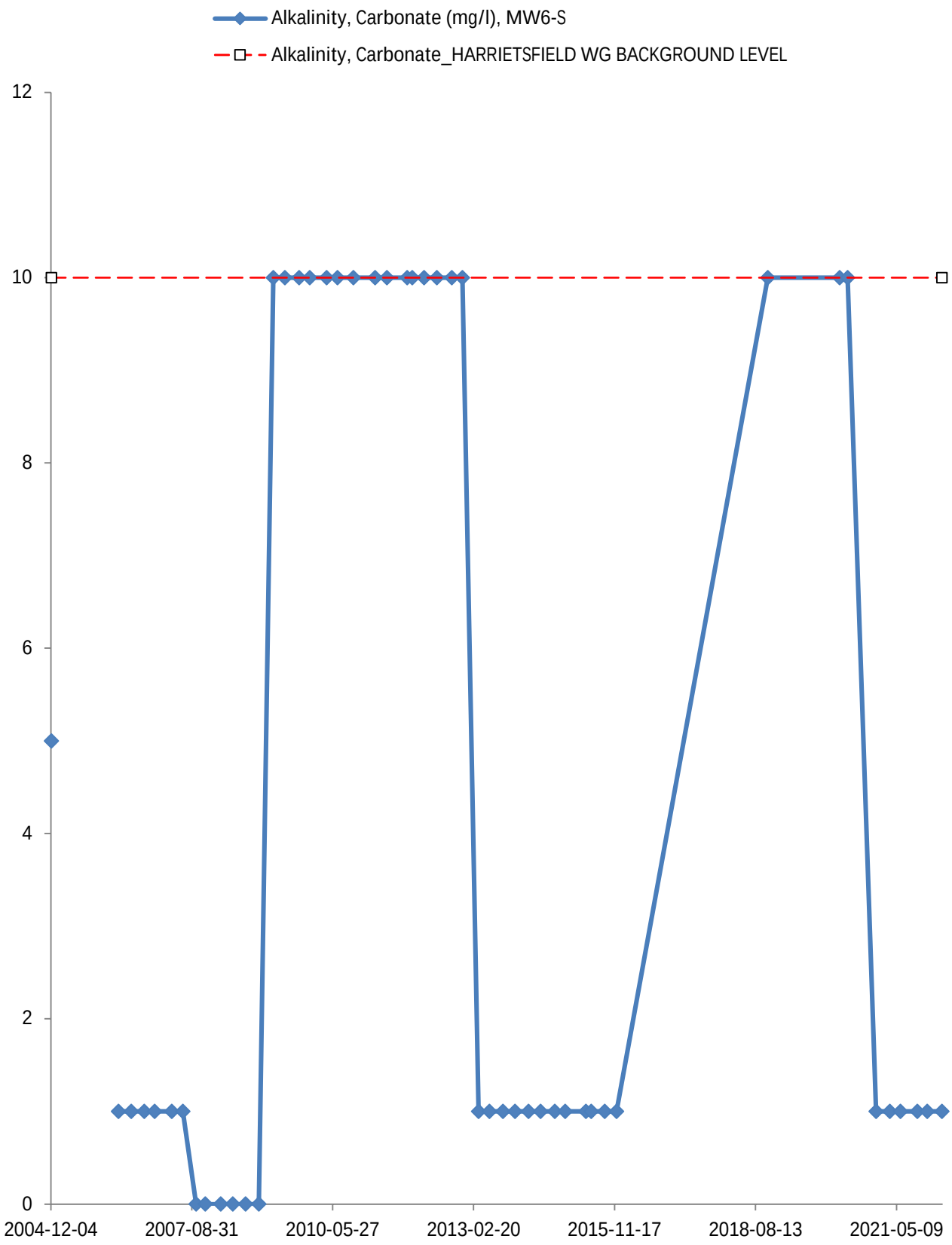
MW6-D-Zinc


Zinc (ug/l), MW6-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
300
250
200
150
100
50
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

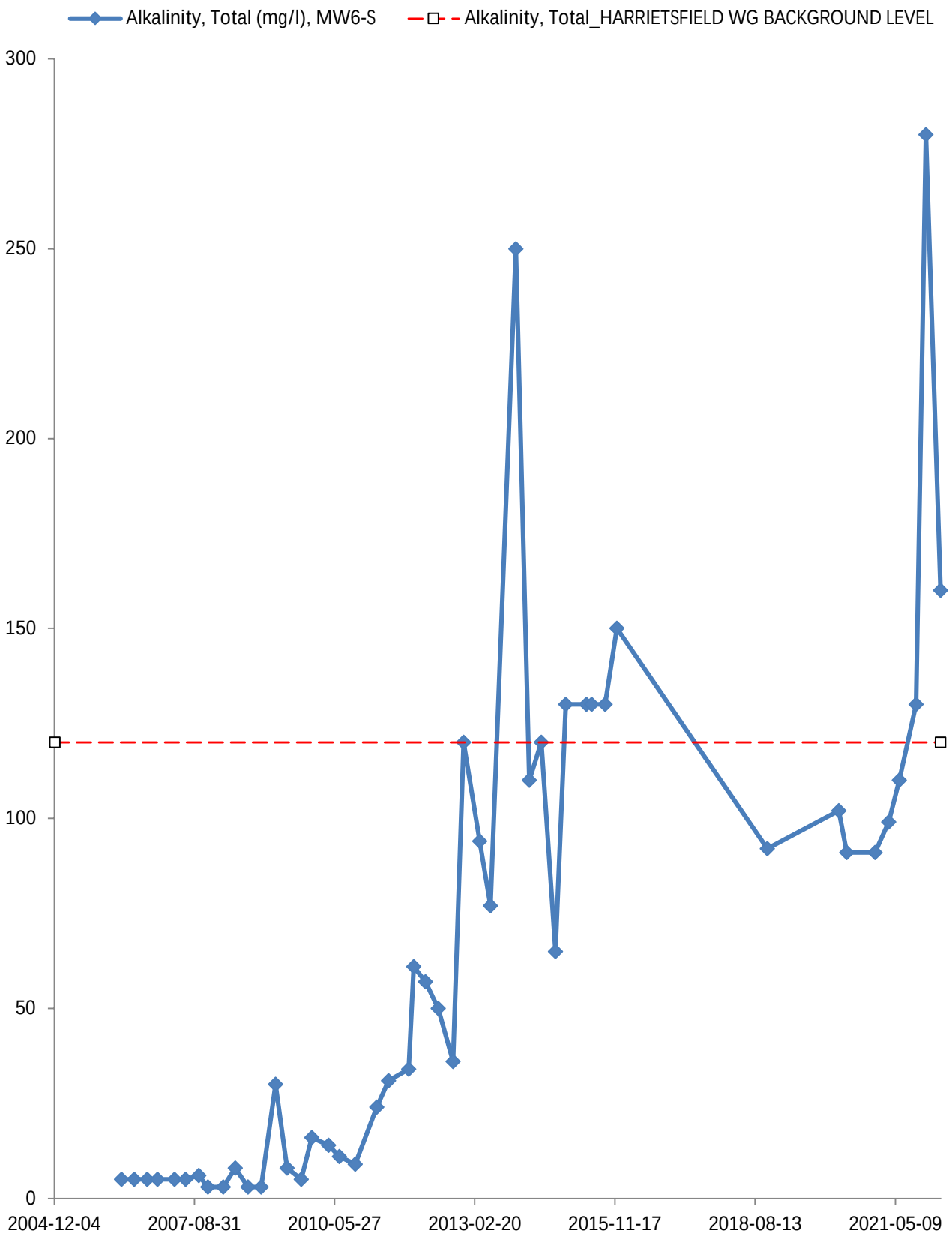
MW6-S-Alkalinity, Bicarbonate



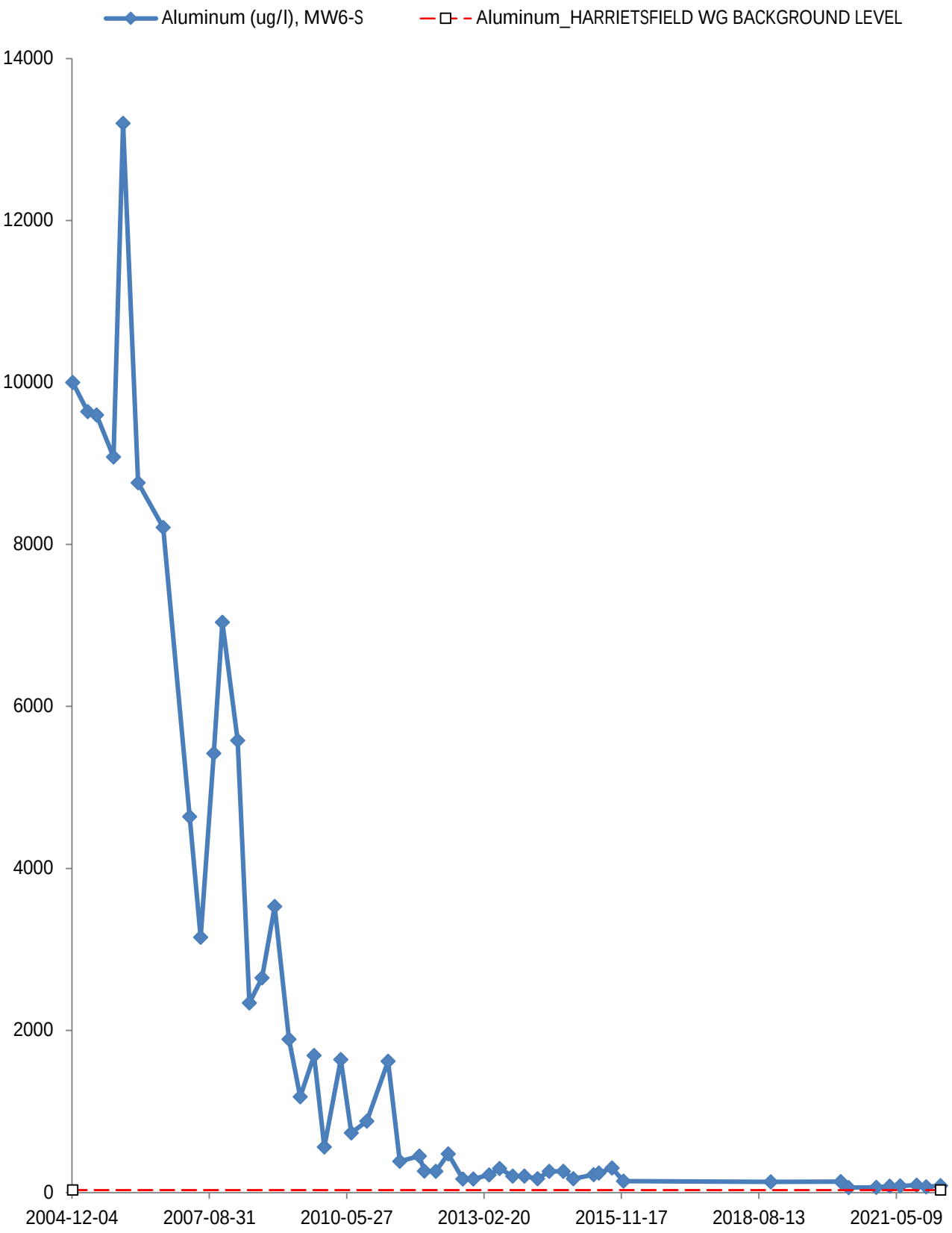
MW6-S-Alkalinity, Carbonate



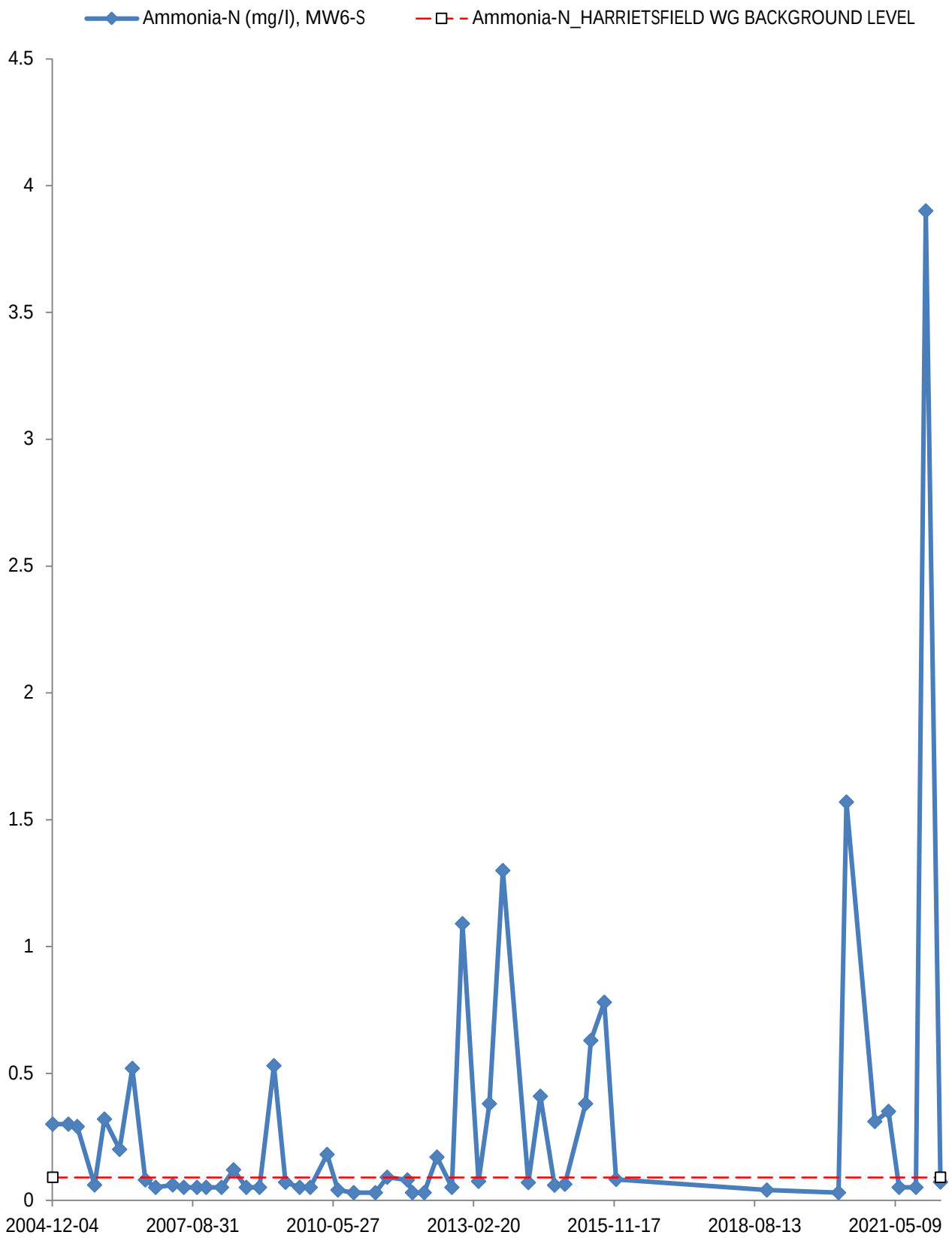
MW6-S-Alkalinity, Total



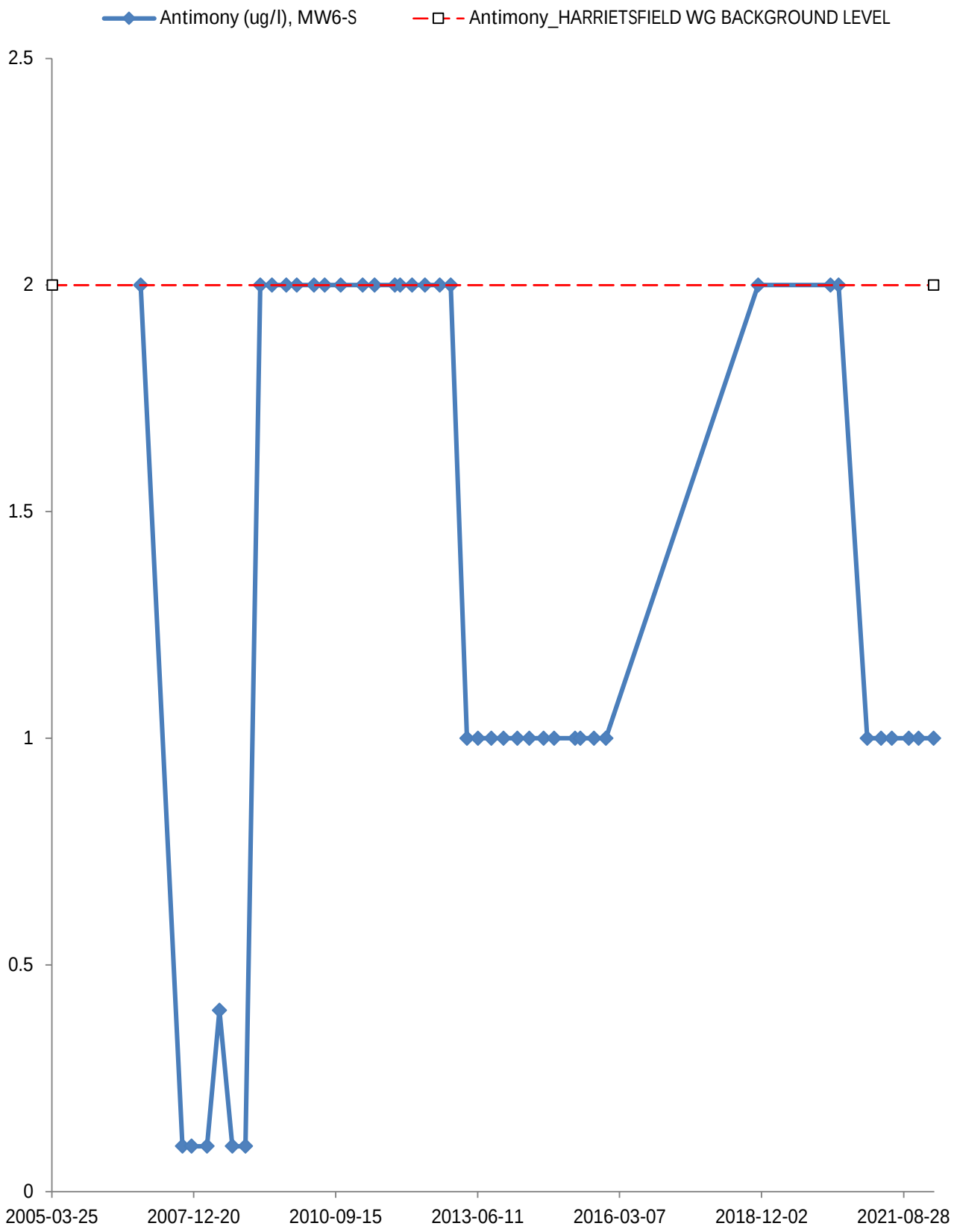
MW6-S-Aluminum



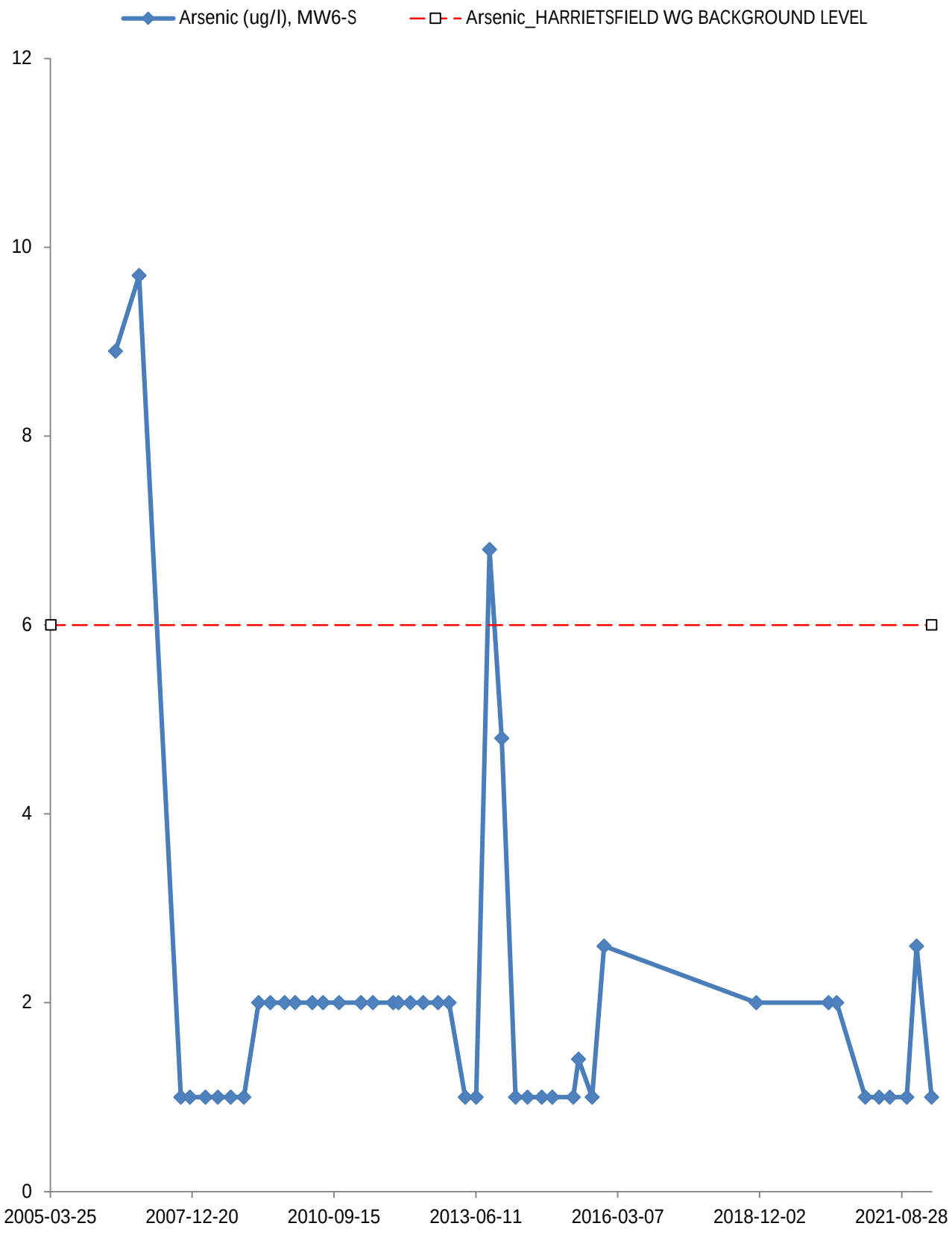
MW6-S-Ammonia-N



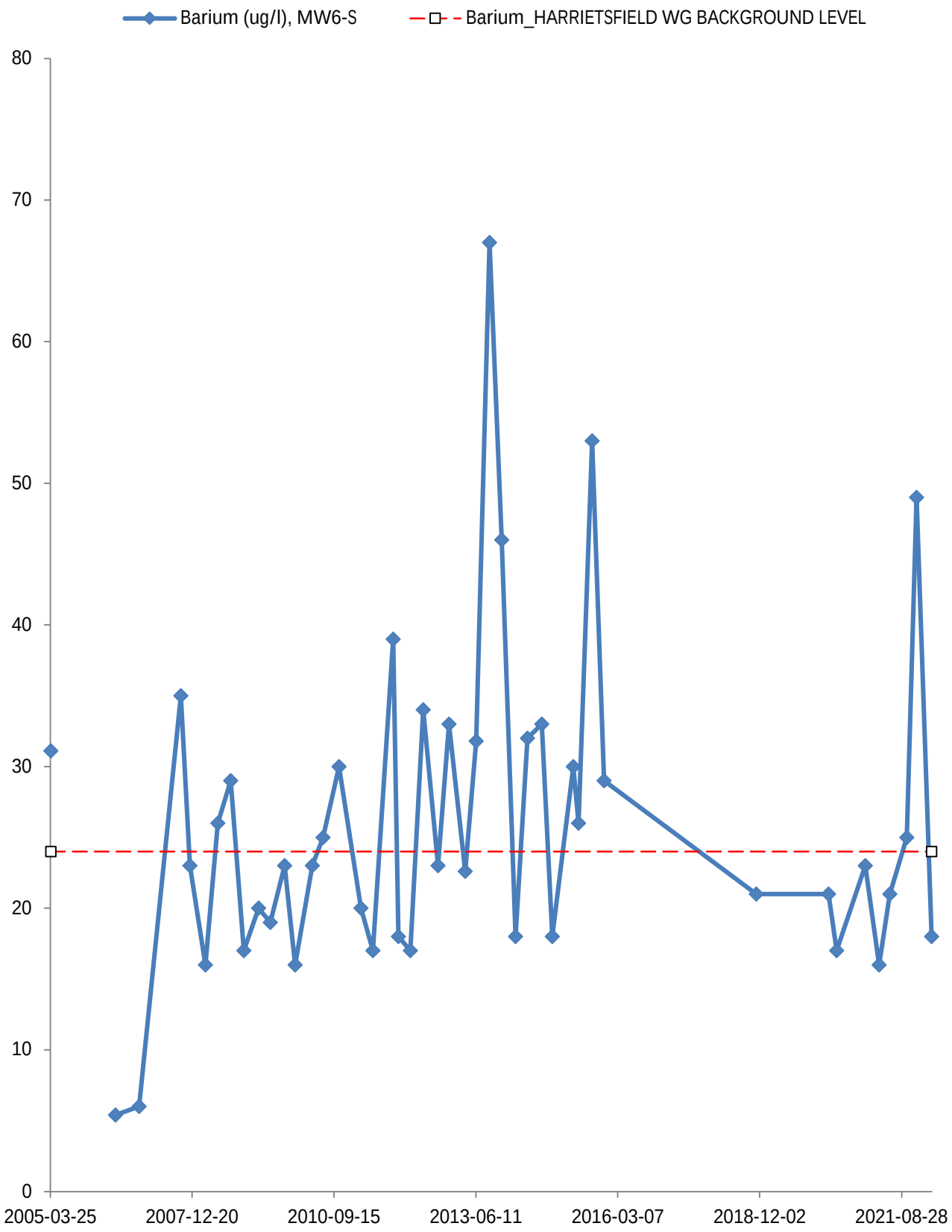
MW6-S-Antimony



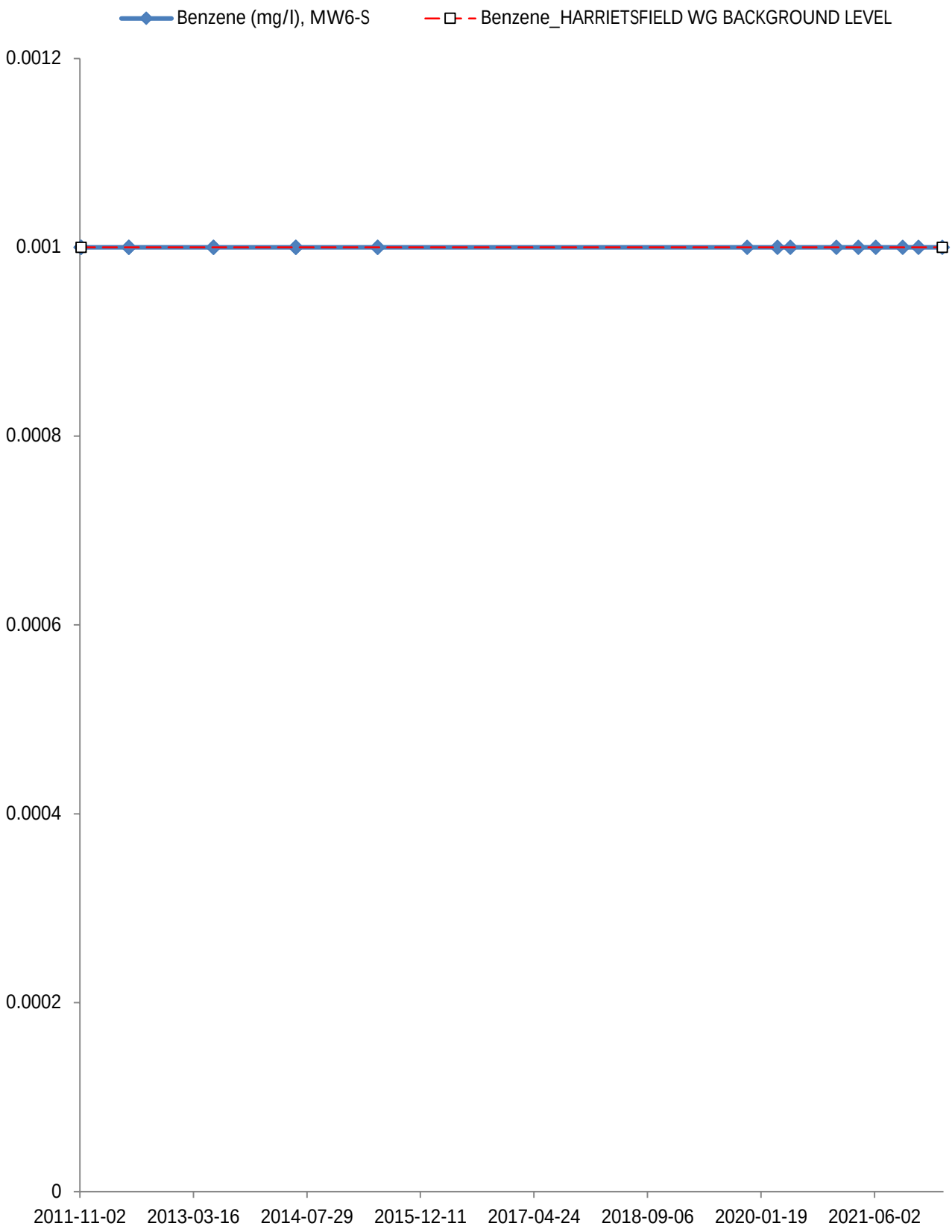
MW6-S-Arsenic



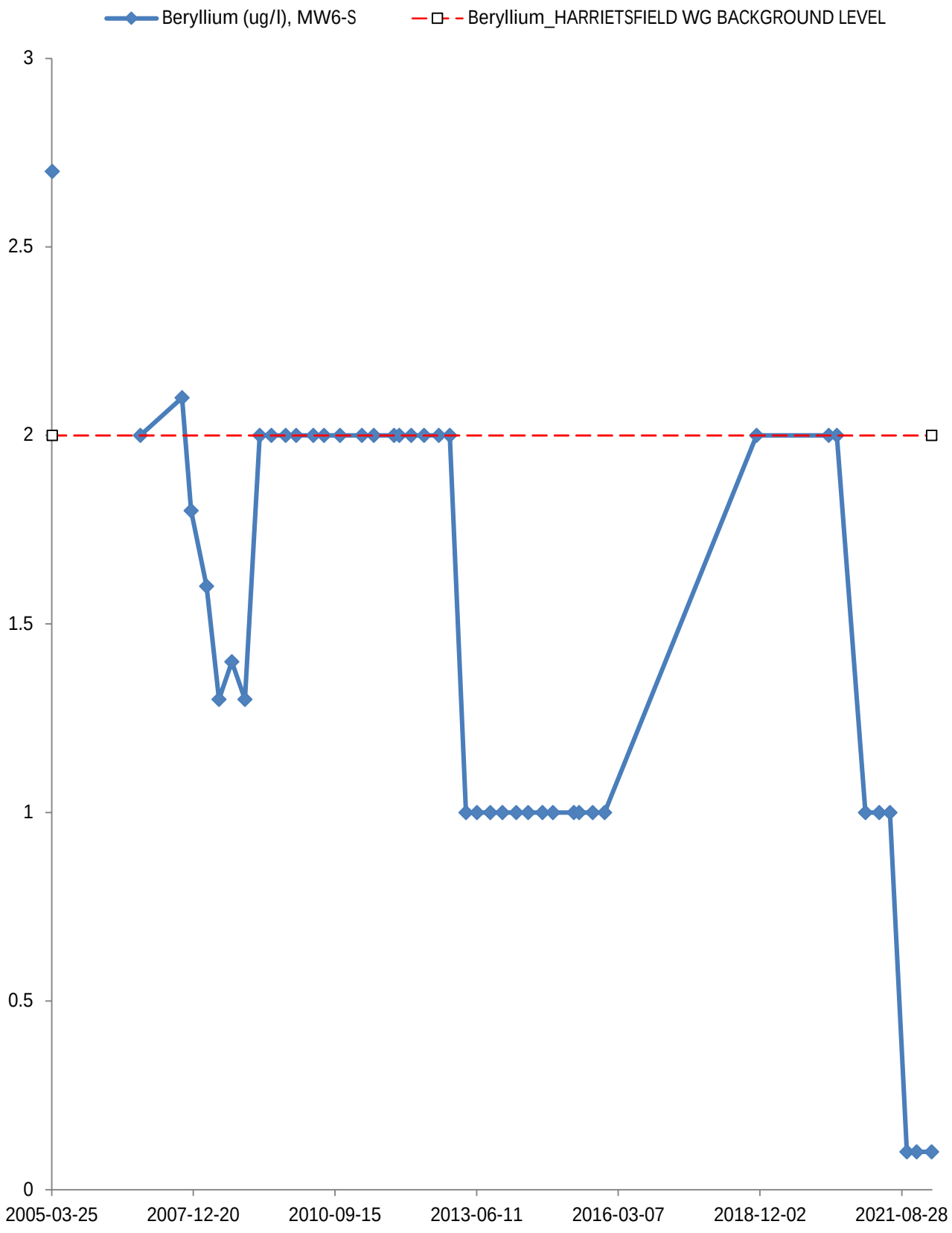
MW6-S-Barium


Barium (ug/l), MW6-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

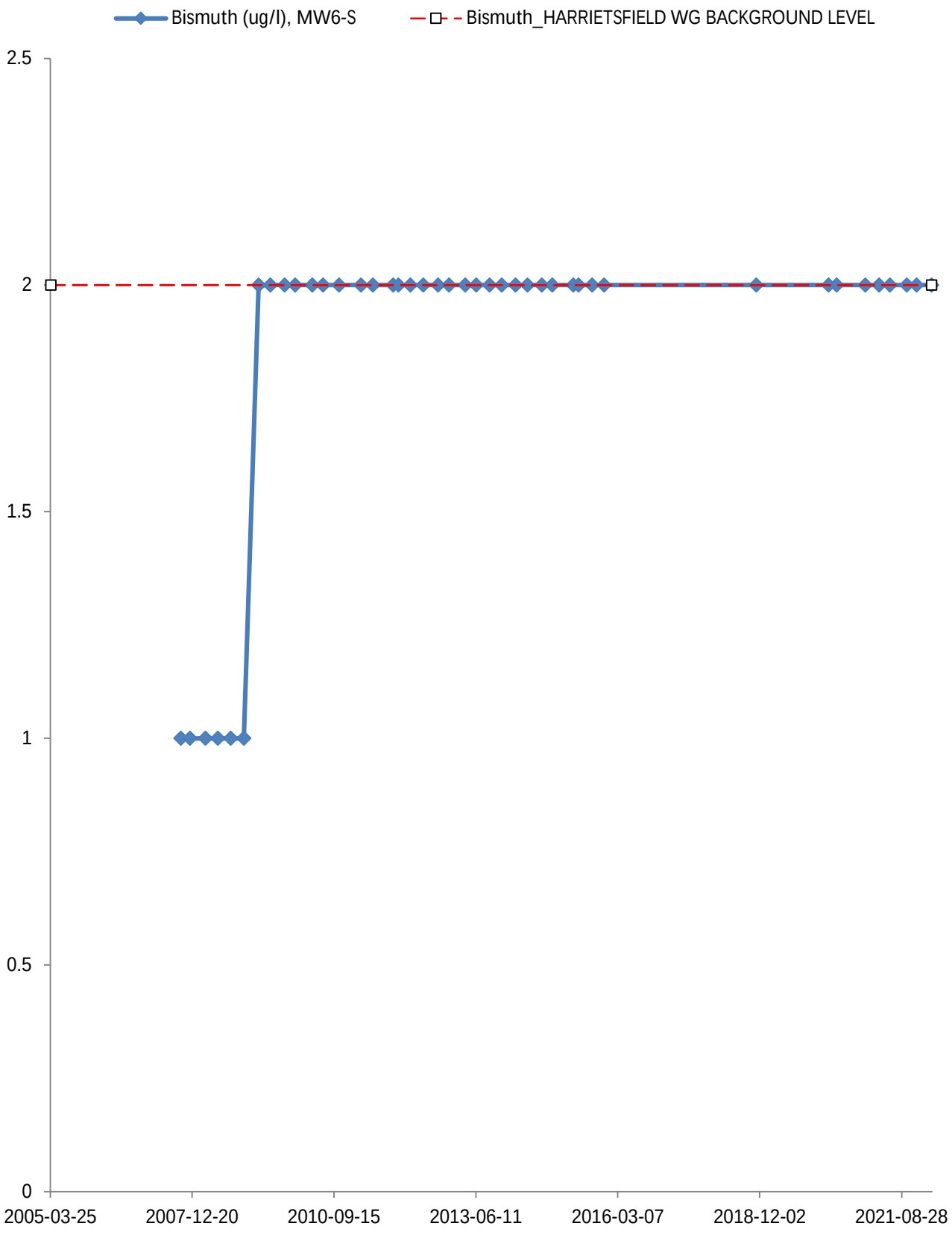
MW6-S-Benzene



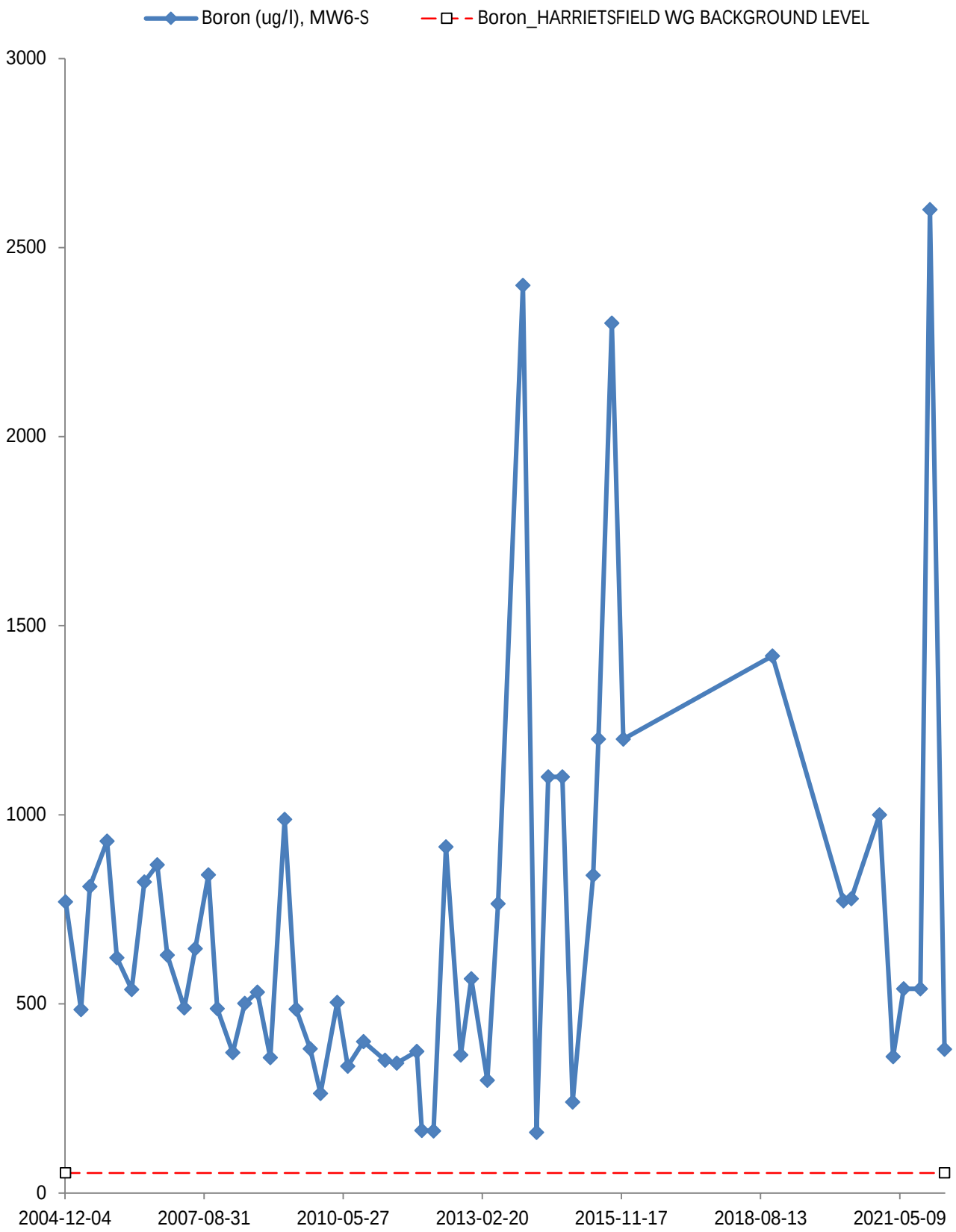
MW6-S-Beryllium



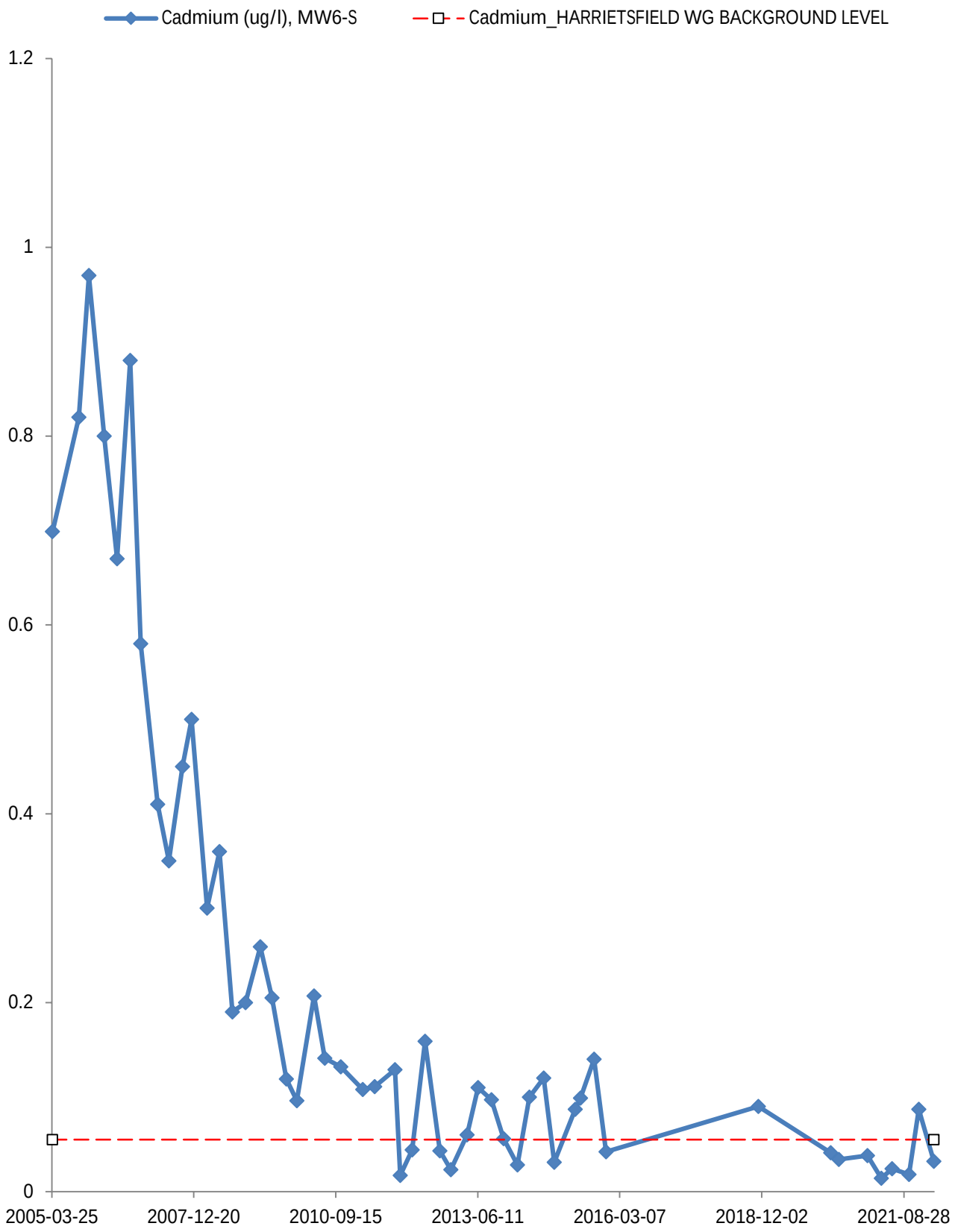
MW6-S-Bismuth



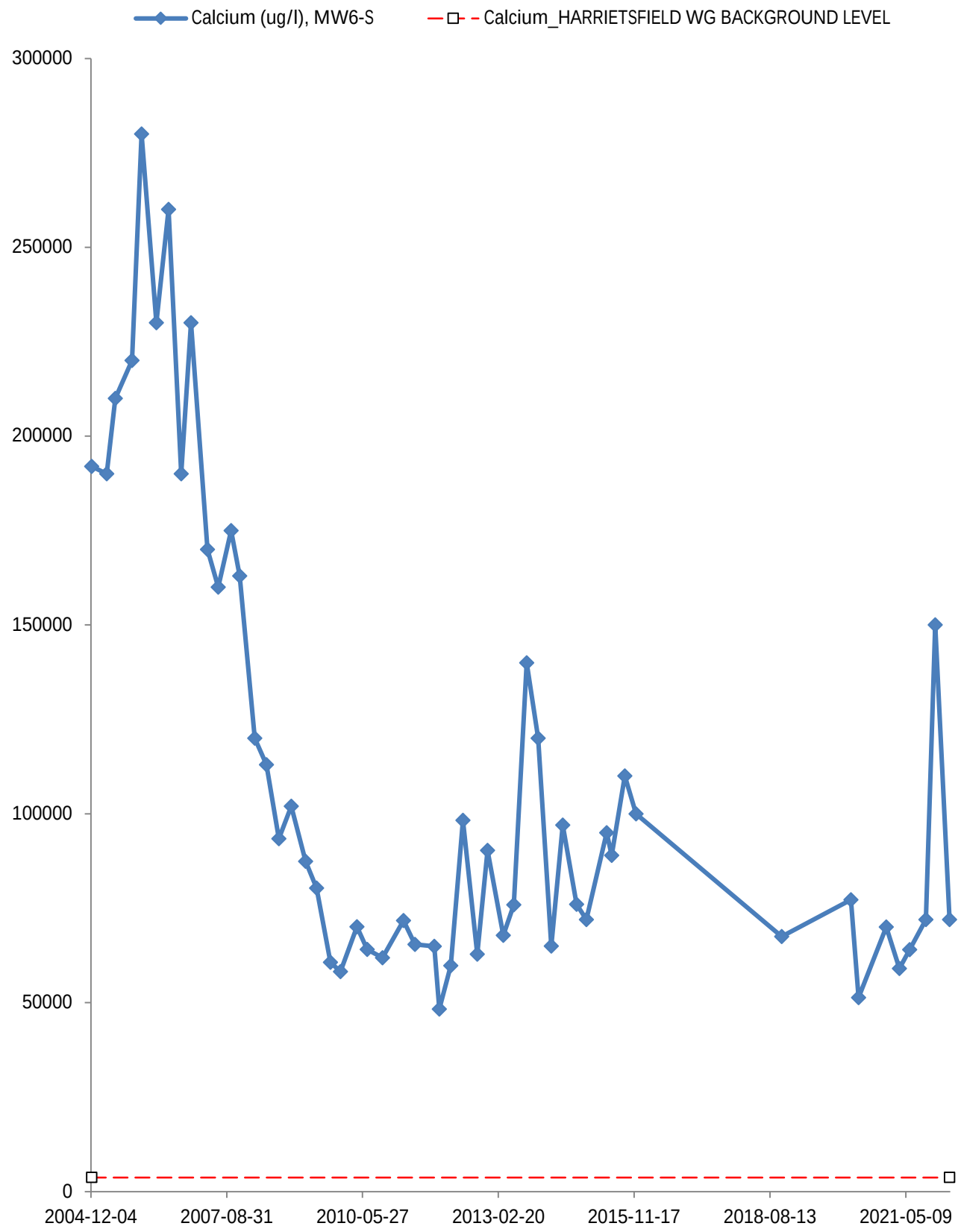
MW6-S-Boron


Boron (ug/l), MW6-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
3000
2500
2000
1500
1000
500
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

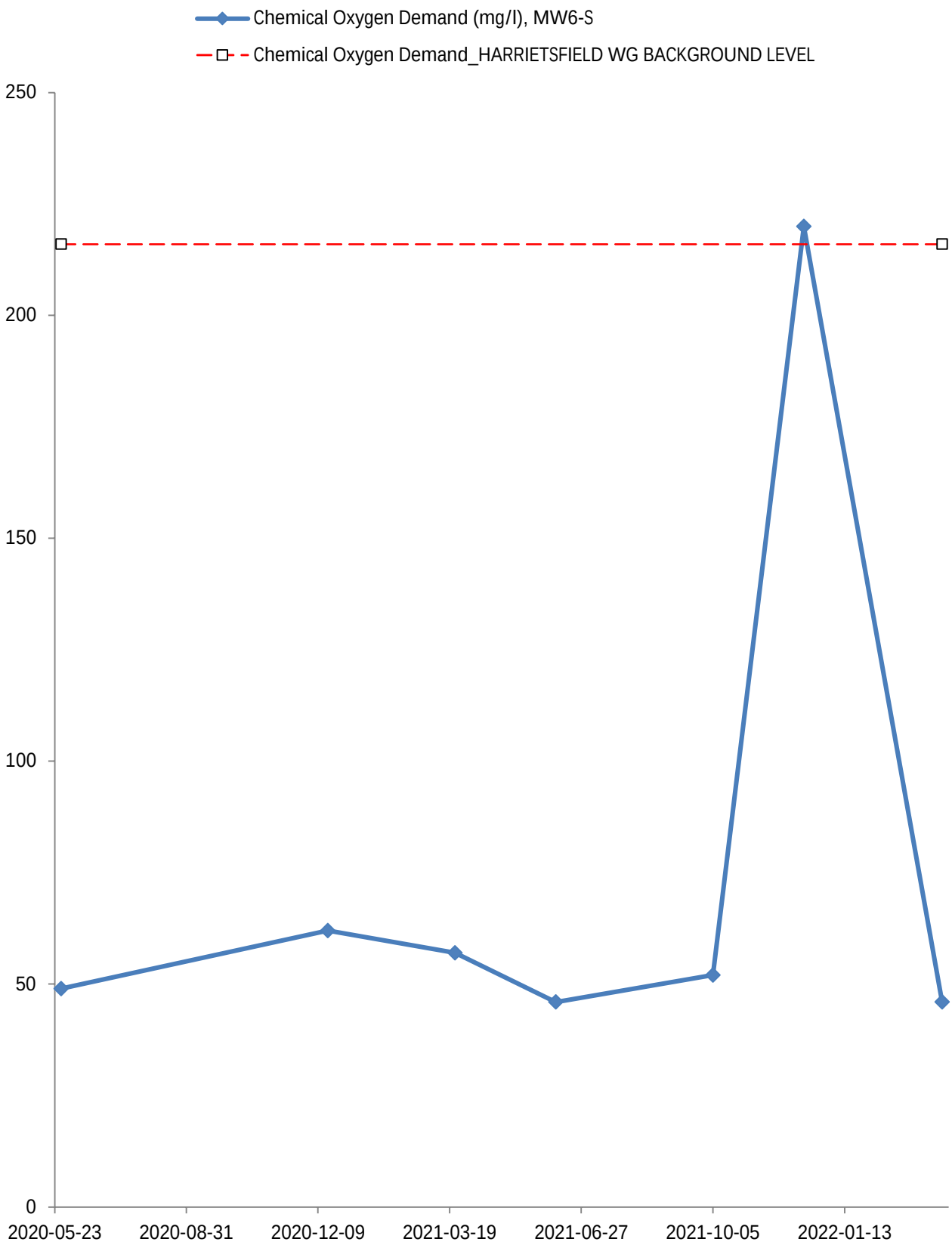
MW6-S-Cadmium



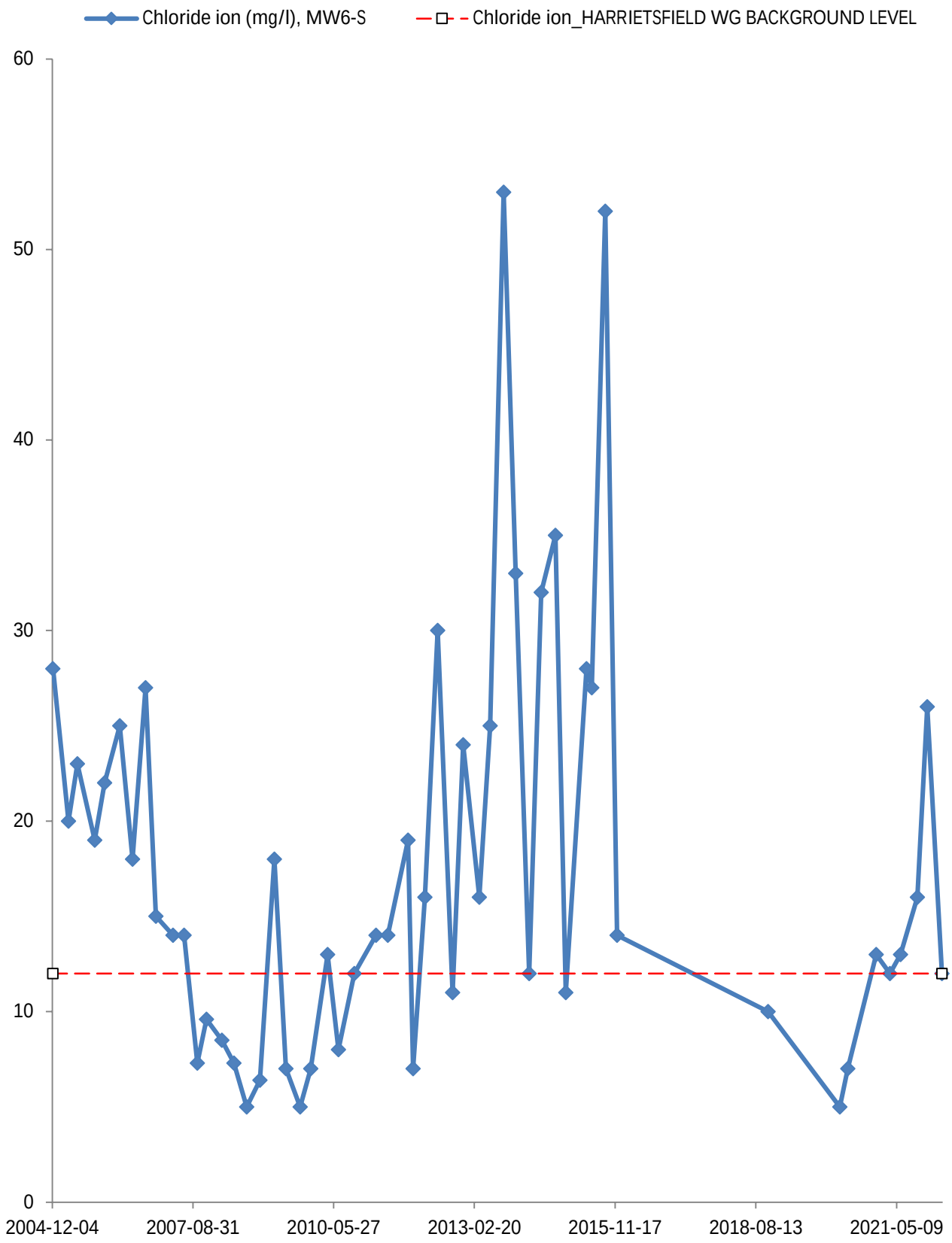
MW6-S-Calcium



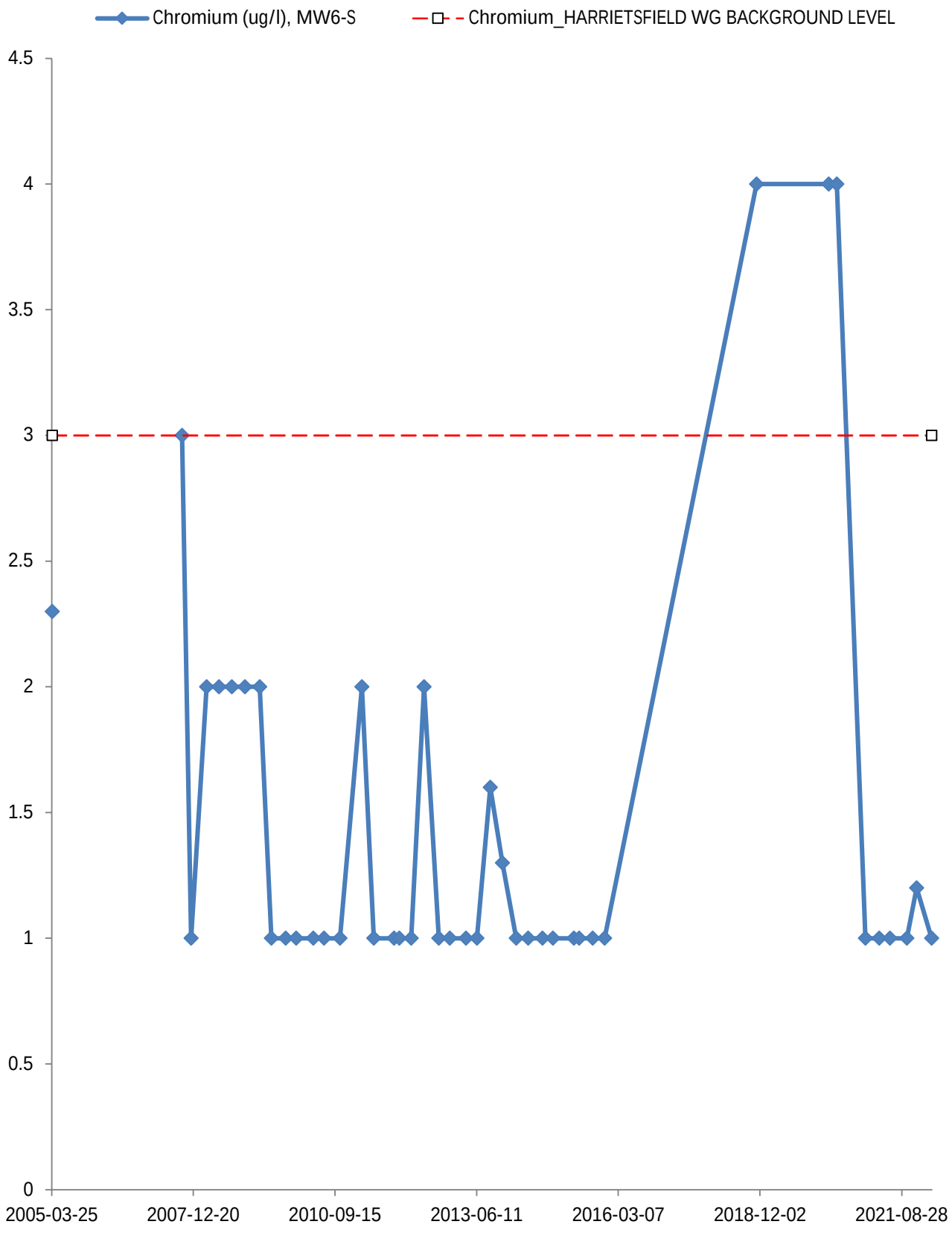
MW6-S-Chemical Oxygen Demand



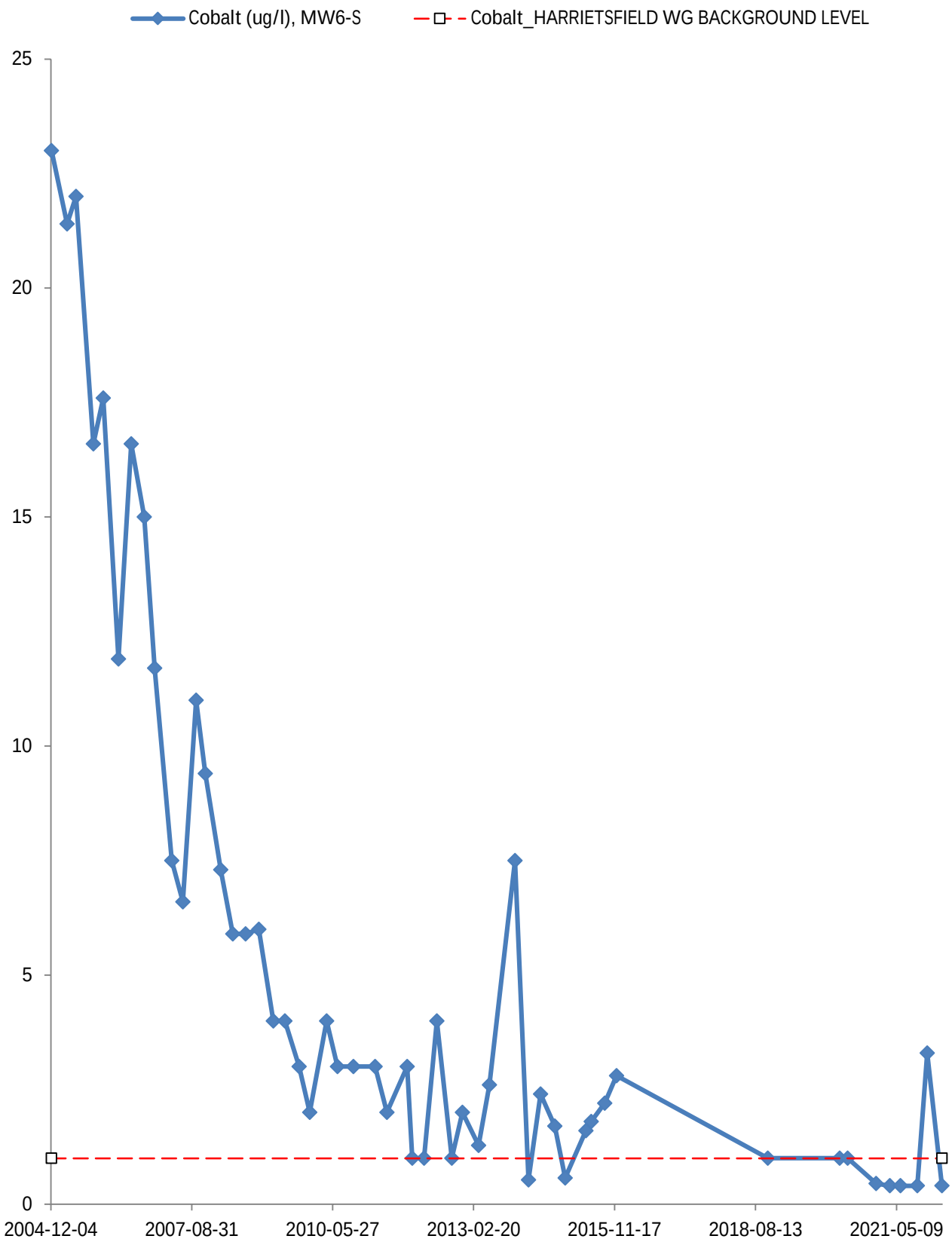
MW6-S-Chloride ion



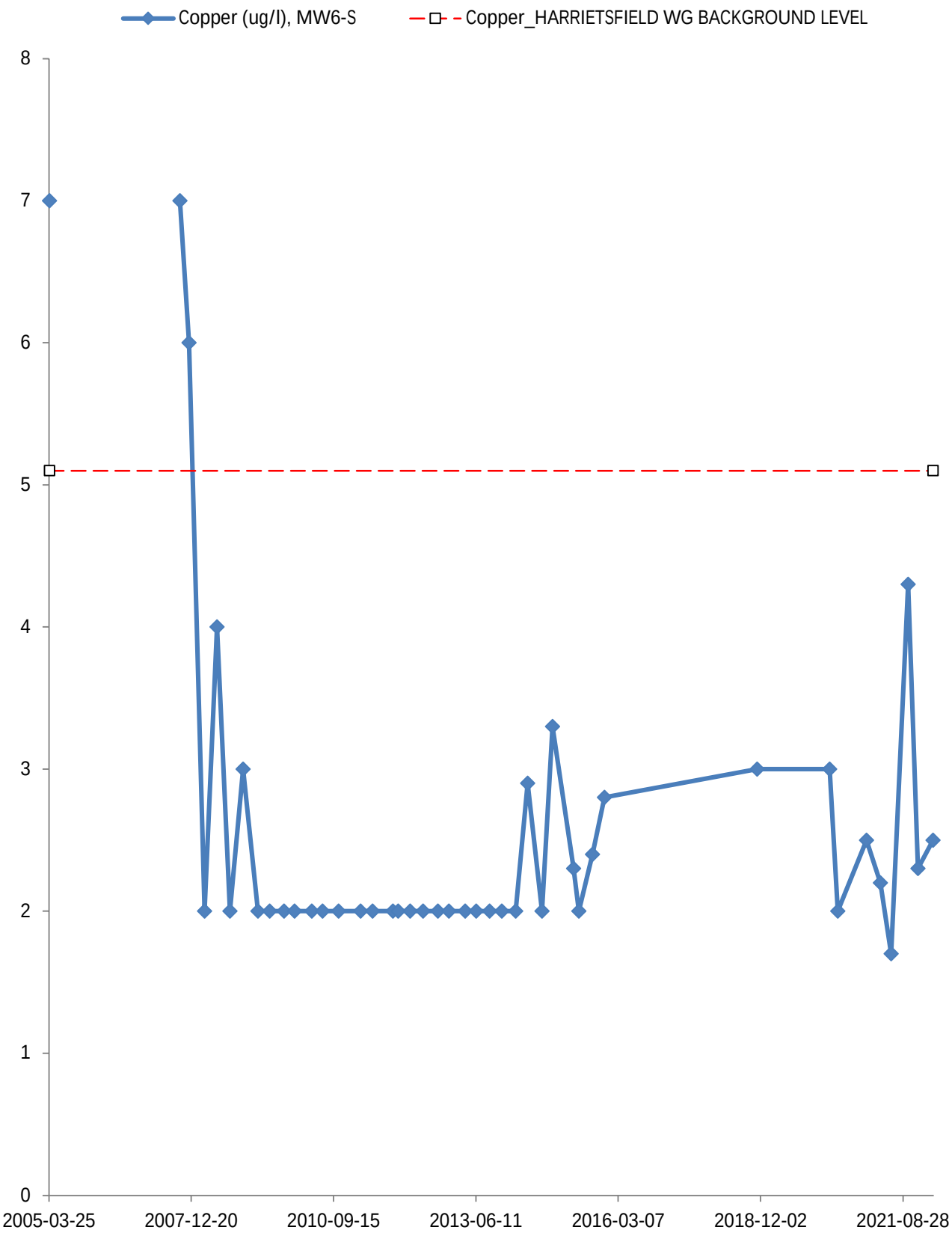
MW6-S-Chromium



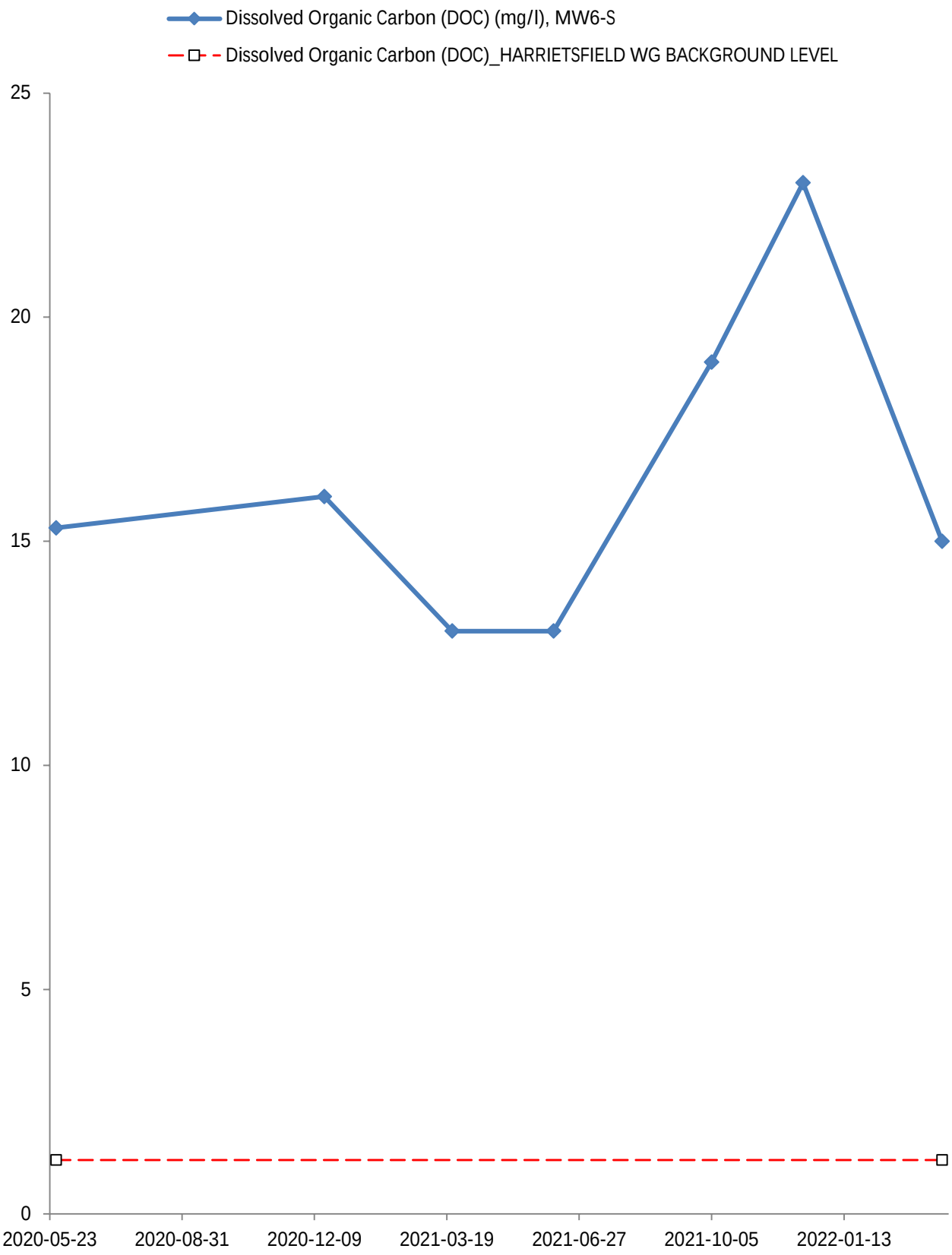
MW6-S-Cobalt


Cobalt (ug/l), MW6-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

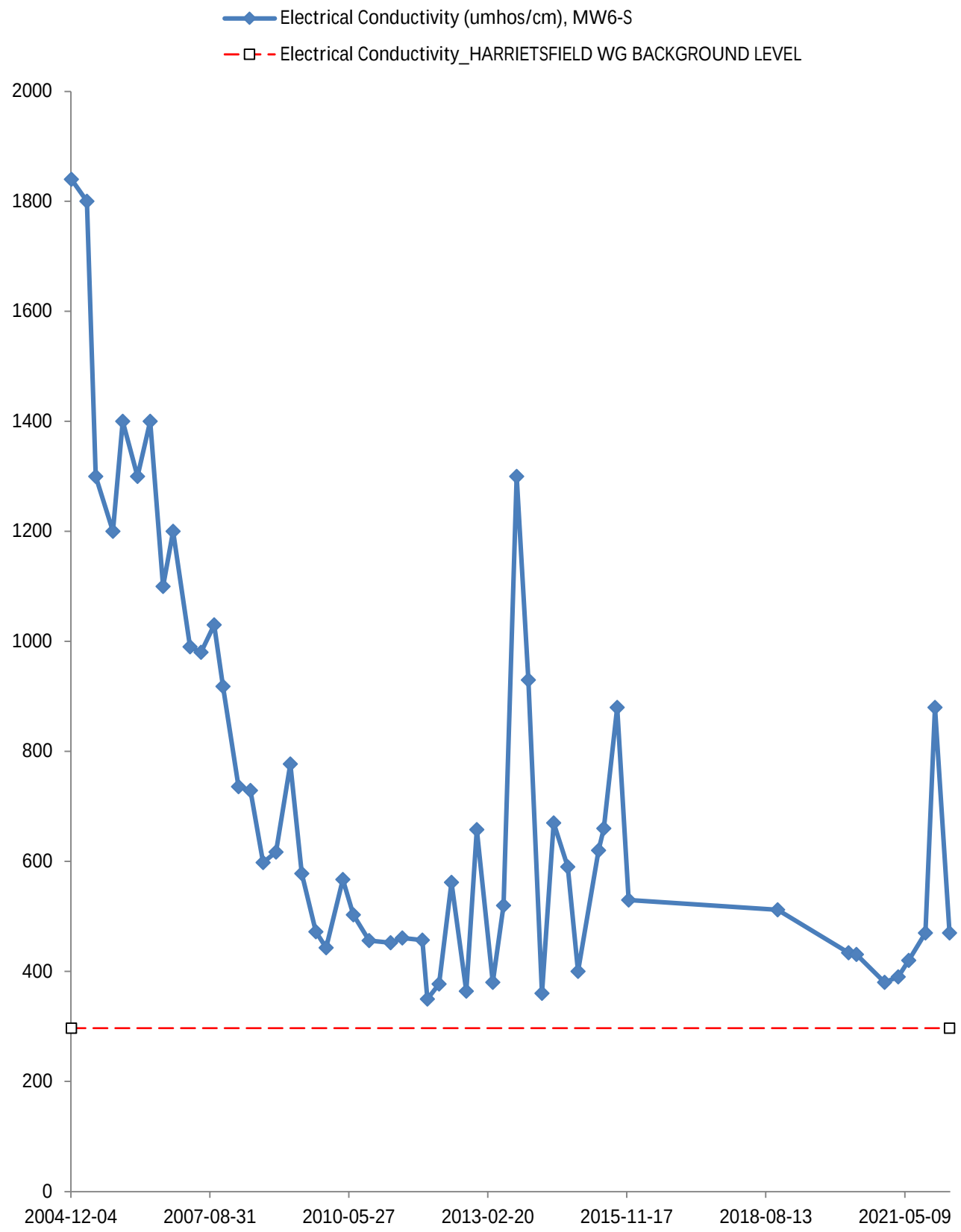
MW6-S-Copper


Copper (ug/l), MW6-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
8
7
6
5
4
3
2
1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

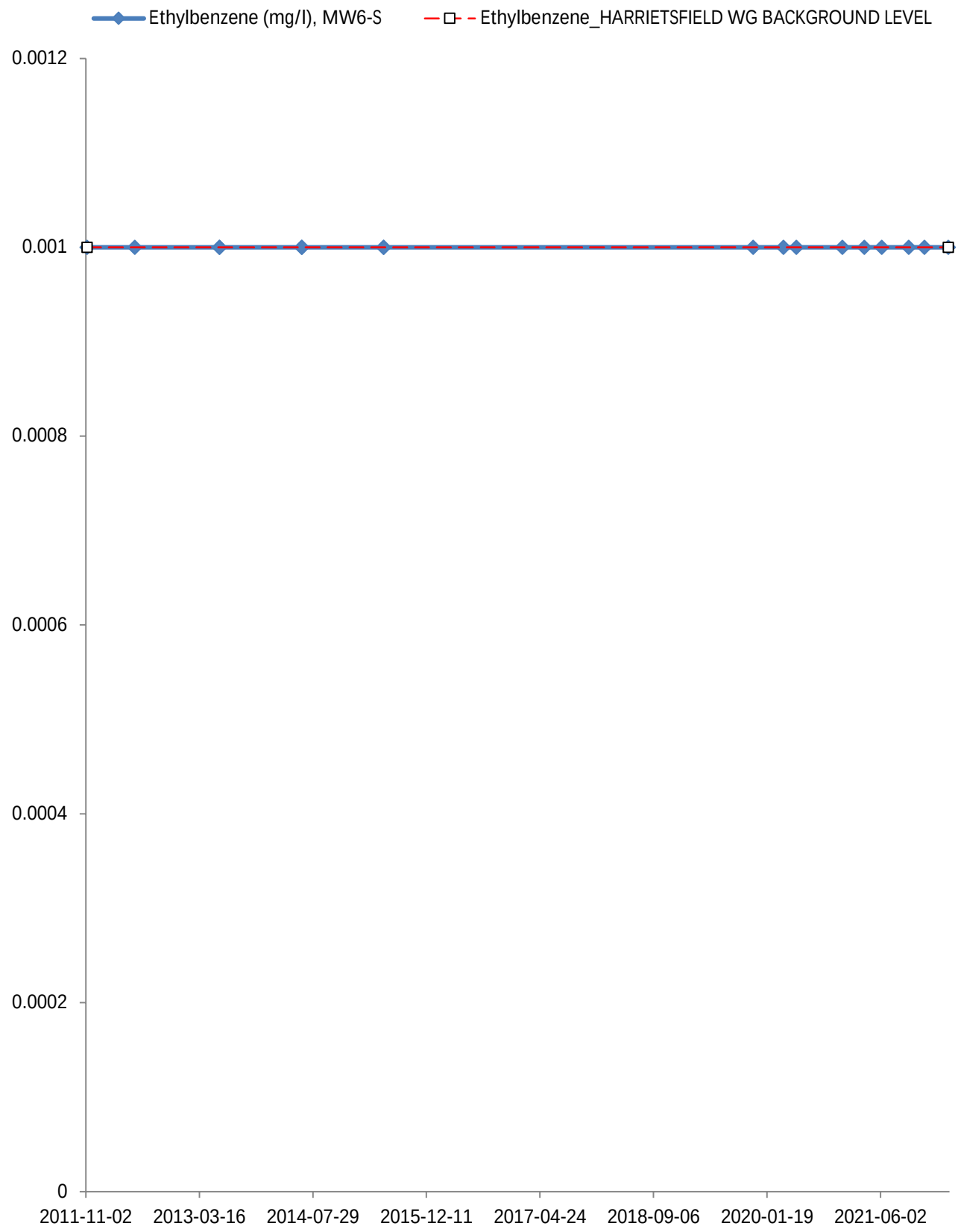
MW6-S-Dissolved Organic Carbon7



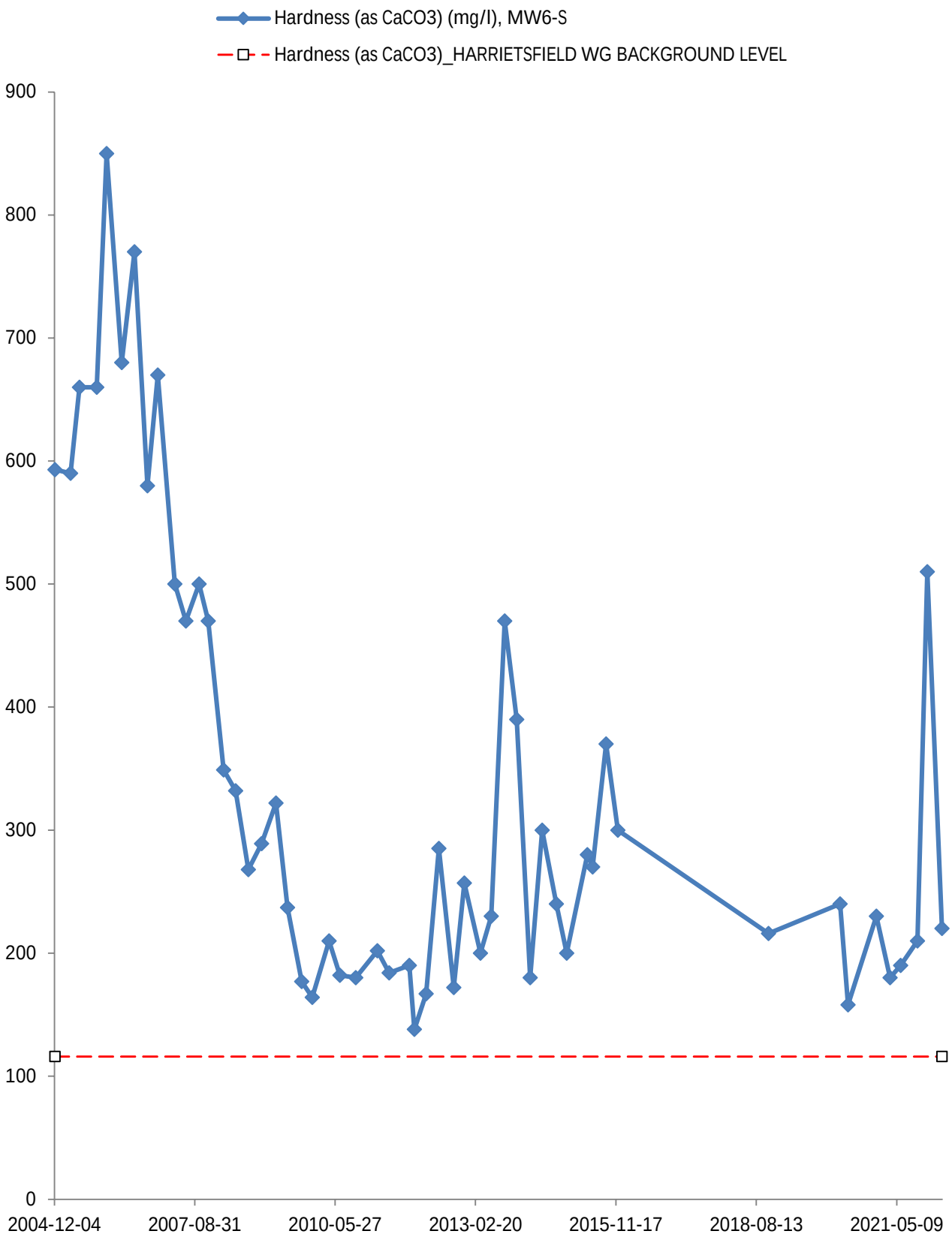
MW6-S-Electrical Conductivity



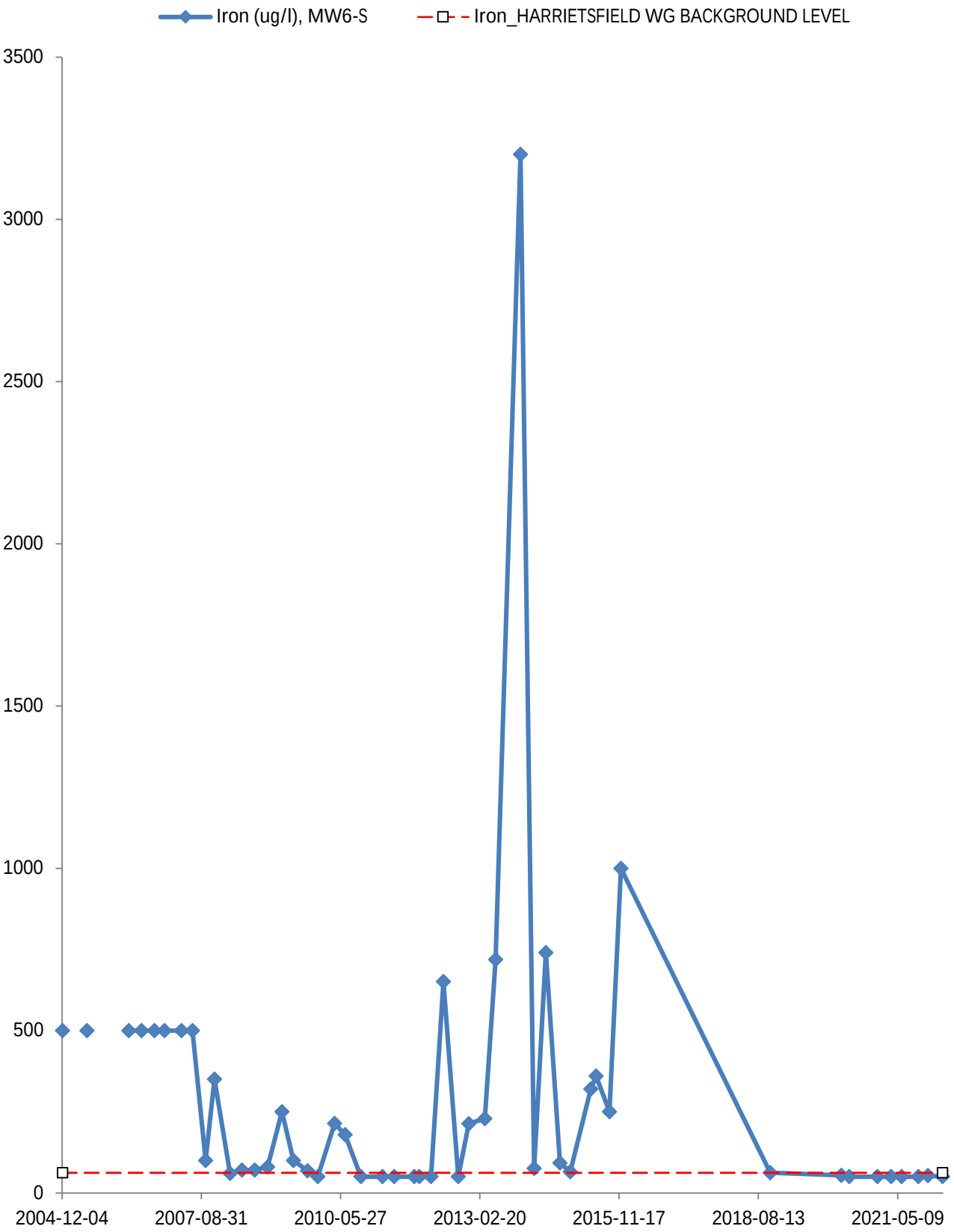
MW6-S-Ethylbenzene



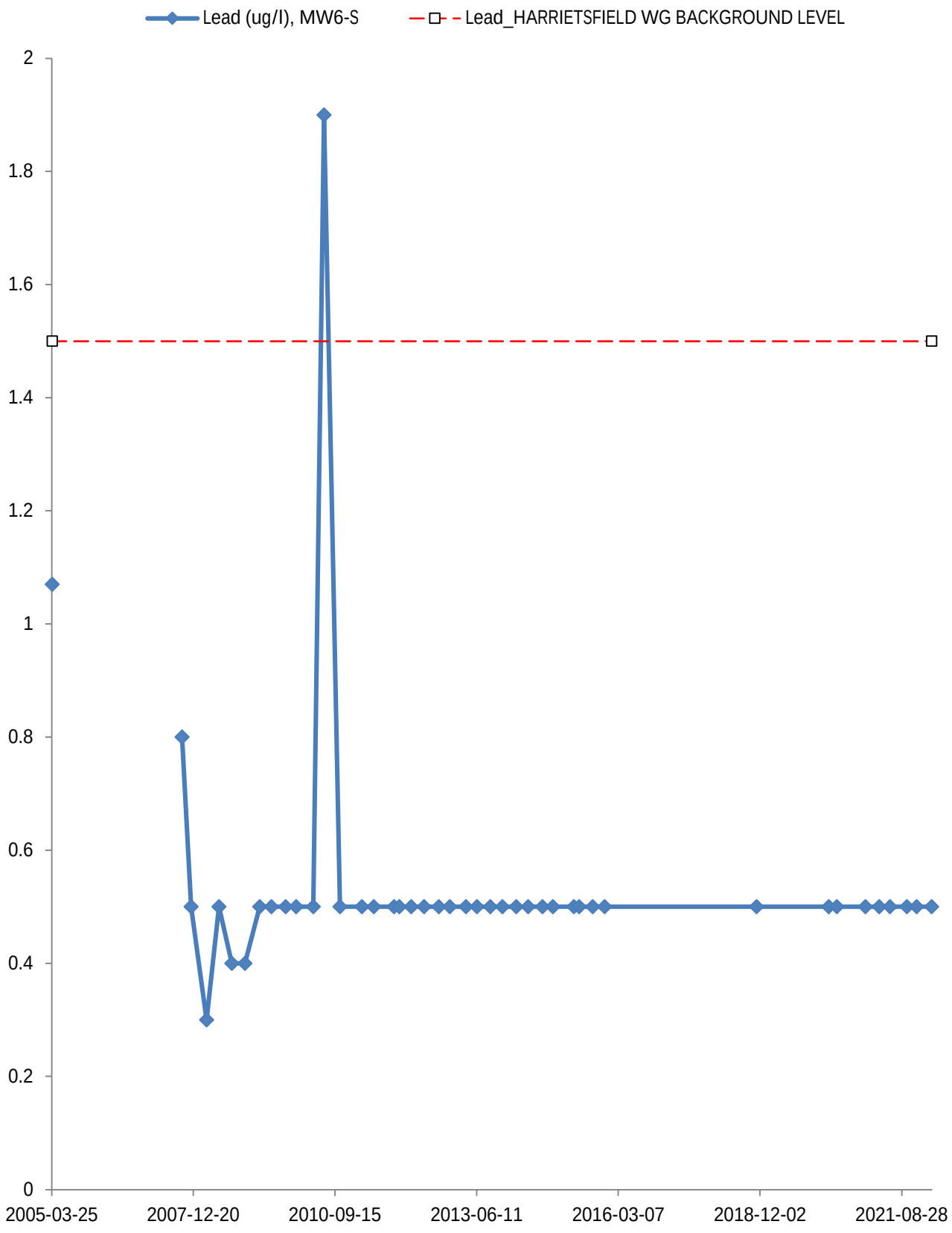
MW6-S-Hardness (as CaCO3)



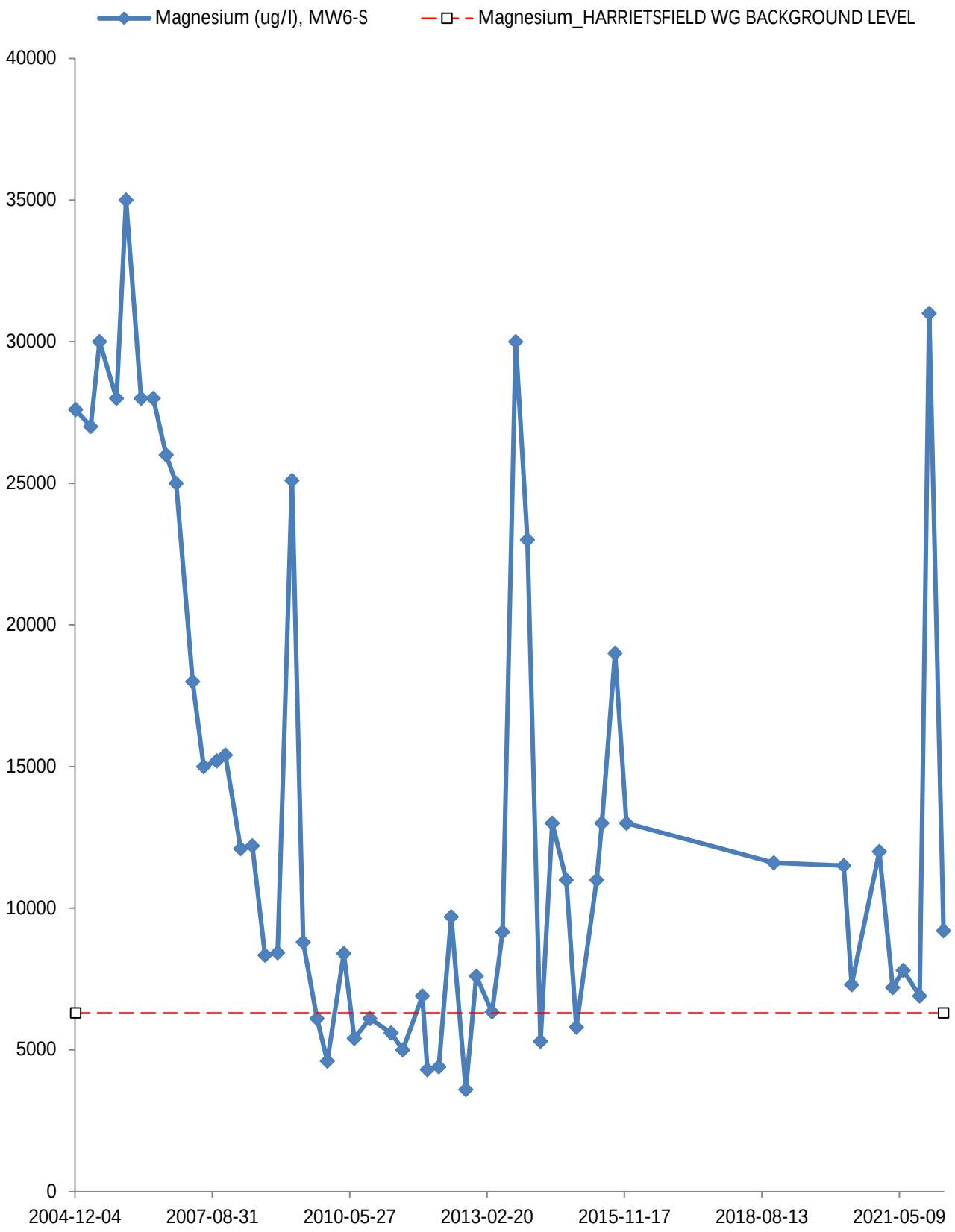
MW6-S-Iron


Iron (ug/l), MW6-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
3500
3000
2500
2000
1500
1000
500
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

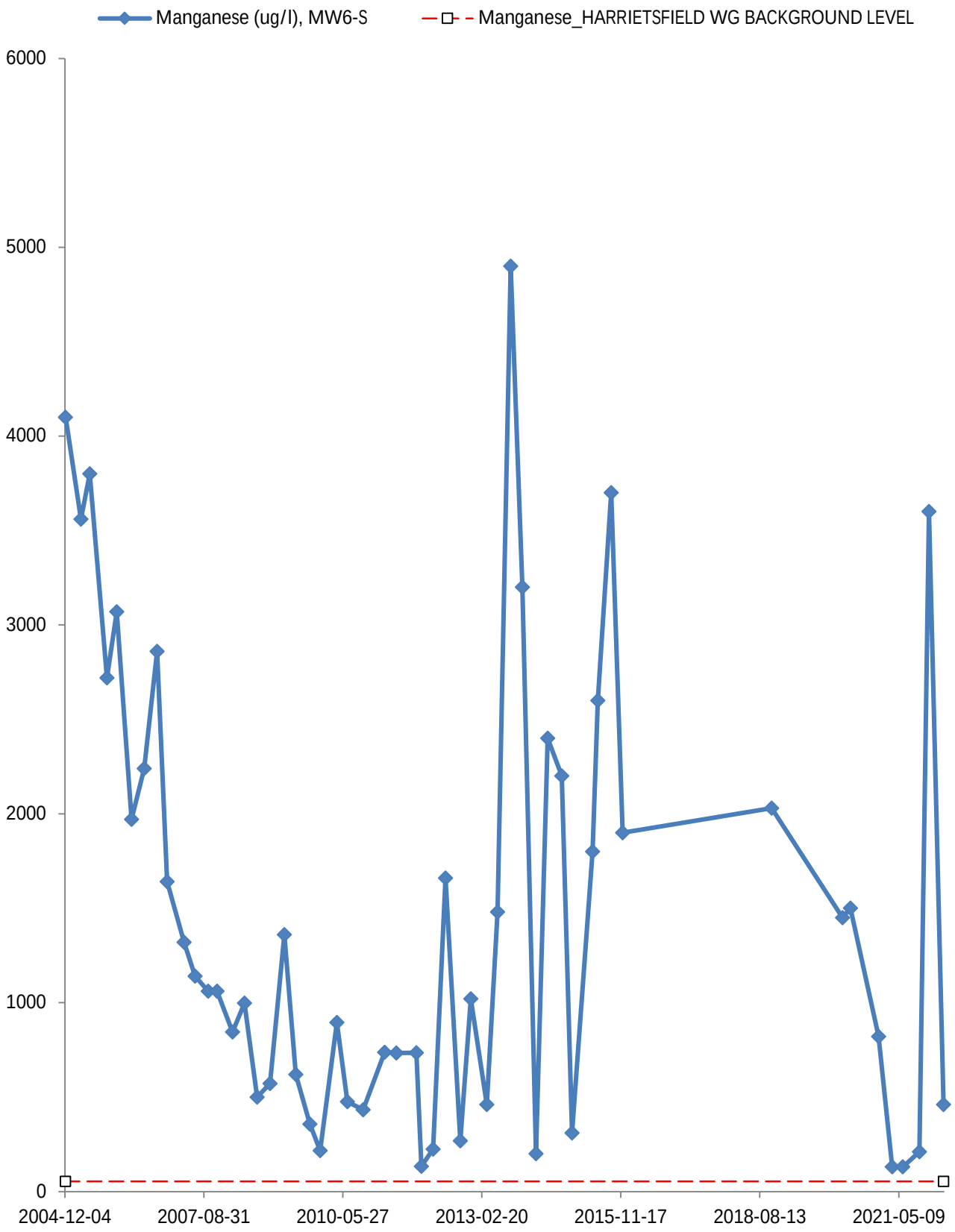
MW6-S-Lead


Lead (ug/l), MW6-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

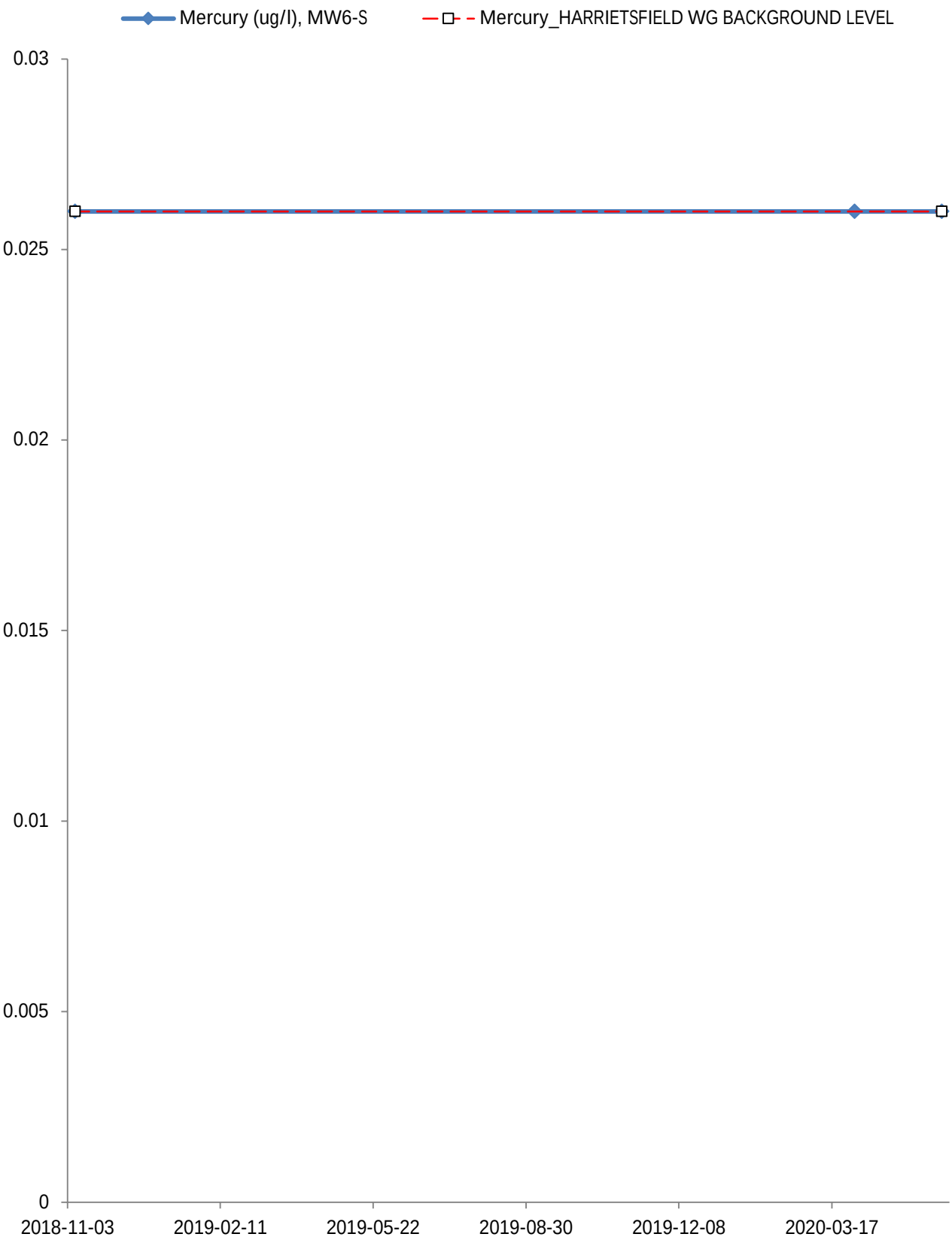
MW6-S-Magnesium



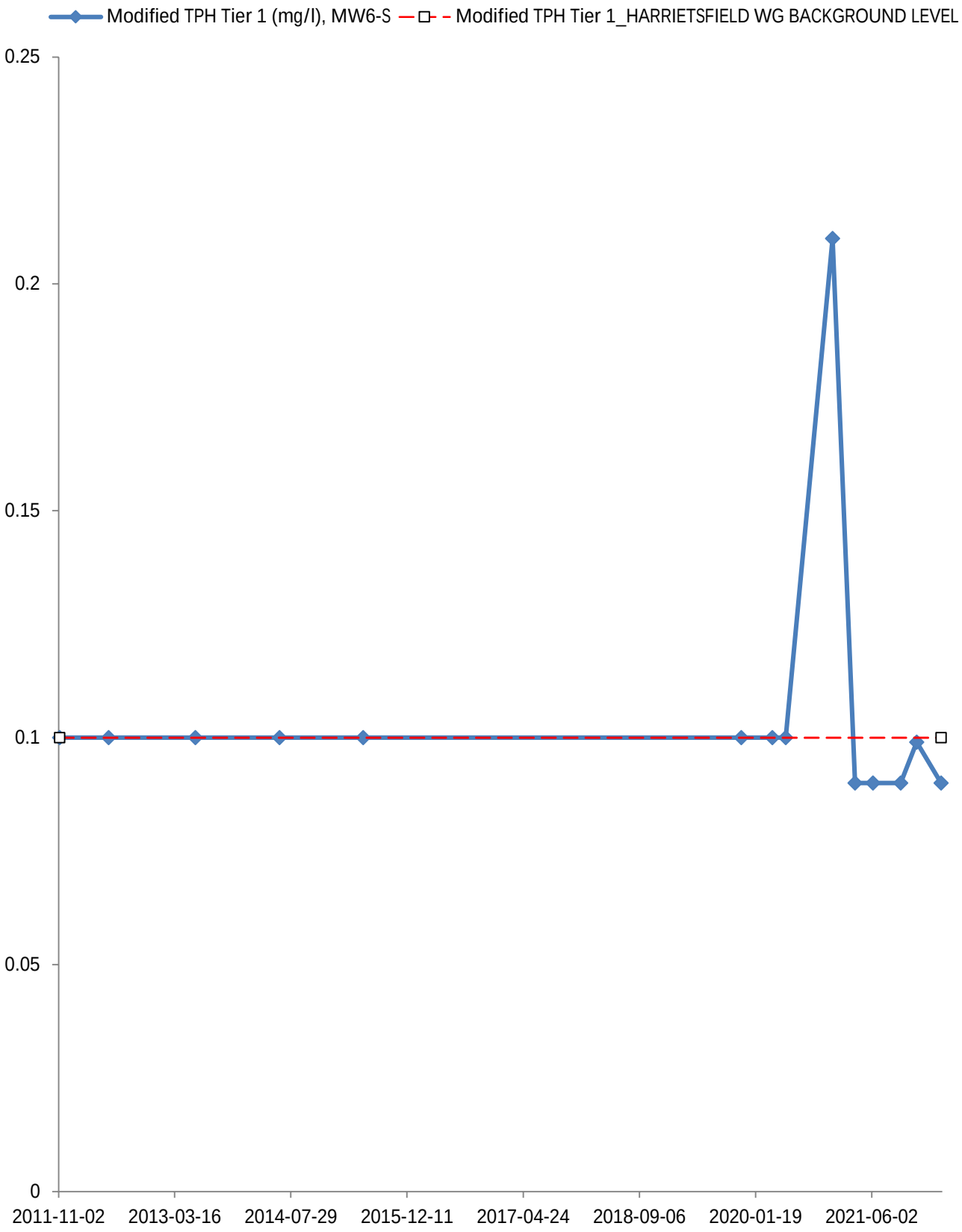
MW6-S-Manganese



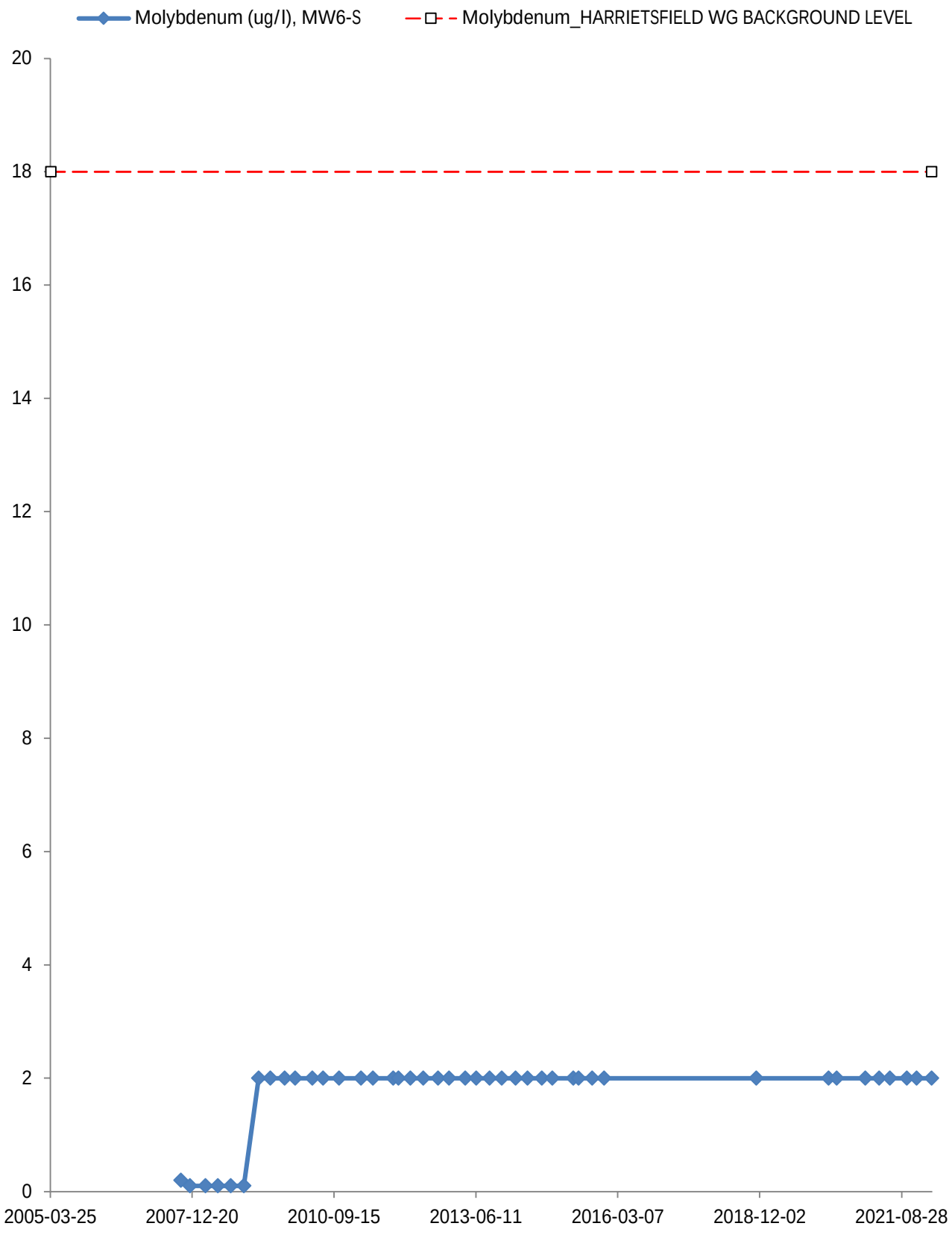
MW6-S-Mercury

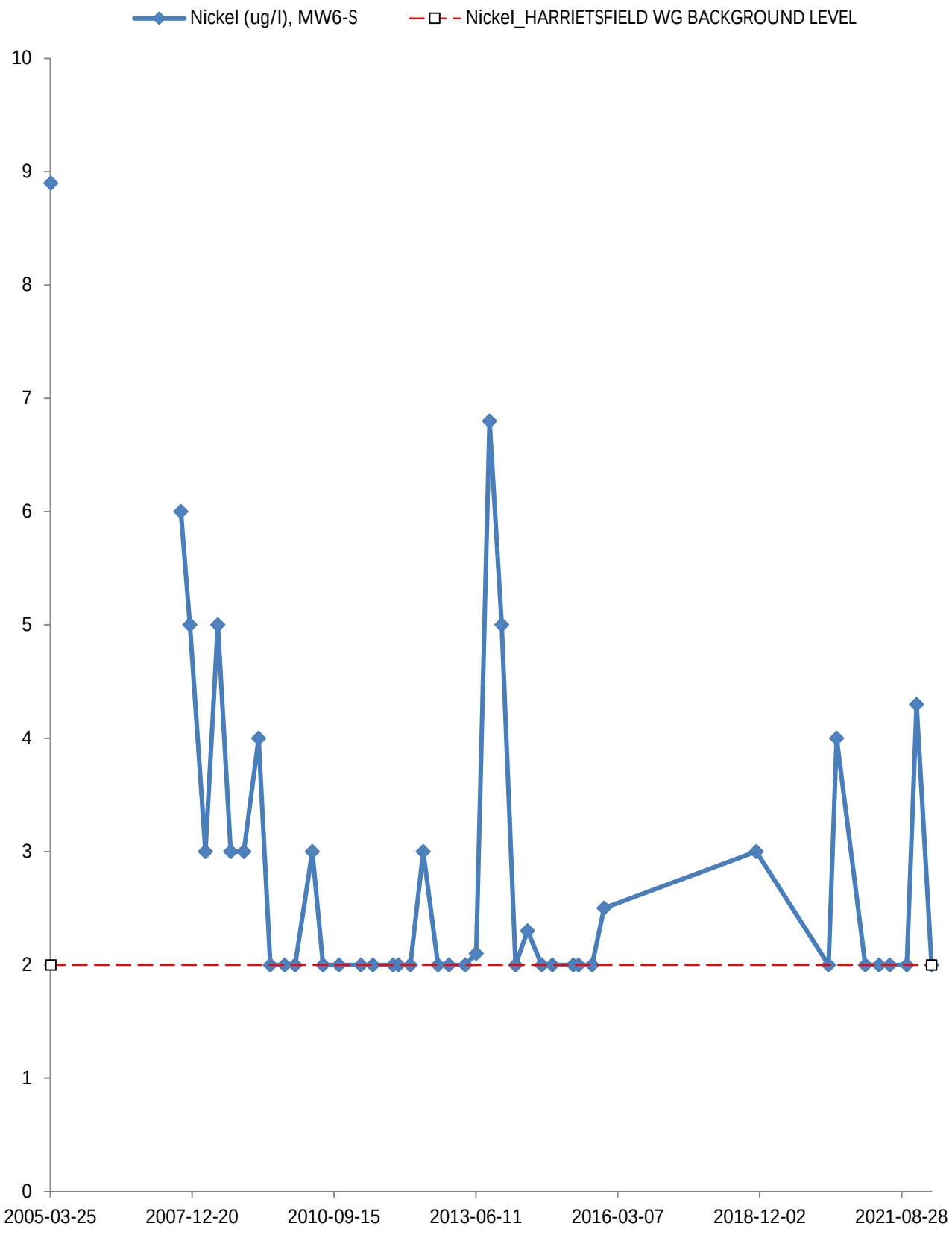


MW6-S-Modified TPH Tier 1

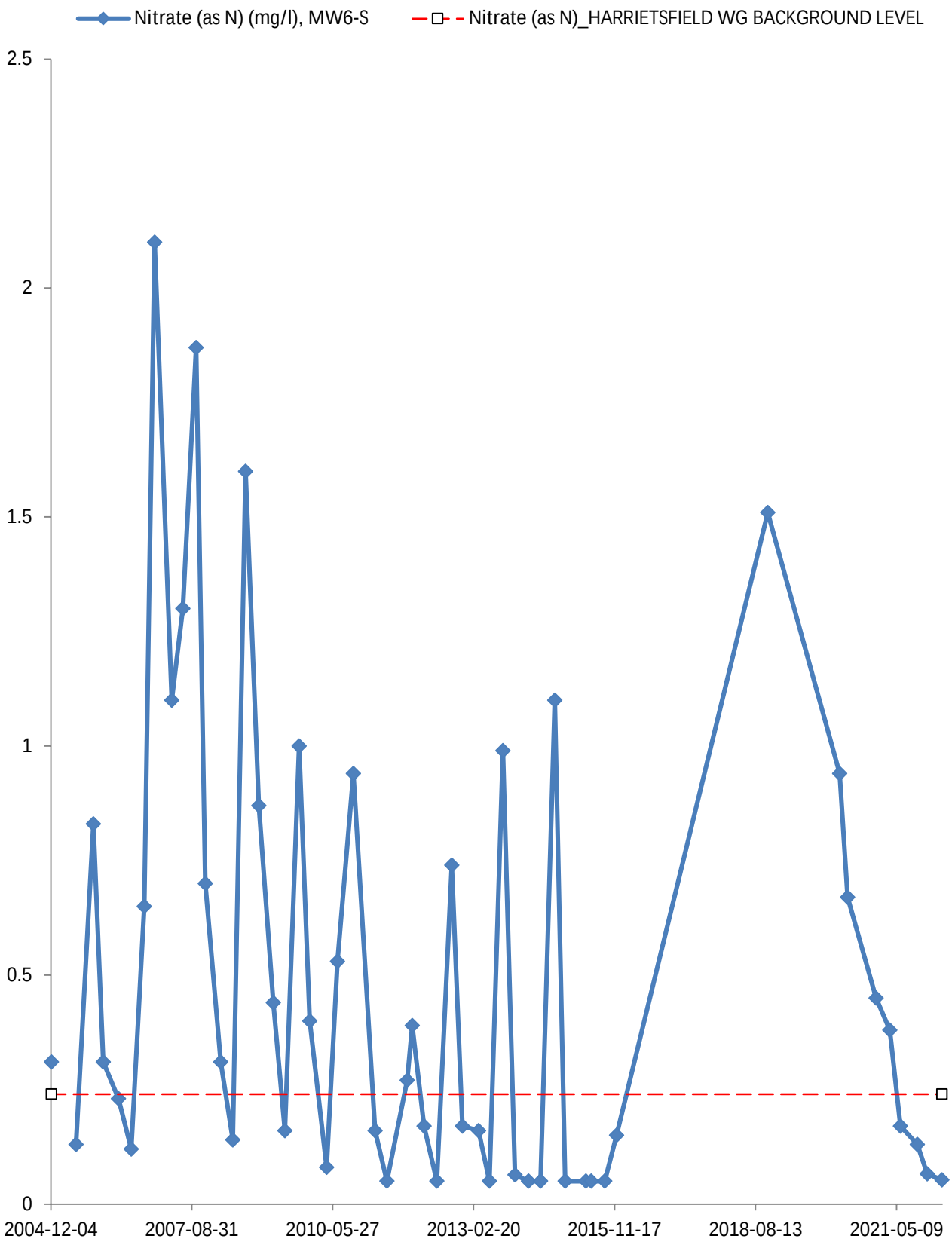


MW6-S-Molybdenum

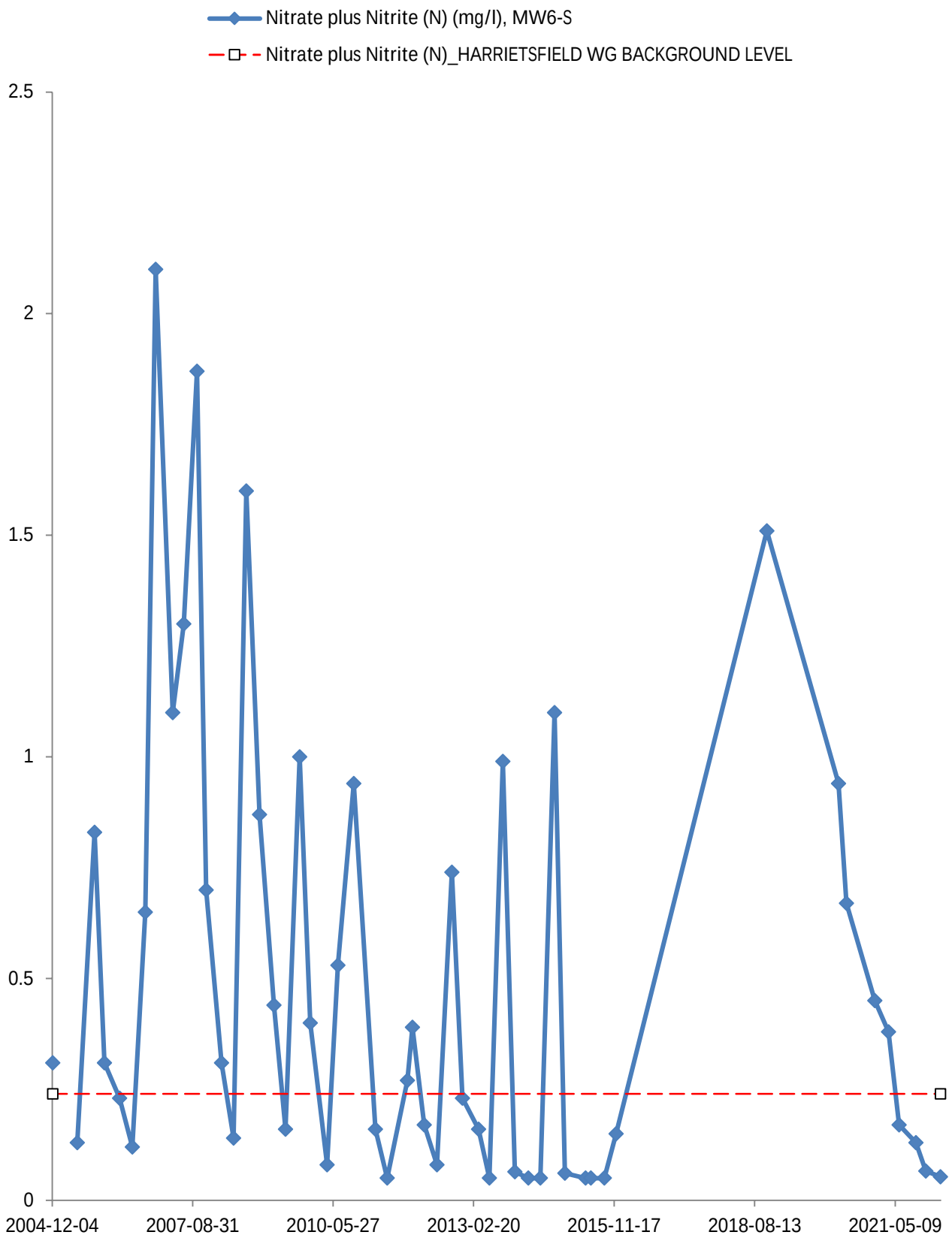



Nickel (ug/l), MW6-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

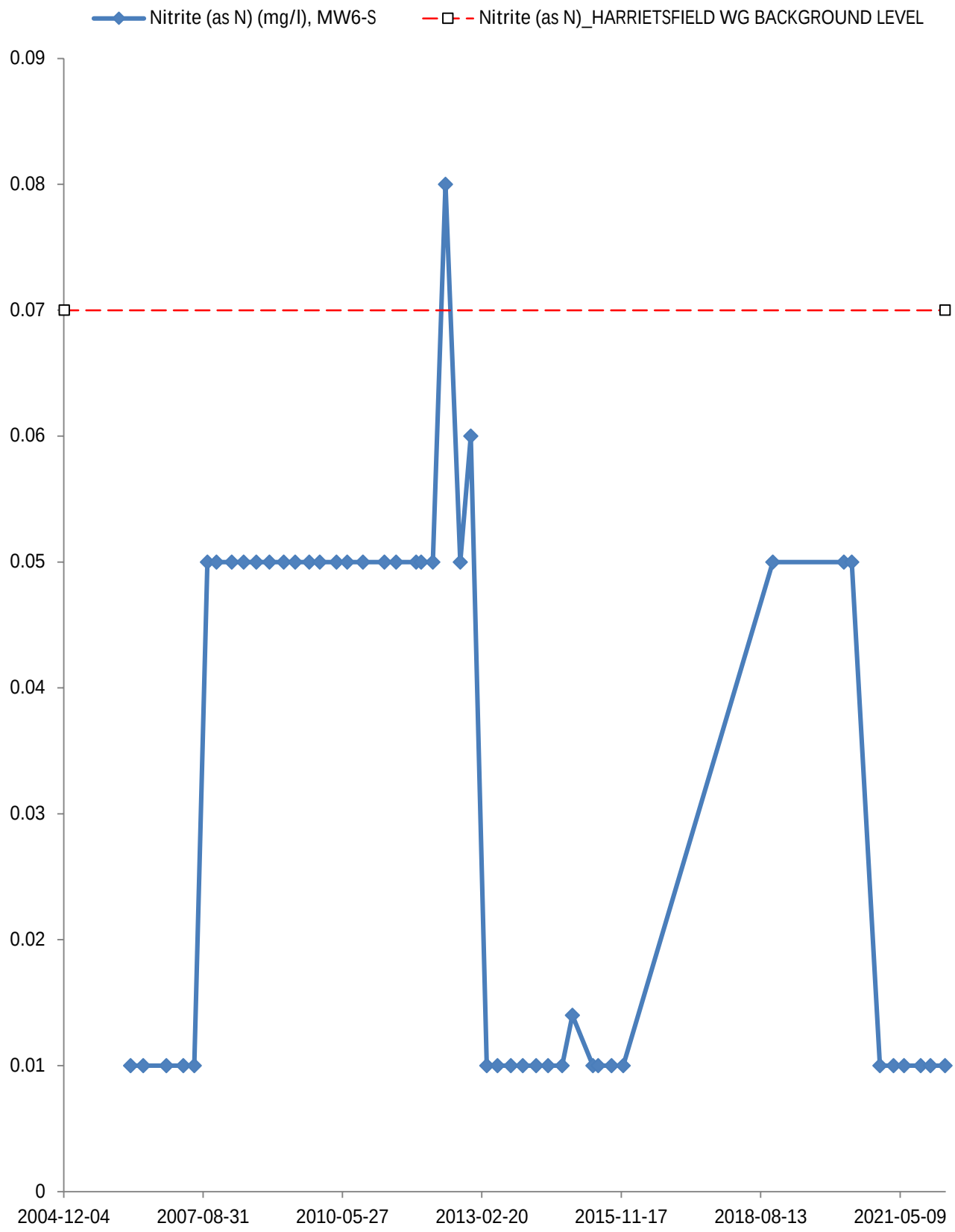
MW6-S-Nitrate (as N)



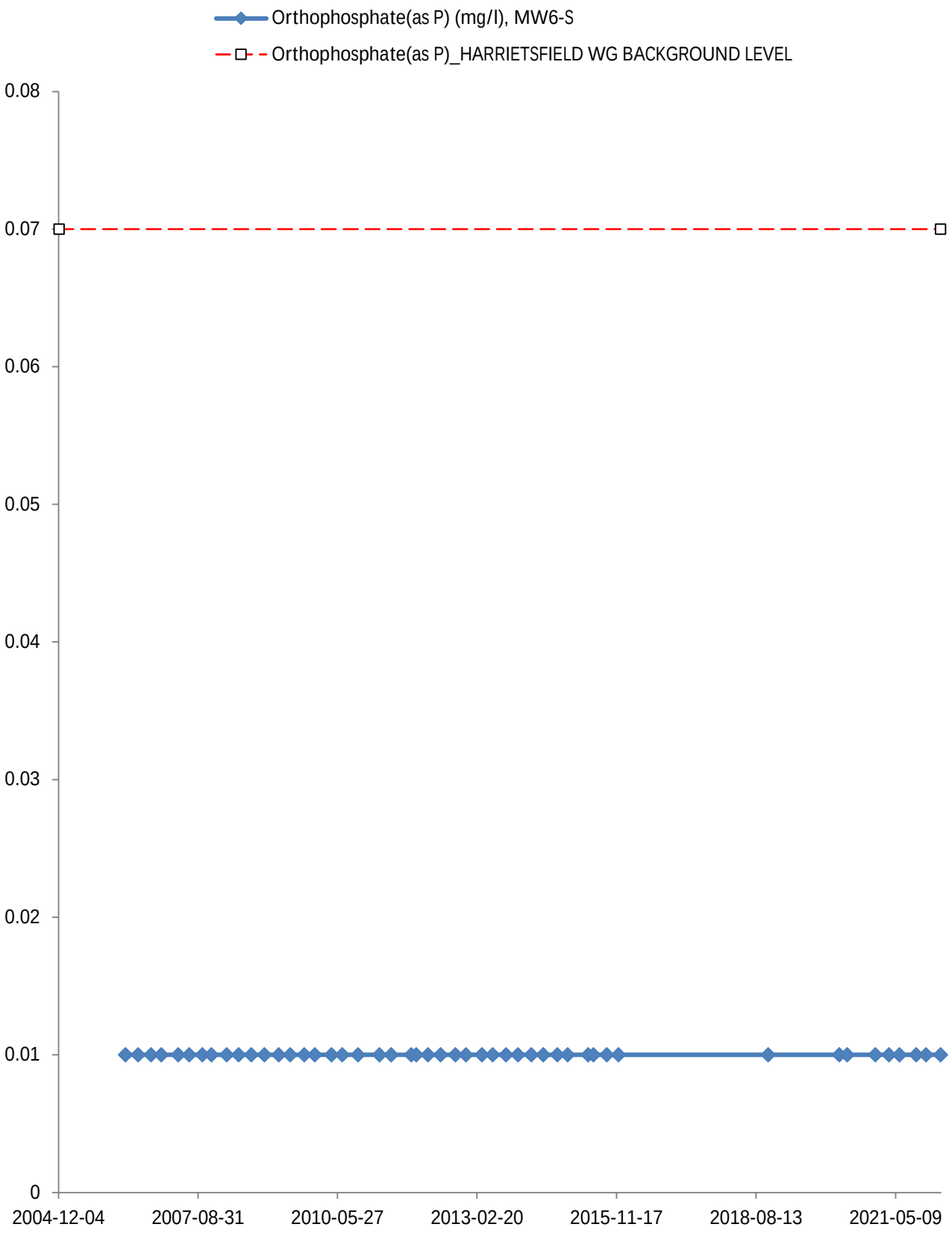
MW6-S-Nitrate plus Nitrite (N)



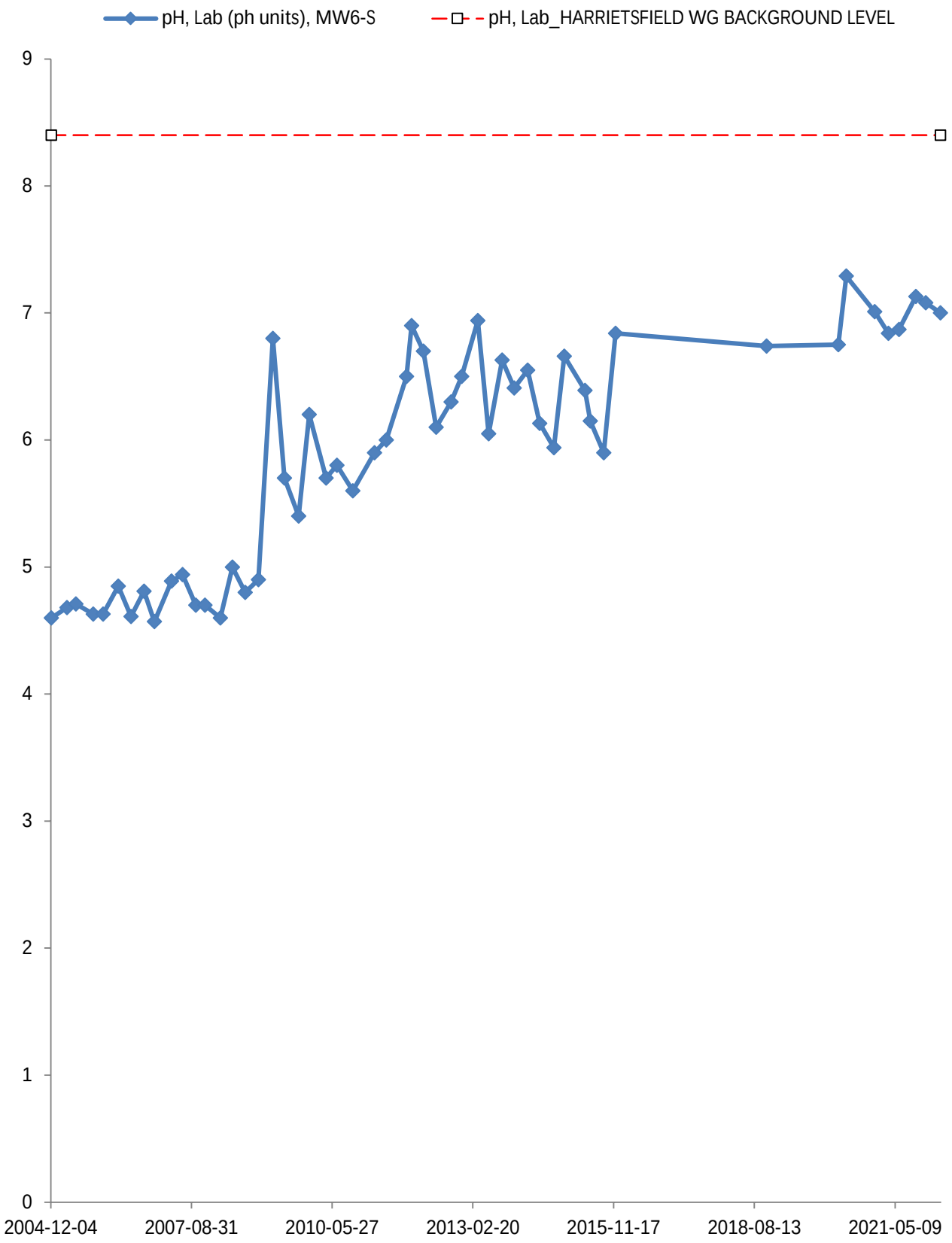
MW6-S-Nitrite (as N)



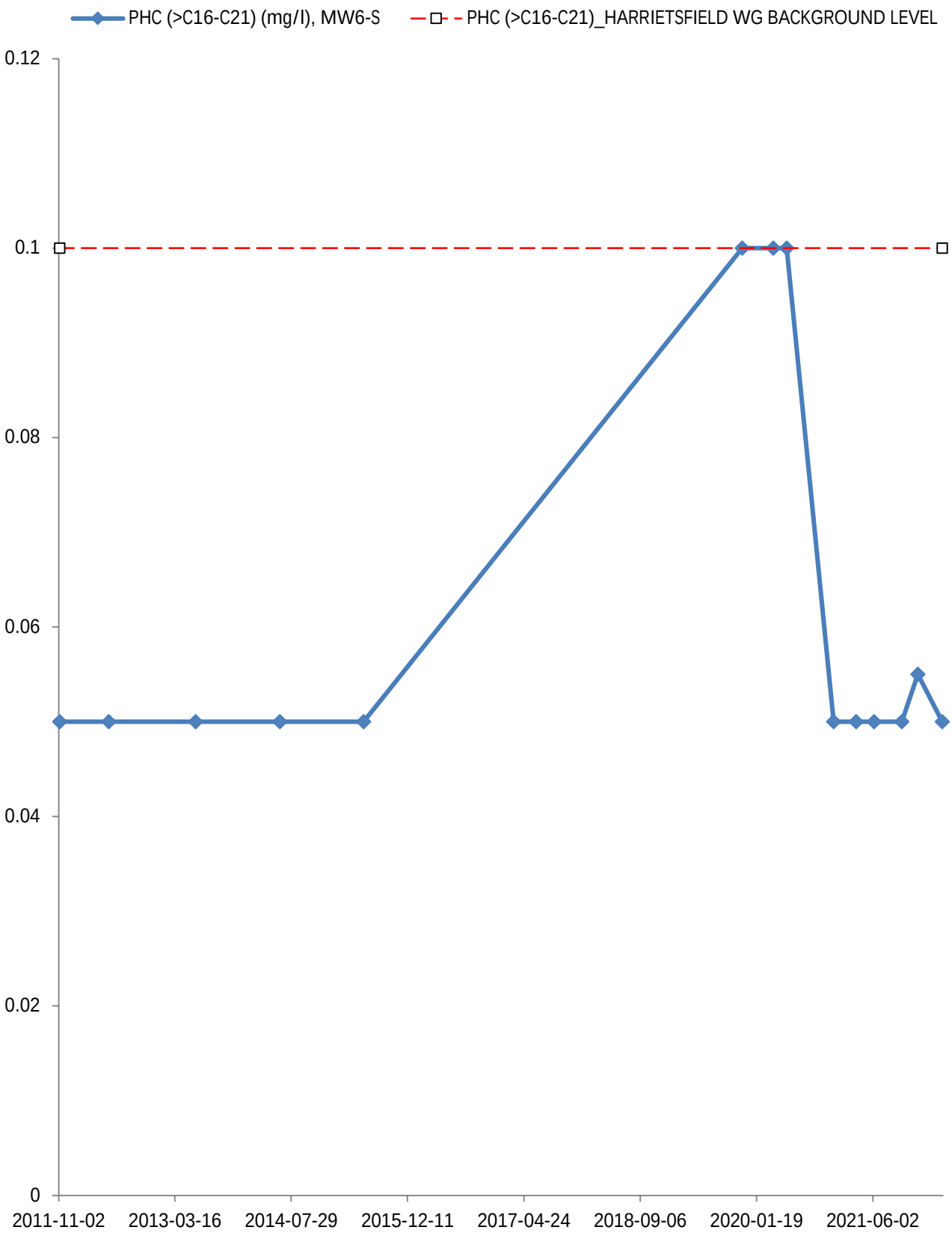
MW6-S-Orthophosphate(as P)



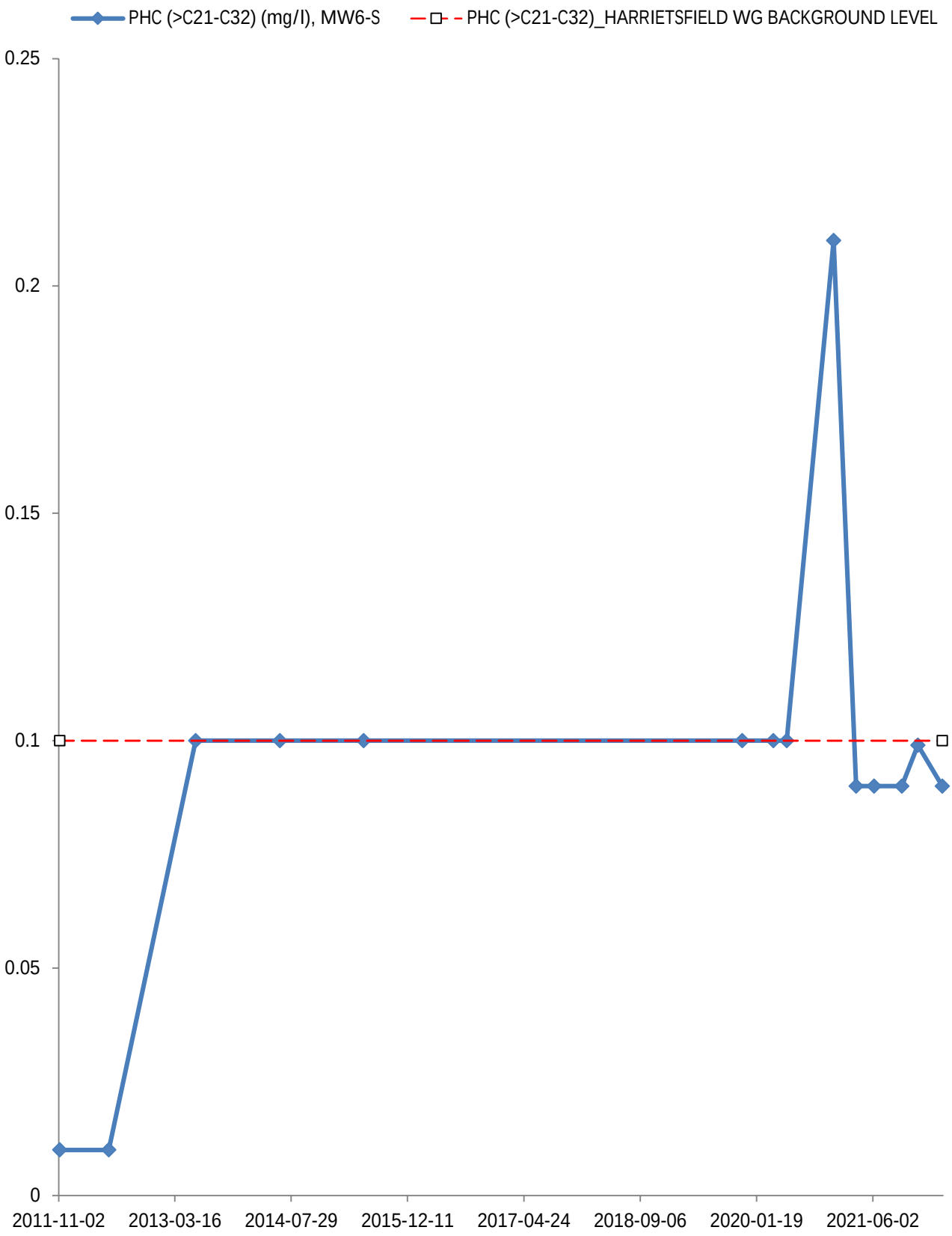
MW6-S-pH, Lab


pH, Lab (ph units), MW6-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

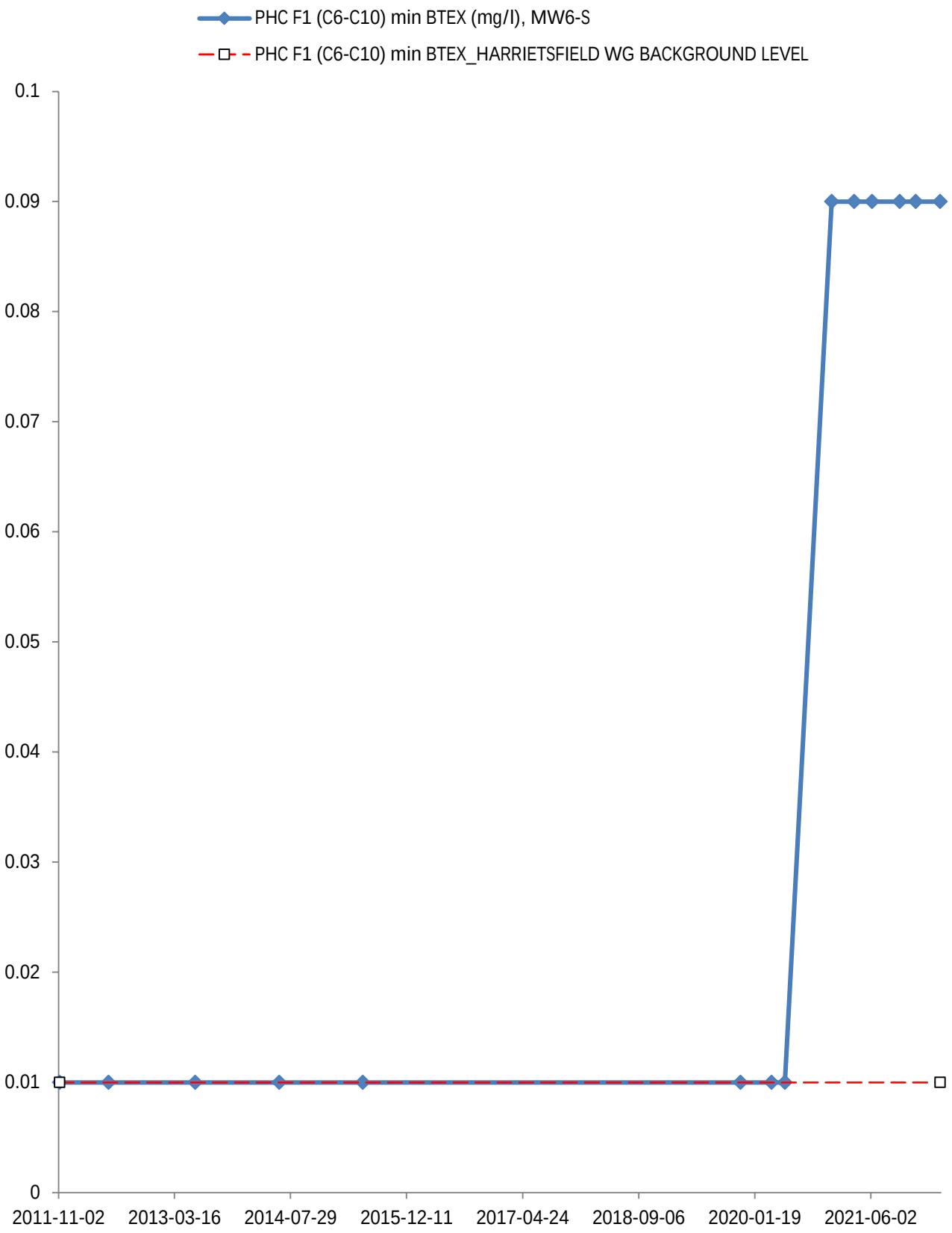
MW6-S-PHC (>C16-C21)



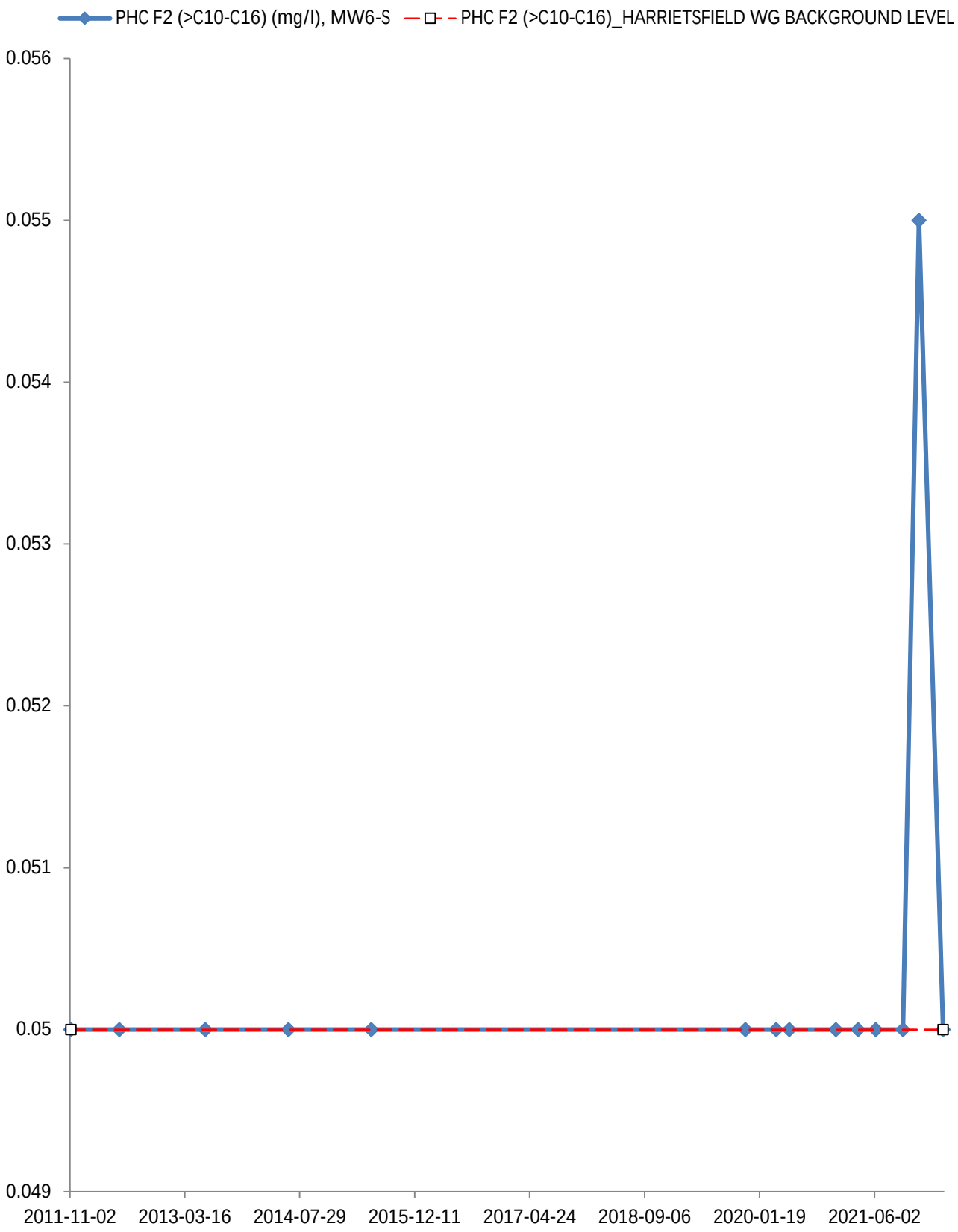
MW6-S-PHC (>C21-C32)



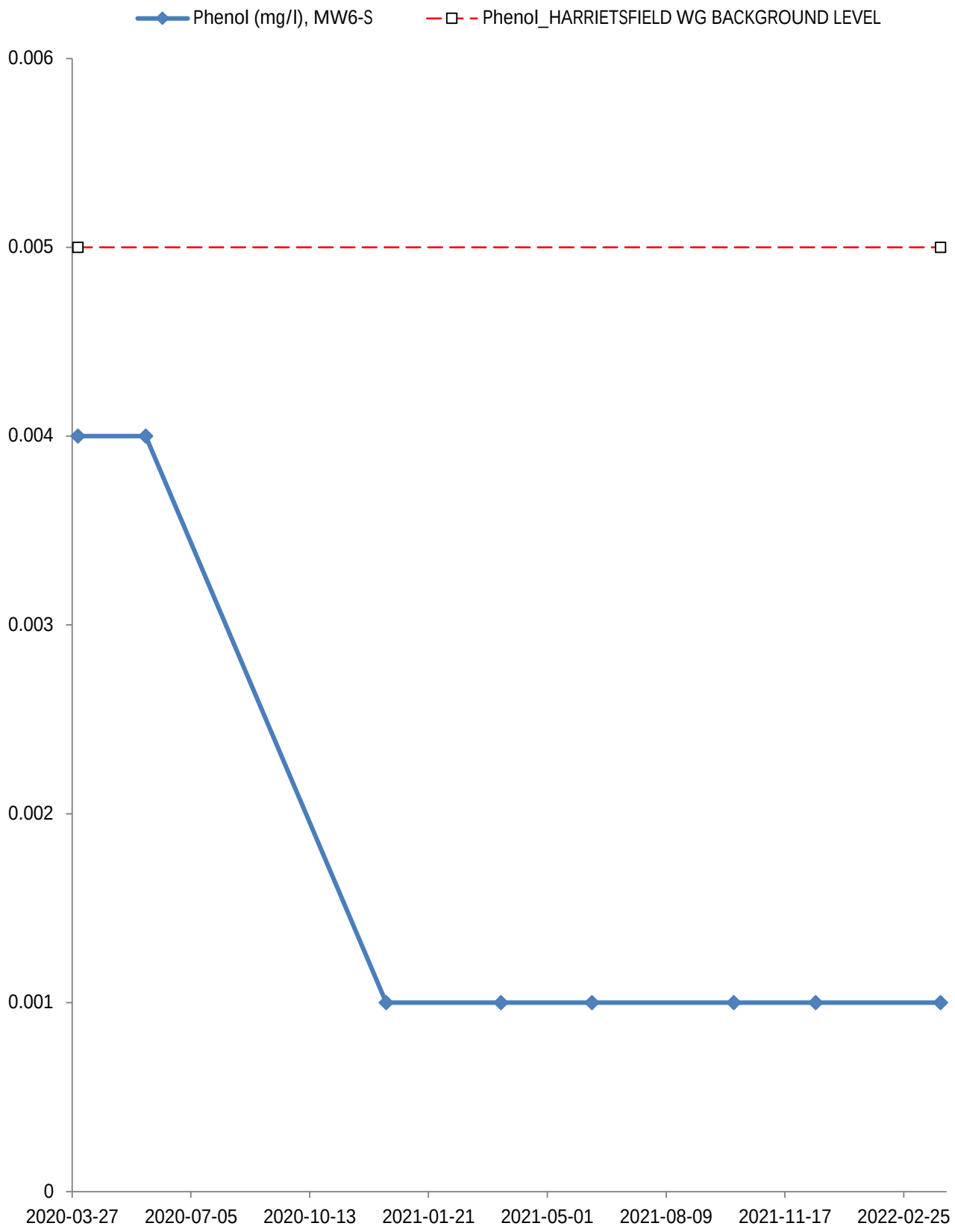
MW6-S-PHC F1 (C6-C10) min BTEX



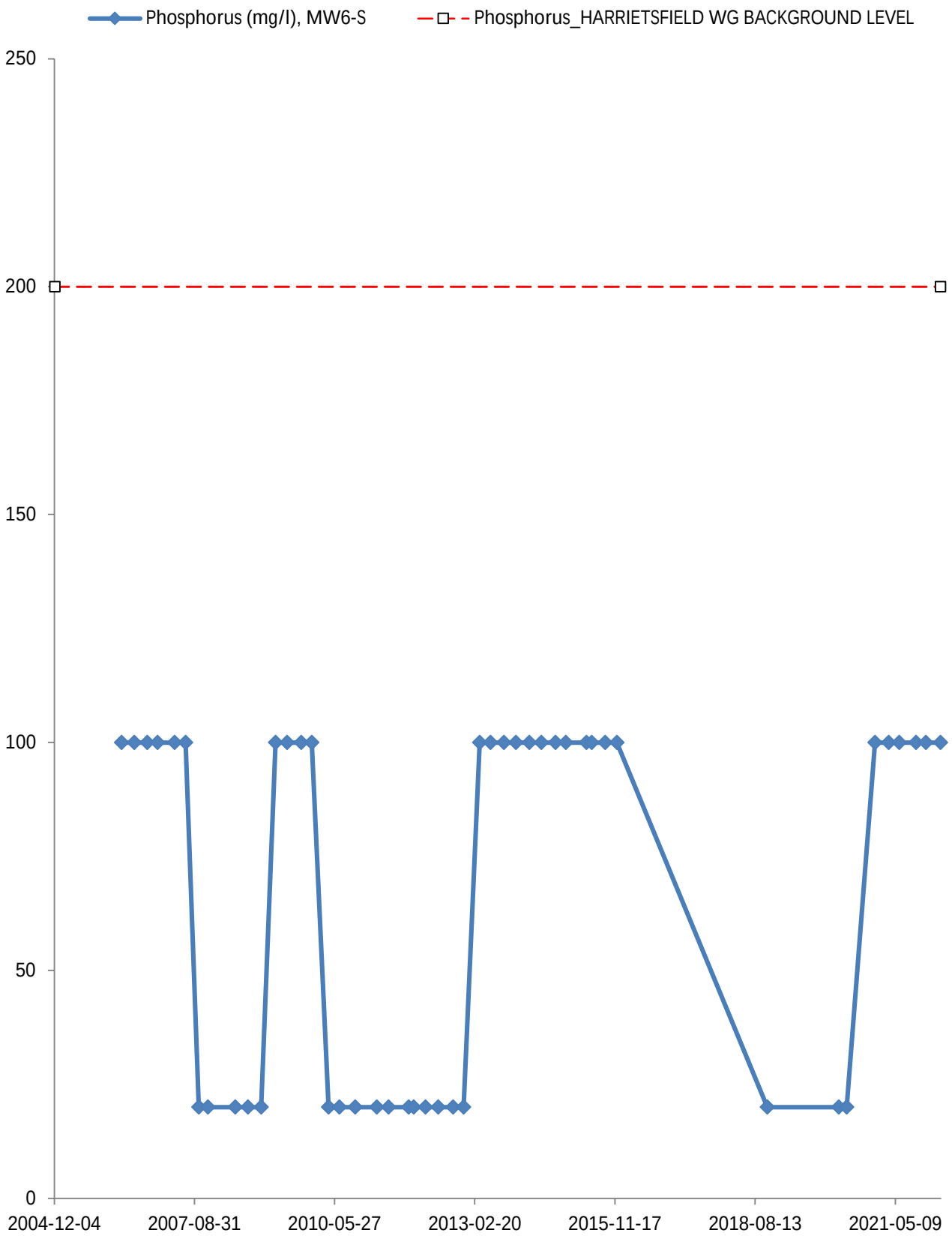
MW6-S-PHC F2 (>C10-C16)



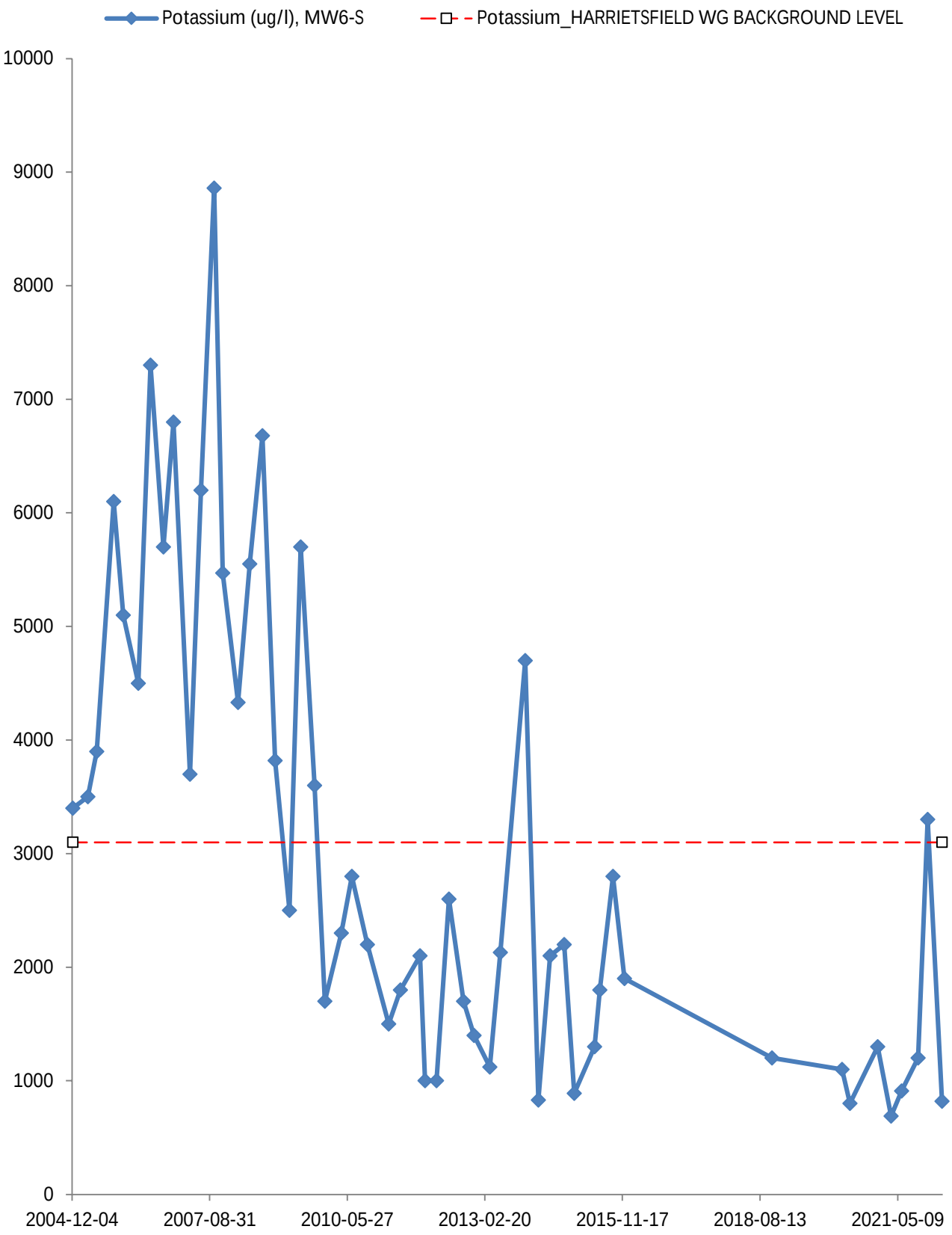
MW6-S-Phenol


Phenol (mg/l), MW6-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

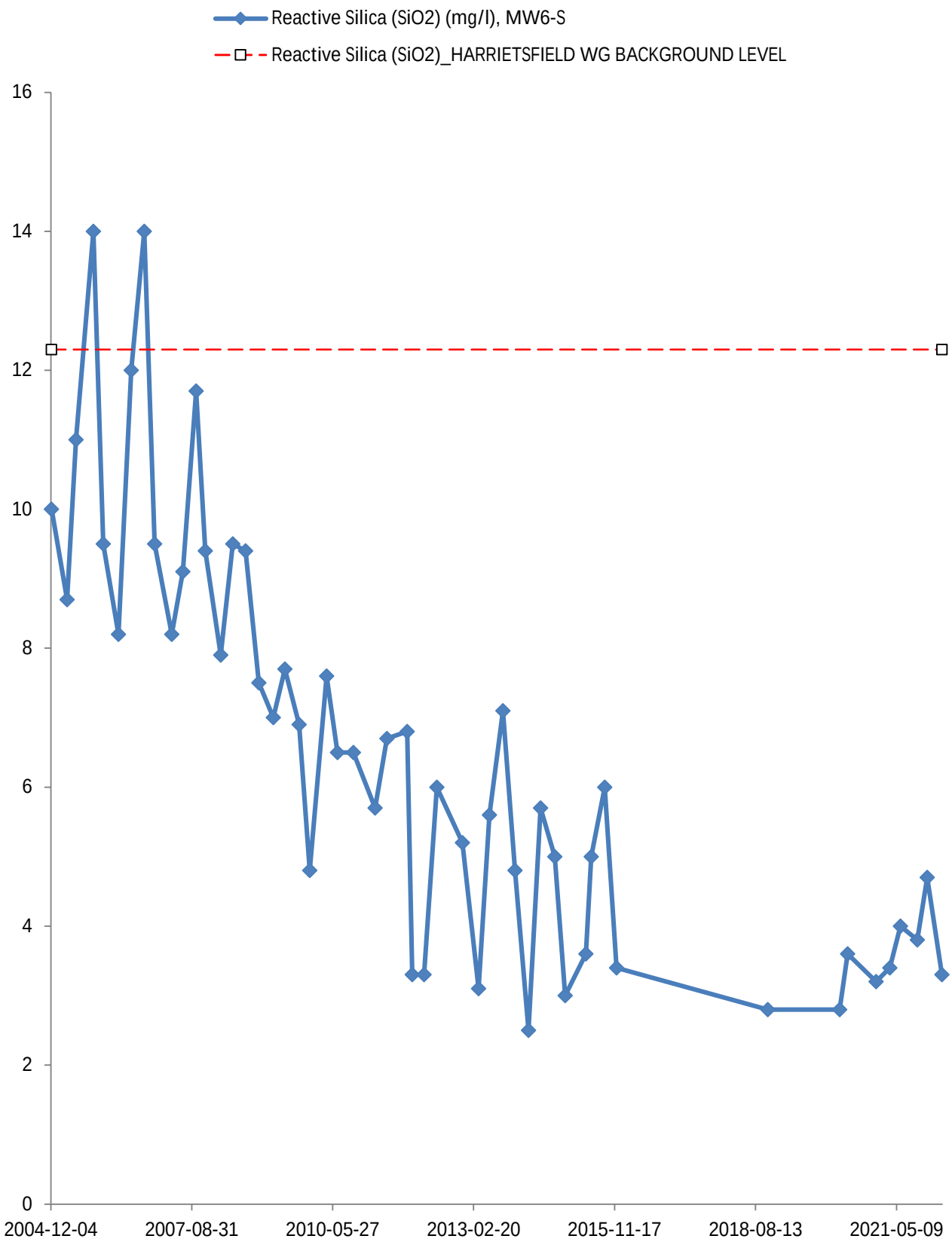
MW6-S-Phosphorus



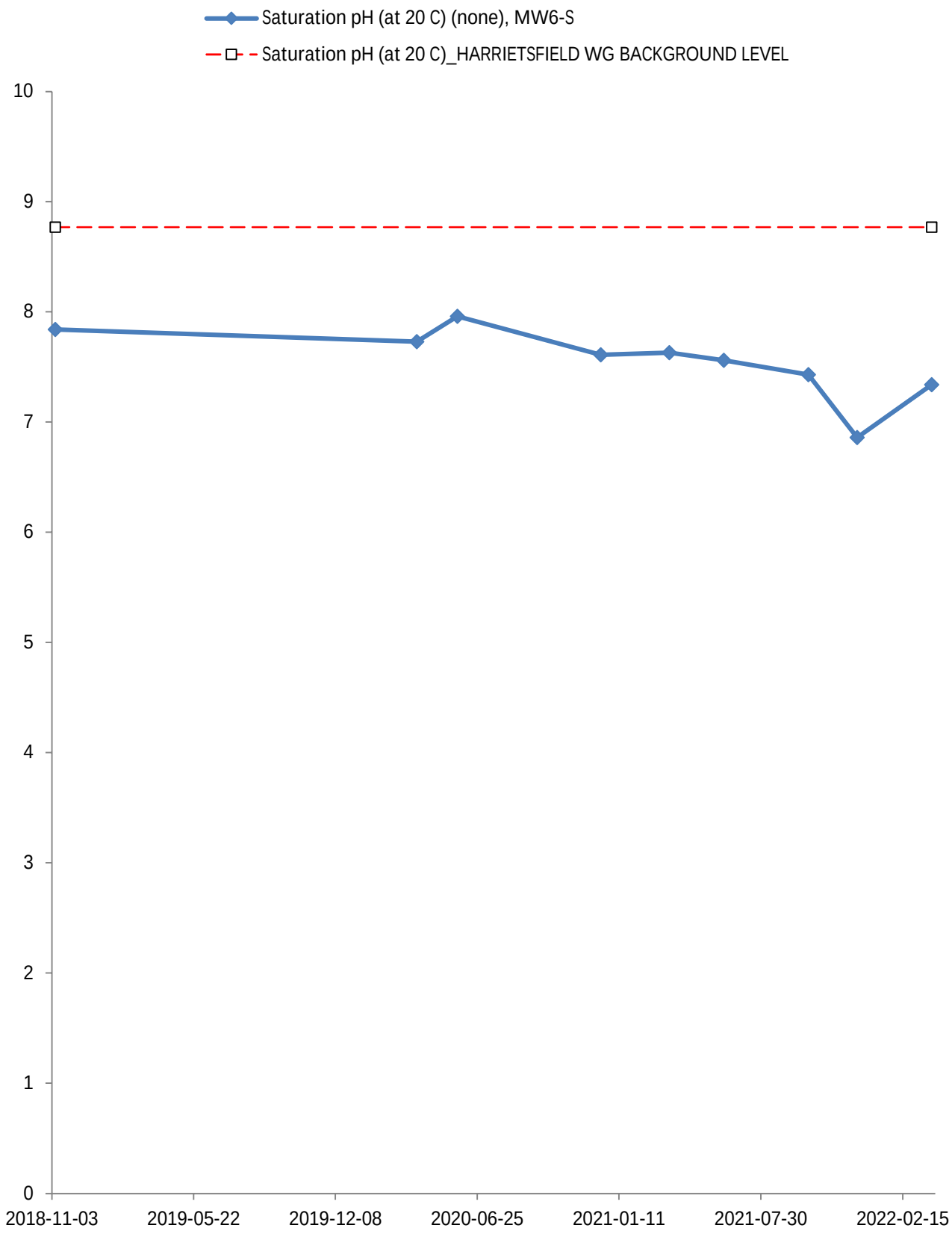
MW6-S-Potassium



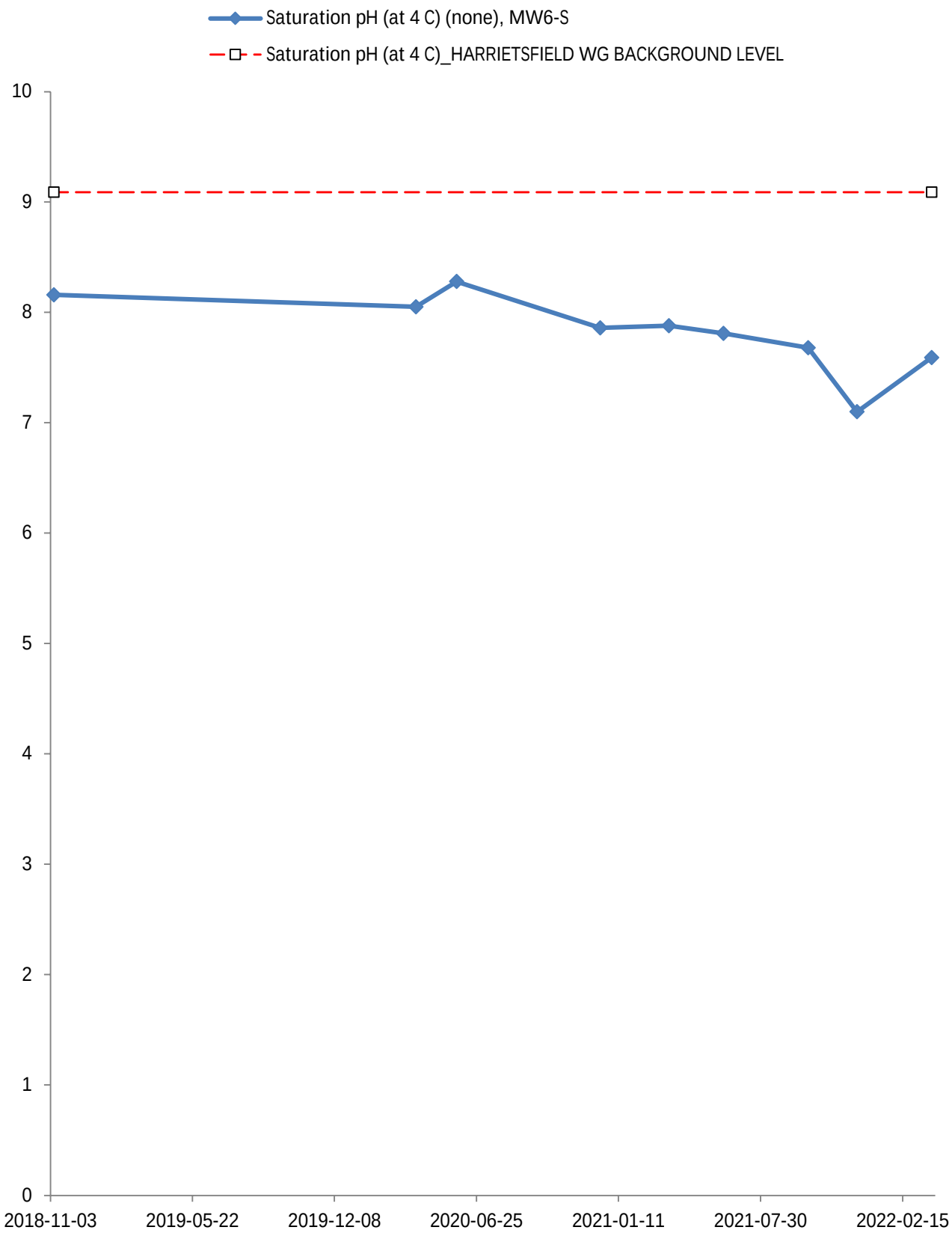
MW6-S-Reactive Silica (SiO2)



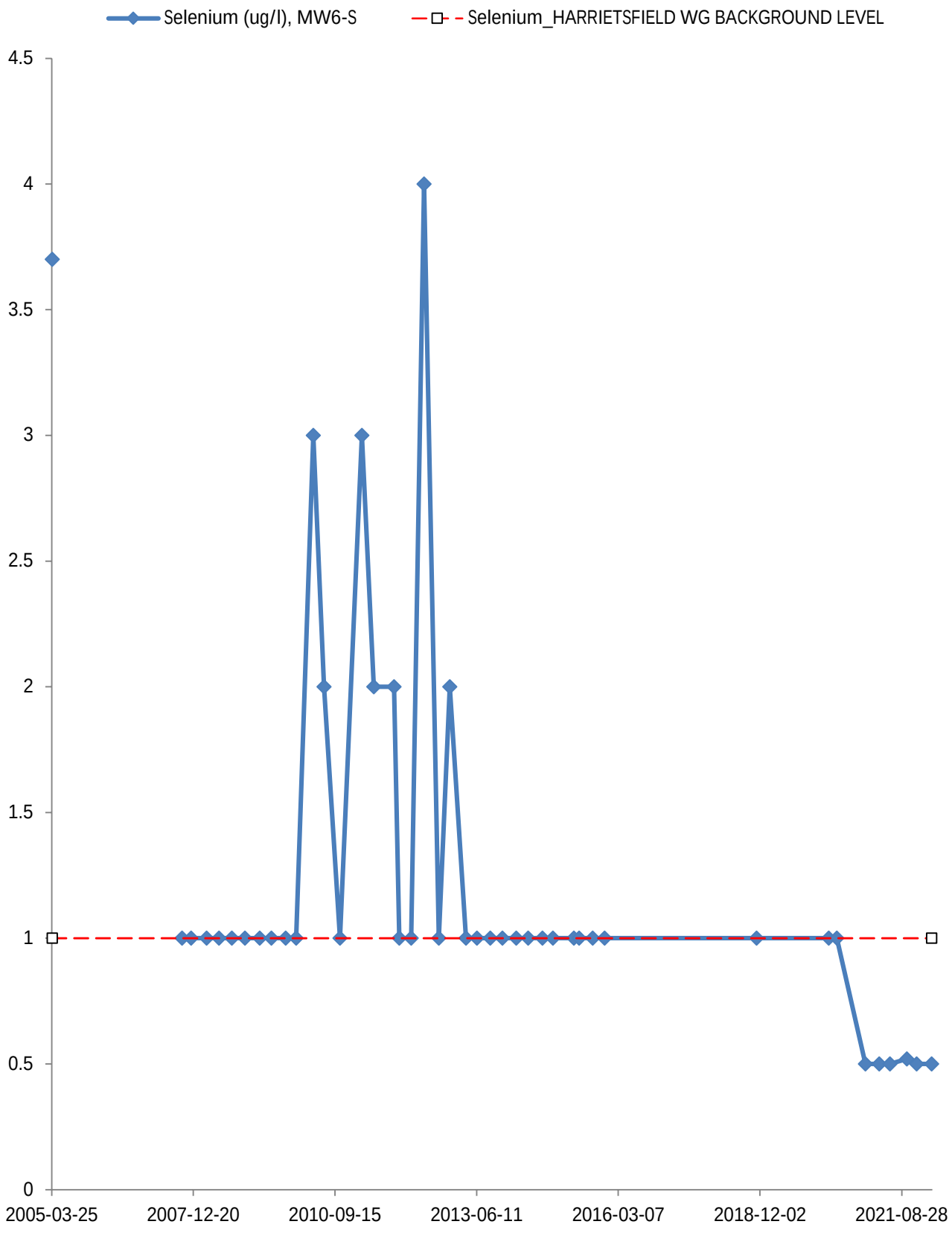
MW6-S-Saturation pH (at 20 C)



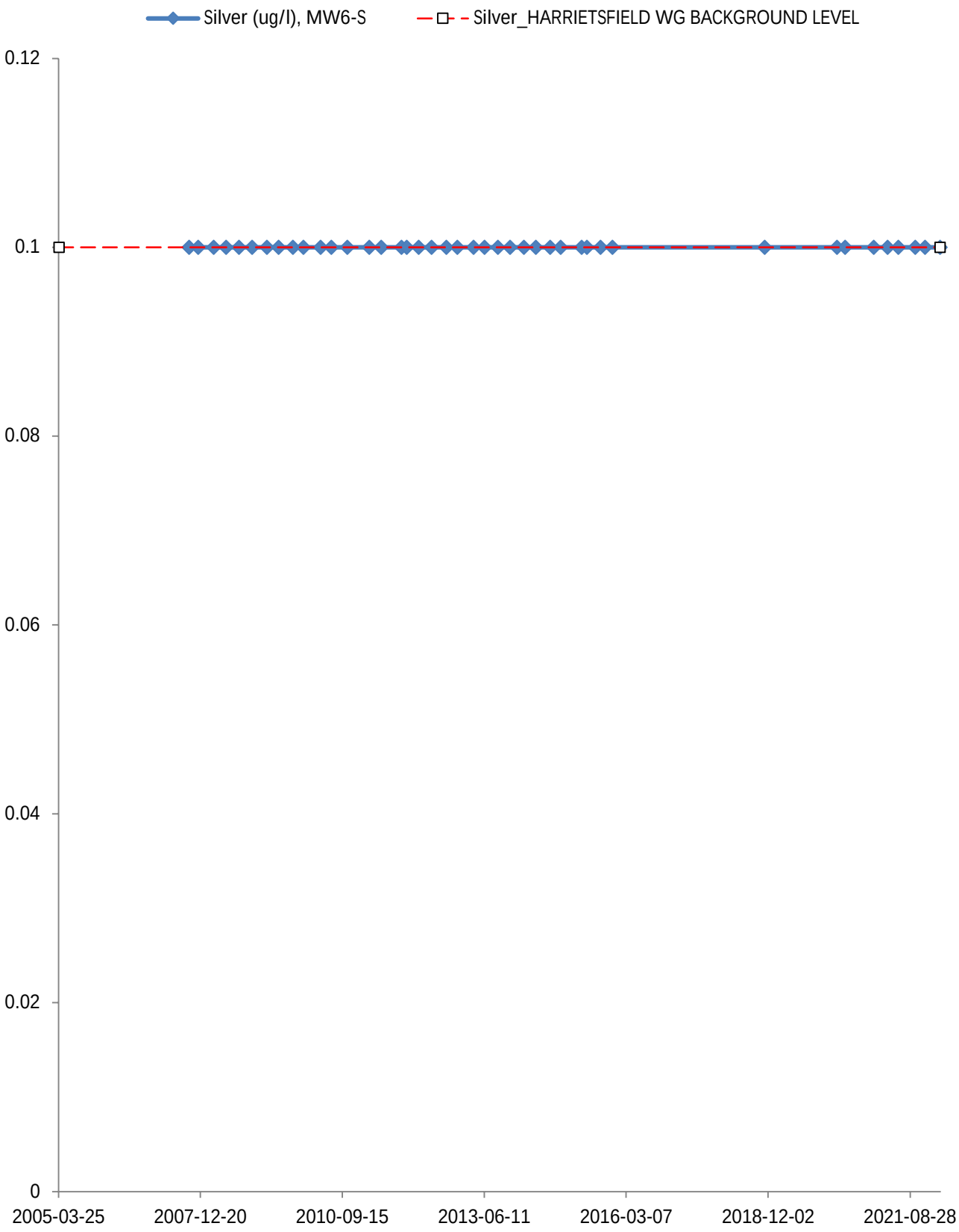
MW6-S-Saturation pH (at 4 C)



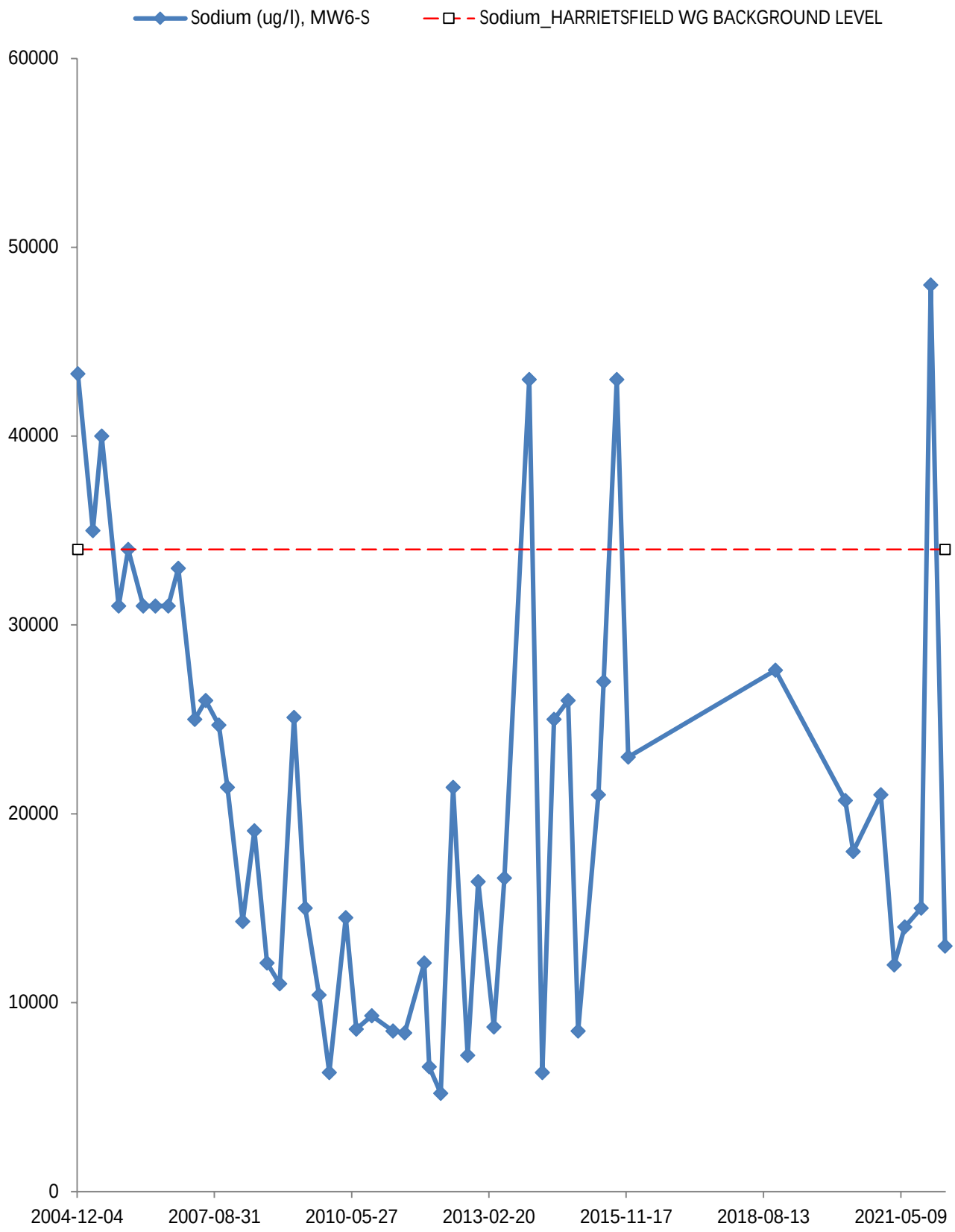
MW6-S-Selenium



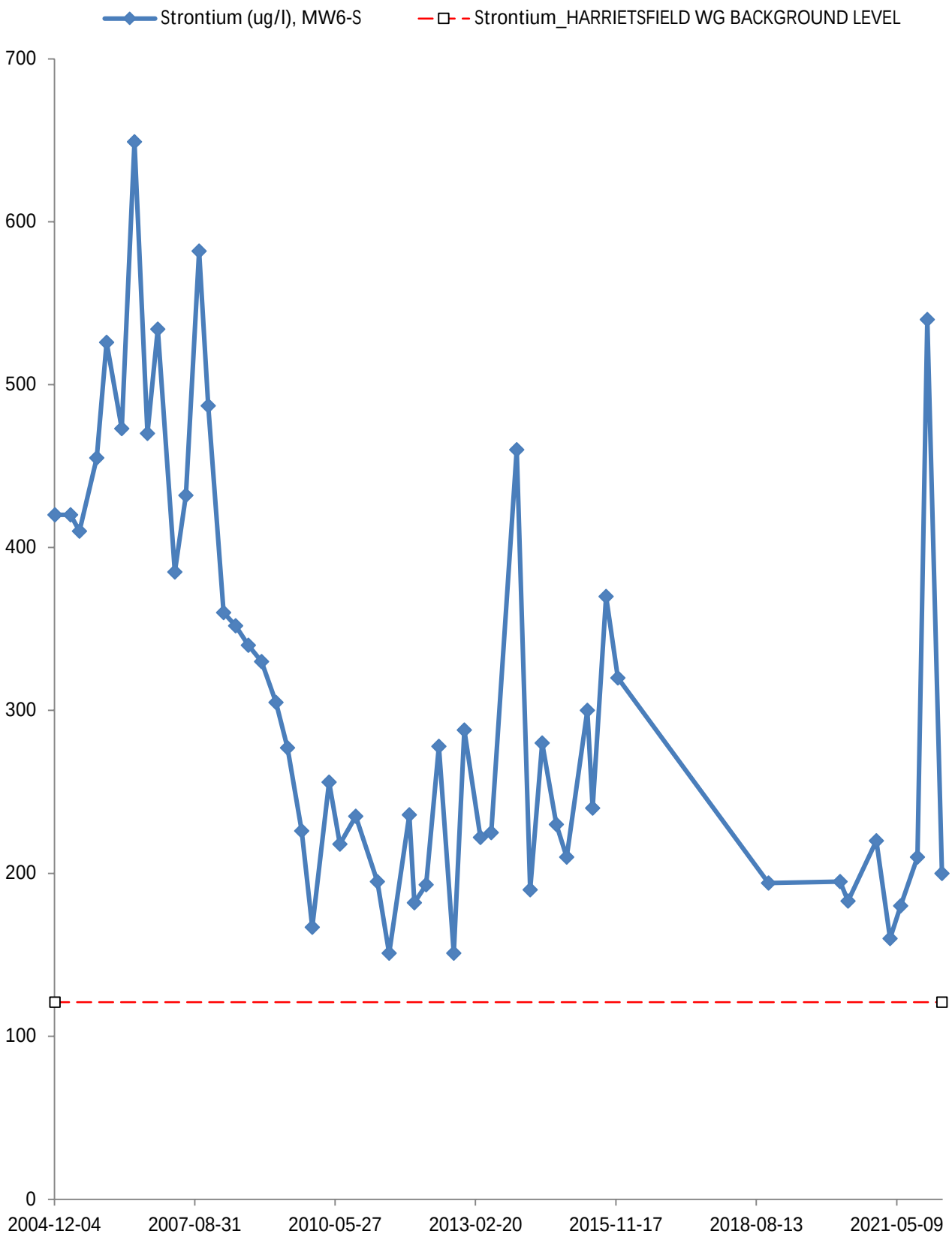
MW6-S-Silver


Silver (ug/l), MW6-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

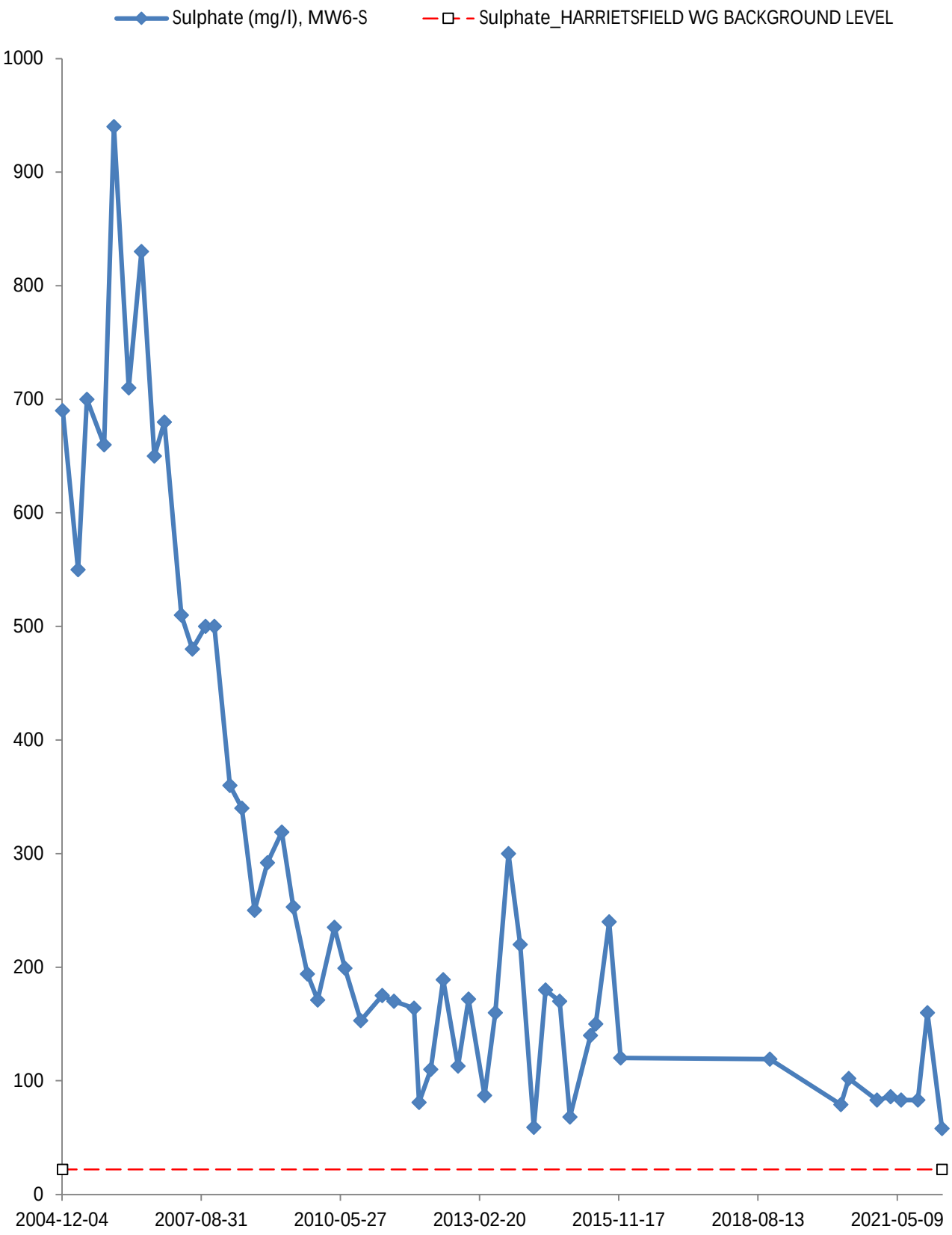
MW6-S-Sodium


Sodium (ug/l), MW6-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
60000
50000
40000
30000
20000
10000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

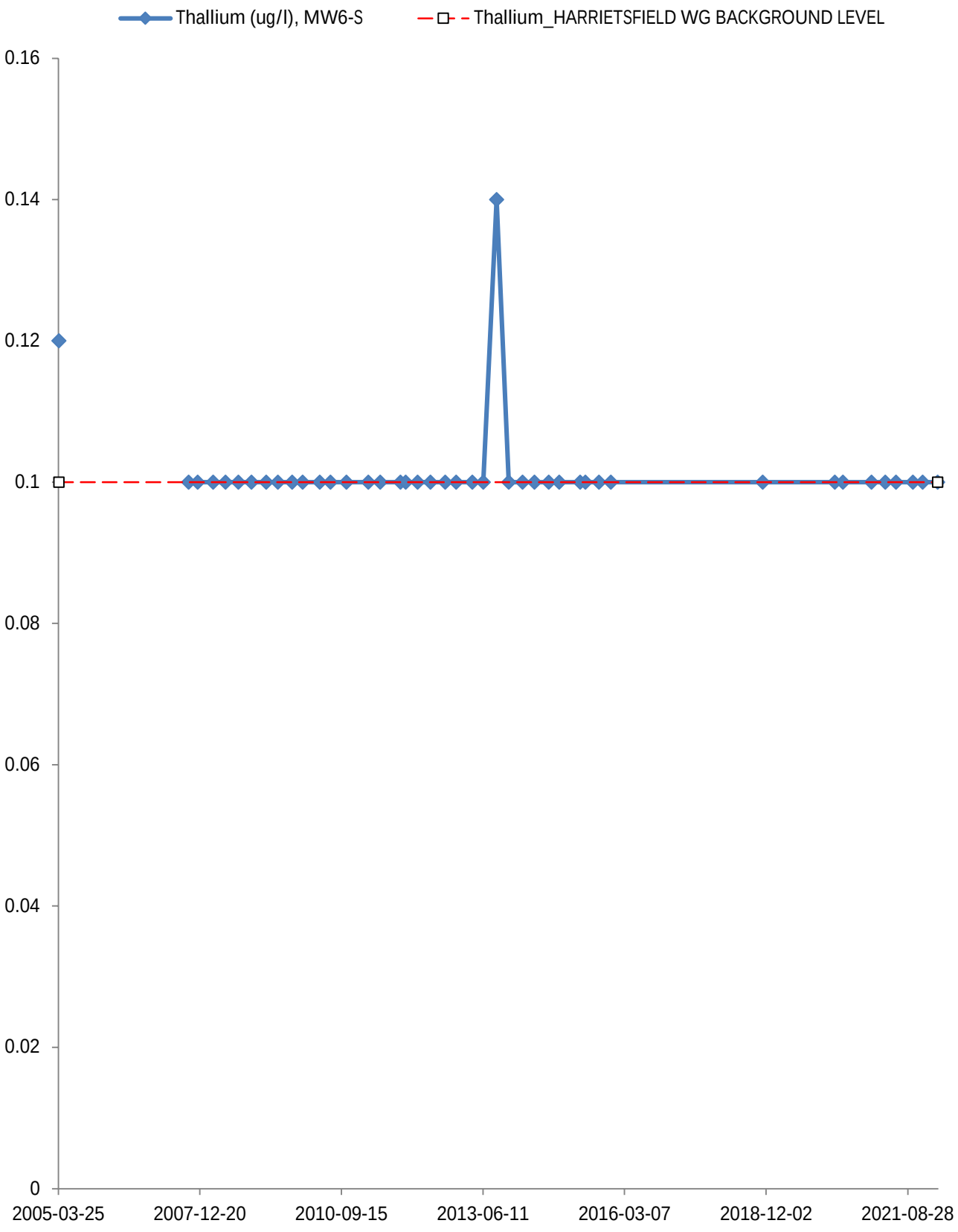
MW6-S-Strontium



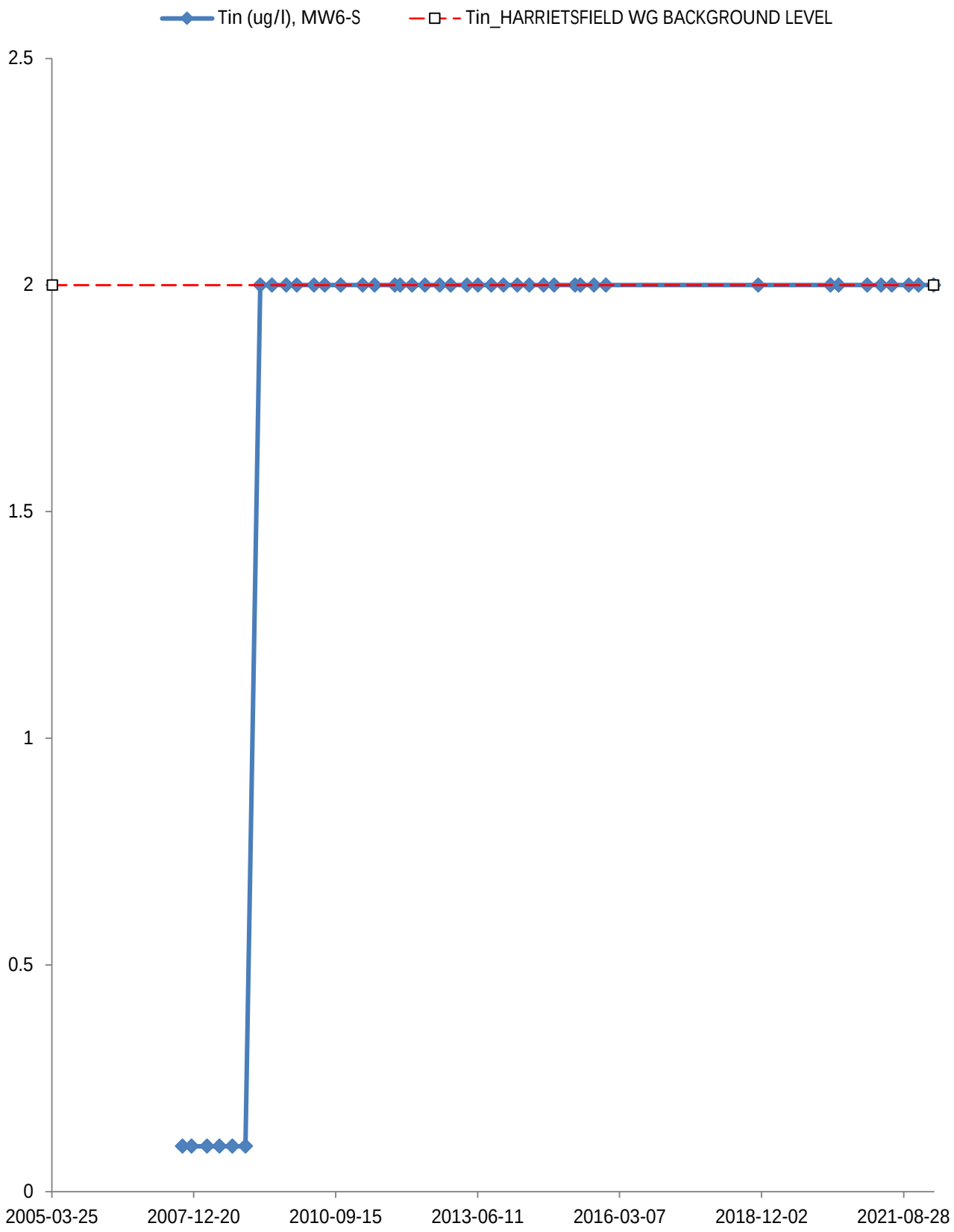
MW6-S-Sulphate



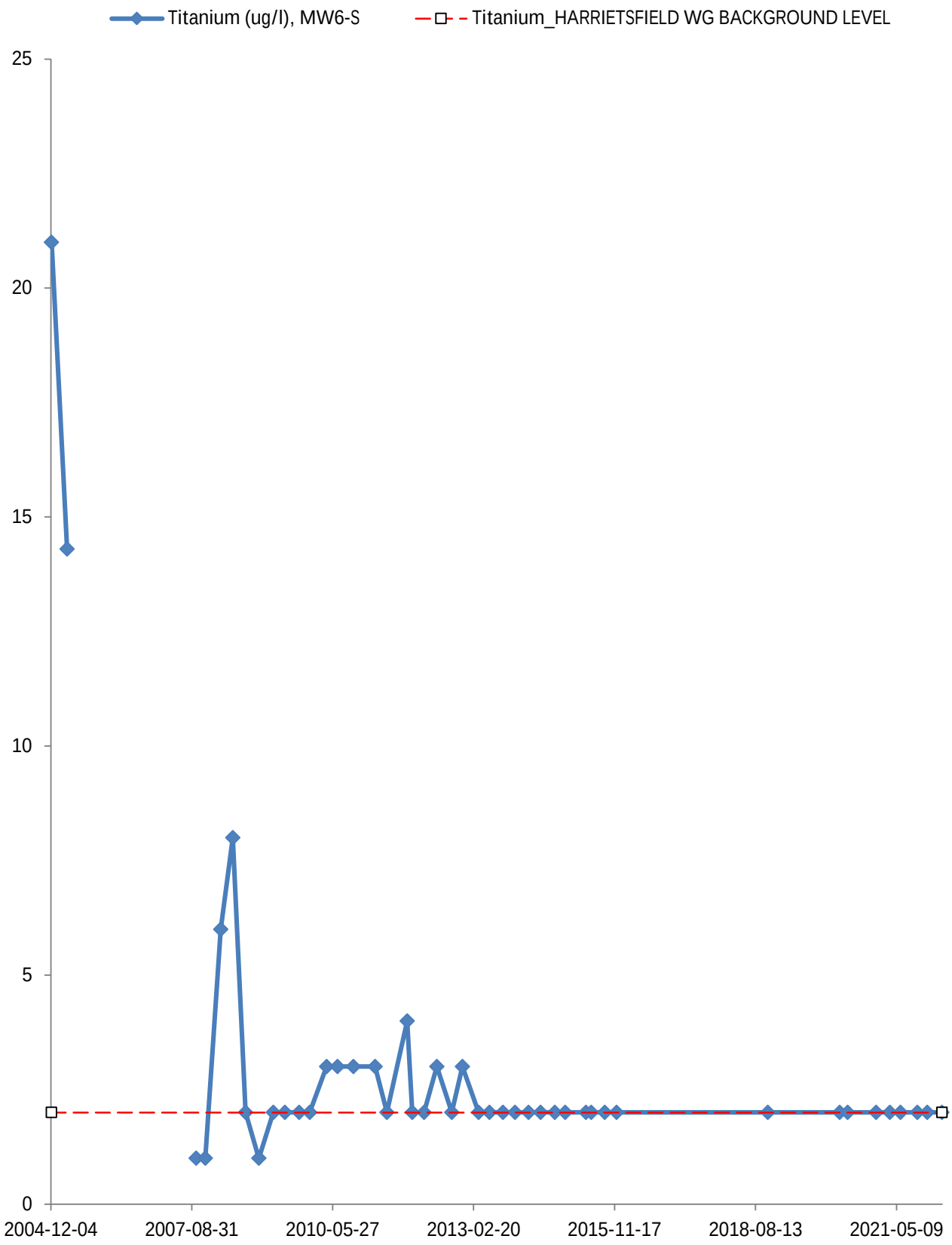
MW6-S-Thallium



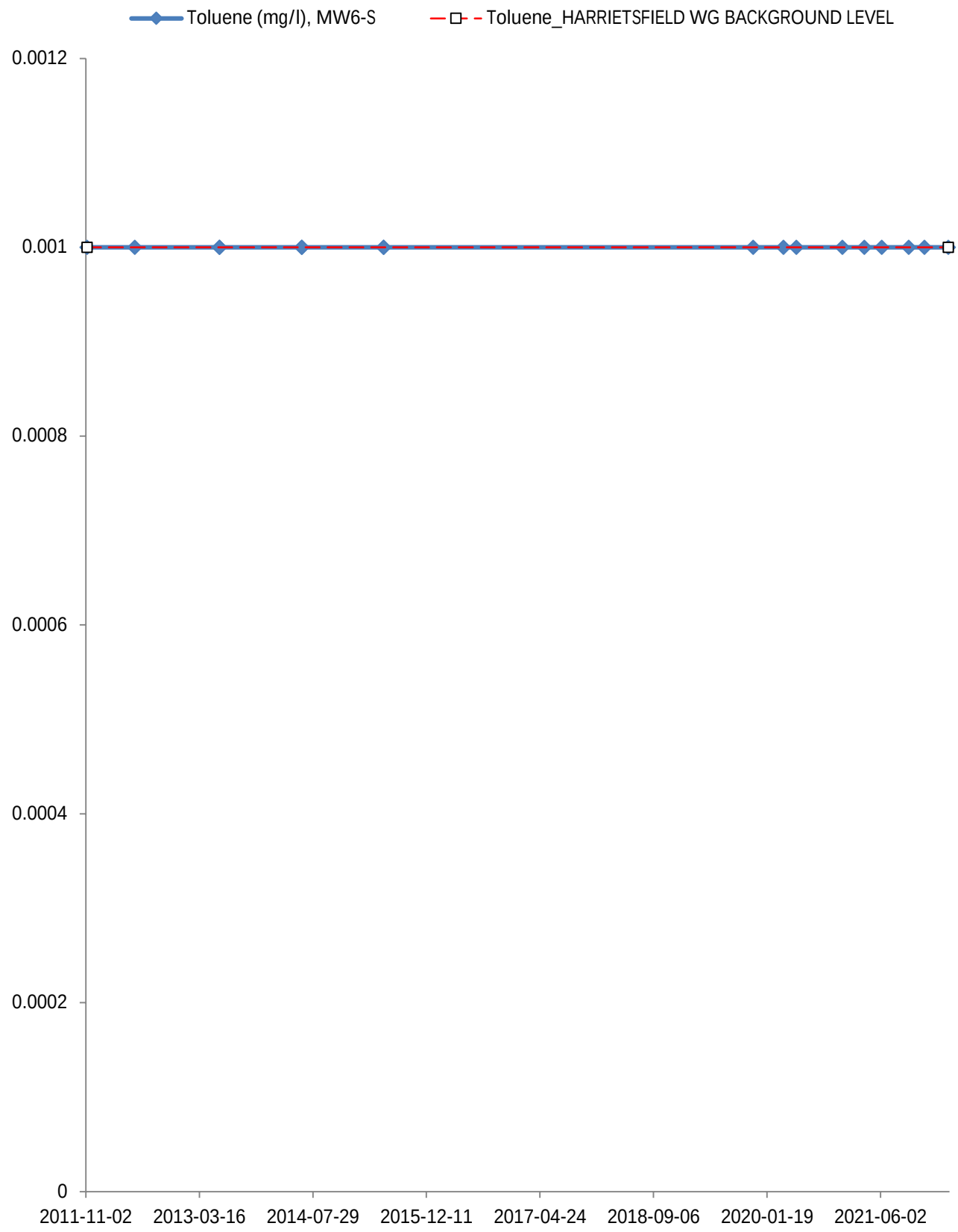
MW6-S-Tin


Tin (ug/l), MW6-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

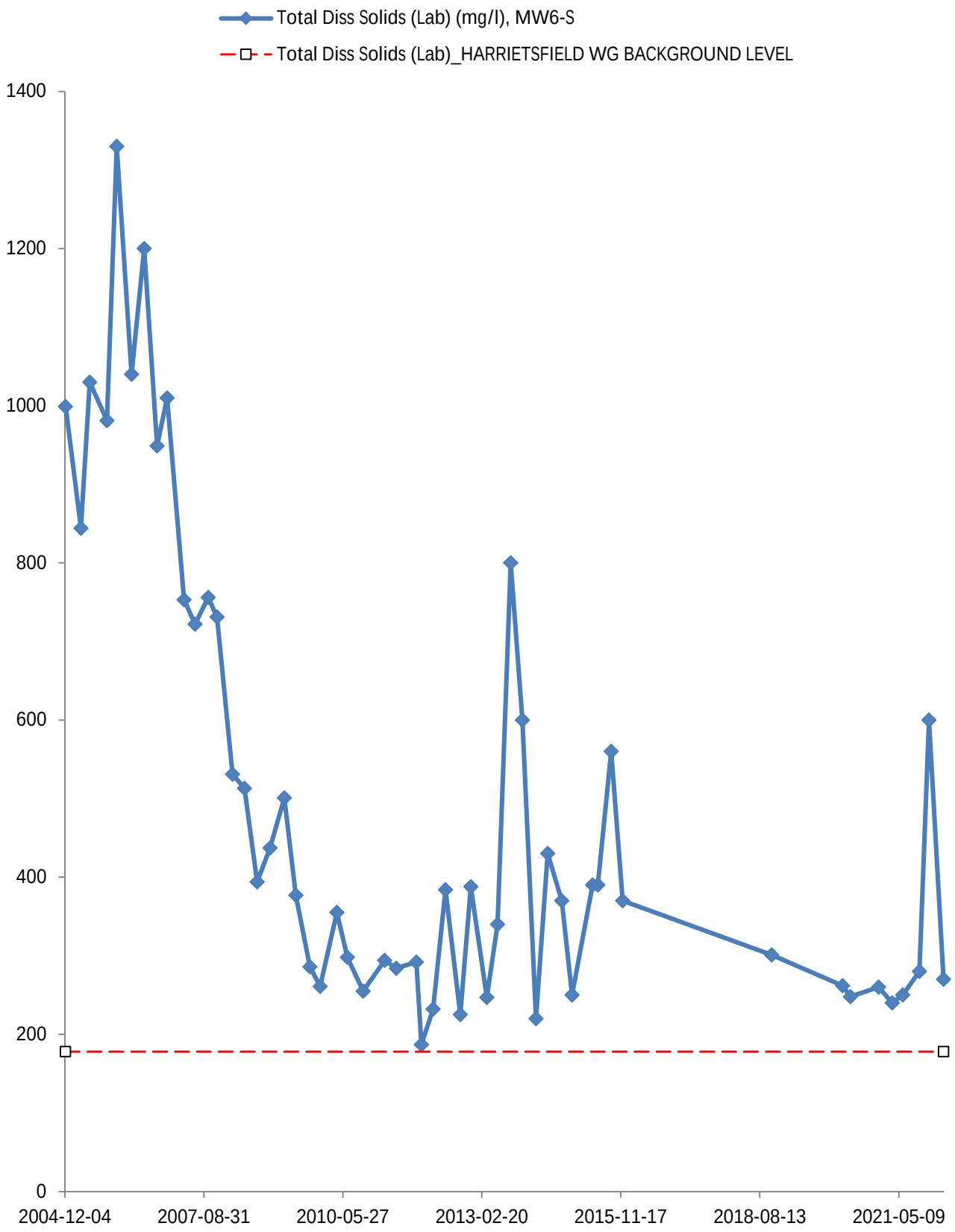
MW6-S-Titanium



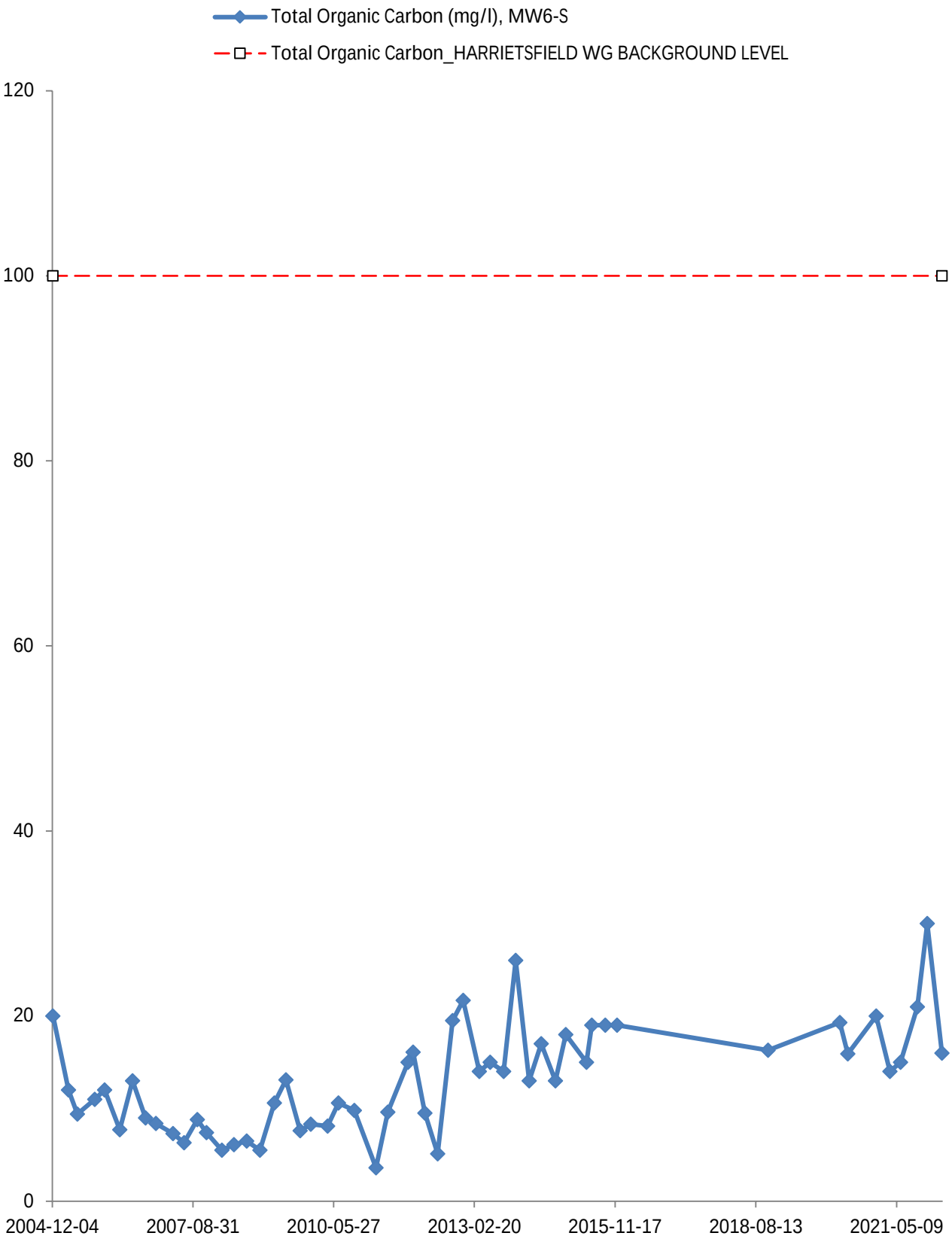
MW6-S-Toluene



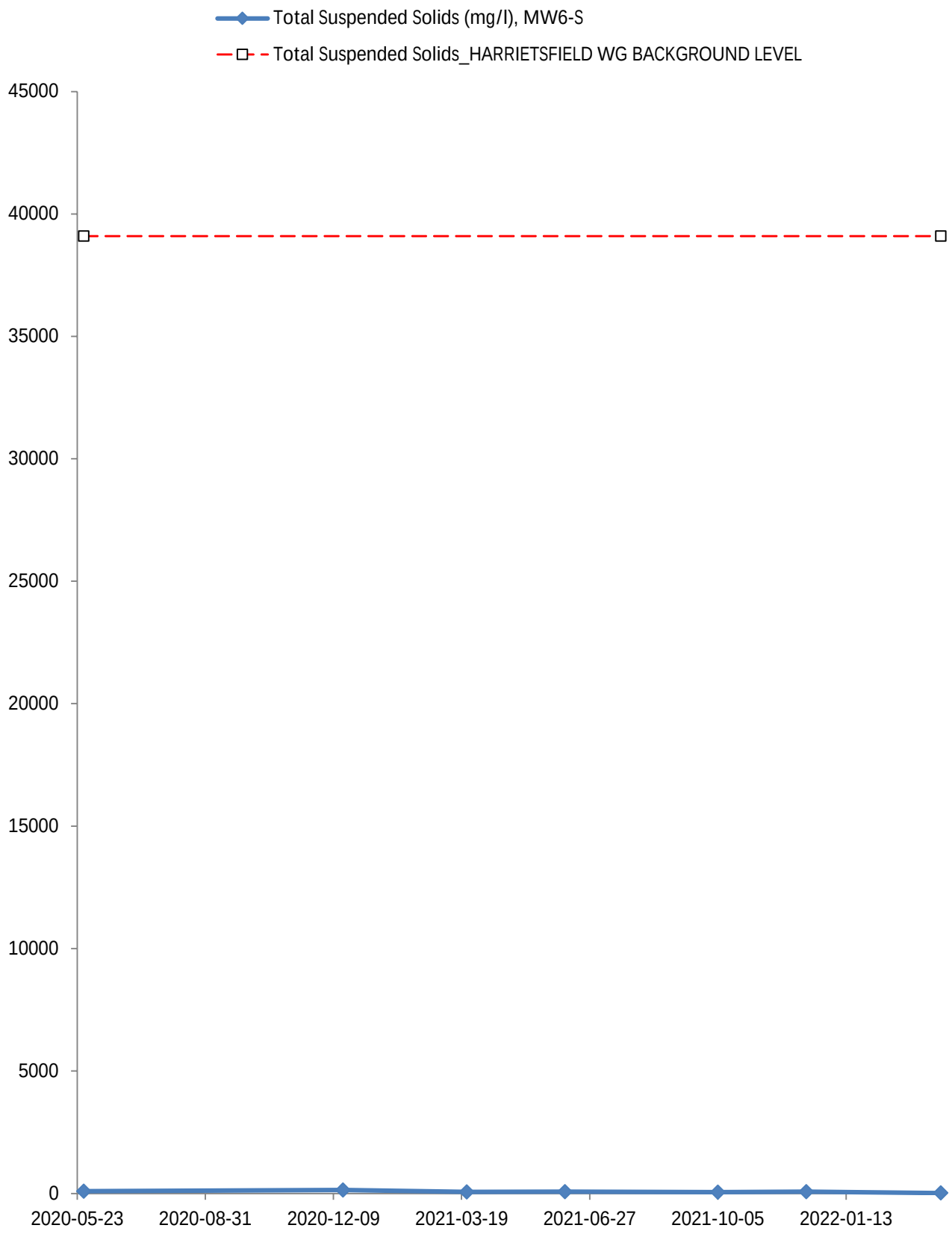
MW6-S-Total Diss Solids (Lab)

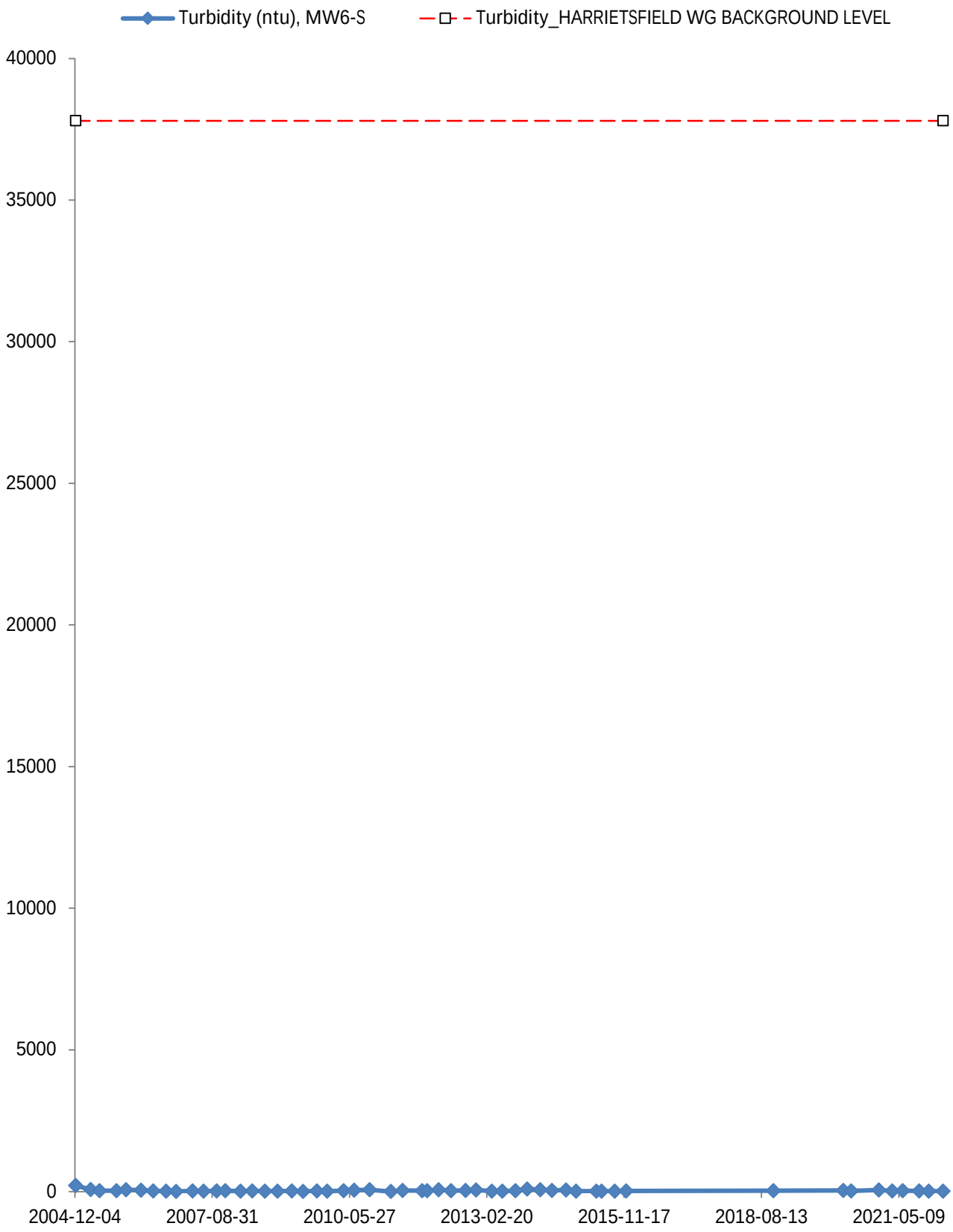


MW6-S-Total Organic Carbon

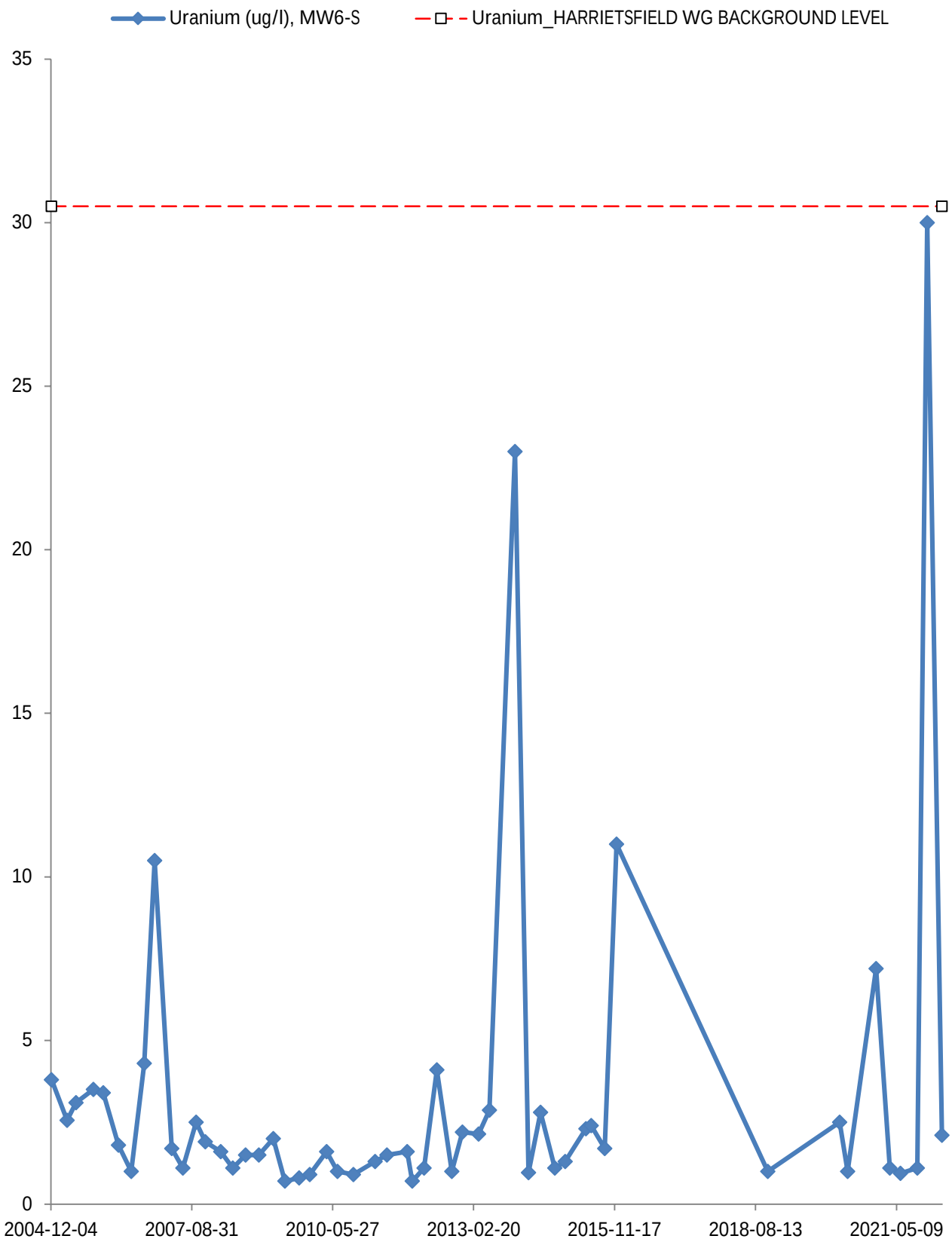


MW6-S-Total Suspended Solids

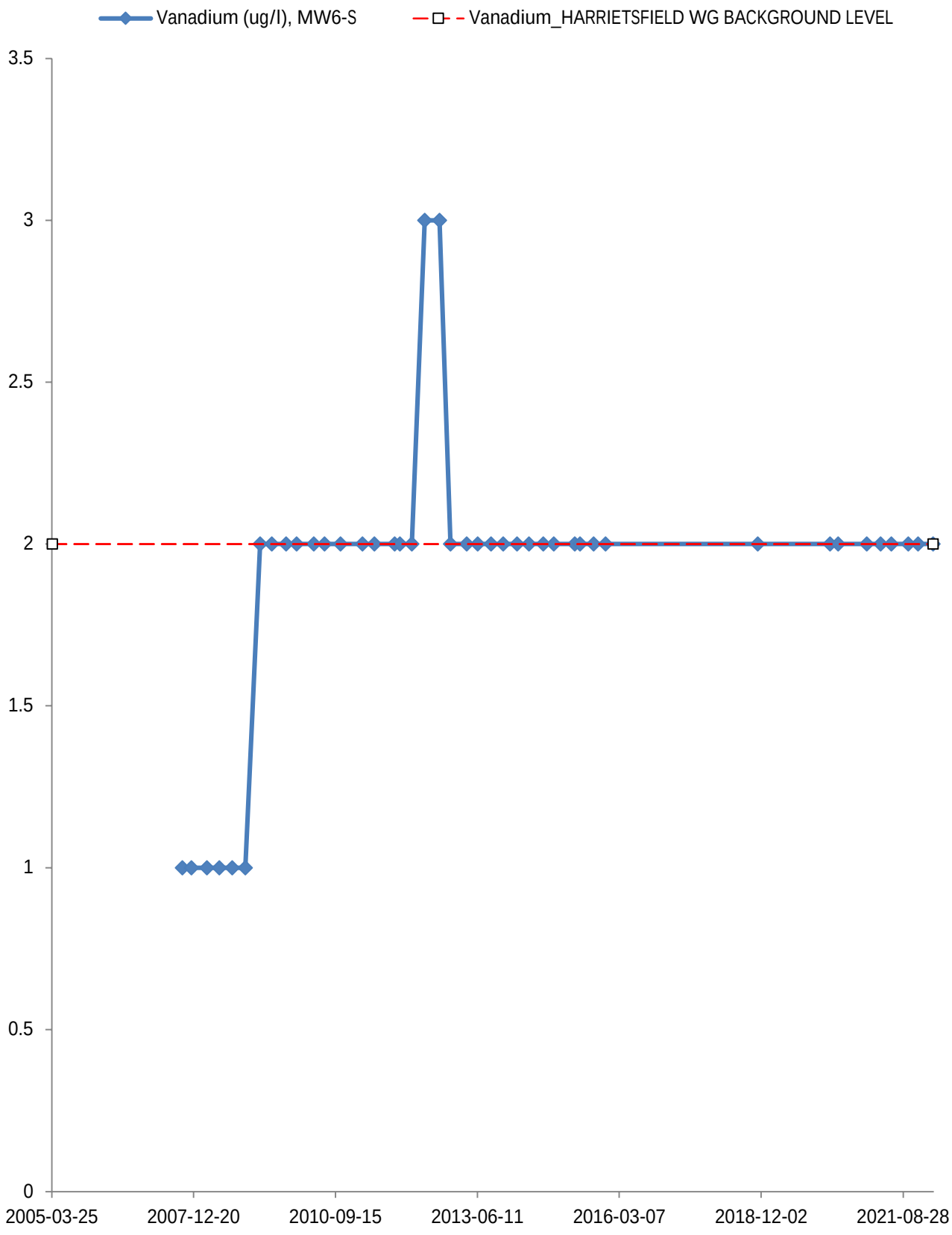



Turbidity (ntu), MW6-S
Turbidity_HARRIETSFIELD WG BACKGROUND LEVEL
40000
35000
30000
25000
20000
15000
10000
5000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

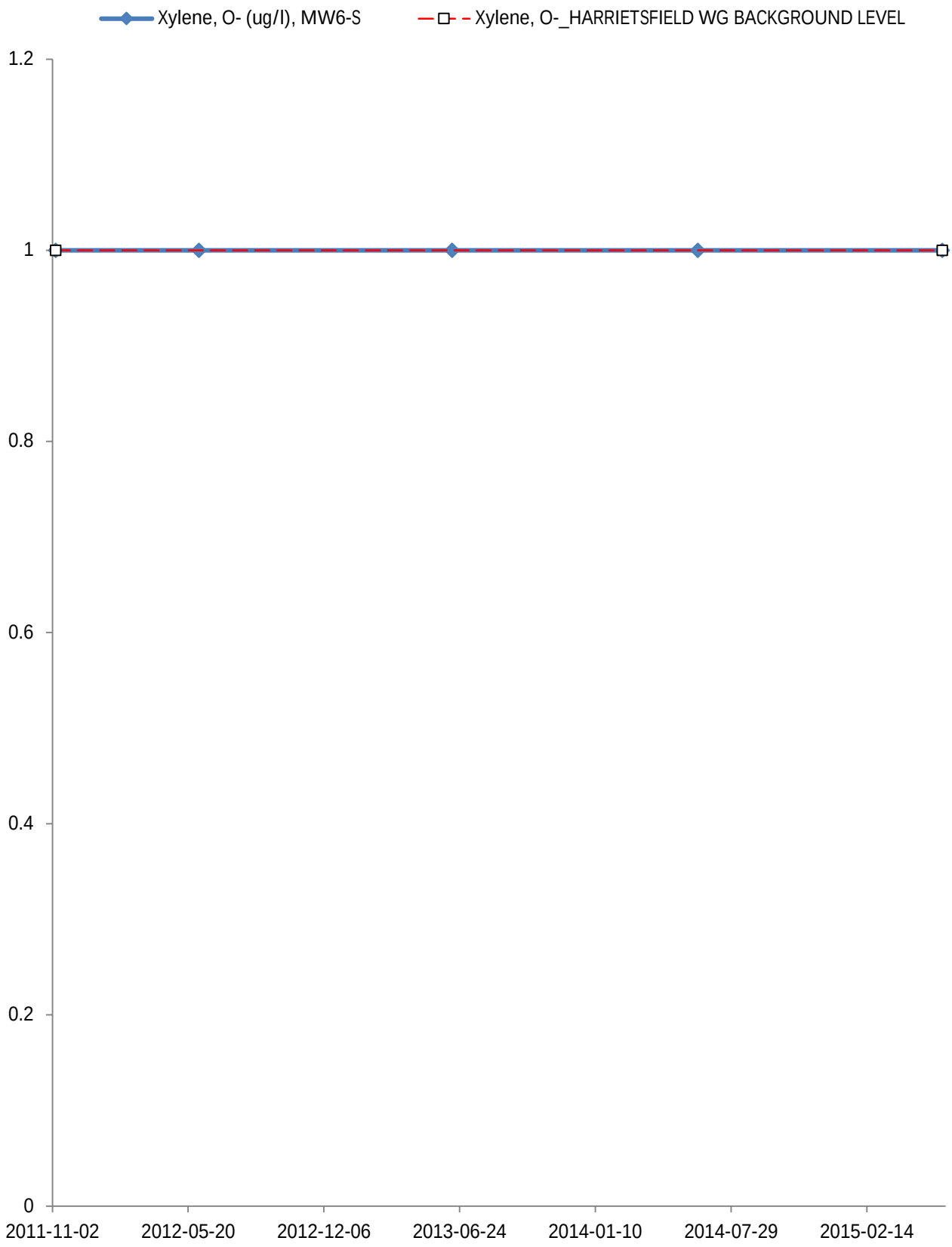
MW6-S-Uranium



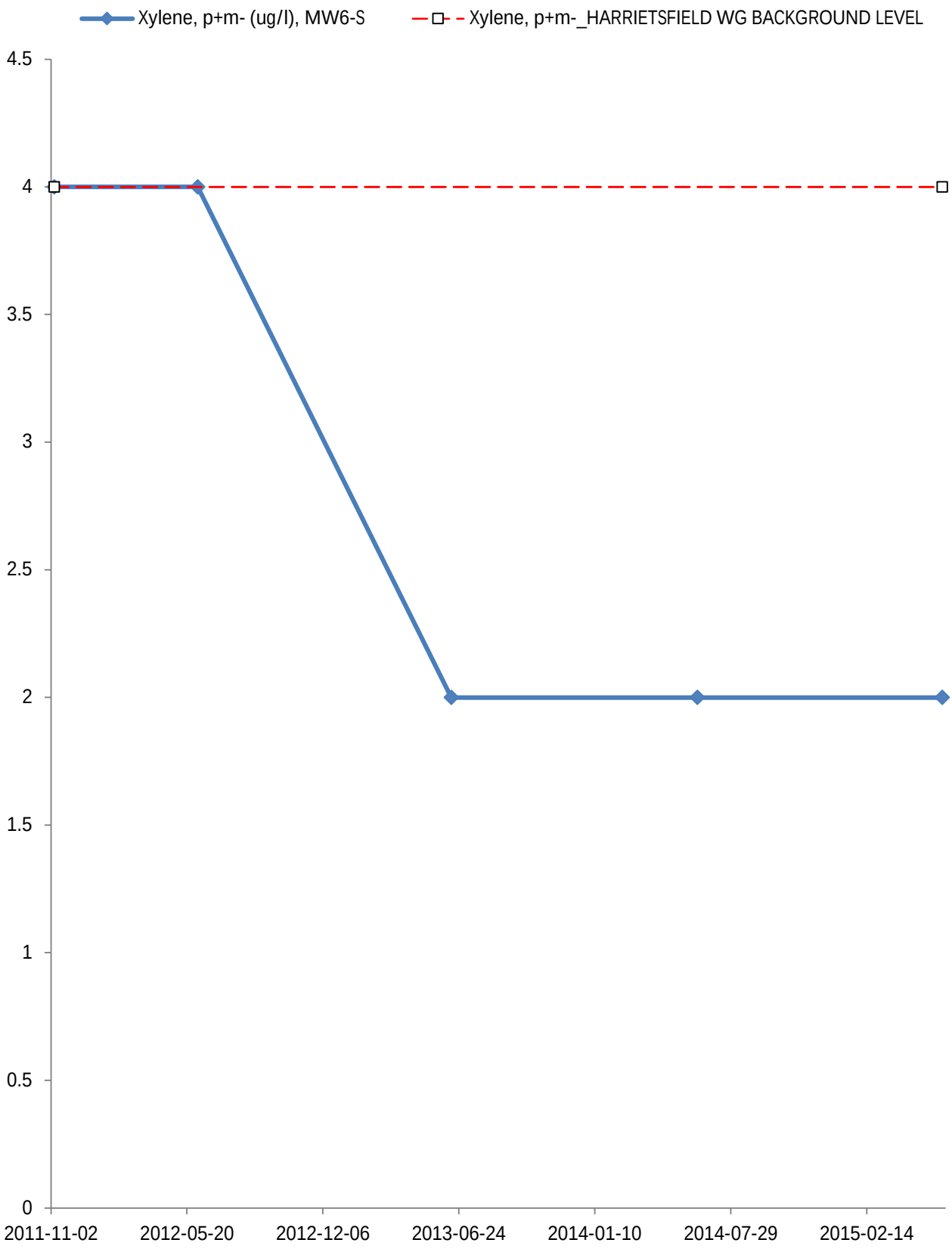
MW6-S-Vanadium



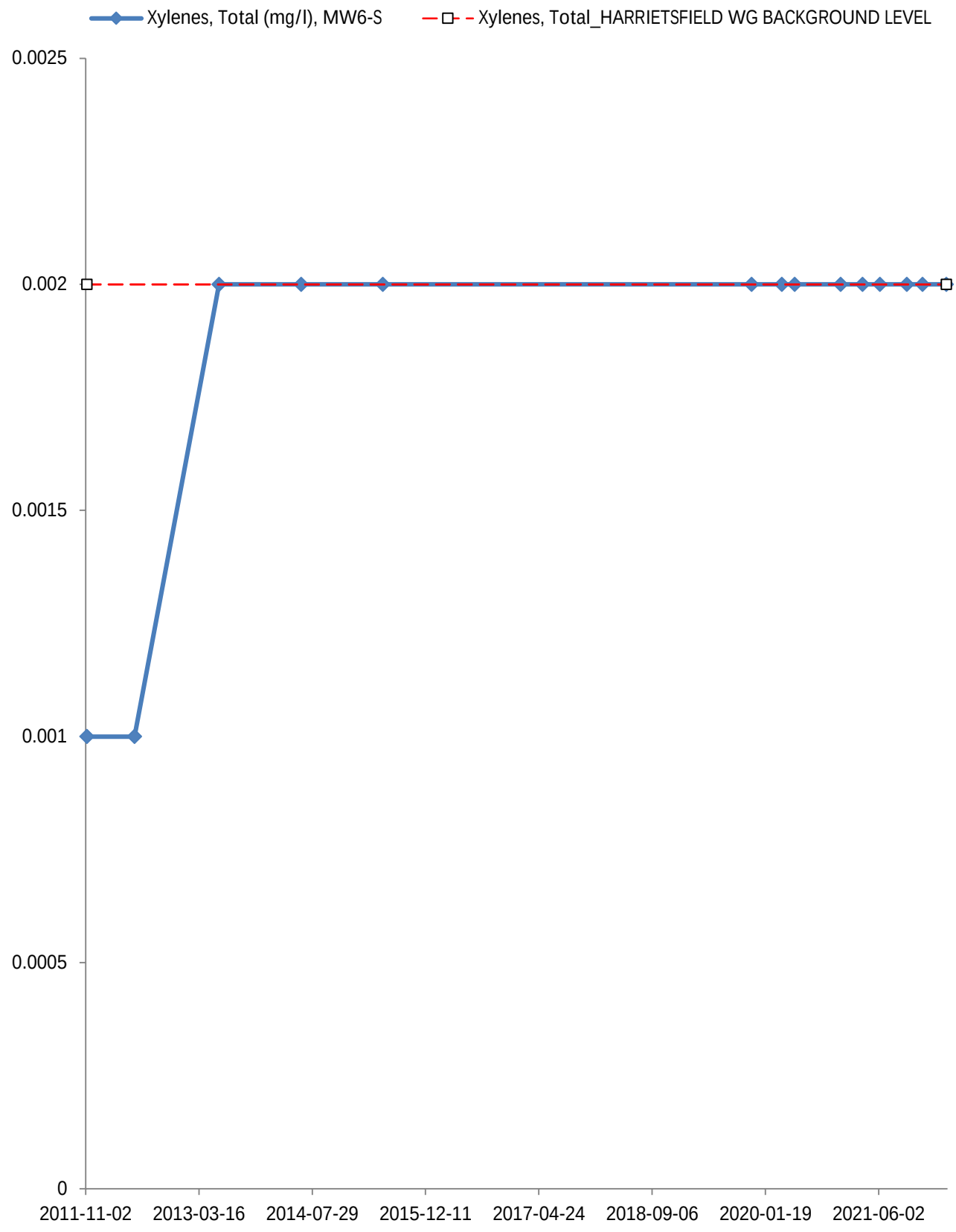
MW6-S-Xylene, O-



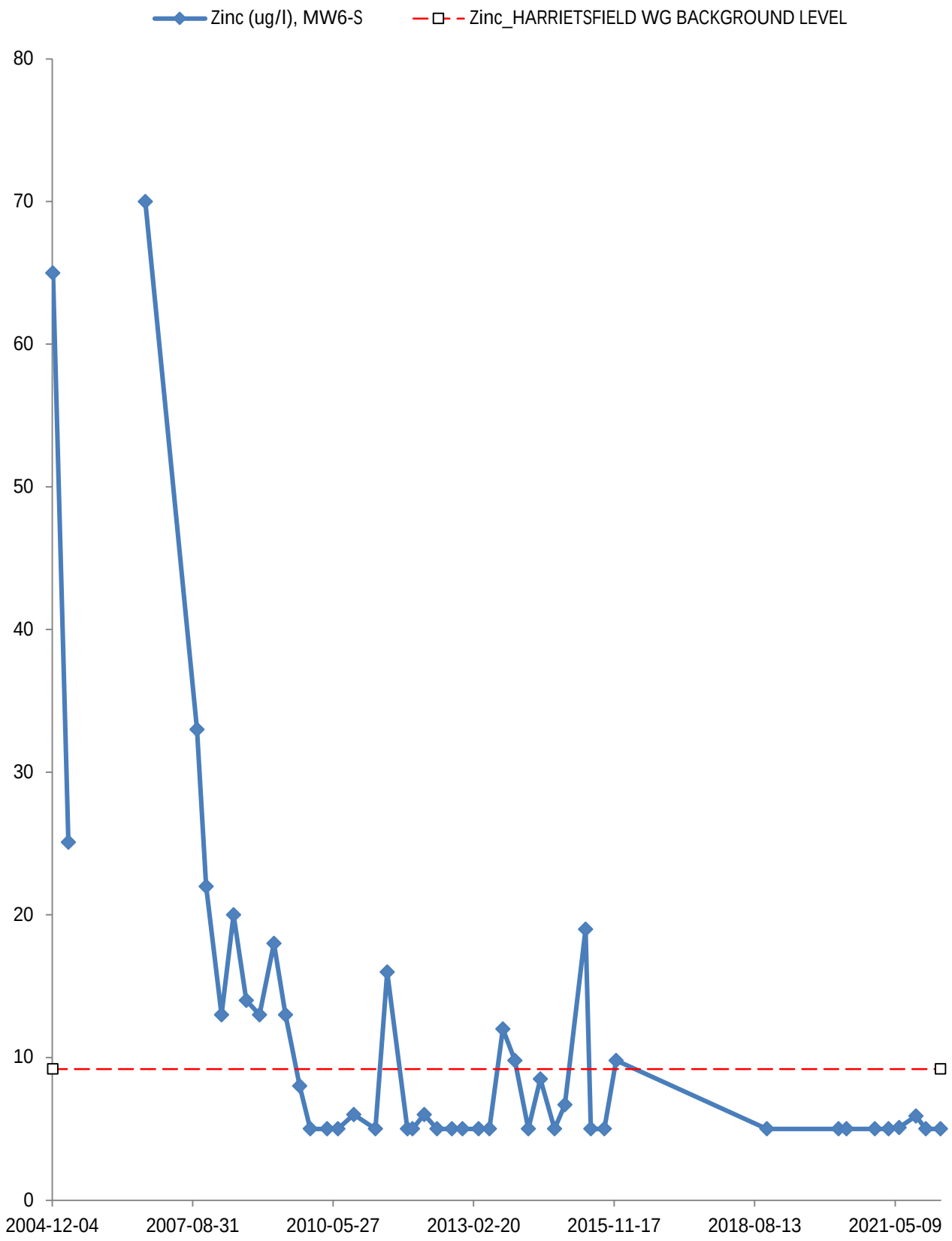
MW6-S-Xylene, p+m-



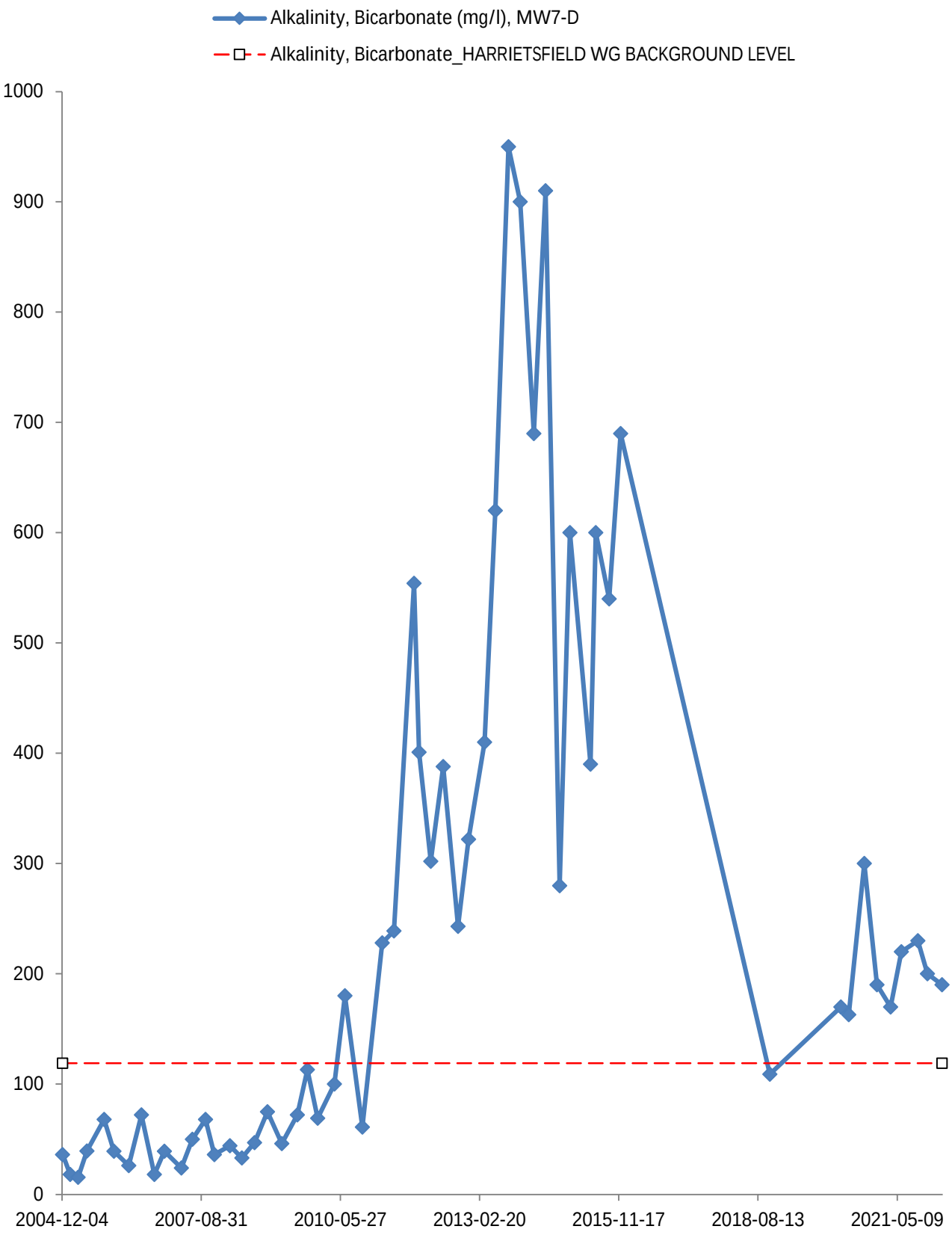
MW6-S-Xylenes, Total



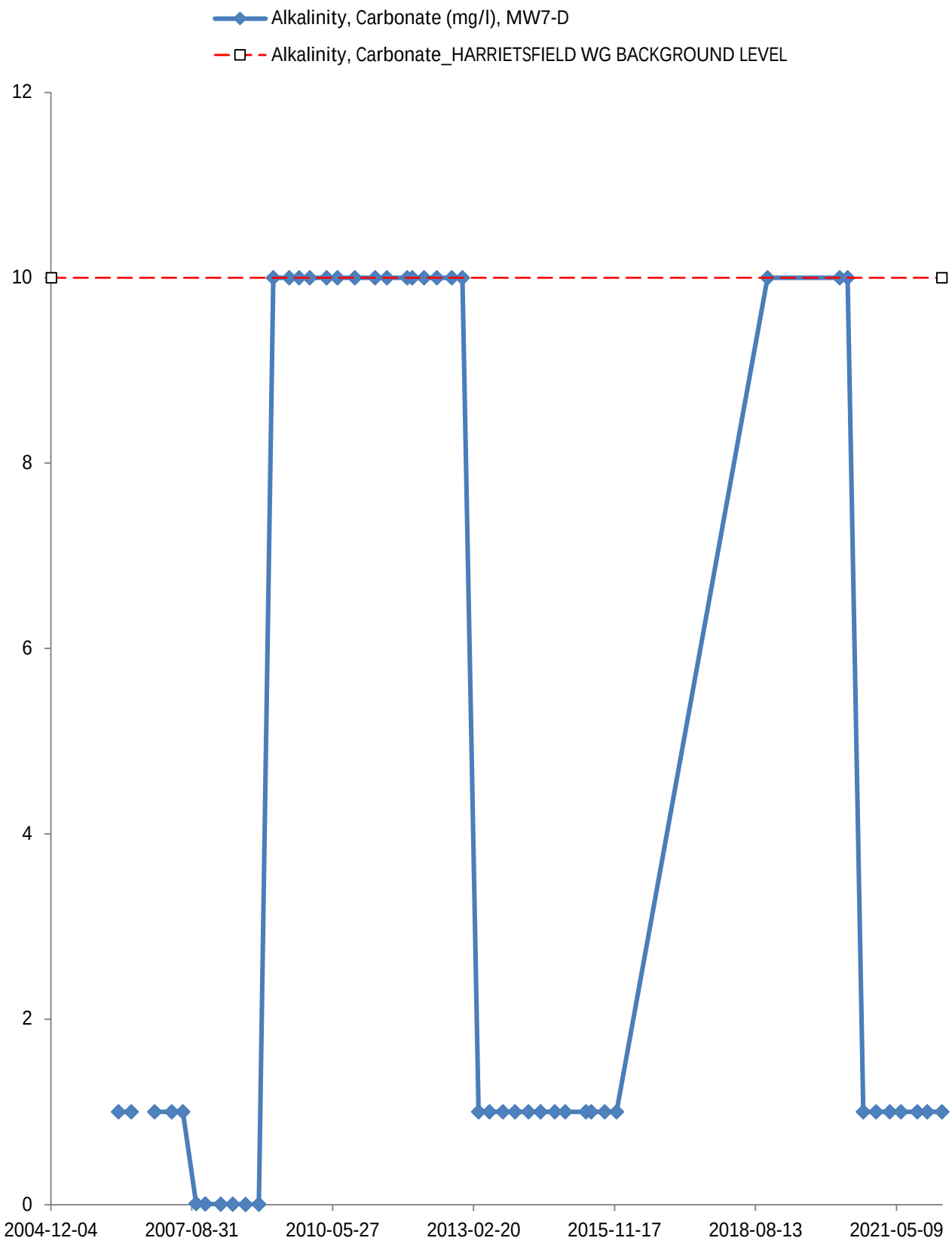
MW6-S-Zinc


Zinc (ug/l), MW6-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
80
70
60
50
40
30
20
10
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

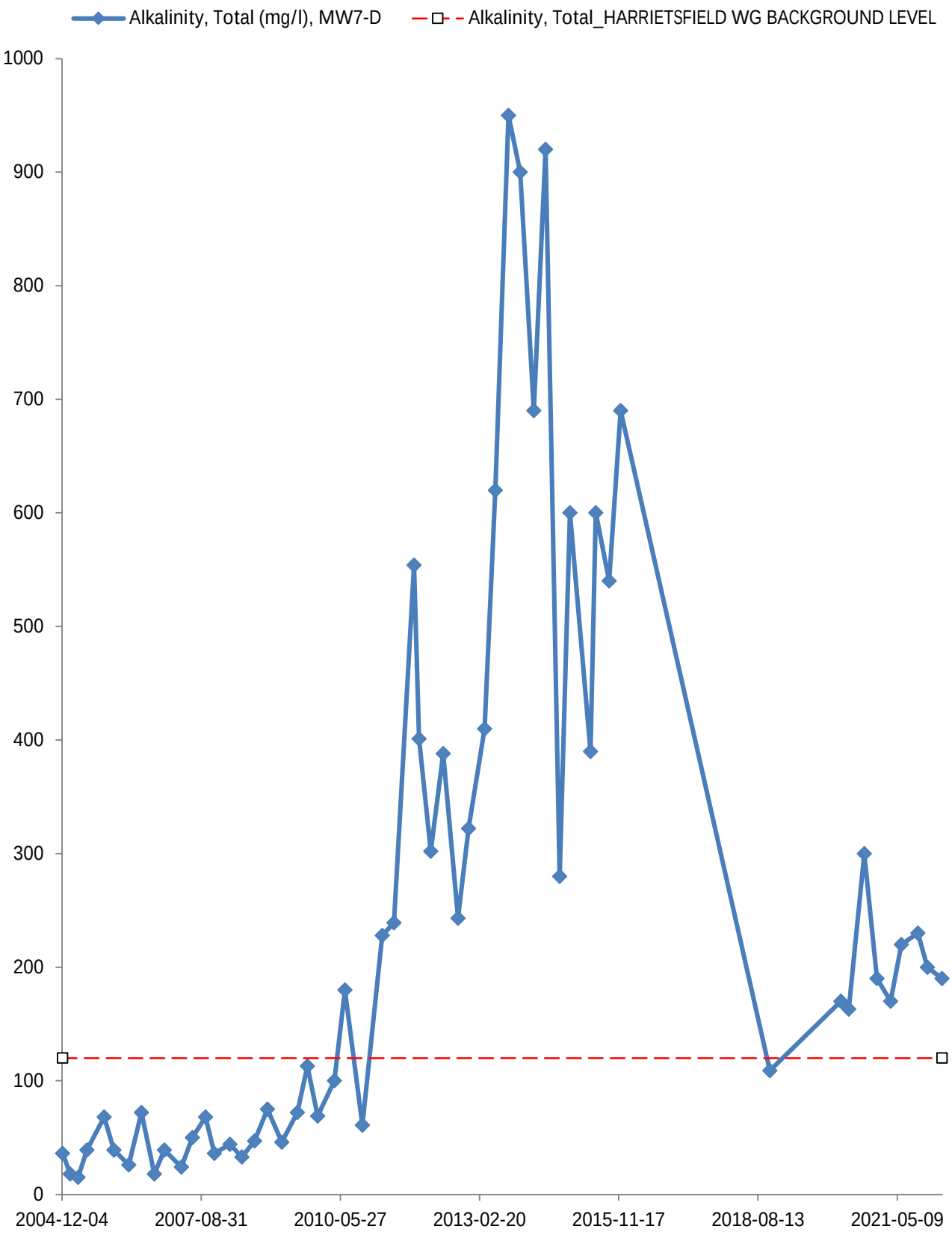
MW7-D-Alkalinity, Bicarbonate



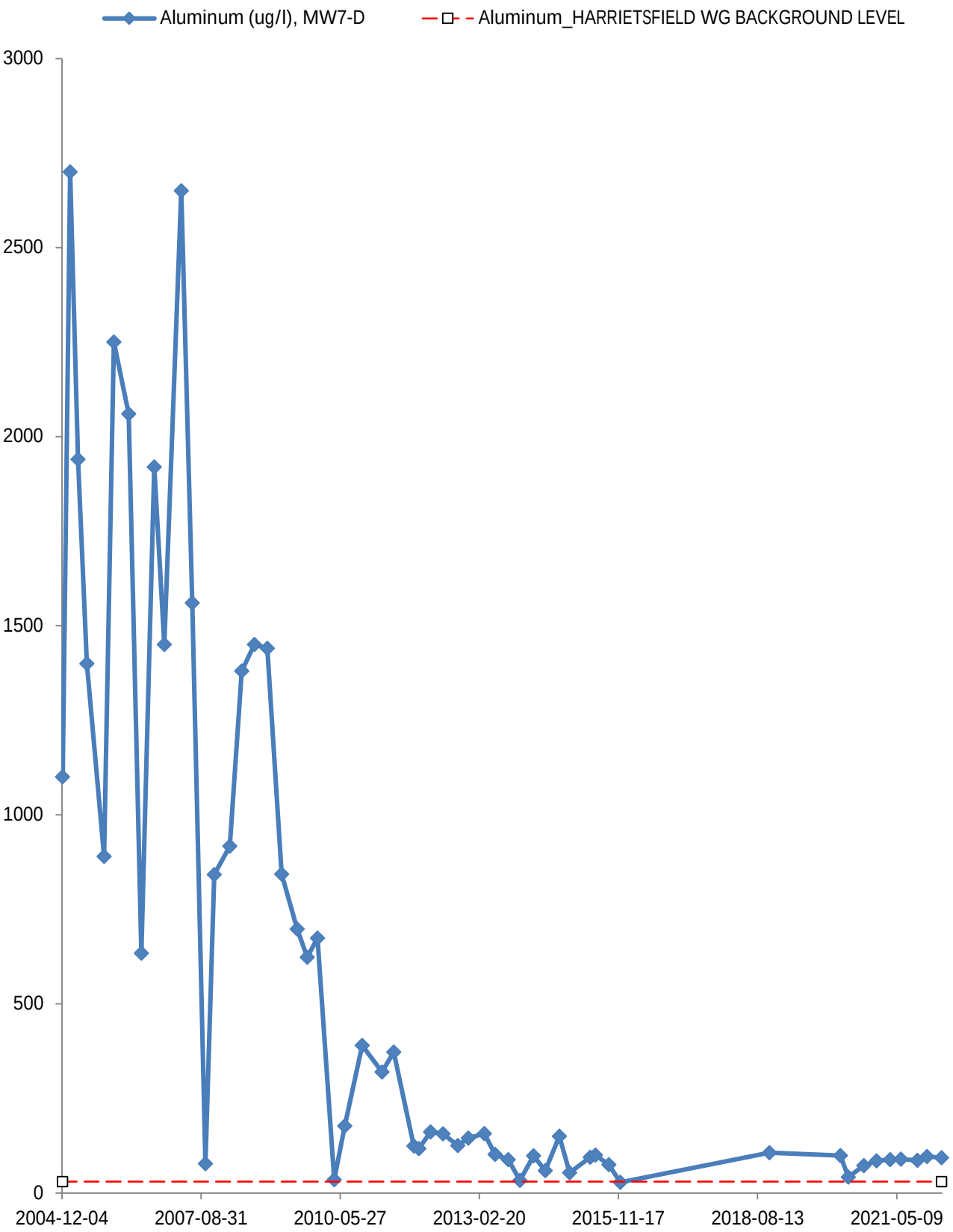
MW7-D-Alkalinity, Carbonate



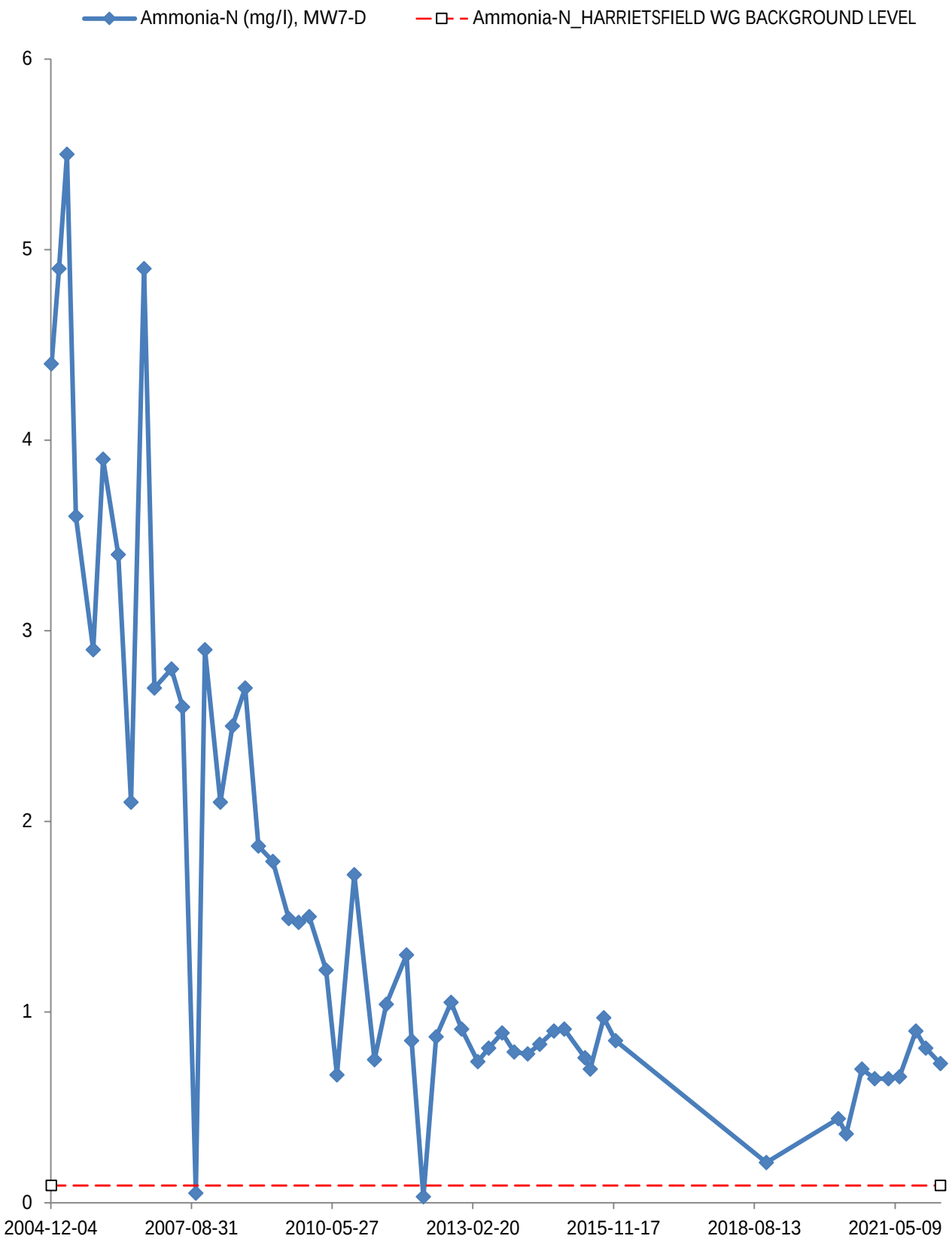
MW7-D-Alkalinity, Total



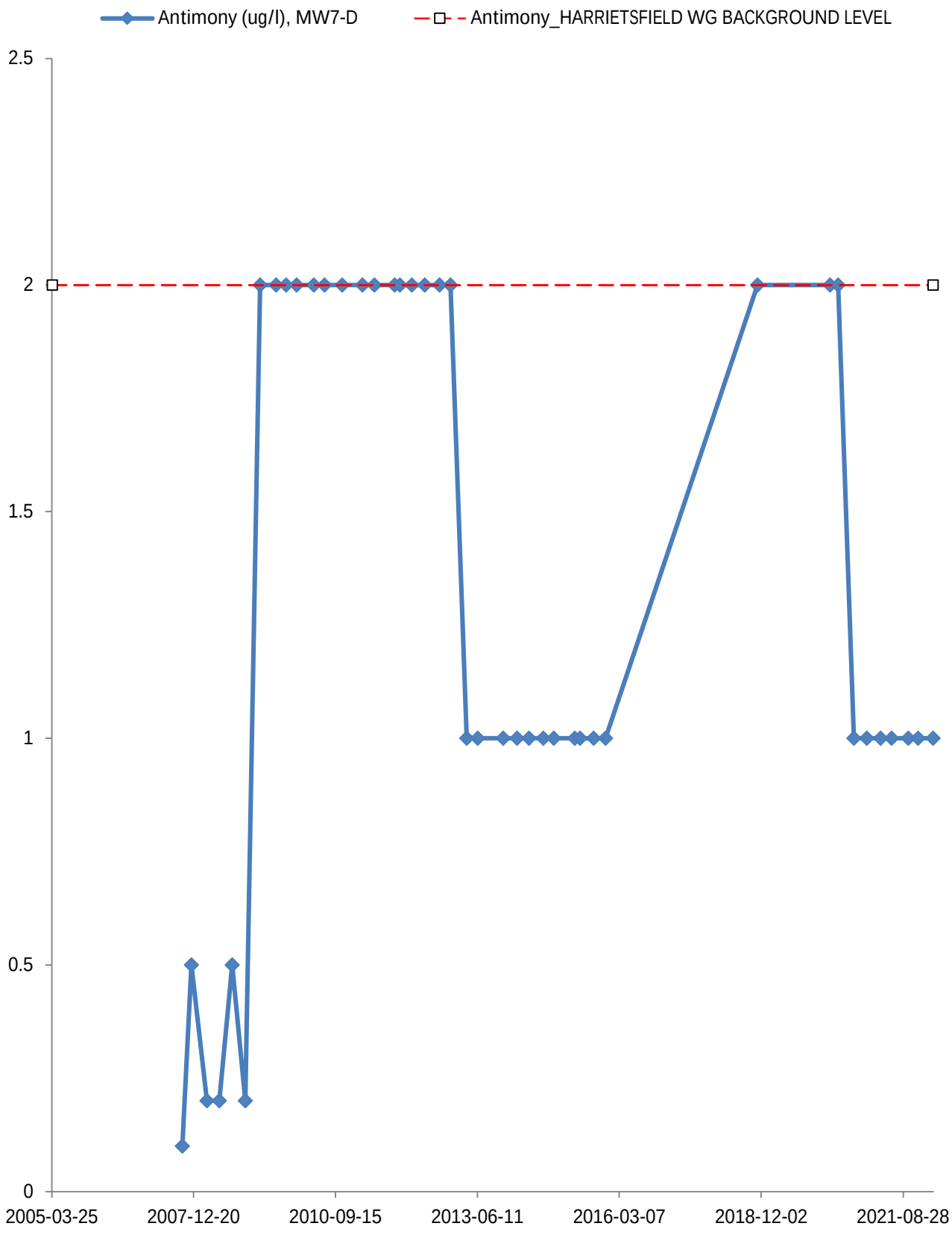
MW7-D-Aluminum



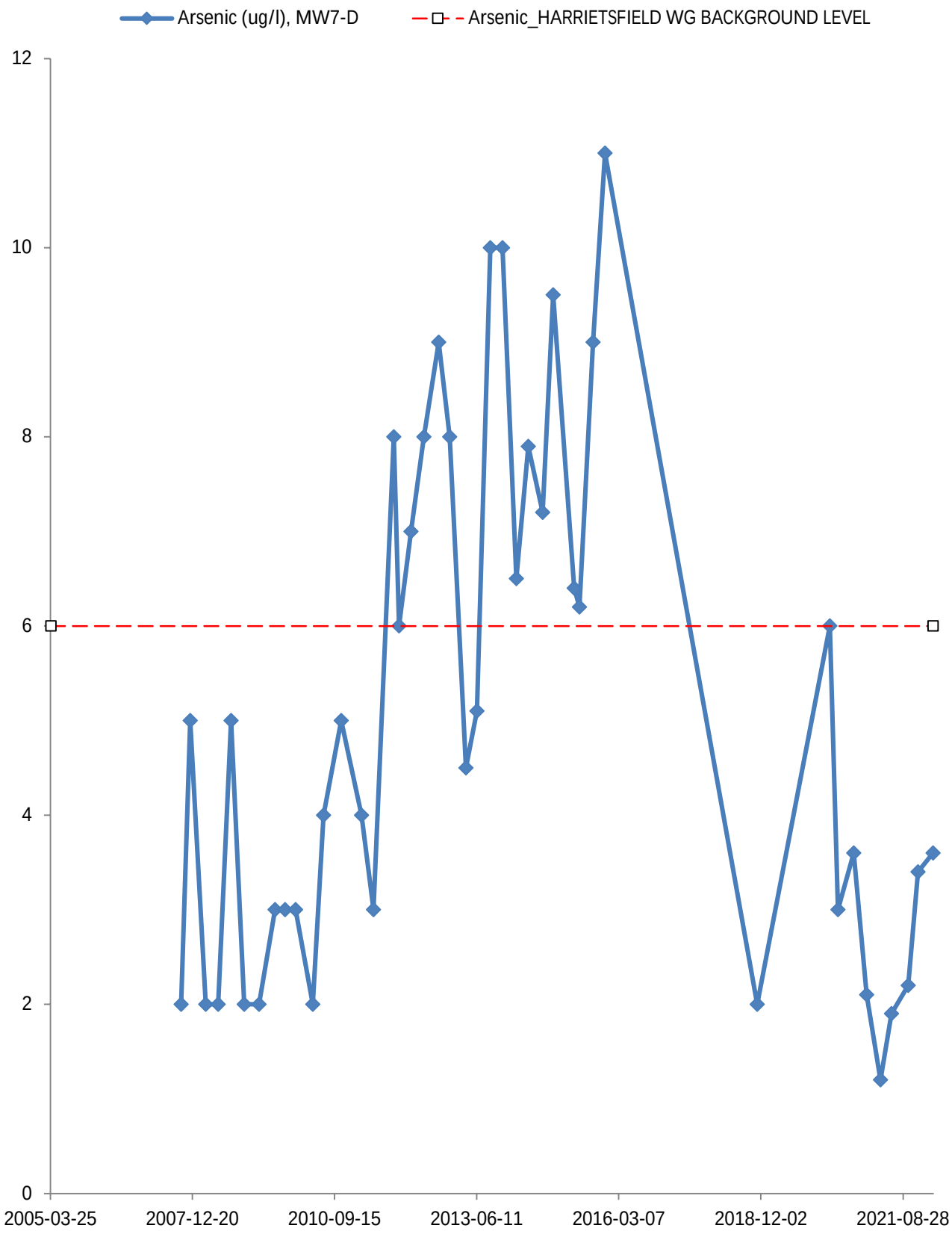
MW7-D-Ammonia-N



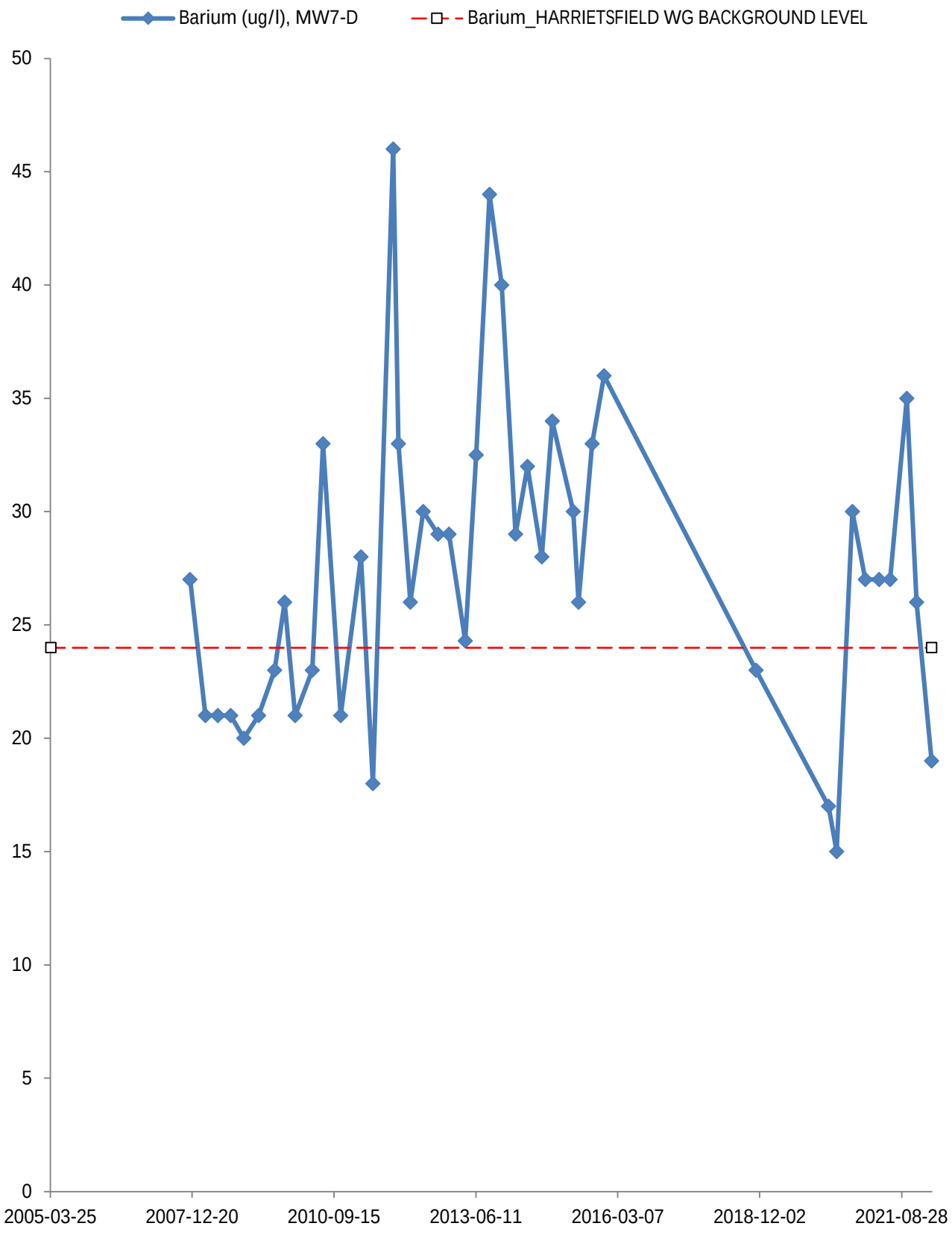
MW7-D-Antimony



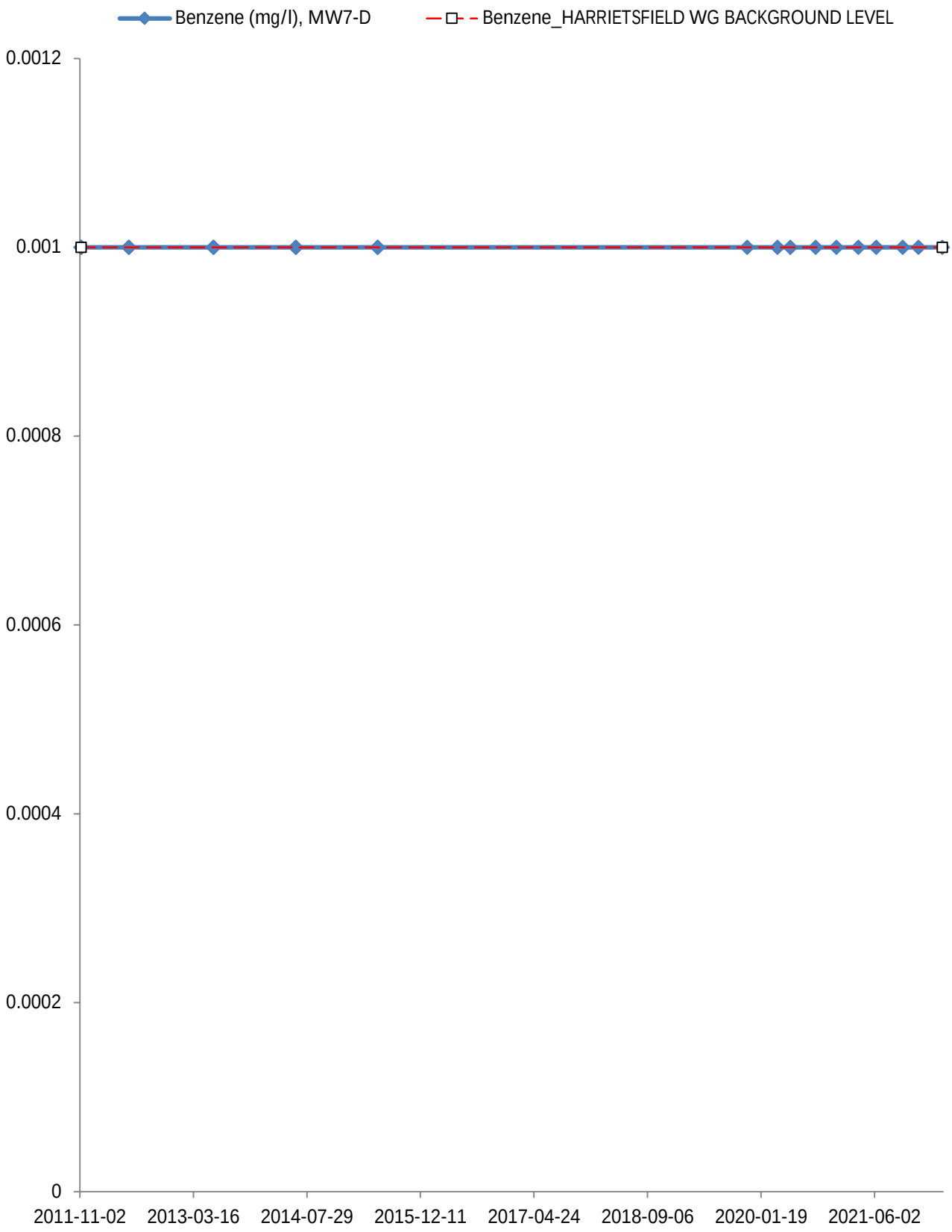
MW7-D-Arsenic



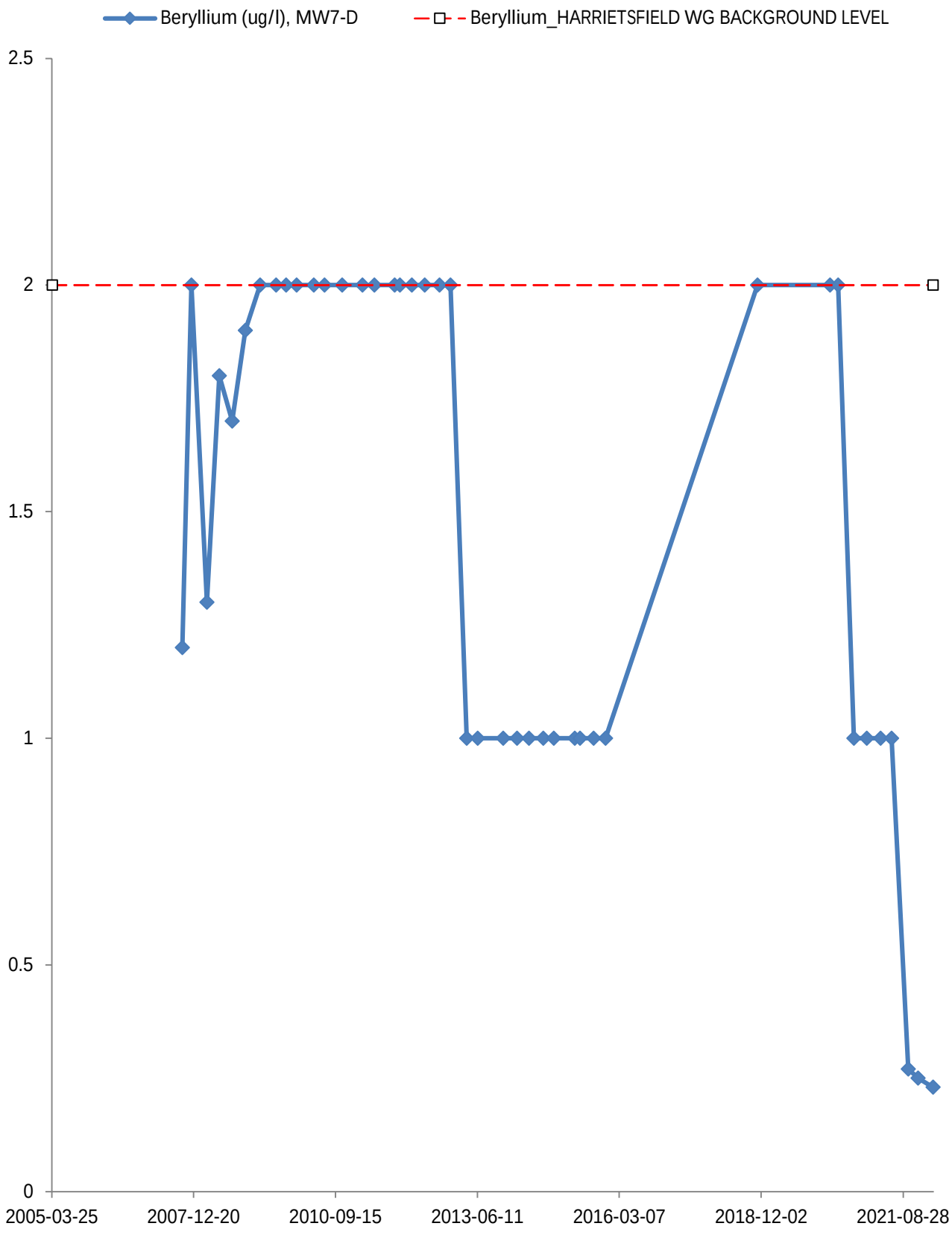
MW7-D-Barium


Barium (ug/l), MW7-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
50
45
40
35
30
25
20
15
10
5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

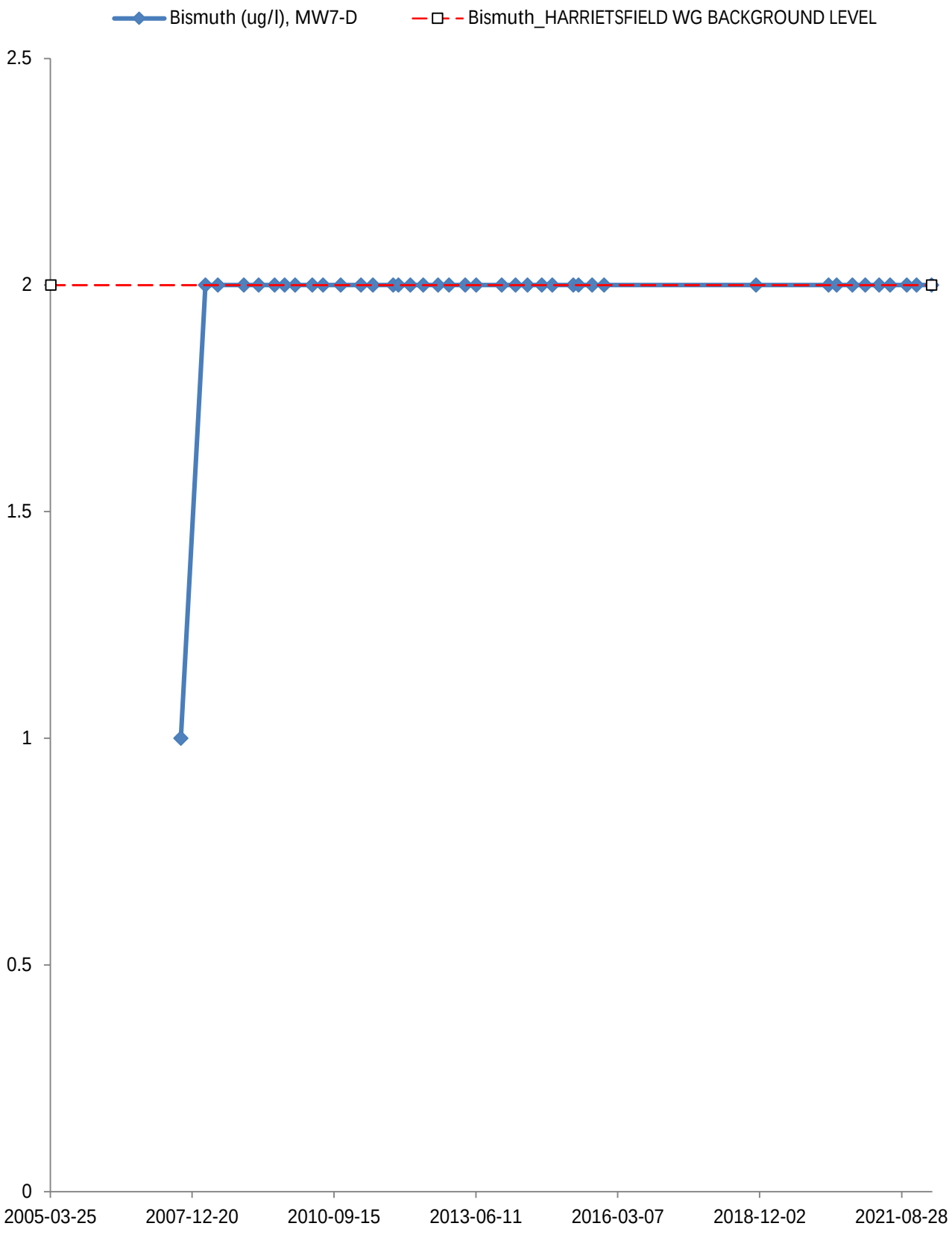
MW7-D-Benzene



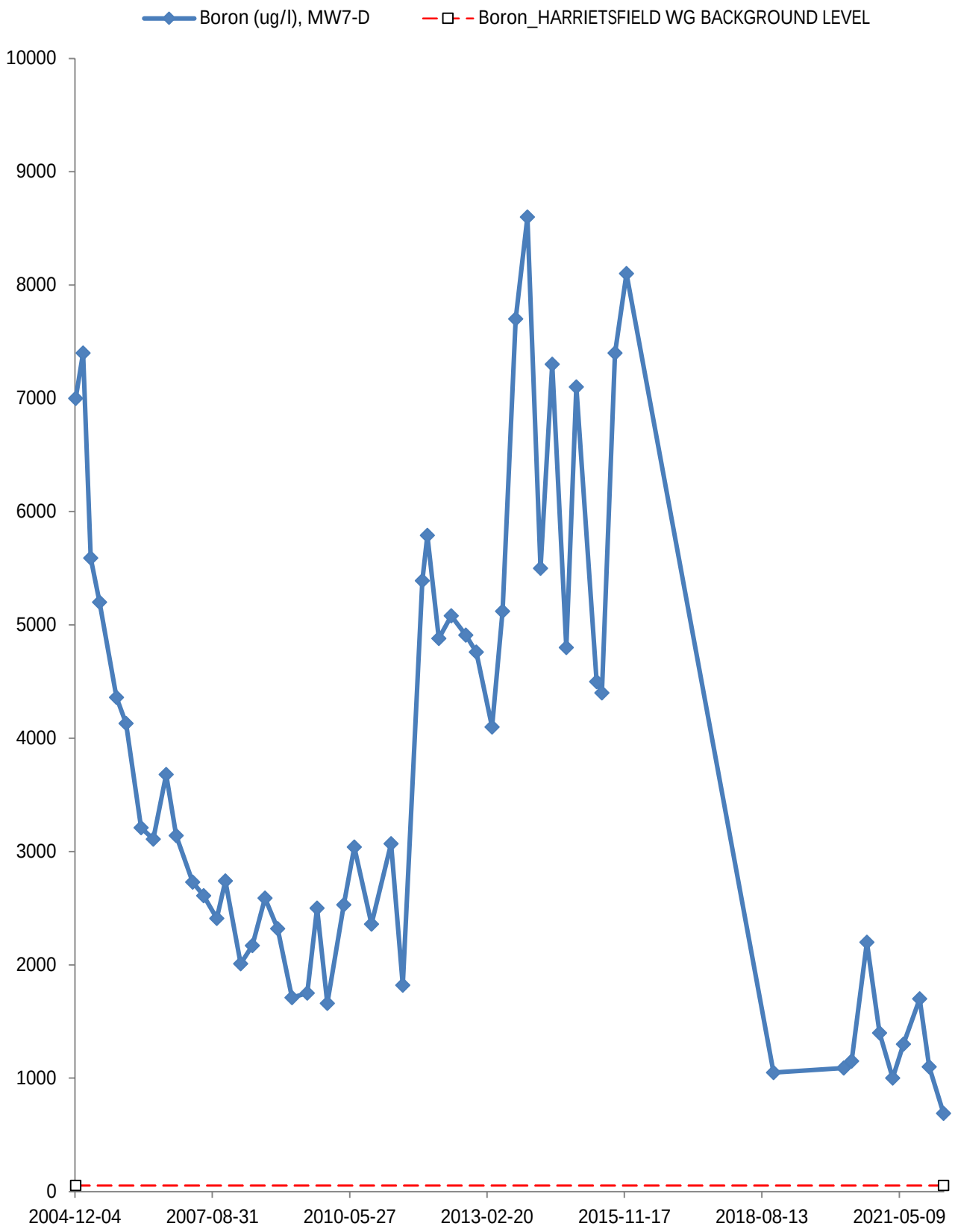
MW7-D-Beryllium



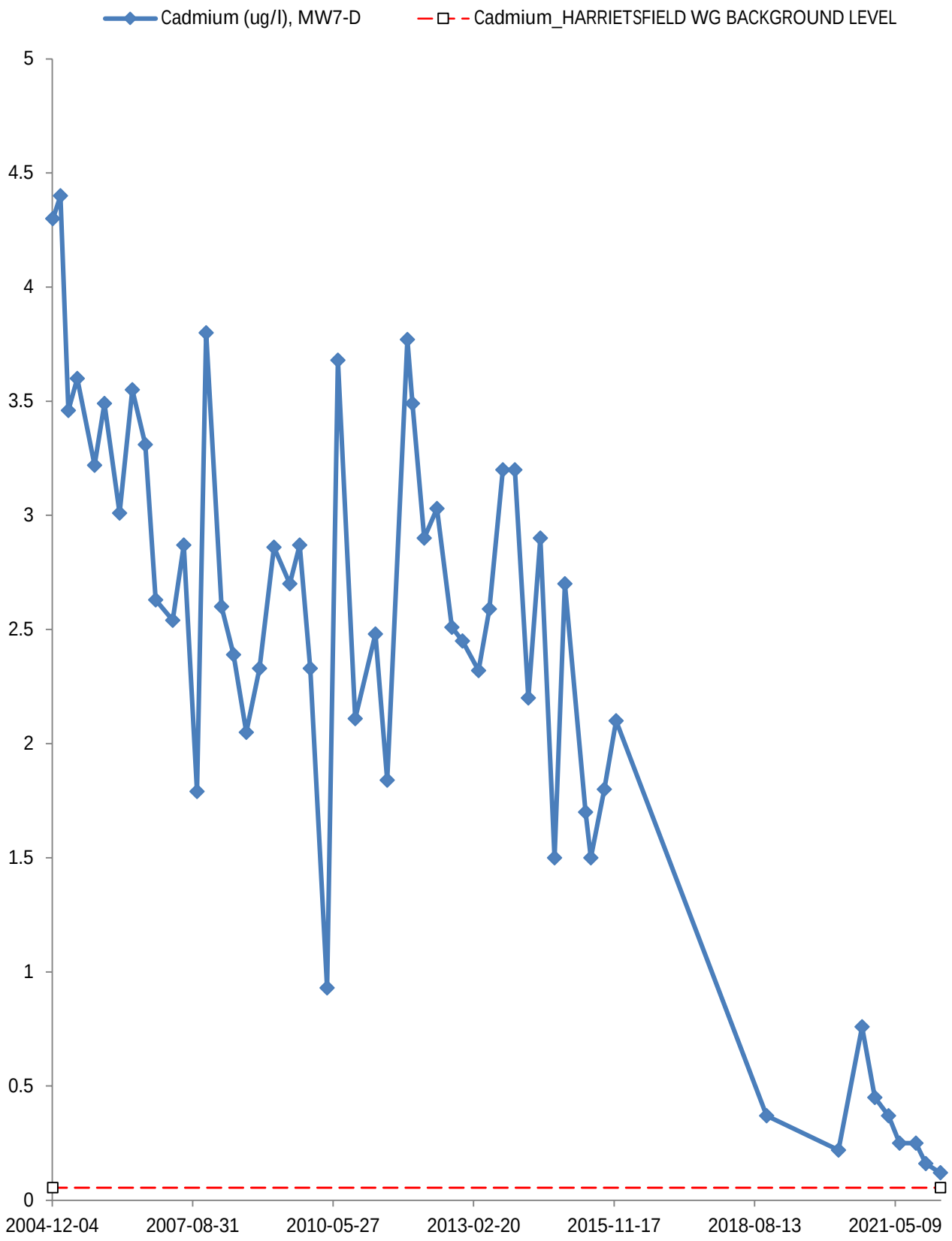
MW7-D-Bismuth



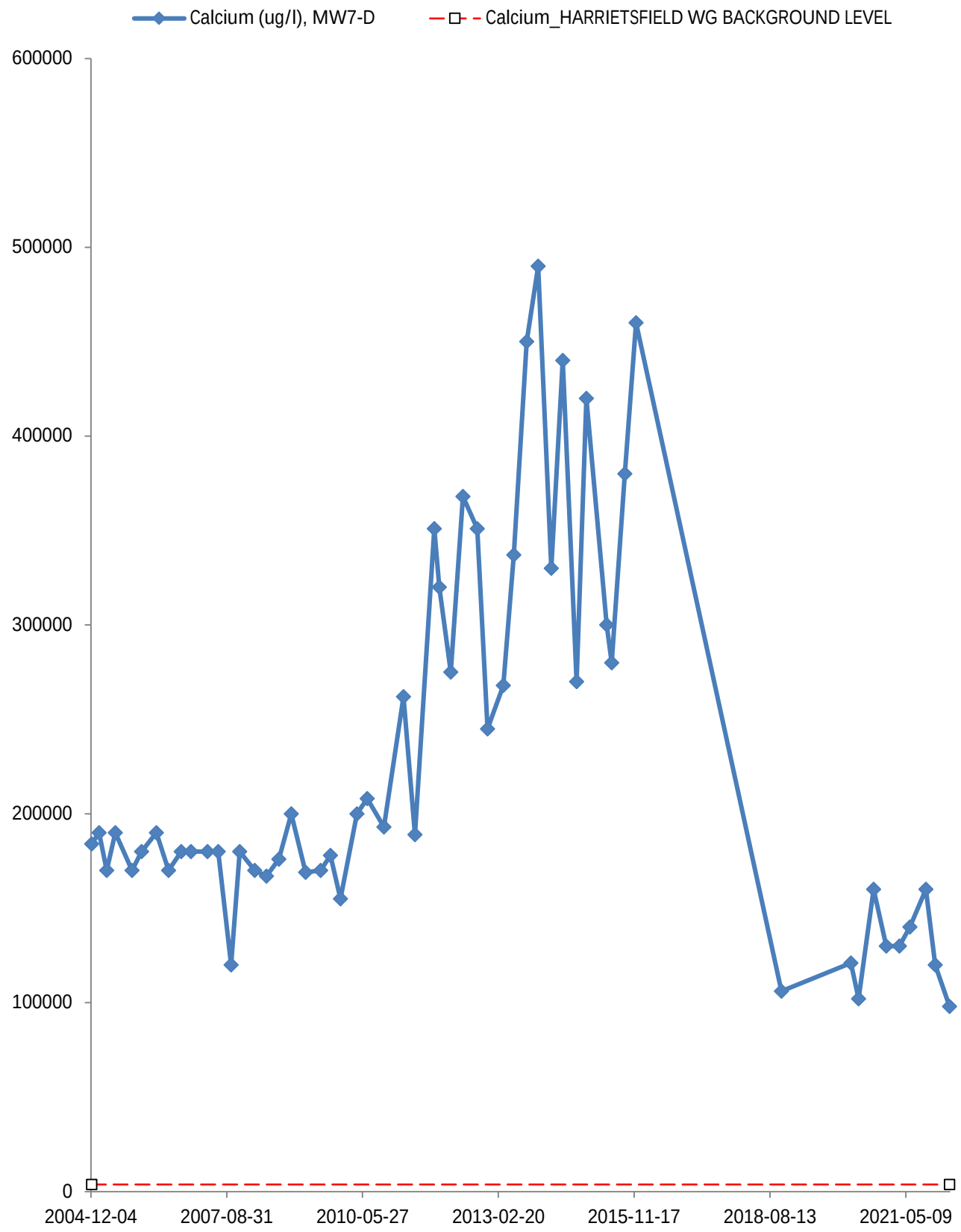
MW7-D-Boron


Boron (ug/l), MW7-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

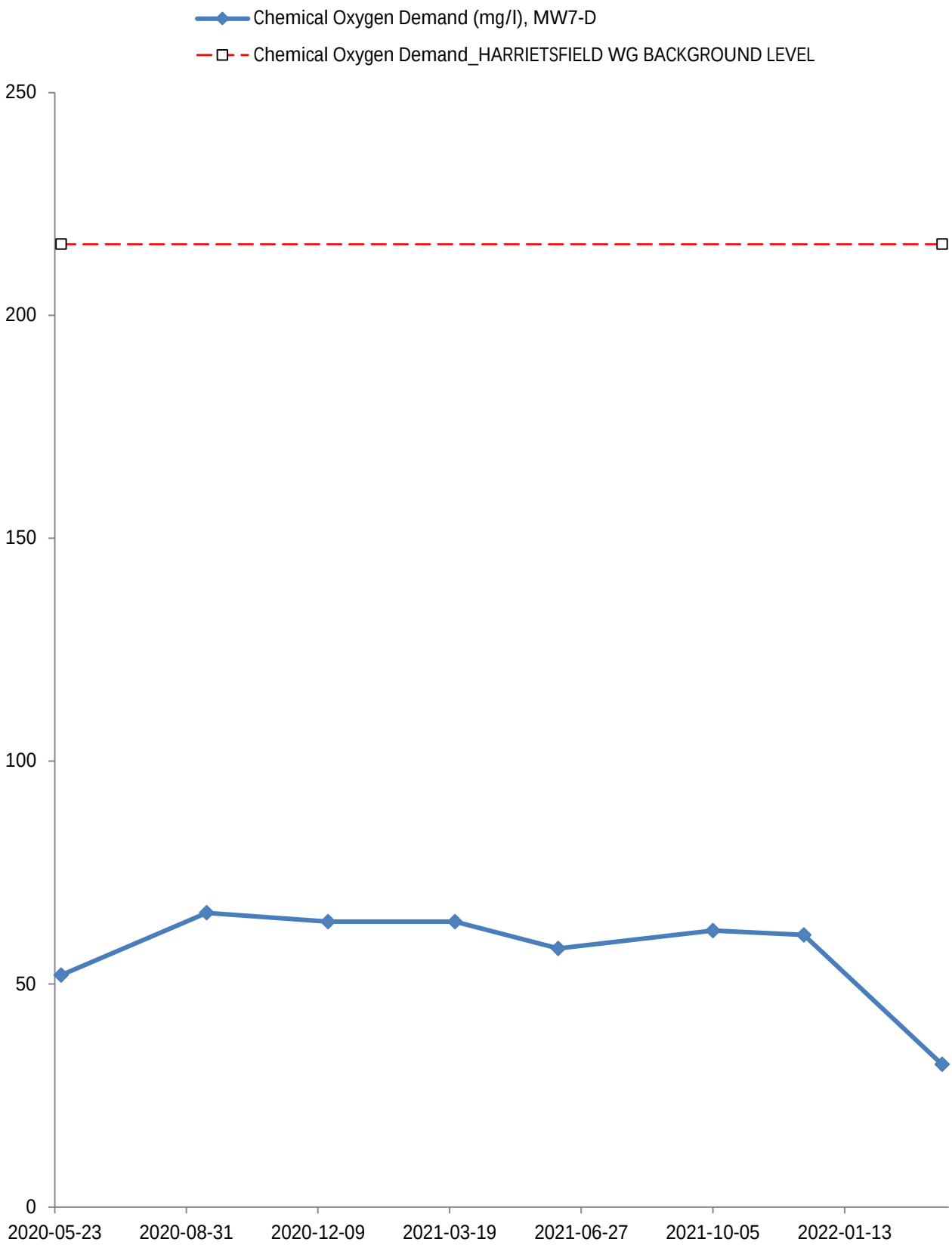
MW7-D-Cadmium



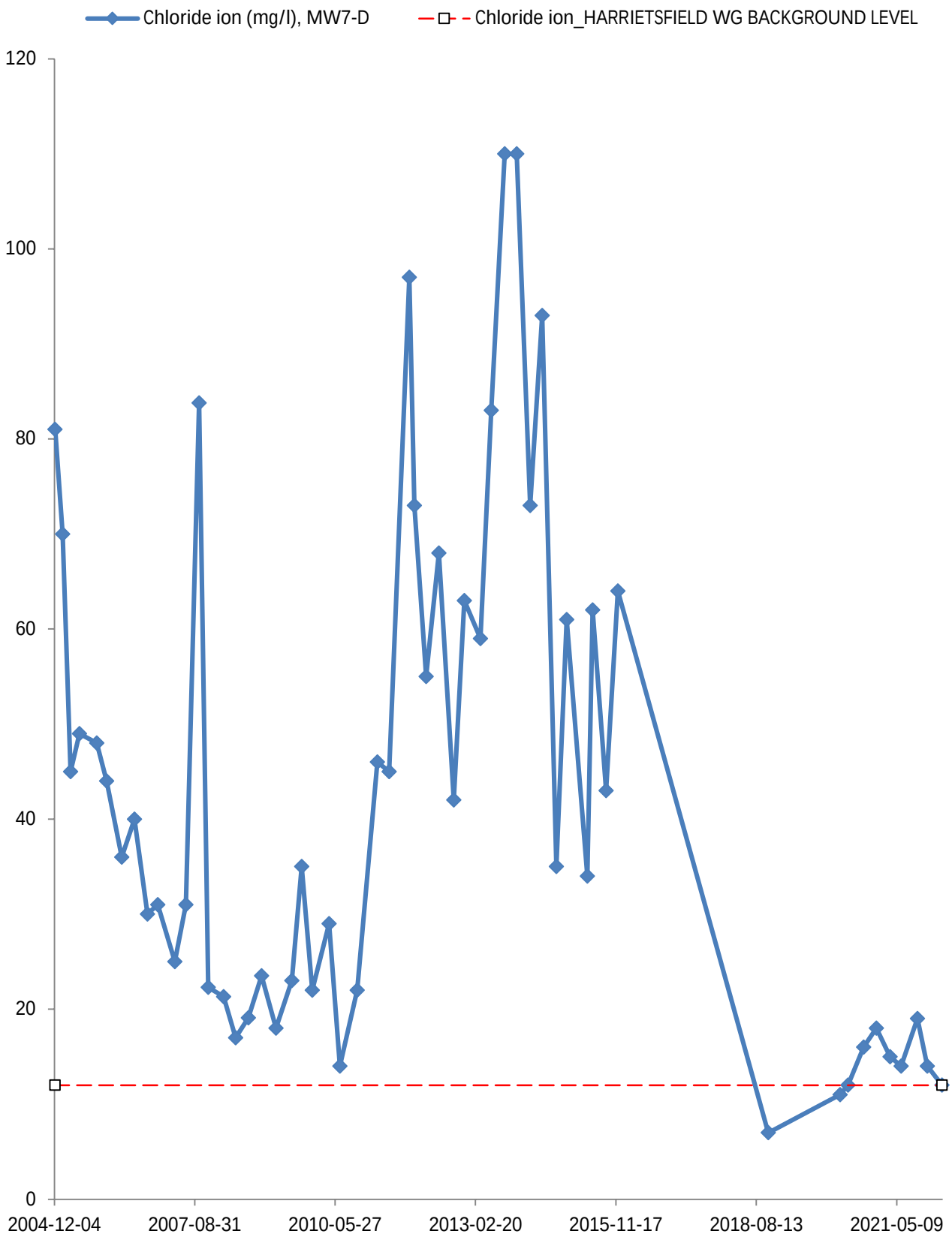
MW7-D-Calcium

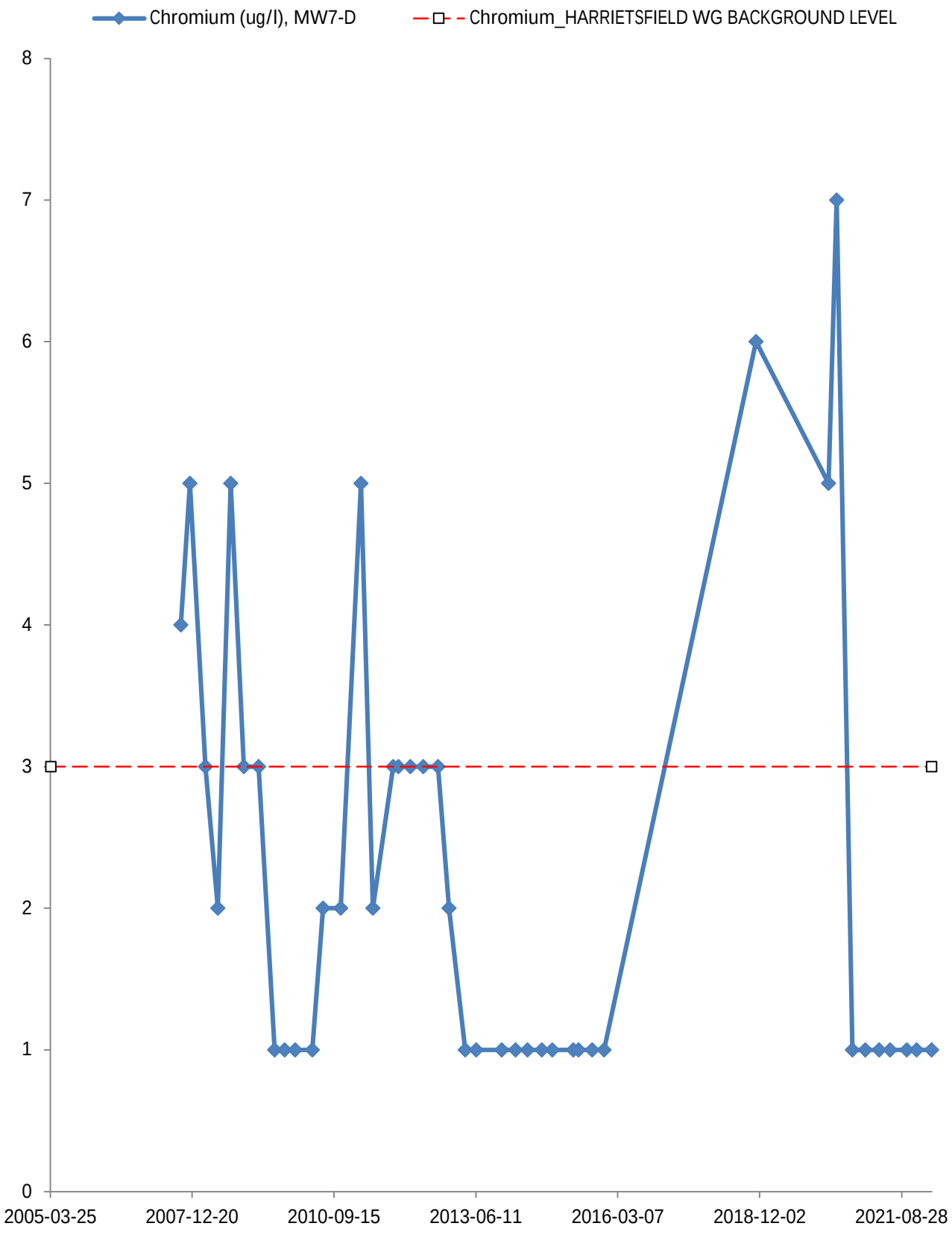


MW7-D-Chemical Oxygen Demand

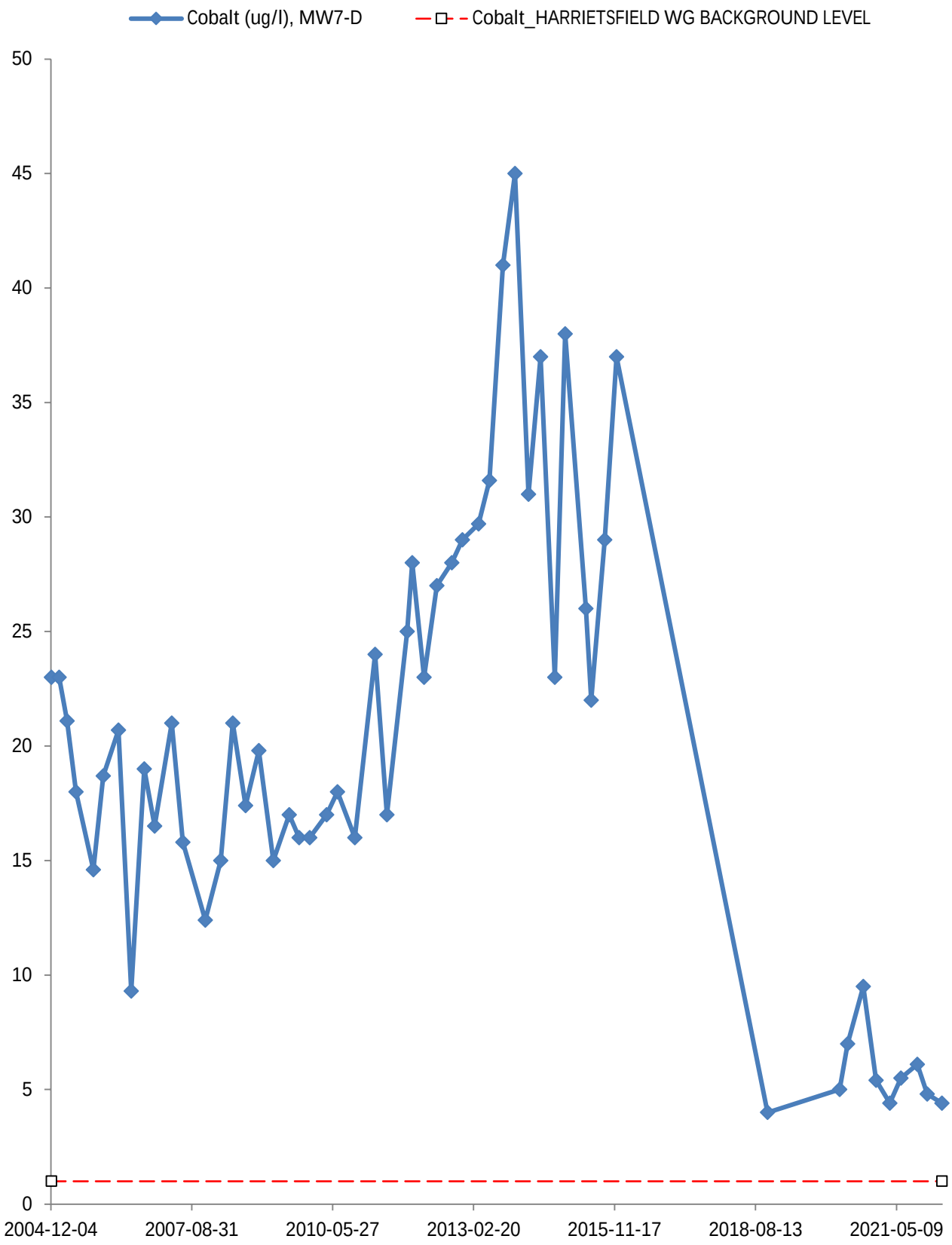


MW7-D-Chloride ion

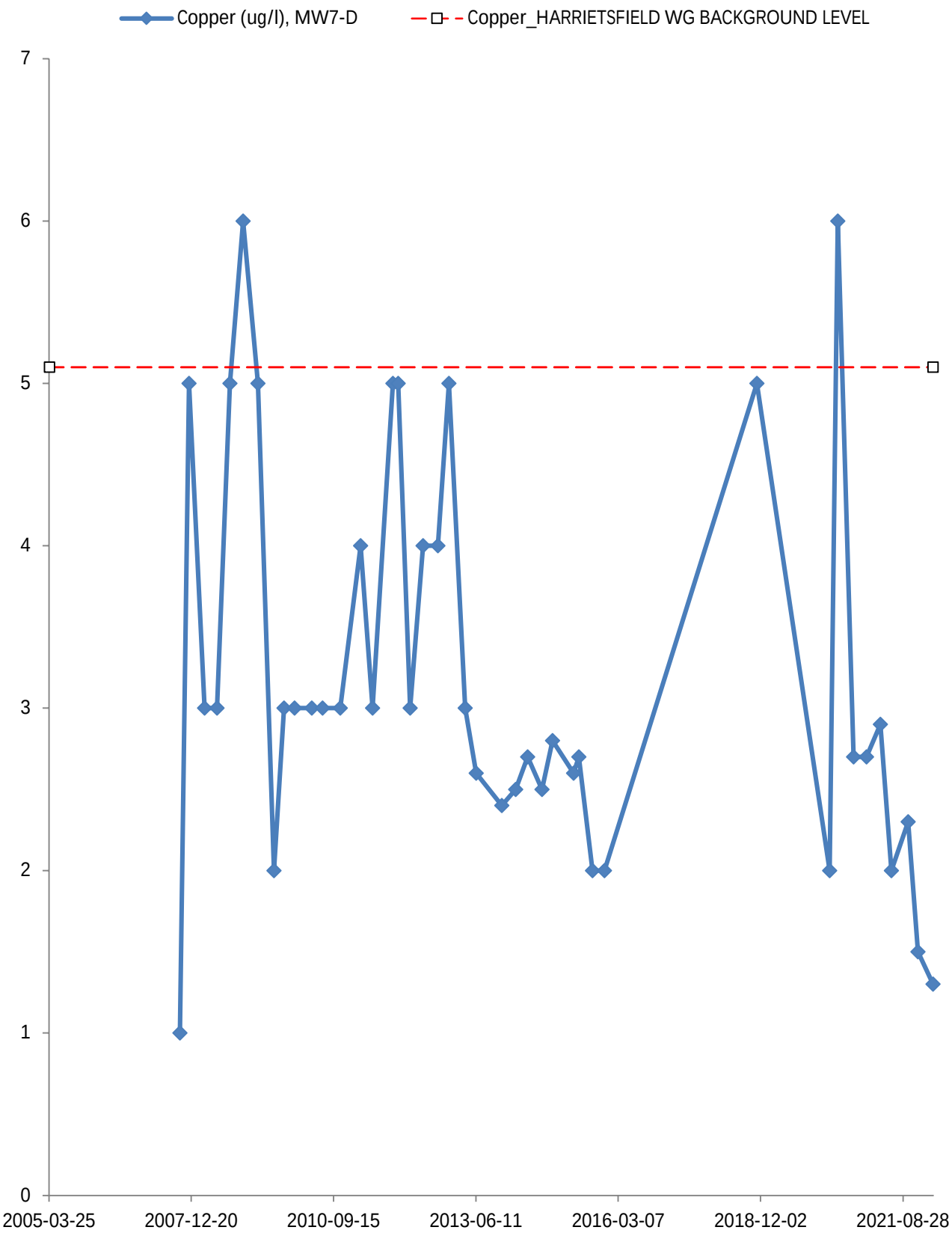



Chromium (ug/l), MW7-D
Chromium_HARRIETSFIELD WG BACKGROUND LEVEL
8
7
6
5
4
3
2
1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

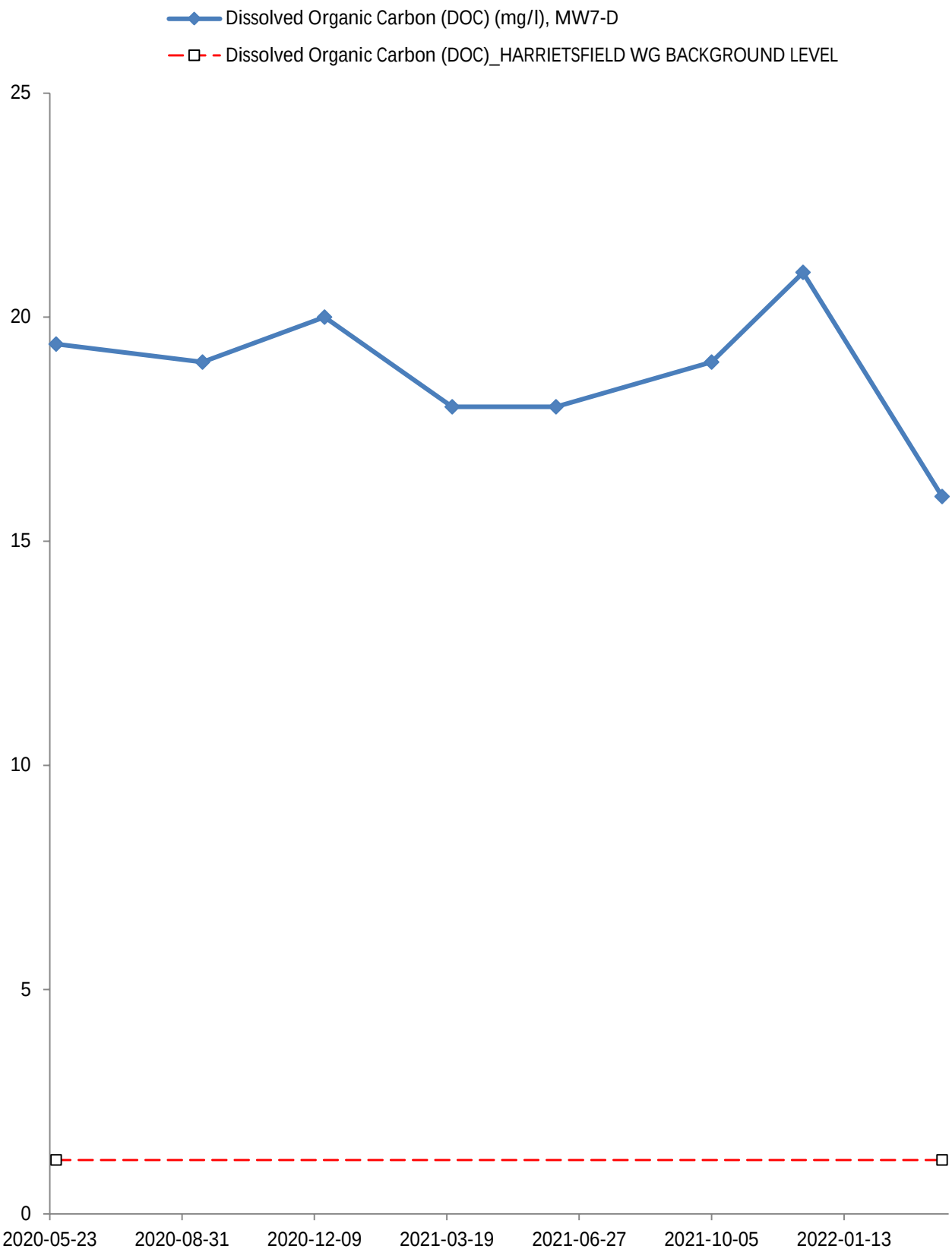
MW7-D-Cobalt


Cobalt (ug/l), MW7-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
50
45
40
35
30
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

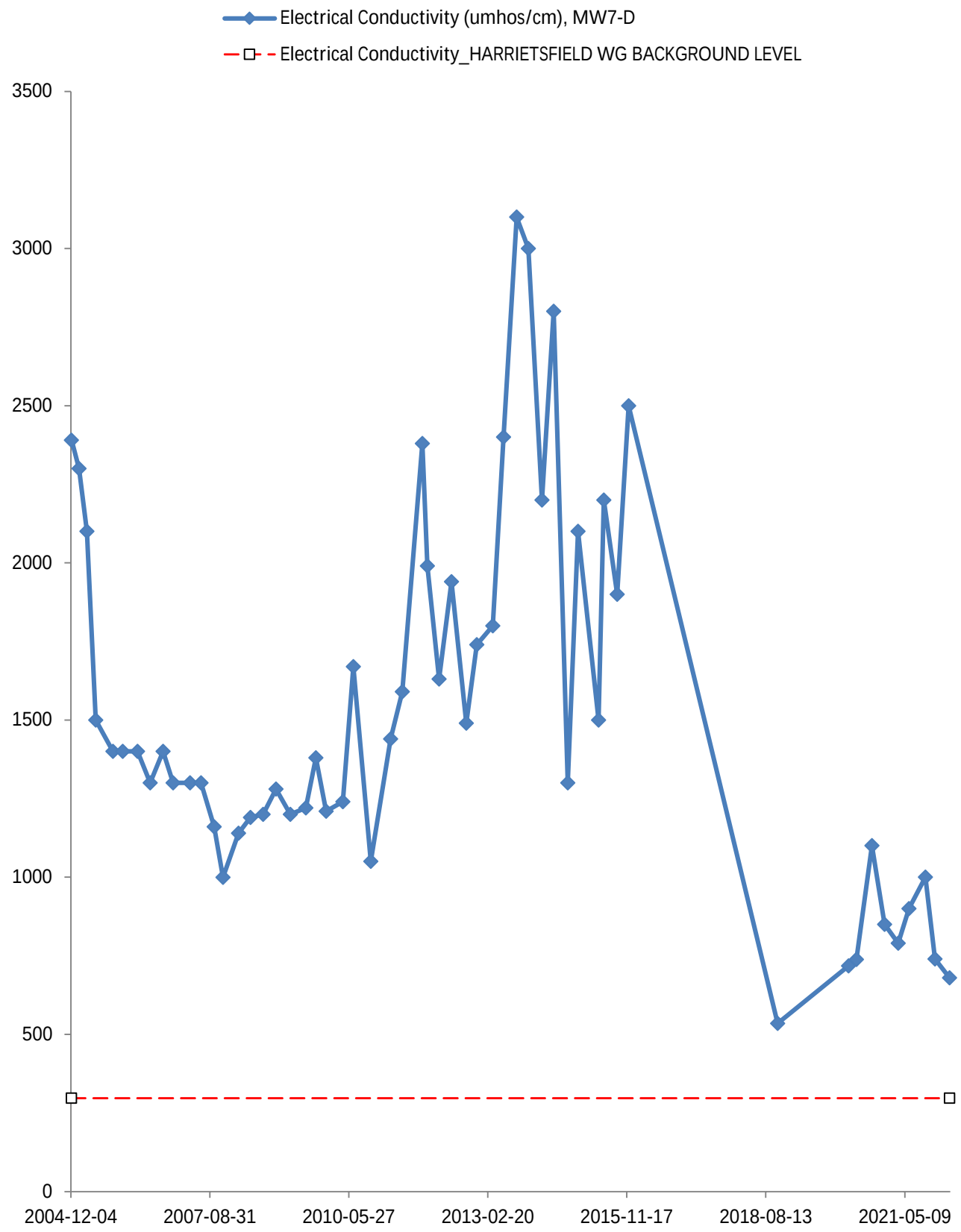
MW7-D-Copper


Copper (ug/l), MW7-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
7
6
5
4
3
2
1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

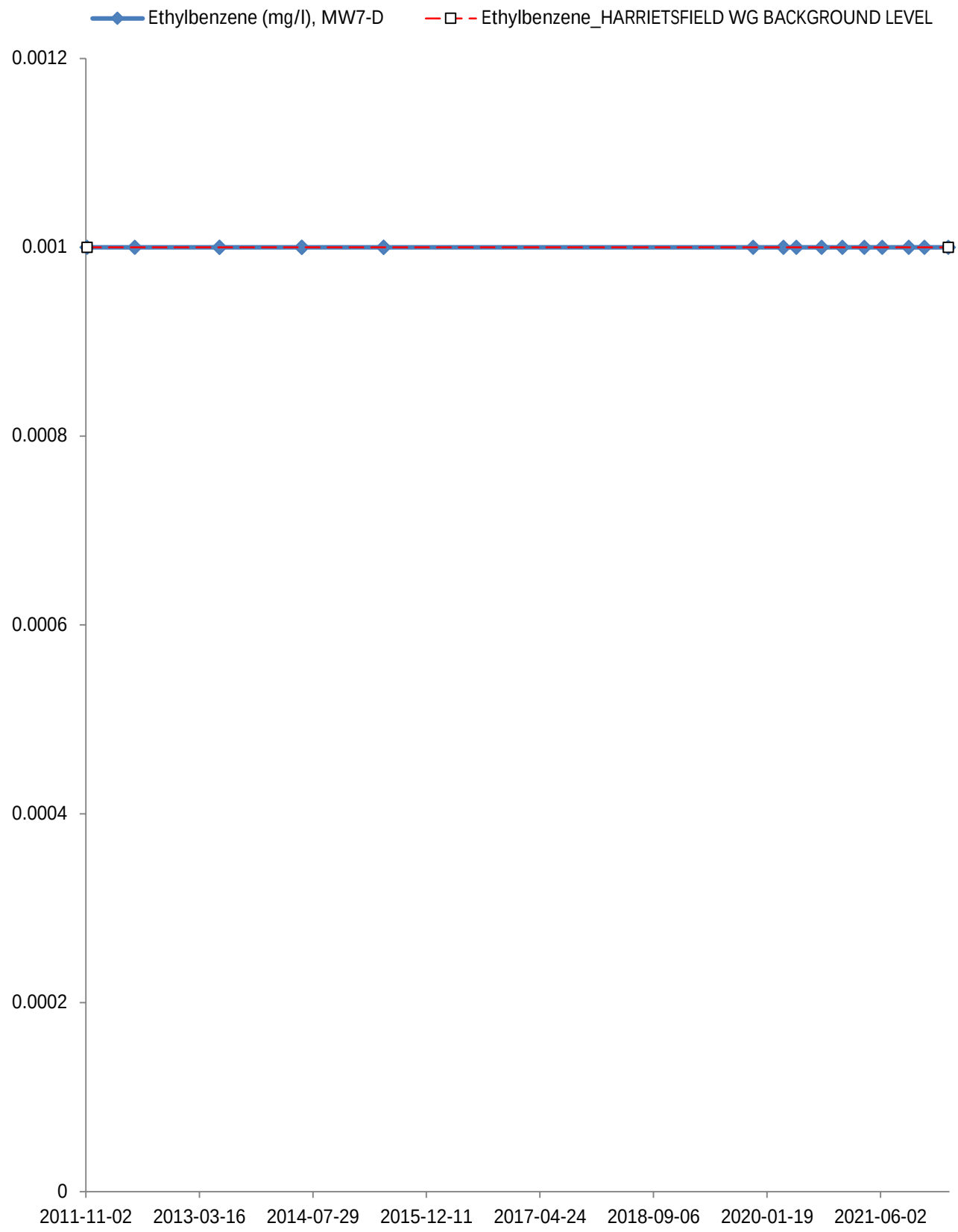
MW7-D-Dissolved Organic Carbon7



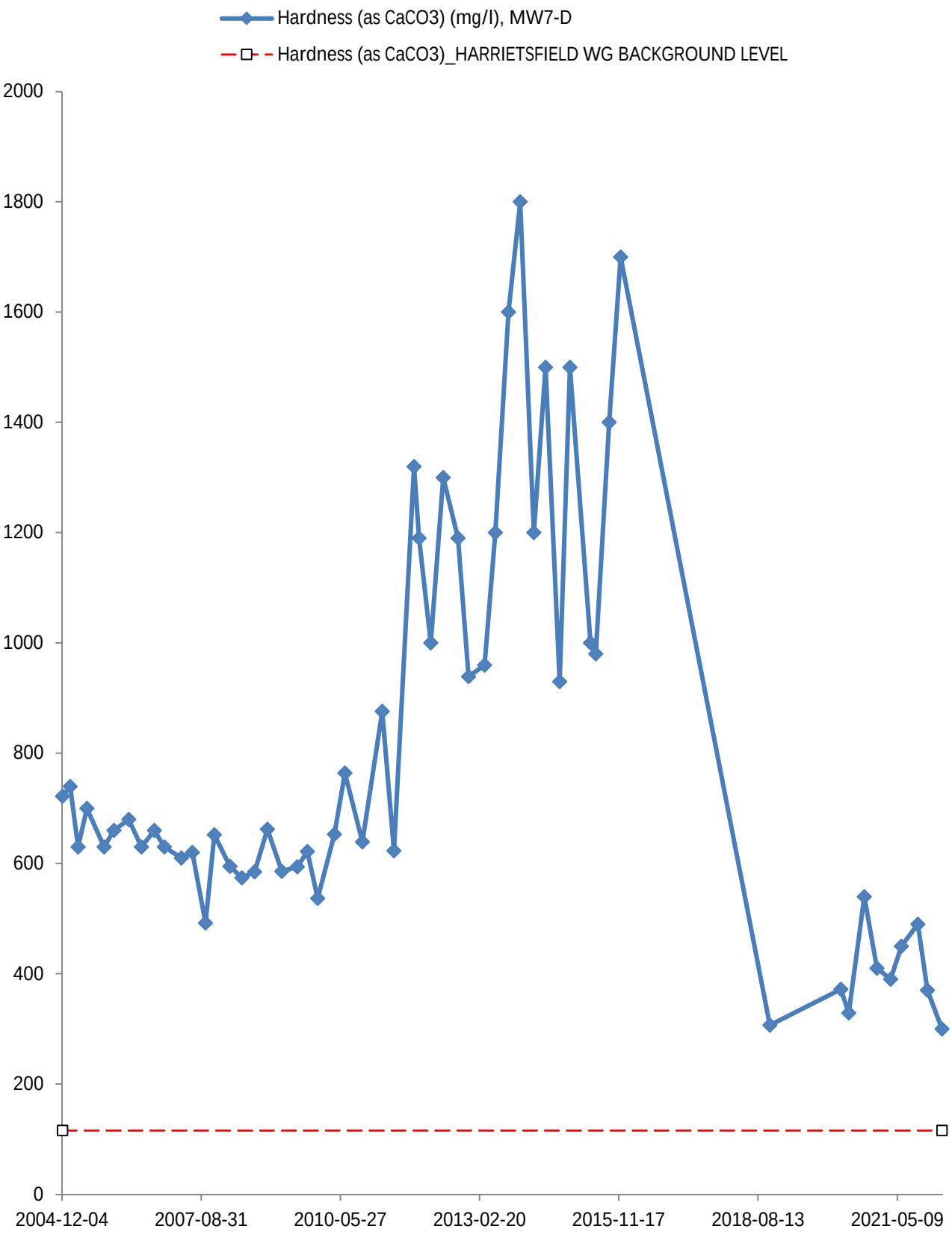
MW7-D-Electrical Conductivity



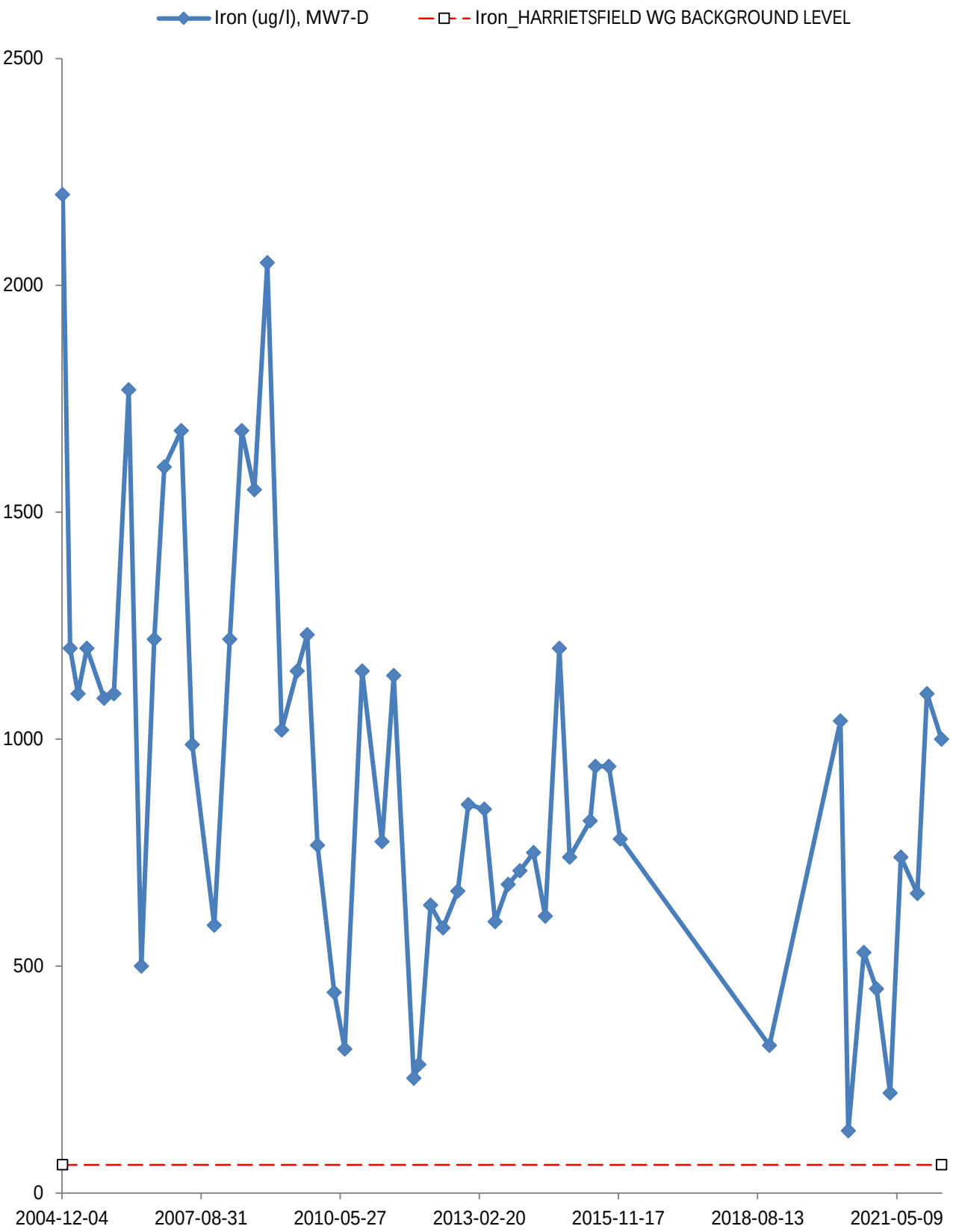
MW7-D-Ethylbenzene

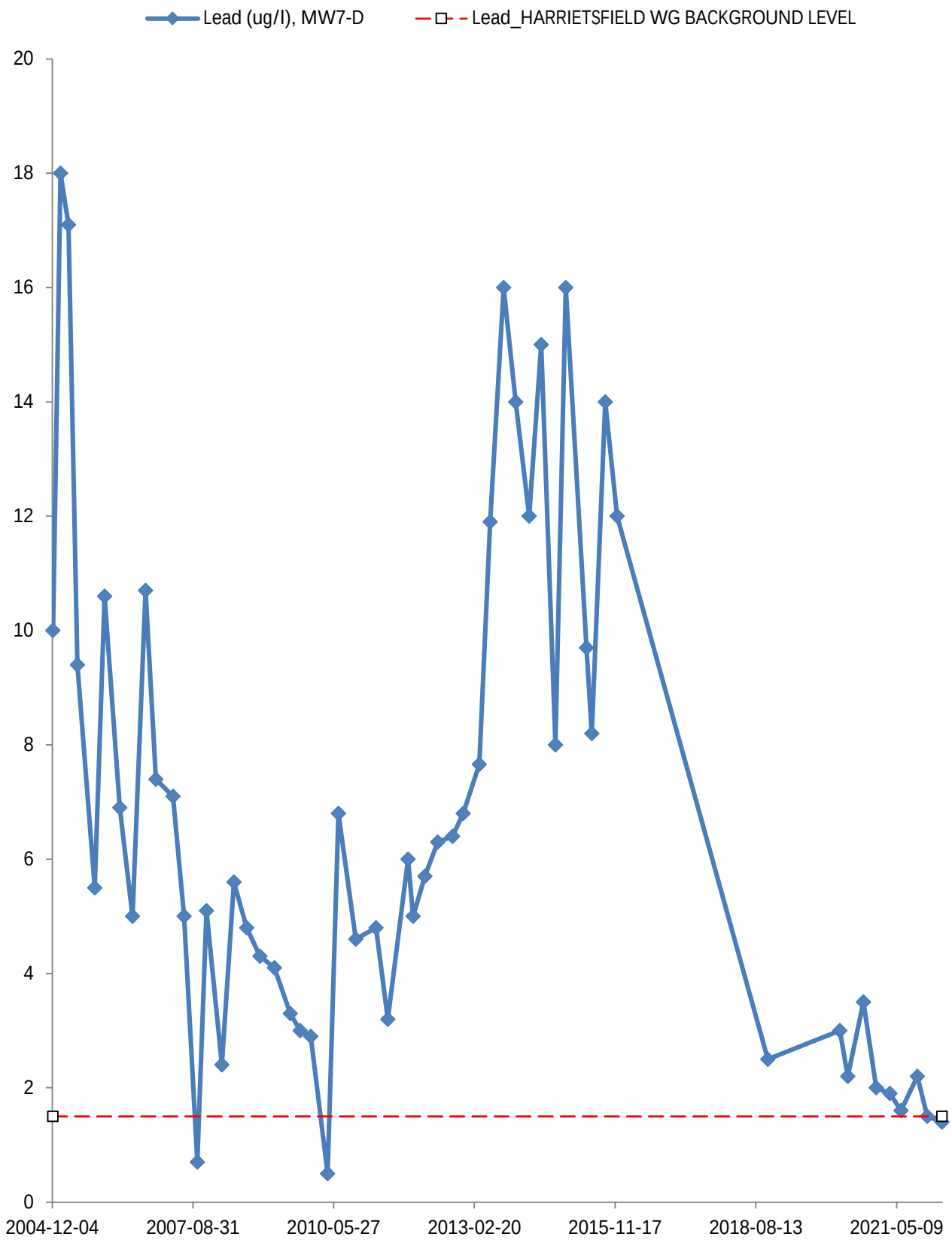


MW7-D-Hardness (as CaCO3)

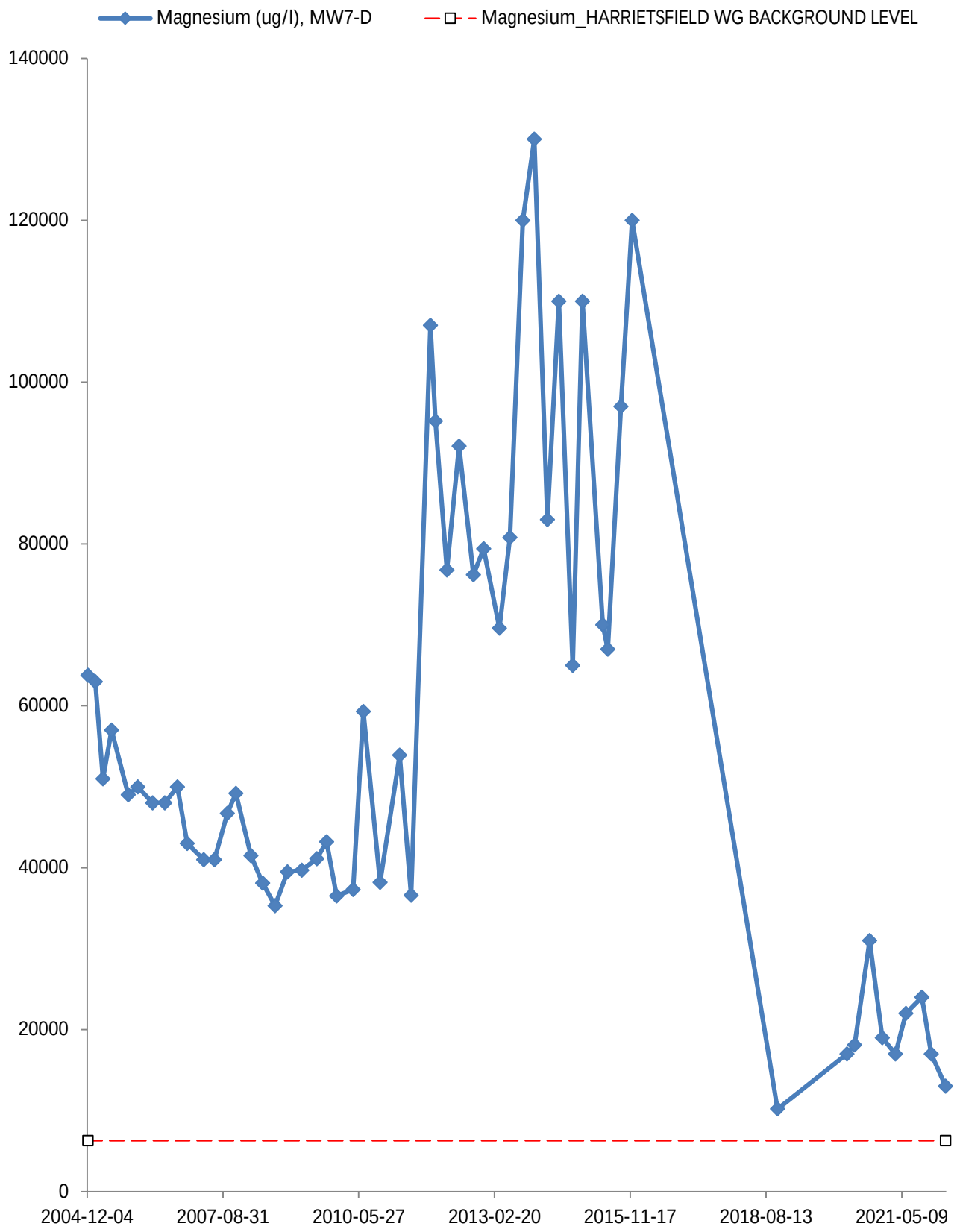


MW7-D-Iron

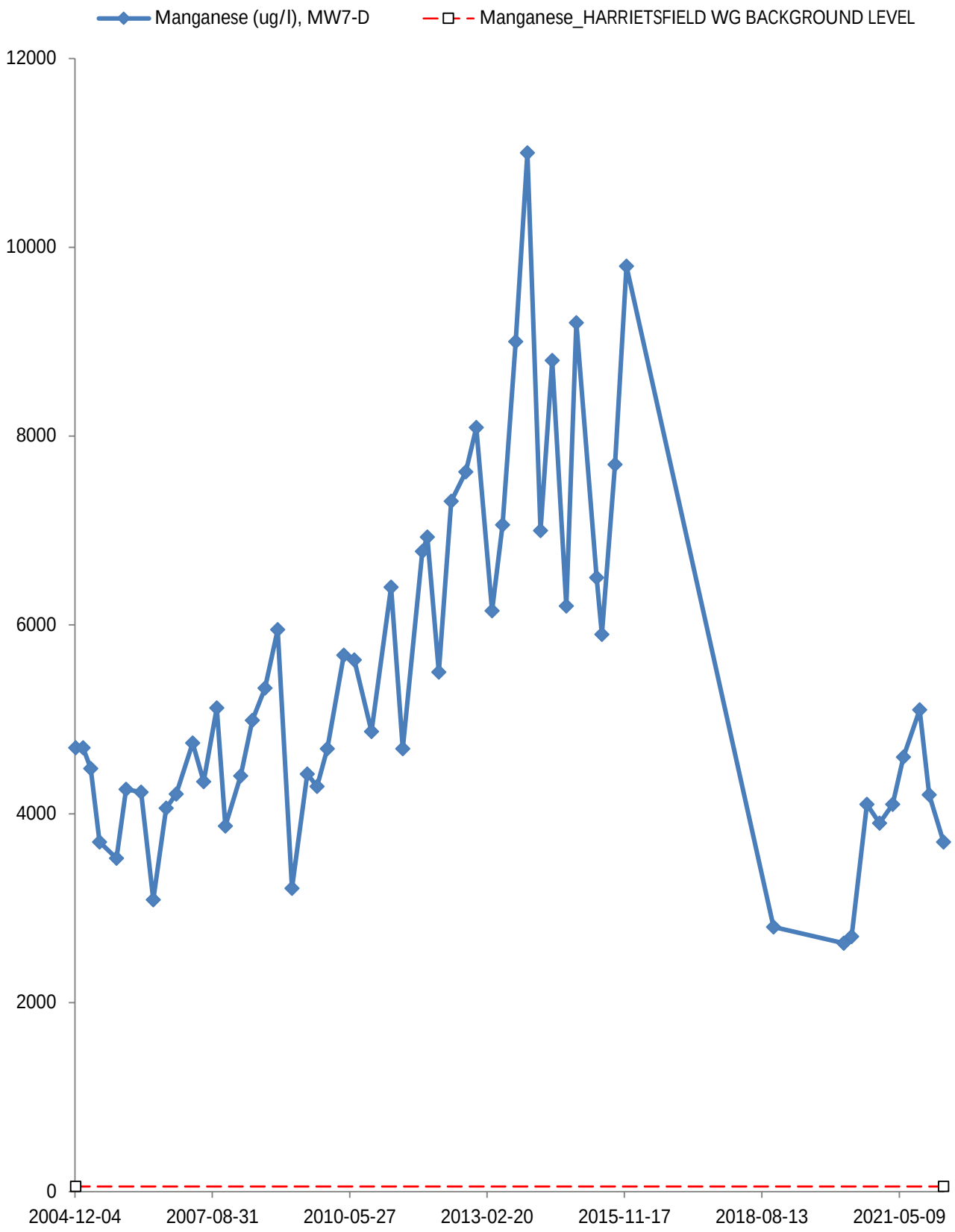

Iron (ug/l), MW7-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
2500
2000
1500
1000
500
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09


Lead (ug/l), MW7-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
20
18
16
14
12
10
8
6
4
2
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

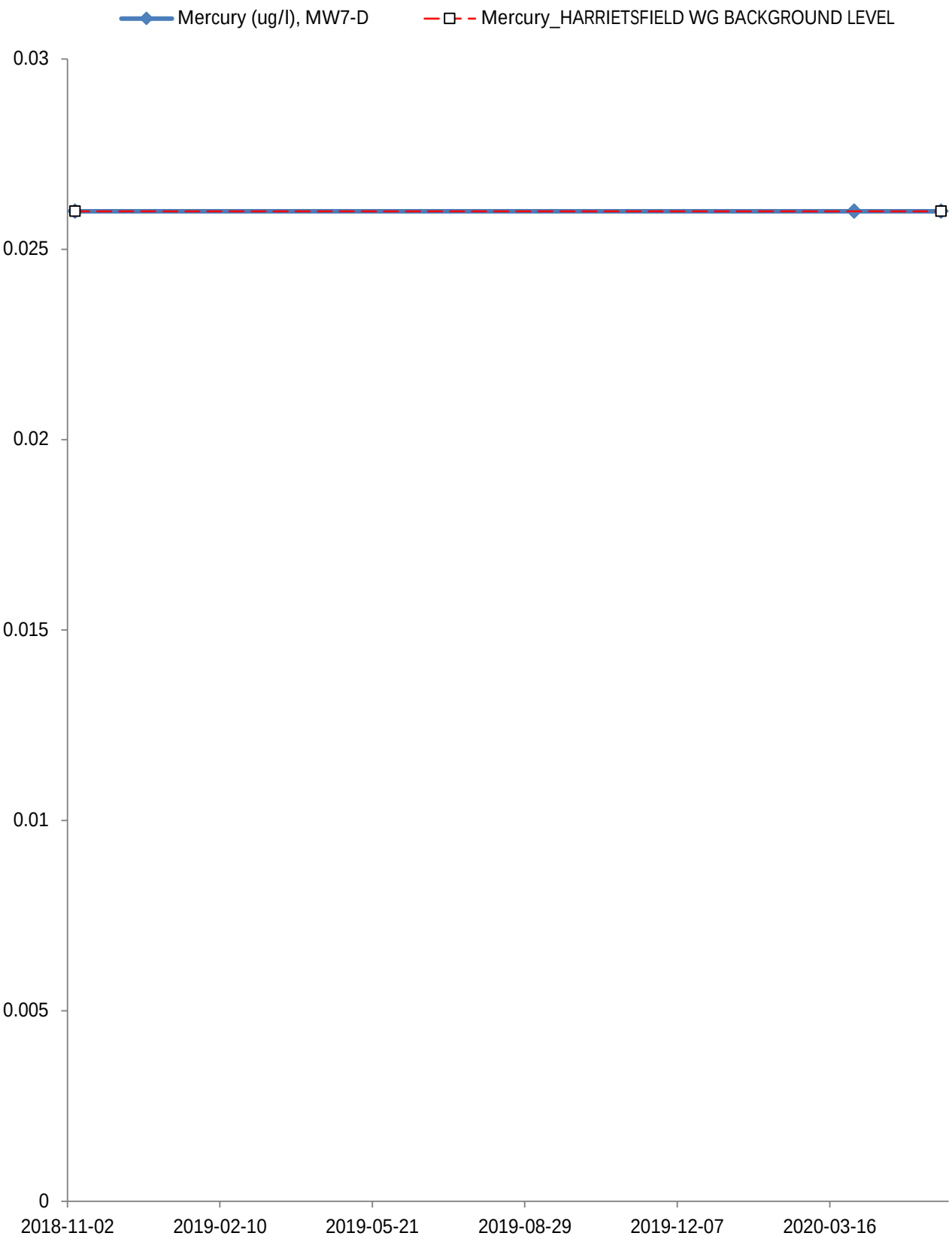
MW7-D-Magnesium



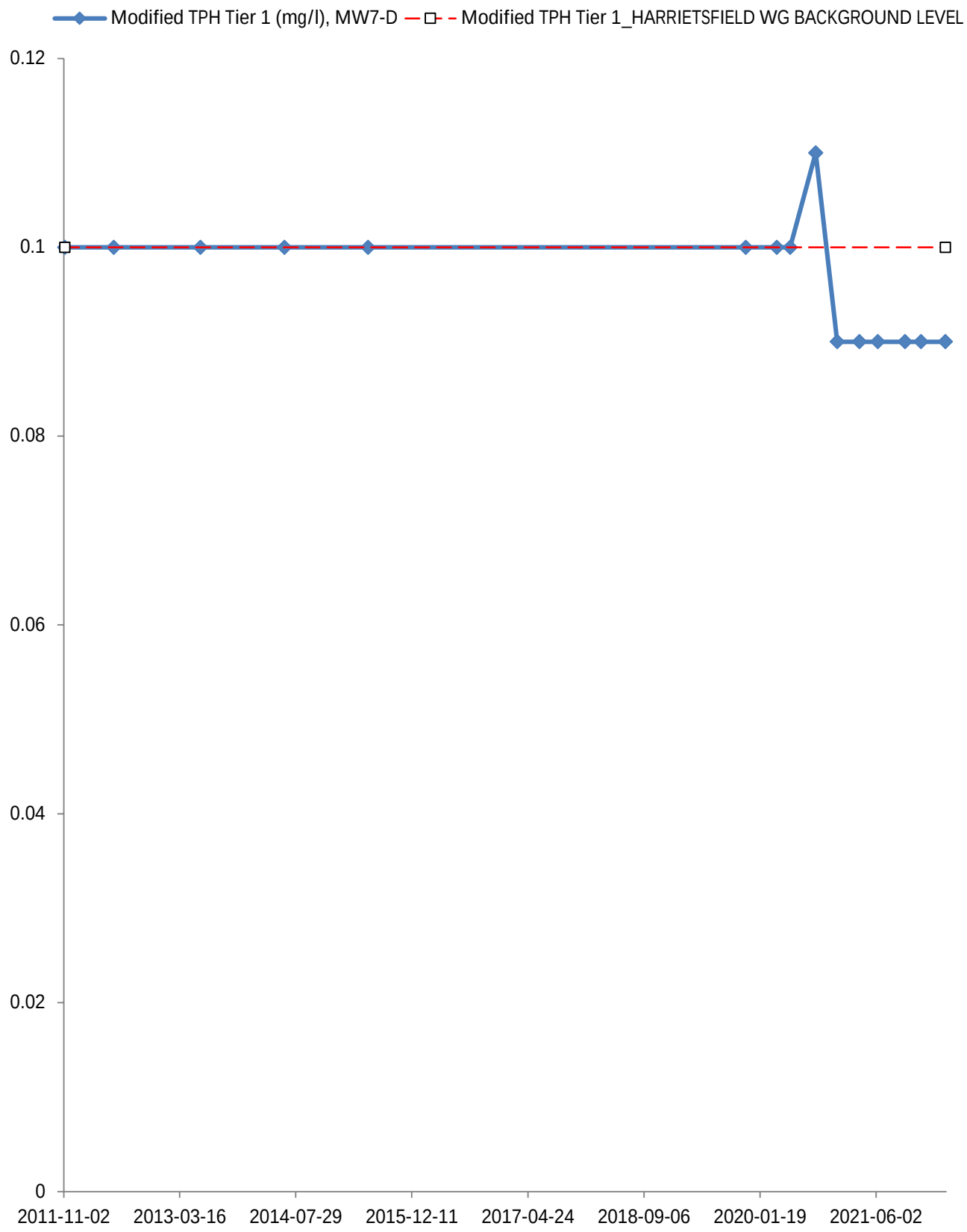
MW7-D-Manganese



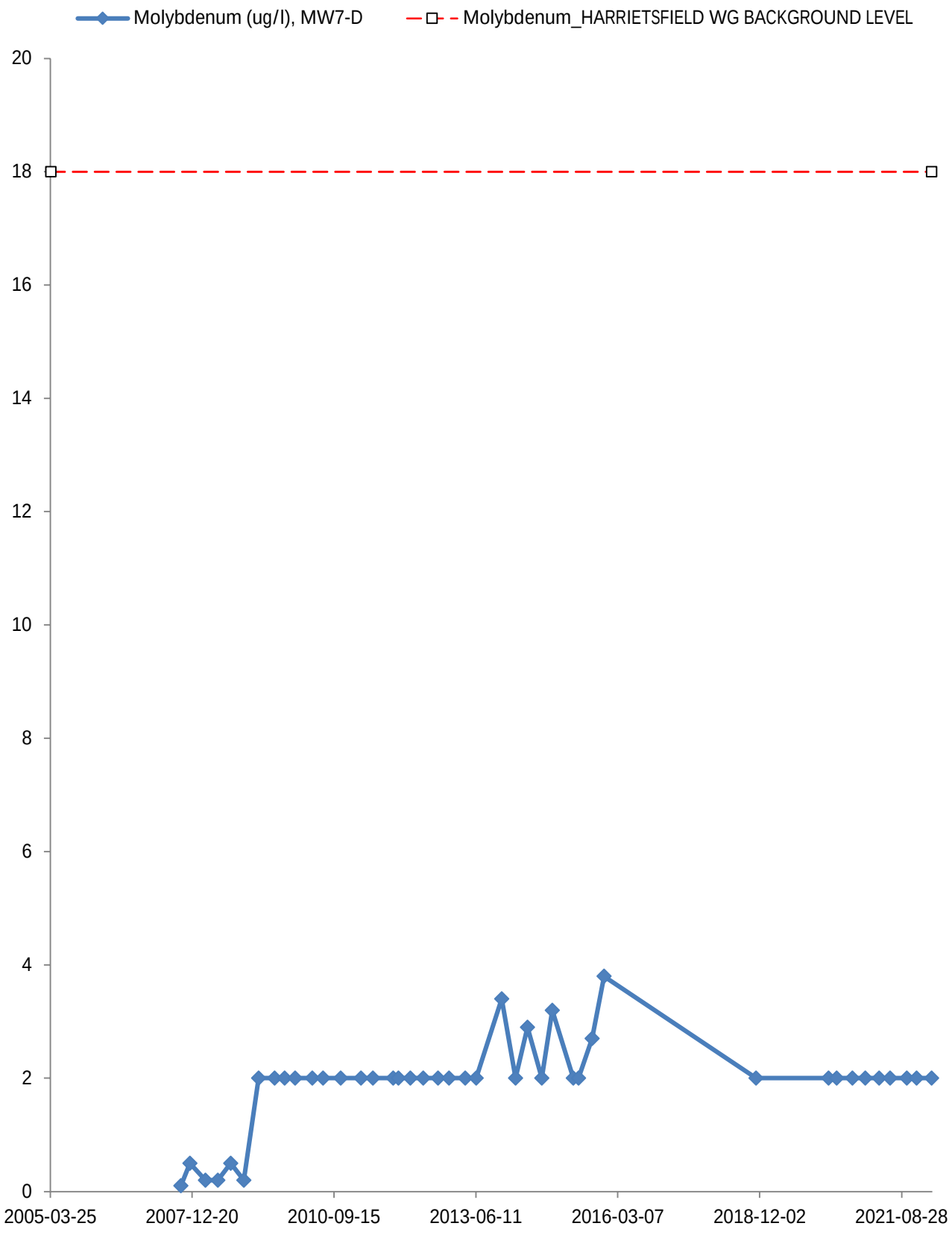
MW7-D-Mercury



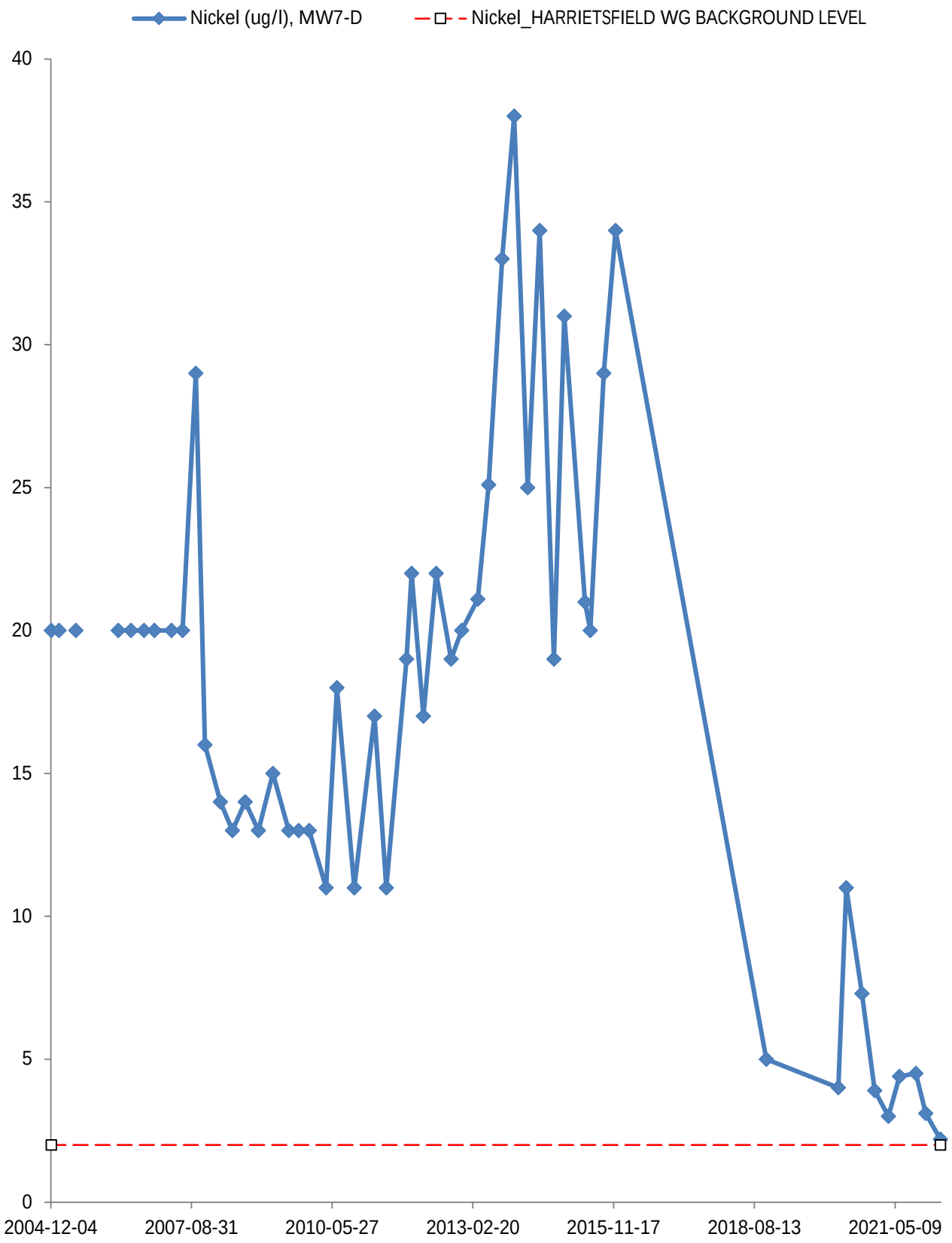
MW7-D-Modified TPH Tier 1



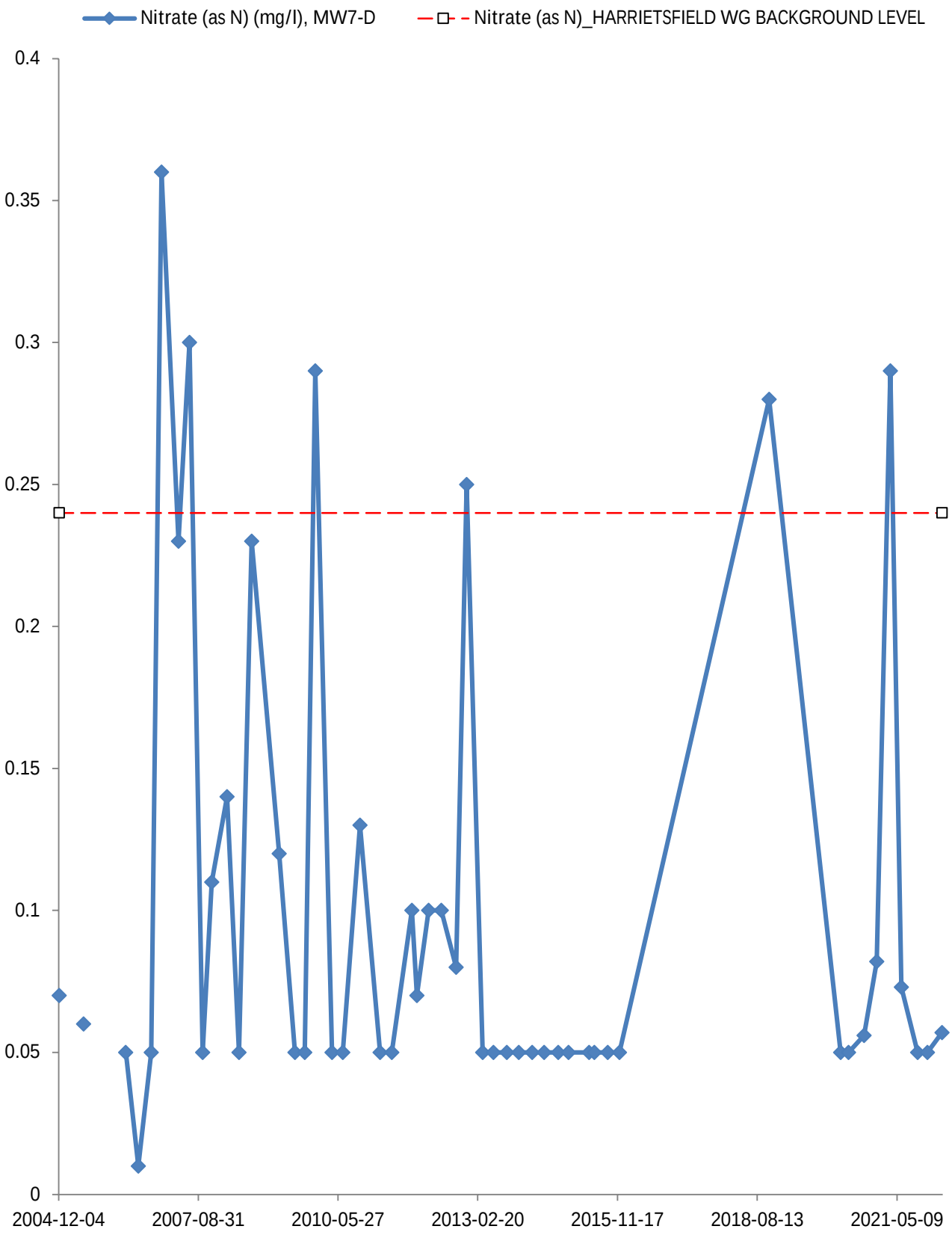
MW7-D-Molybdenum



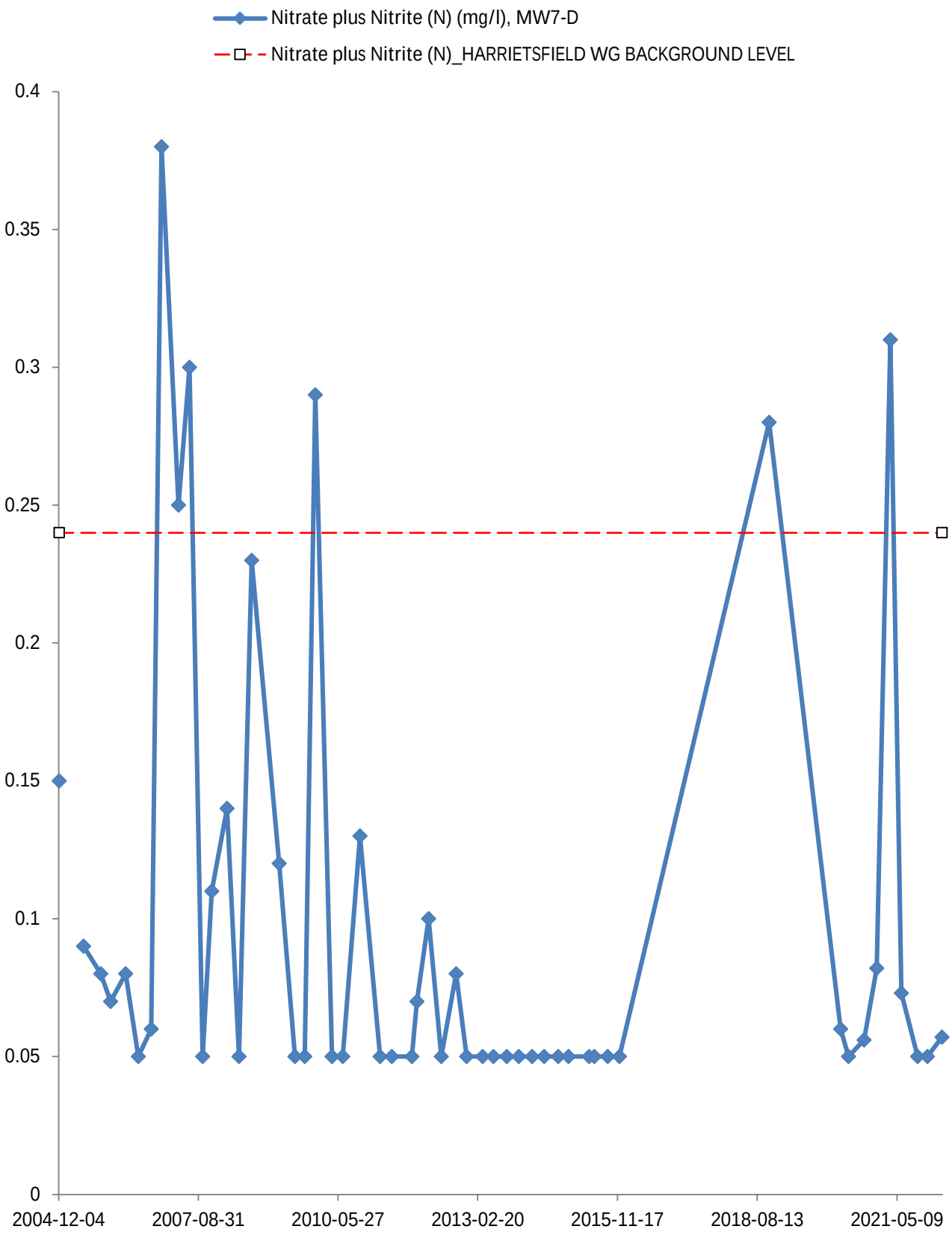
MW7-D-Nickel


Nickel (ug/l), MW7-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
40
35
30
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

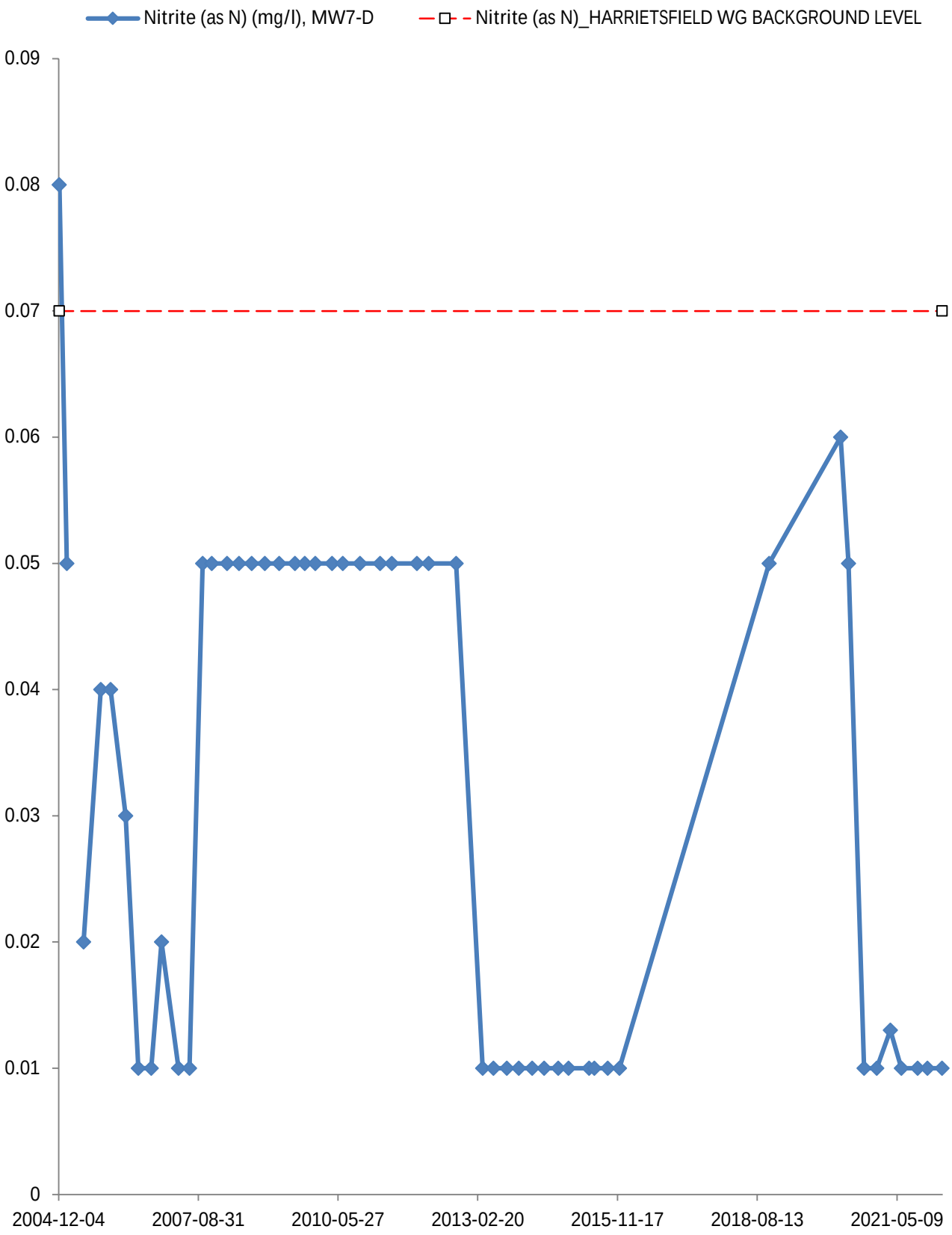
MW7-D-Nitrate (as N)



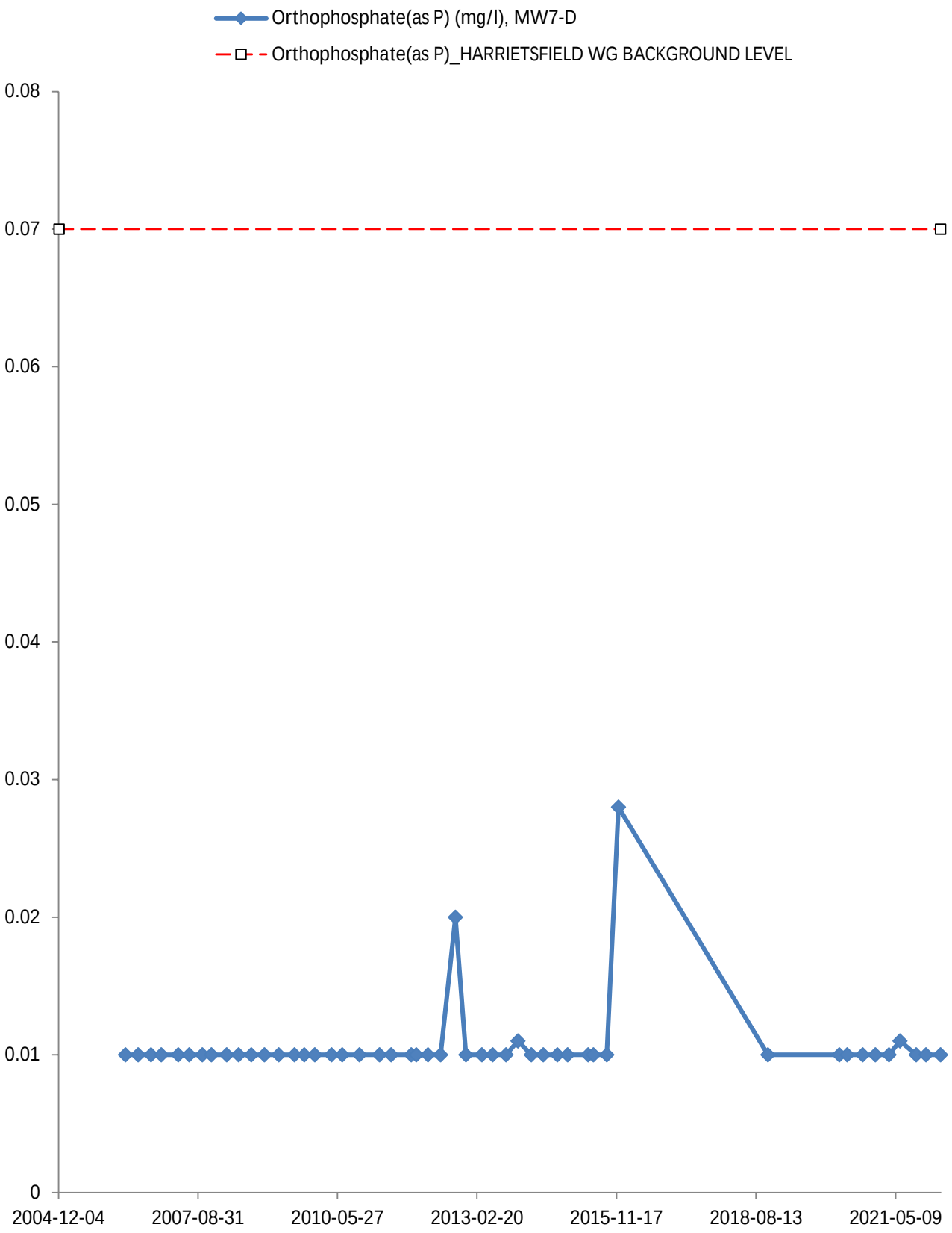
MW7-D-Nitrate plus Nitrite (N)



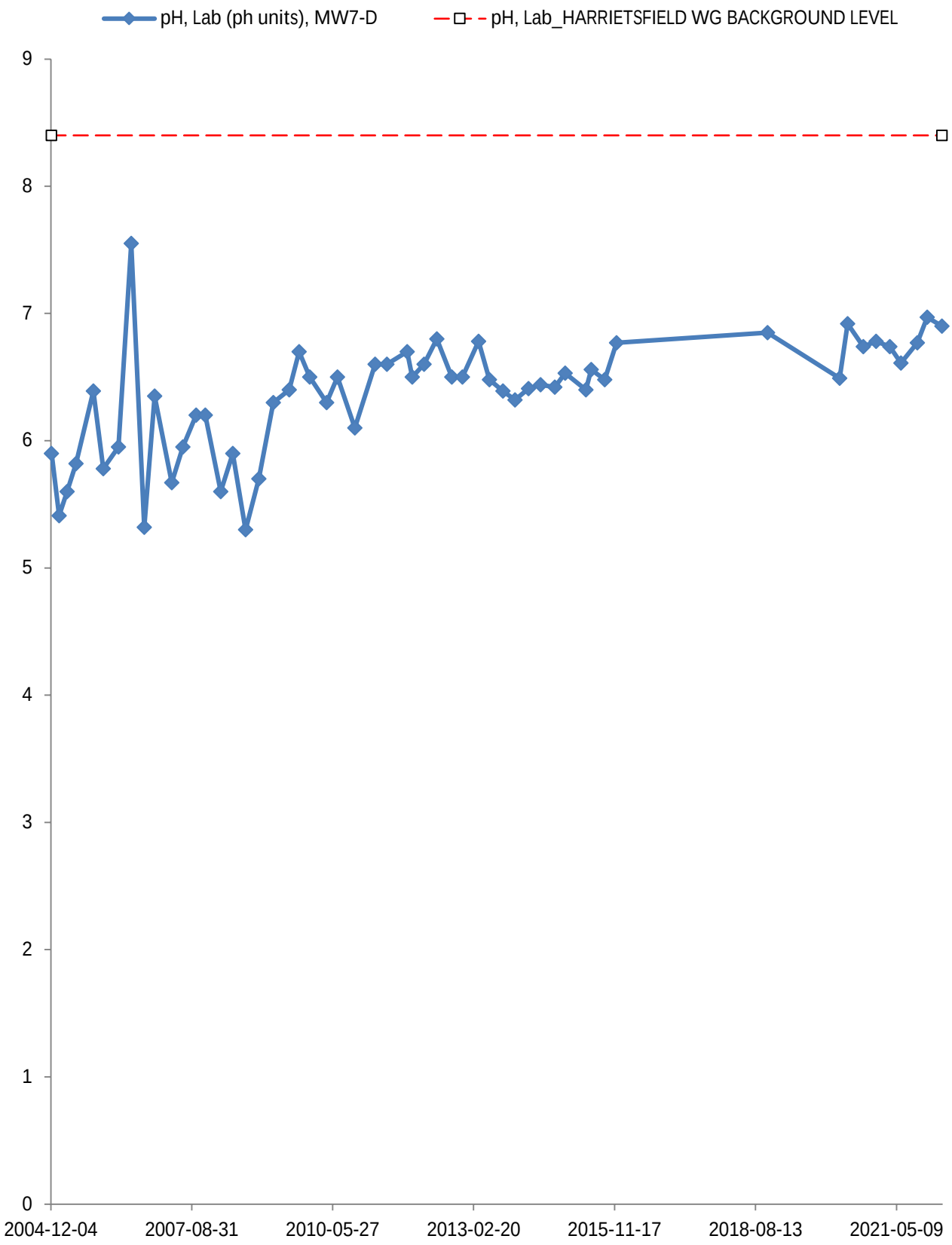
MW7-D-Nitrite (as N)



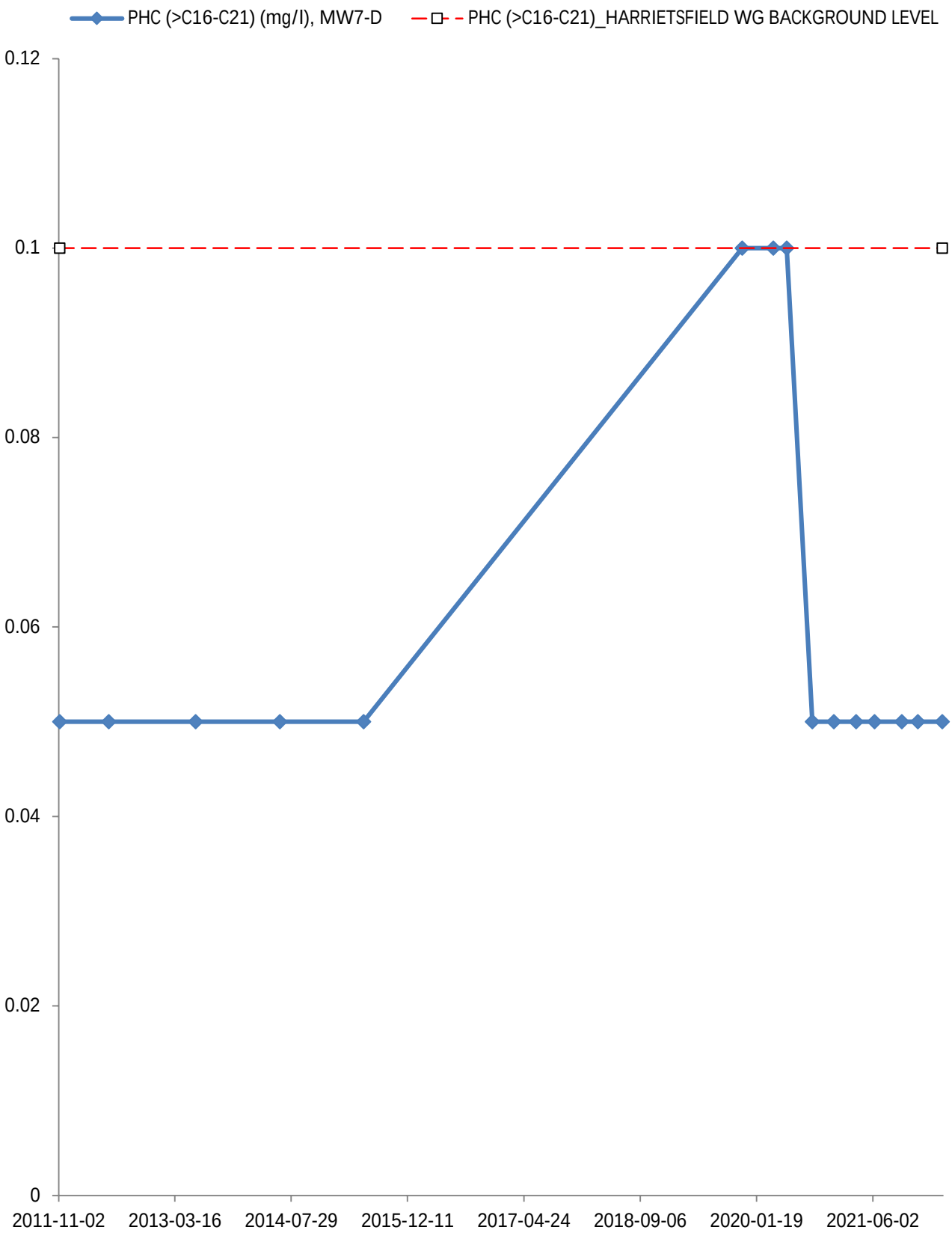
MW7-D-Orthophosphate(as P)



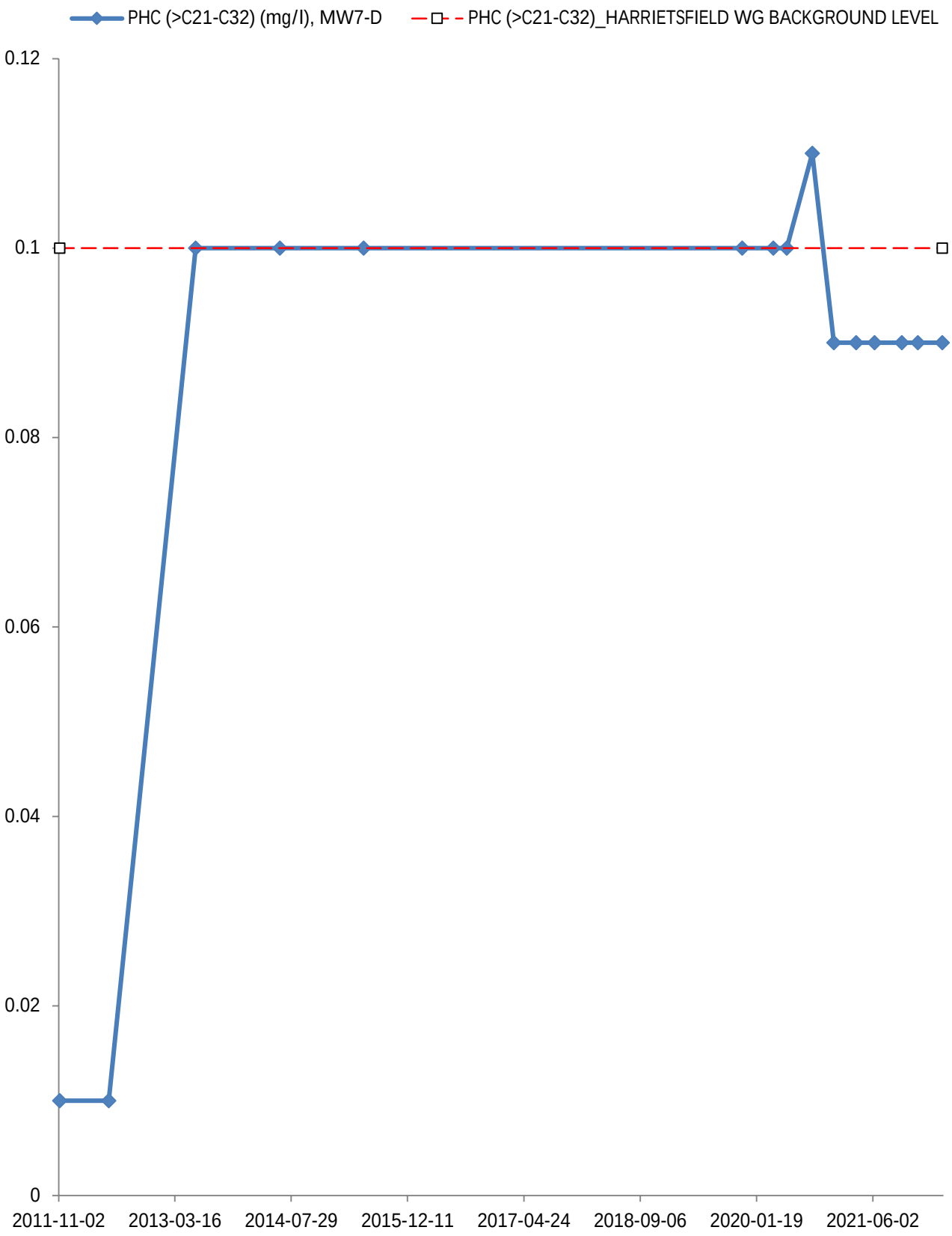
MW7-D-pH, Lab


pH, Lab (ph units), MW7-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

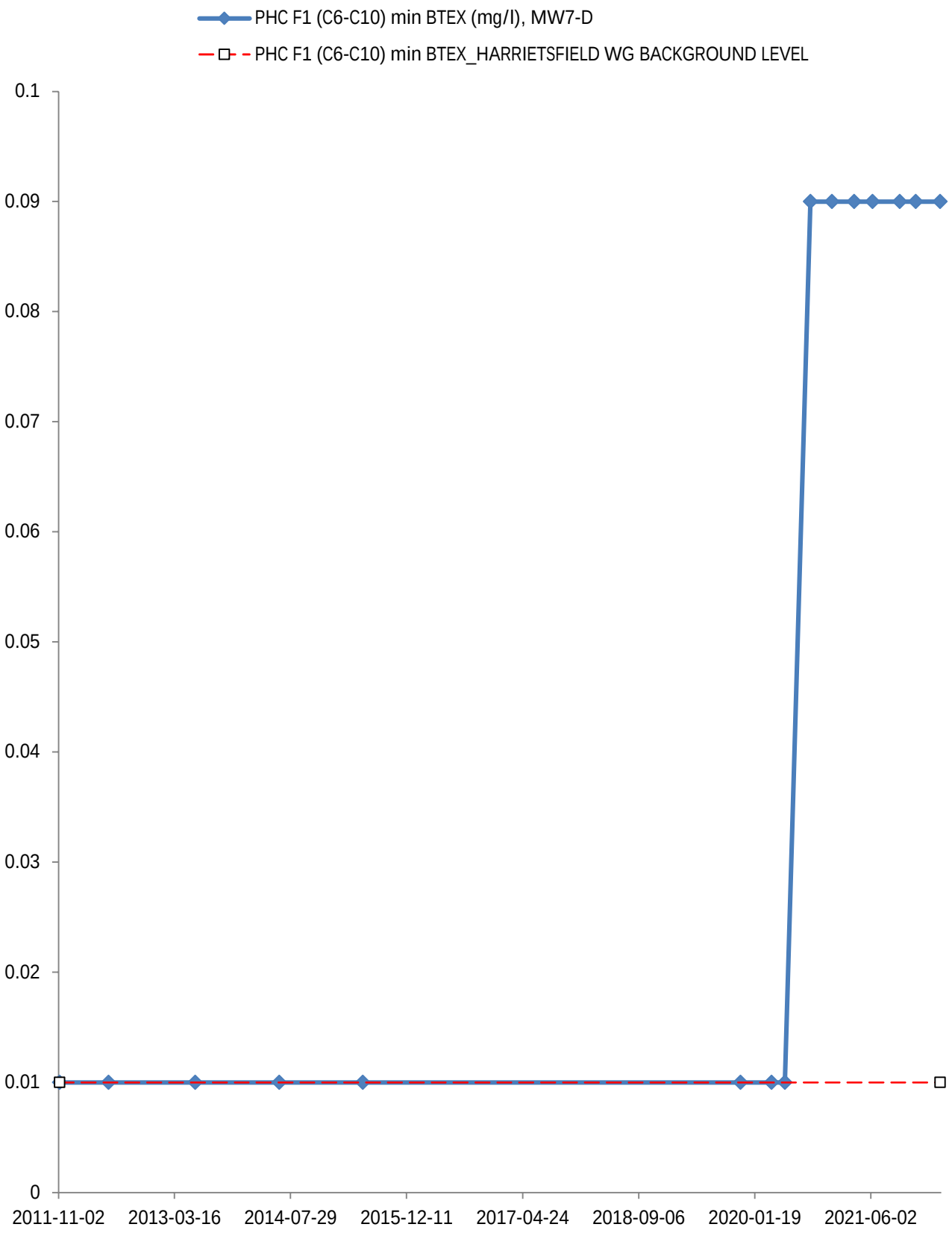
MW7-D-PHC (>C16-C21)



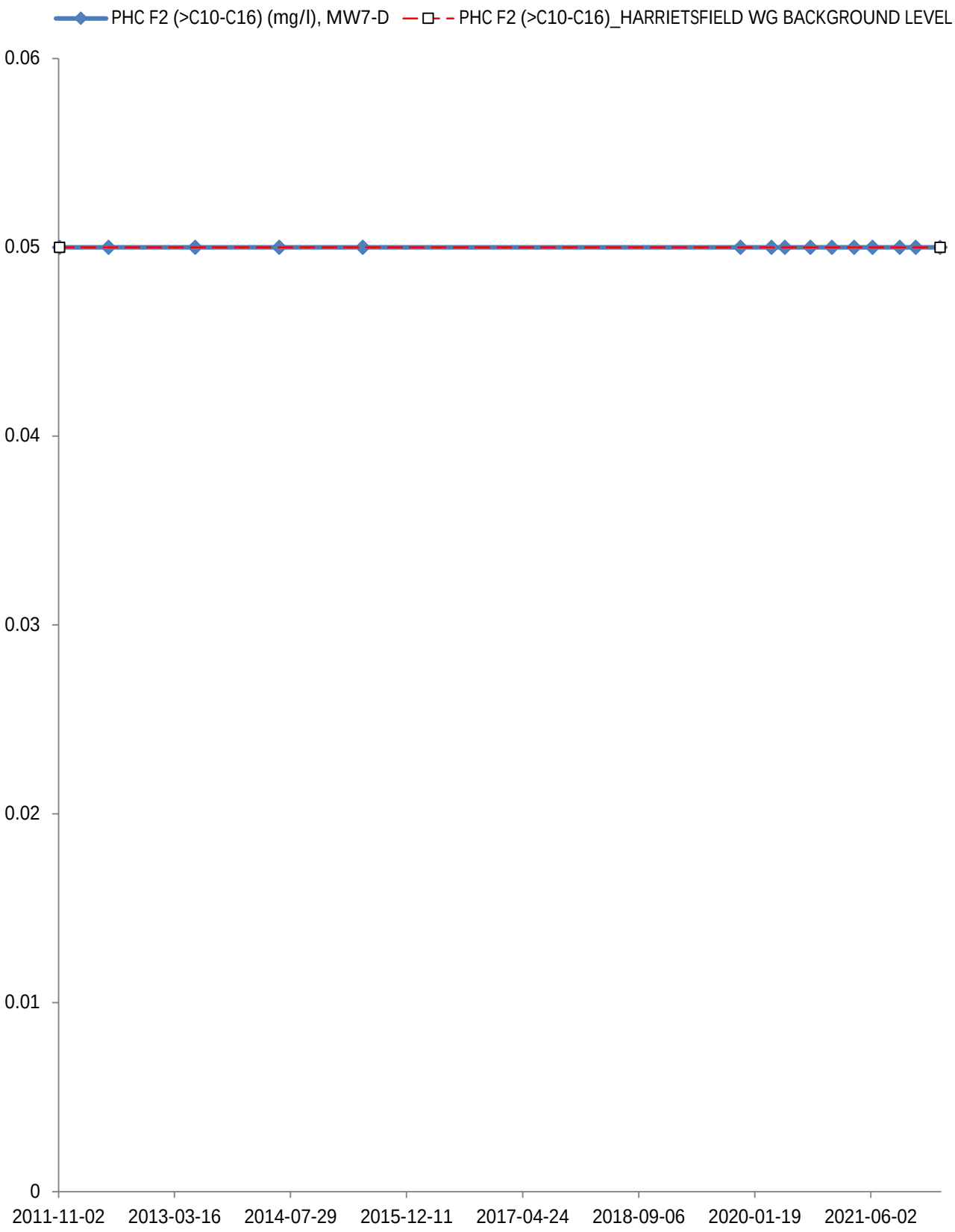
MW7-D-PHC (>C21-C32)



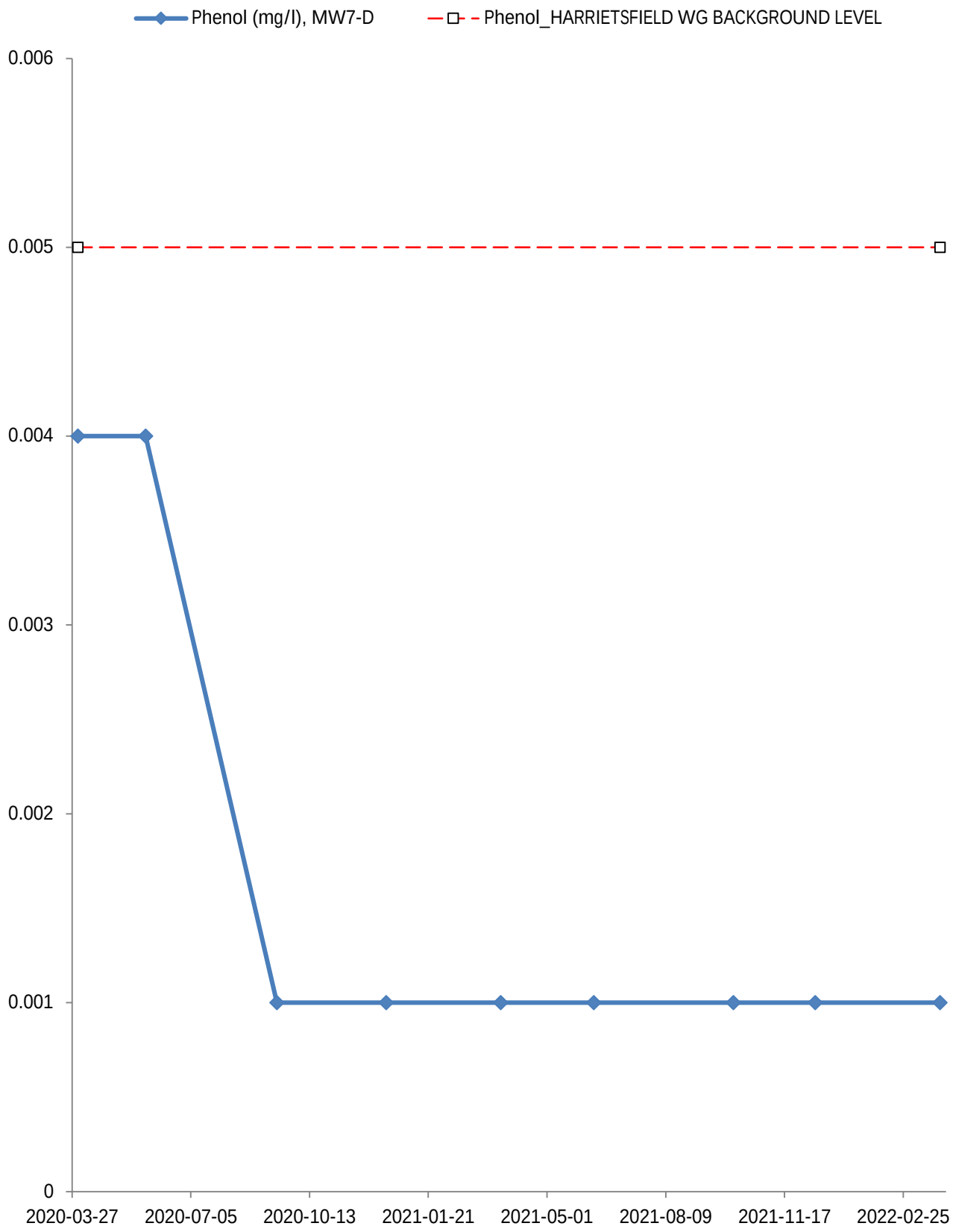
MW7-D-PHC F1 (C6-C10) min BTEX



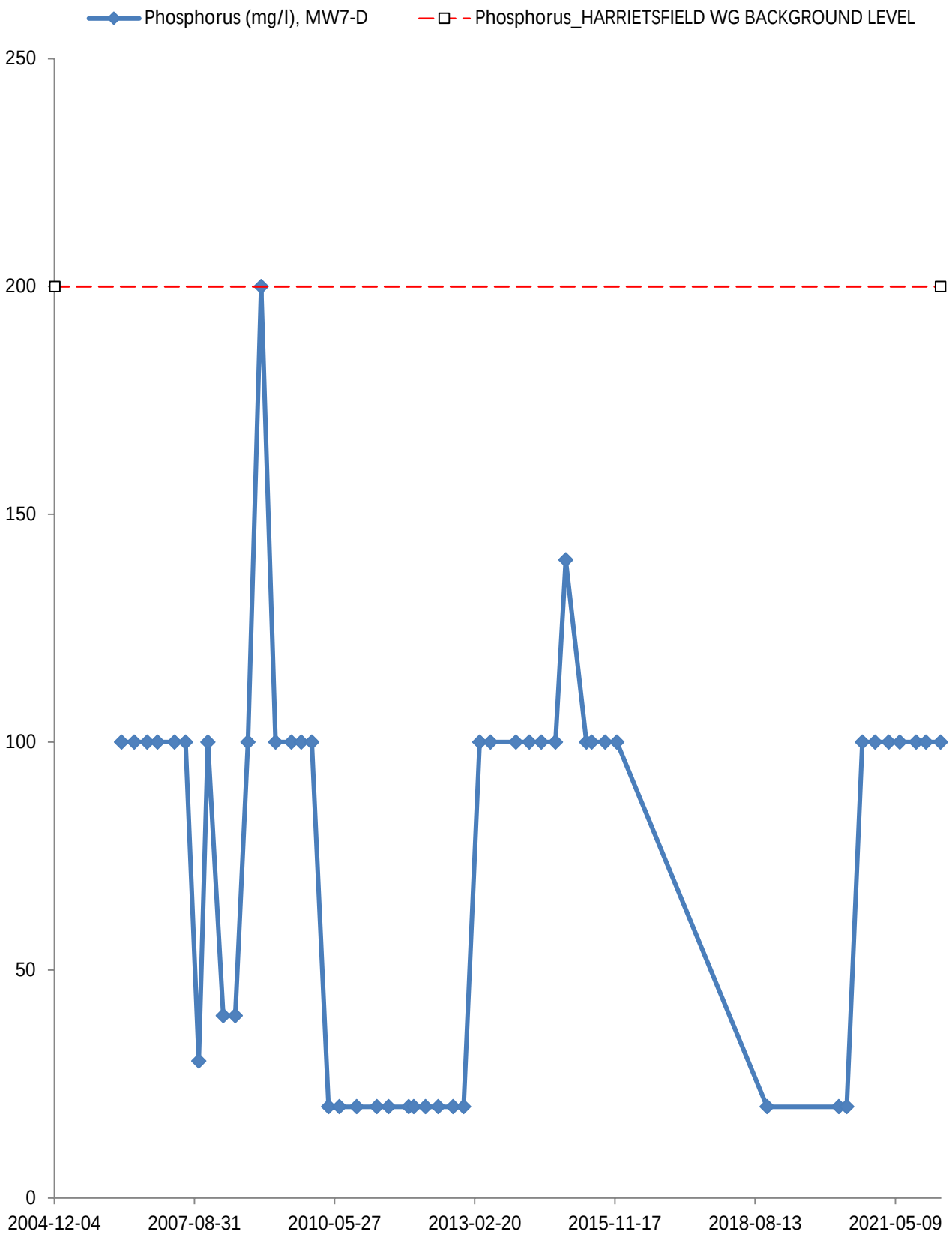
MW7-D-PHC F2 (>C10-C16)



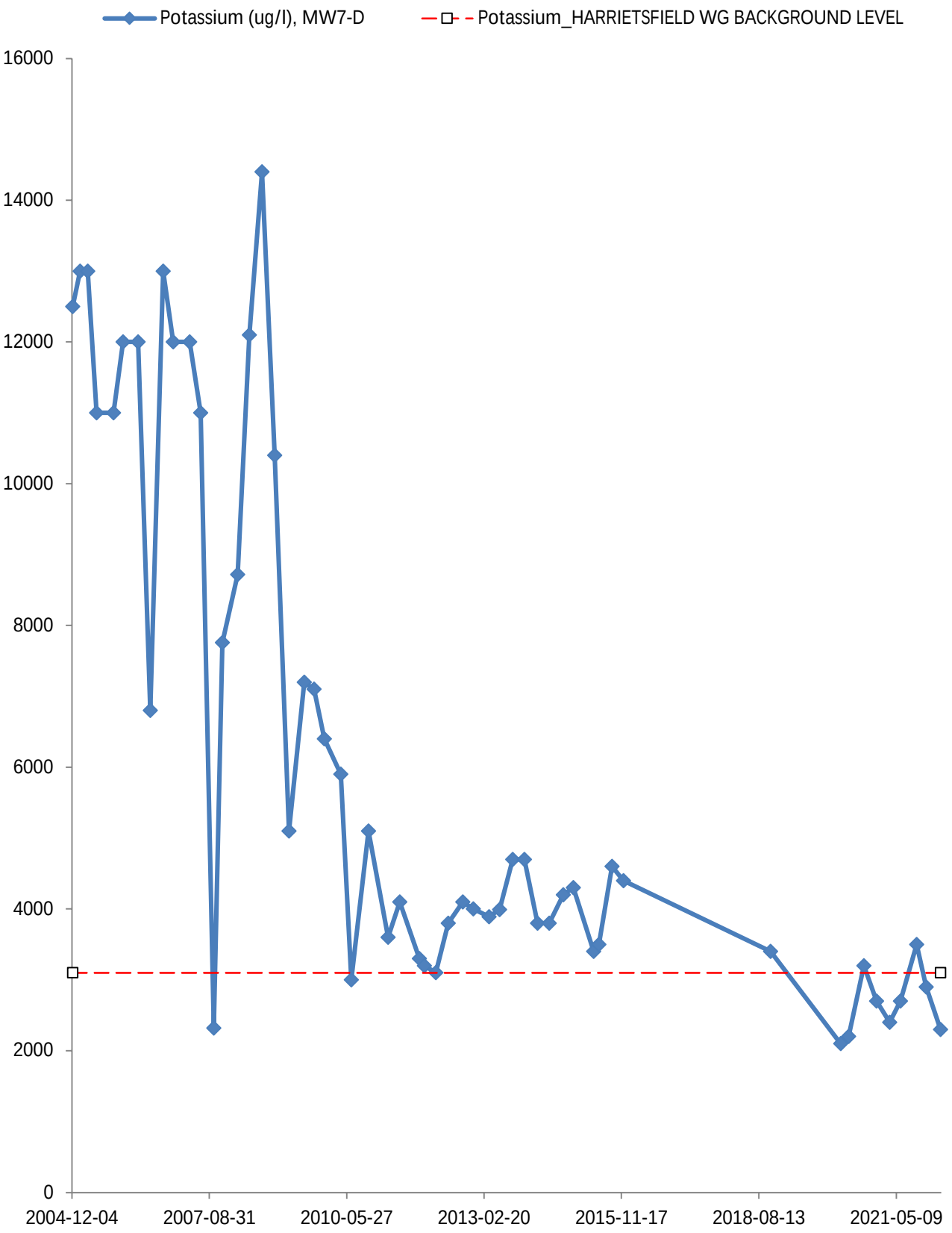
MW7-D-Phenol


Phenol (mg/l), MW7-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

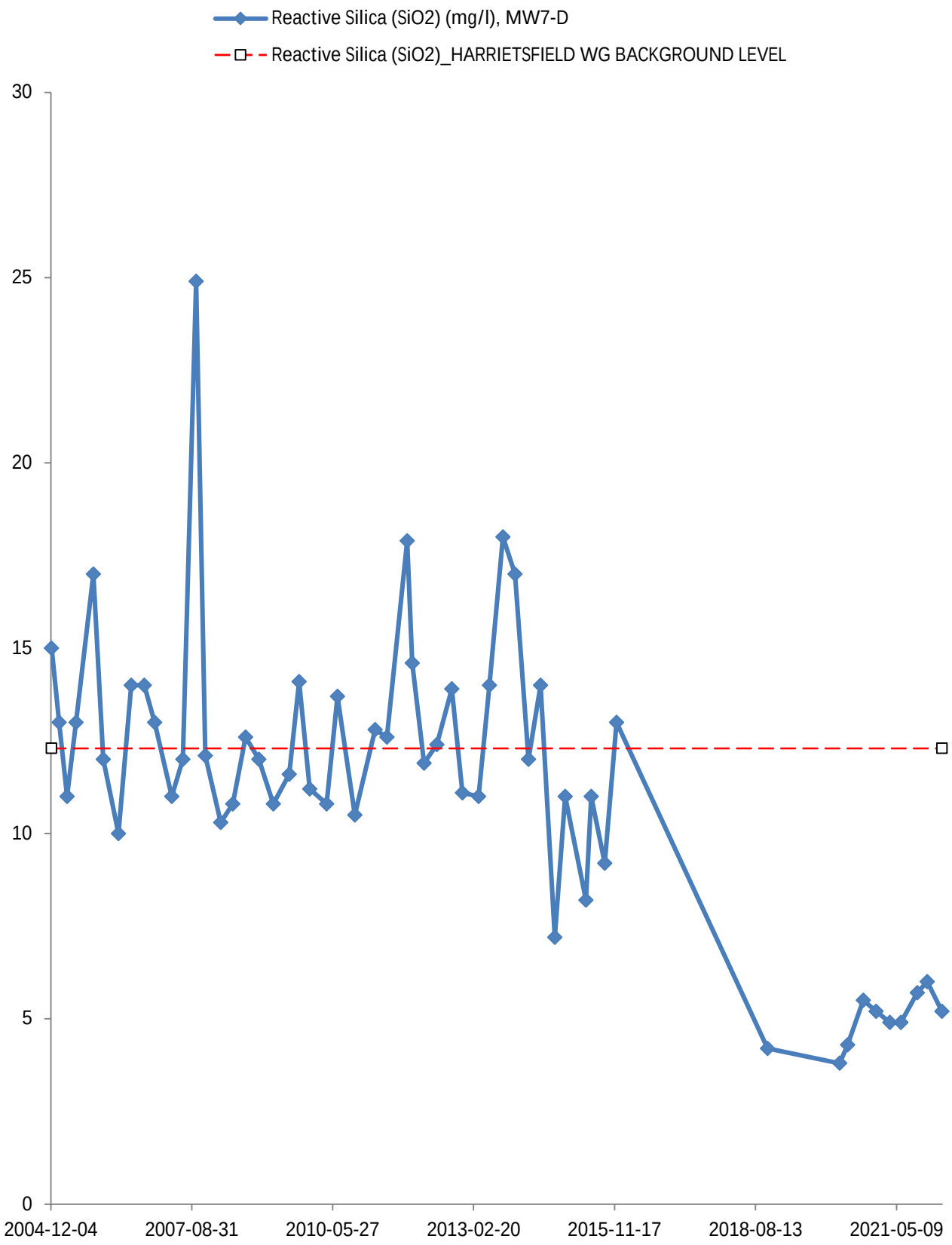
MW7-D-Phosphorus



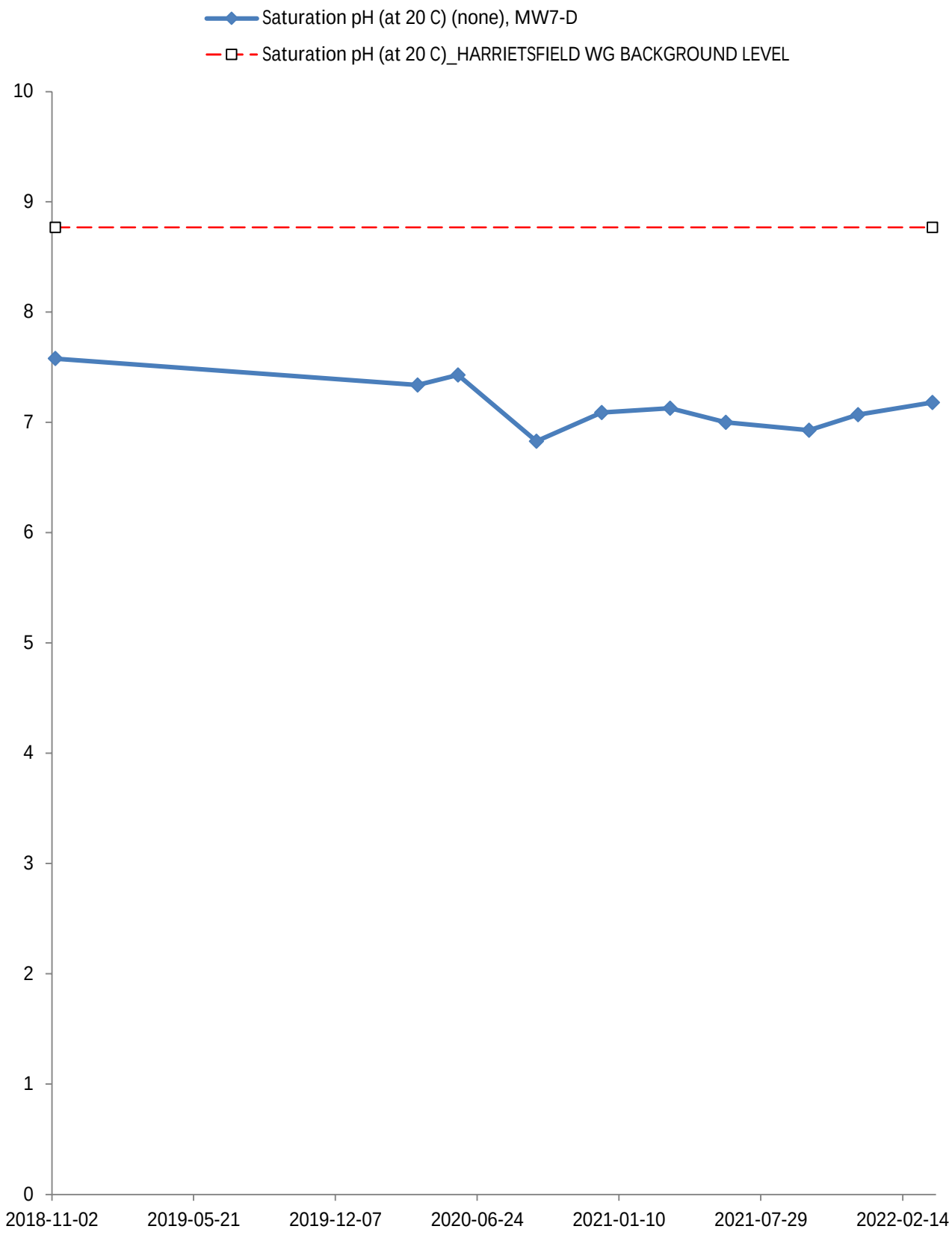
MW7-D-Potassium



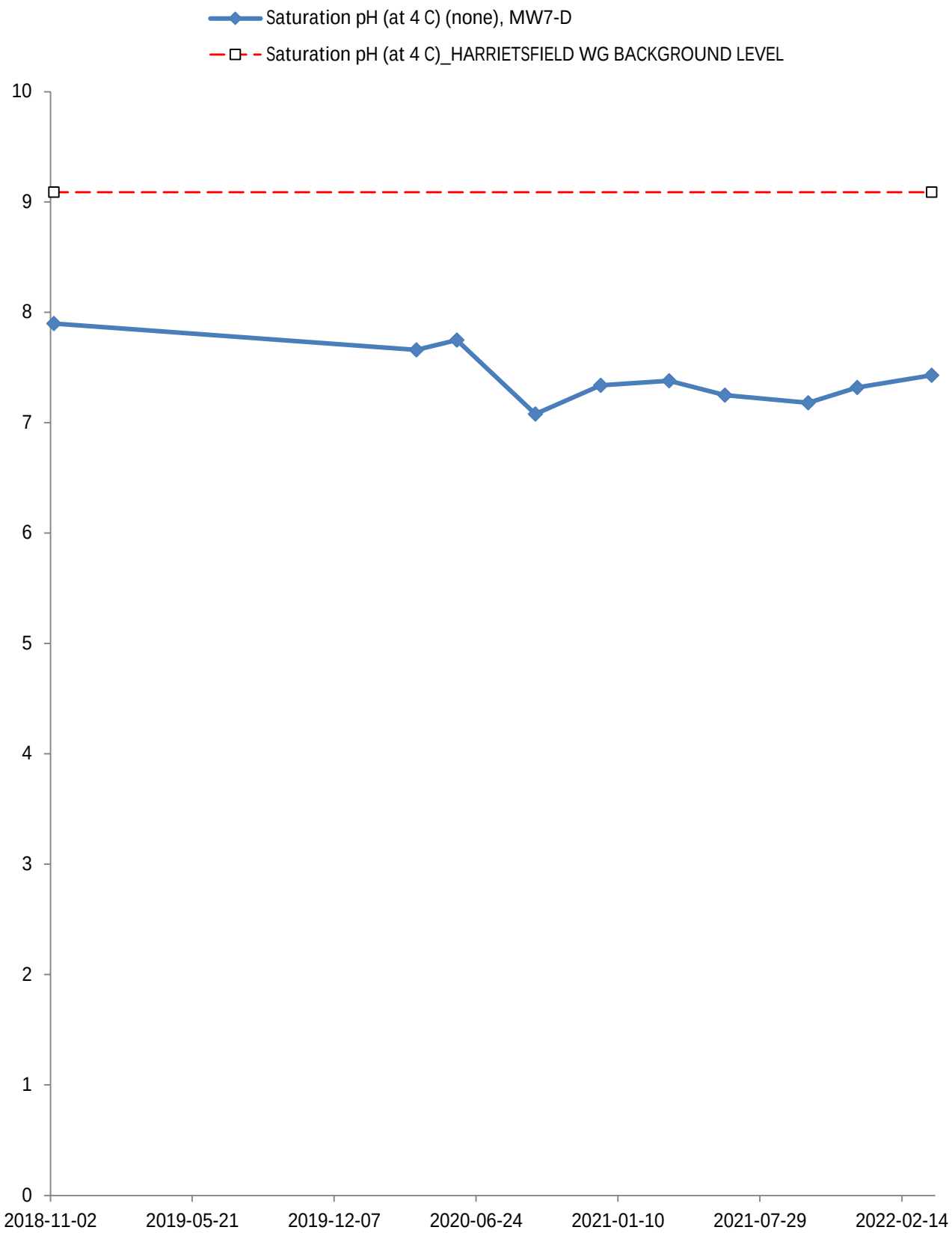
MW7-D-Reactive Silica (SiO2)



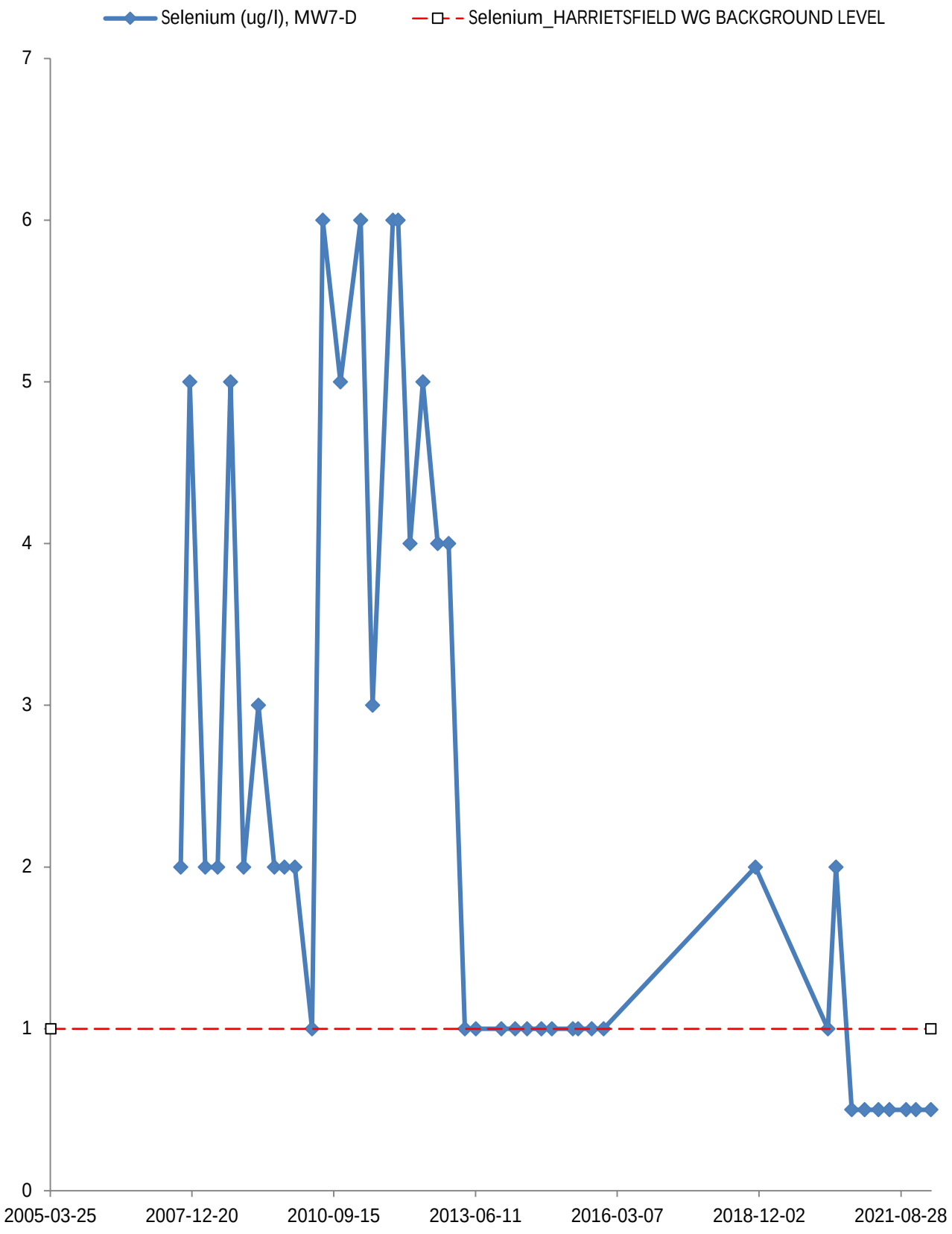
MW7-D-Saturation pH (at 20 C)

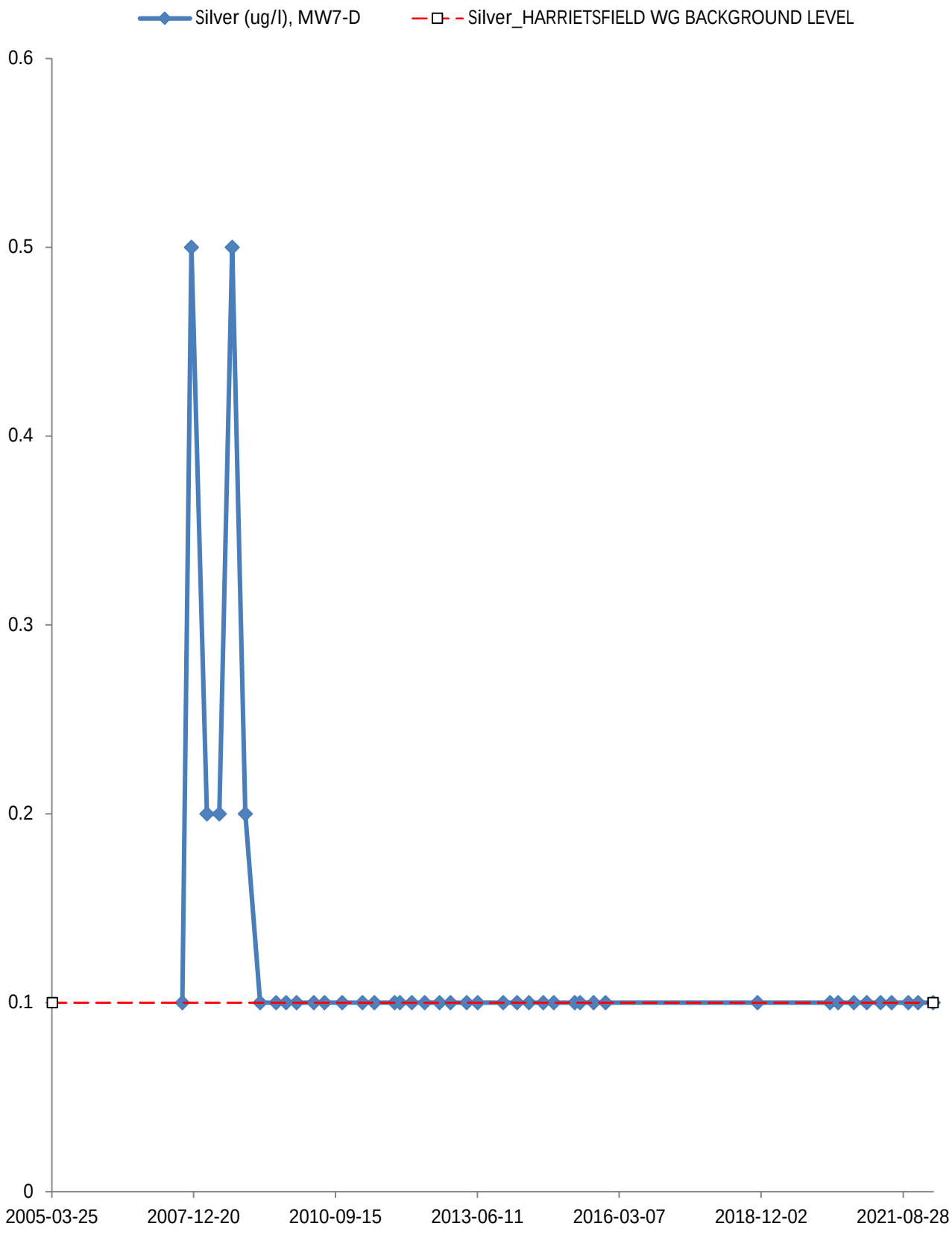


MW7-D-Saturation pH (at 4 C)

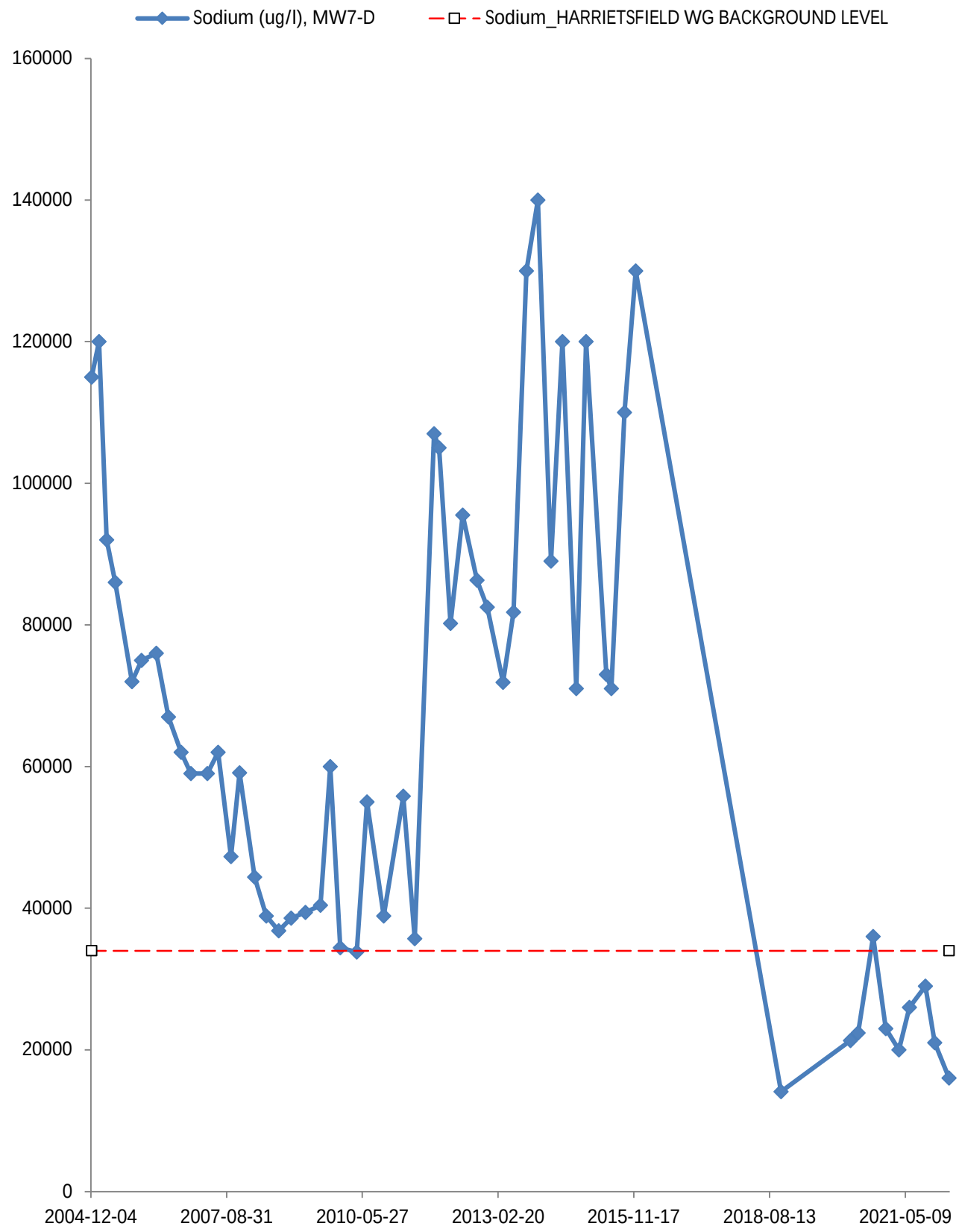


MW7-D-Selenium

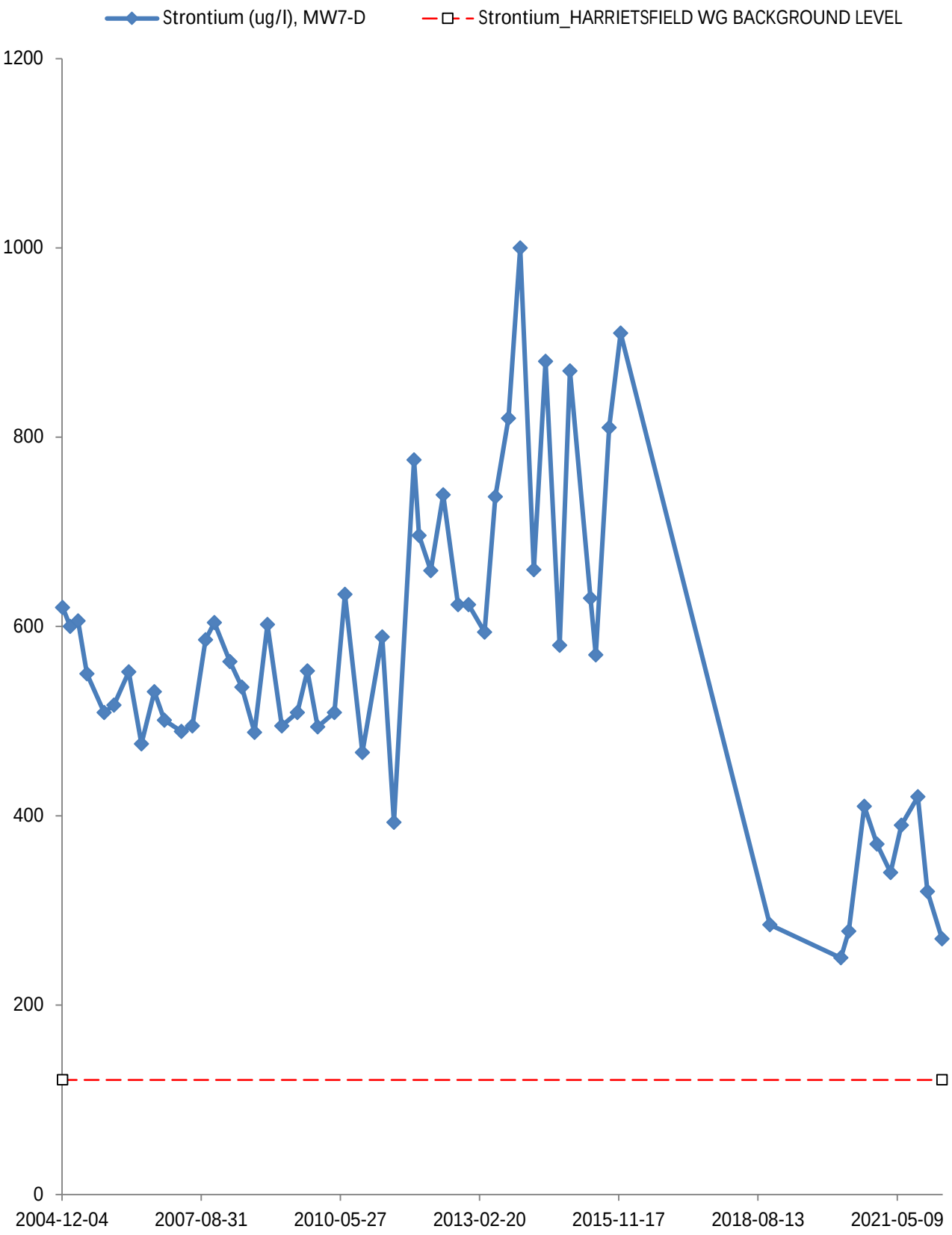



Silver (ug/l), MW7-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.6
0.5
0.4
0.3
0.2
0.1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

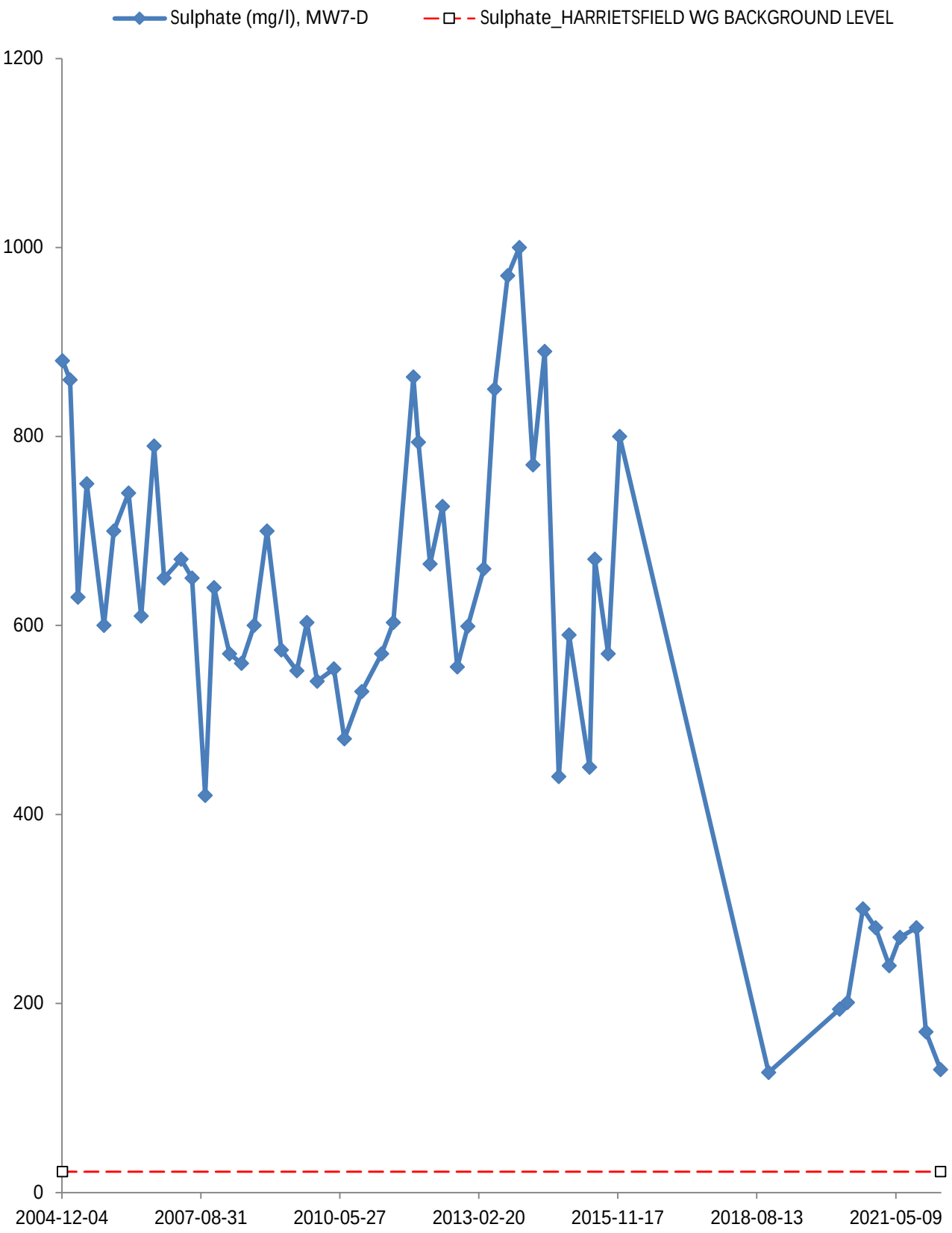
MW7-D-Sodium


Sodium (ug/l), MW7-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
160000
140000
120000
100000
80000
60000
40000
20000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

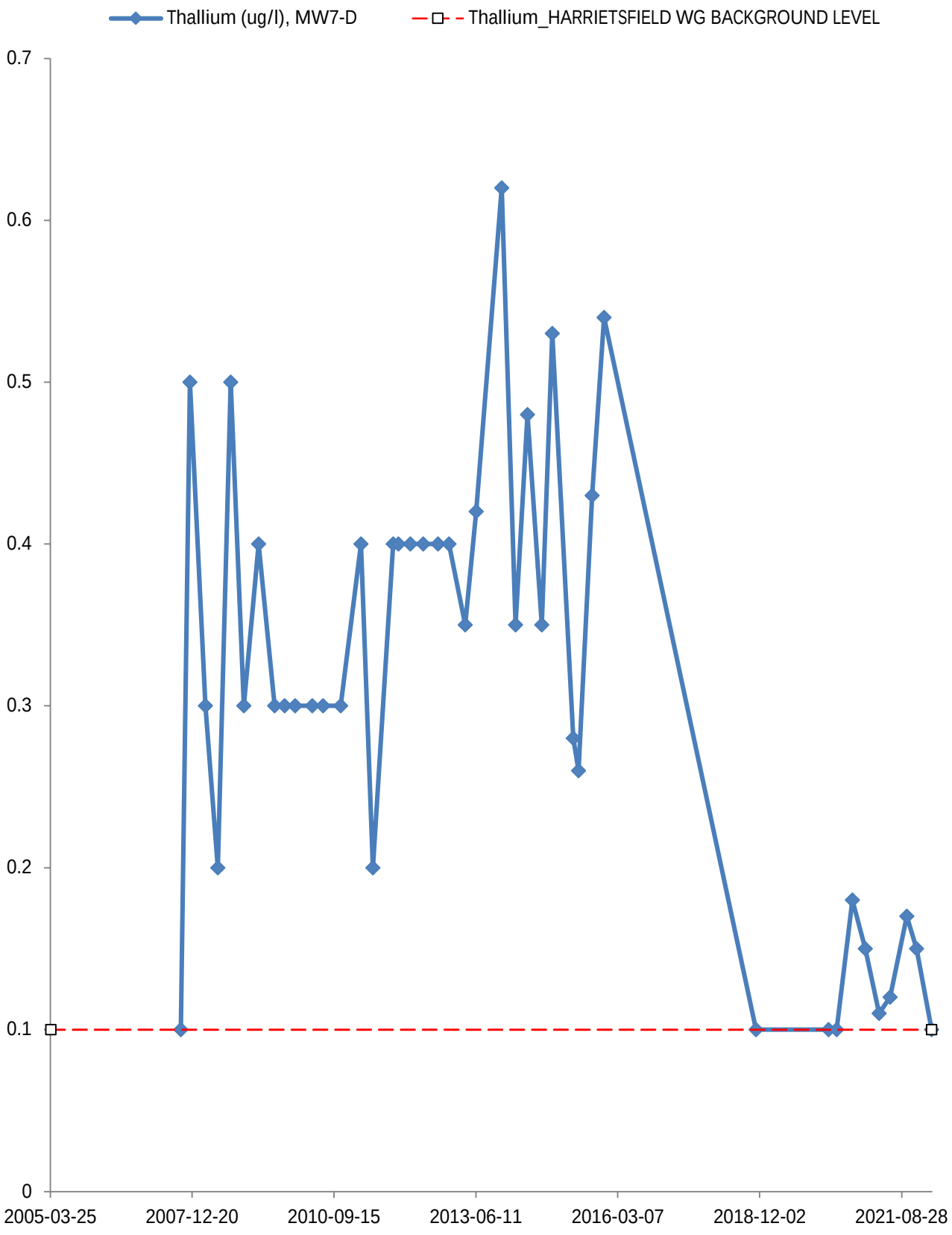
MW7-D-Strontium

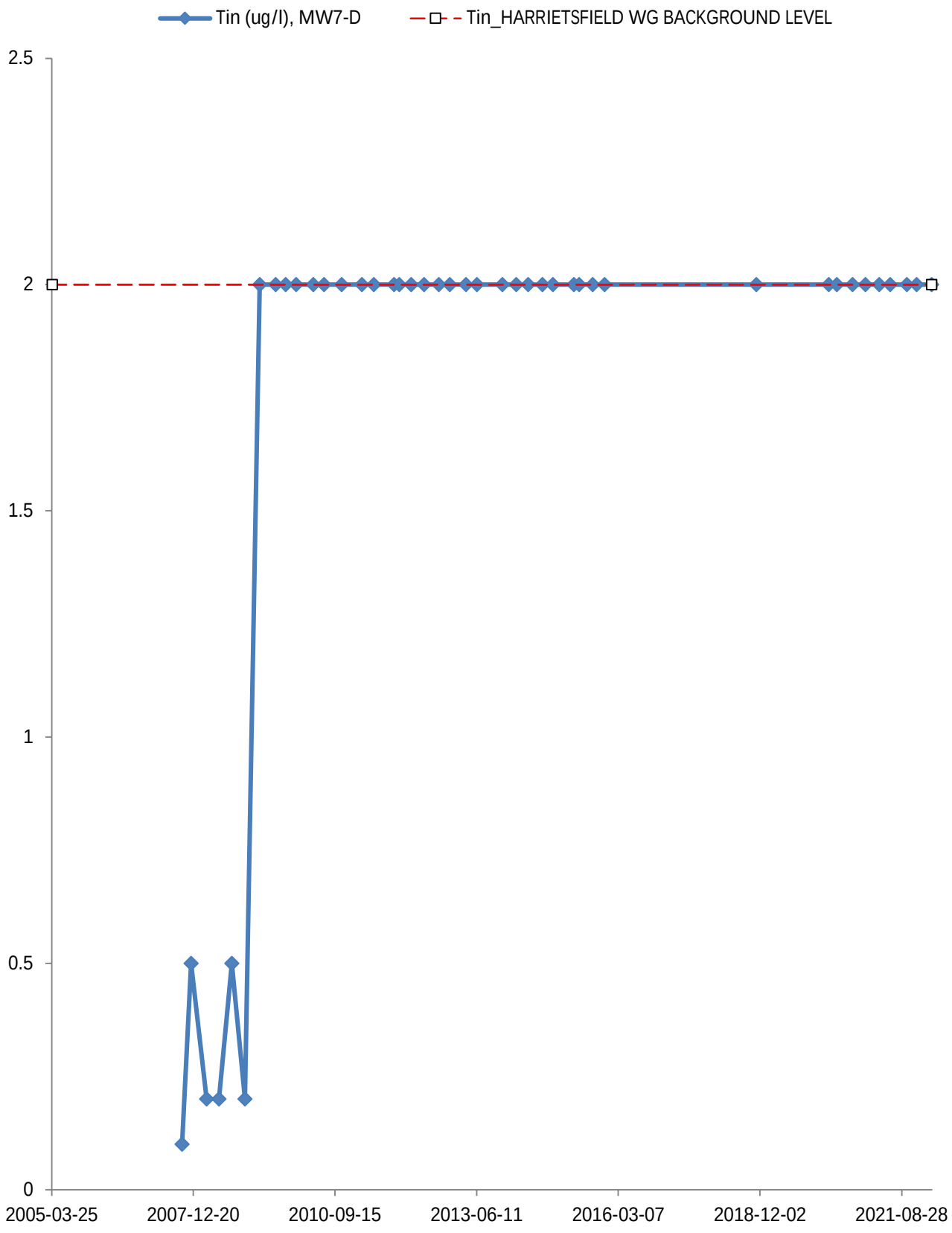


MW7-D-Sulphate

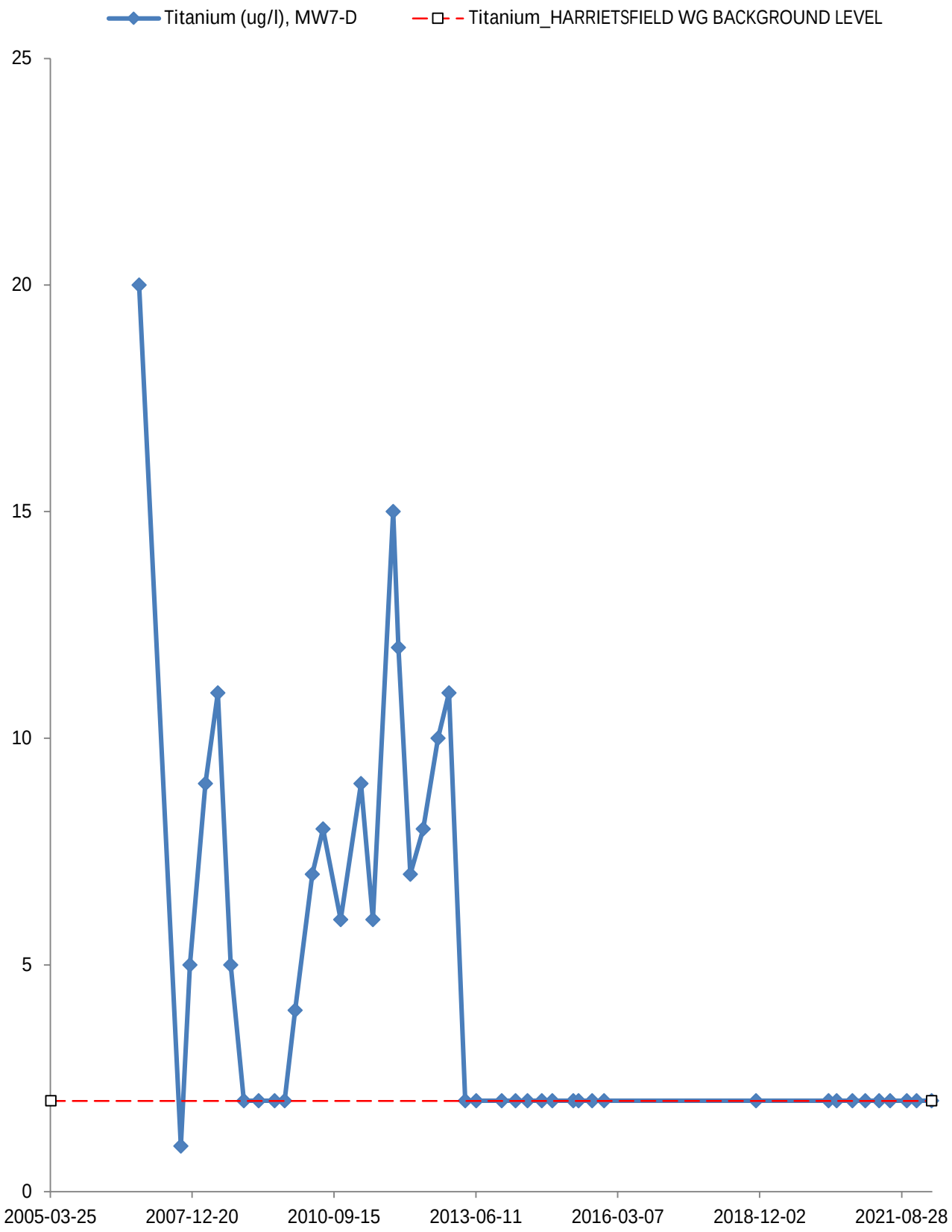


MW7-D-Thallium

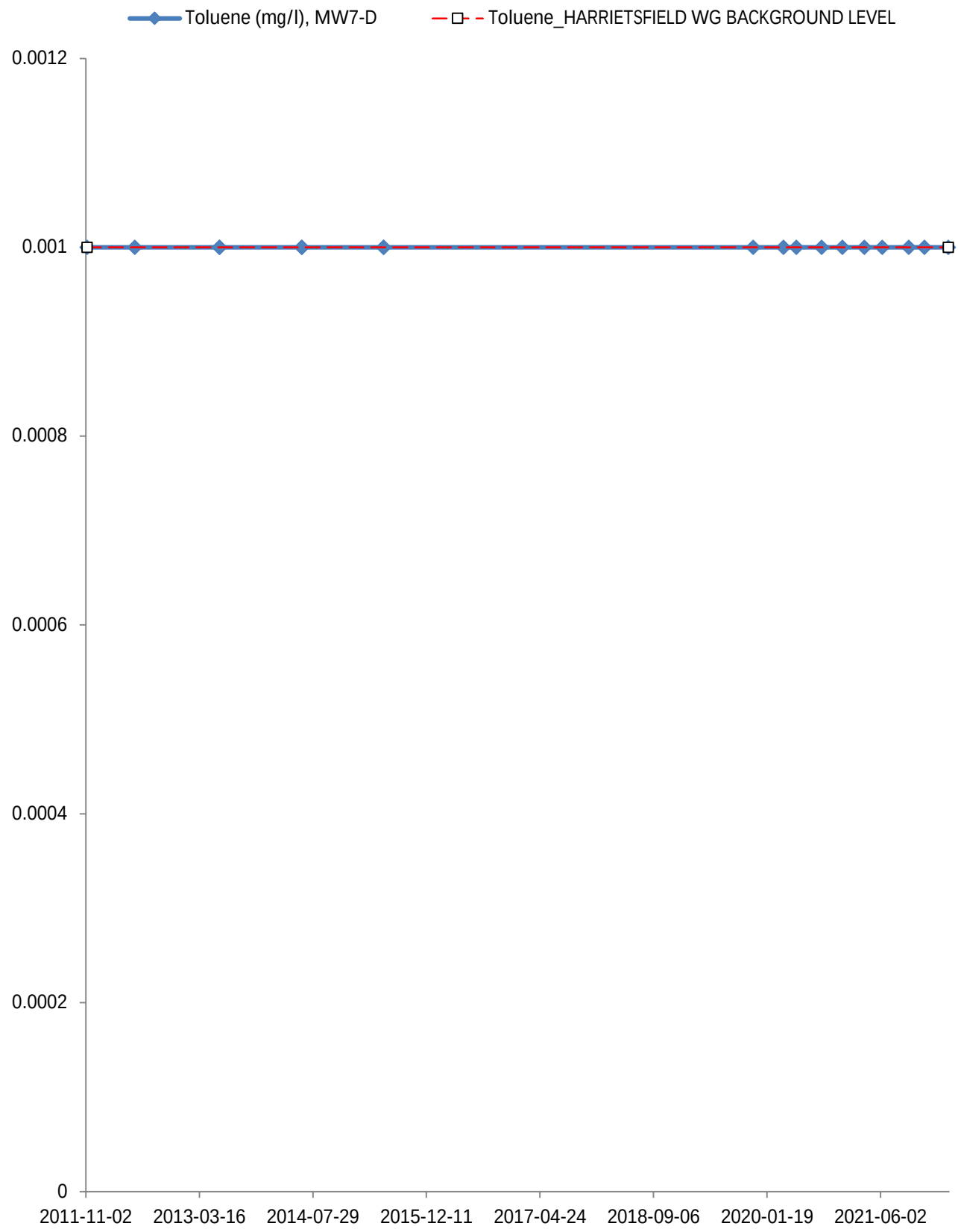



Tin (ug/l), MW7-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

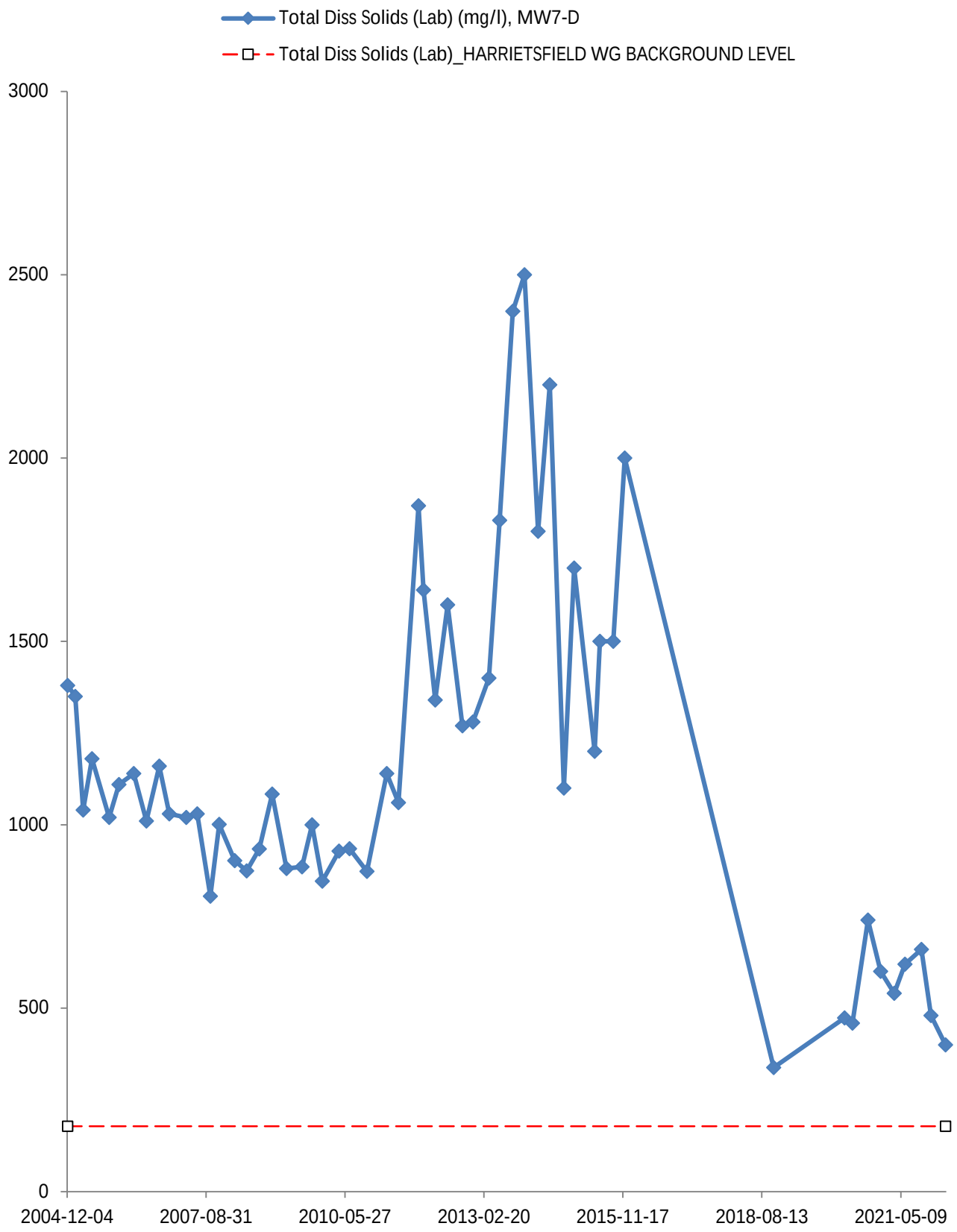
MW7-D-Titanium



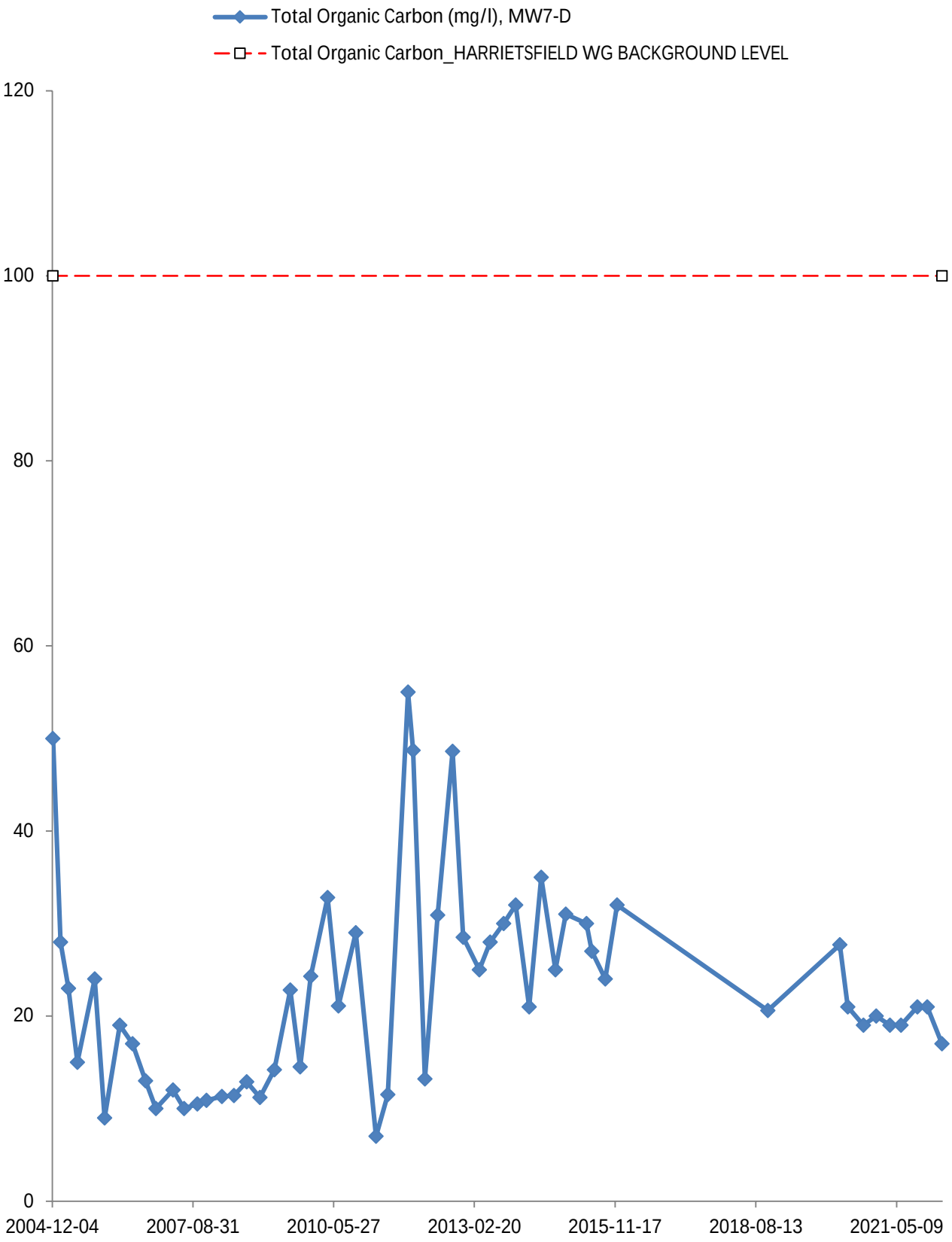
MW7-D-Toluene



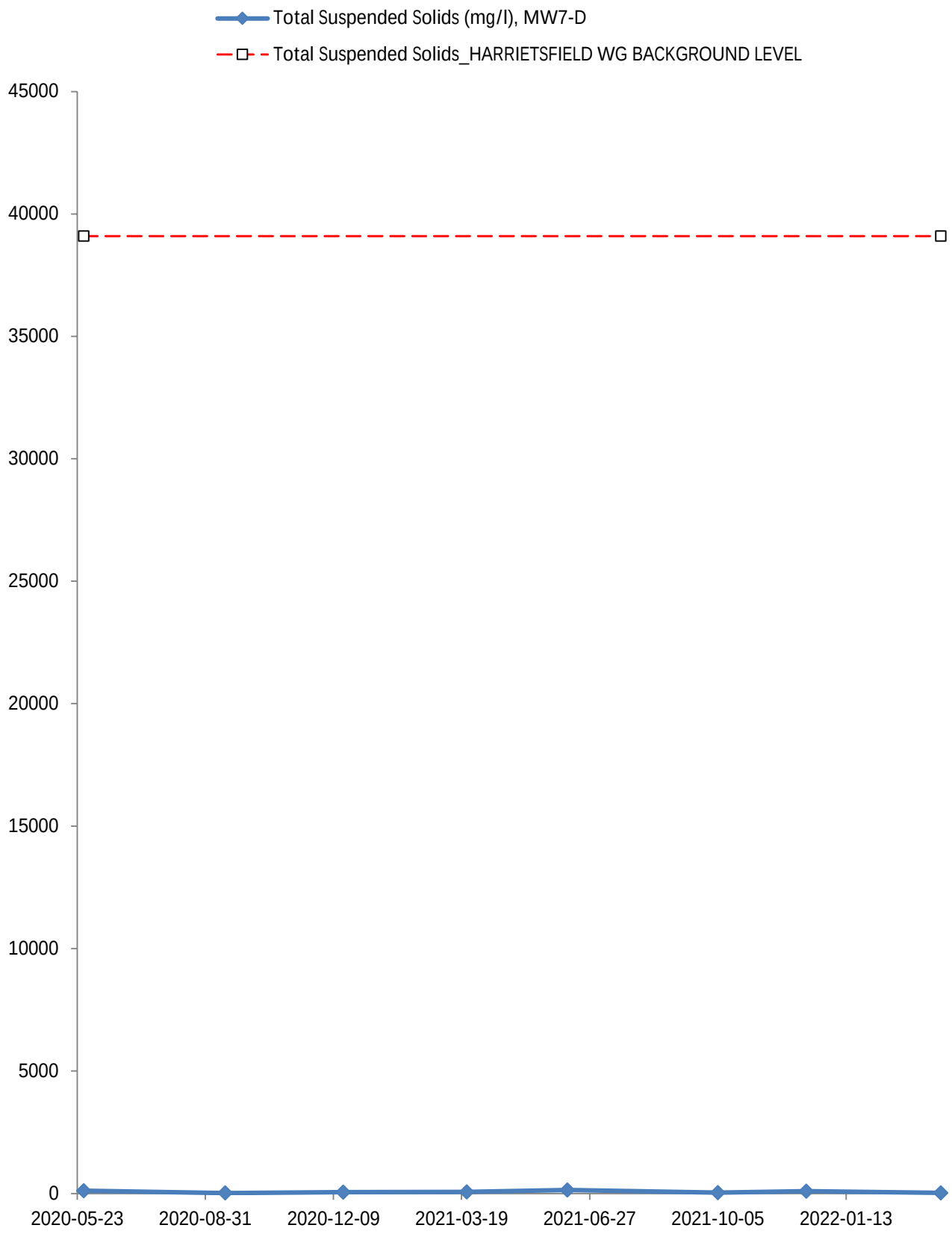
MW7-D-Total Diss Solids (Lab)



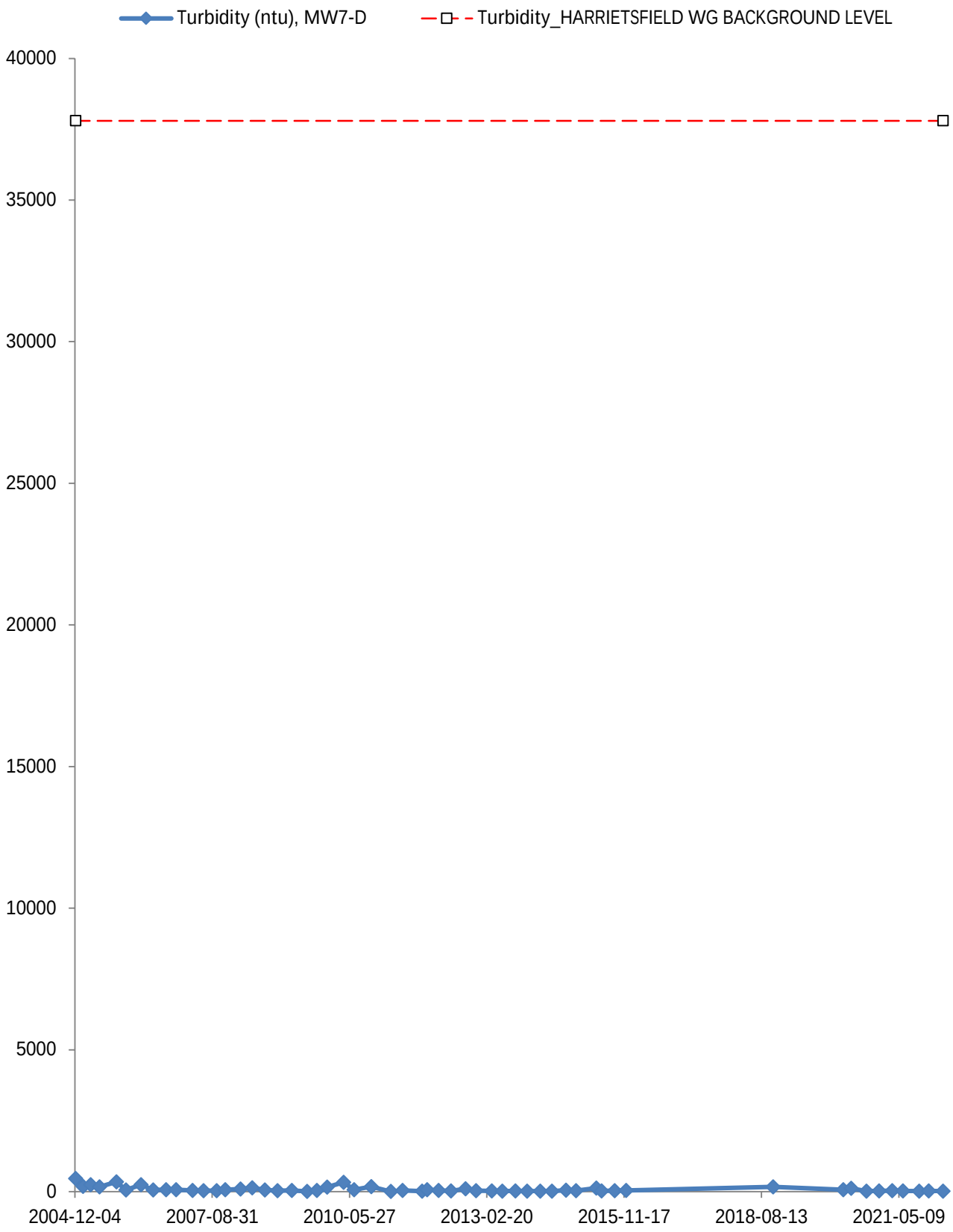
MW7-D-Total Organic Carbon



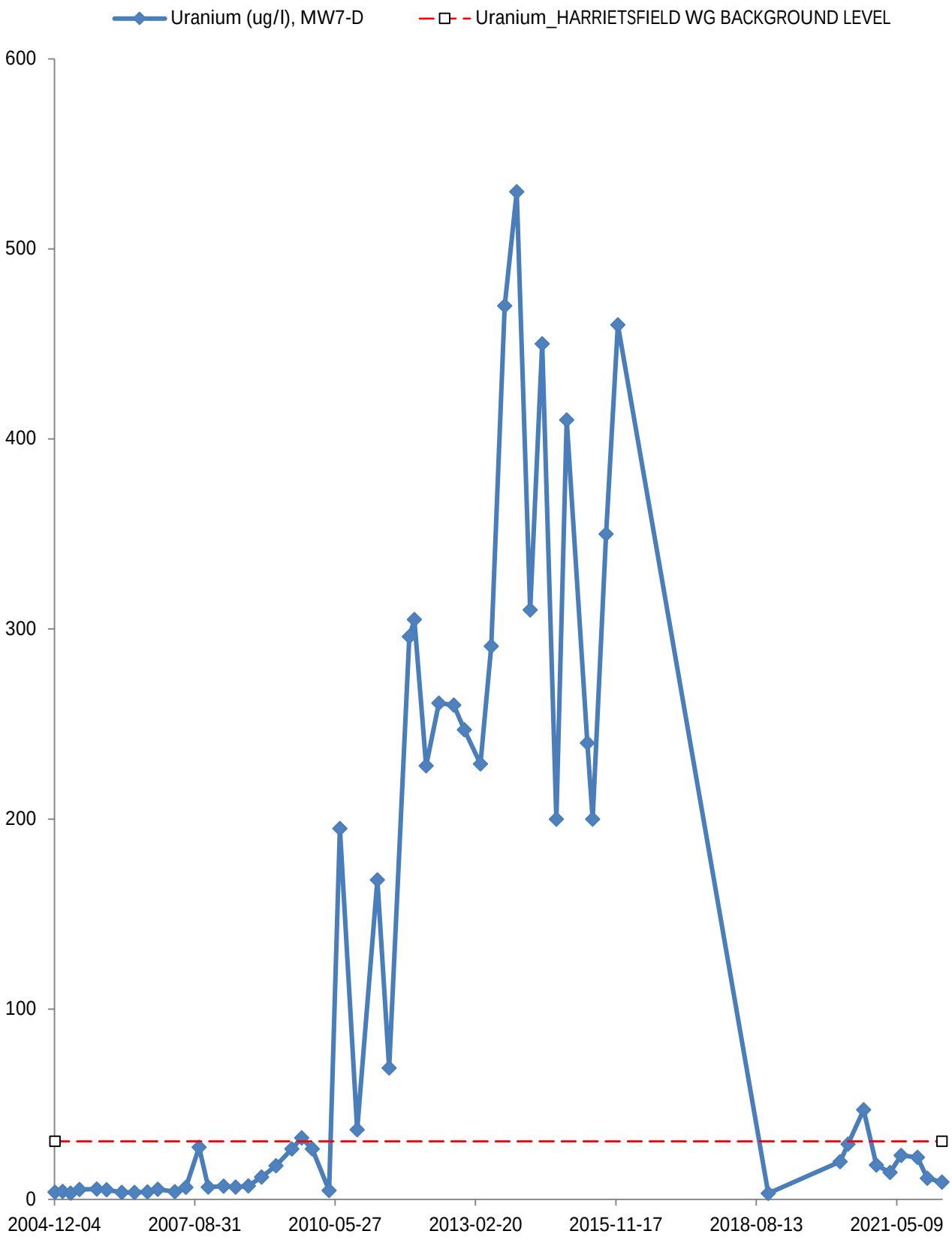
MW7-D-Total Suspended Solids



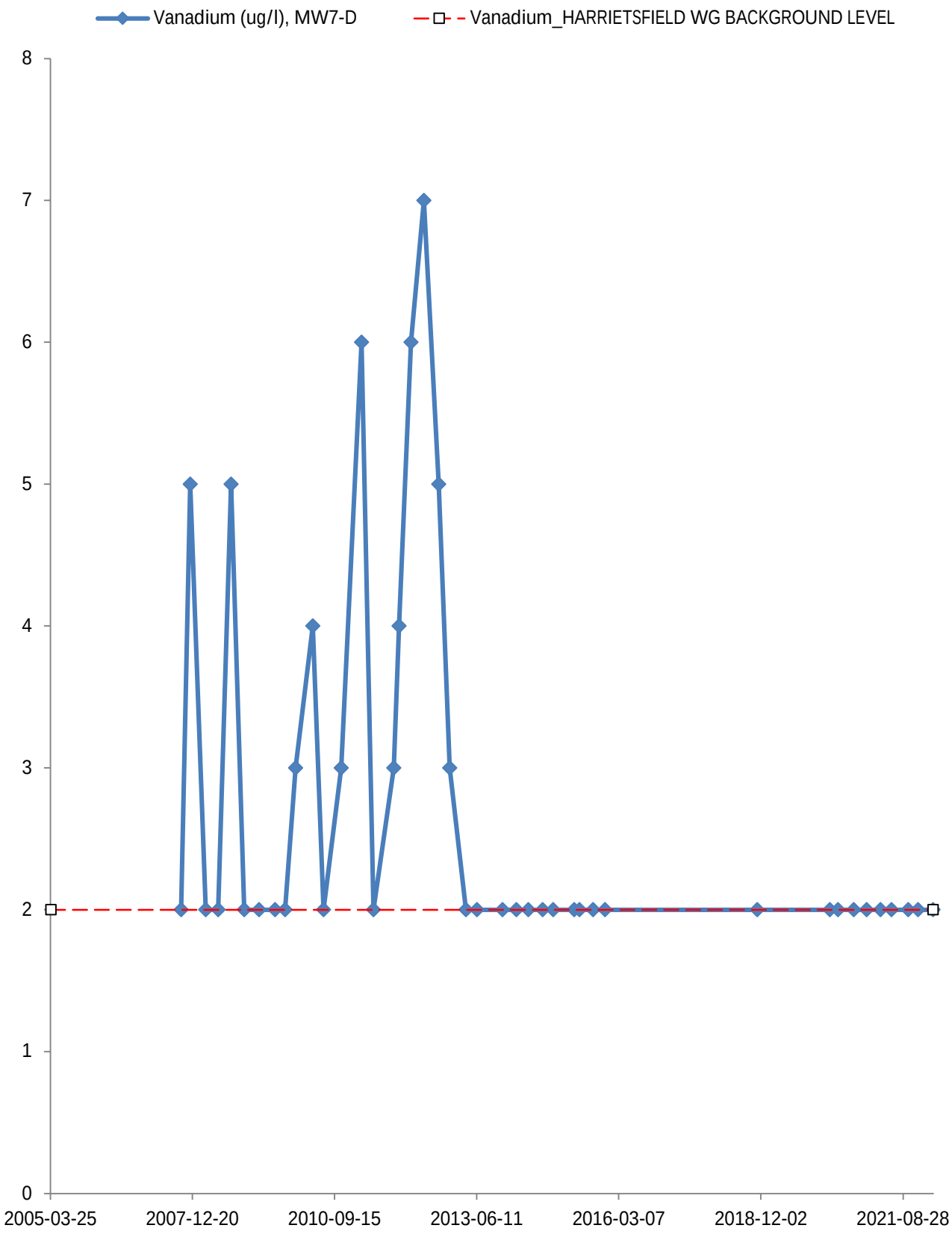
MW7-D-Turbidity



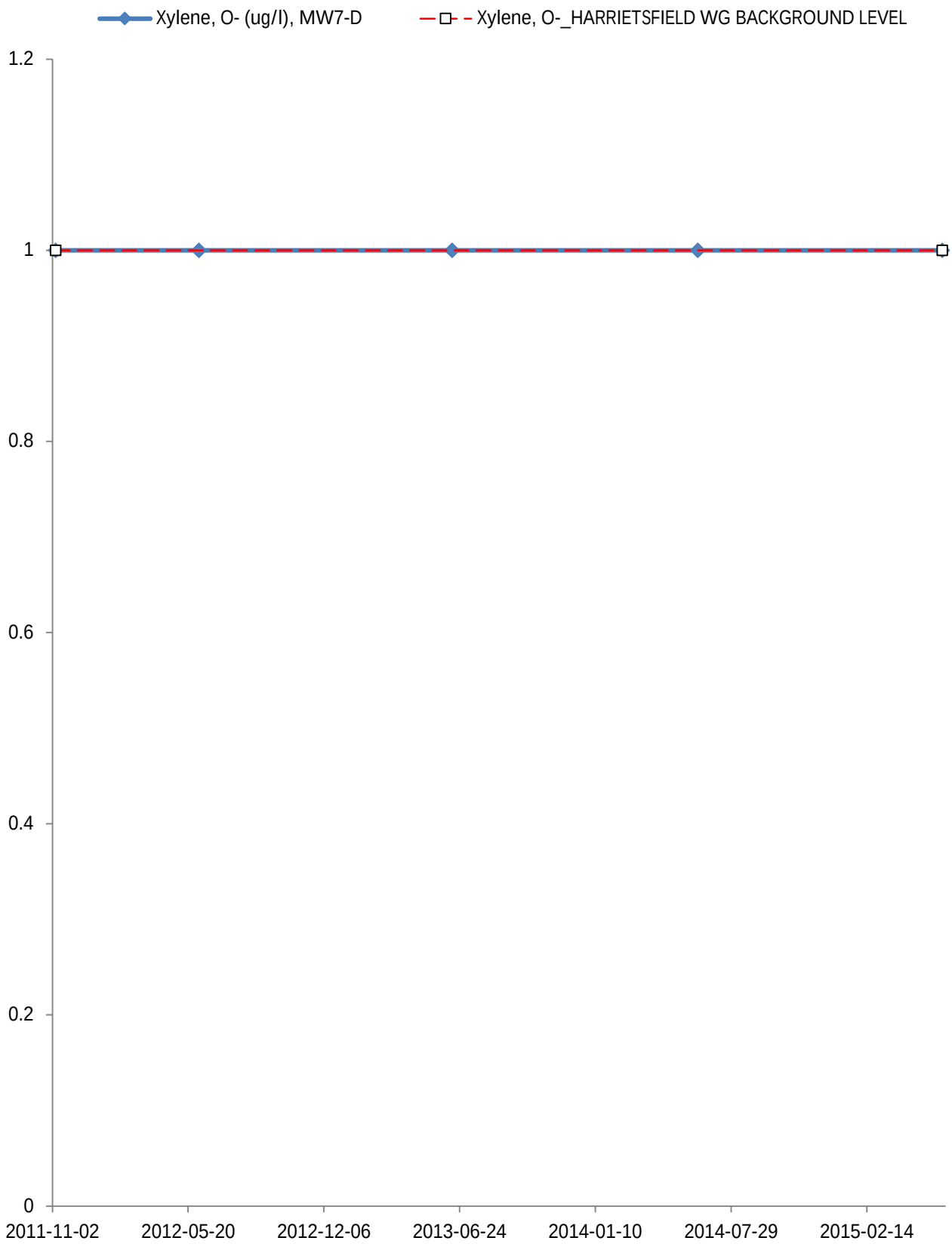
MW7-D-Uranium



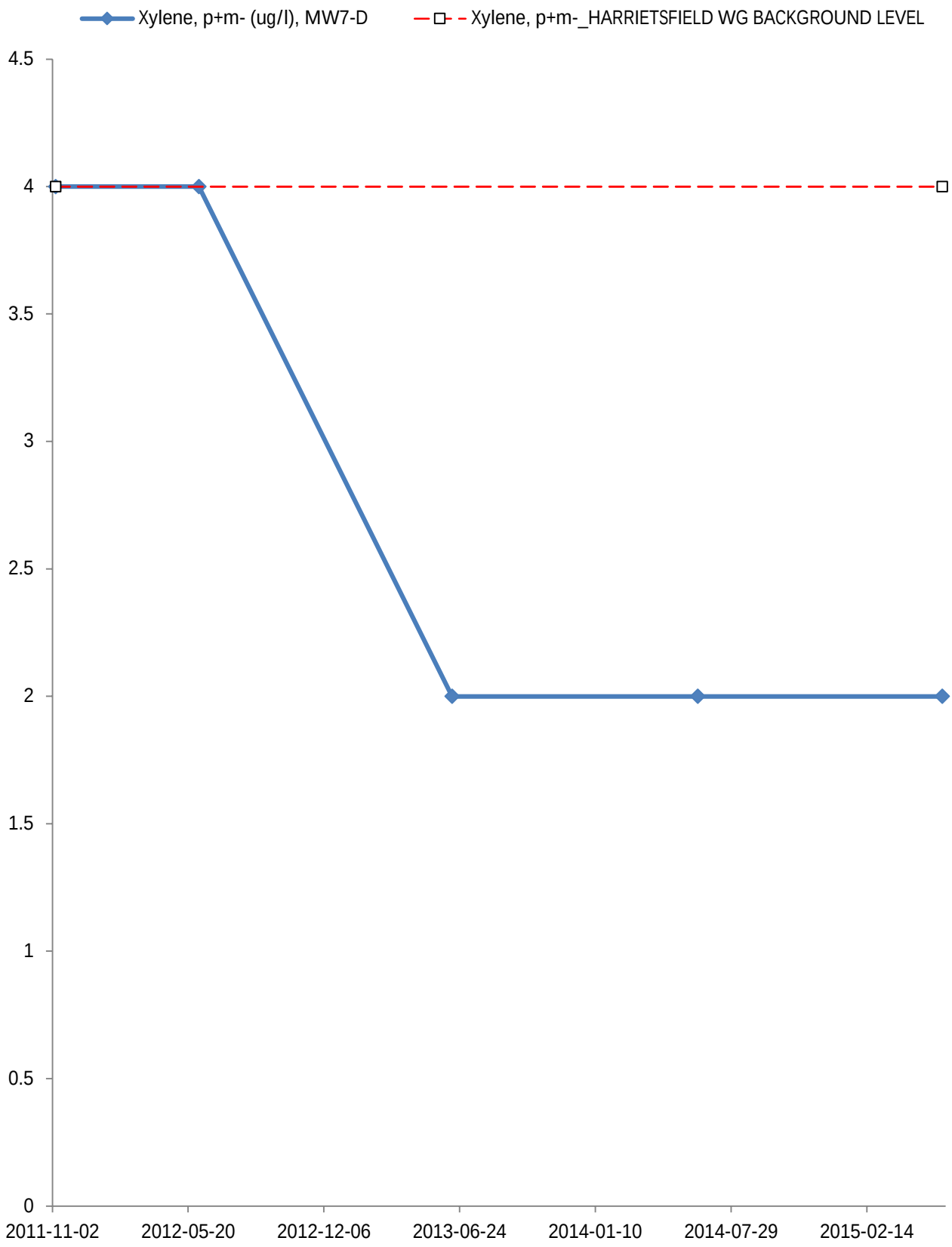
MW7-D-Vanadium



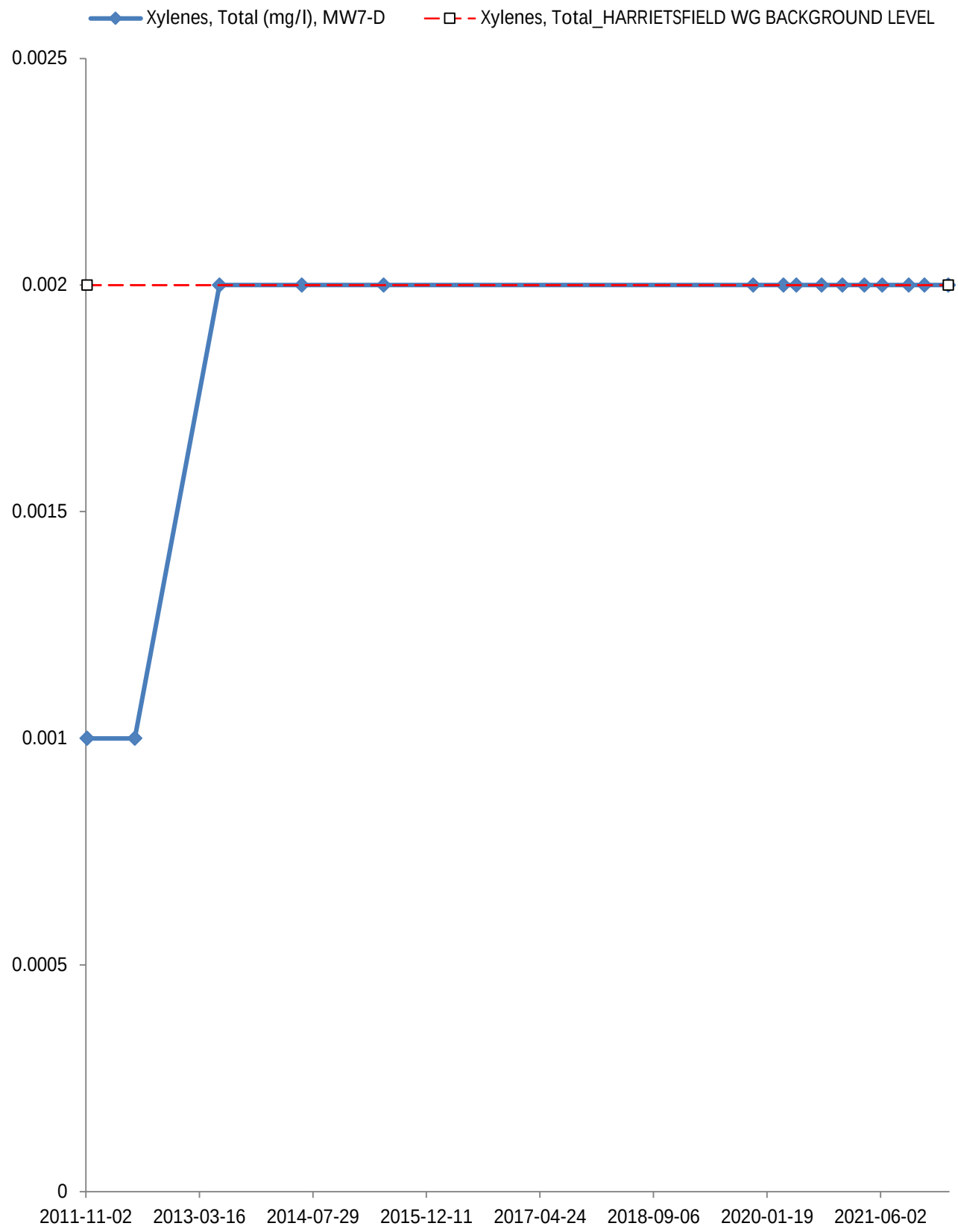
MW7-D-Xylene, O-



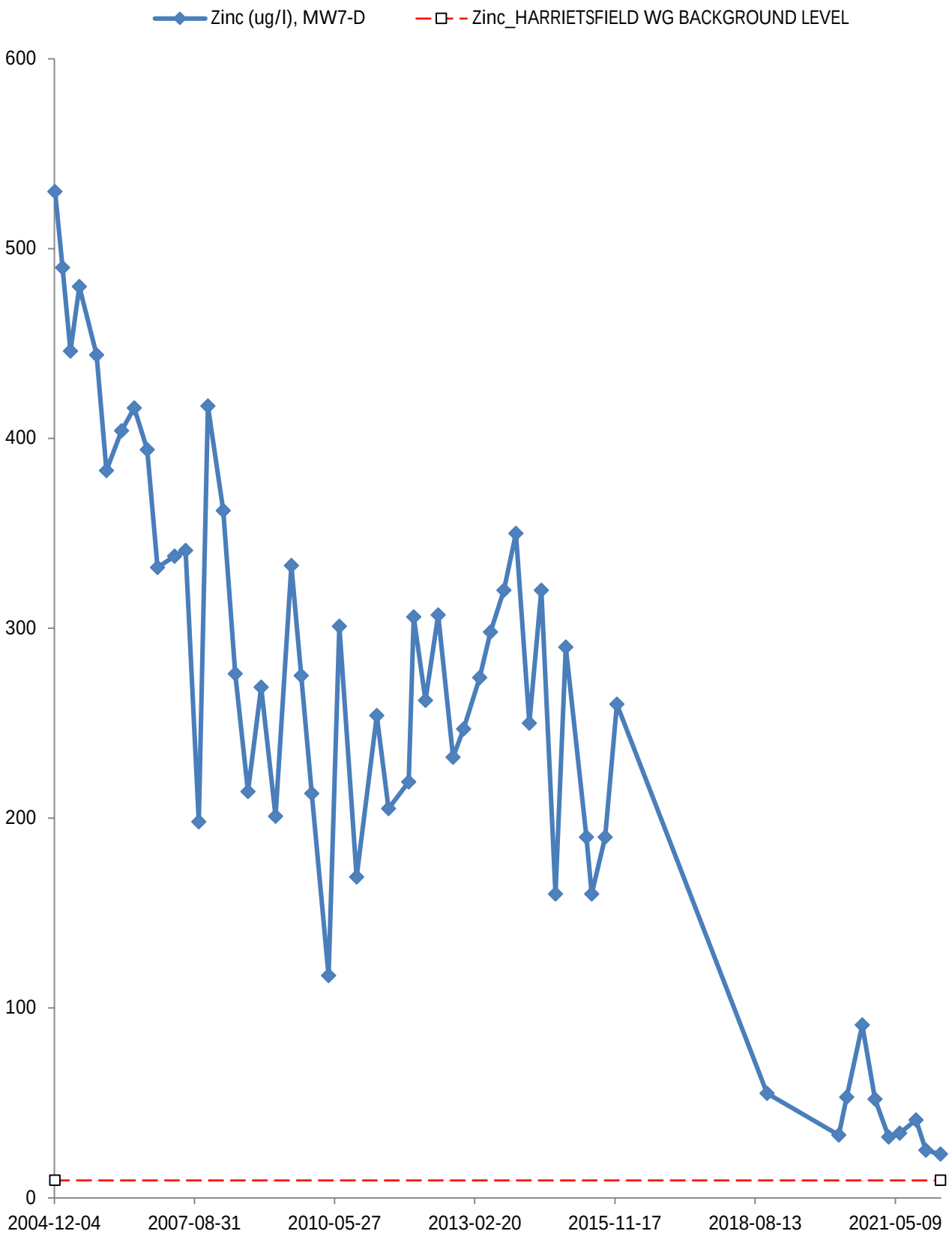
MW7-D-Xylene, p+m-



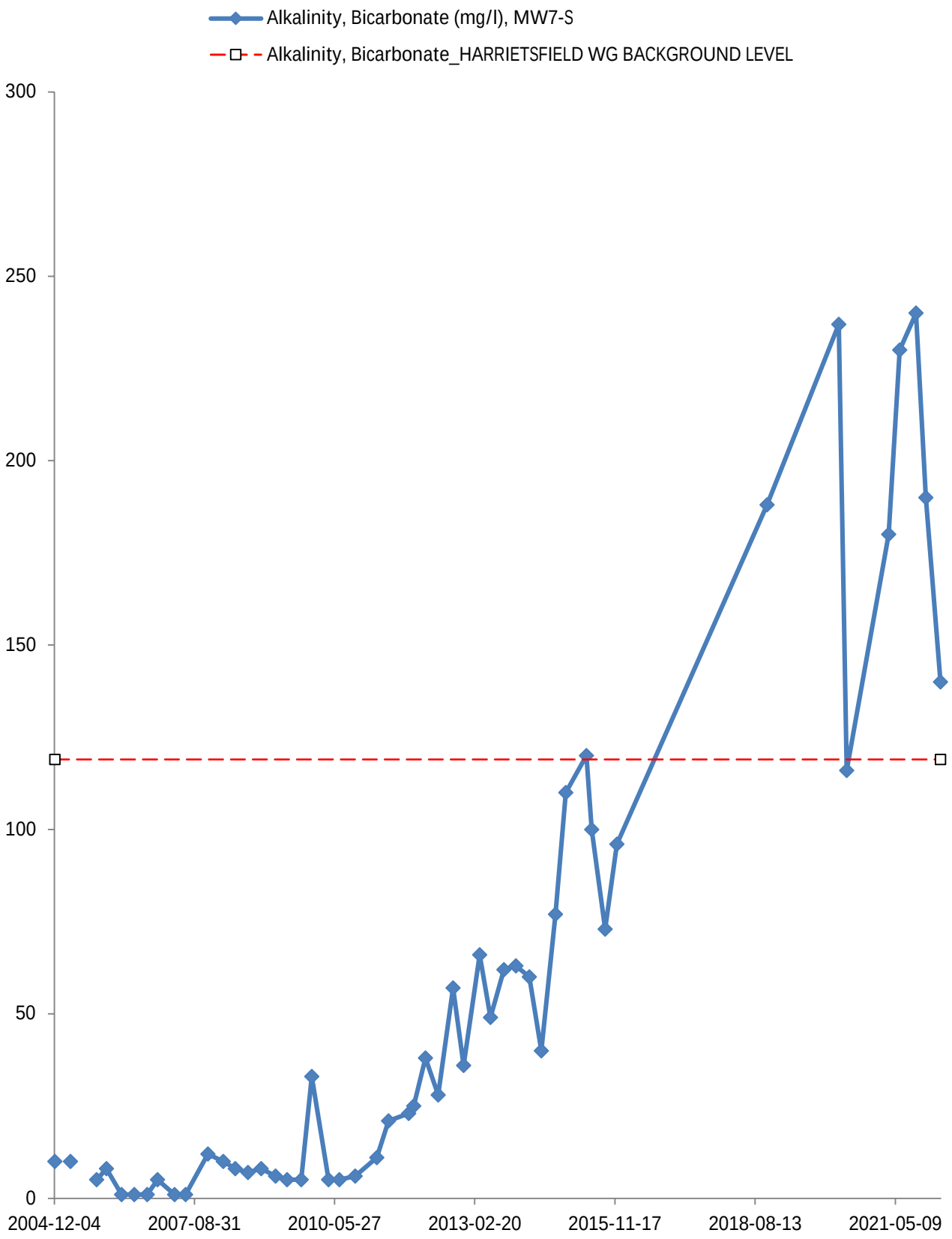
MW7-D-Xylenes, Total



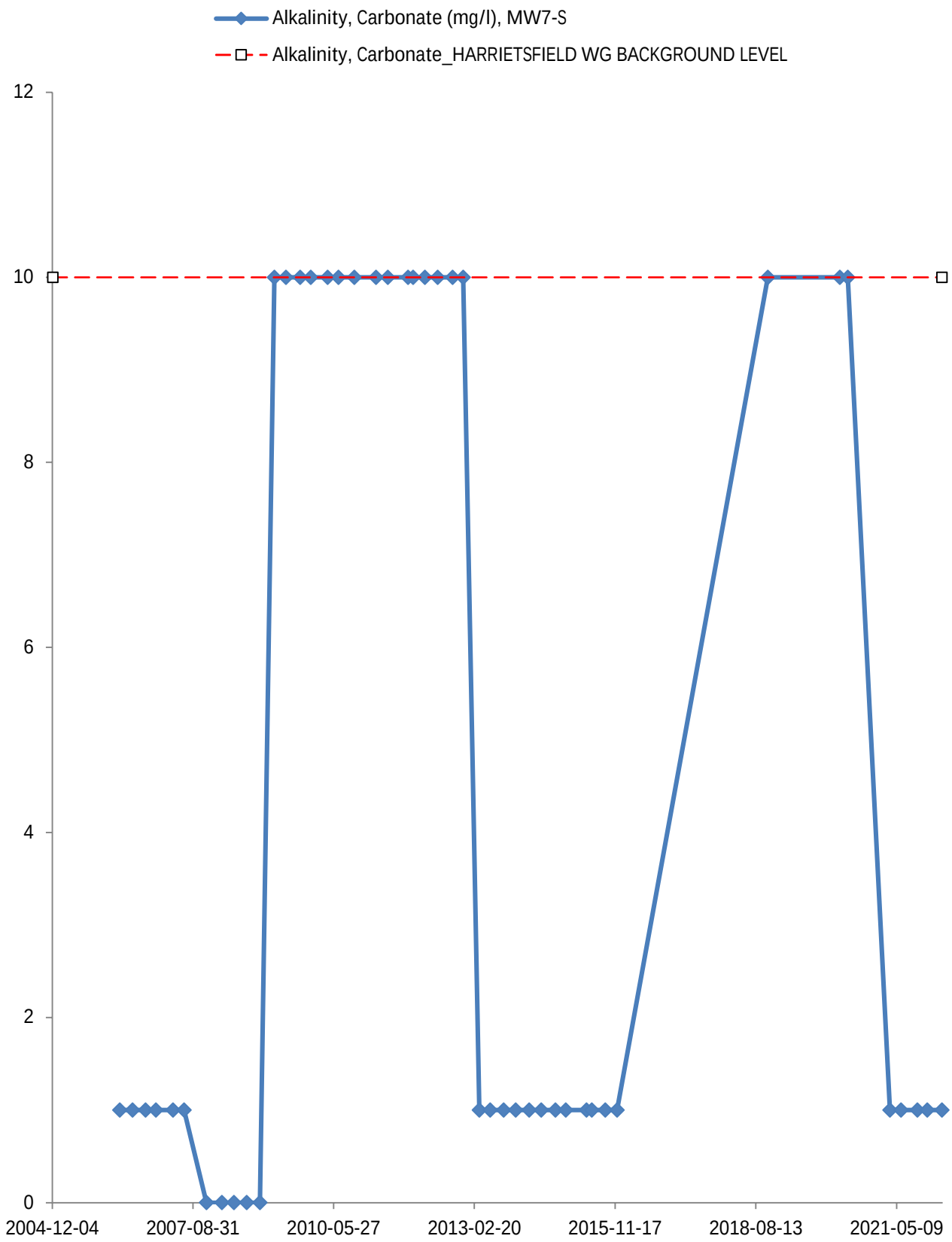
MW7-D-Zinc


Zinc (ug/l), MW7-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
600
500
400
300
200
100
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

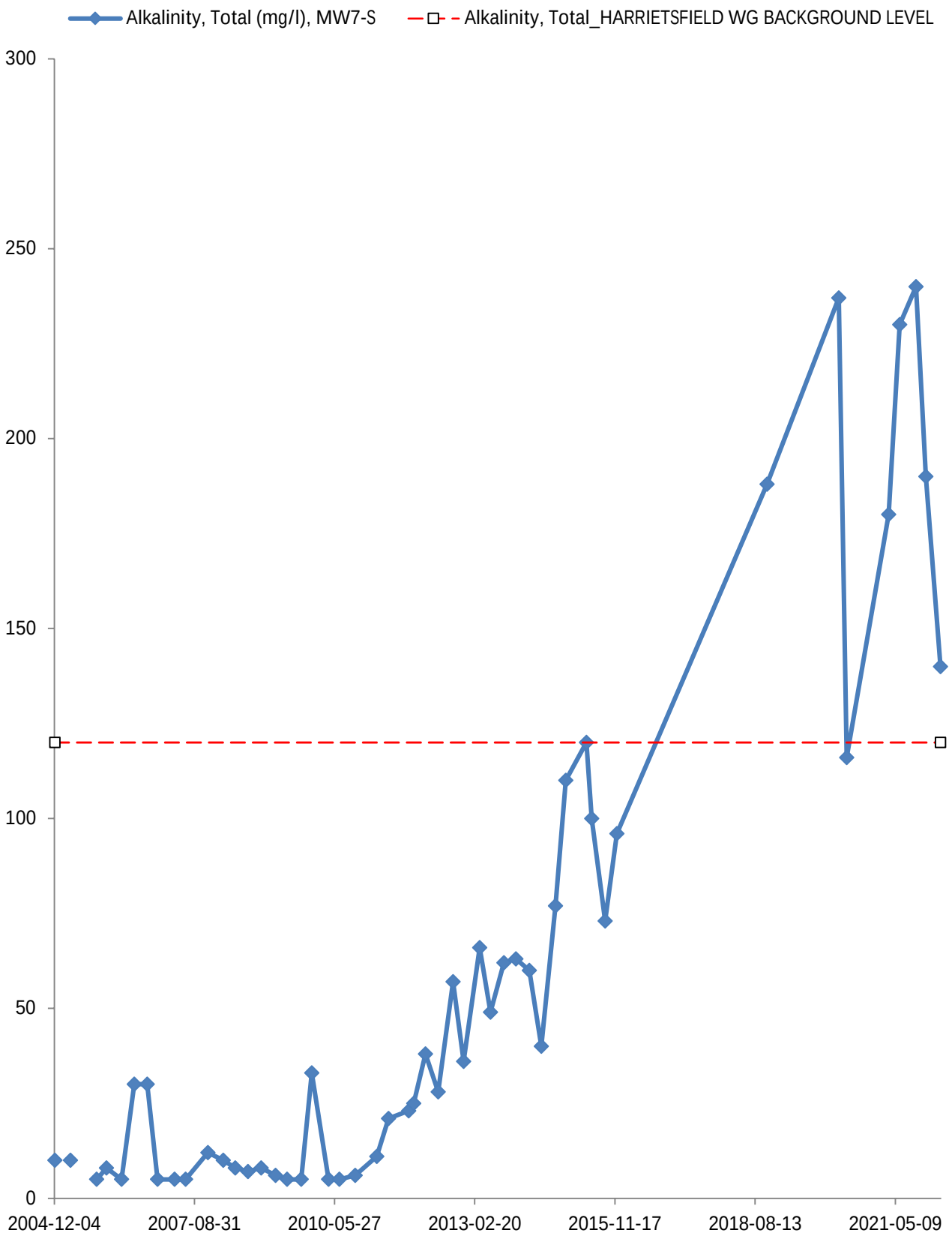
MW7-S-Alkalinity, Bicarbonate



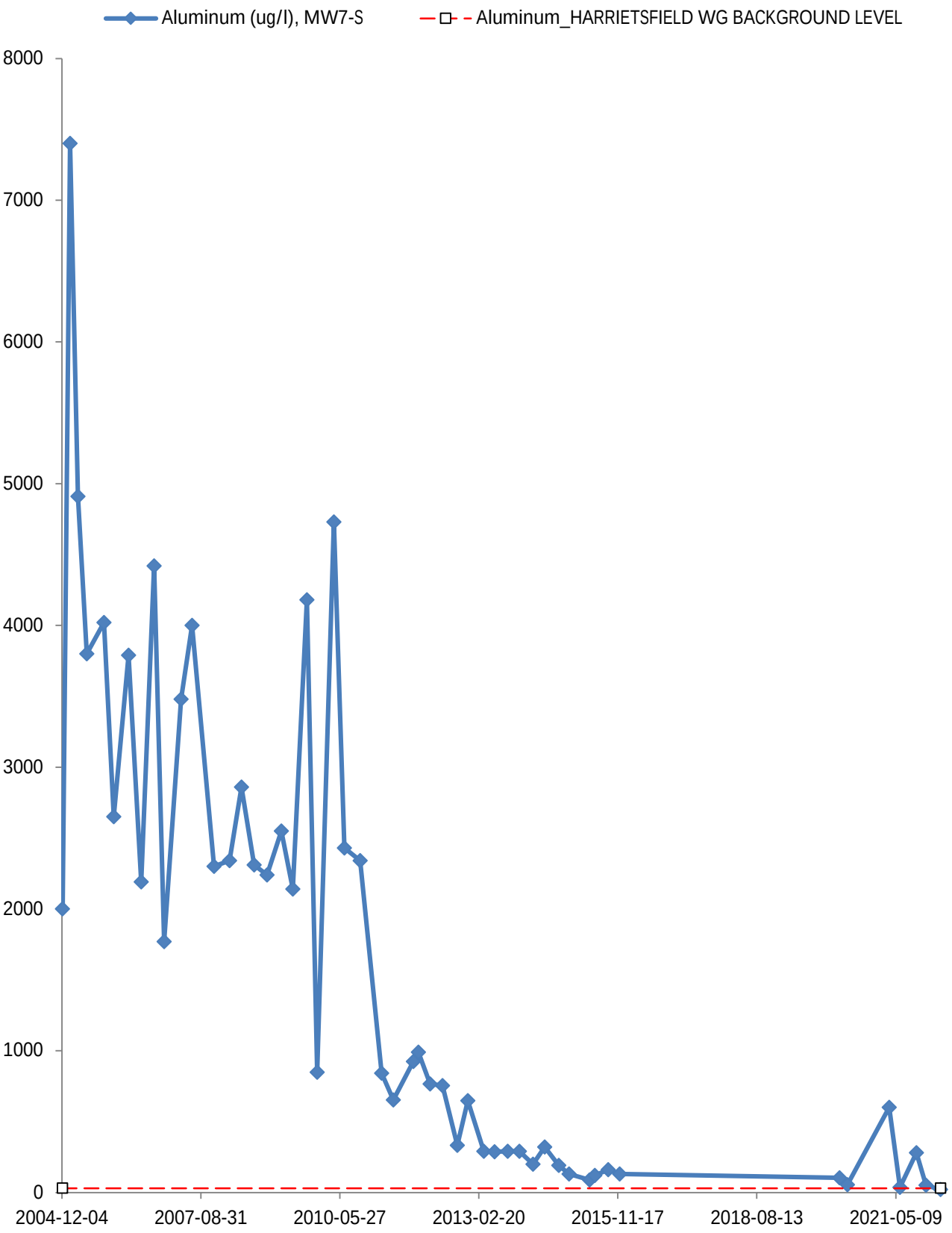
MW7-S-Alkalinity, Carbonate



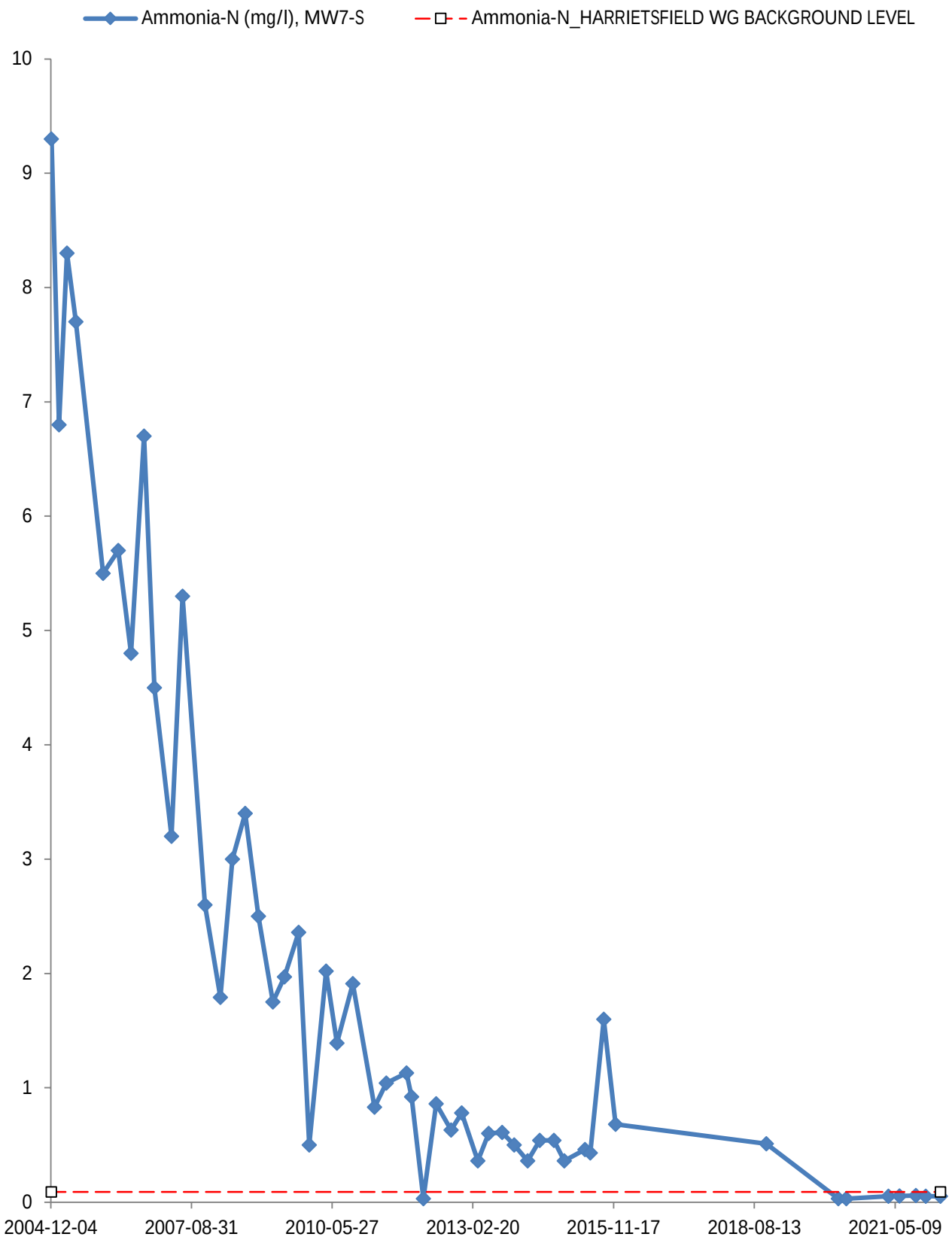
MW7-S-Alkalinity, Total



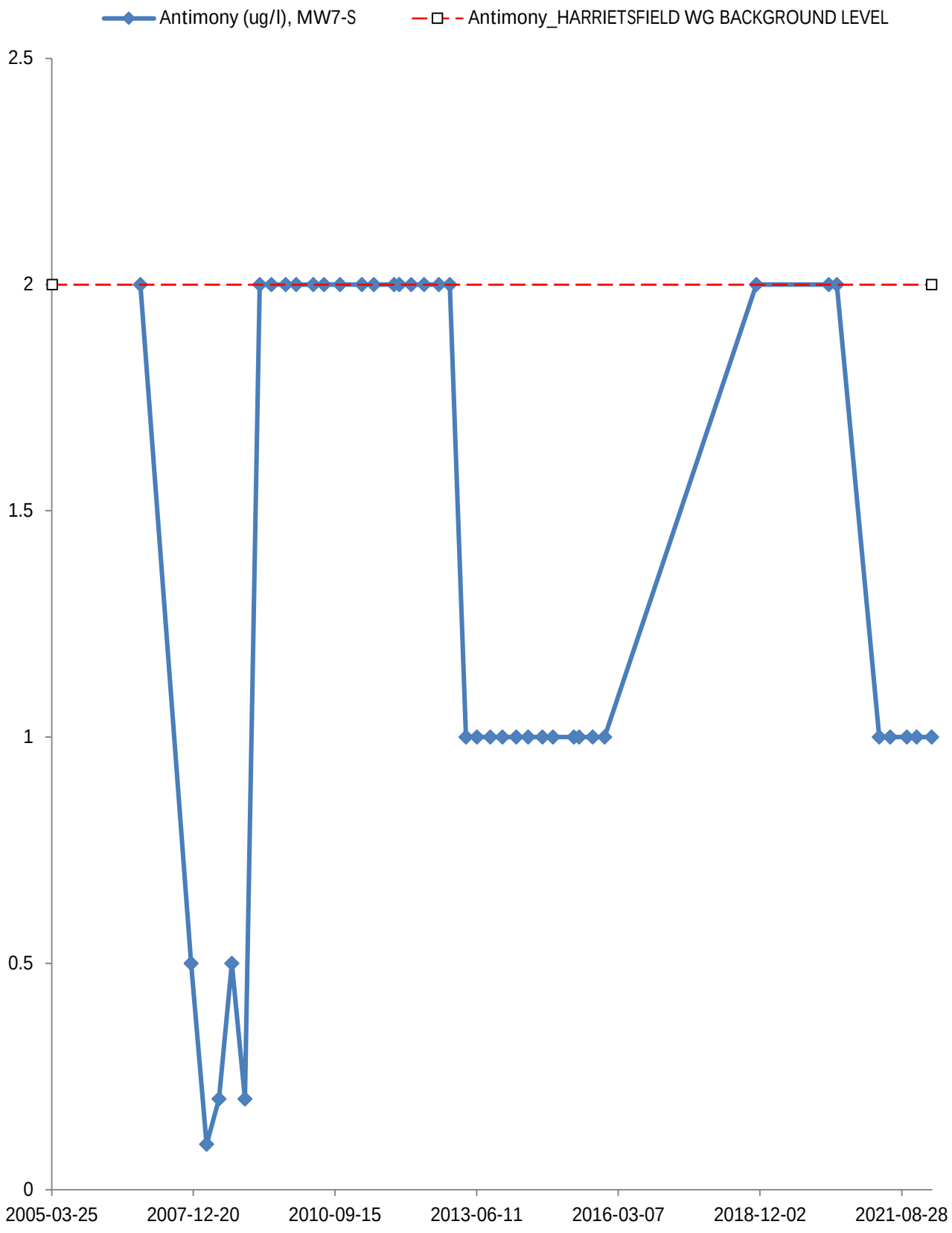
MW7-S-Aluminum



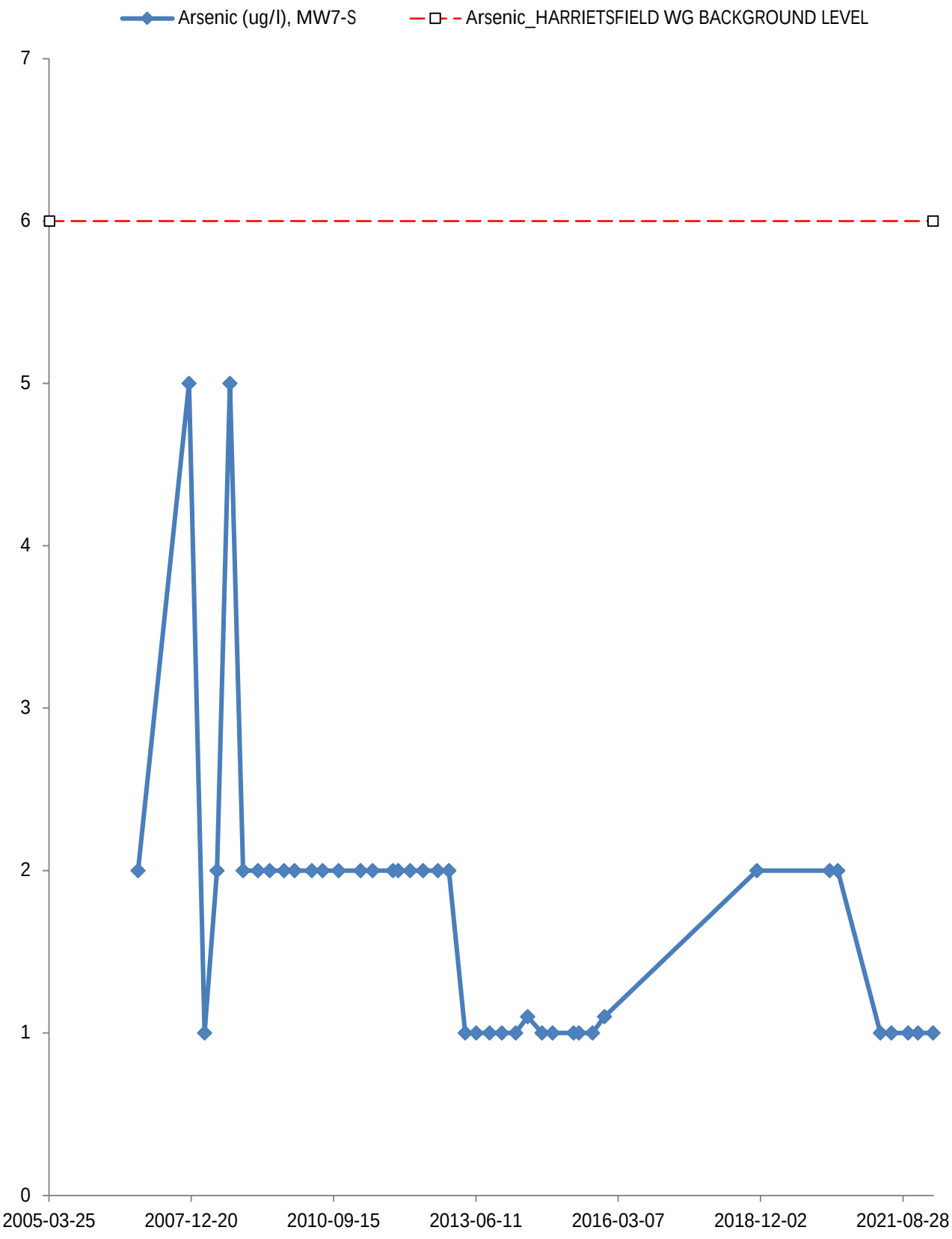
MW7-S-Ammonia-N



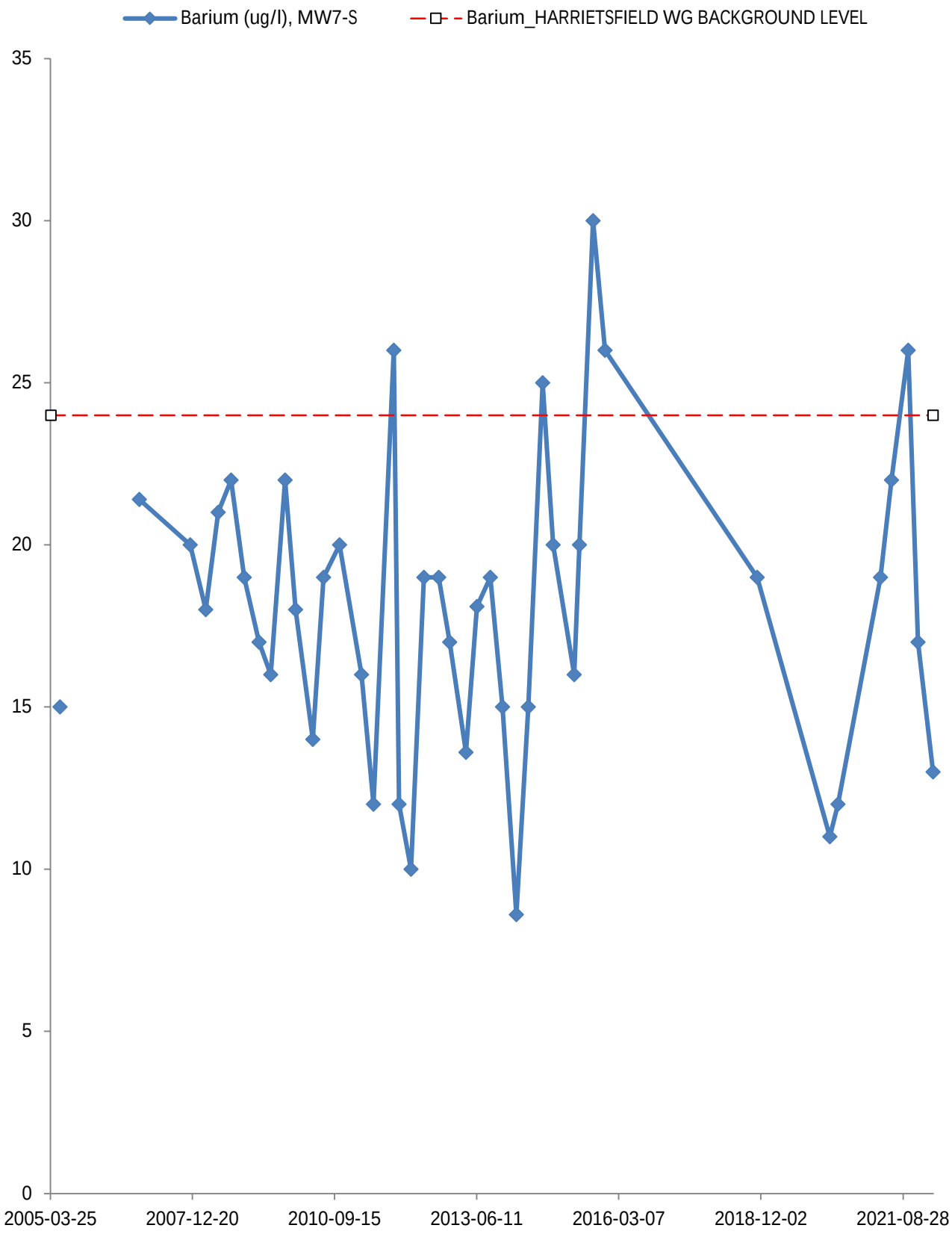
MW7-S-Antimony



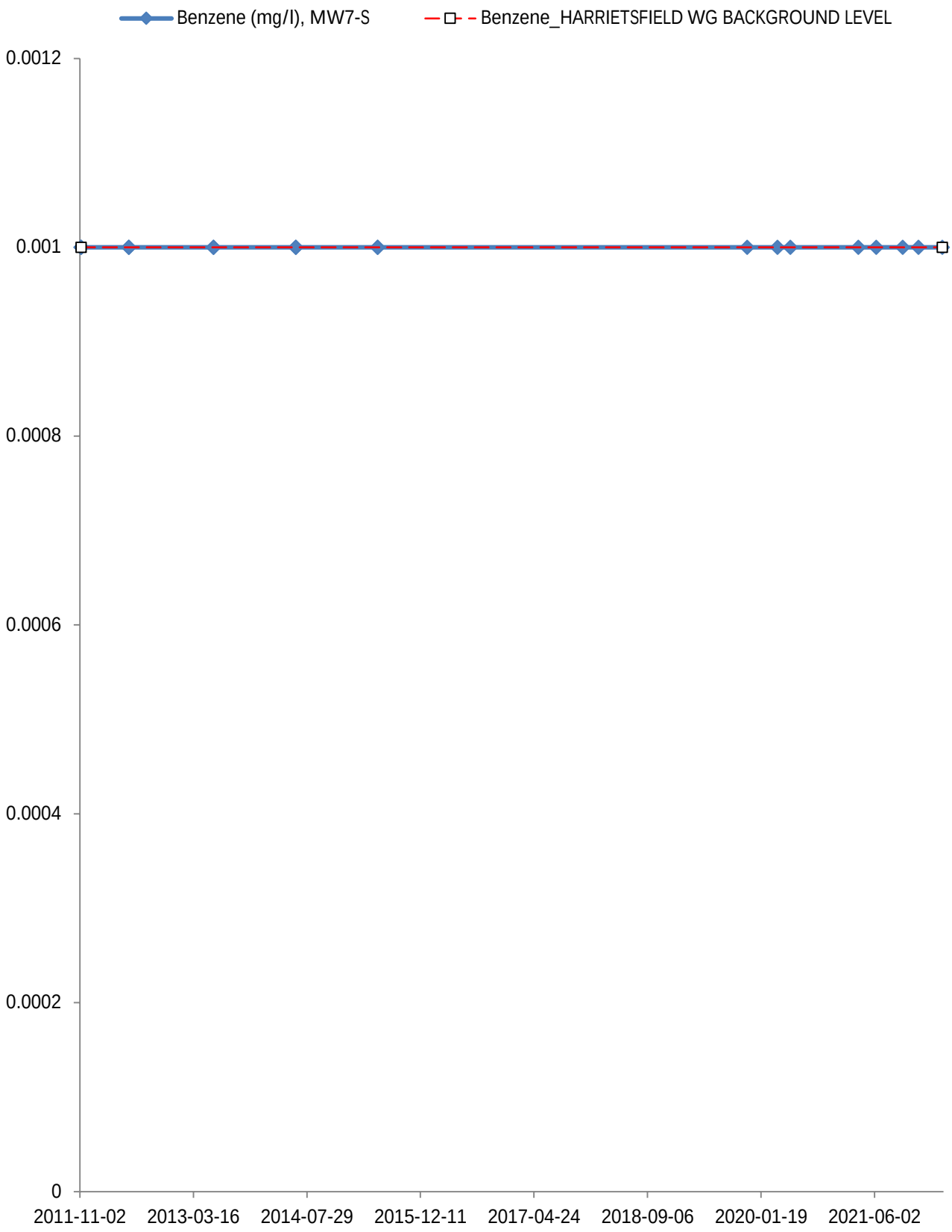
MW7-S-Arsenic



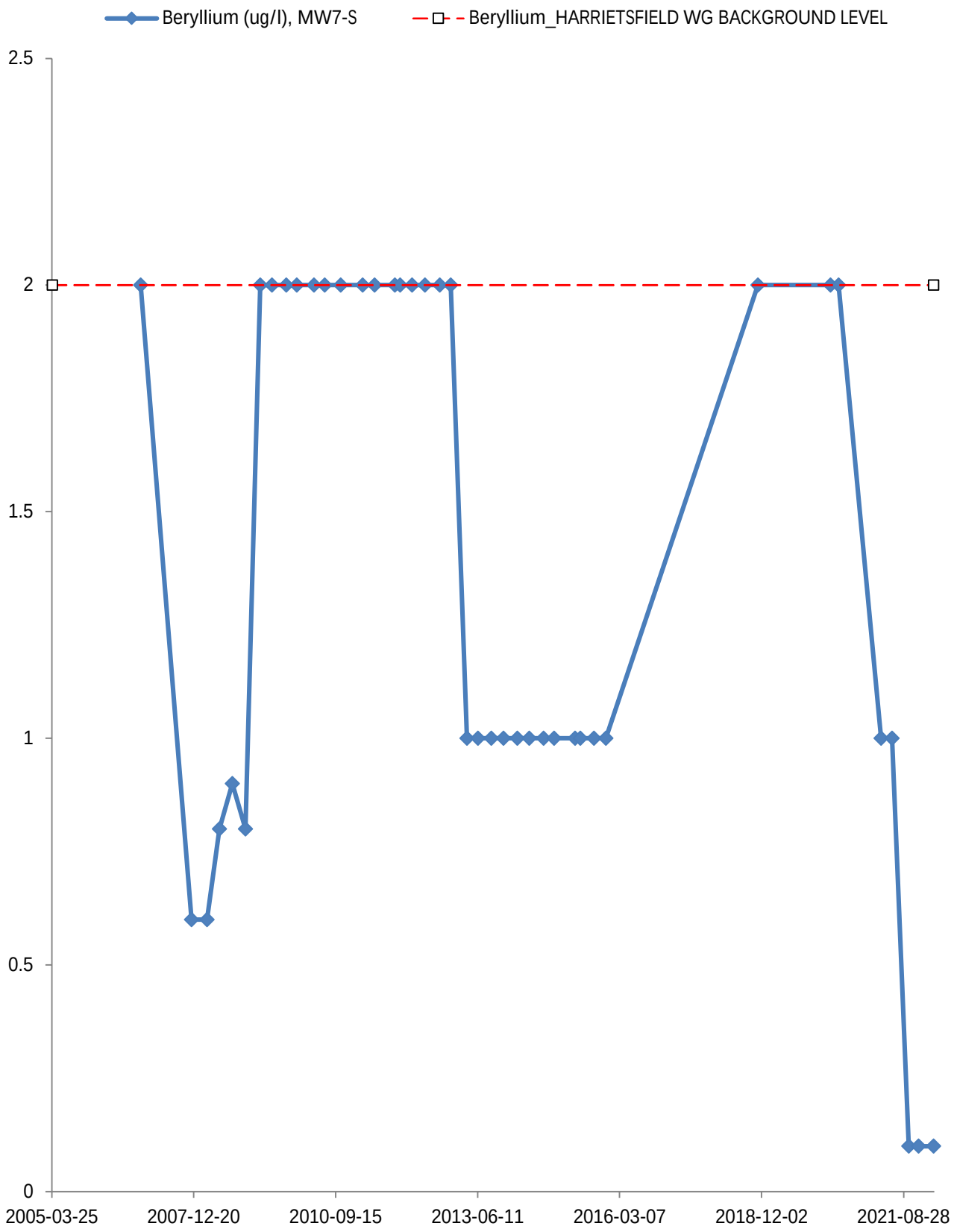
MW7-S-Barium

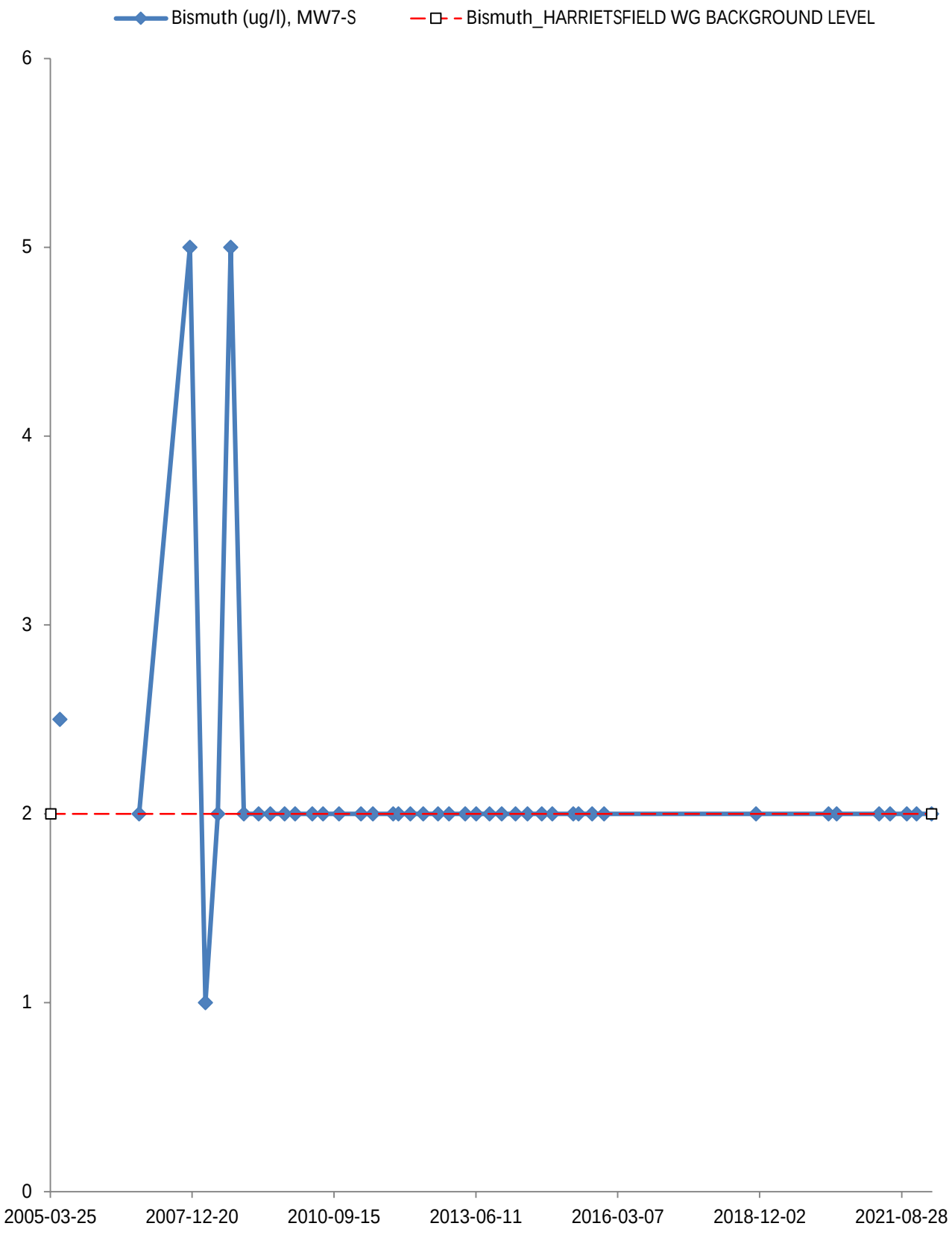

Barium (ug/l), MW7-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
35
30
25
20
15
10
5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

MW7-S-Benzene

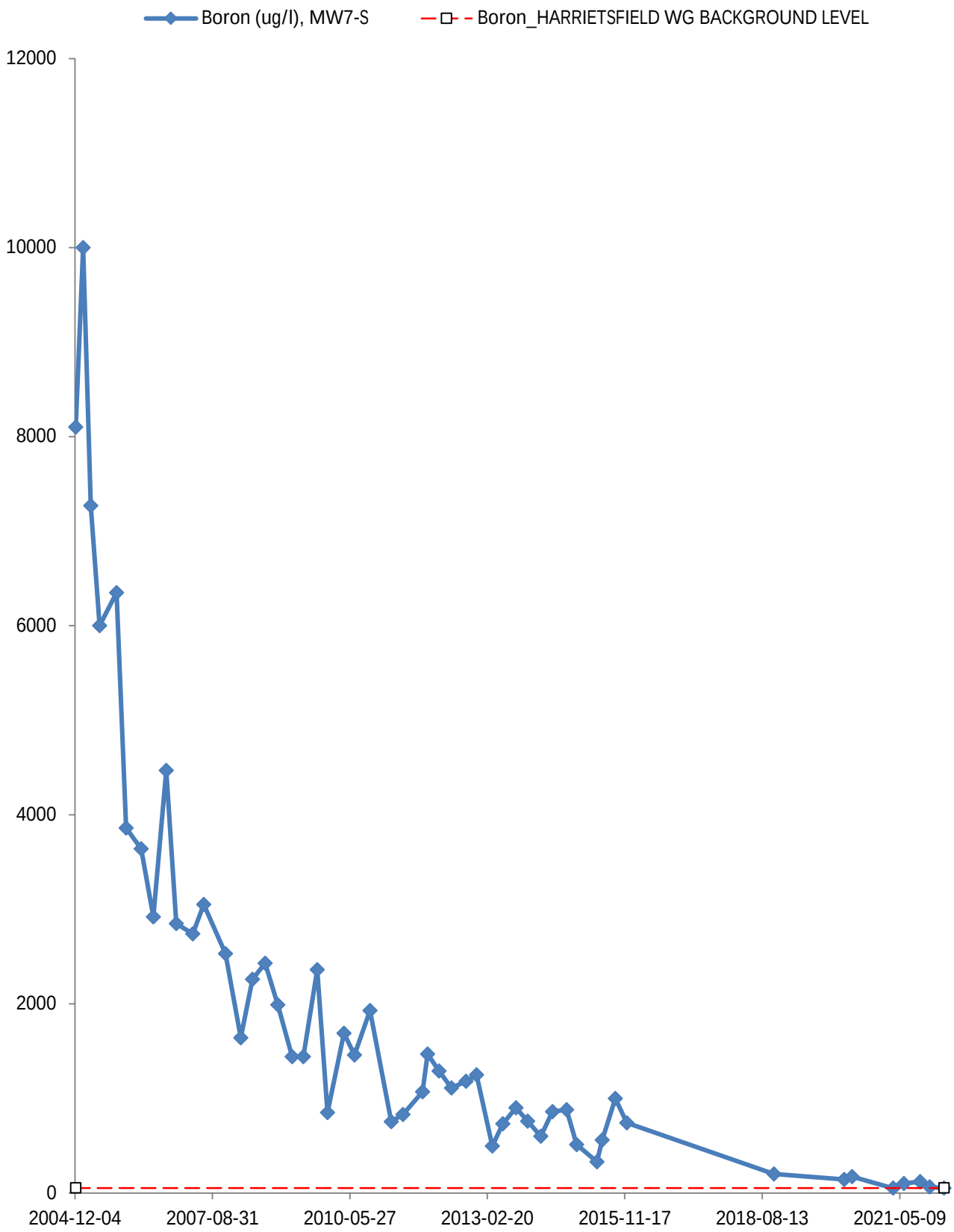


MW7-S-Beryllium

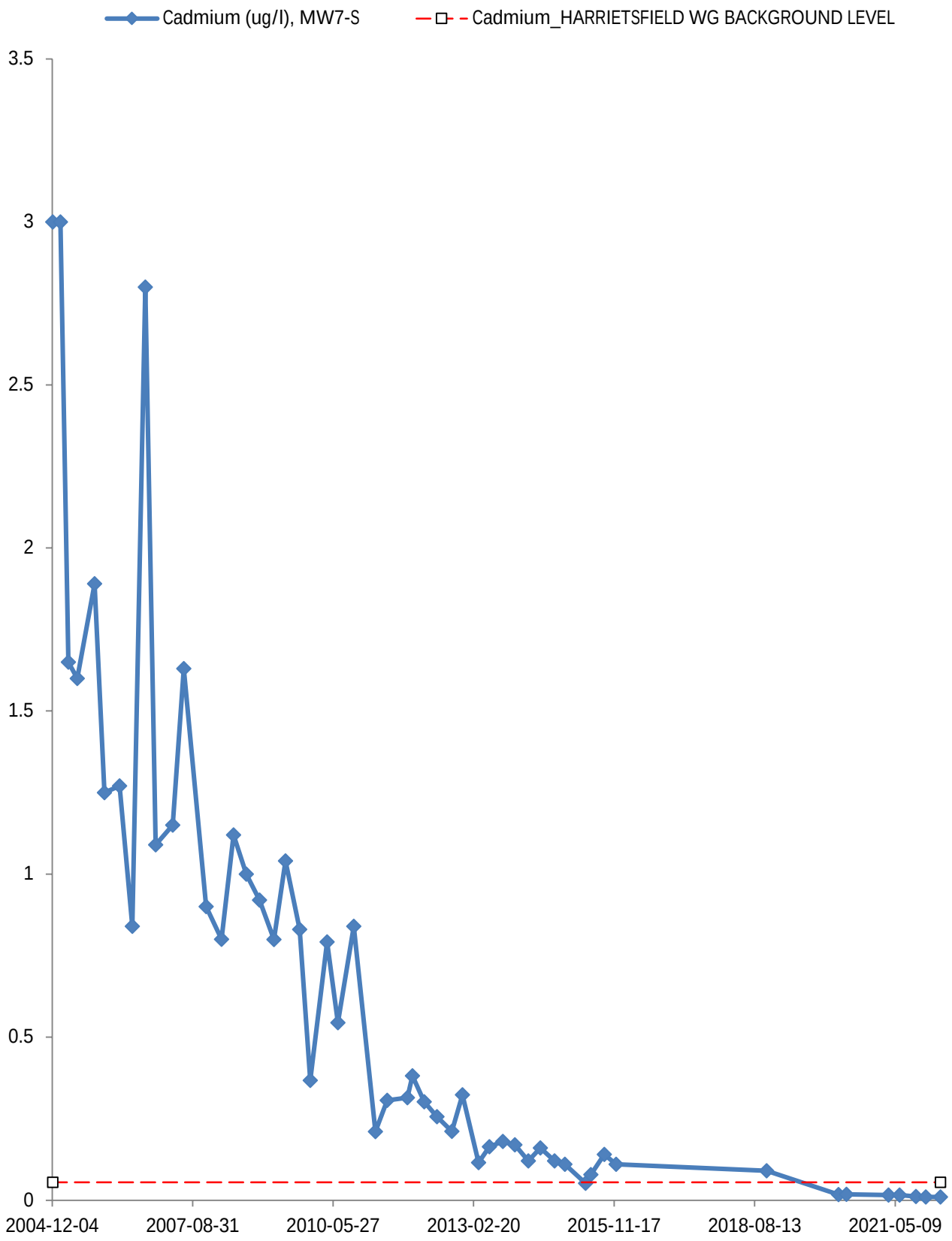



Bismuth (ug/l), MW7-S
Bismuth_HARRIETSFIELD WG BACKGROUND LEVEL
6
5
4
3
2
1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

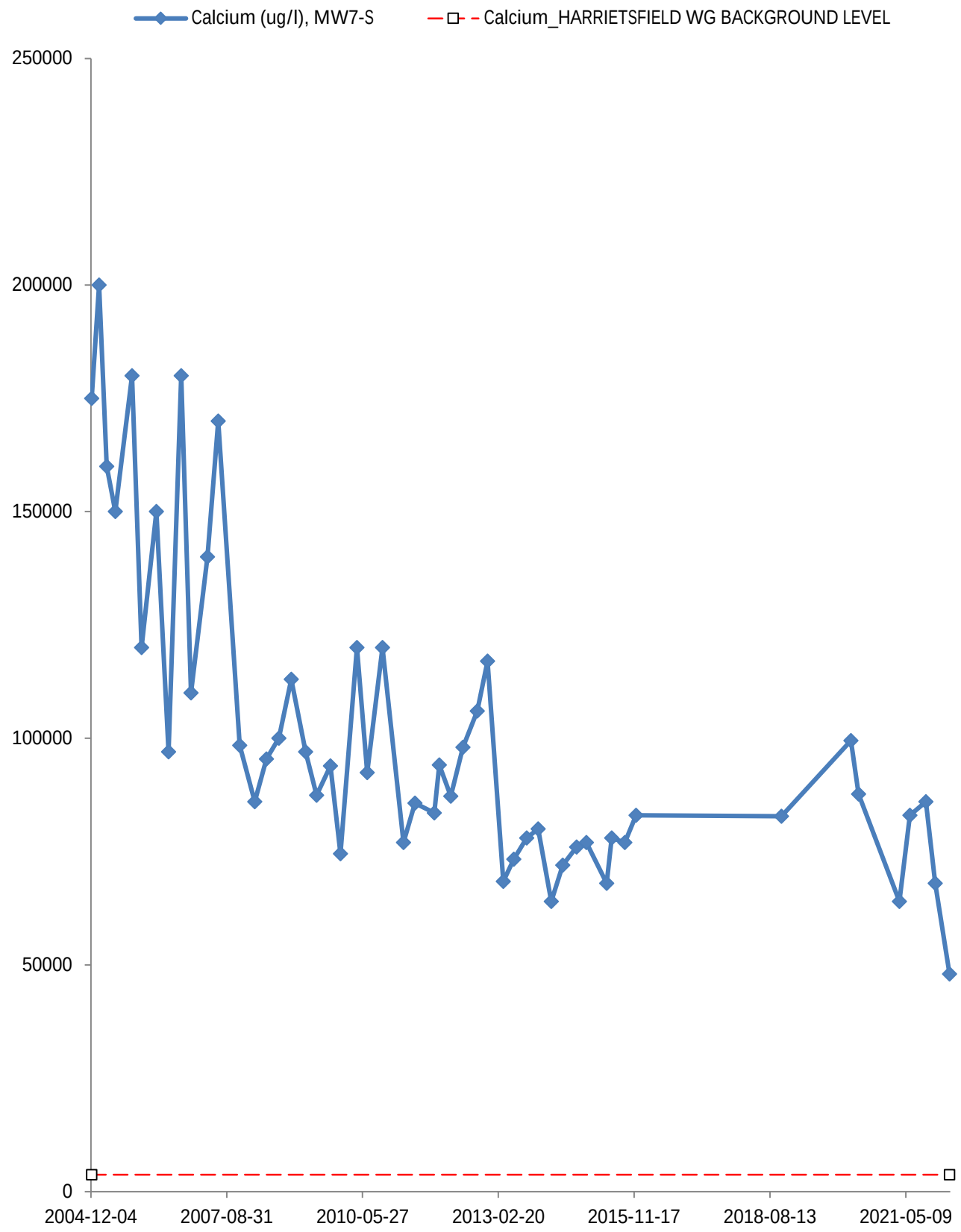
MW7-S-Boron


Boron (ug/l), MW7-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
12000
10000
8000
6000
4000
2000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

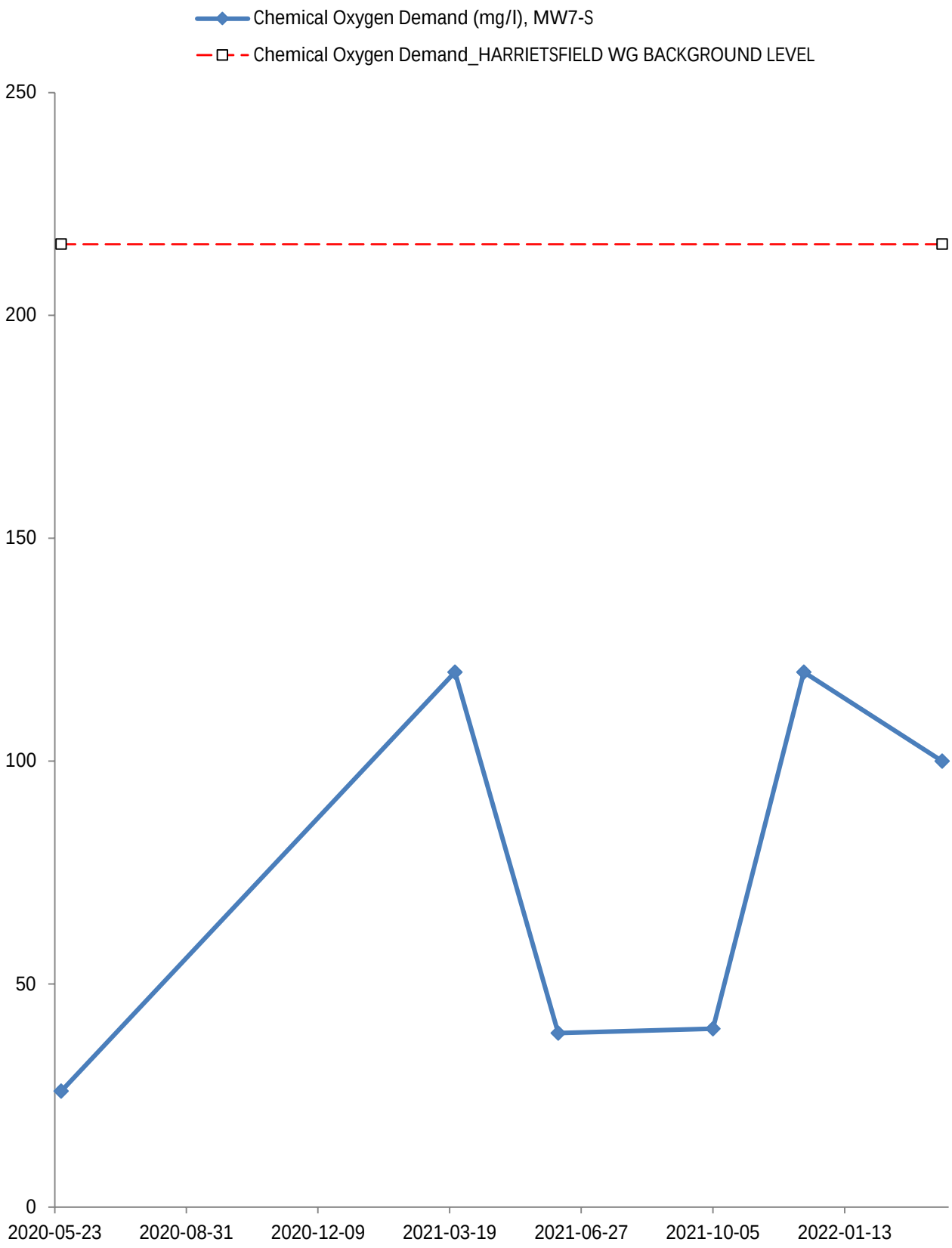
MW7-S-Cadmium



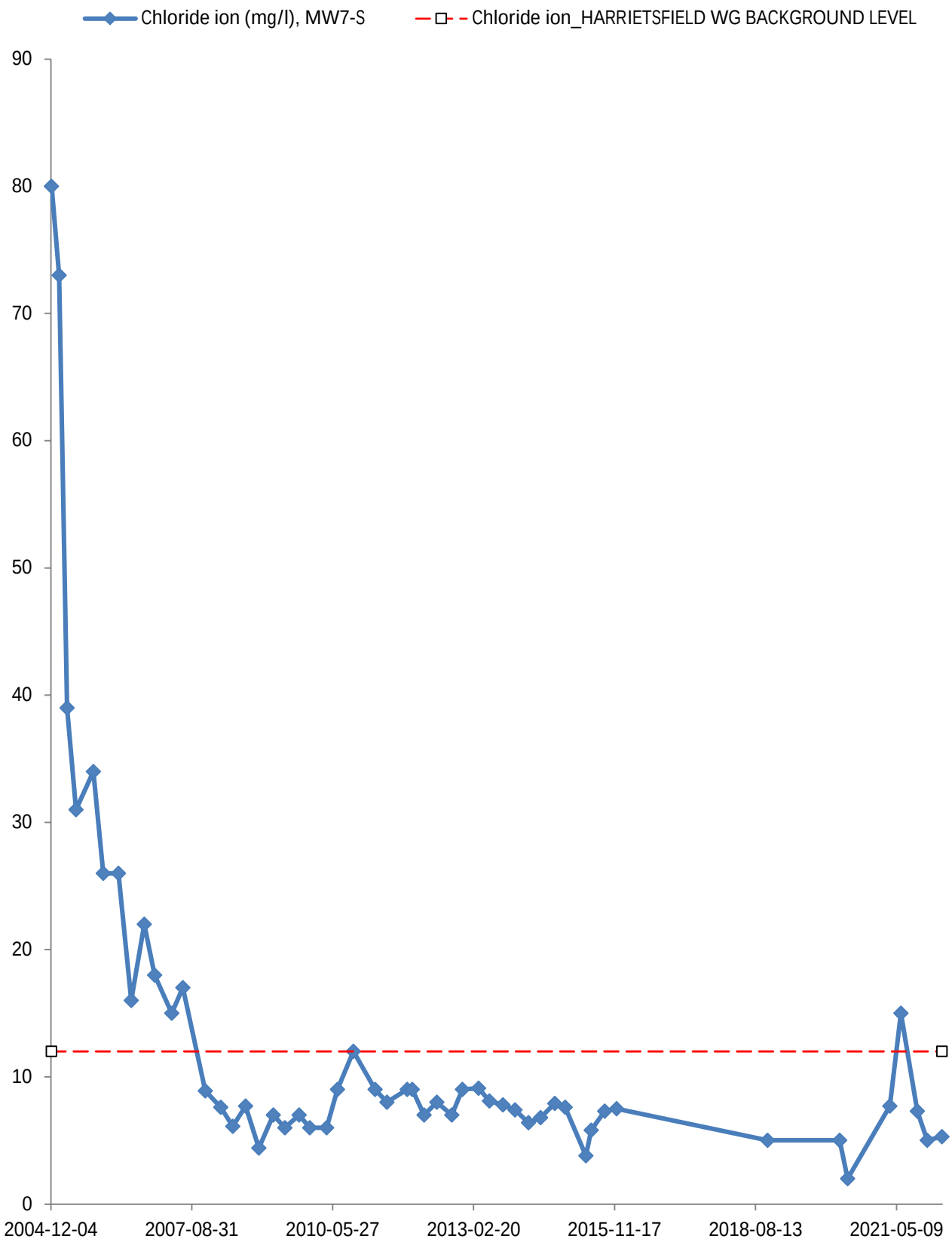
MW7-S-Calcium



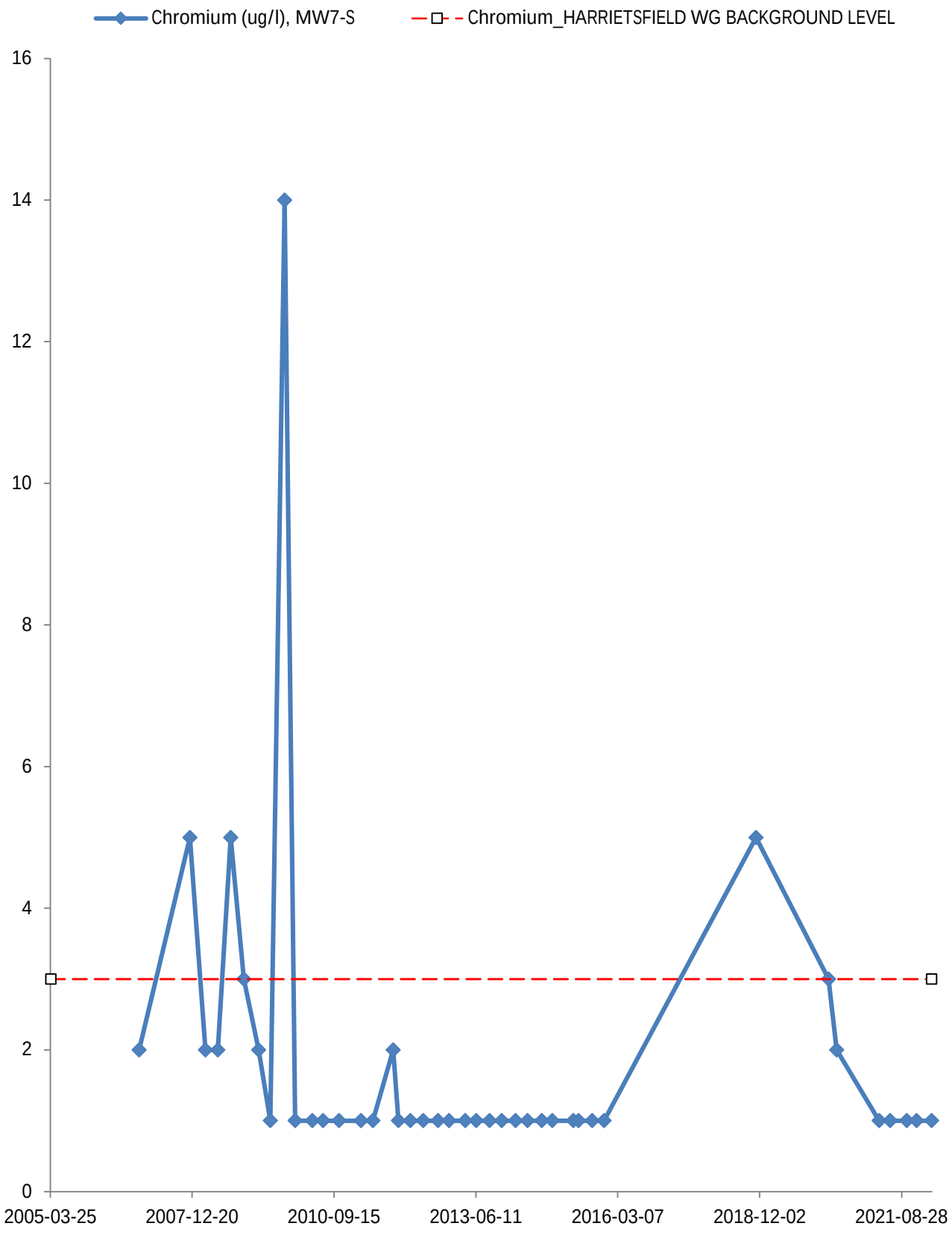
MW7-S-Chemical Oxygen Demand



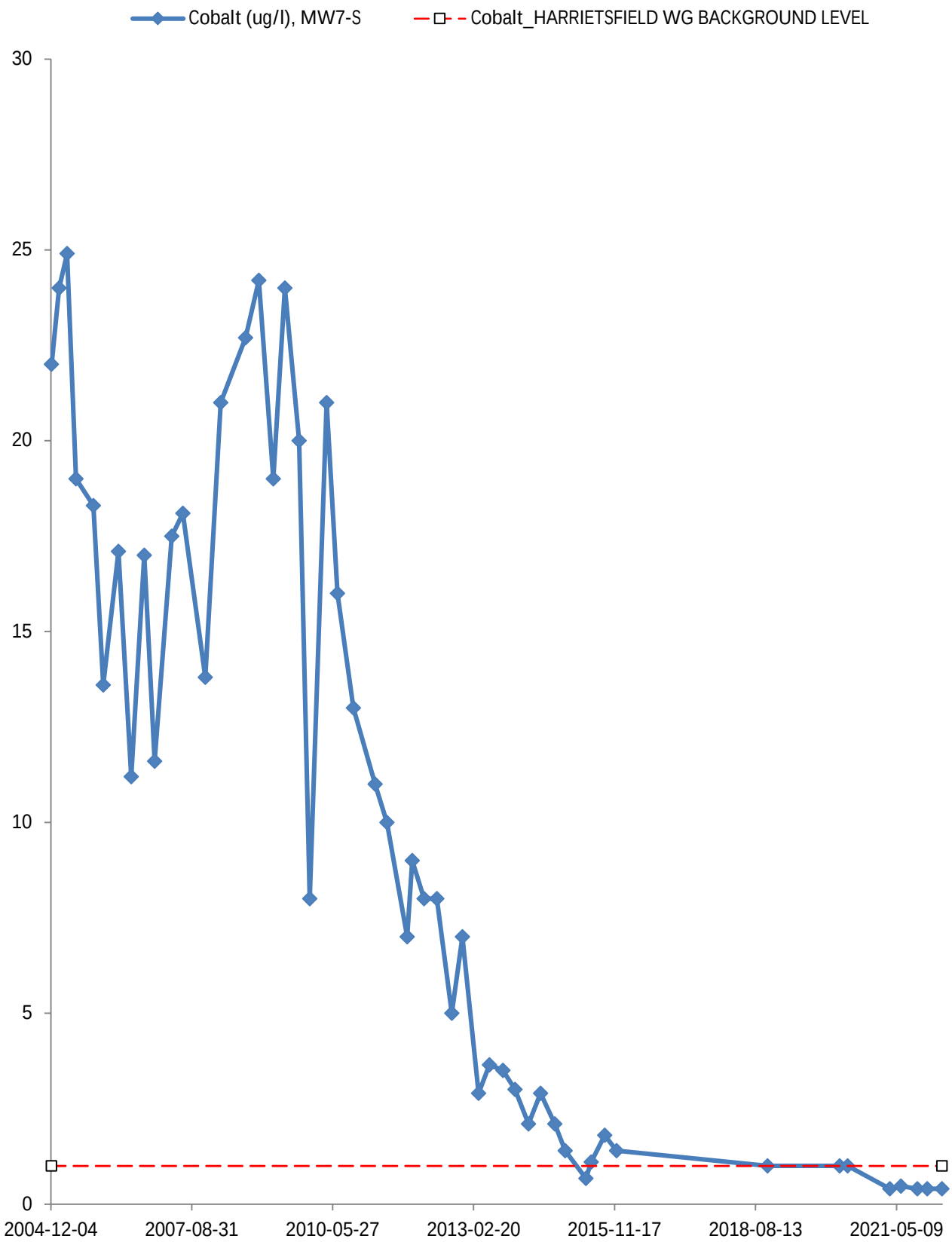
MW7-S-Chloride ion



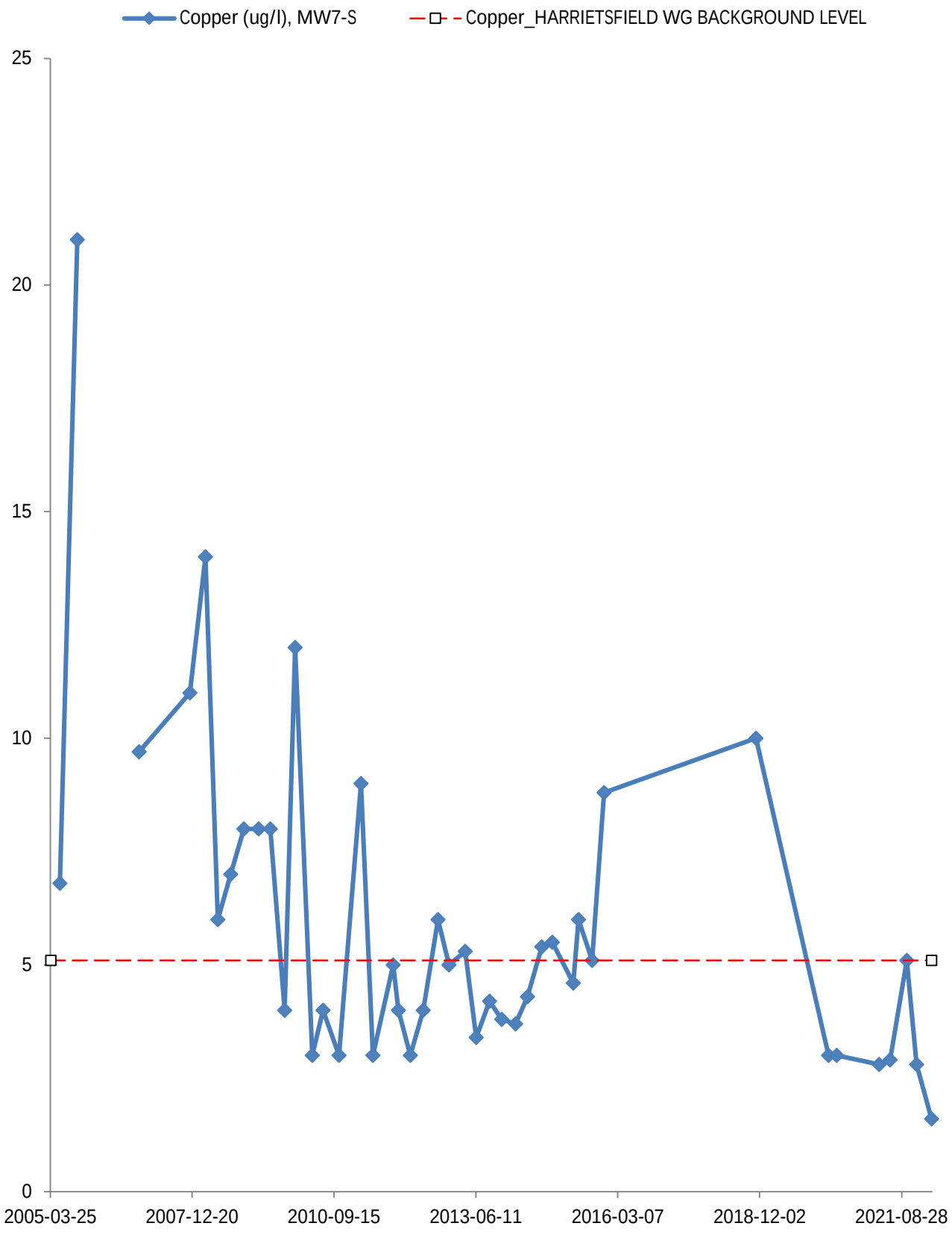
MW7-S-Chromium



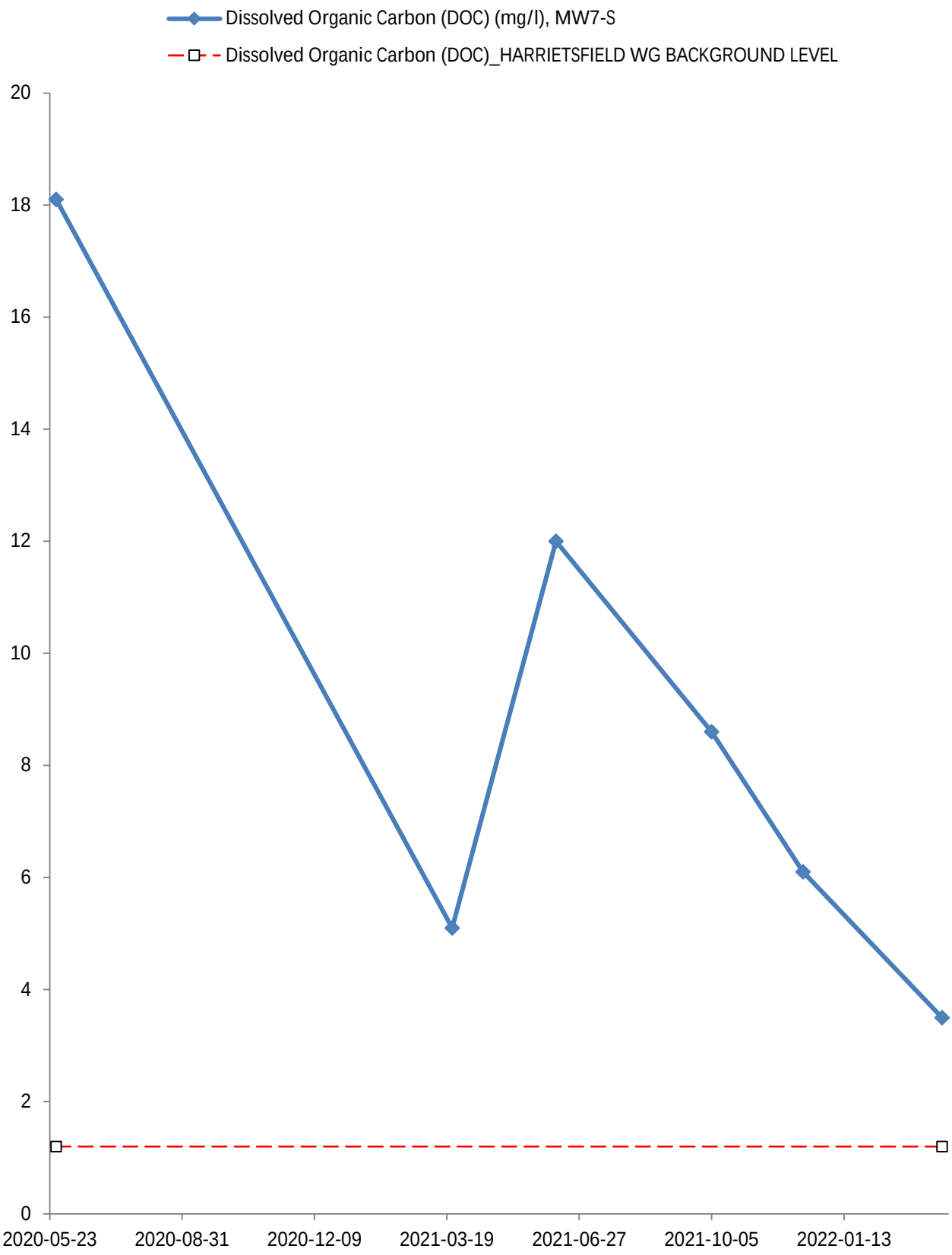
MW7-S-Cobalt


Cobalt (ug/l), MW7-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
30
25
20
15
10
5
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

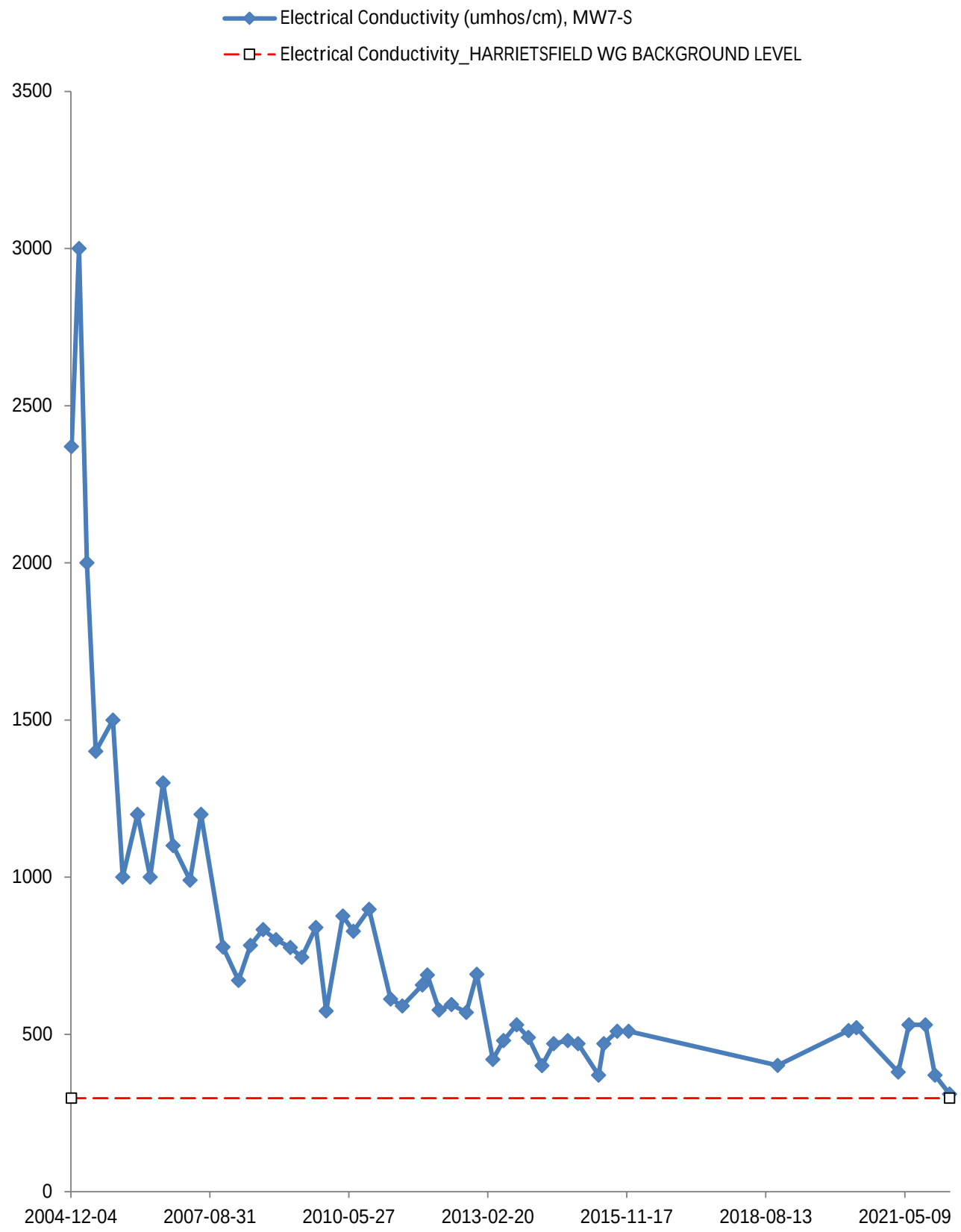
MW7-S-Copper


Copper (ug/l), MW7-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

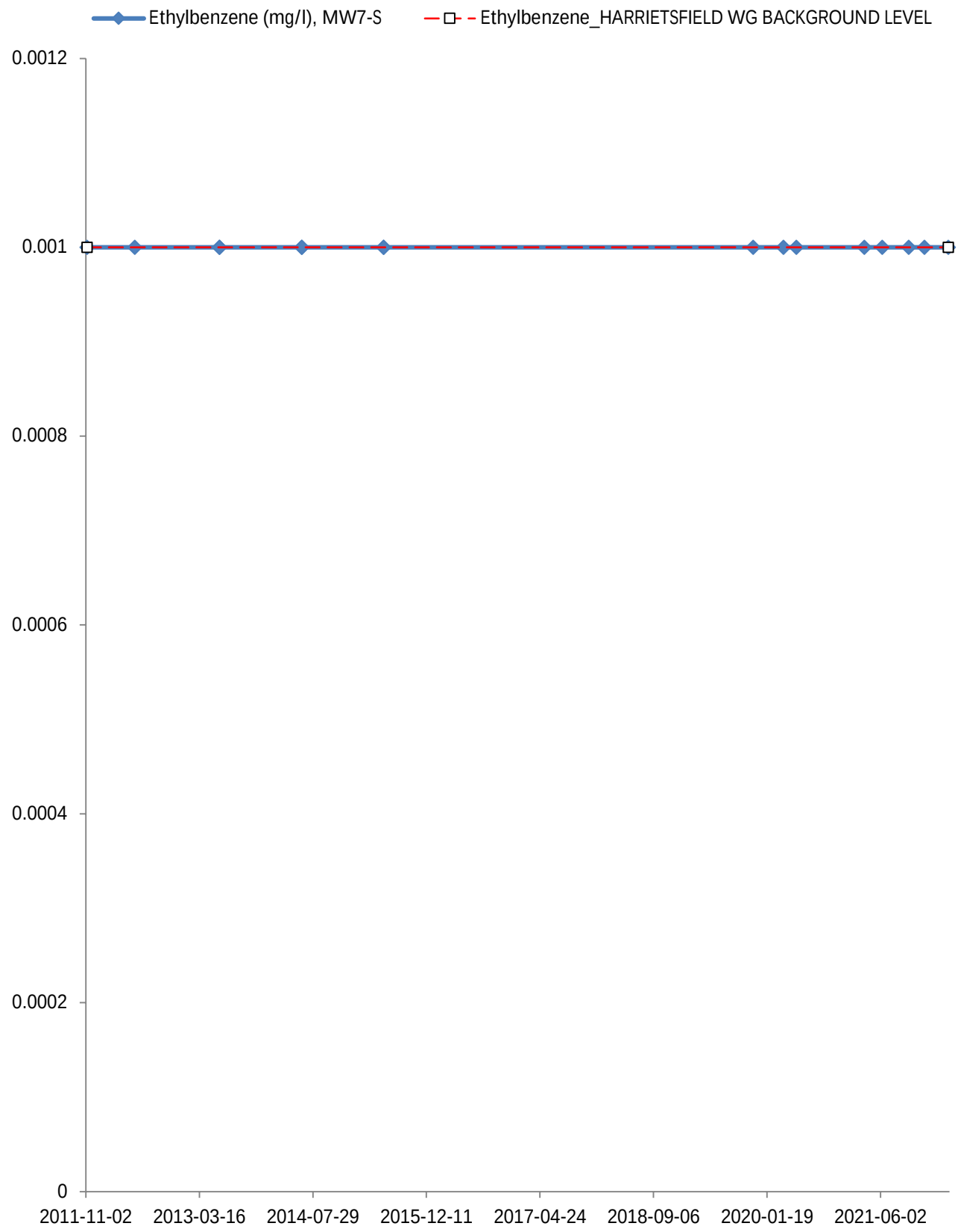
MW7-S-Dissolved Organic Carbon7



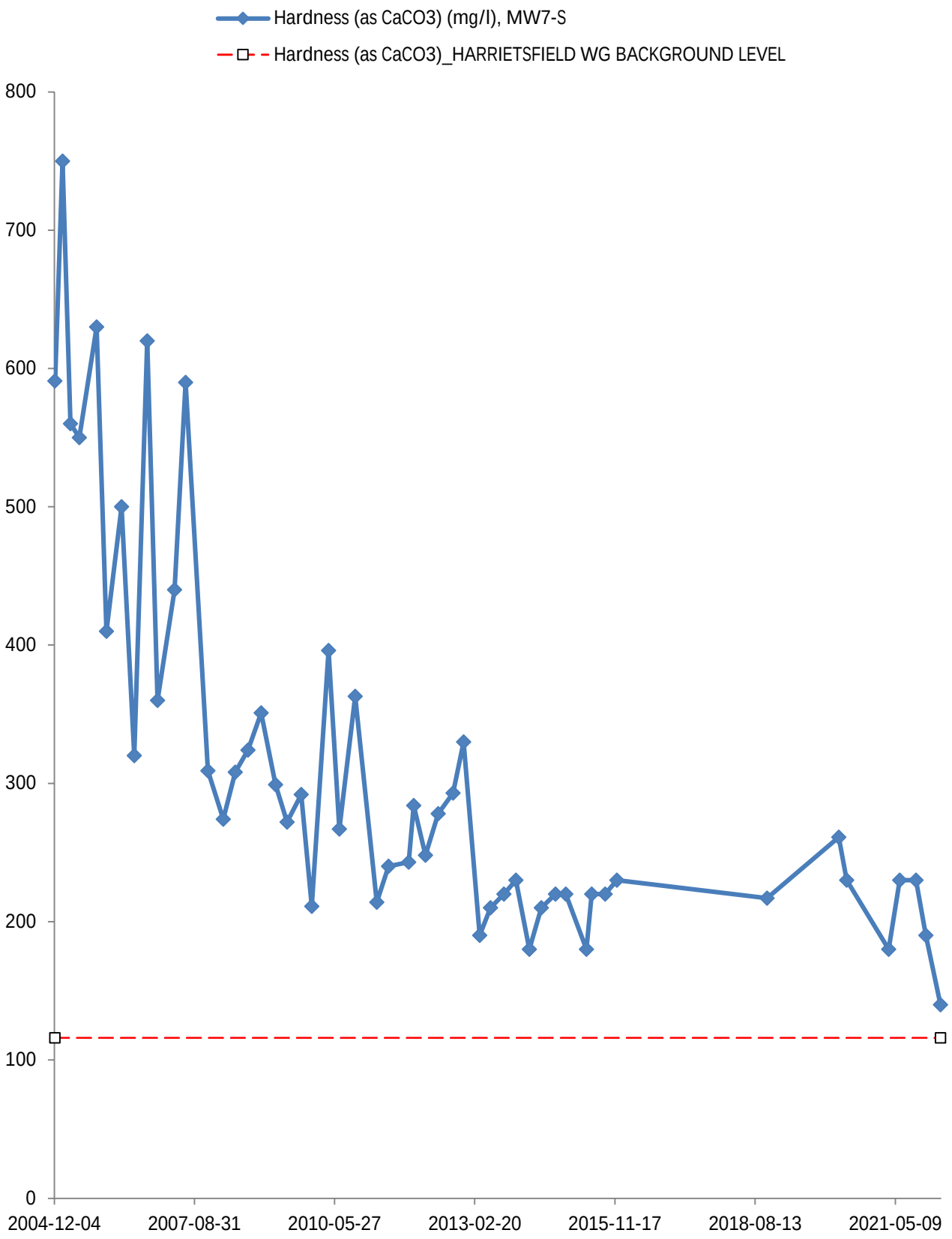
MW7-S-Electrical Conductivity



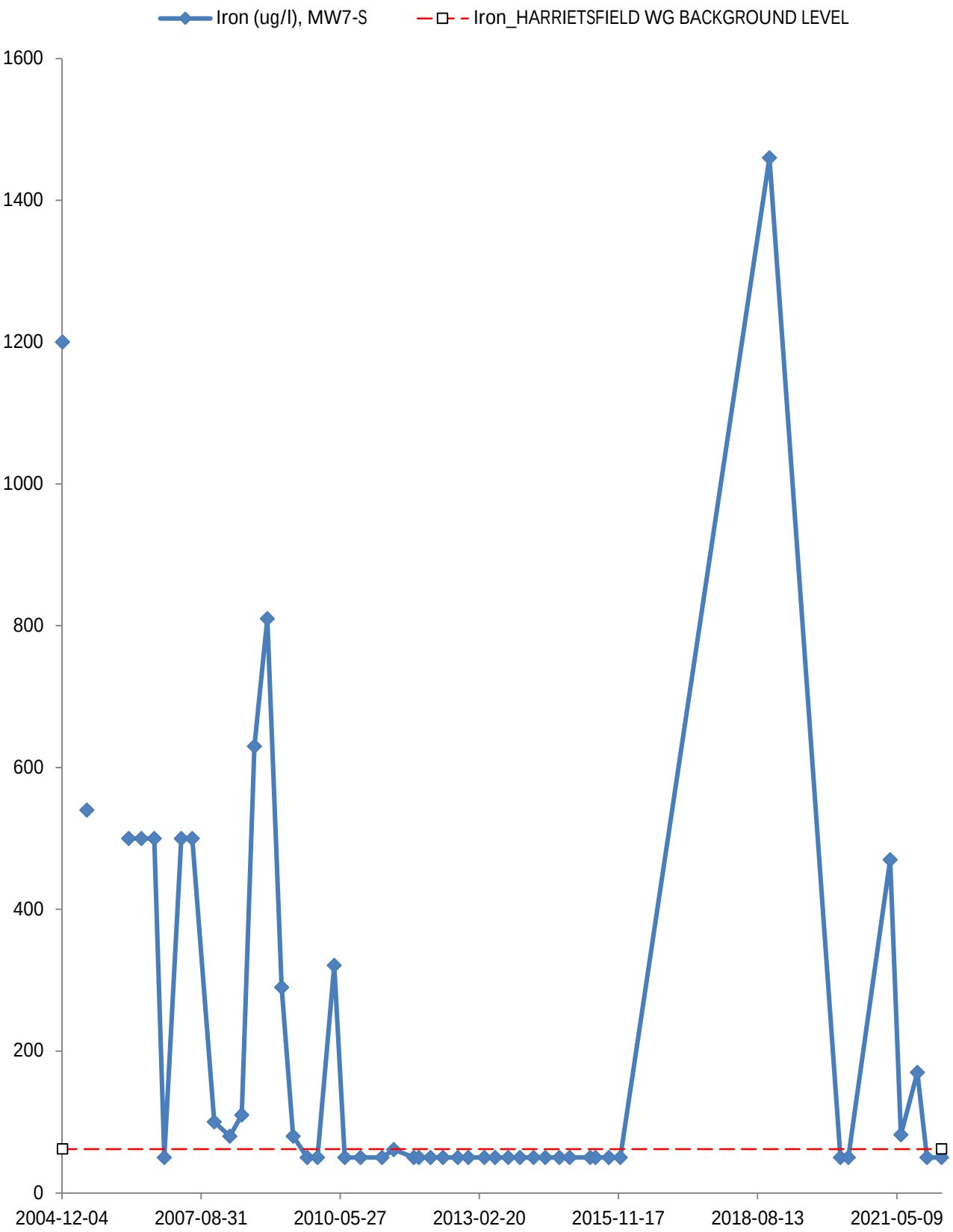
MW7-S-Ethylbenzene



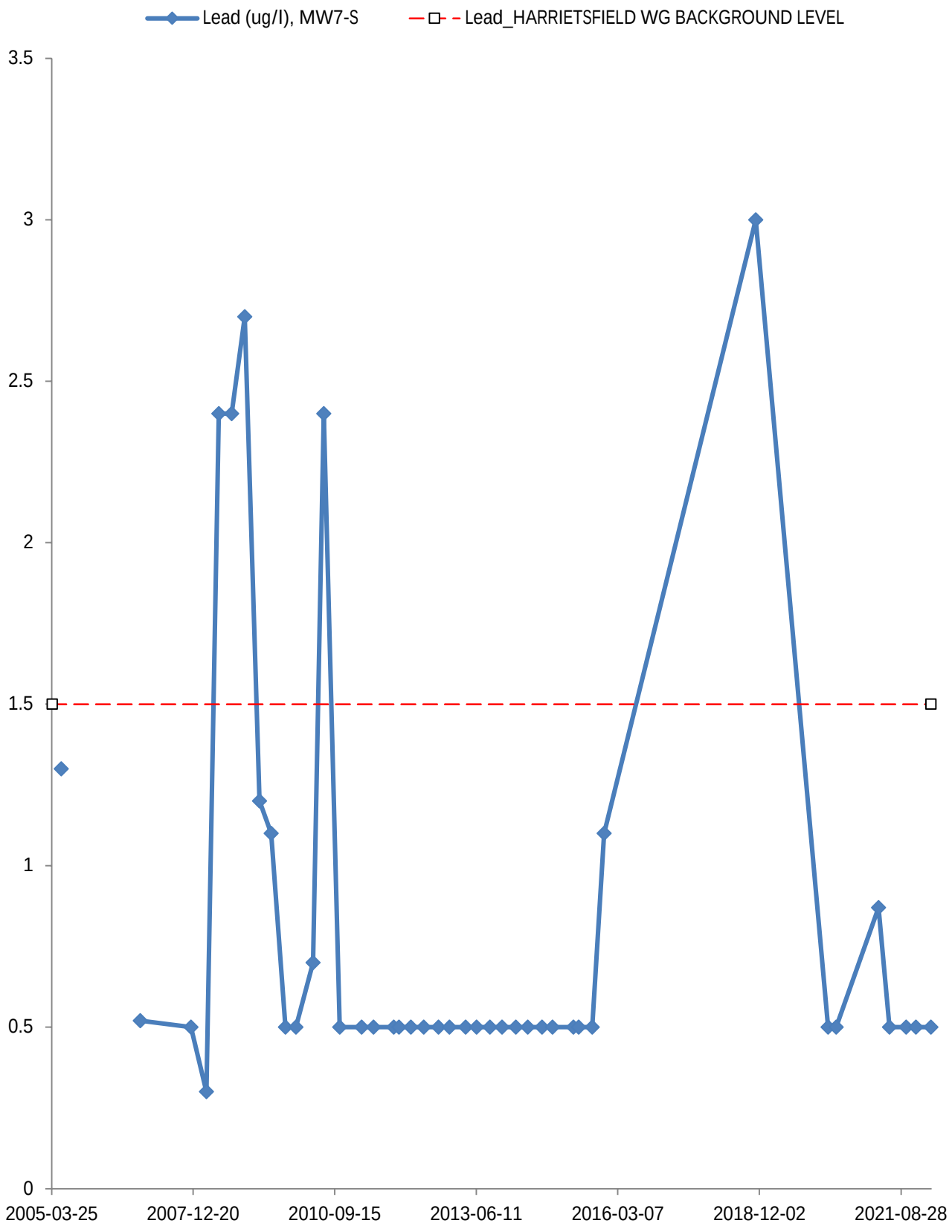
MW7-S-Hardness (as CaCO3)



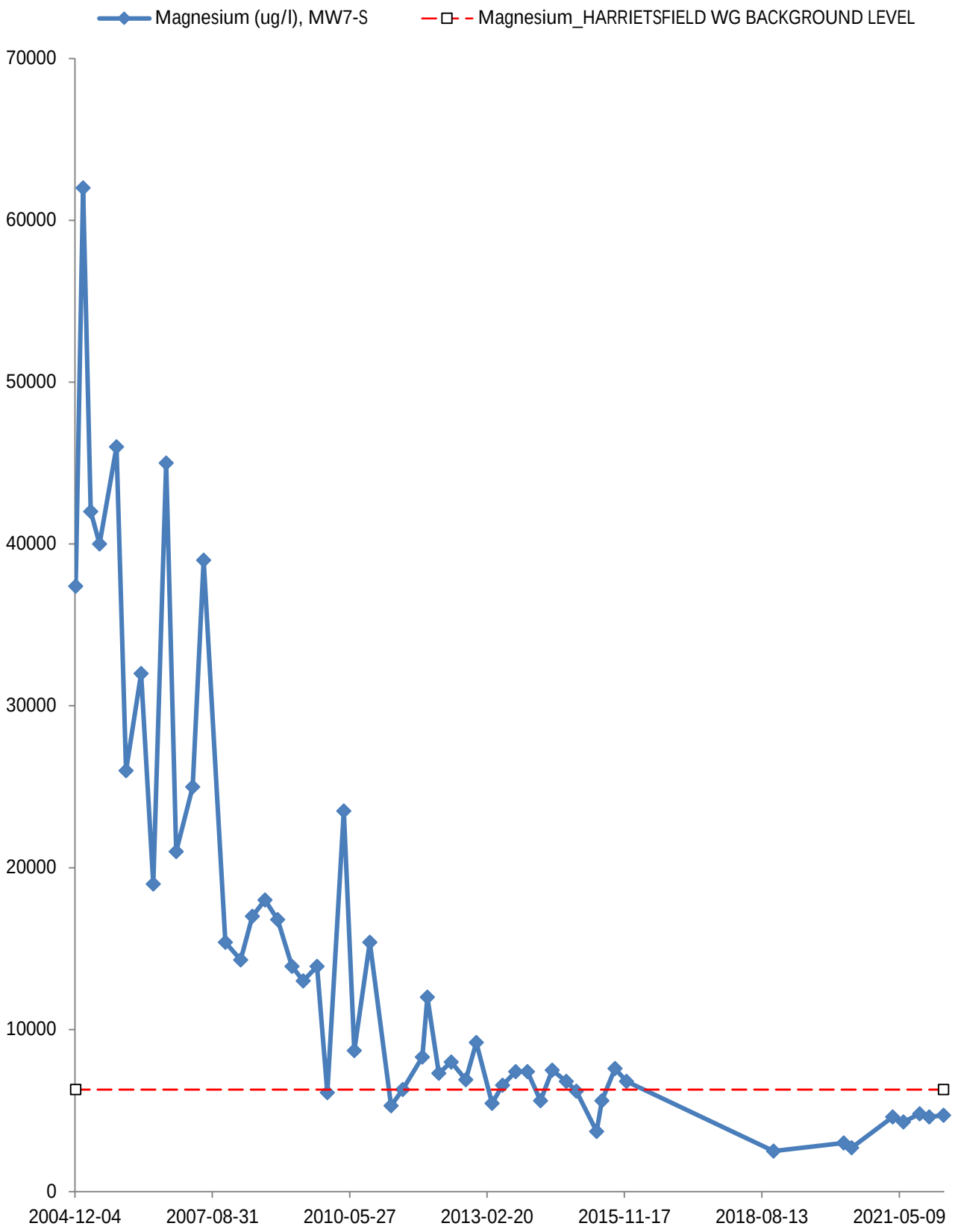
MW7-S-Iron


Iron (ug/l), MW7-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
1600
1400
1200
1000
800
600
400
200
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

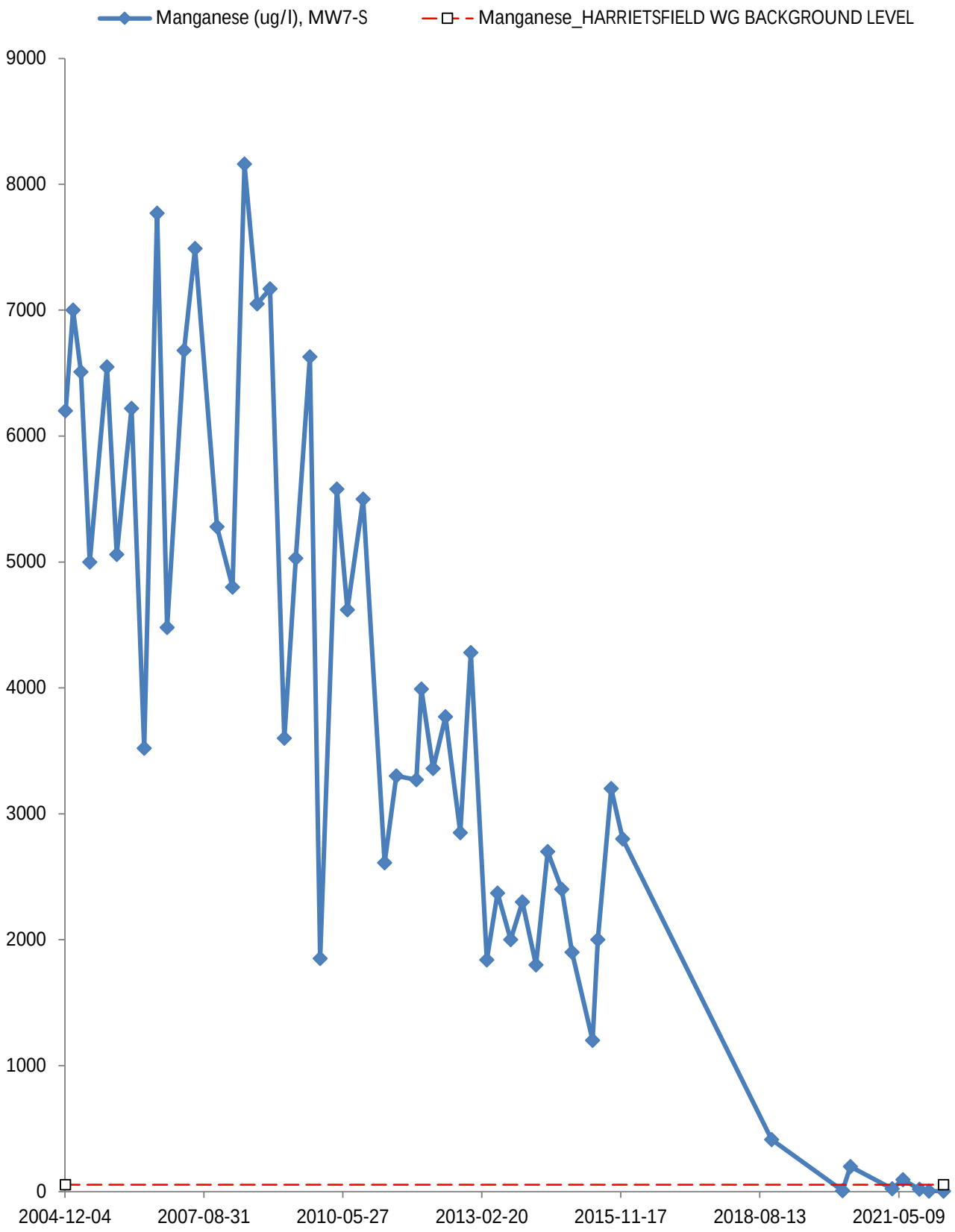
MW7-S-Lead


Lead (ug/l), MW7-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
3.5
3
2.5
2
1.5
1
0.5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

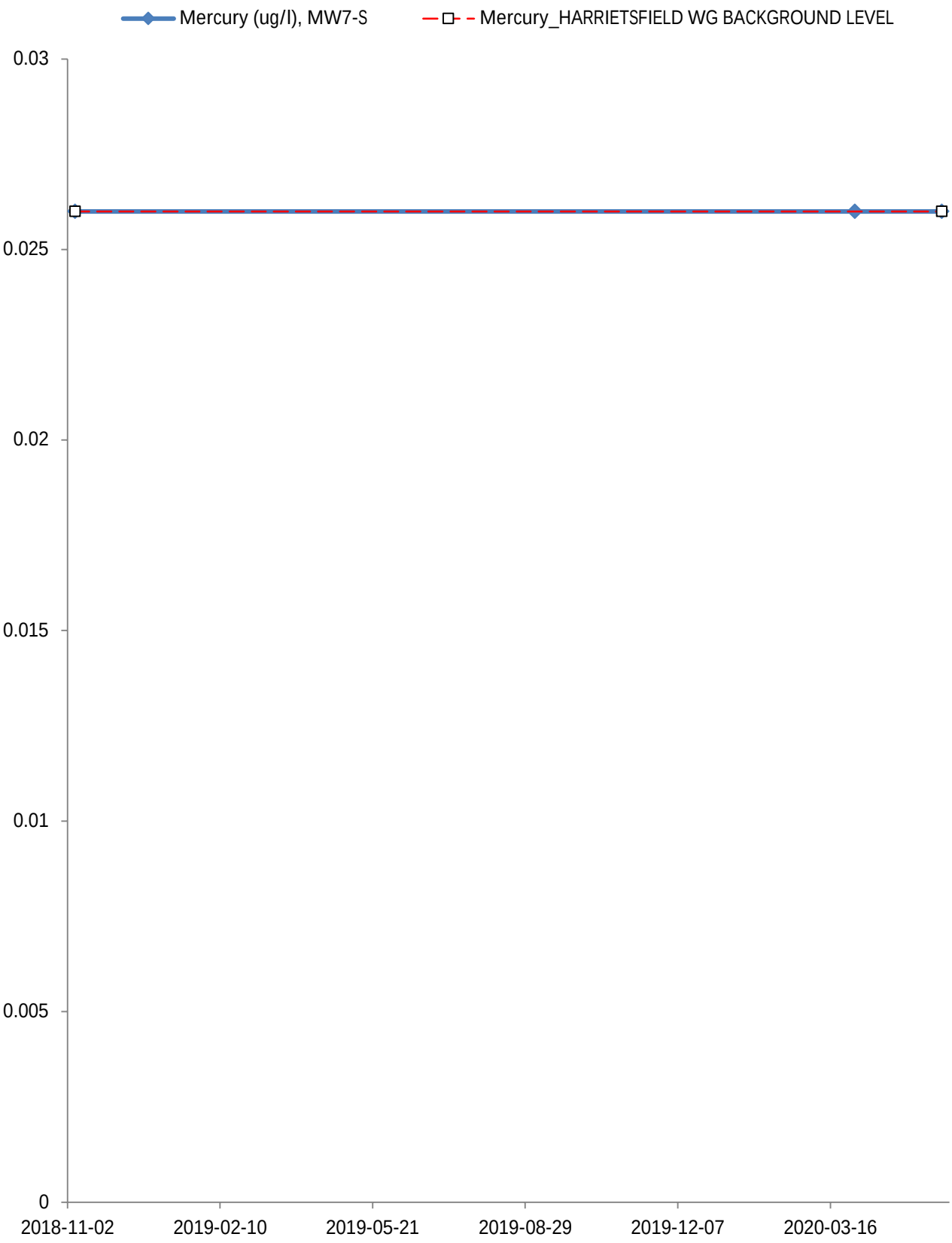
MW7-S-Magnesium



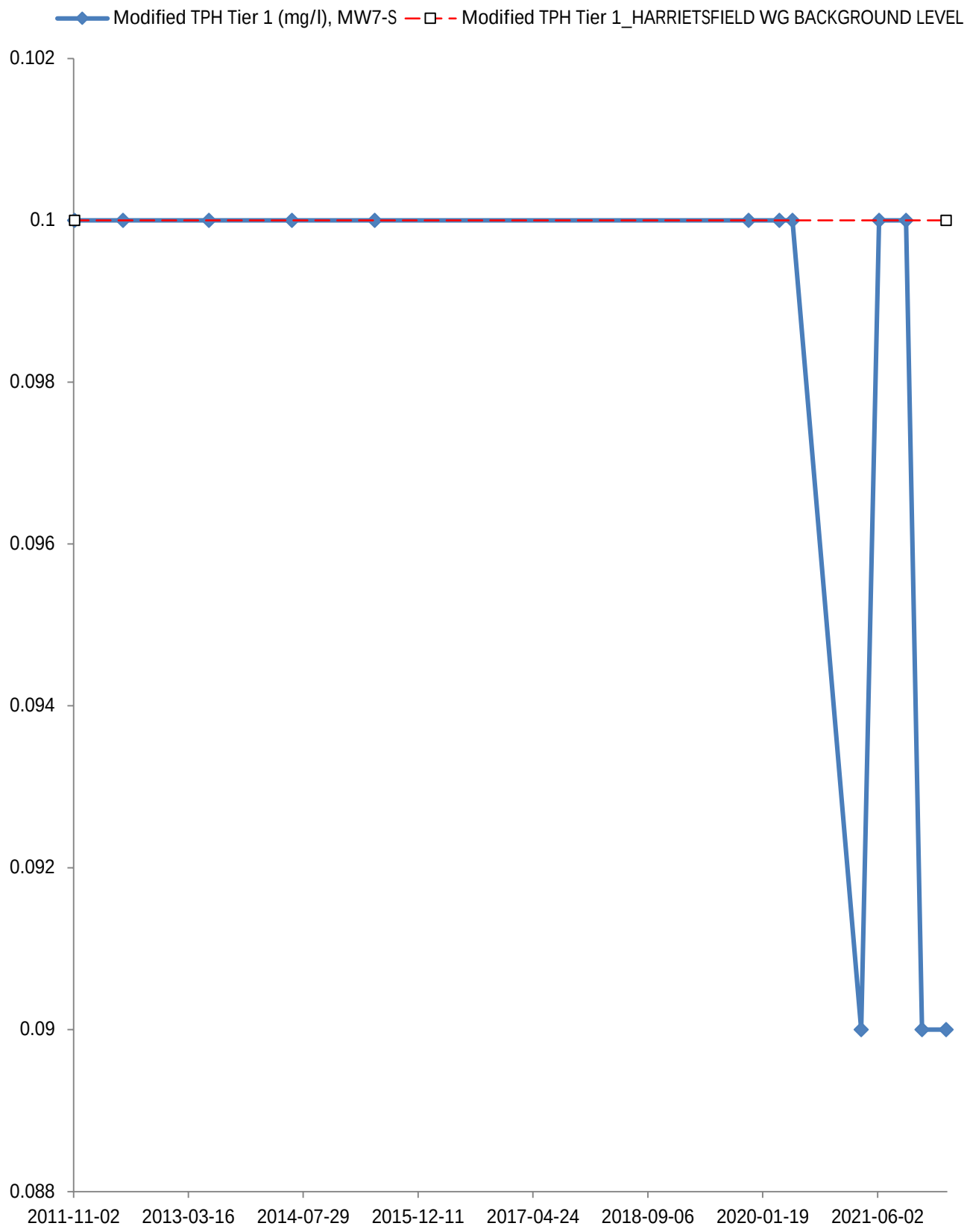
MW7-S-Manganese



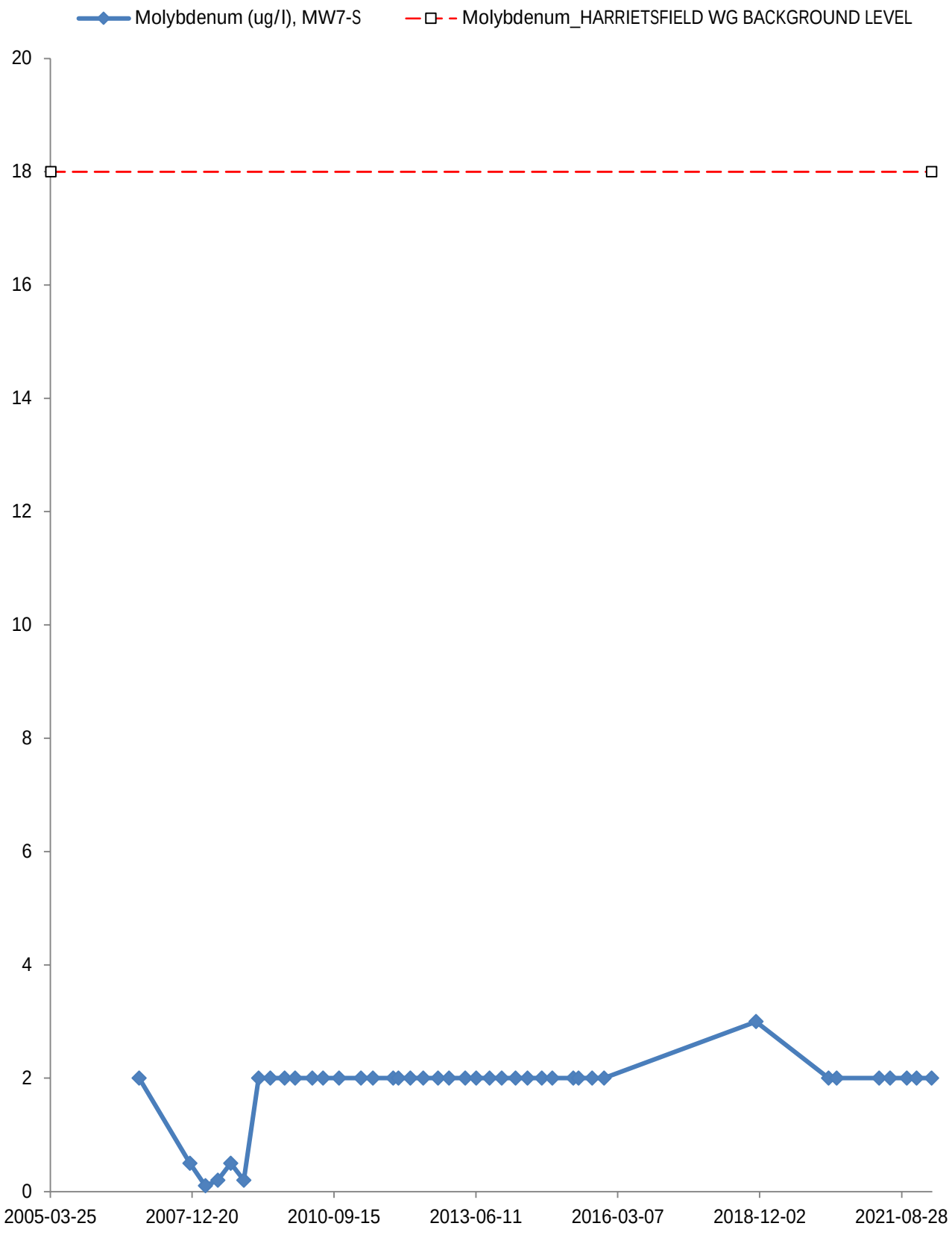
MW7-S-Mercury

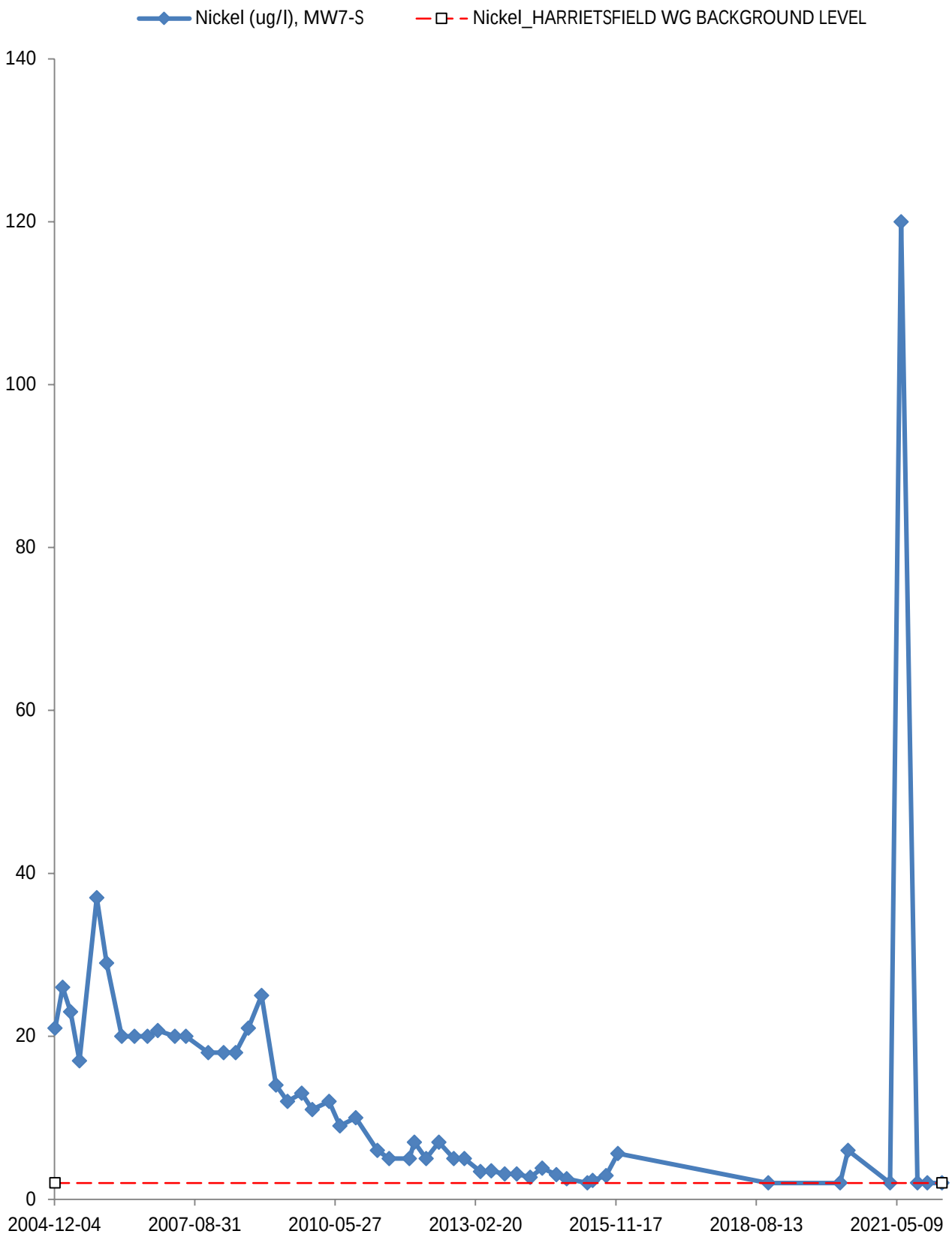


MW7-S-Modified TPH Tier 1

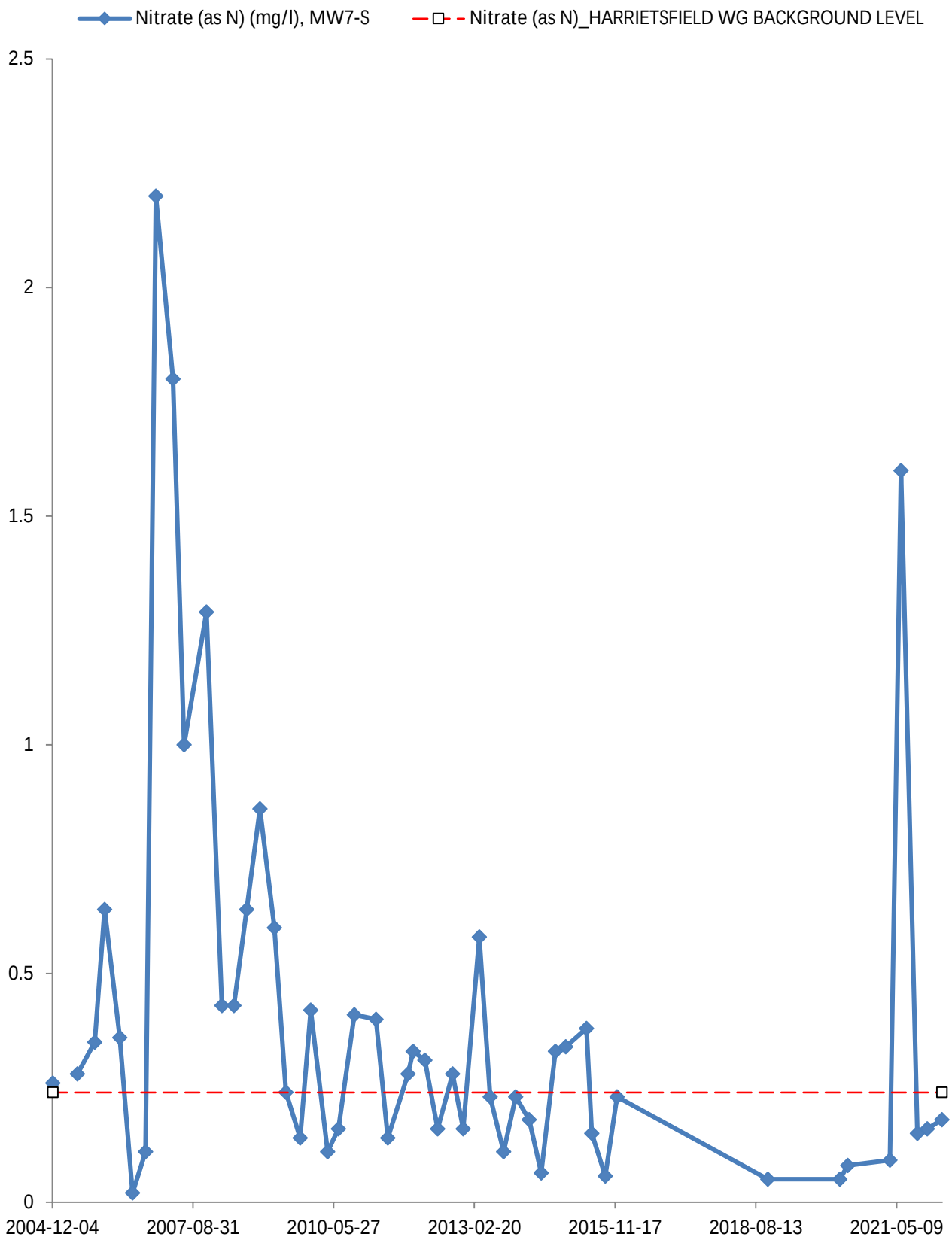


MW7-S-Molybdenum

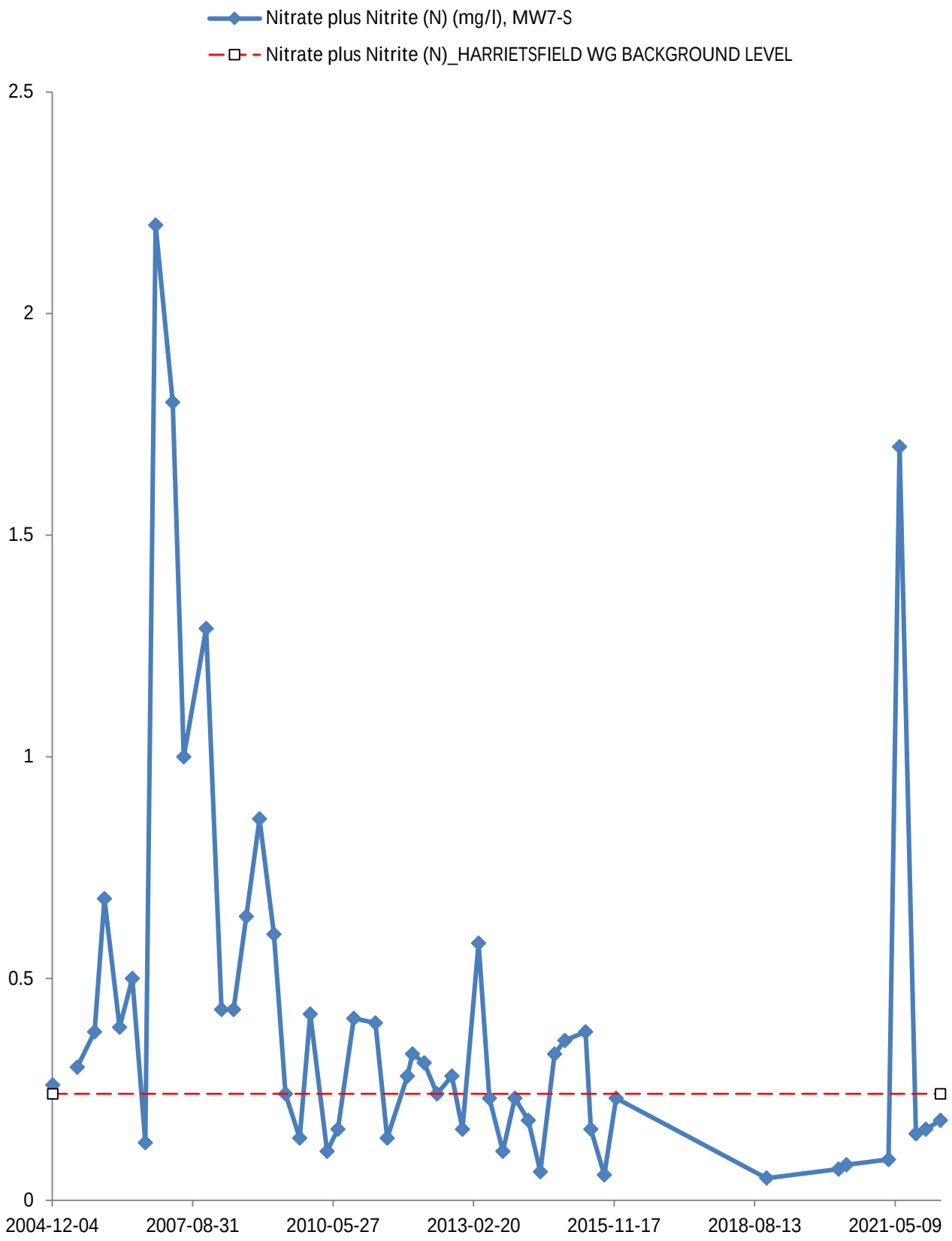



Nickel (ug/l), MW7-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
140
120
100
80
60
40
20
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

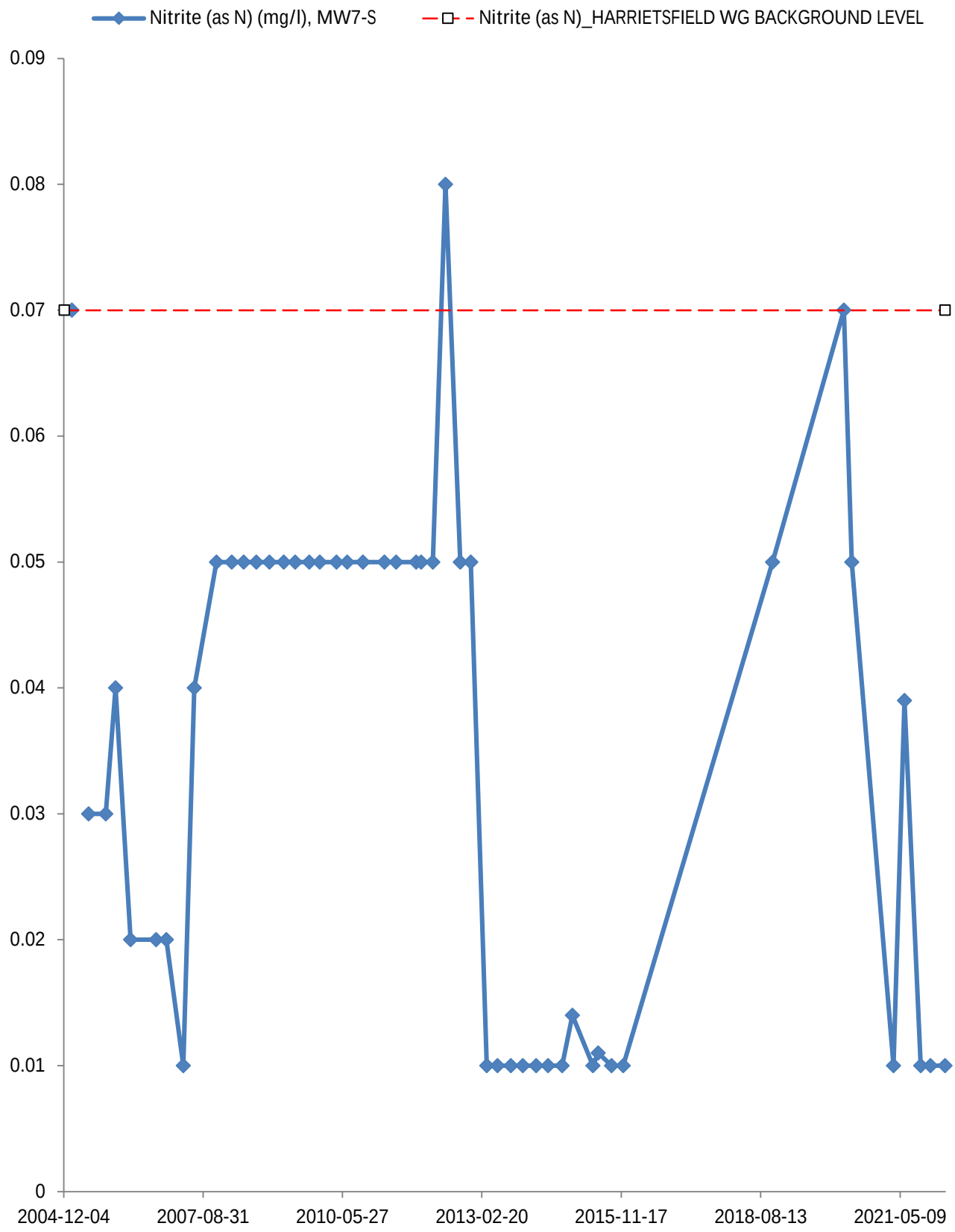
MW7-S-Nitrate (as N)



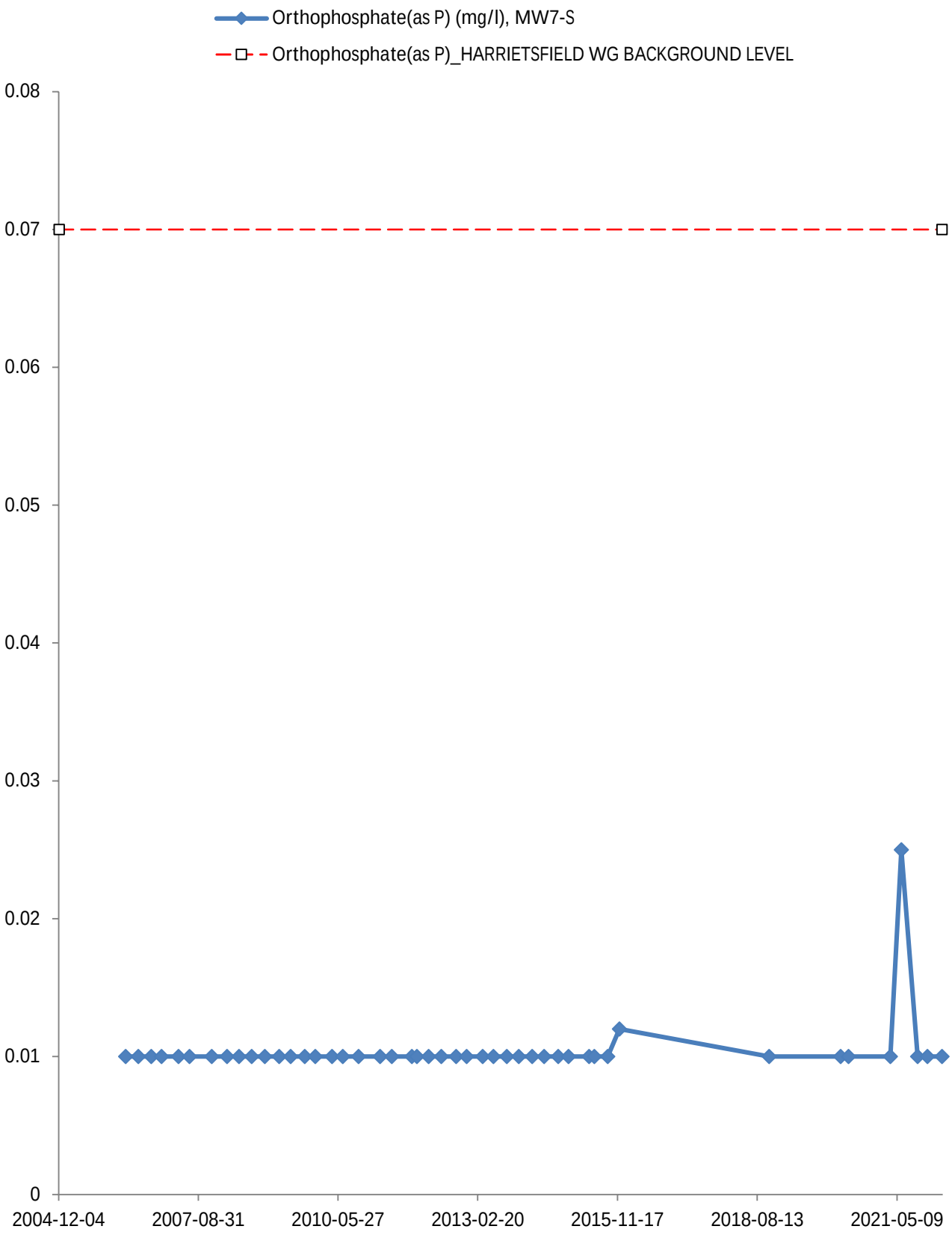
MW7-S-Nitrate plus Nitrite (N)



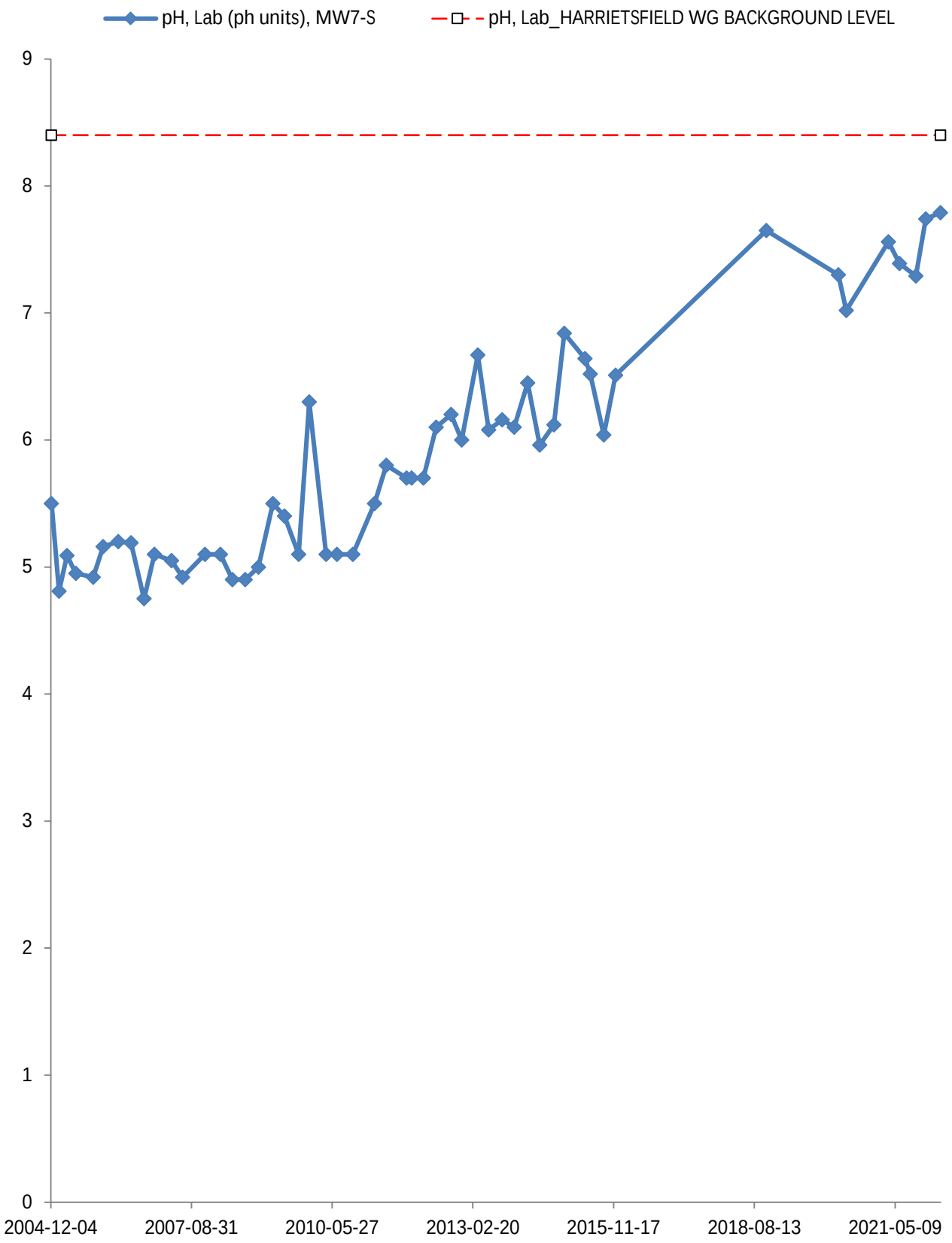
MW7-S-Nitrite (as N)



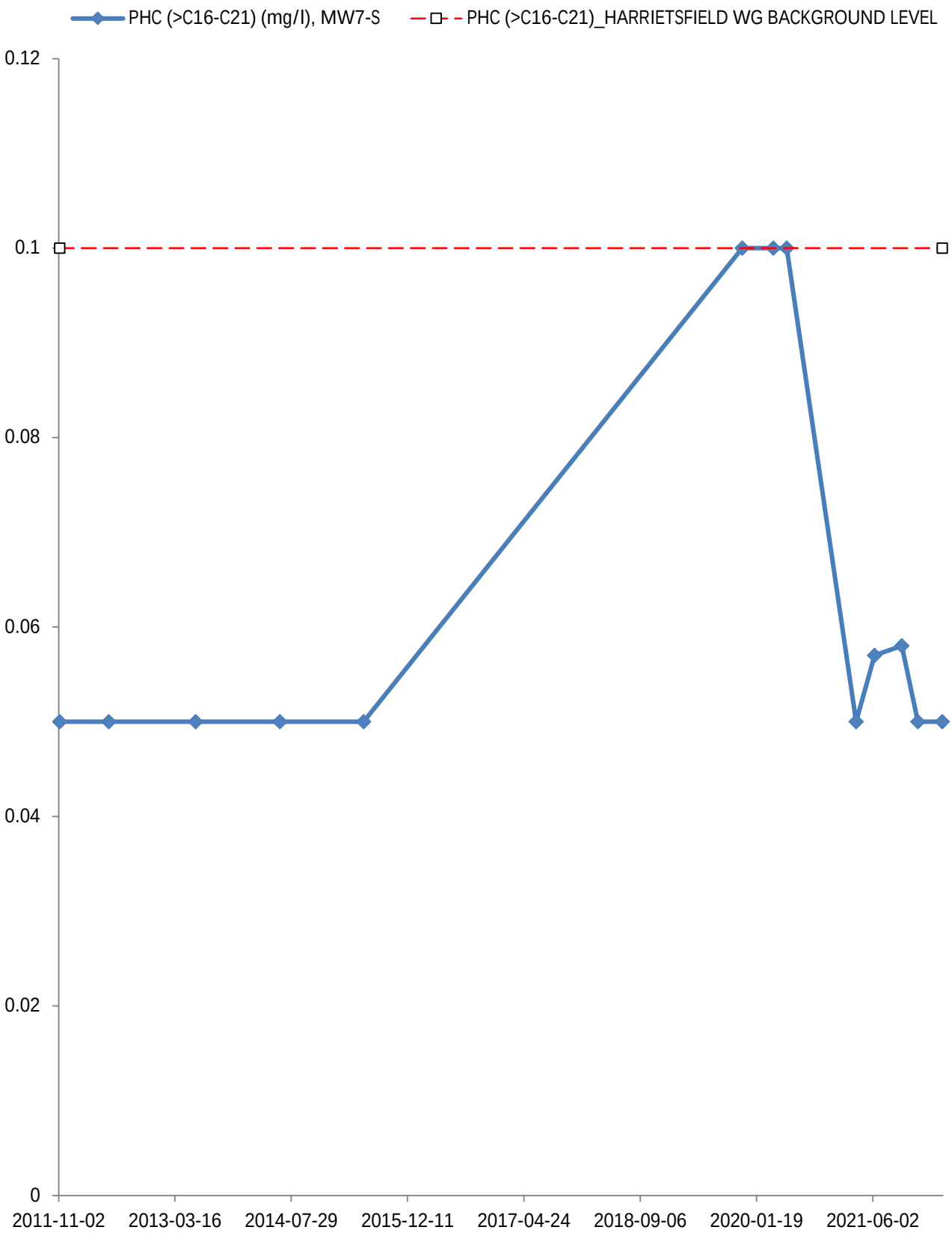
MW7-S-Orthophosphate(as P)



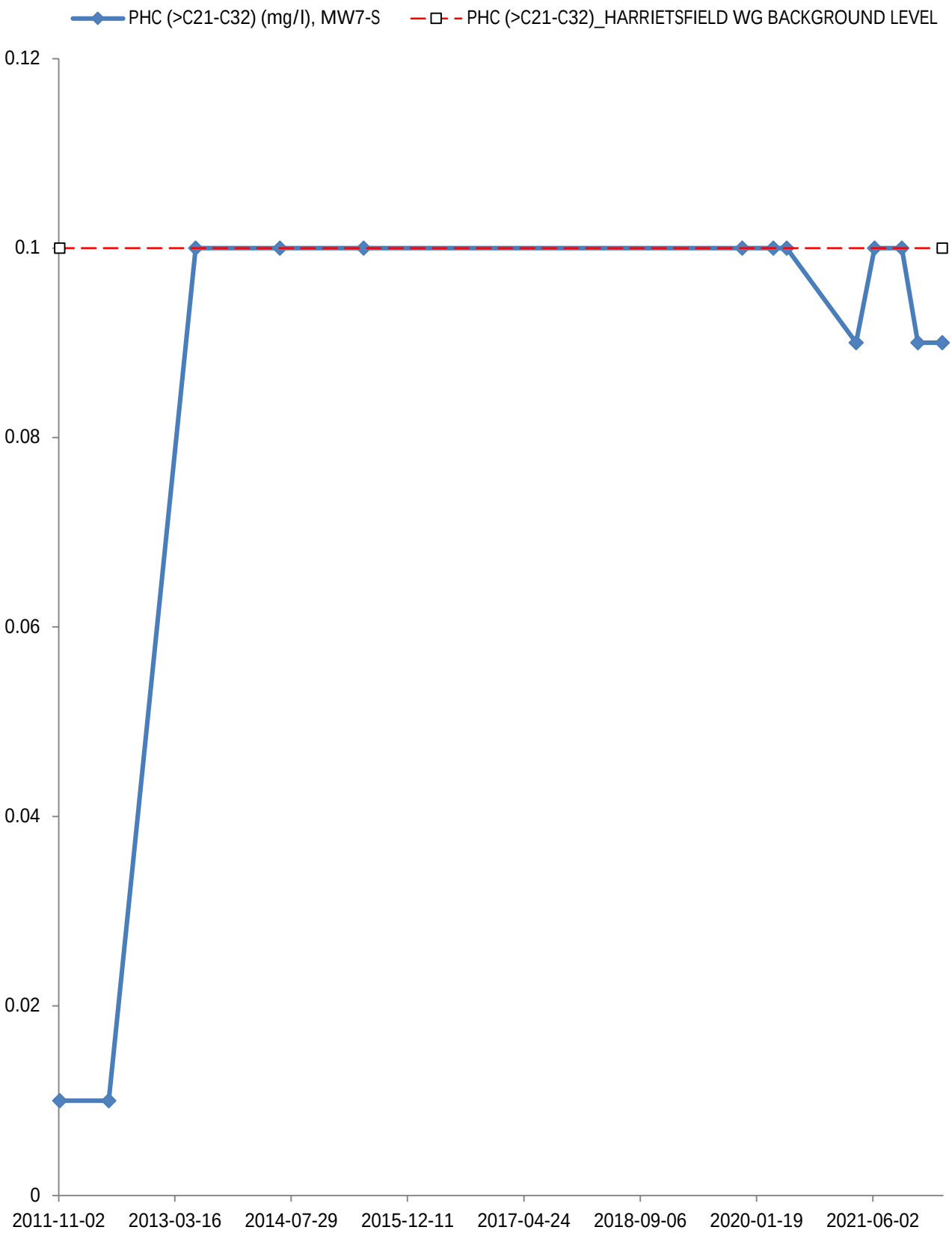
MW7-S-pH, Lab


pH, Lab (ph units), MW7-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
9
8
7
6
5
4
3
2
1
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

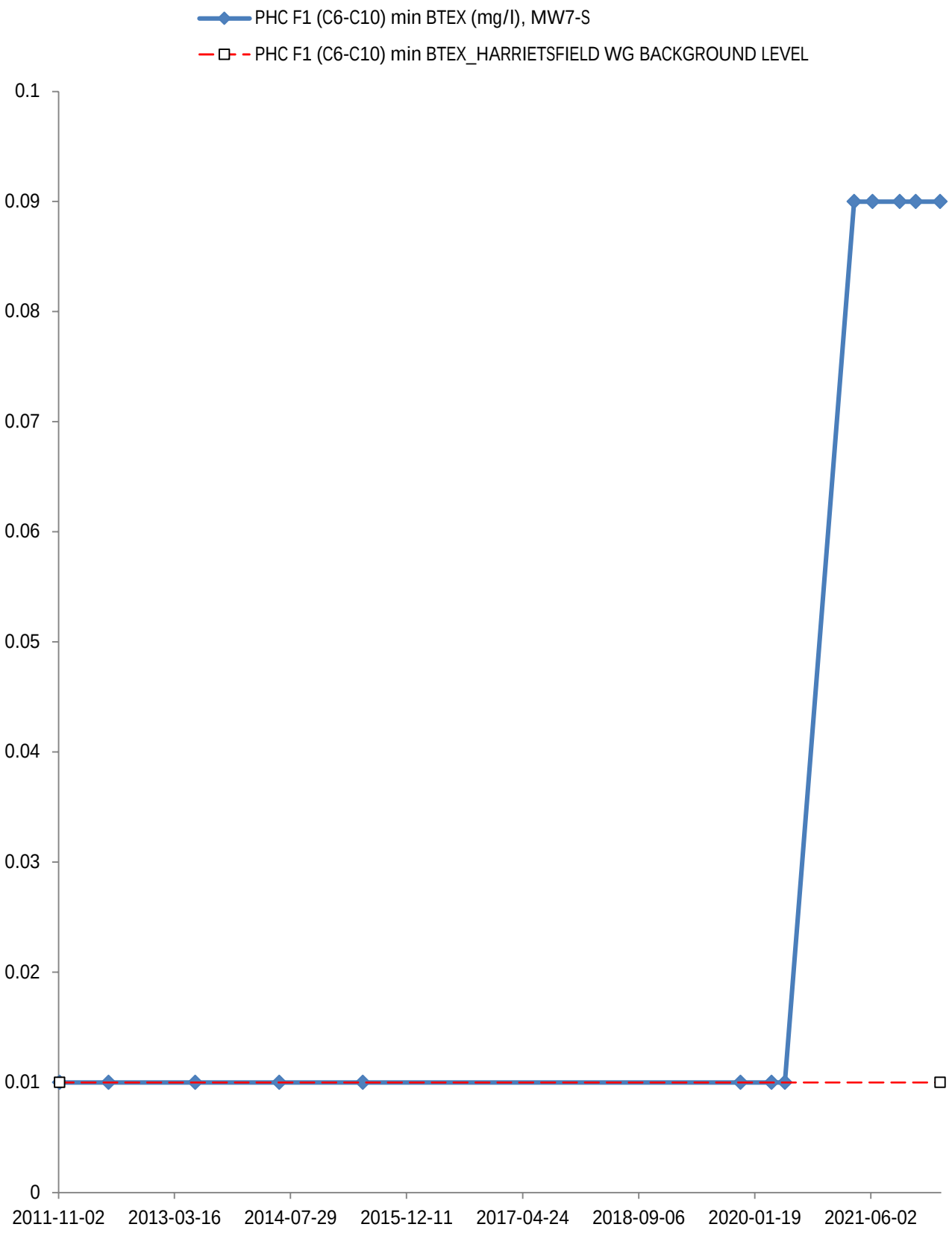
MW7-S-PHC (>C16-C21)



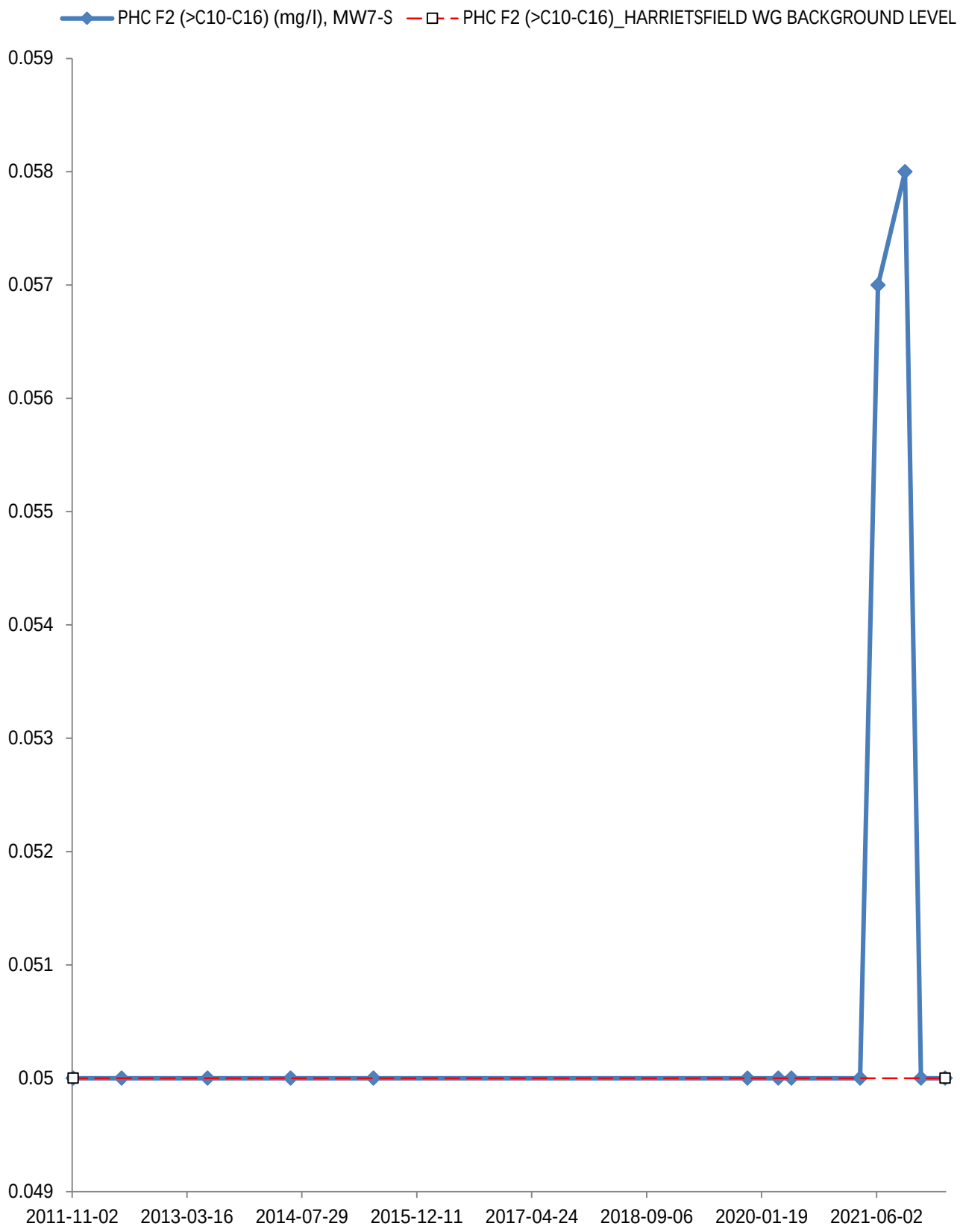
MW7-S-PHC (>C21-C32)



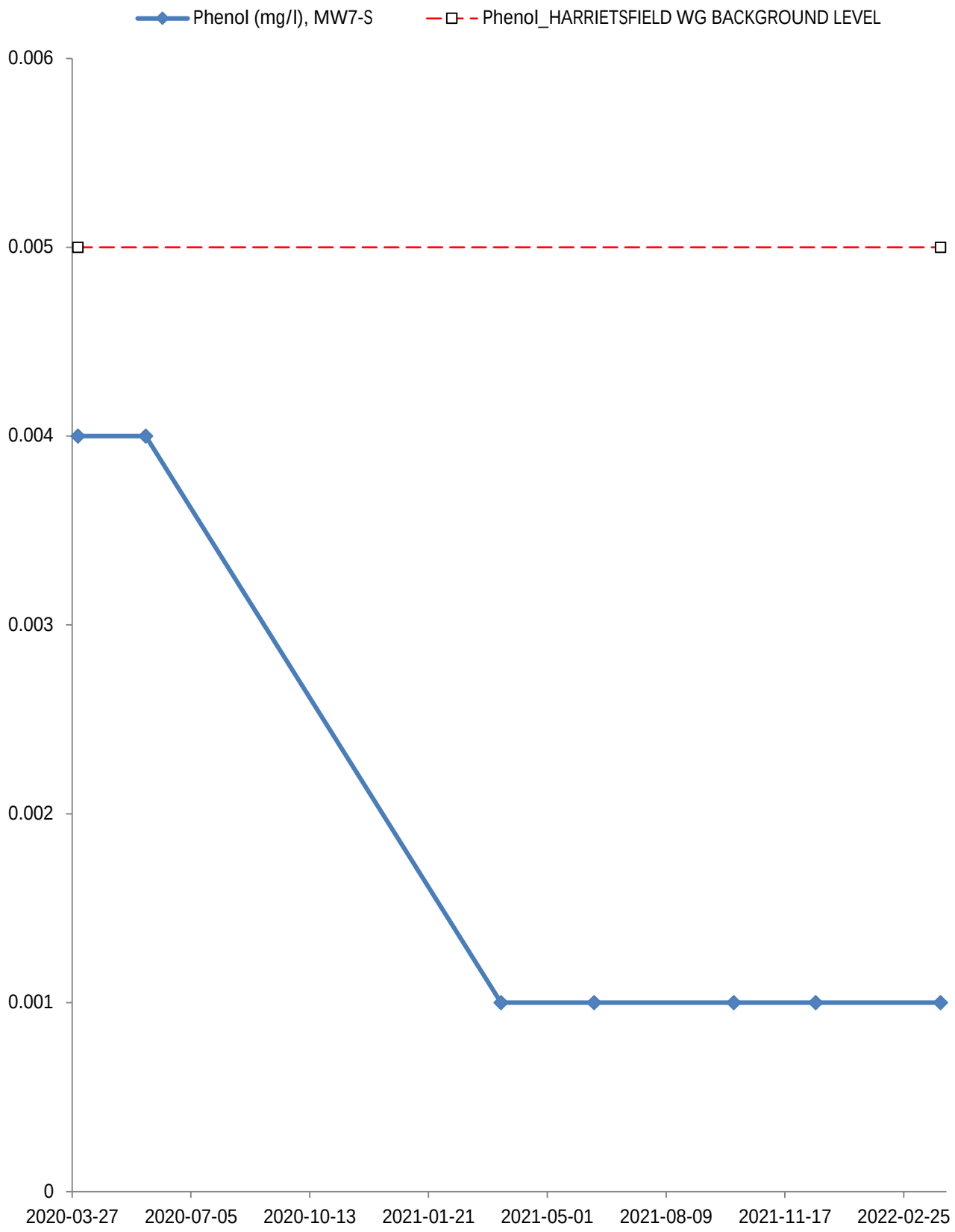
MW7-S-PHC F1 (C6-C10) min BTEX



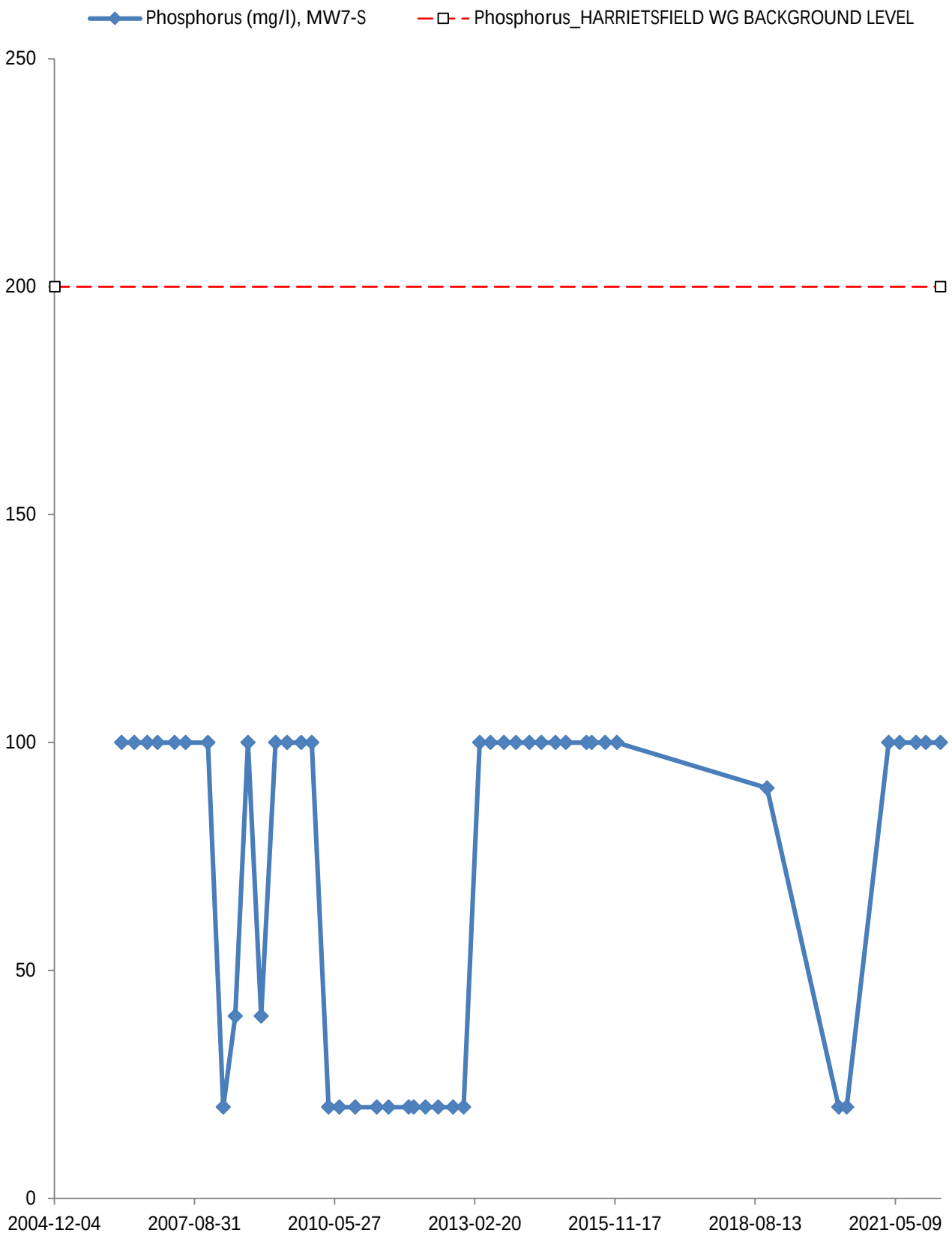
MW7-S-PHC F2 (>C10-C16)



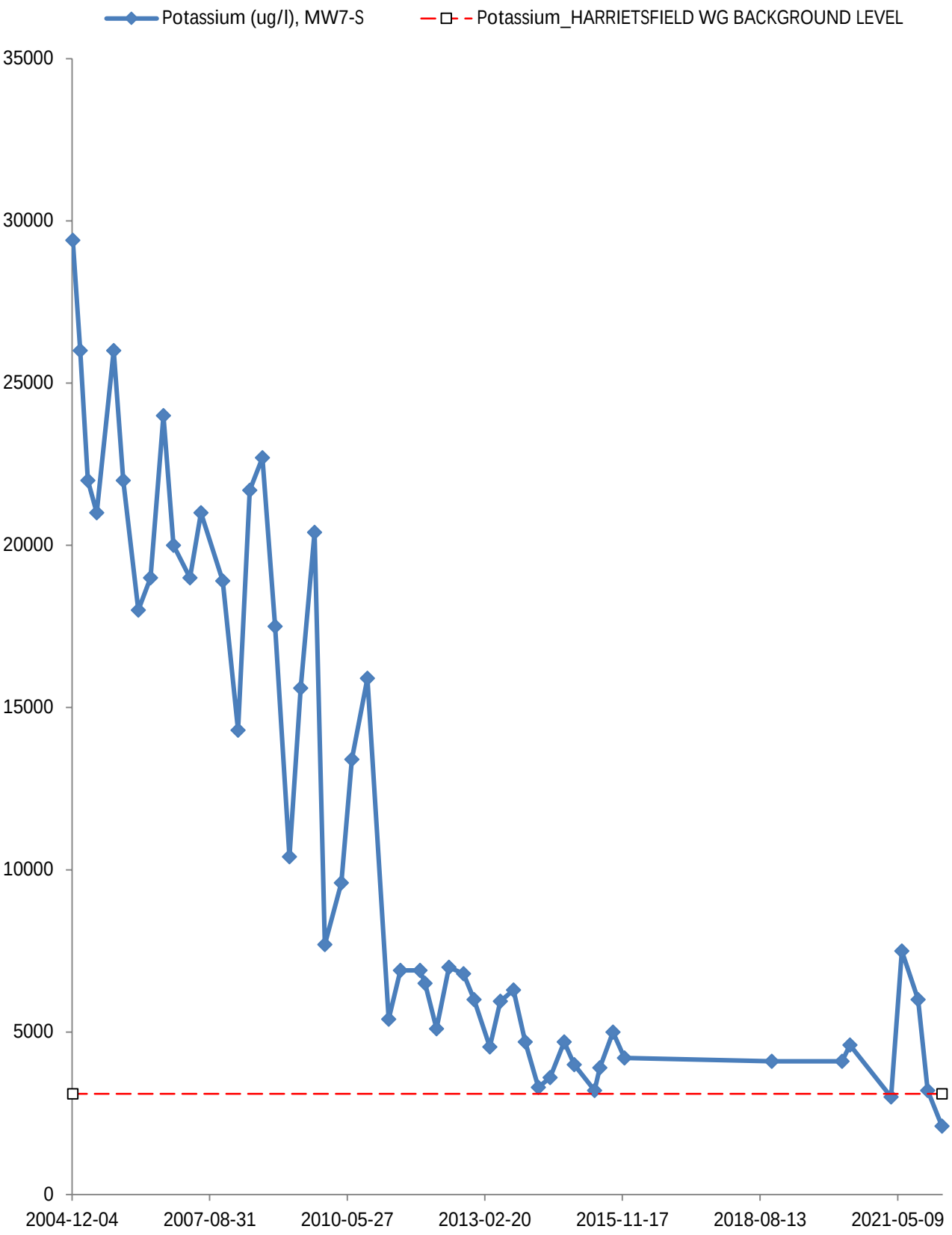
MW7-S-Phenol


Phenol (mg/l), MW7-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-03-27
2020-07-05
2020-10-13
2021-01-21
2021-05-01
2021-08-09
2021-11-17
2022-02-25

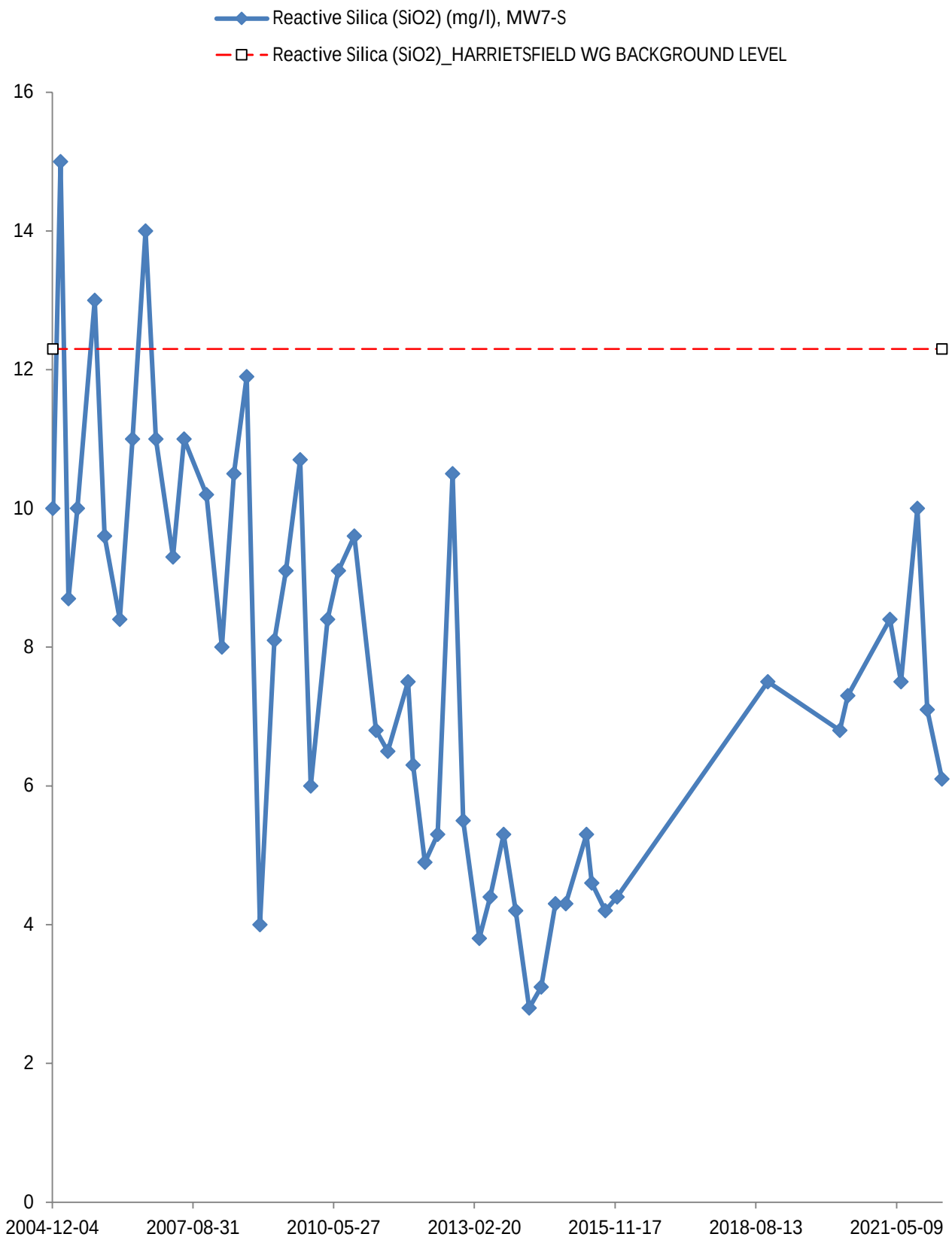
MW7-S-Phosphorus



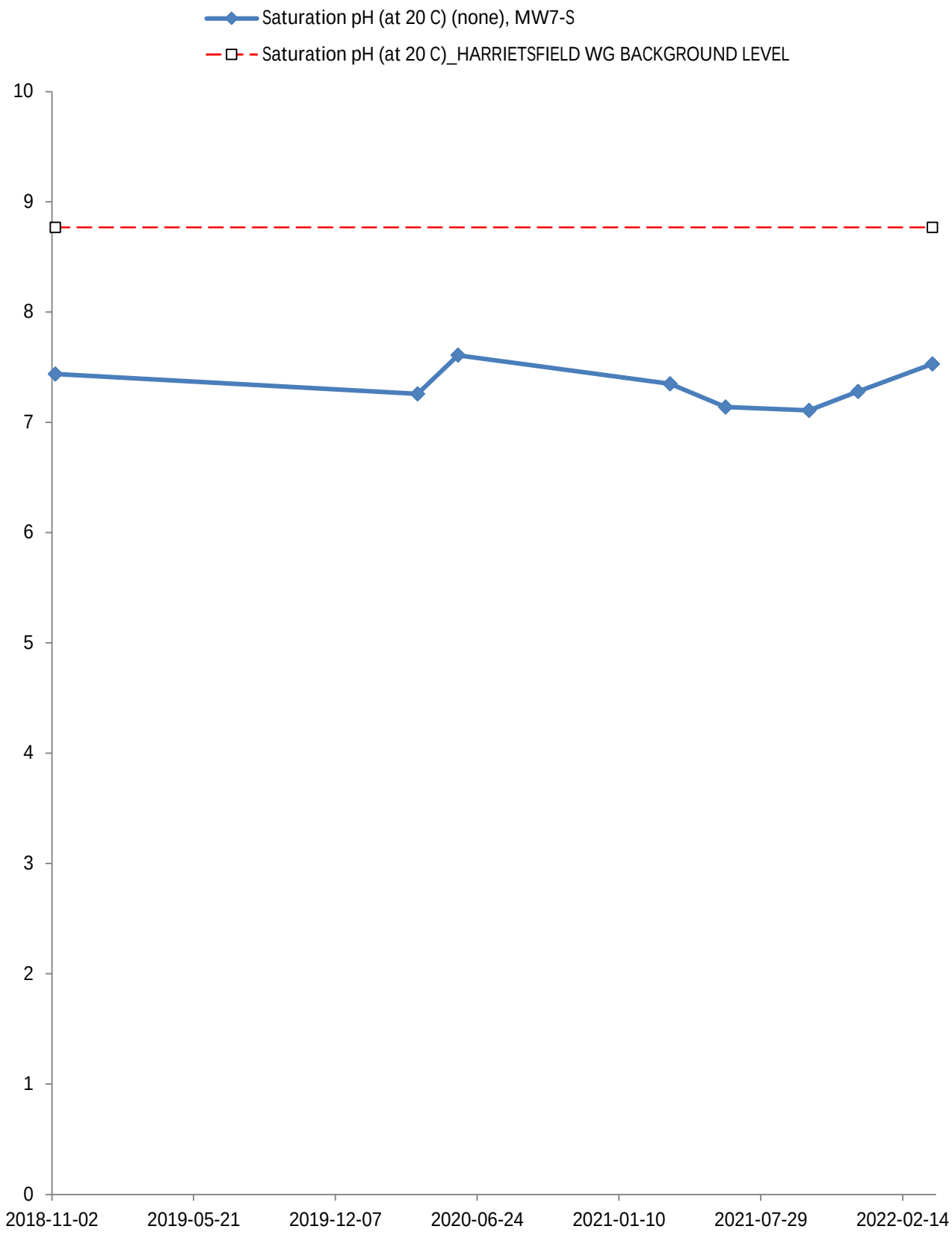
MW7-S-Potassium



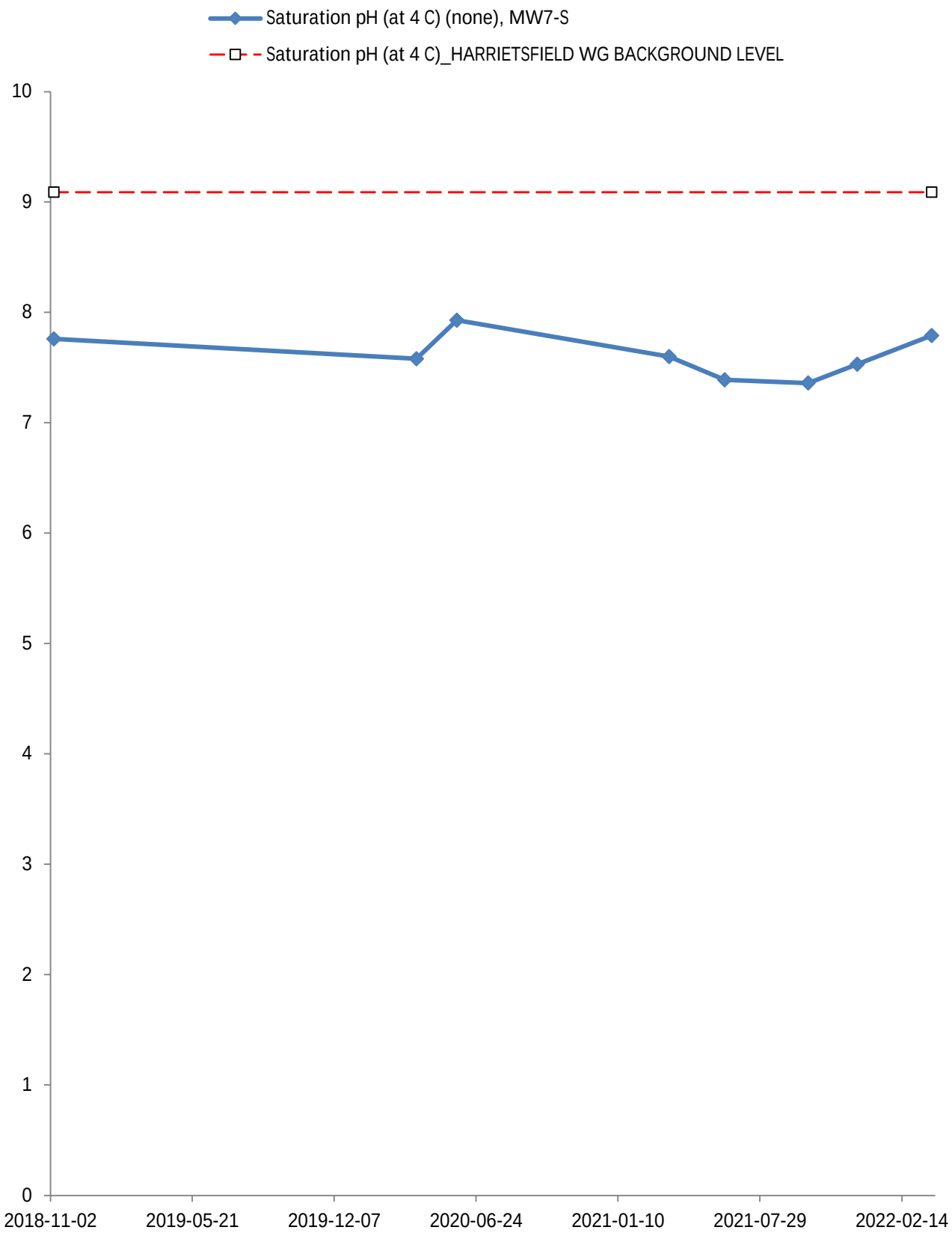
MW7-S-Reactive Silica (SiO2)



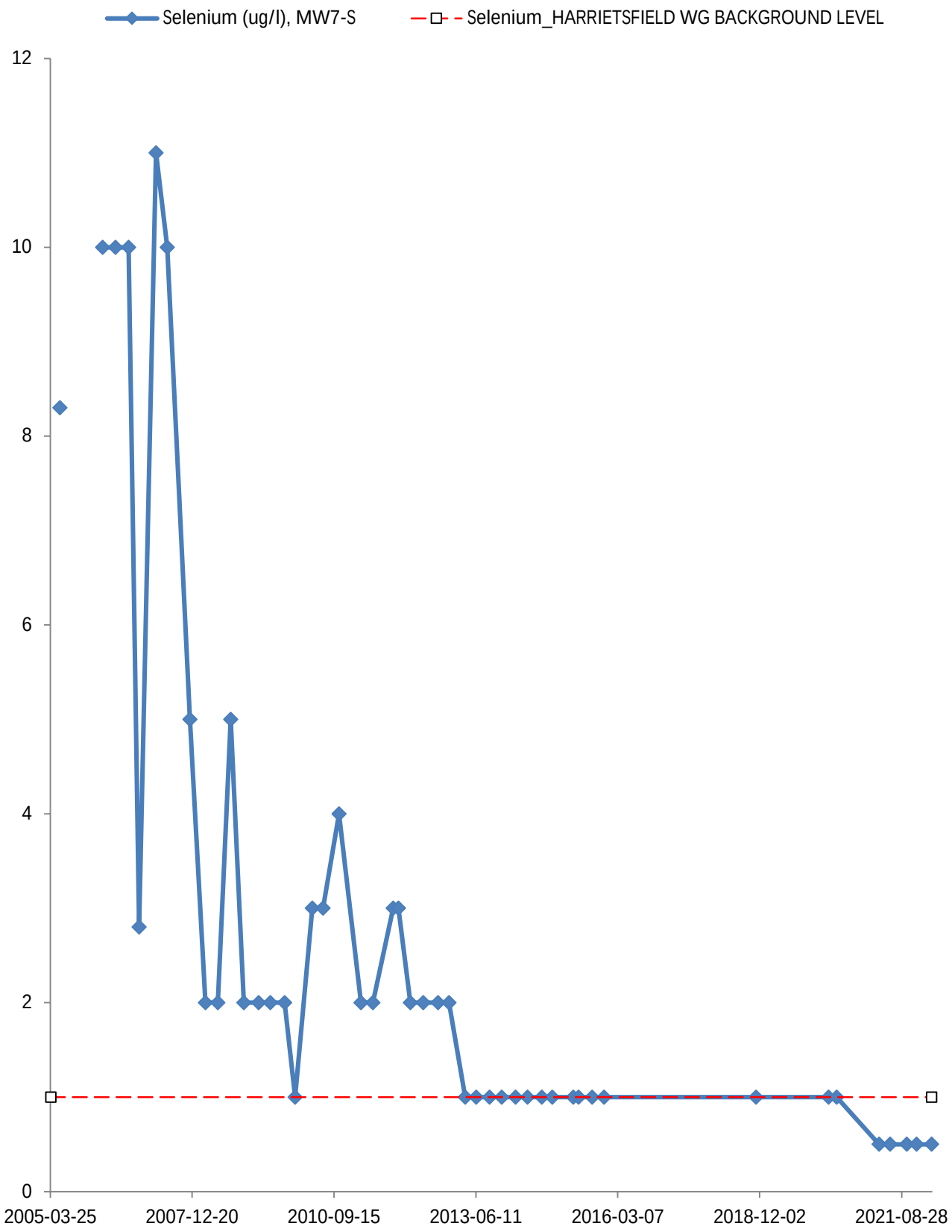
MW7-S-Saturation pH (at 20 C)



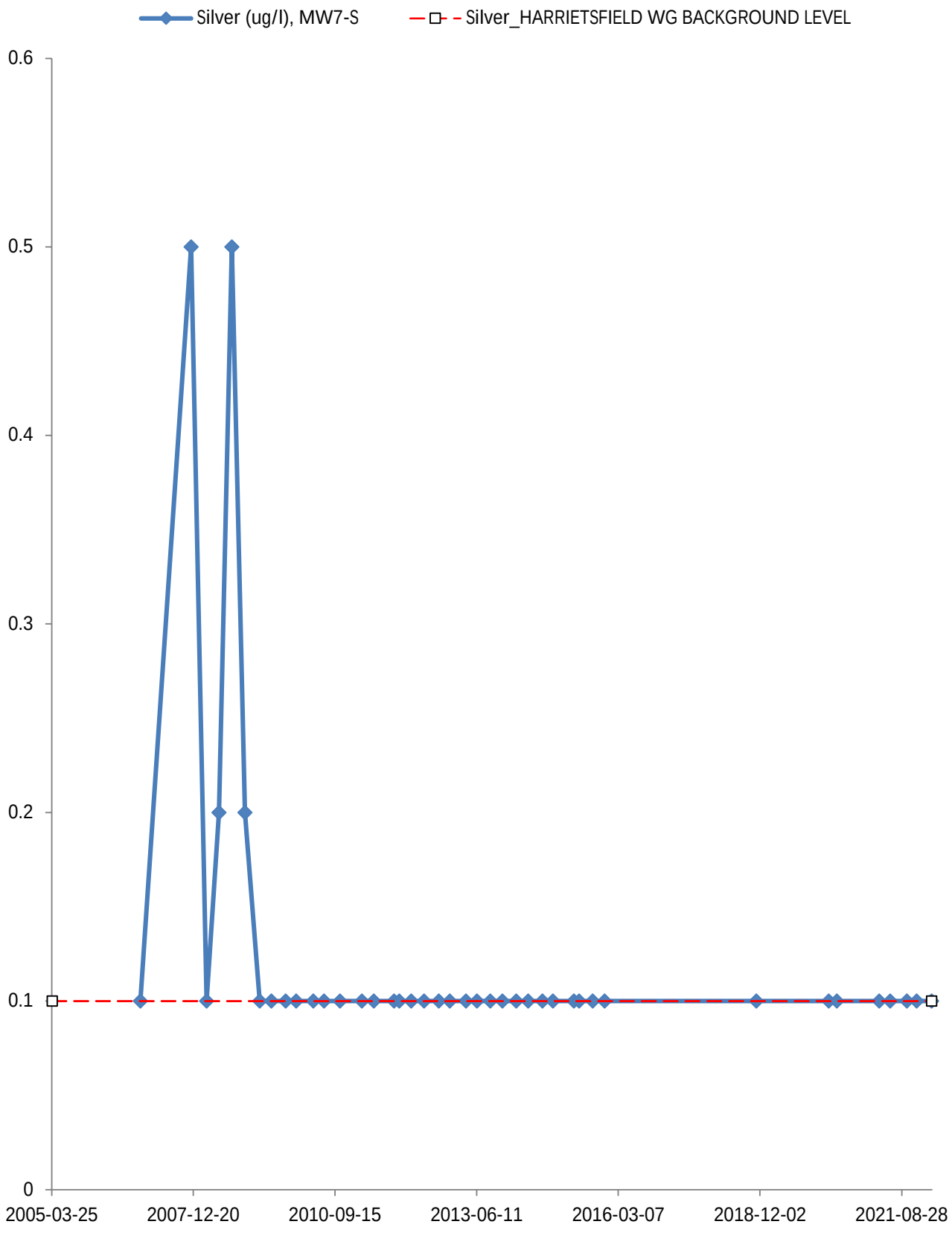
MW7-S-Saturation pH (at 4 C)

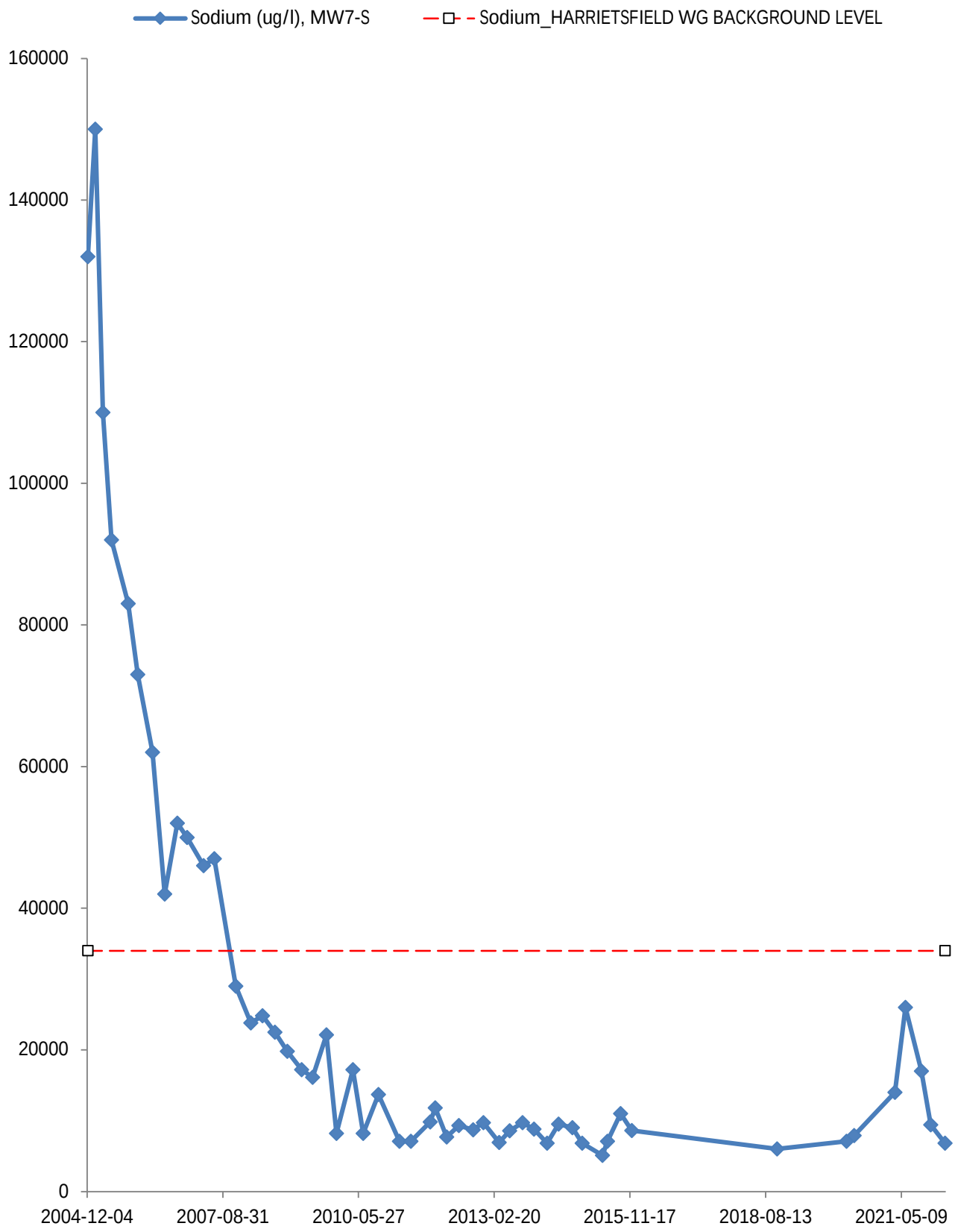


MW7-S-Selenium

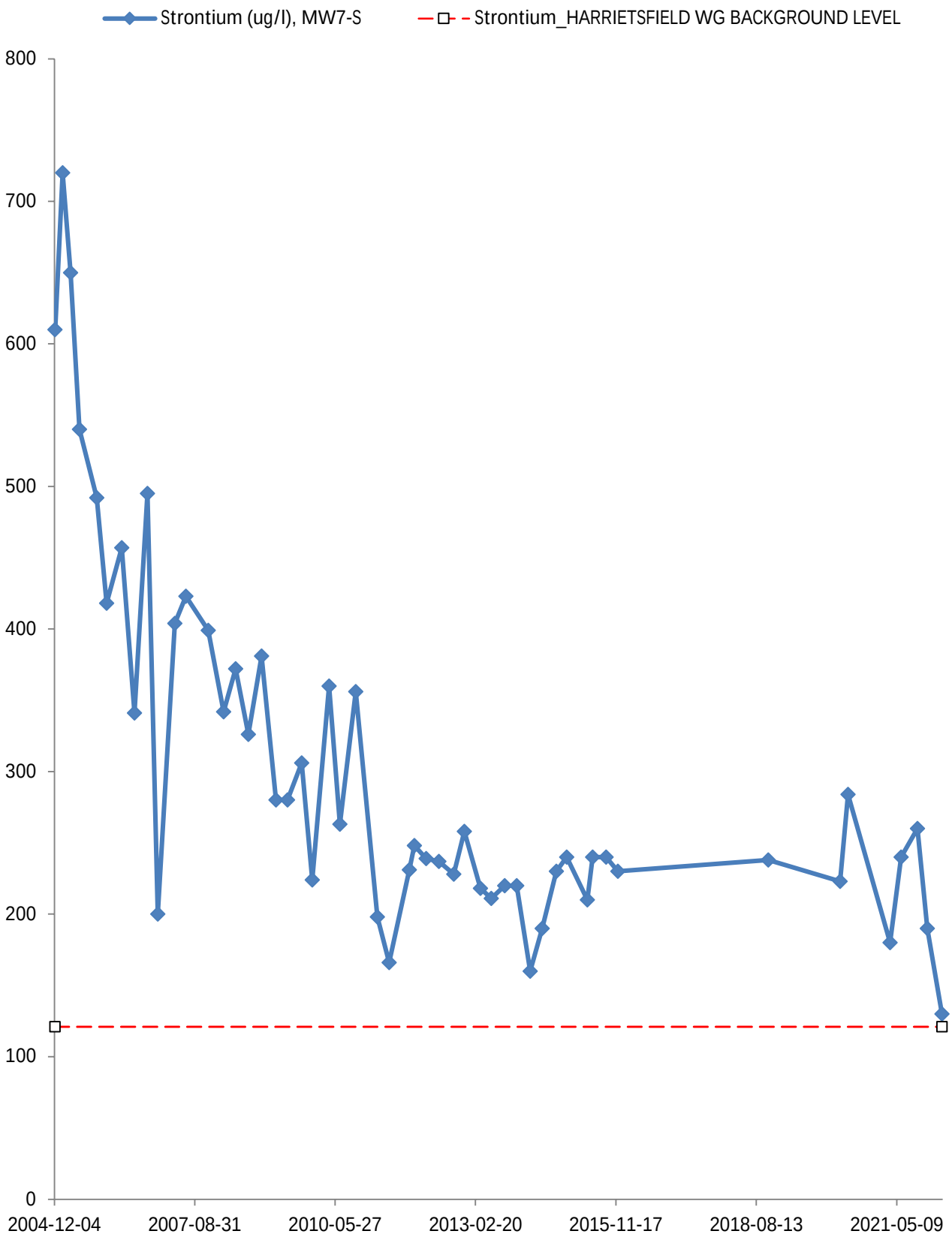


MW7-S-Silver

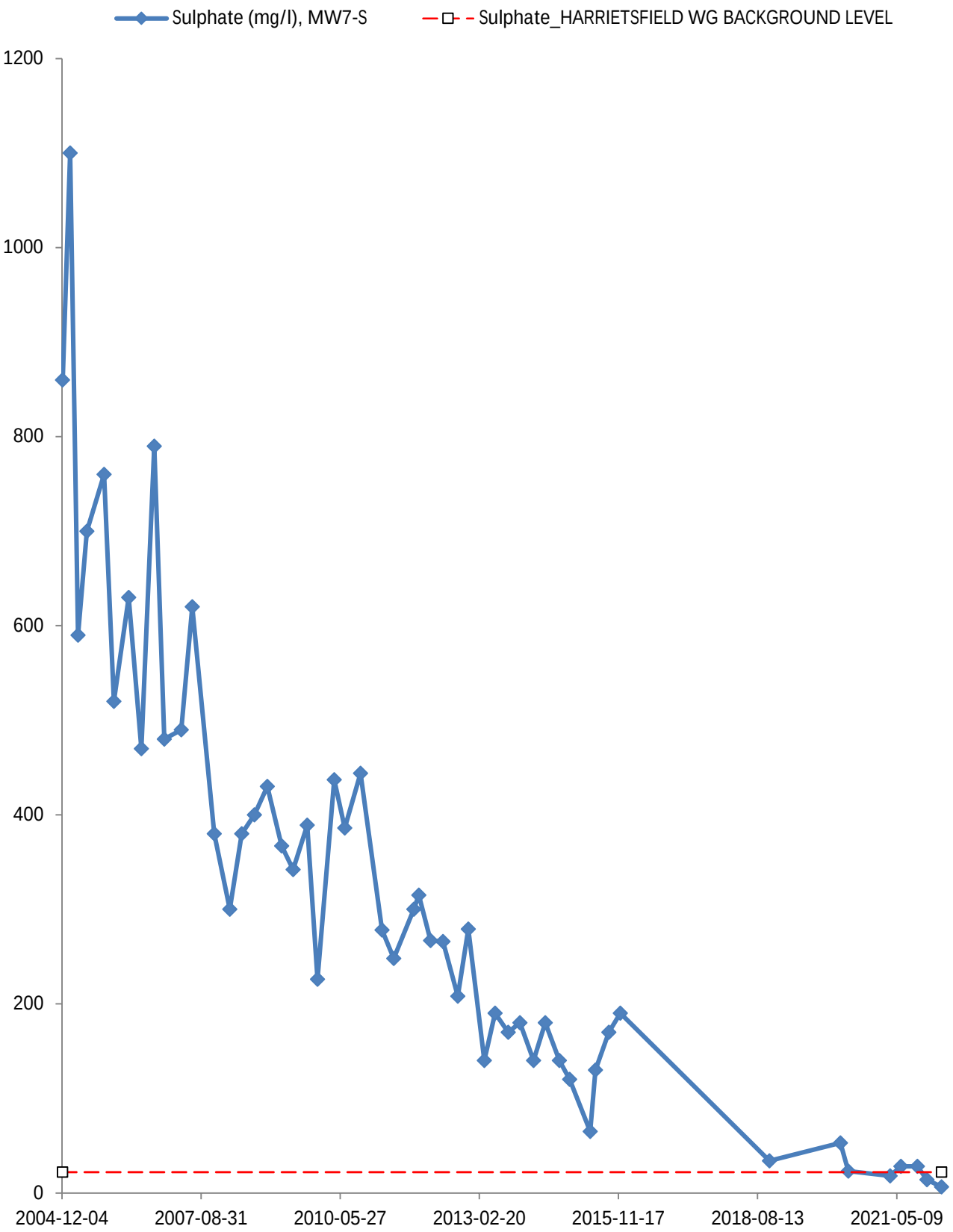

Silver (ug/l), MW7-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.6
0.5
0.4
0.3
0.2
0.1
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28


Sodium (ug/l), MW7-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
160000
140000
120000
100000
80000
60000
40000
20000
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

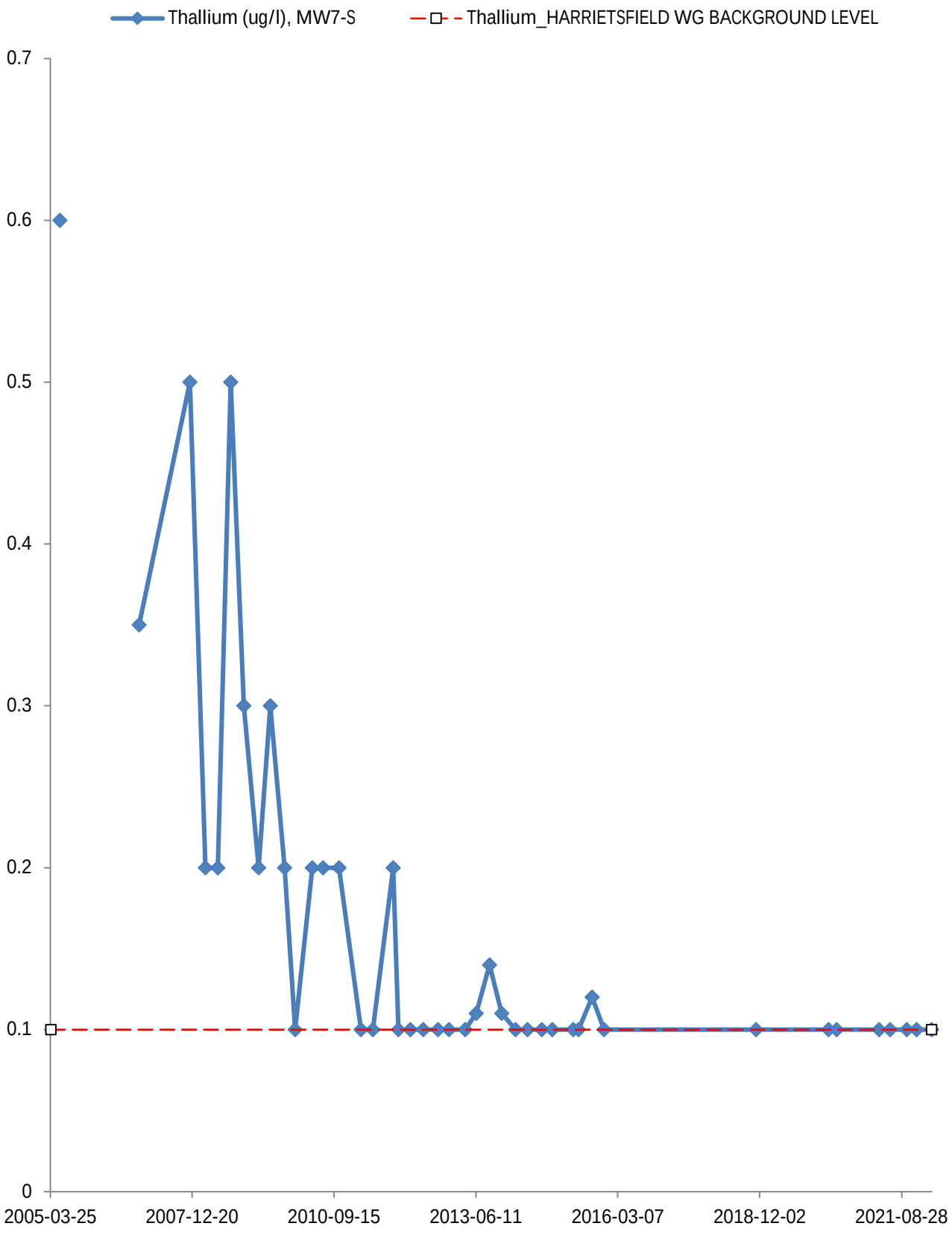
MW7-S-Strontium

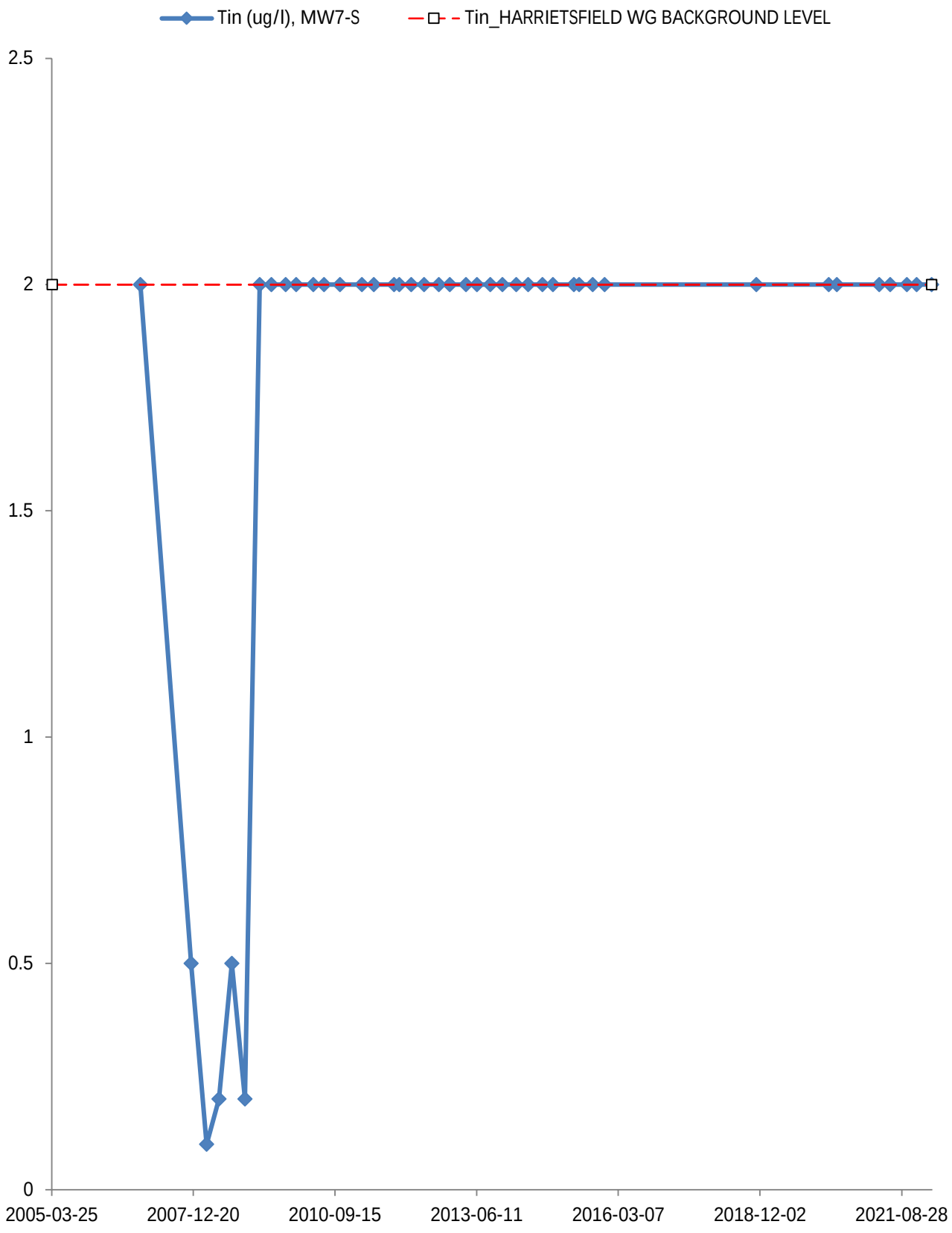


MW7-S-Sulphate

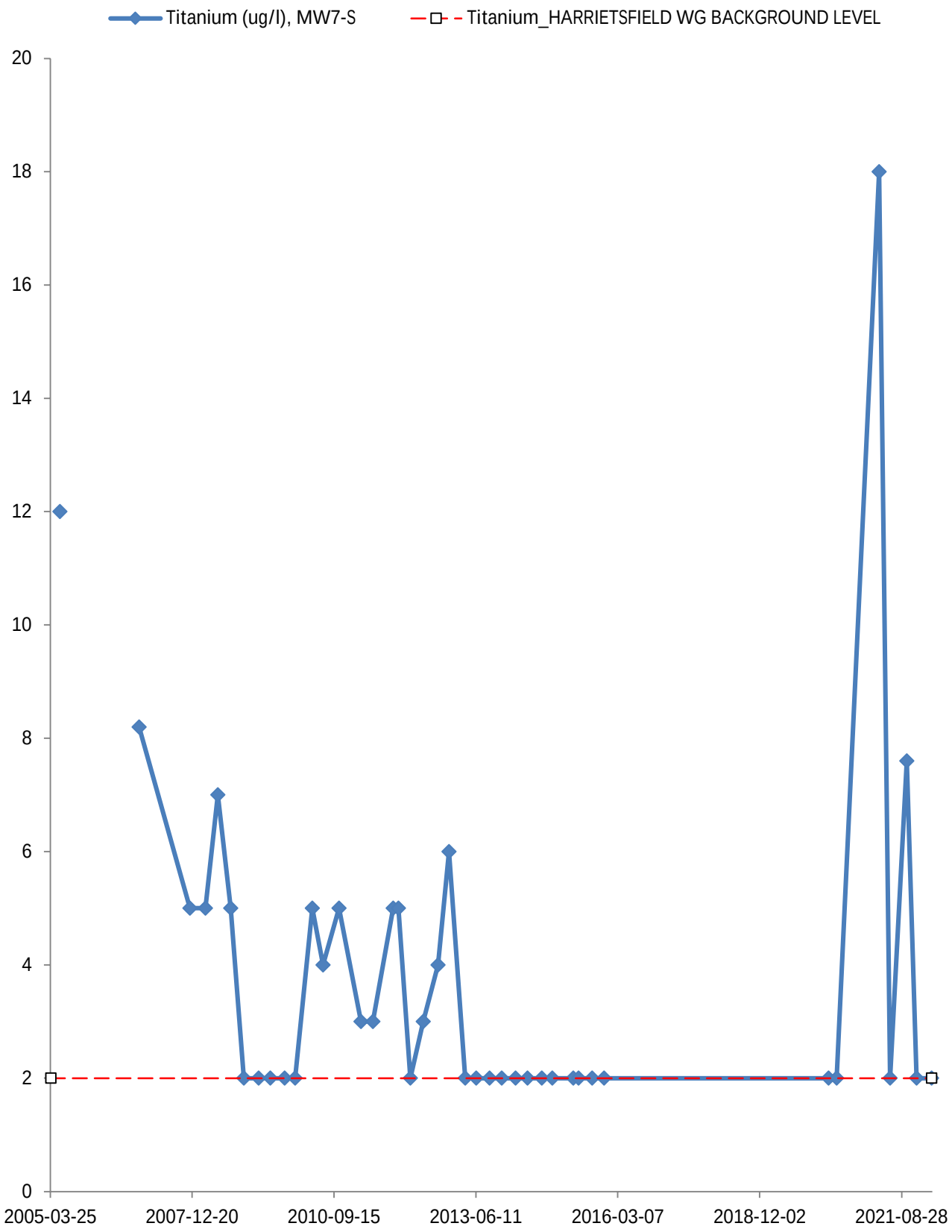


MW7-S-Thallium

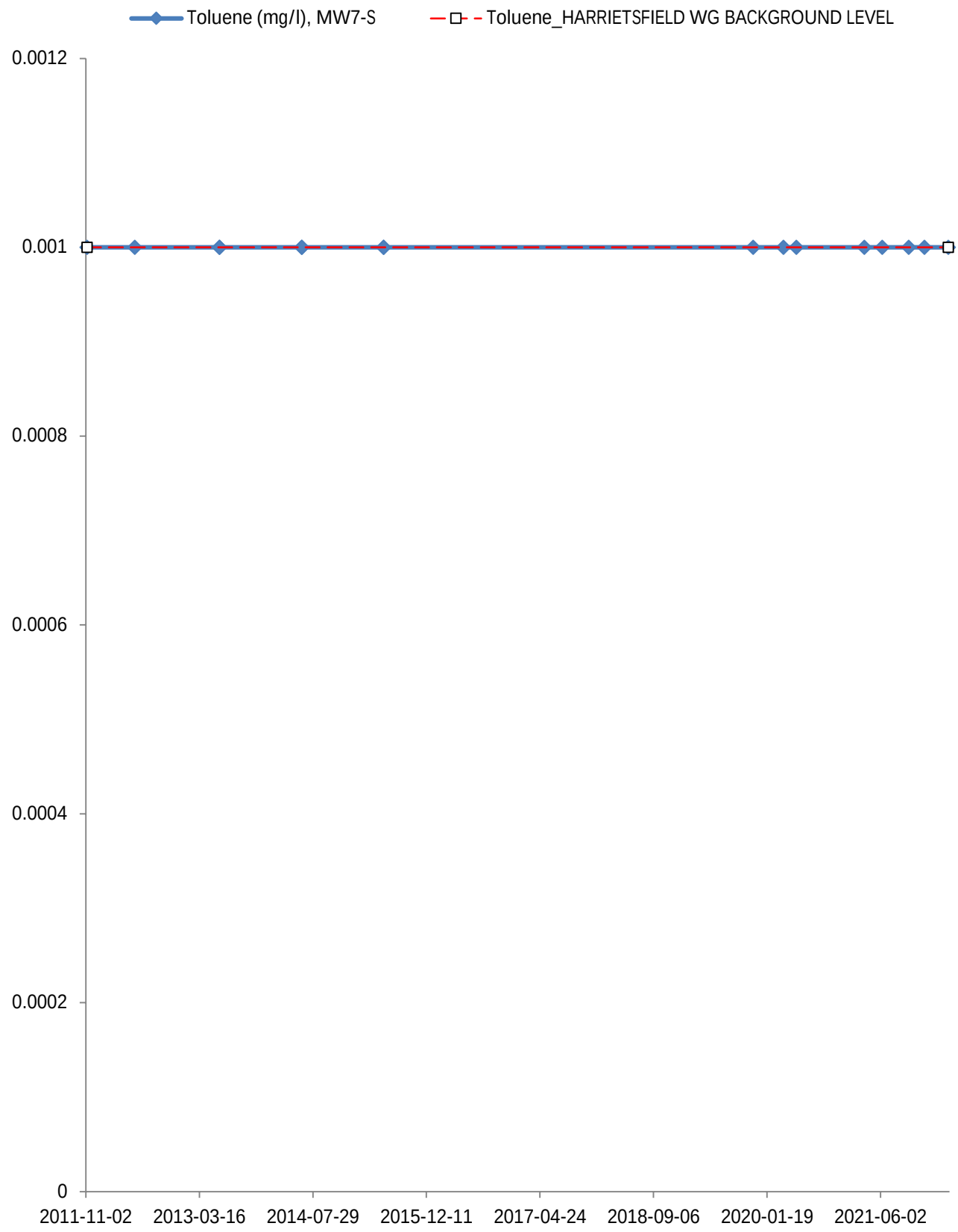



Tin (ug/l), MW7-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2005-03-25
2007-12-20
2010-09-15
2013-06-11
2016-03-07
2018-12-02
2021-08-28

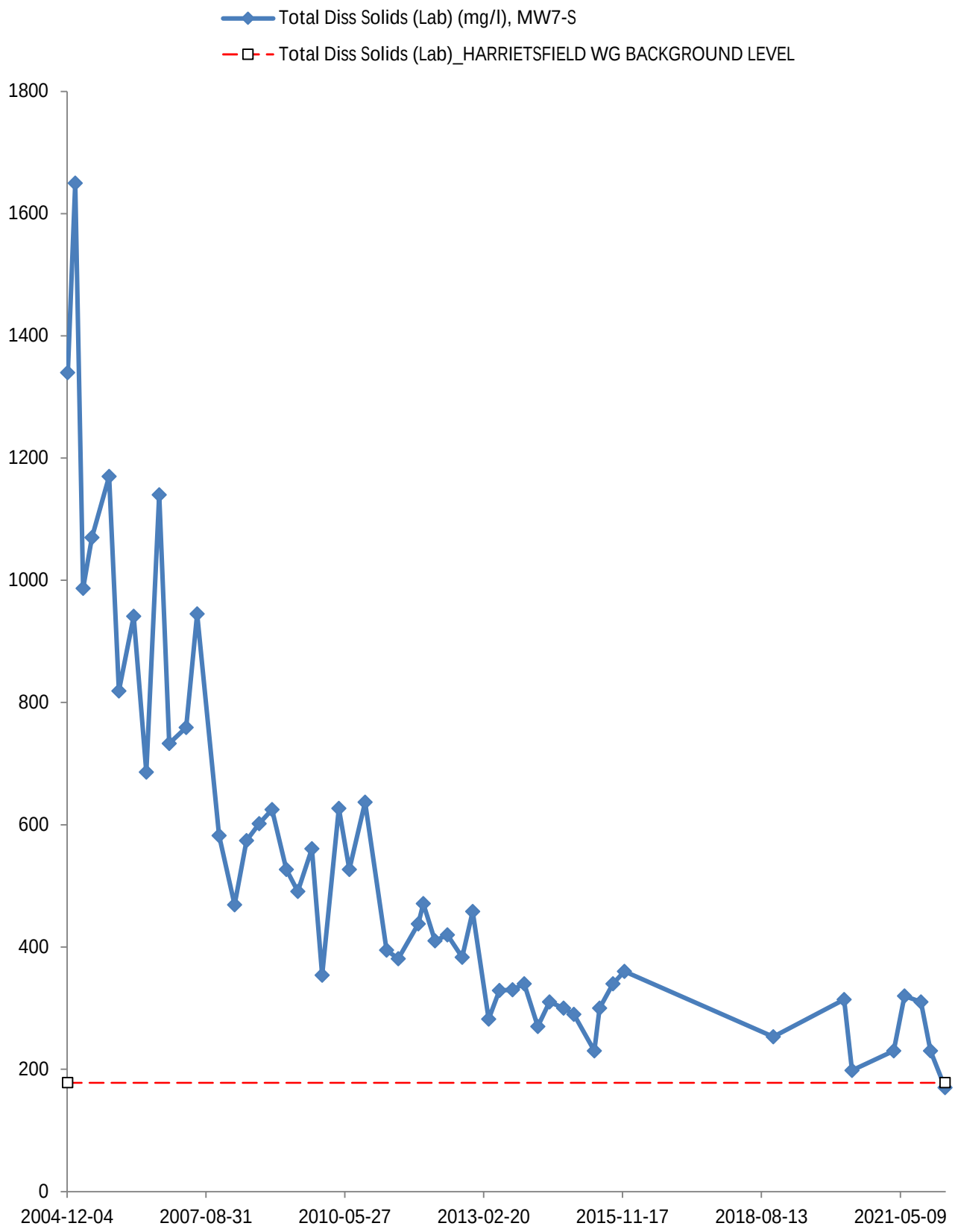
MW7-S-Titanium



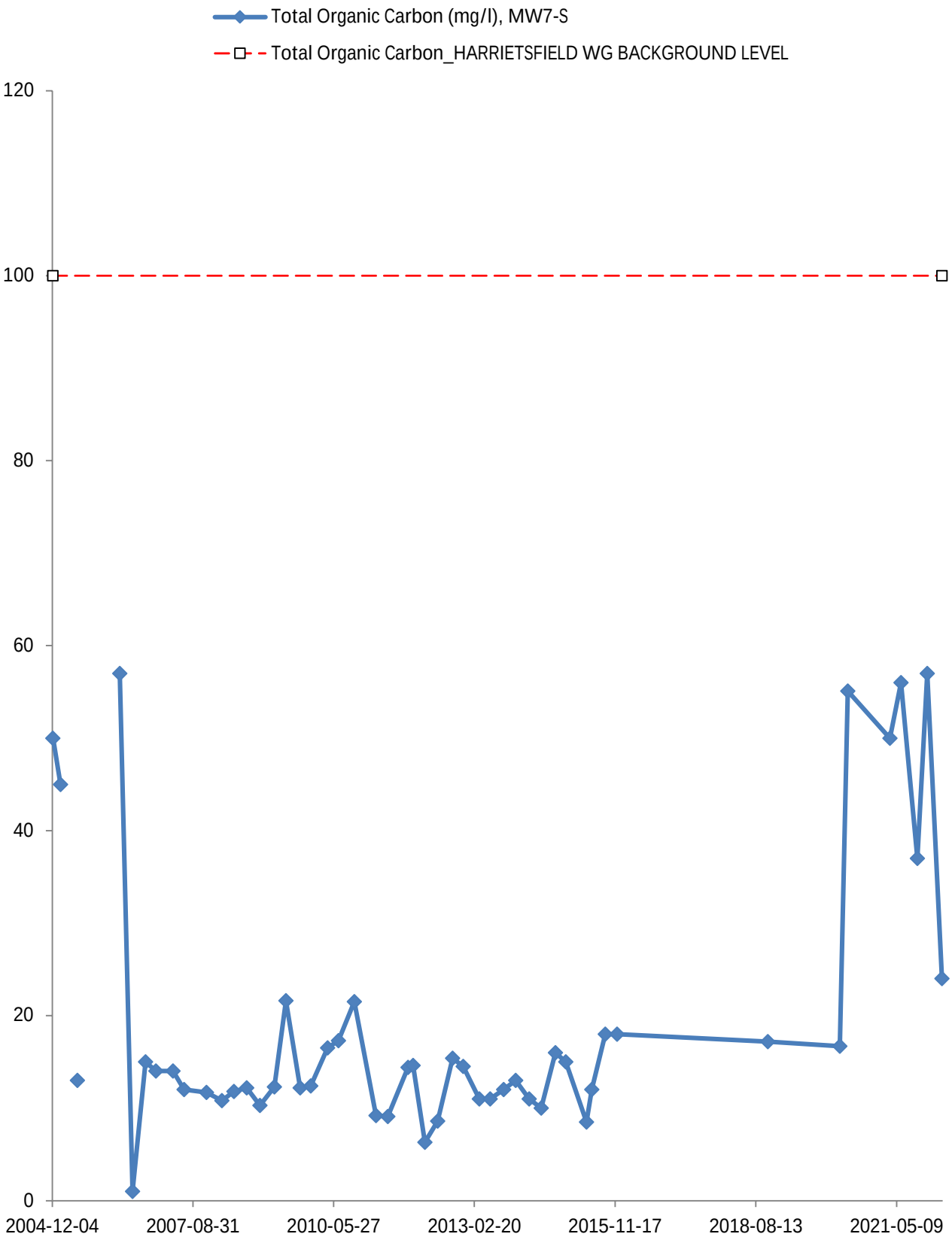
MW7-S-Toluene



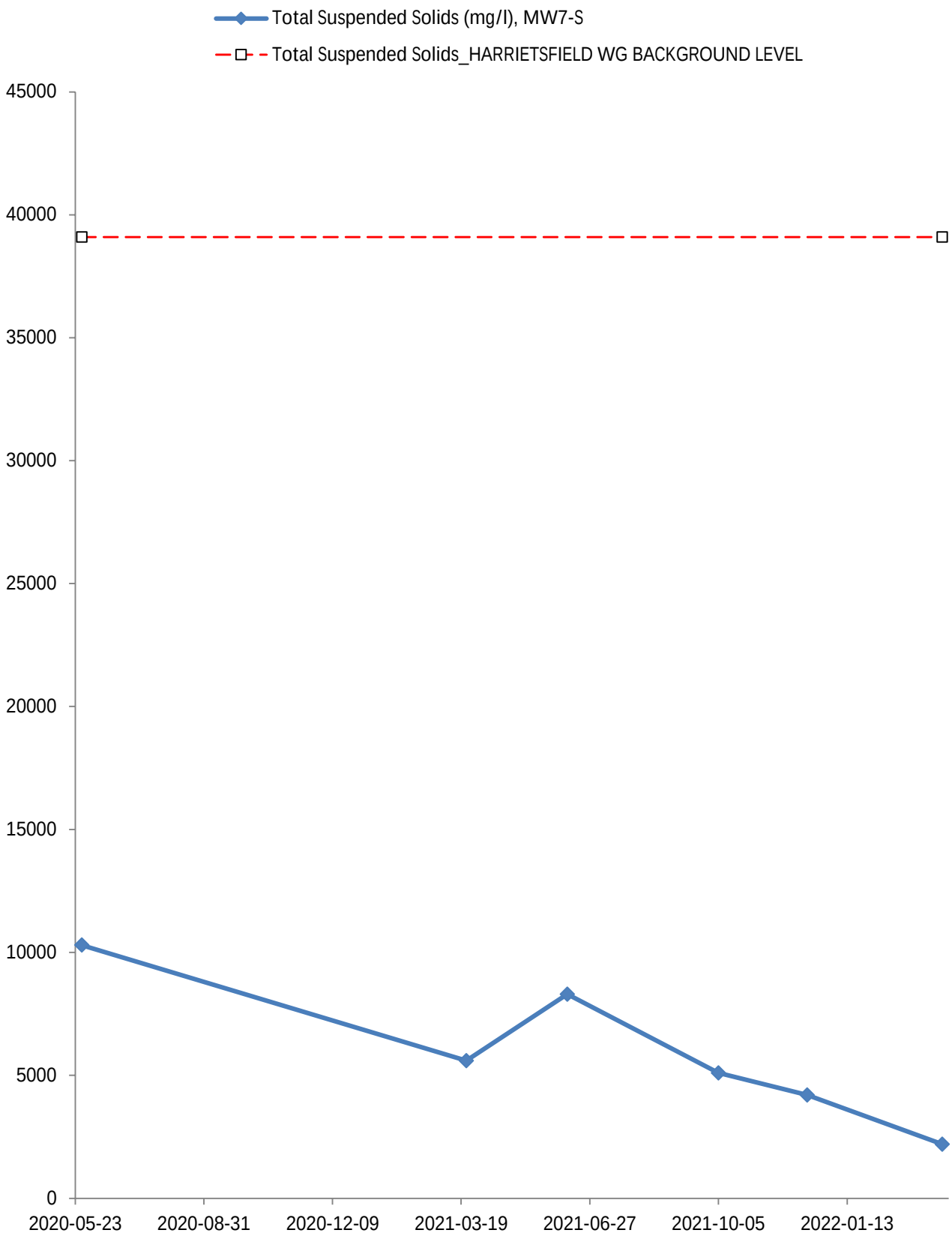
MW7-S-Total Diss Solids (Lab)



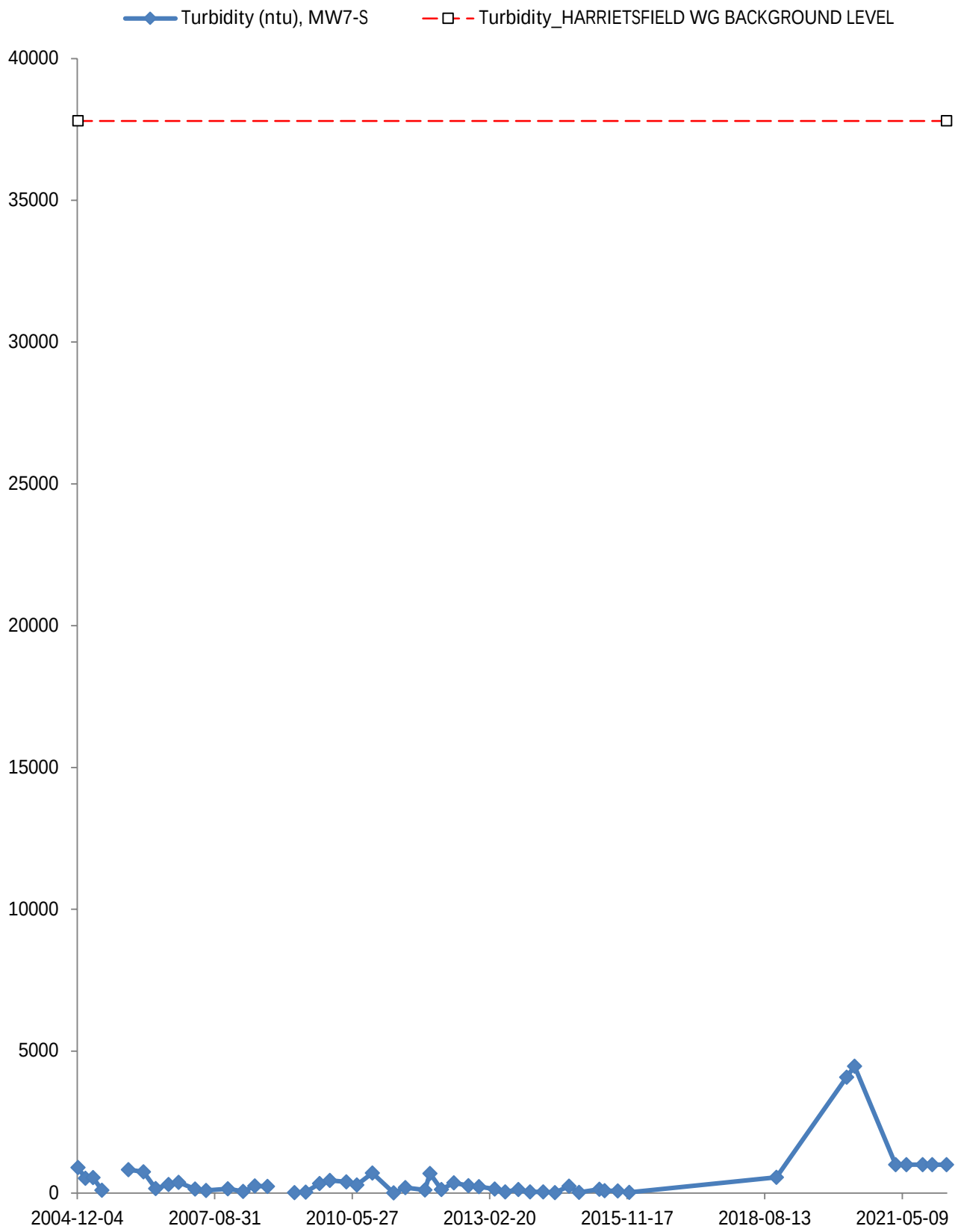
MW7-S-Total Organic Carbon



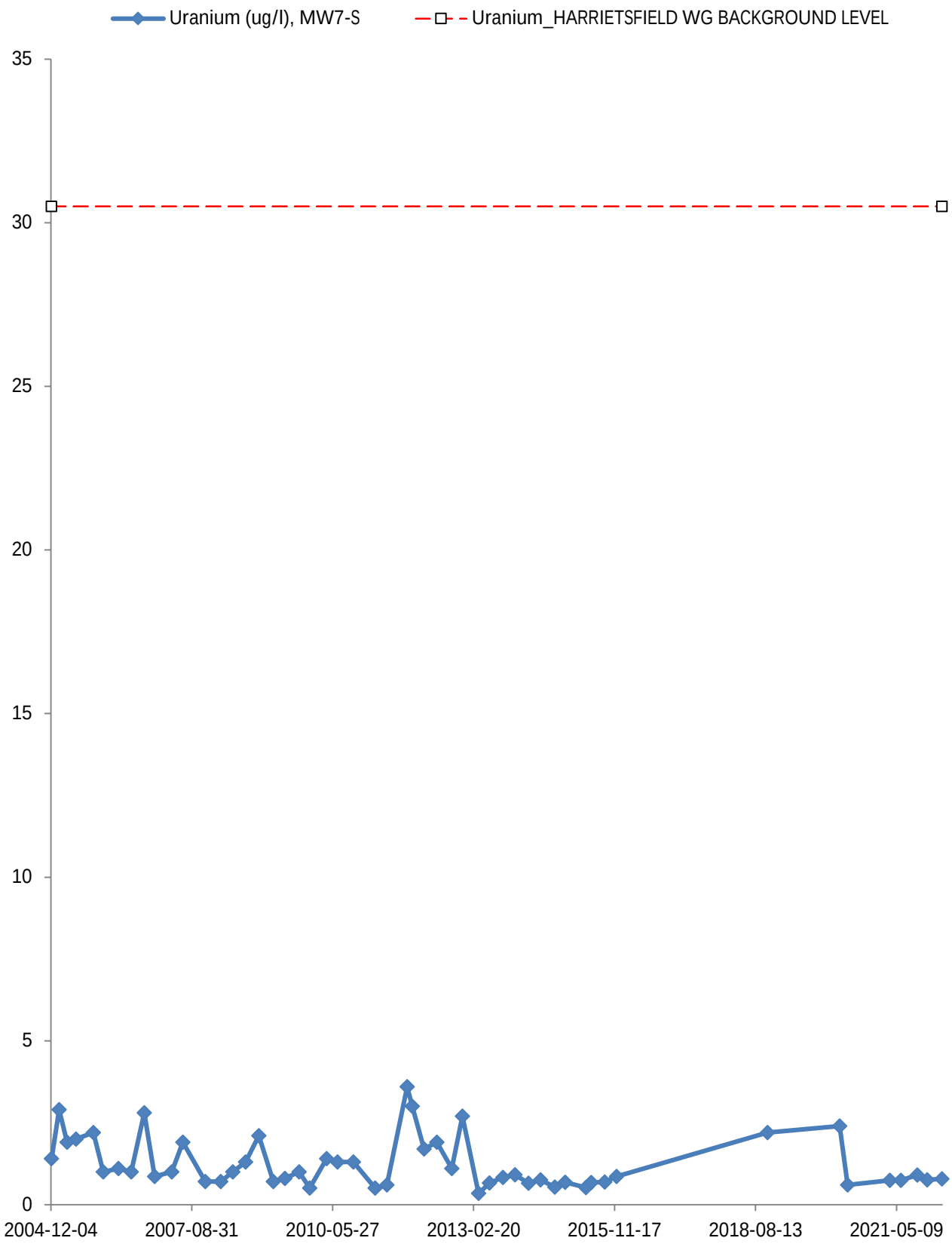
MW7-S-Total Suspended Solids



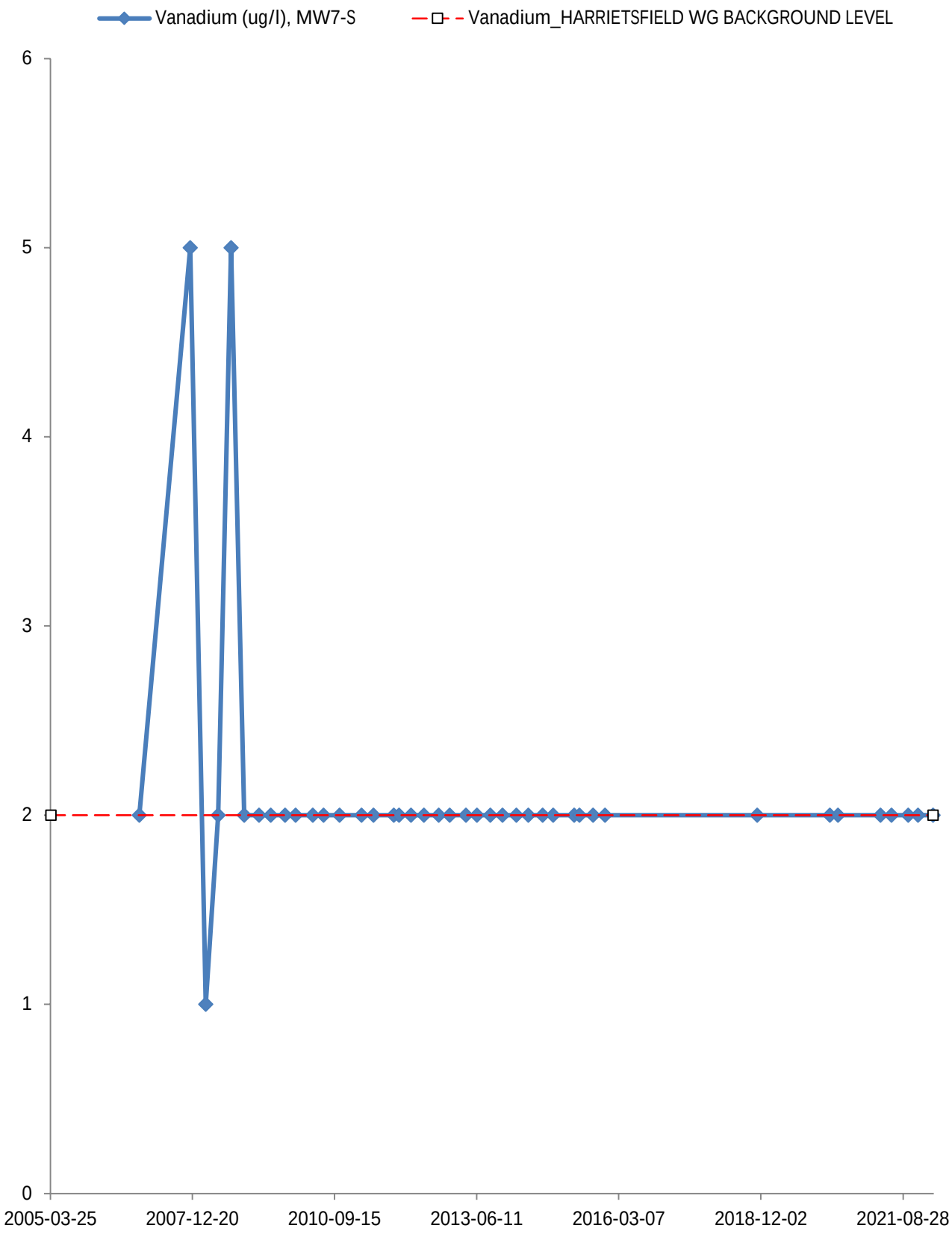
MW7-S-Turbidity



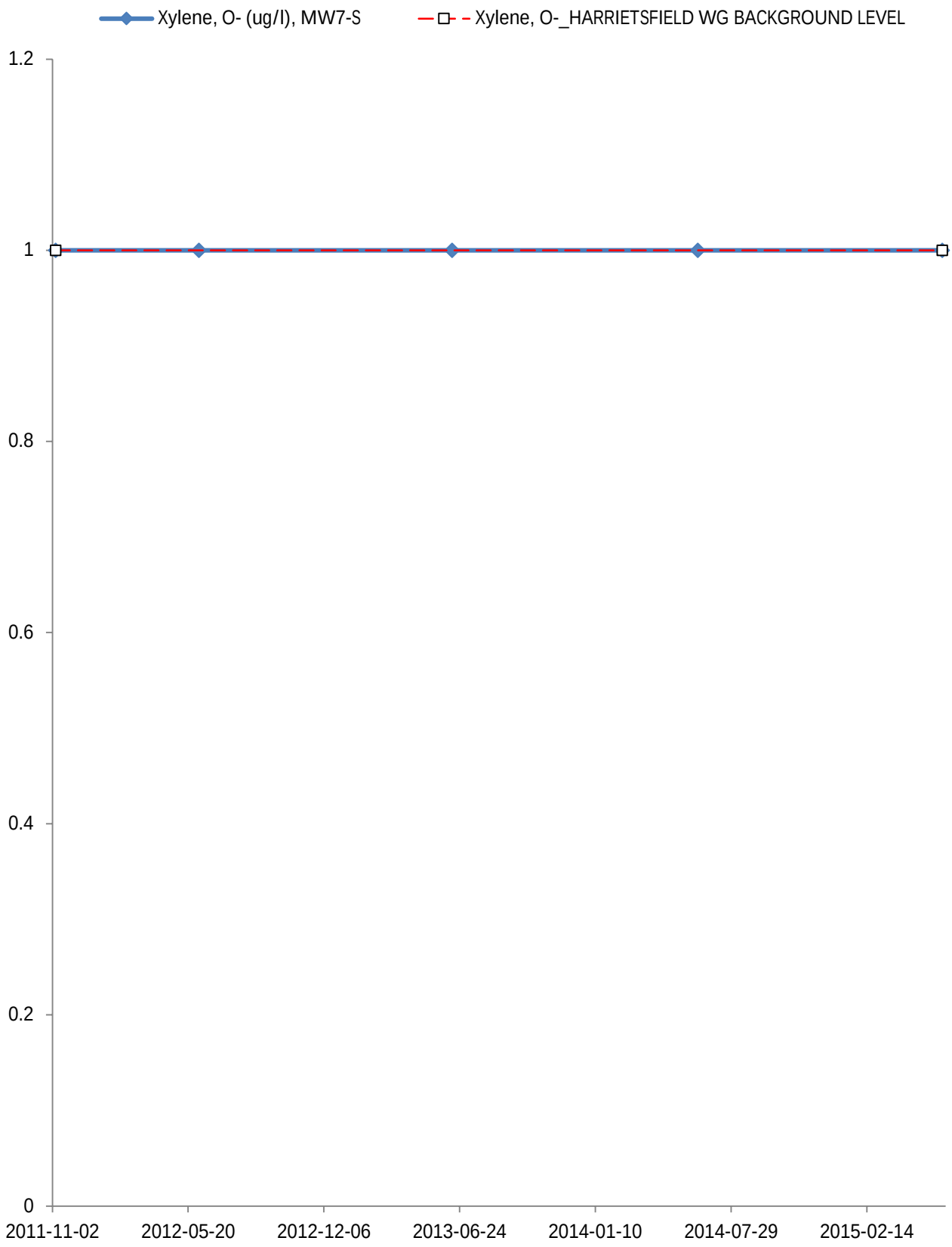
MW7-S-Uranium



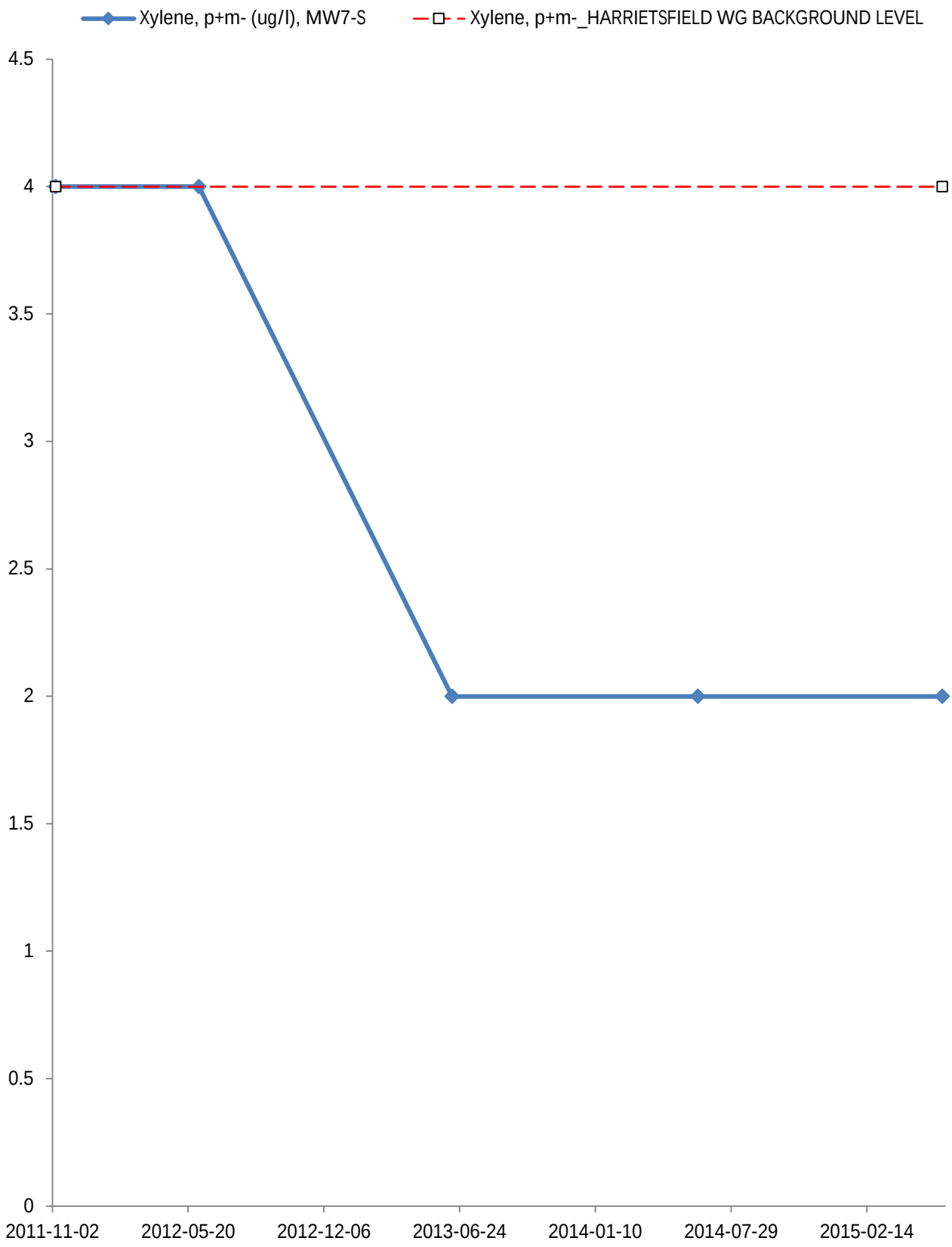
MW7-S-Vanadium



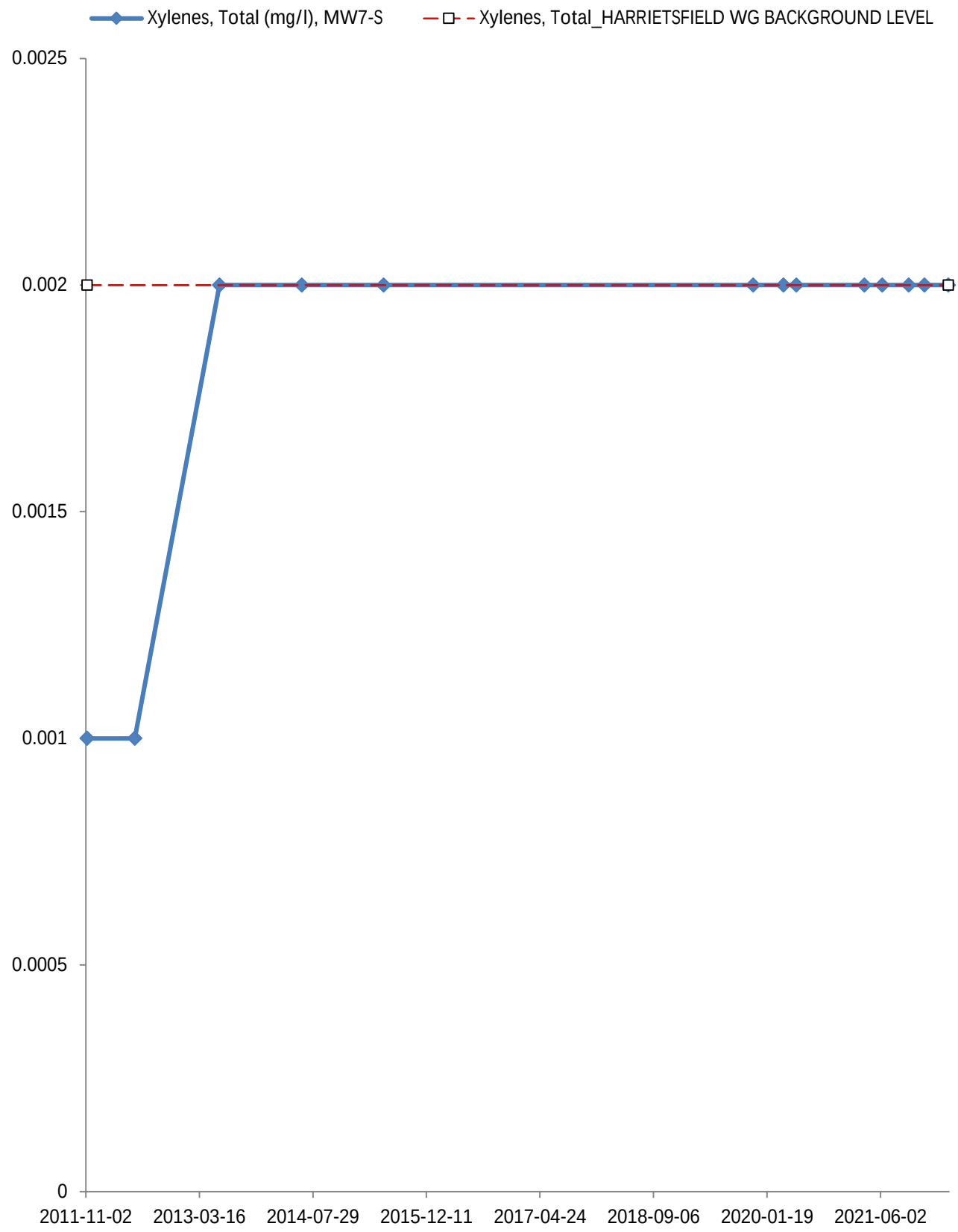
MW7-S-Xylene, O-



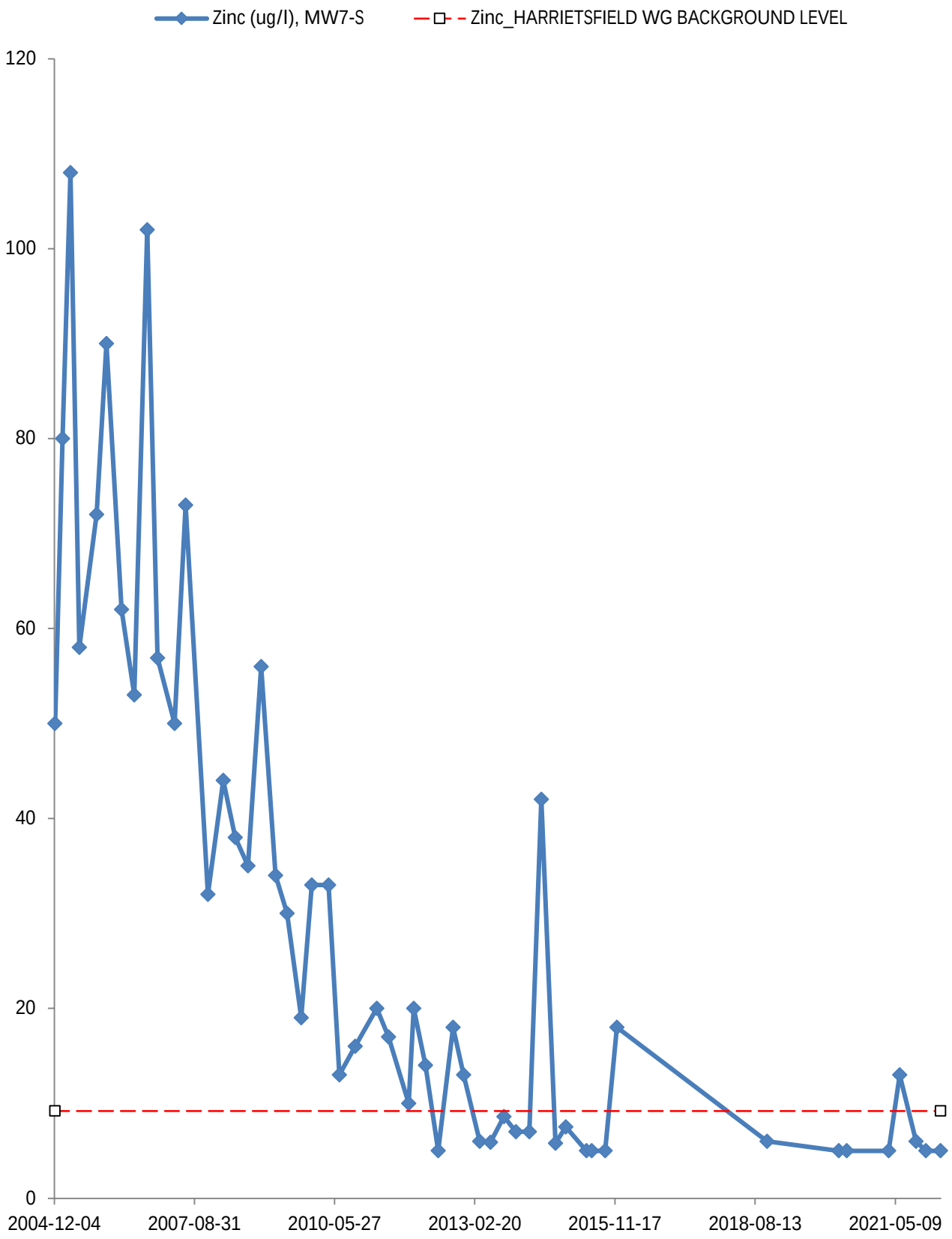
MW7-S-Xylene, p+m-



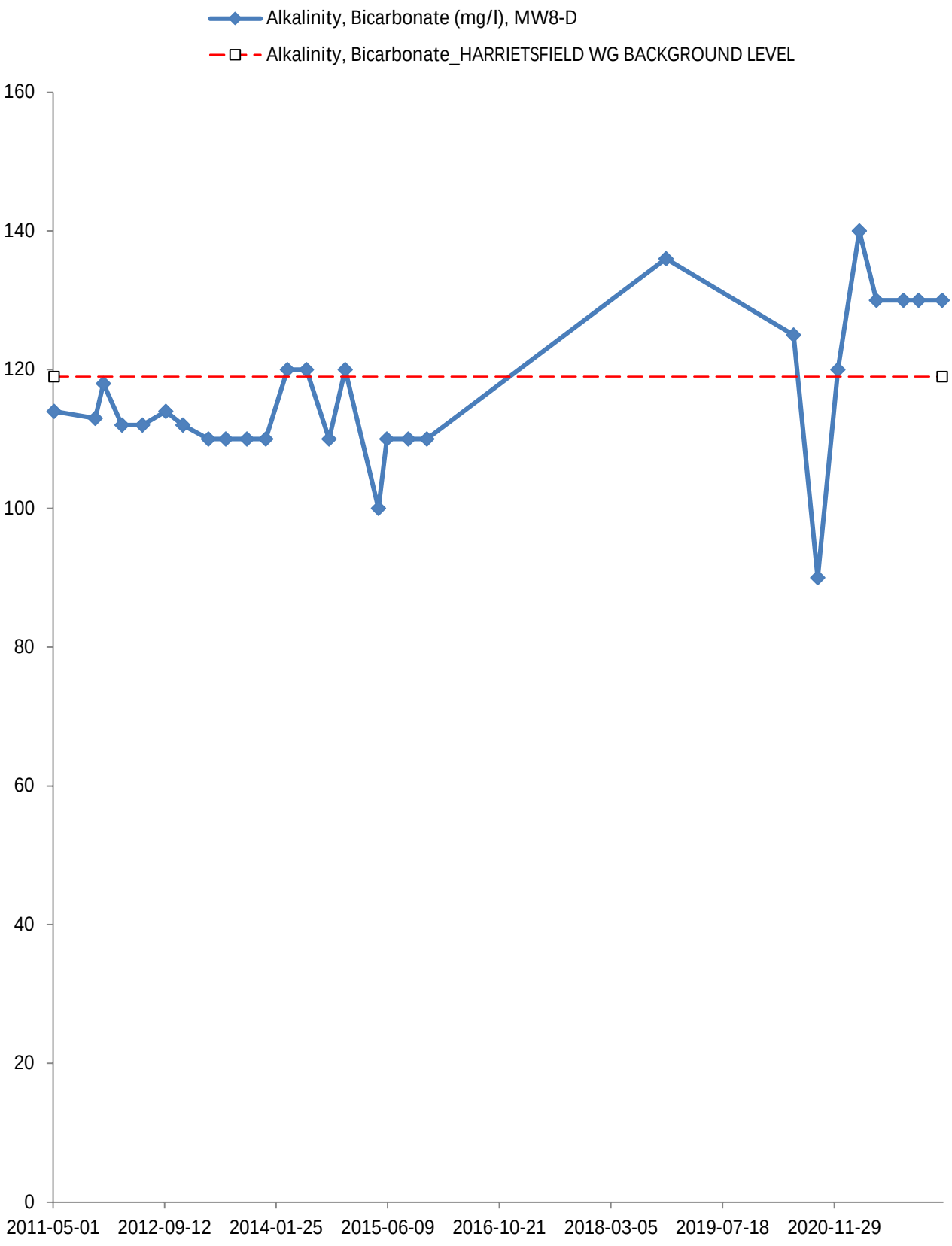
MW7-S-Xylenes, Total



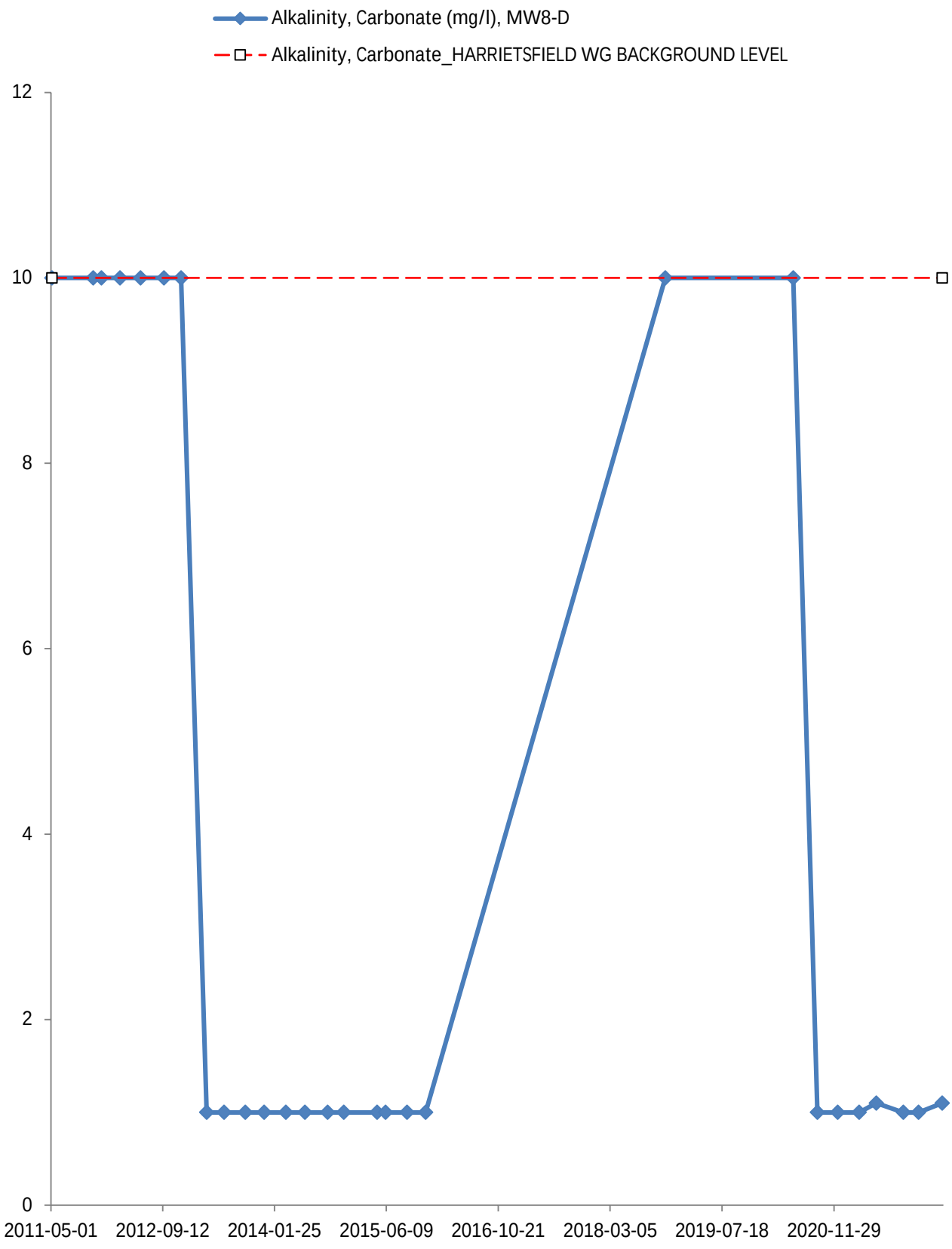
MW7-S-Zinc


Zinc (ug/l), MW7-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
120
100
80
60
40
20
0
2004-12-04
2007-08-31
2010-05-27
2013-02-20
2015-11-17
2018-08-13
2021-05-09

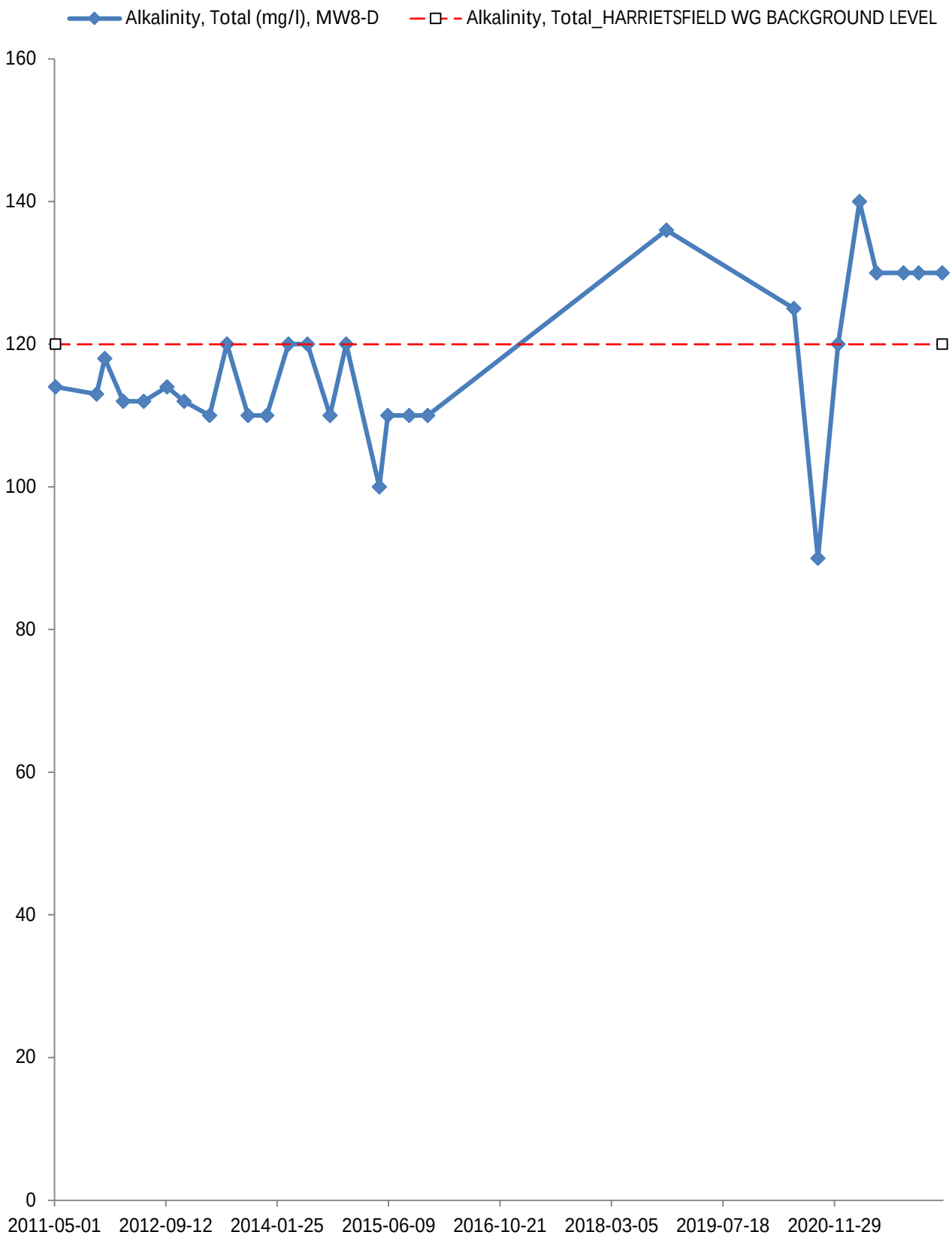
MW8-D-Alkalinity, Bicarbonate



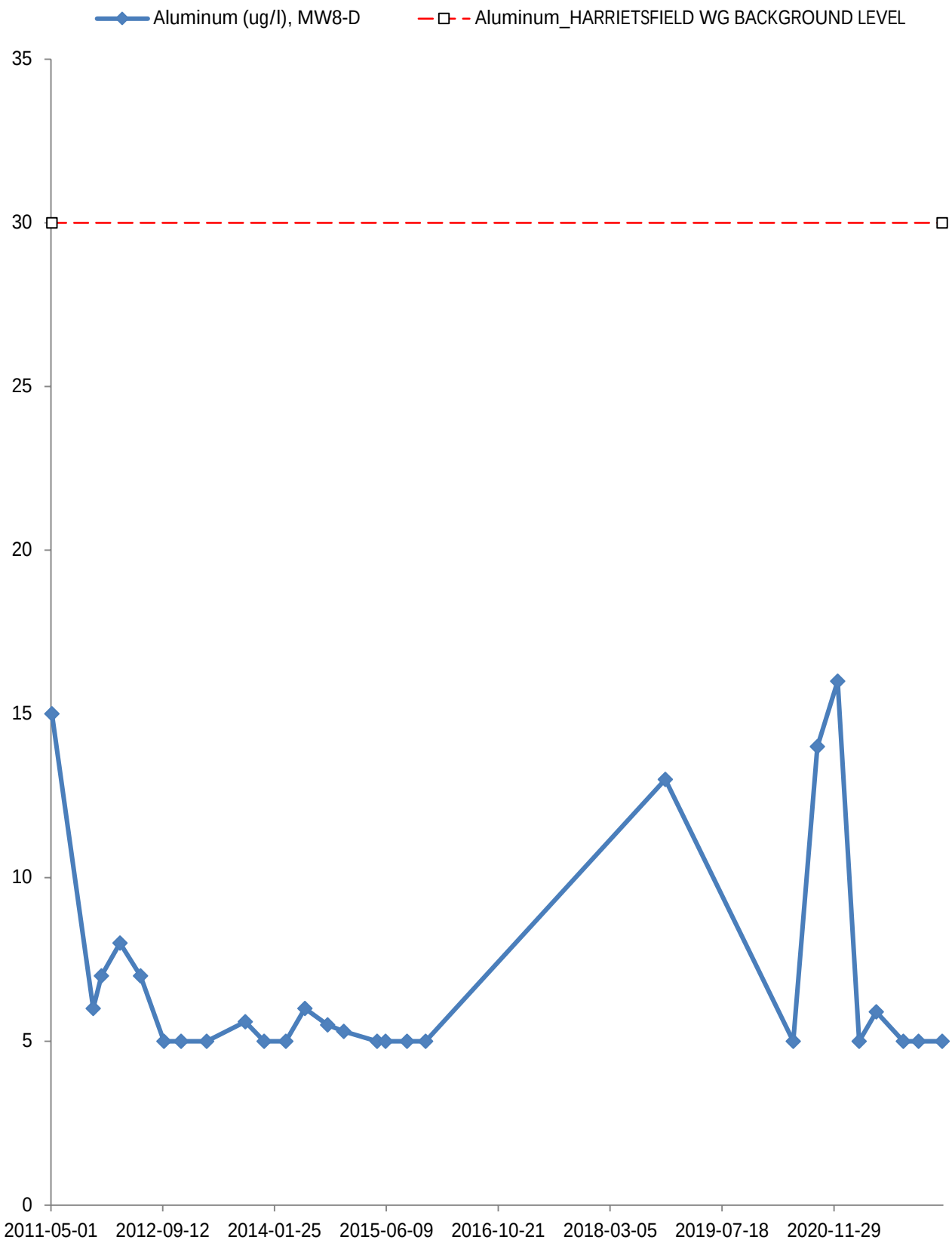
MW8-D-Alkalinity, Carbonate



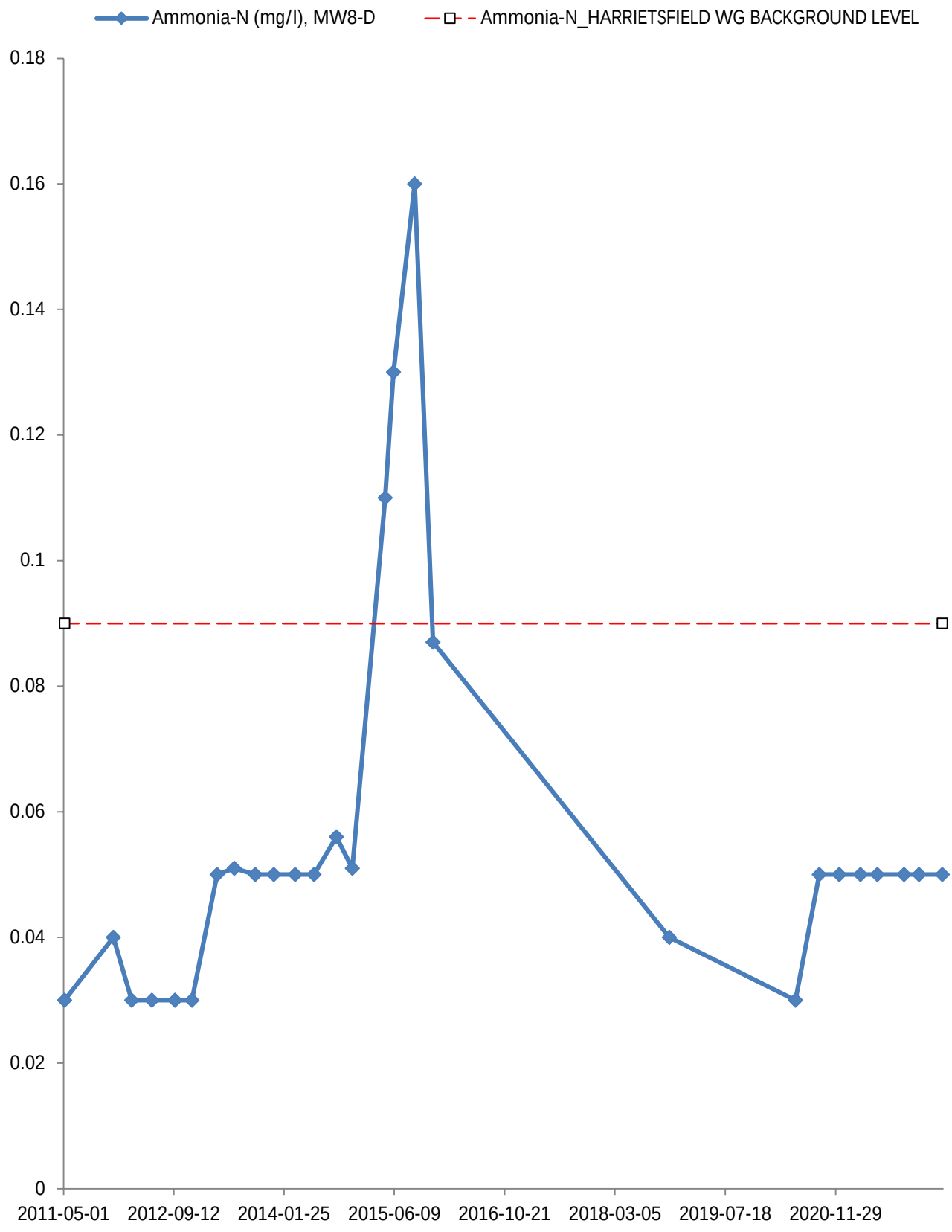
MW8-D-Alkalinity, Total



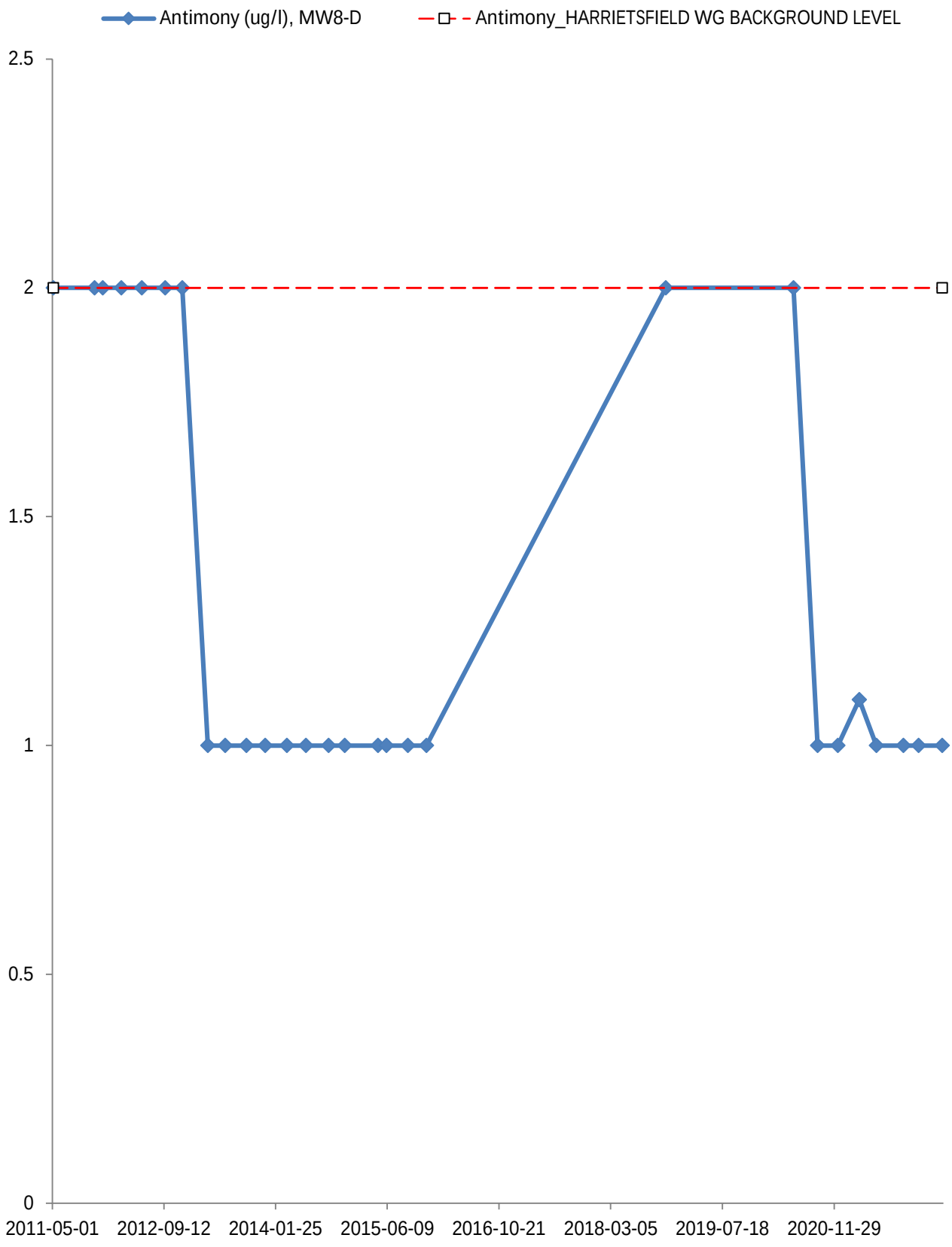
MW8-D-Aluminum



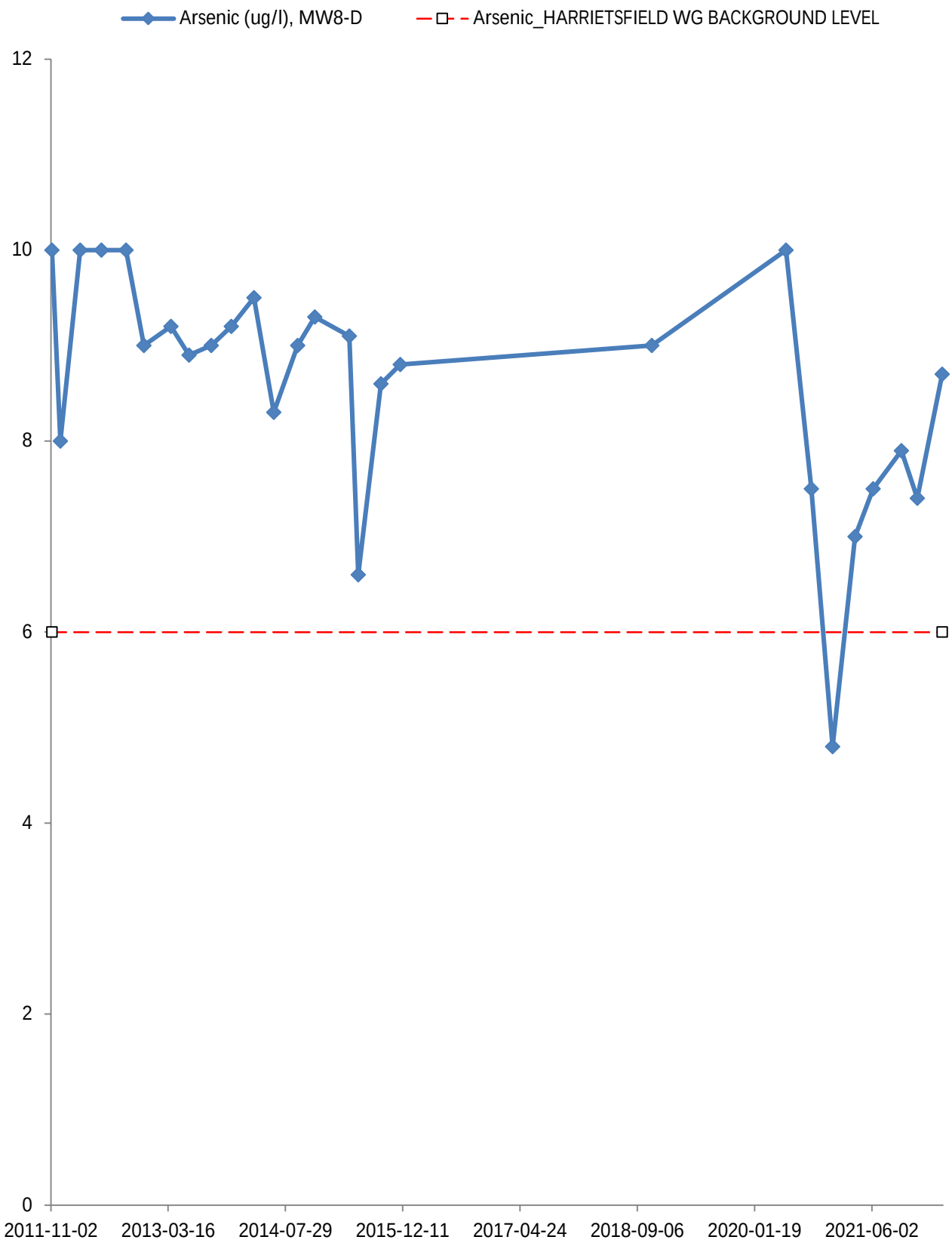
MW8-D-Ammonia-N



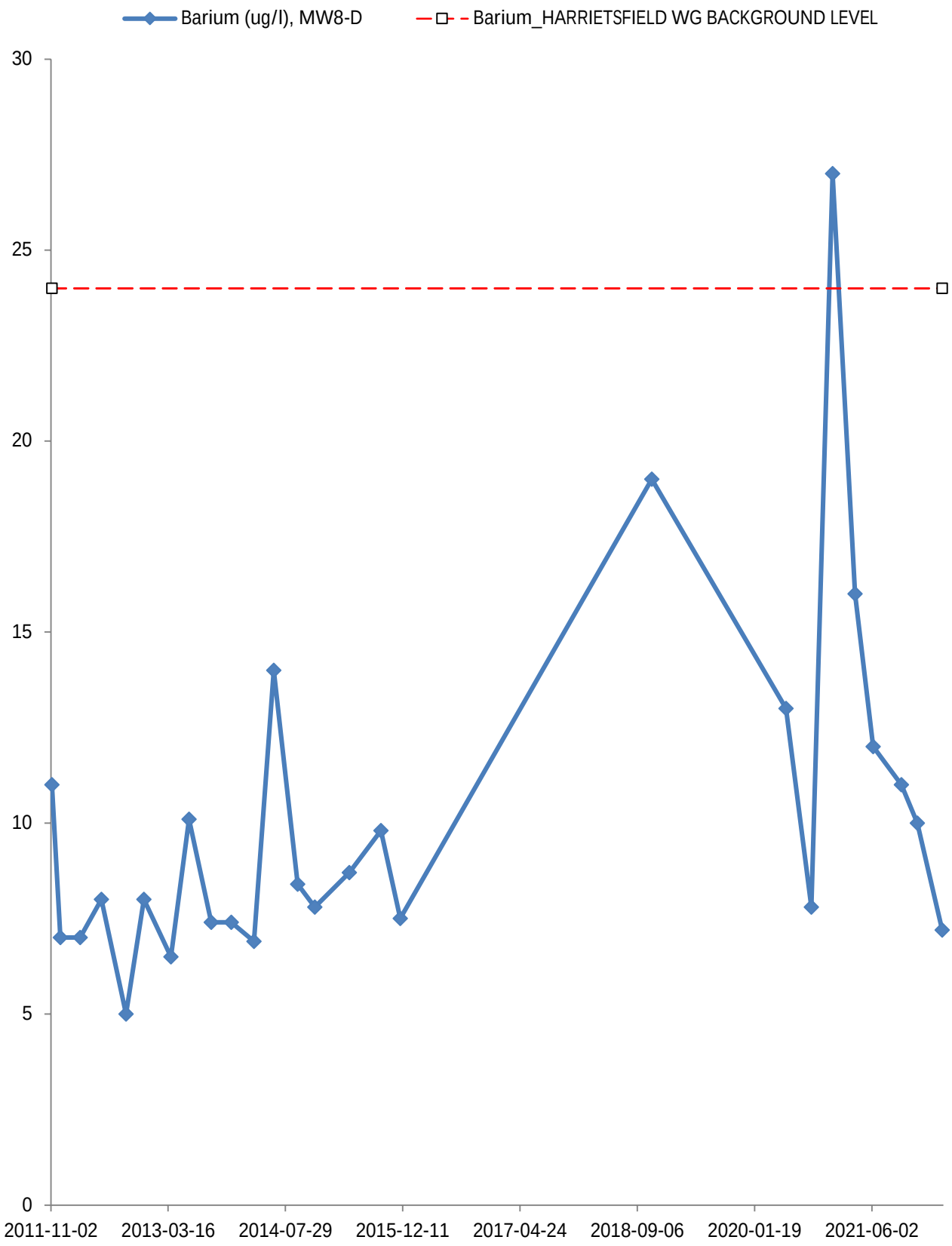
MW8-D-Antimony



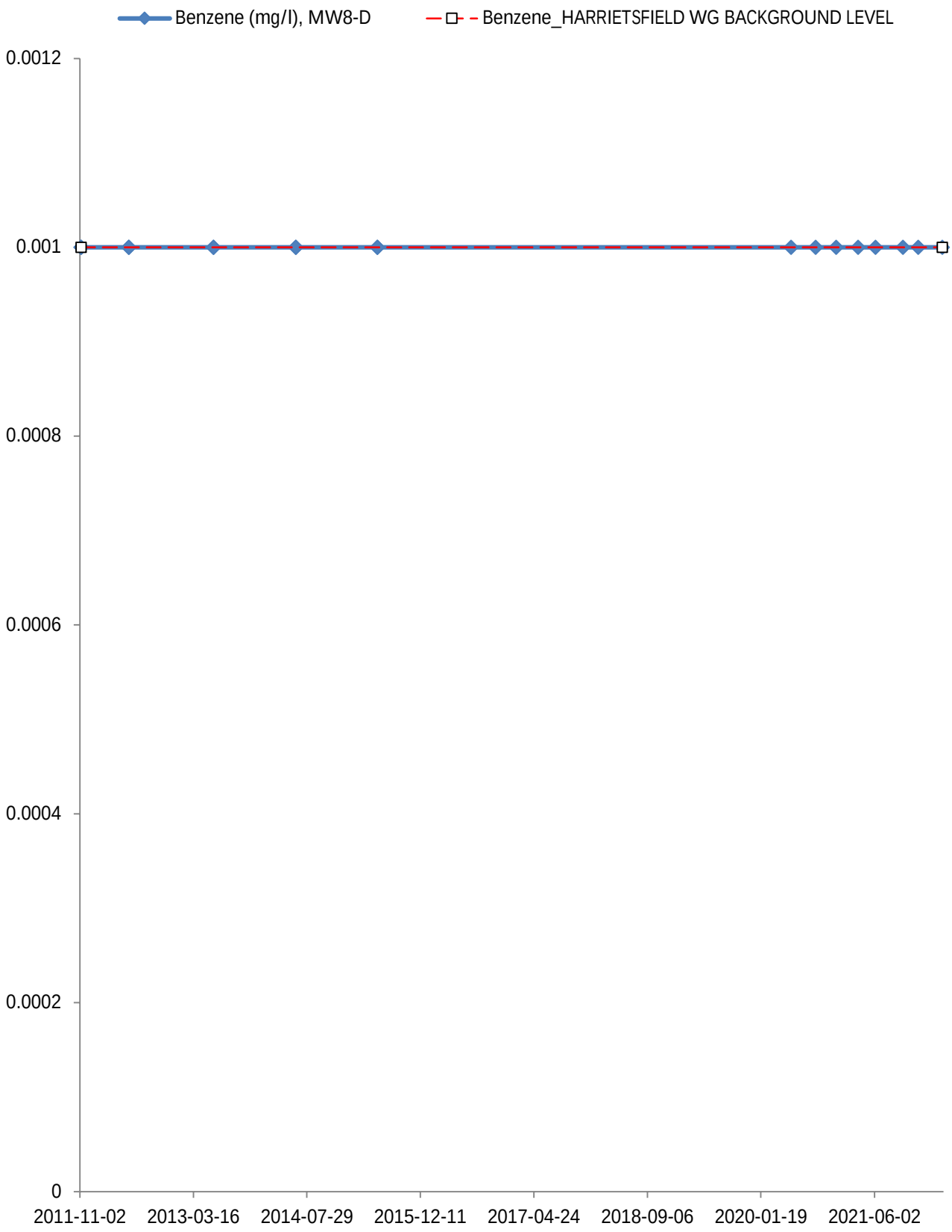
MW8-D-Arsenic



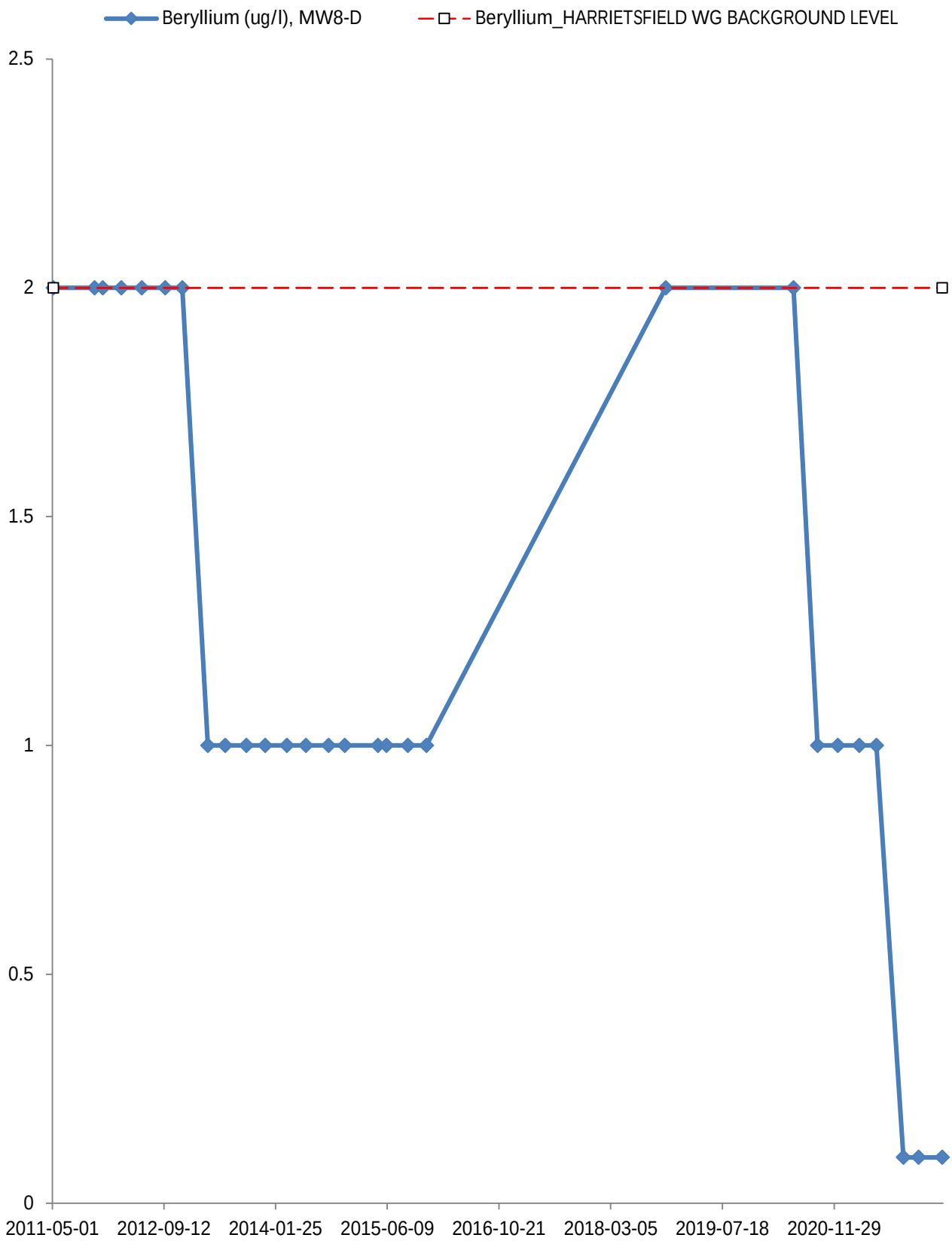
MW8-D-Barium


Barium (ug/l), MW8-D
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
30
25
20
15
10
5
0
2011-11-02
2013-03-16
2014-07-29
2015-12-11
2017-04-24
2018-09-06
2020-01-19
2021-06-02

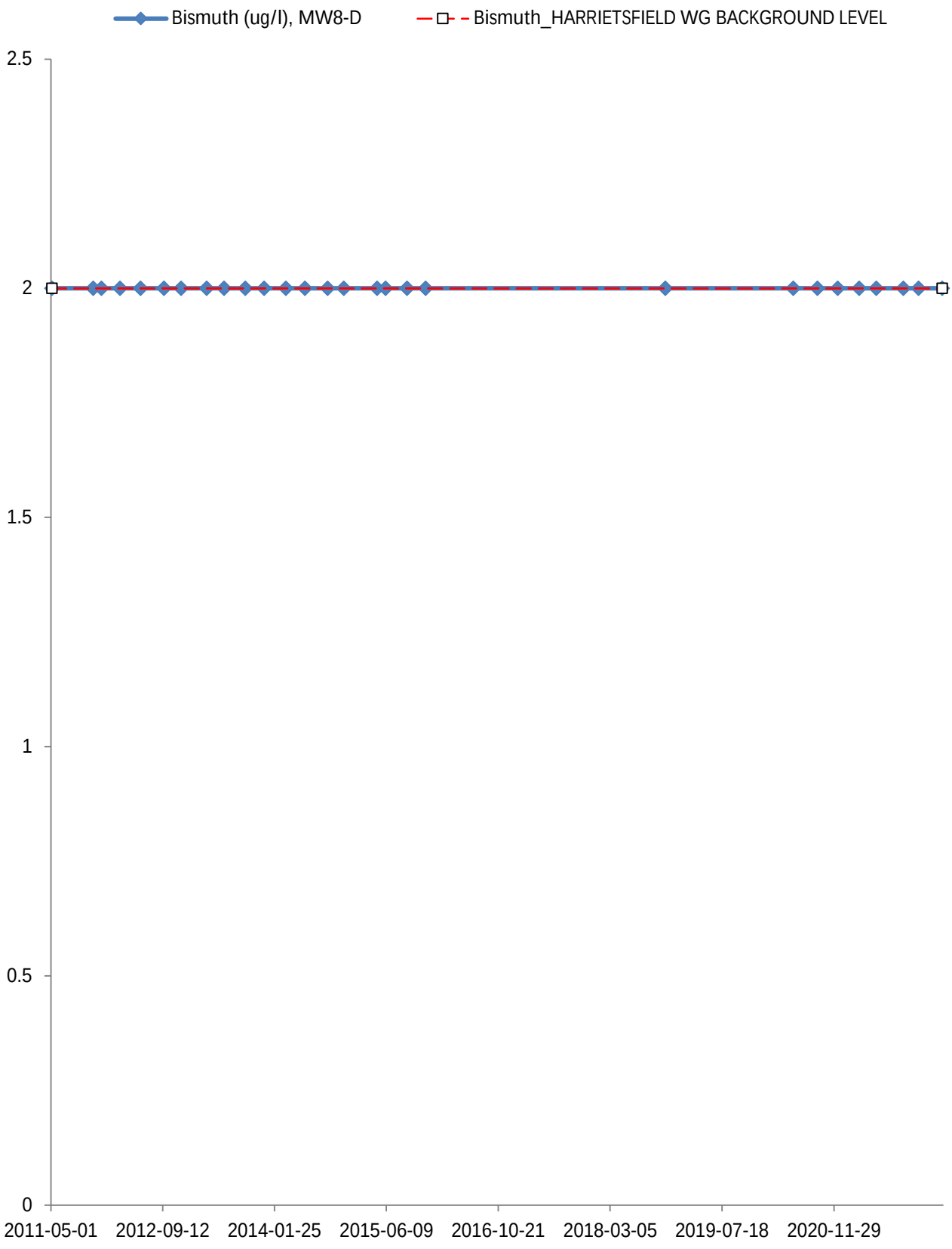
MW8-D-Benzene



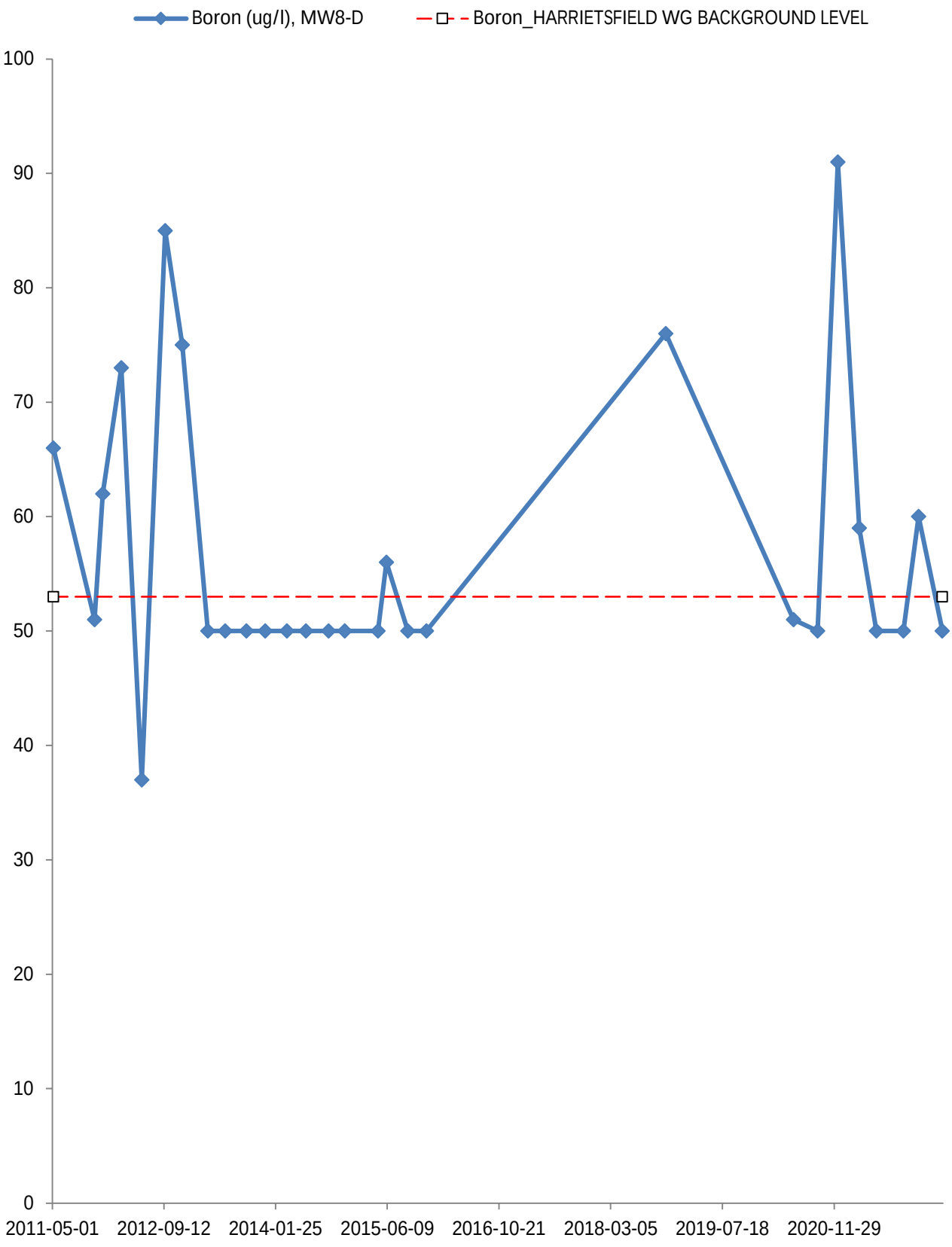
MW8-D-Beryllium



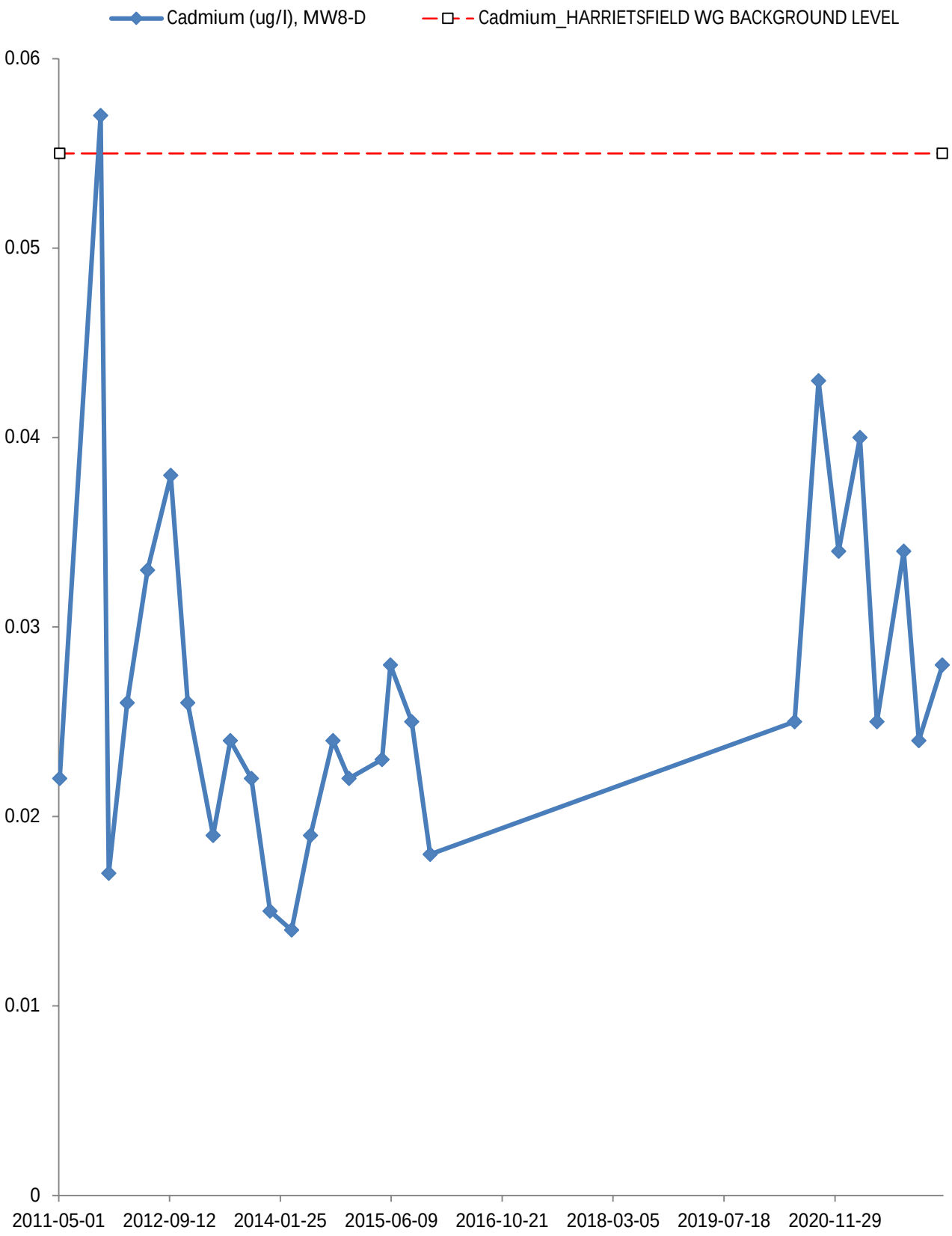
MW8-D-Bismuth



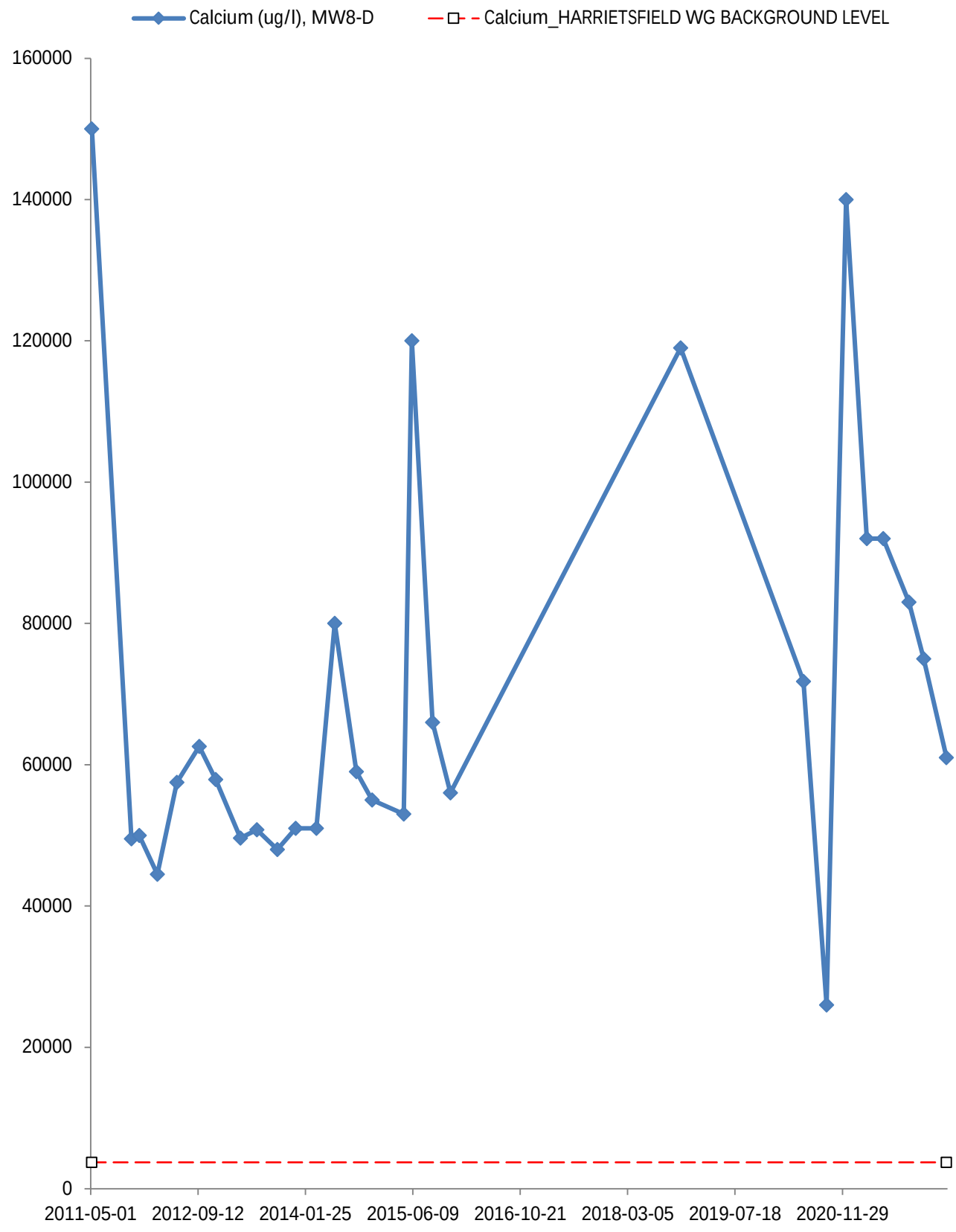
MW8-D-Boron


Boron (ug/l), MW8-D
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
100
90
80
70
60
50
40
30
20
10
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

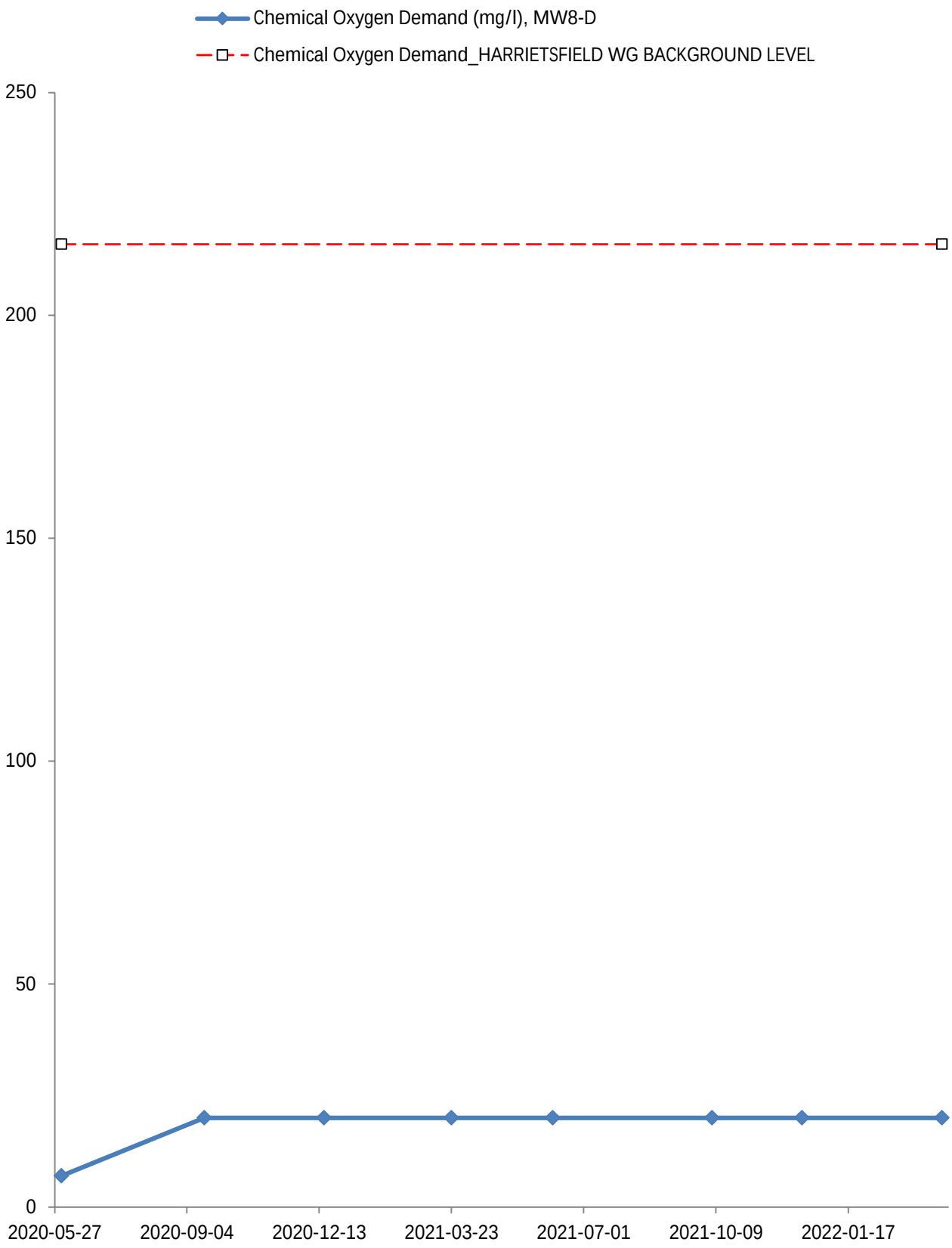
MW8-D-Cadmium



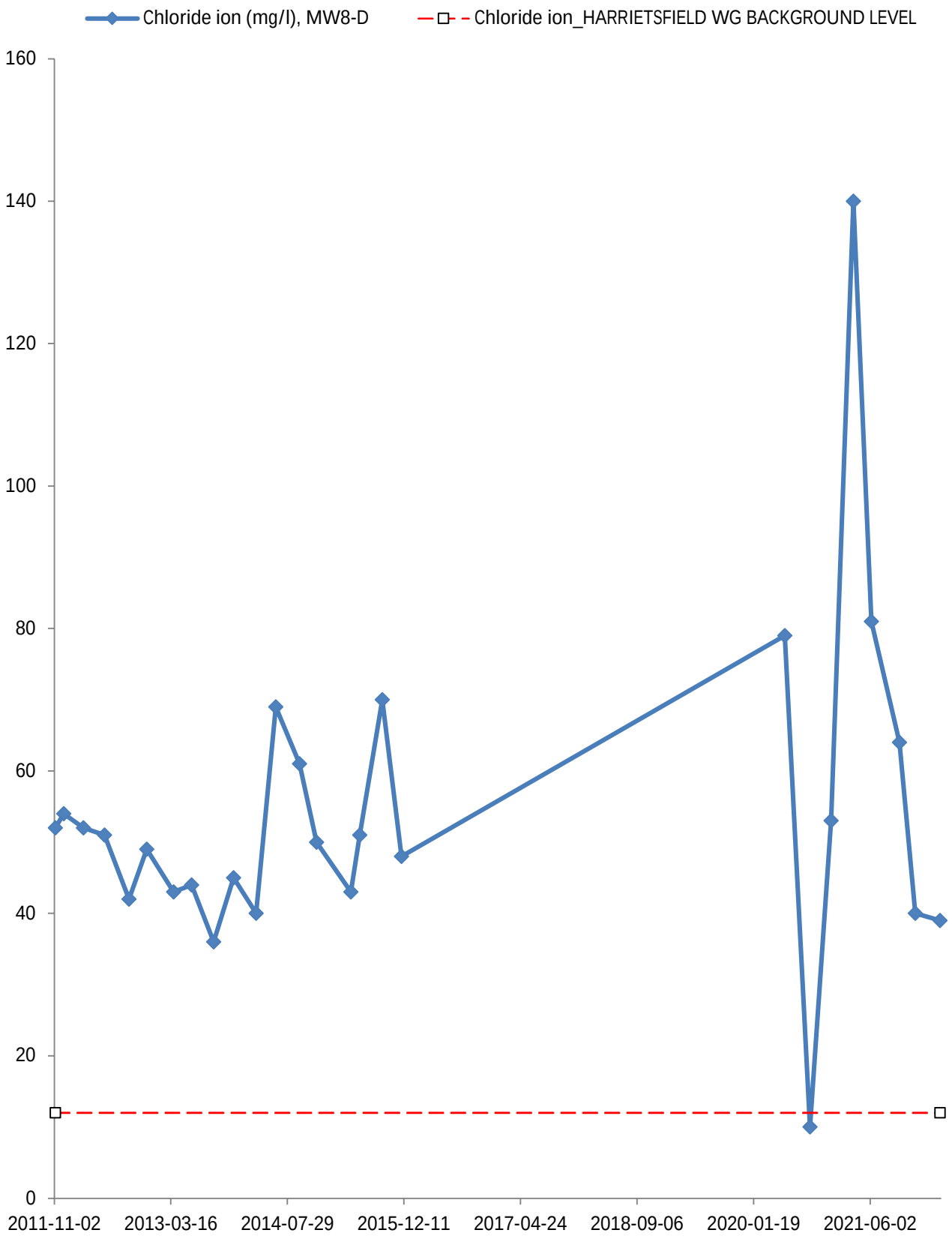
MW8-D-Calcium



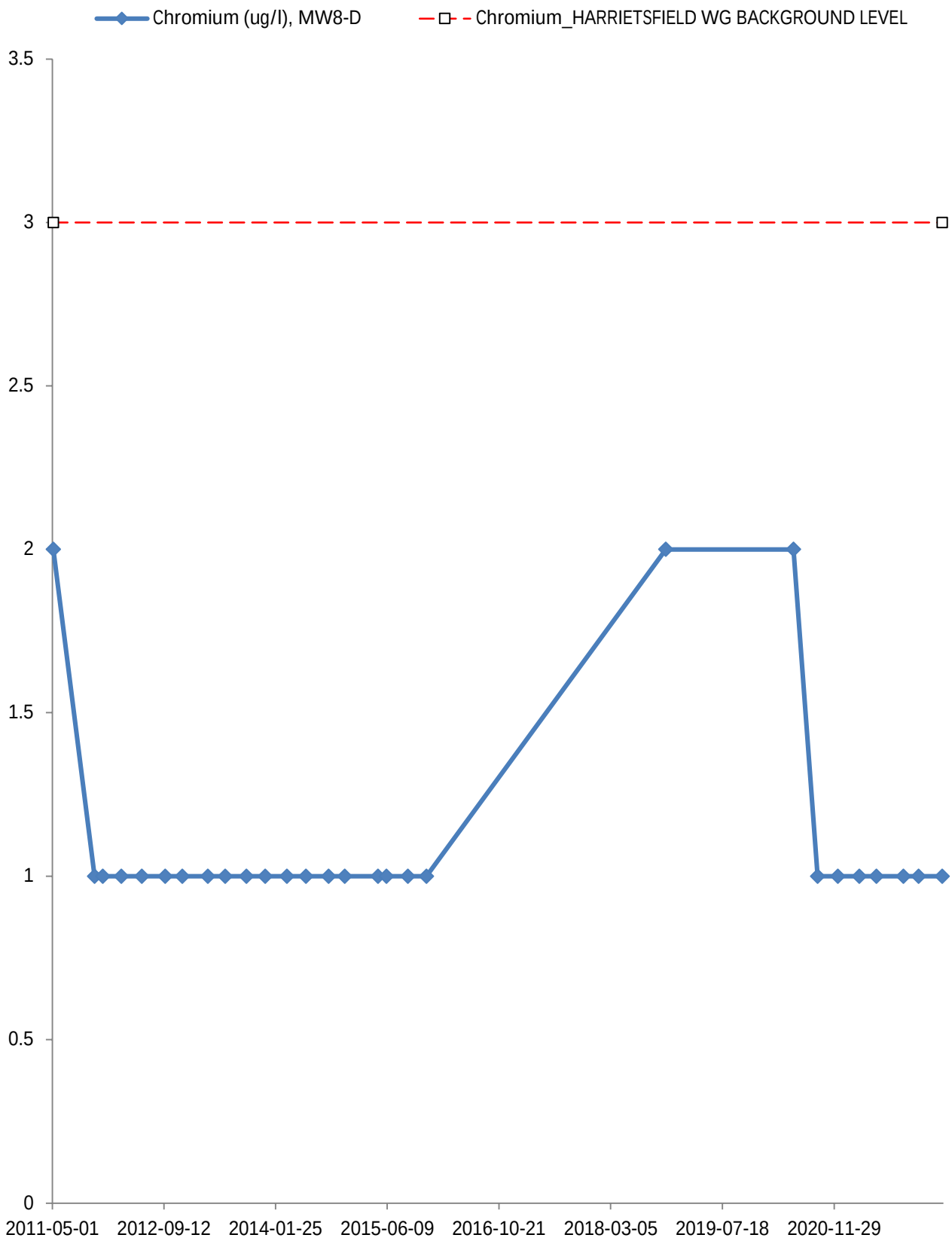
MW8-D-Chemical Oxygen Demand



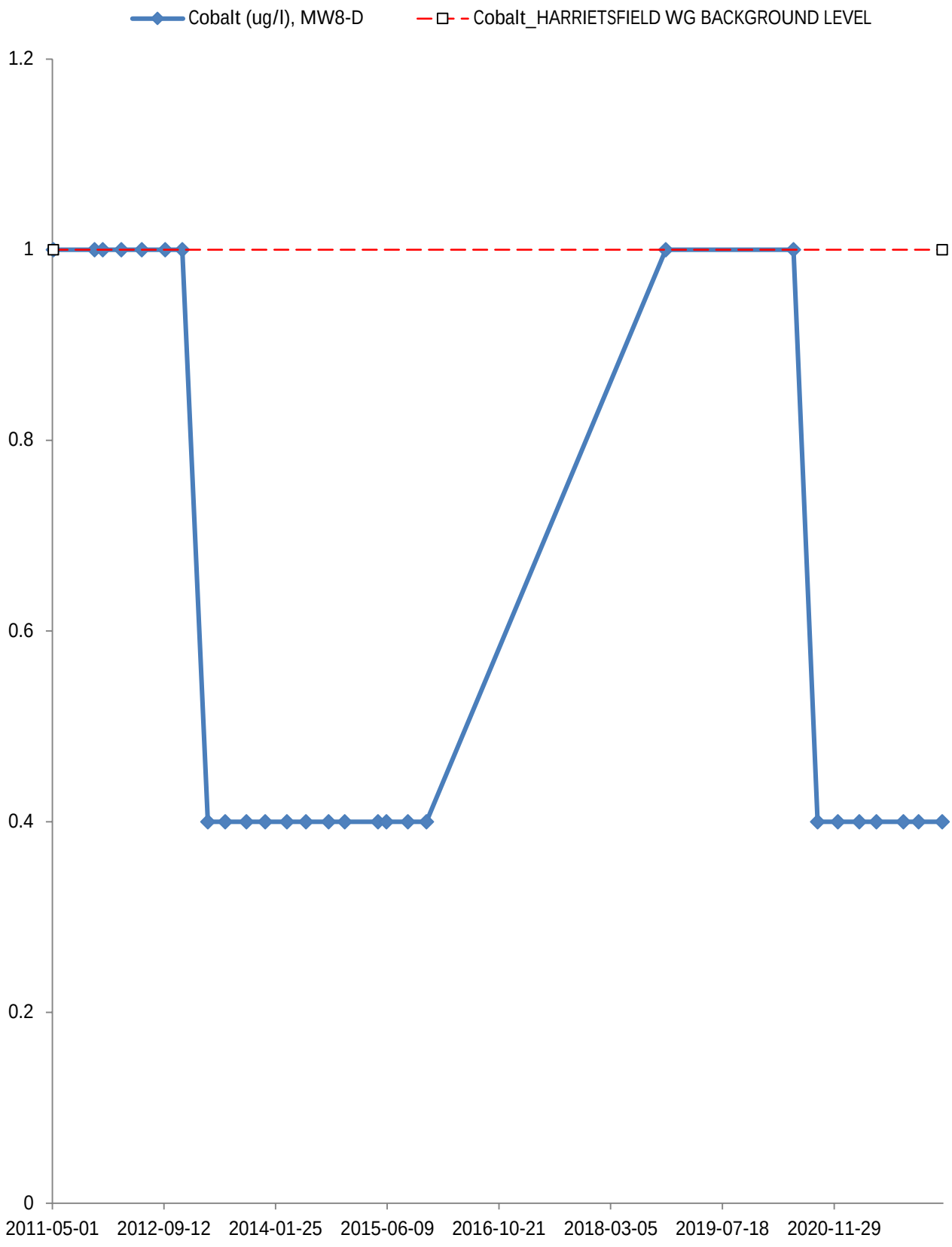
MW8-D-Chloride ion



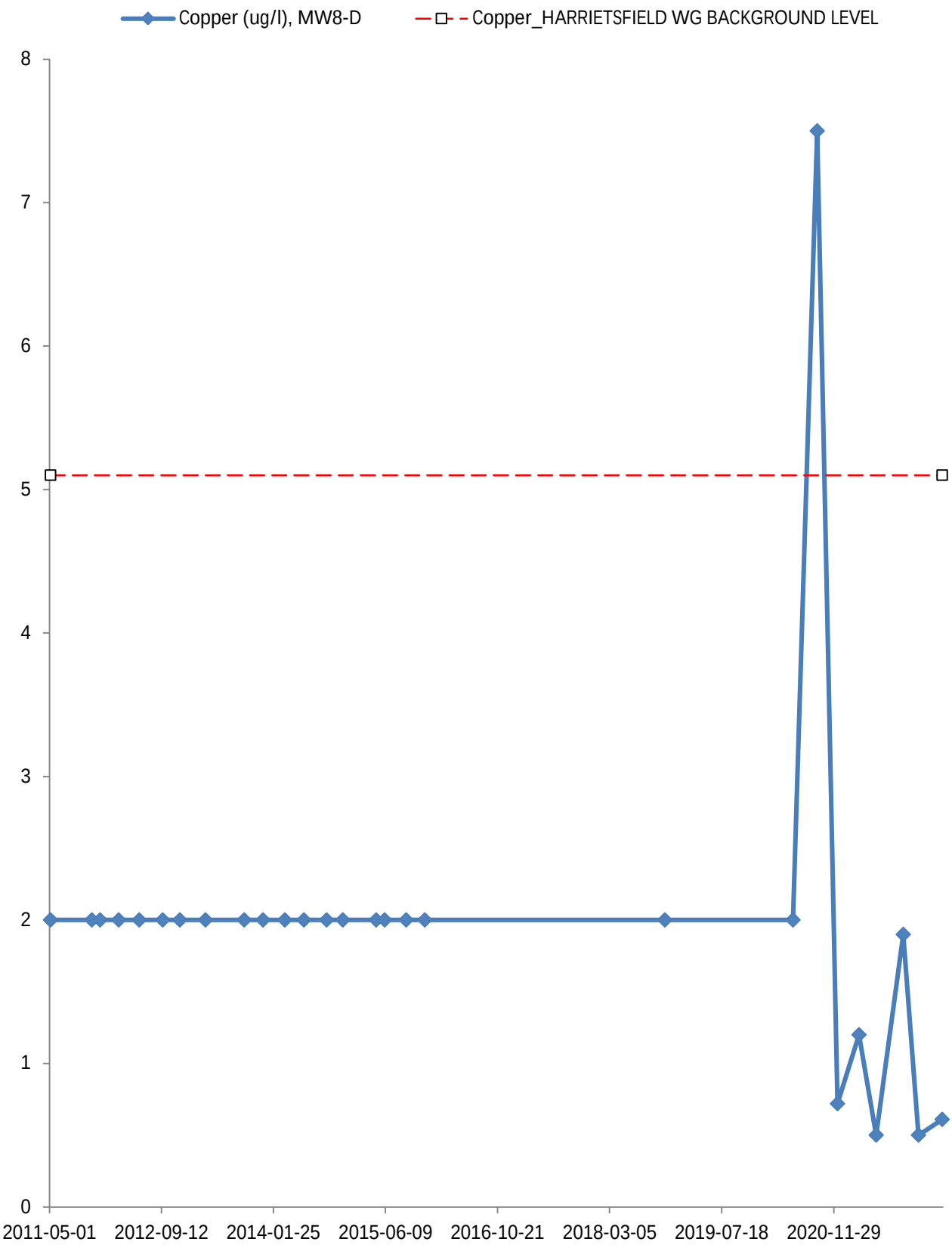
MW8-D-Chromium



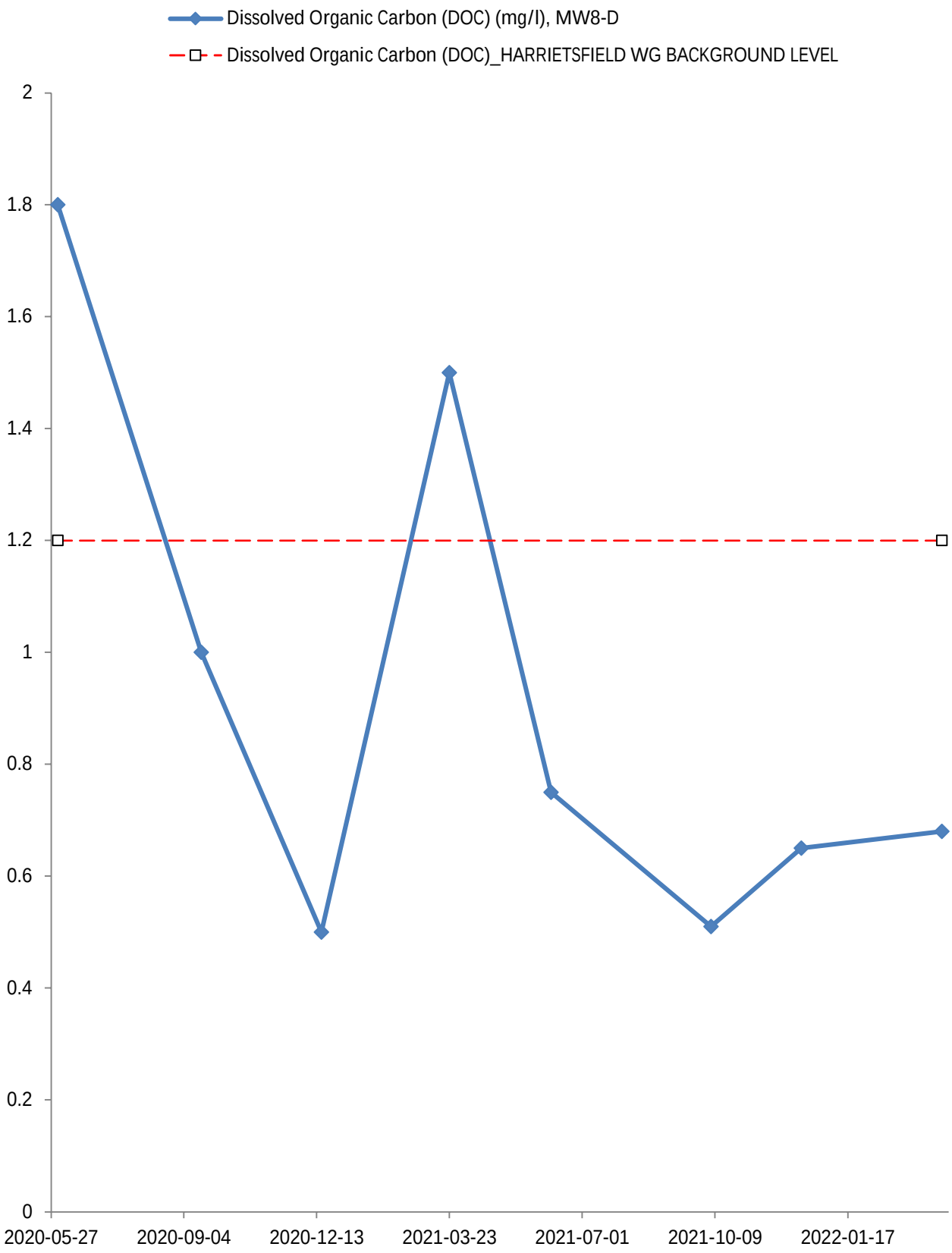
MW8-D-Cobalt


Cobalt (ug/l), MW8-D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

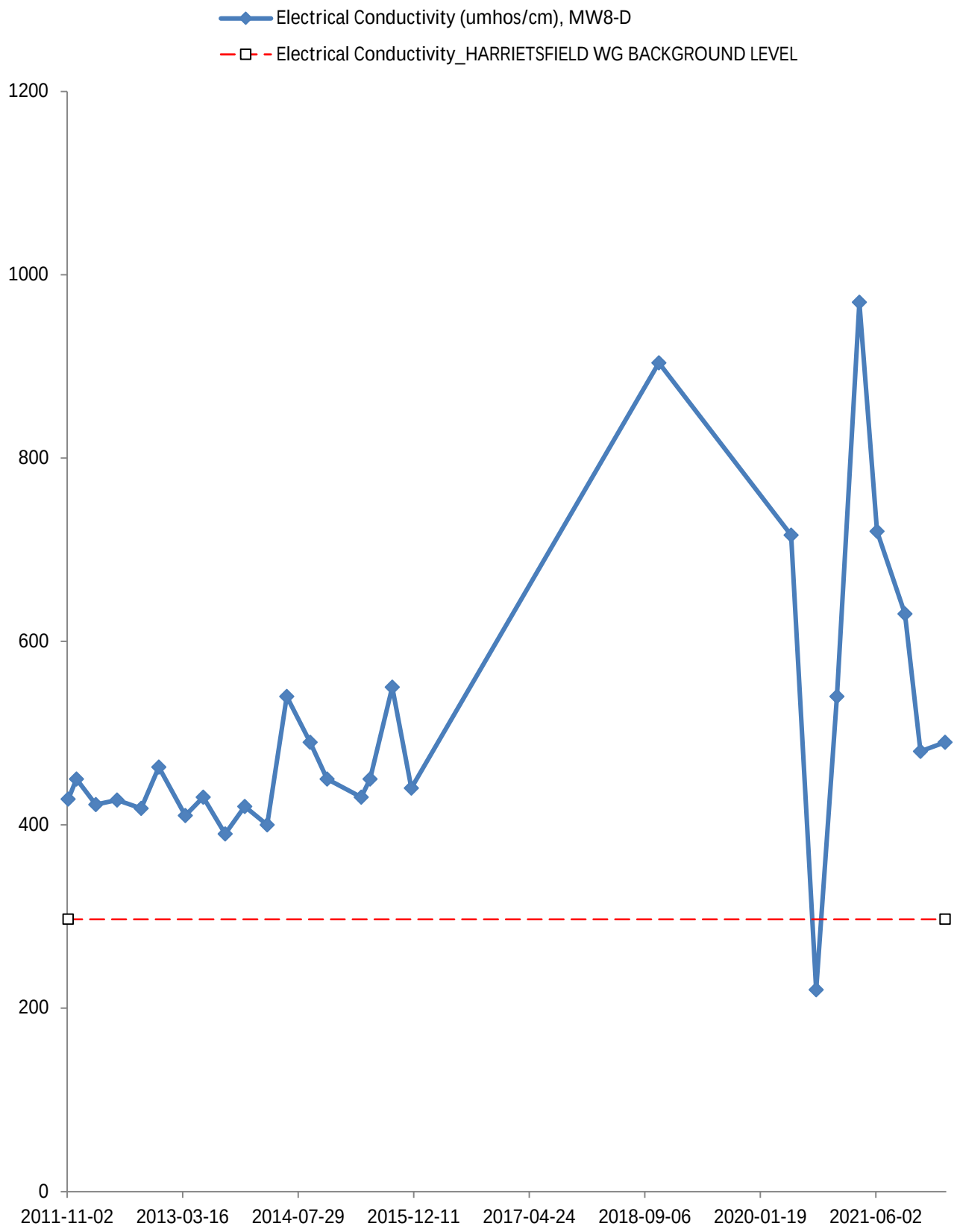
MW8-D-Copper


Copper (ug/l), MW8-D
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
8
7
6
5
4
3
2
1
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

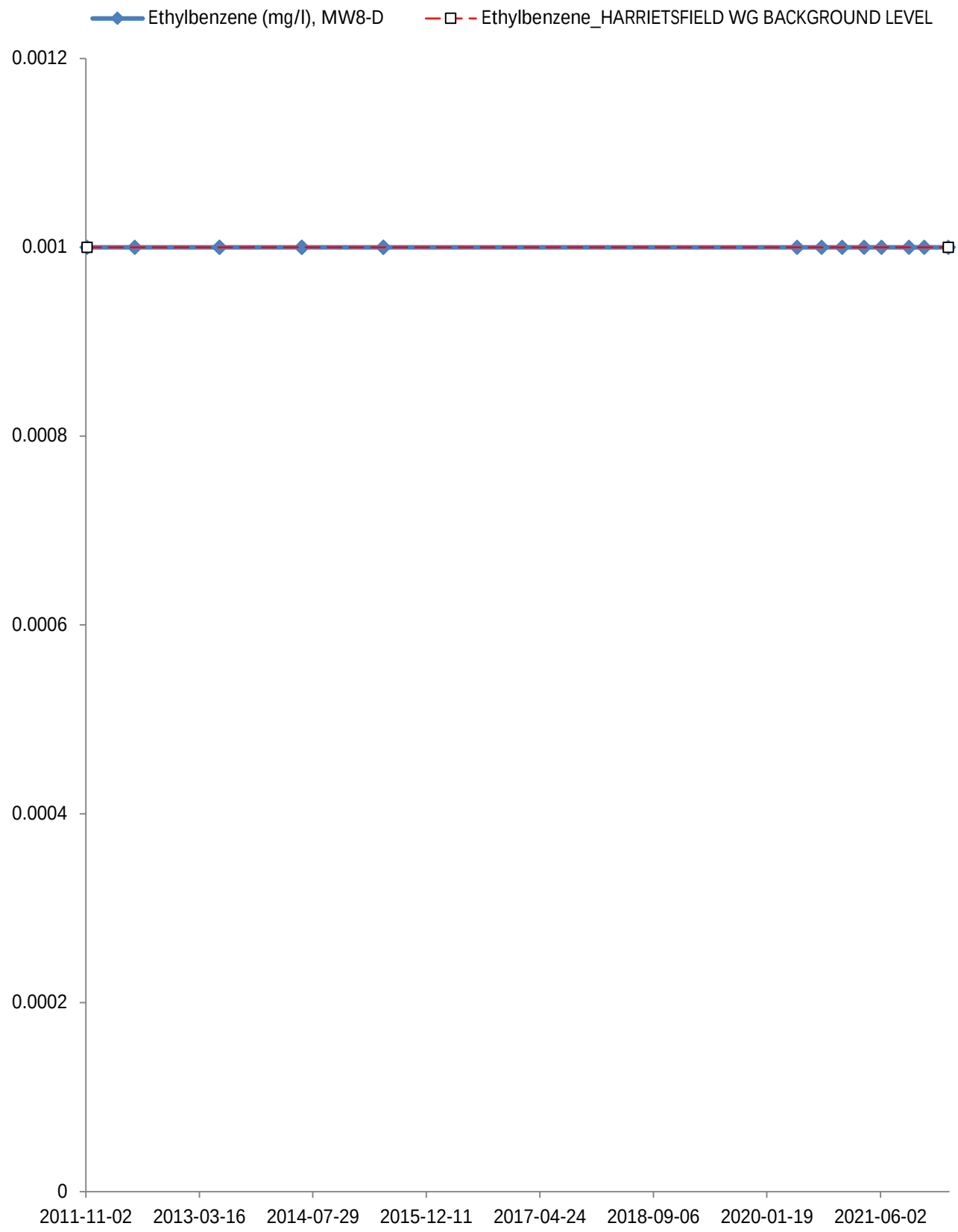
MW8-D-Dissolved Organic Carbon7



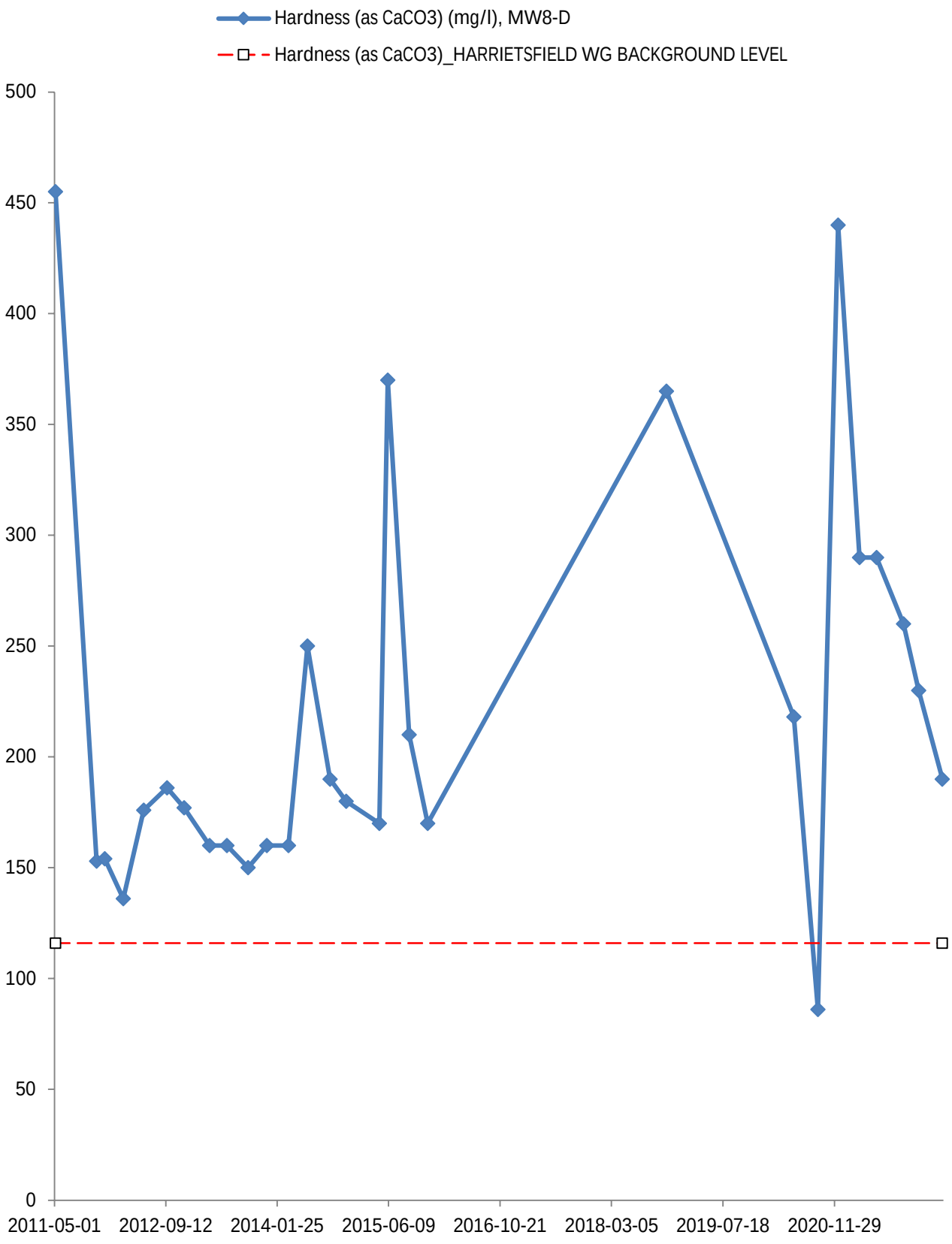
MW8-D-Electrical Conductivity



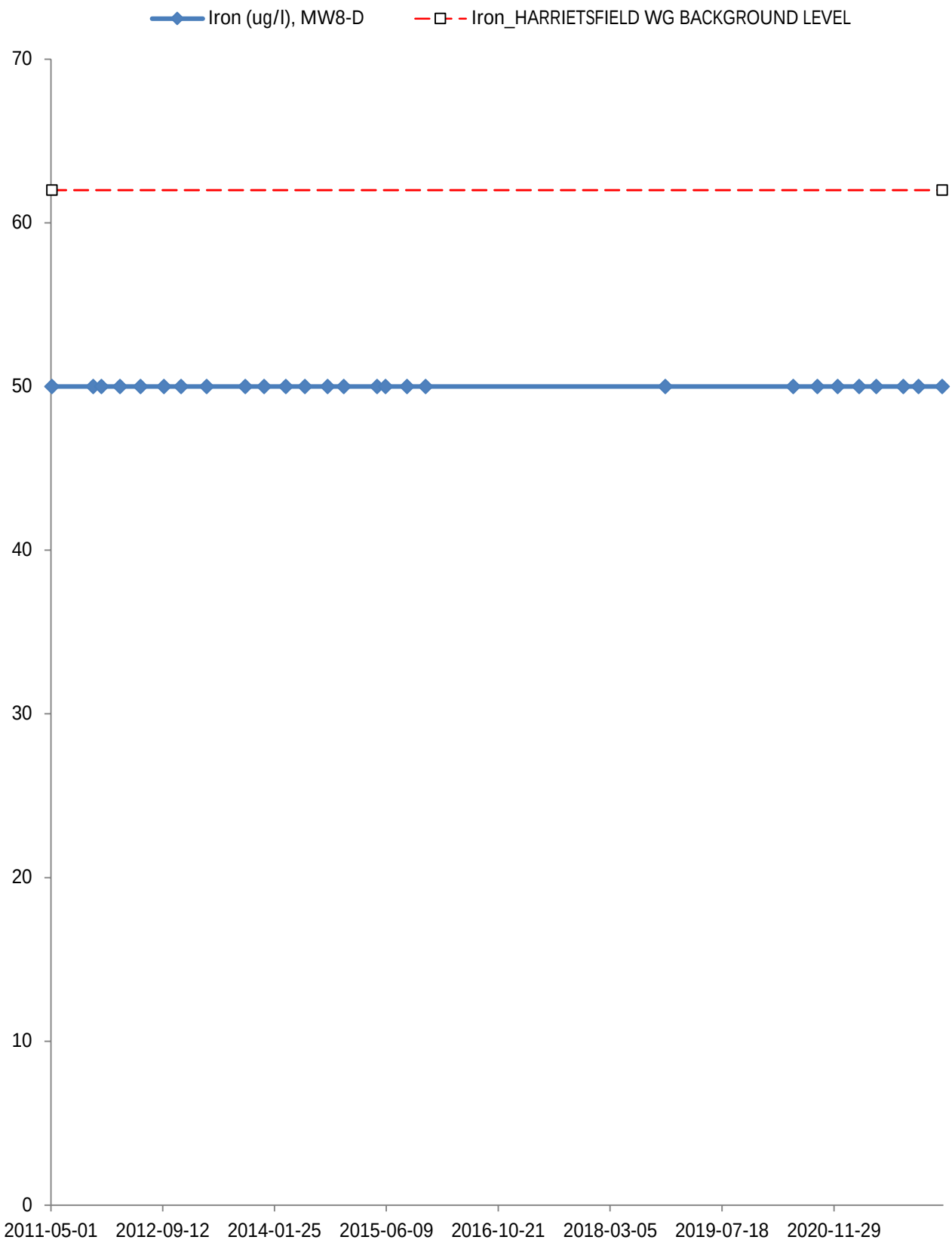
MW8-D-Ethylbenzene



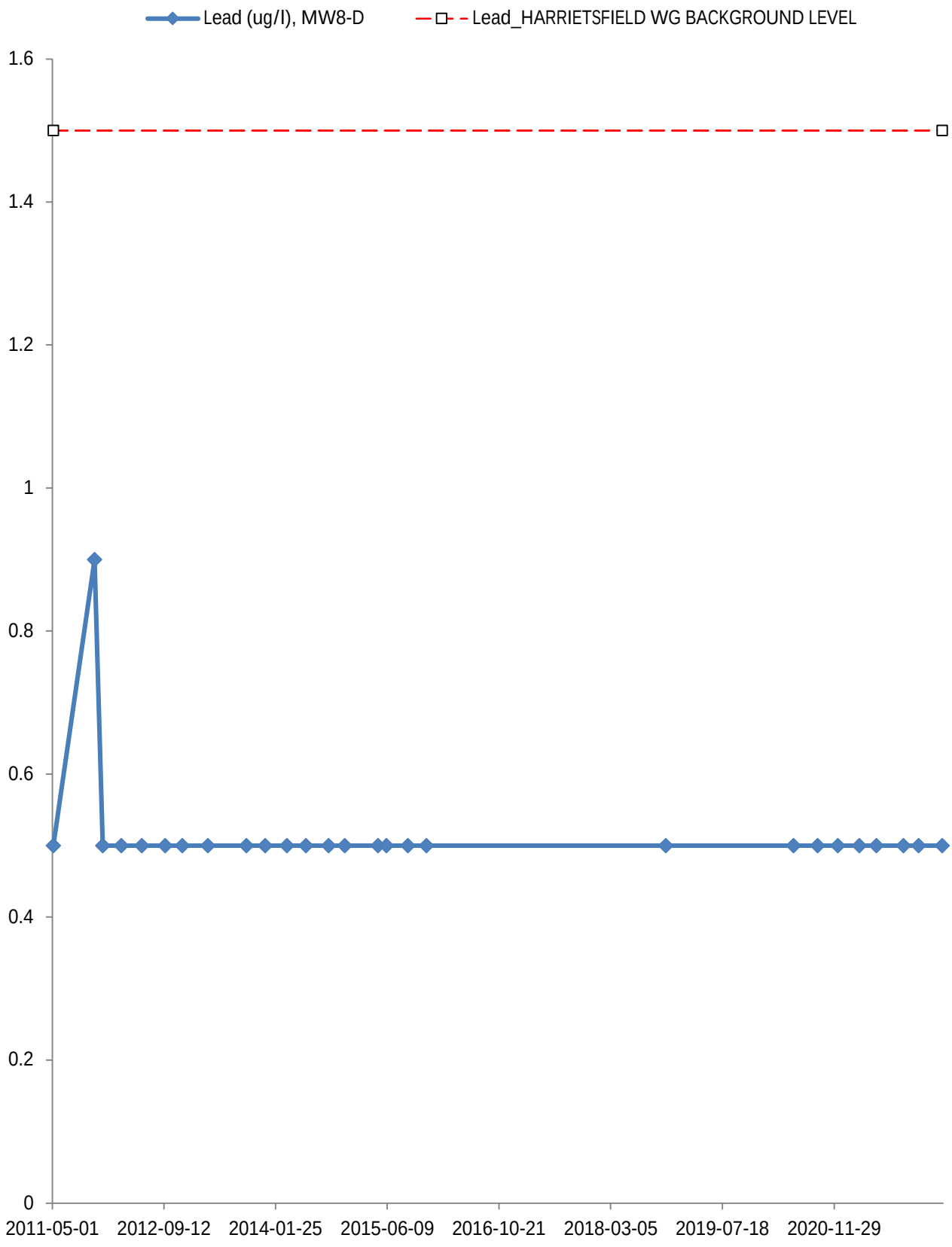
MW8-D-Hardness (as CaCO3)



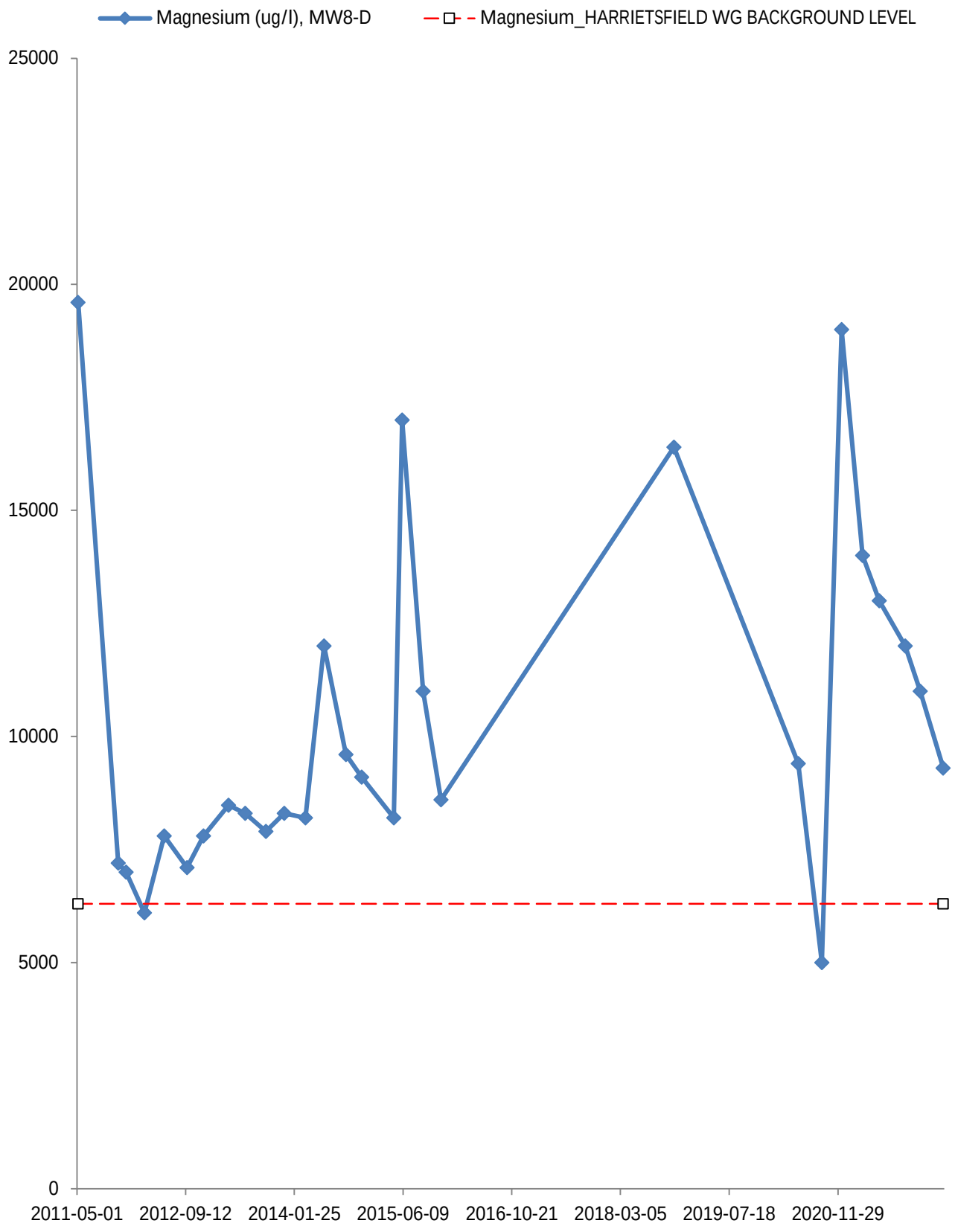
MW8-D-Iron


Iron (ug/l), MW8-D
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

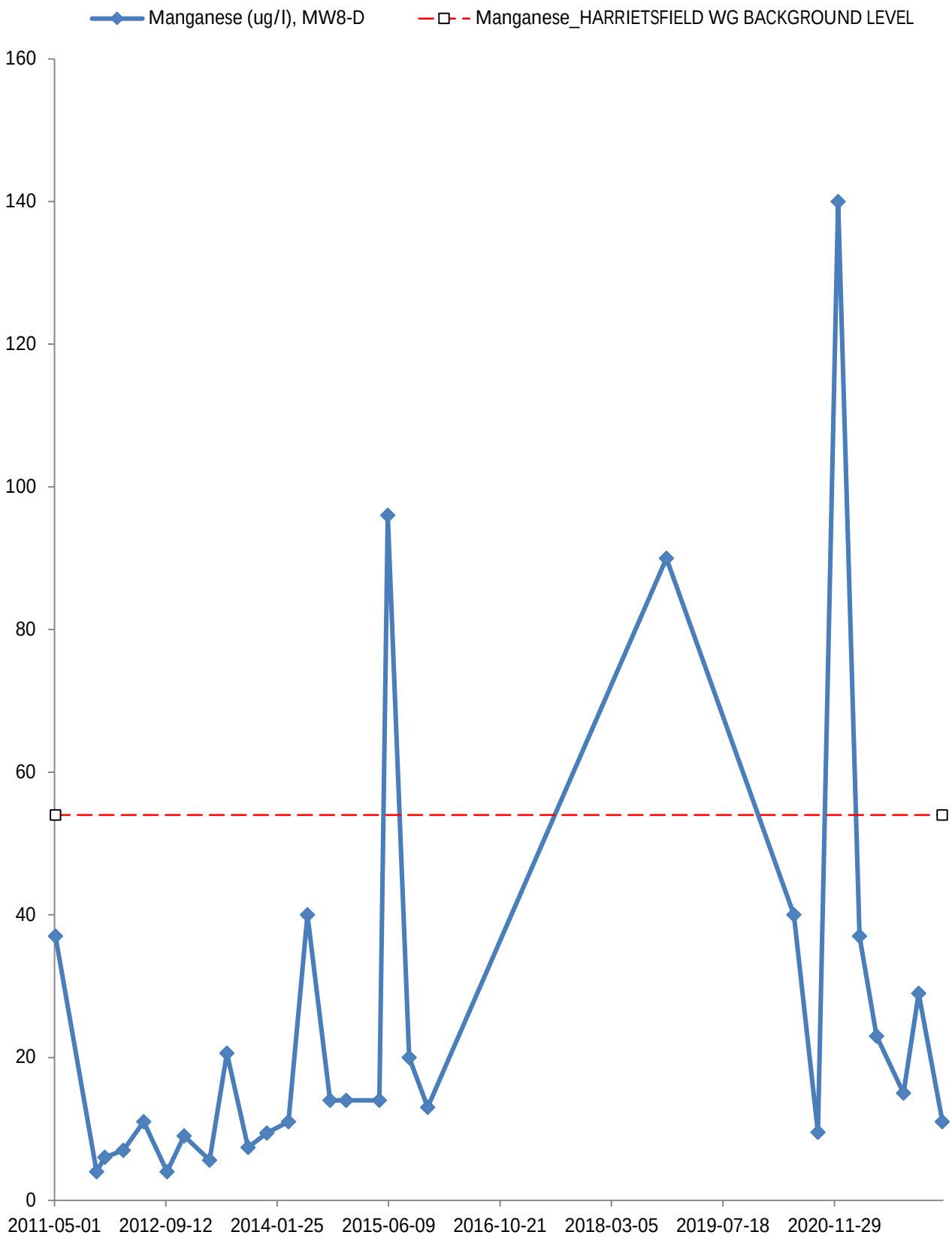
MW8-D-Lead


Lead (ug/l), MW8-D
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

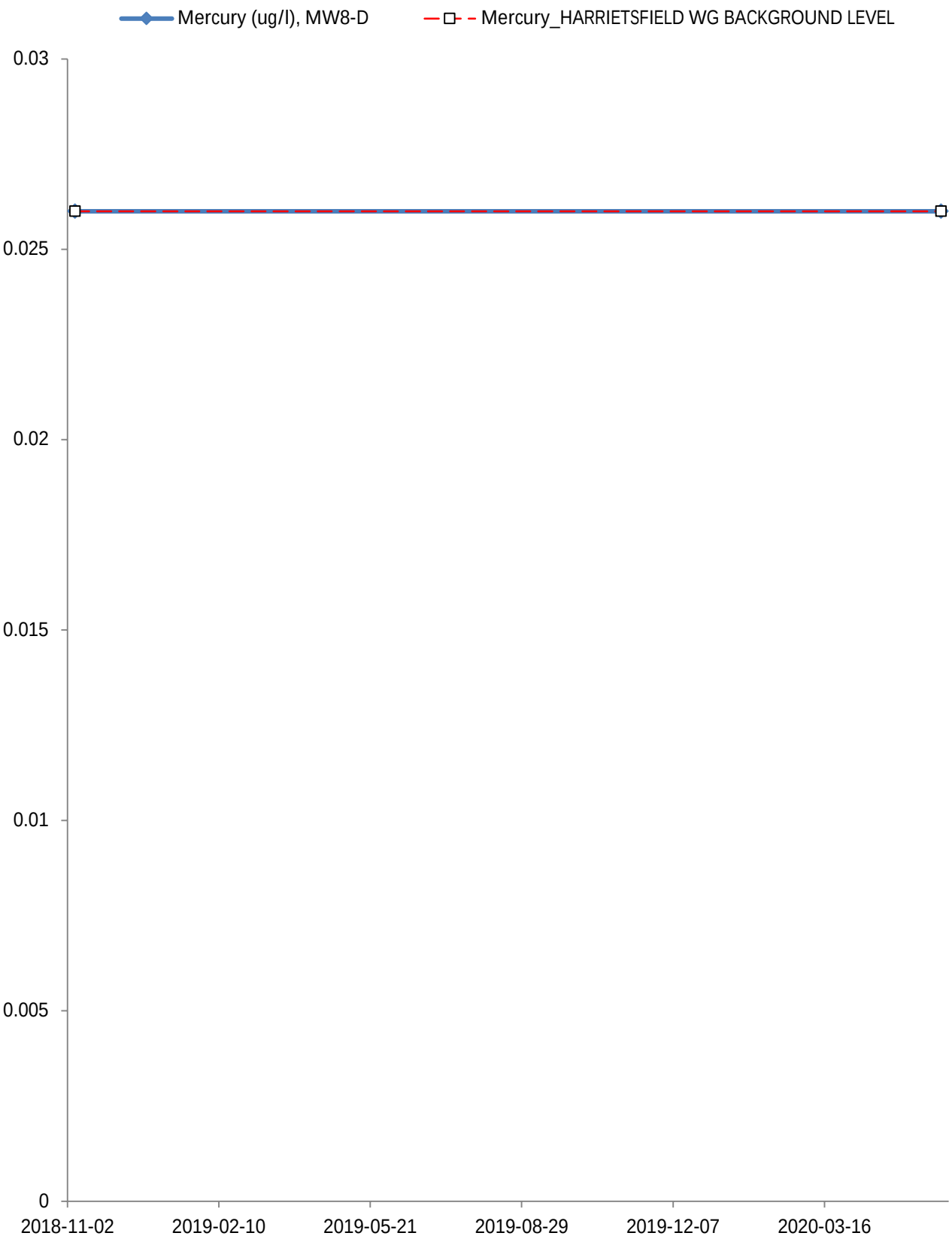
MW8-D-Magnesium



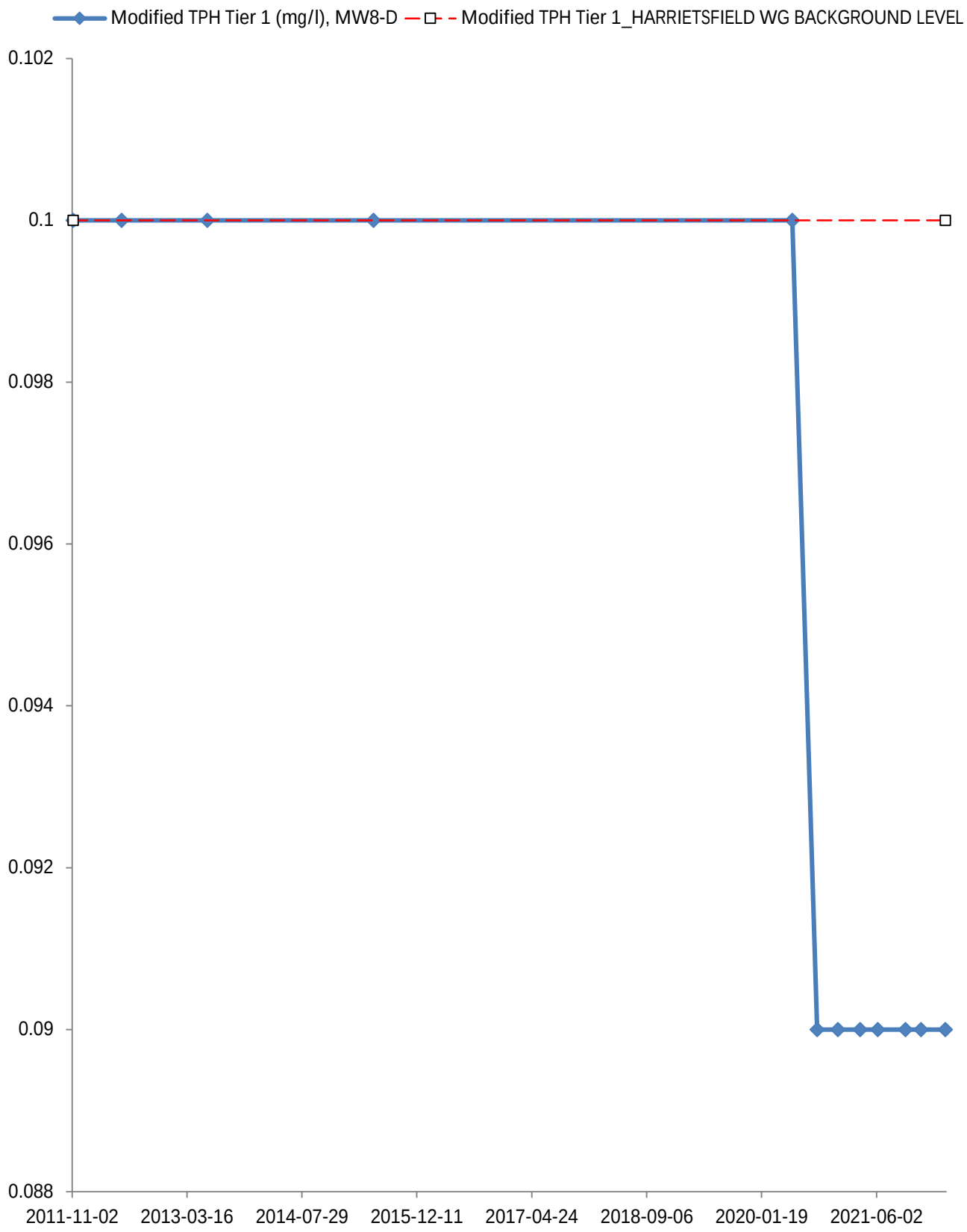
MW8-D-Manganese



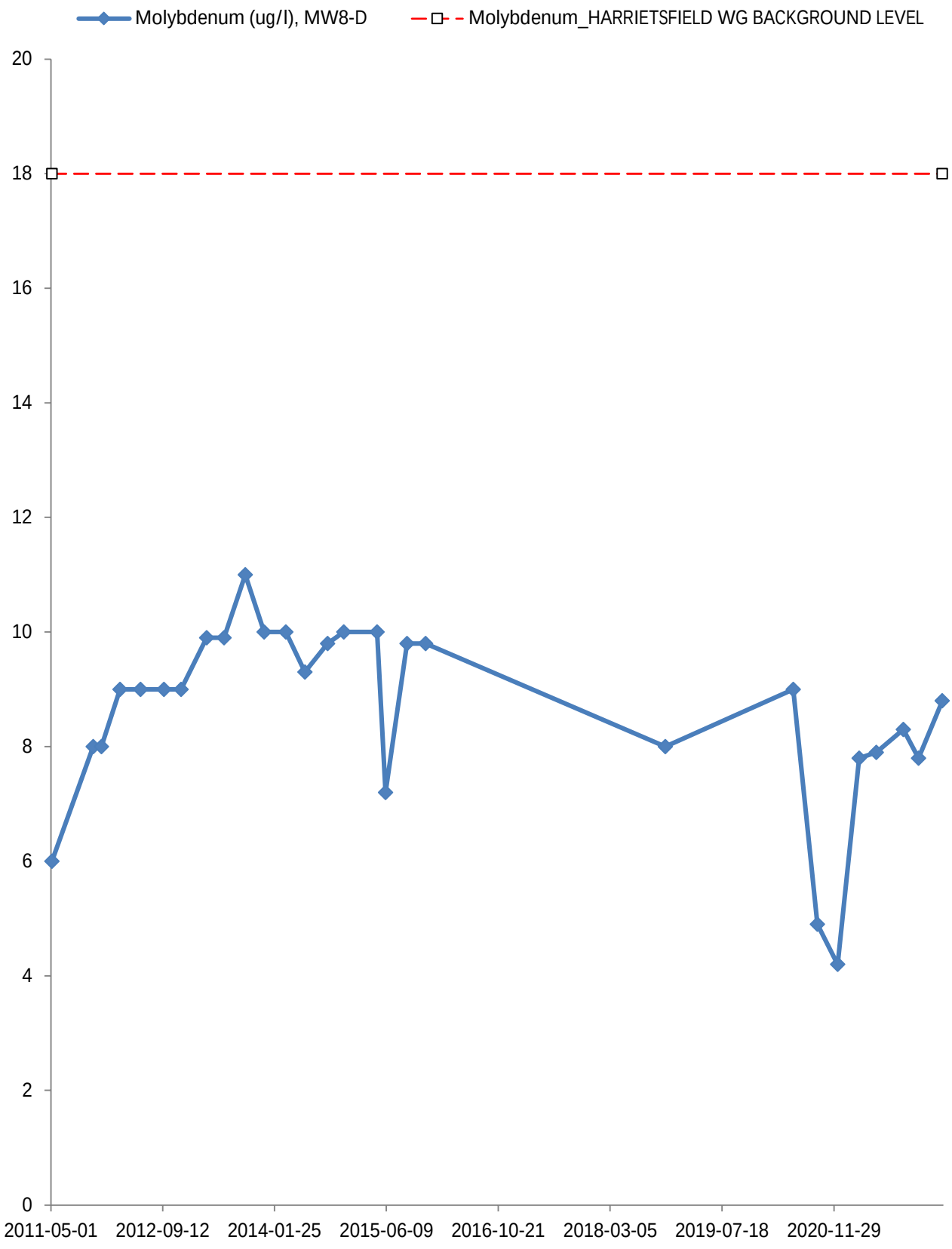
MW8-D-Mercury



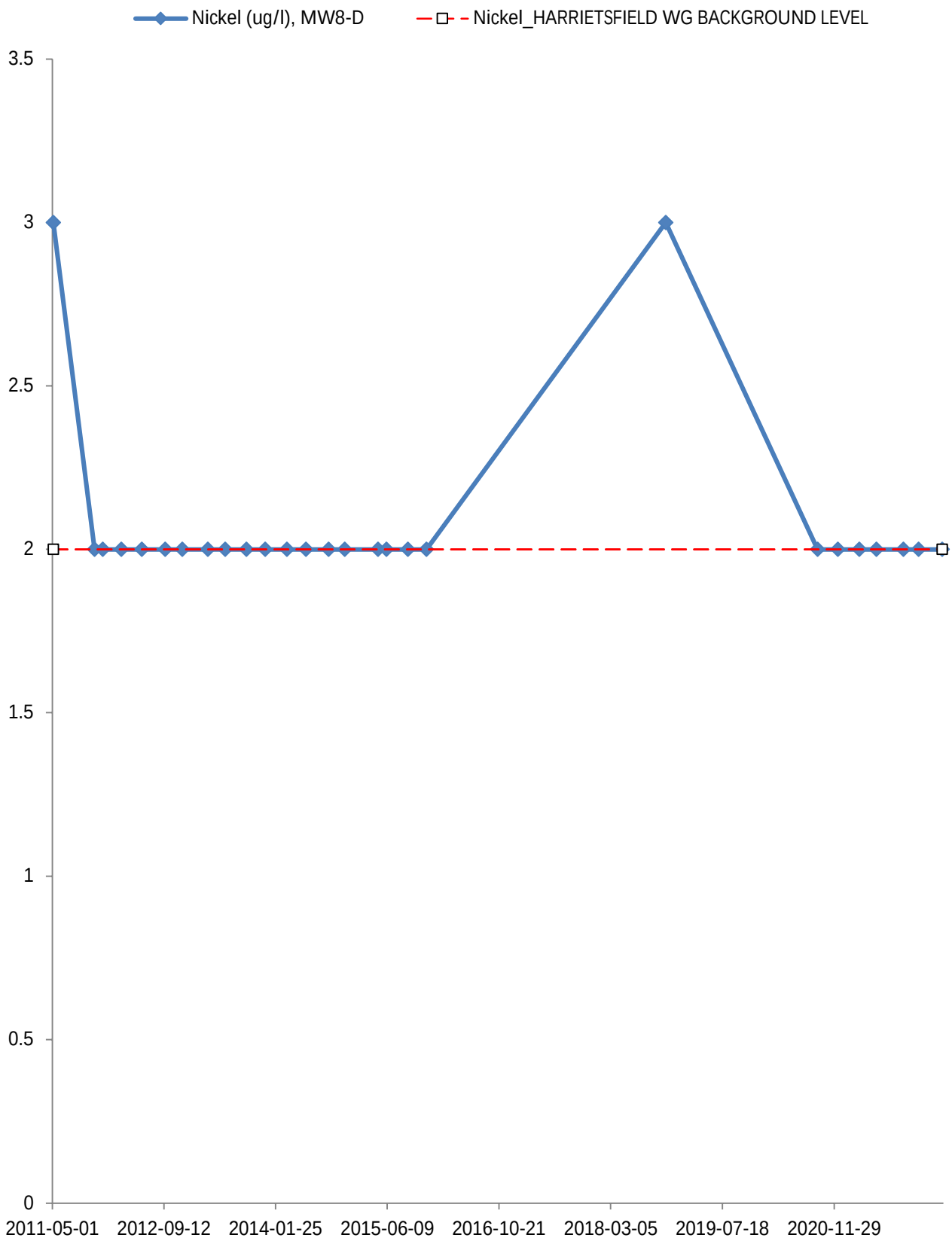
MW8-D-Modified TPH Tier 1



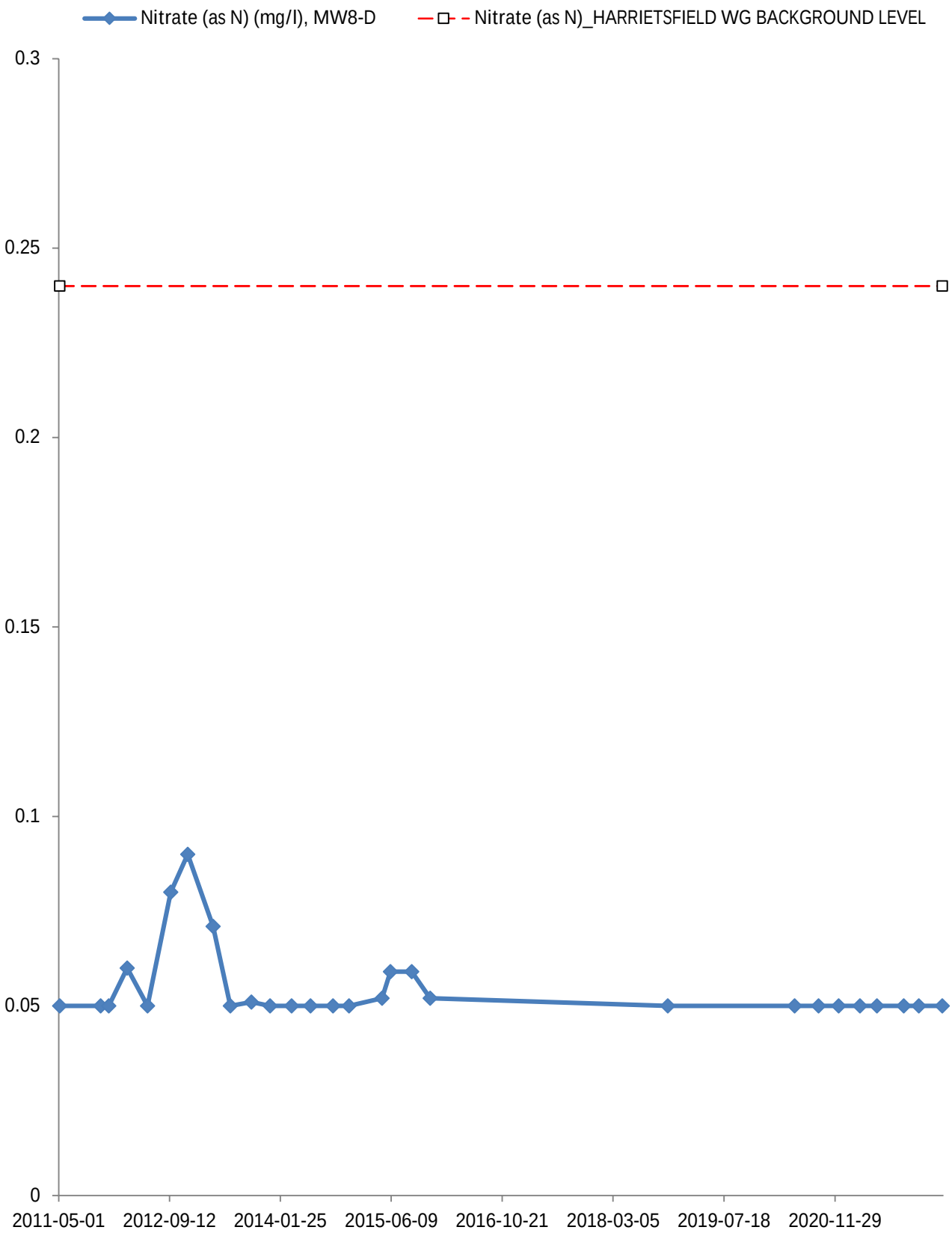
MW8-D-Molybdenum



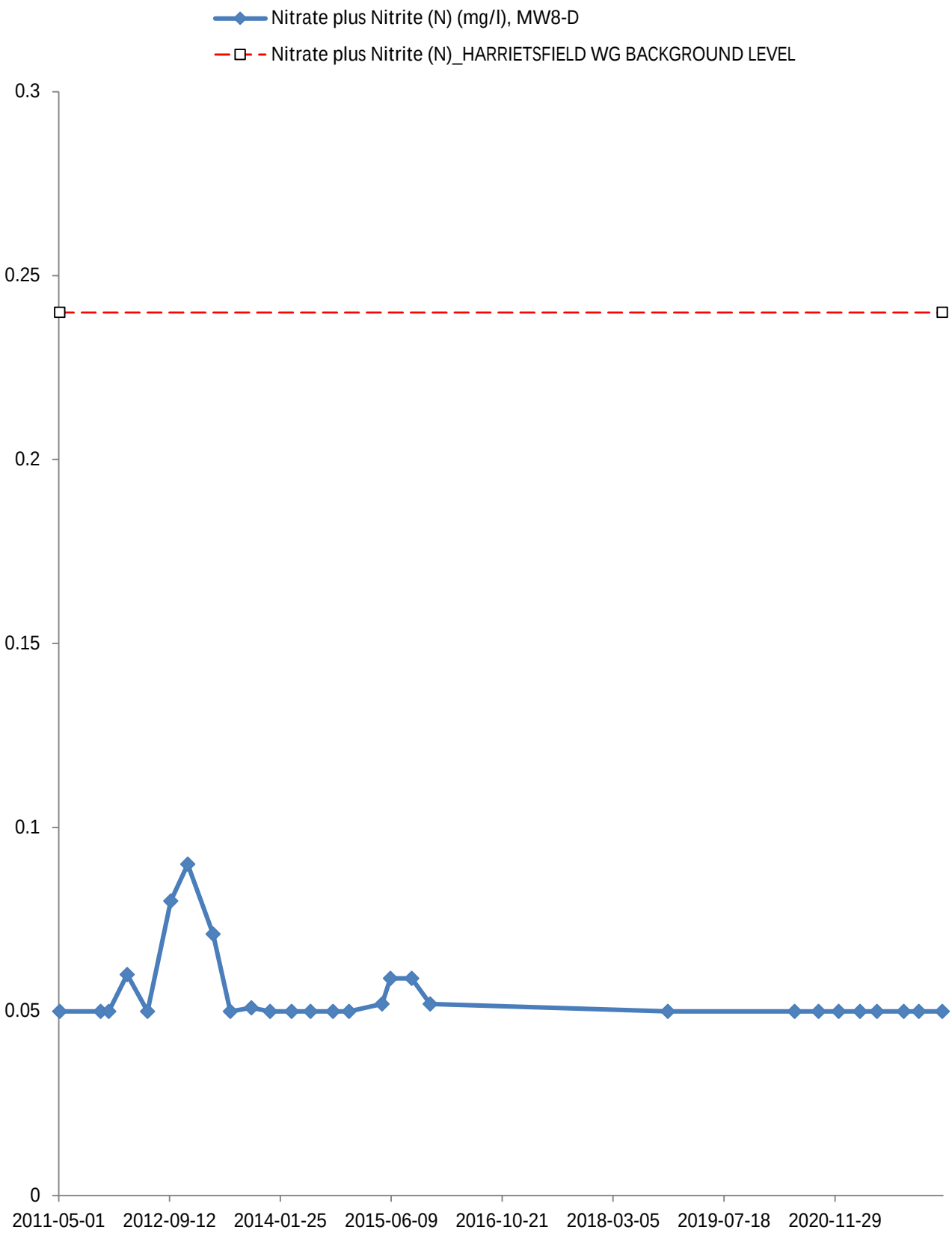
MW8-D-Nickel


Nickel (ug/l), MW8-D
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
3.5
3
2.5
2
1.5
1
0.5
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

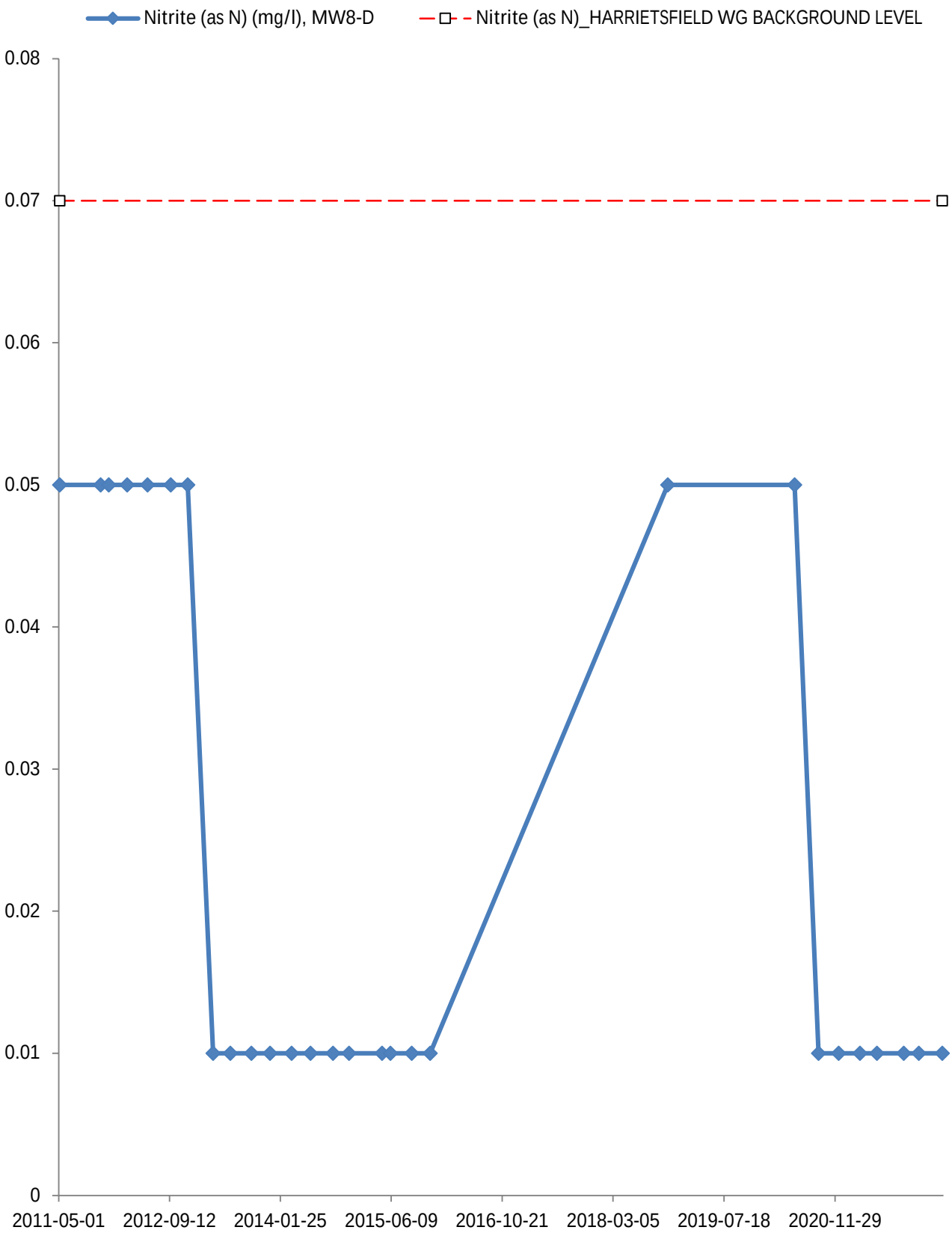
MW8-D-Nitrate (as N)



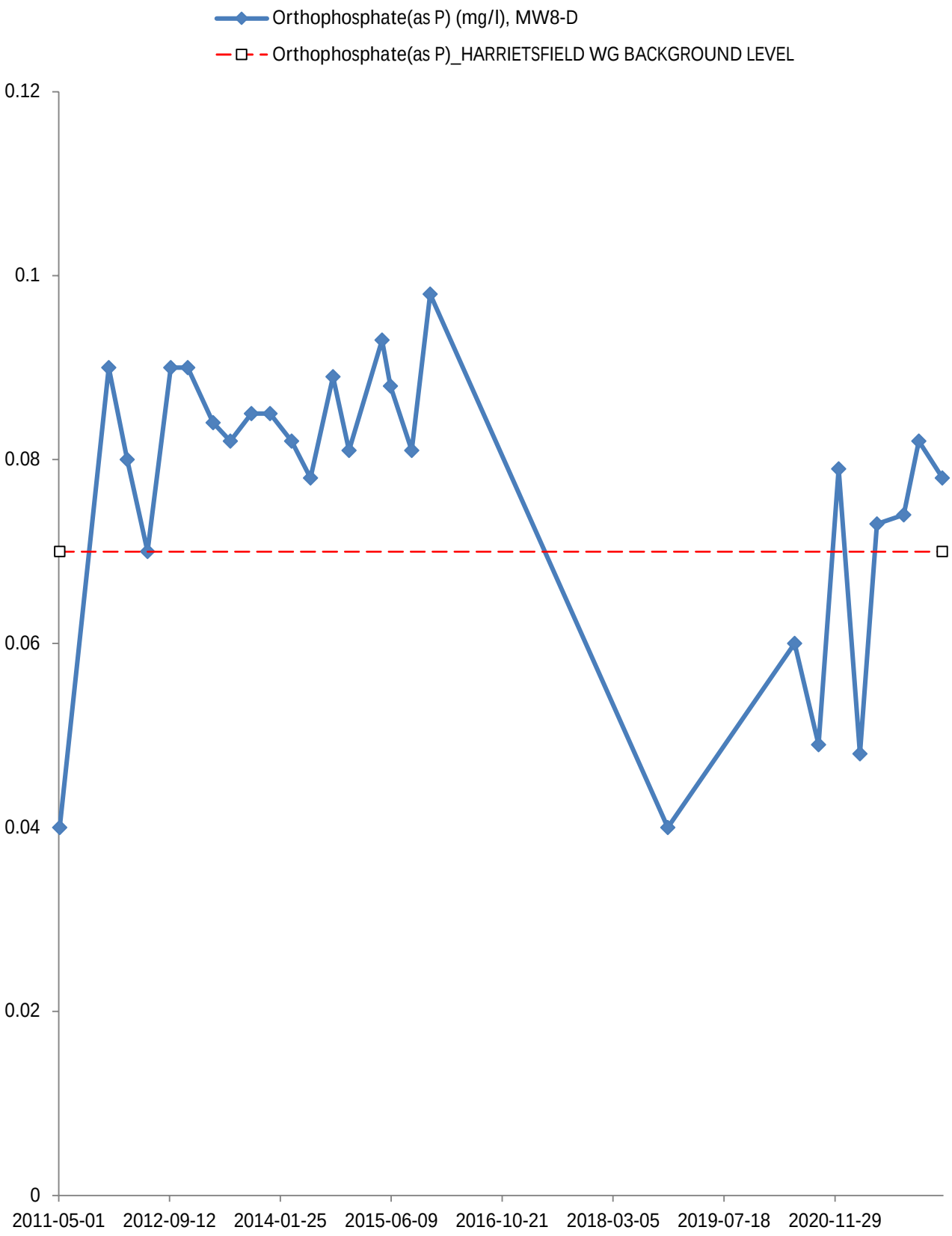
MW8-D-Nitrate plus Nitrite (N)



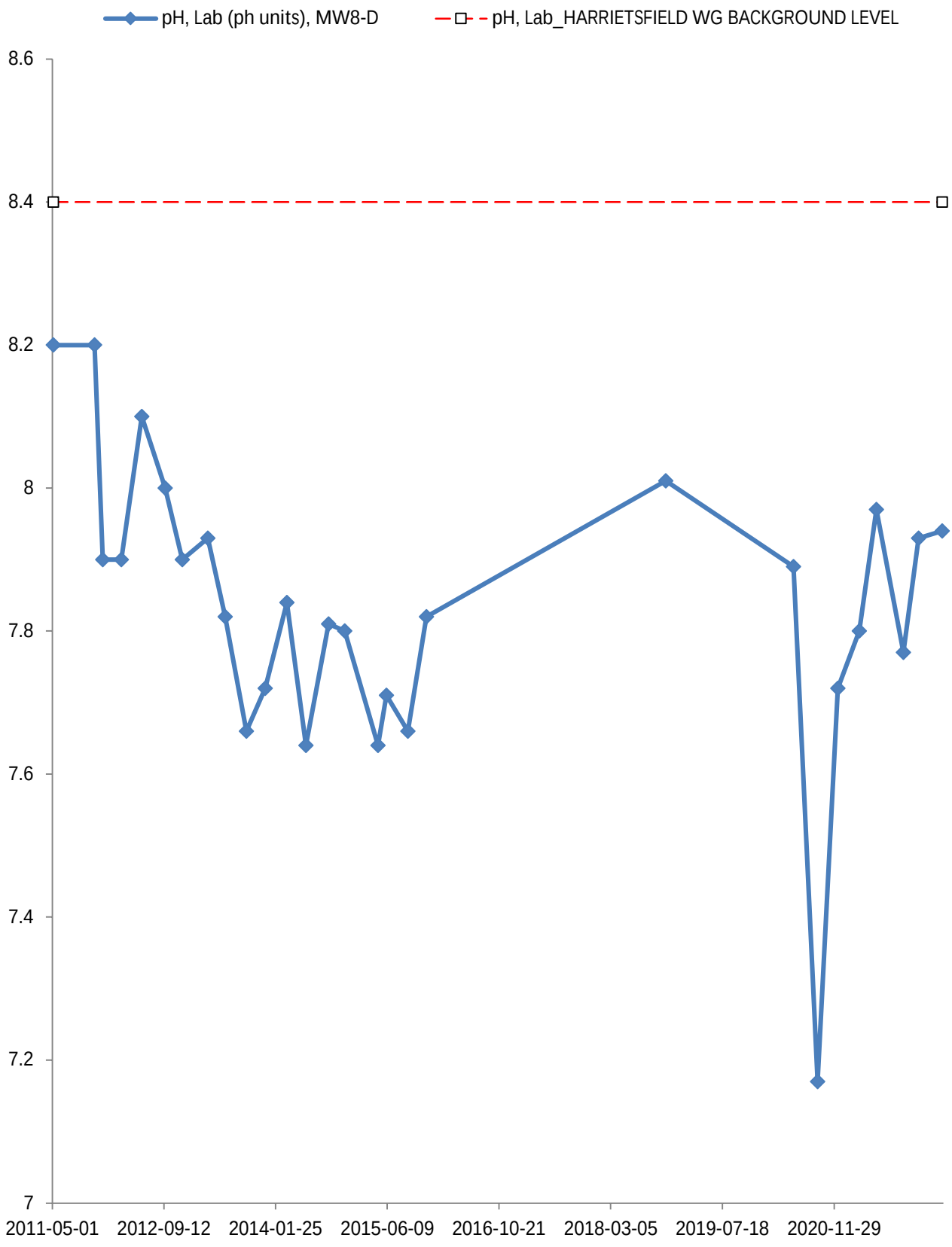
MW8-D-Nitrite (as N)



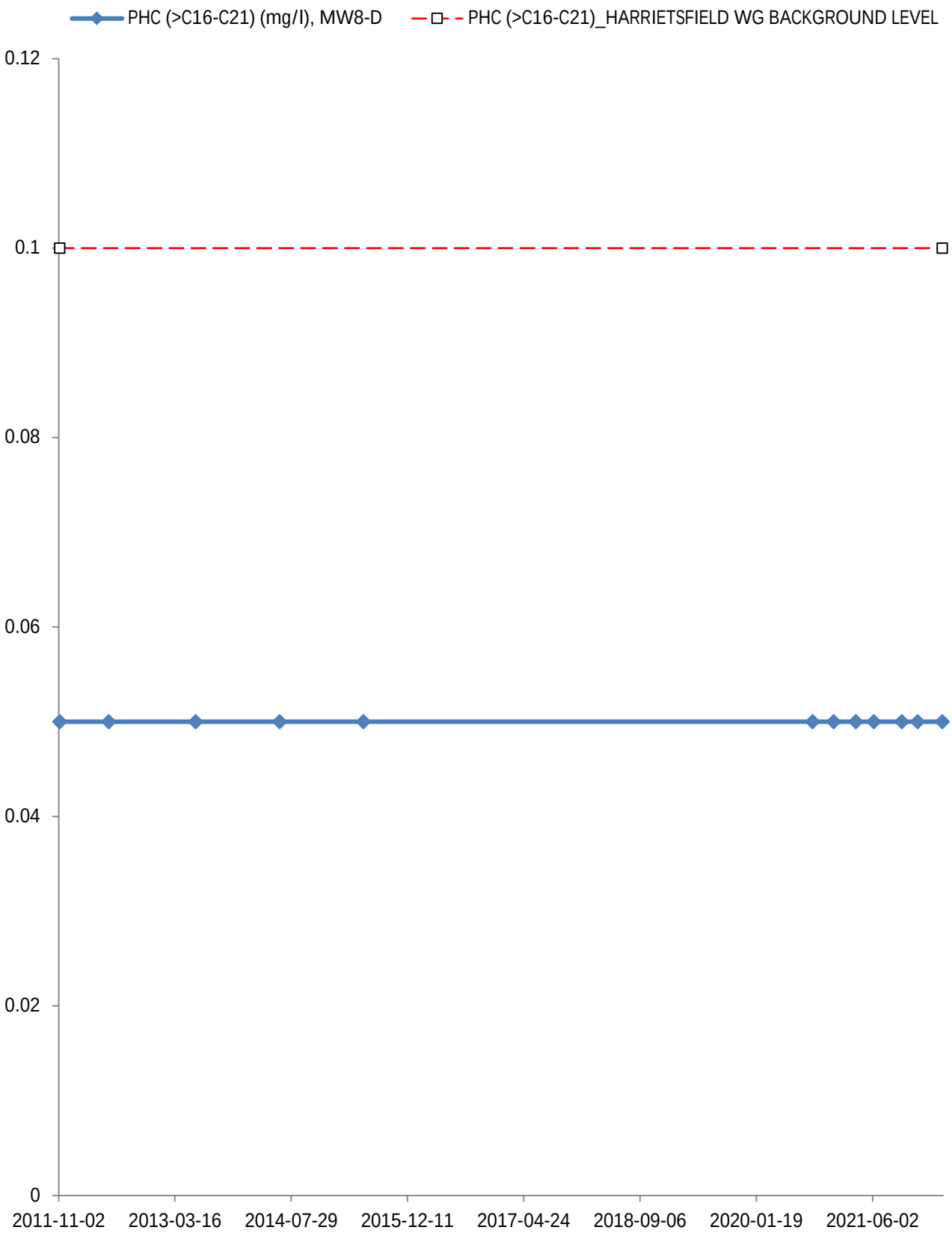
MW8-D-Orthophosphate(as P)



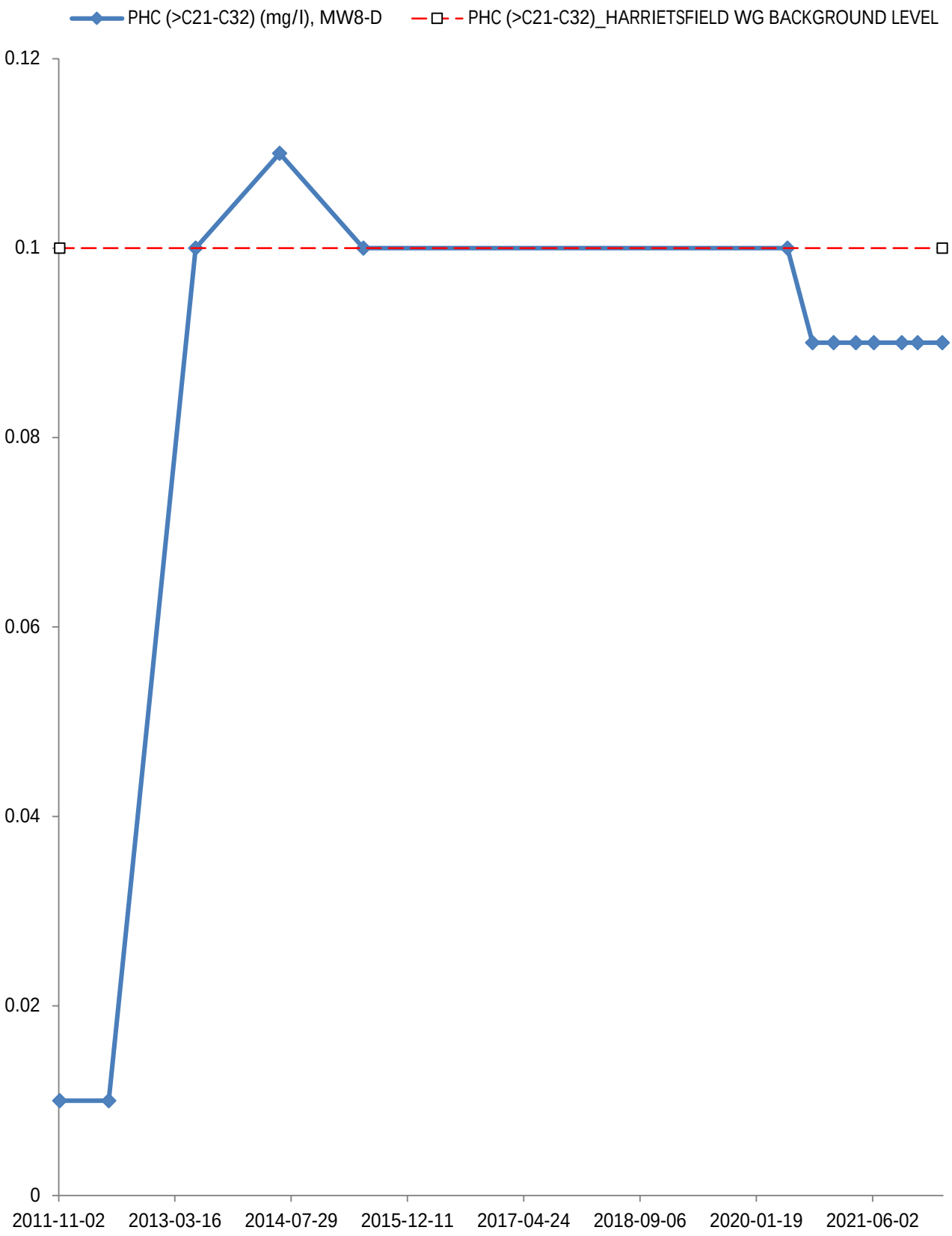
MW8-D-pH, Lab


pH, Lab (ph units), MW8-D
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
7
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

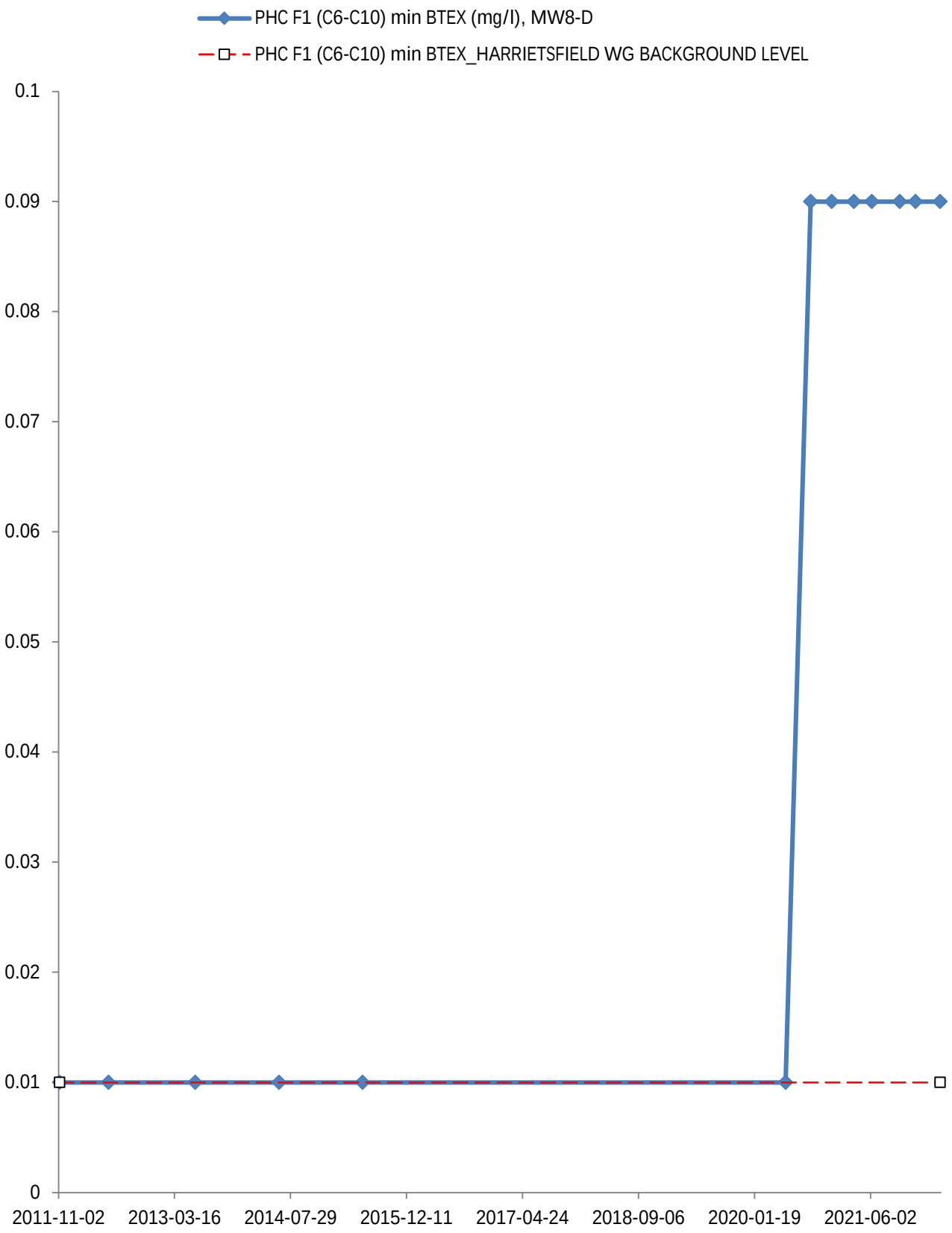
MW8-D-PHC (>C16-C21)



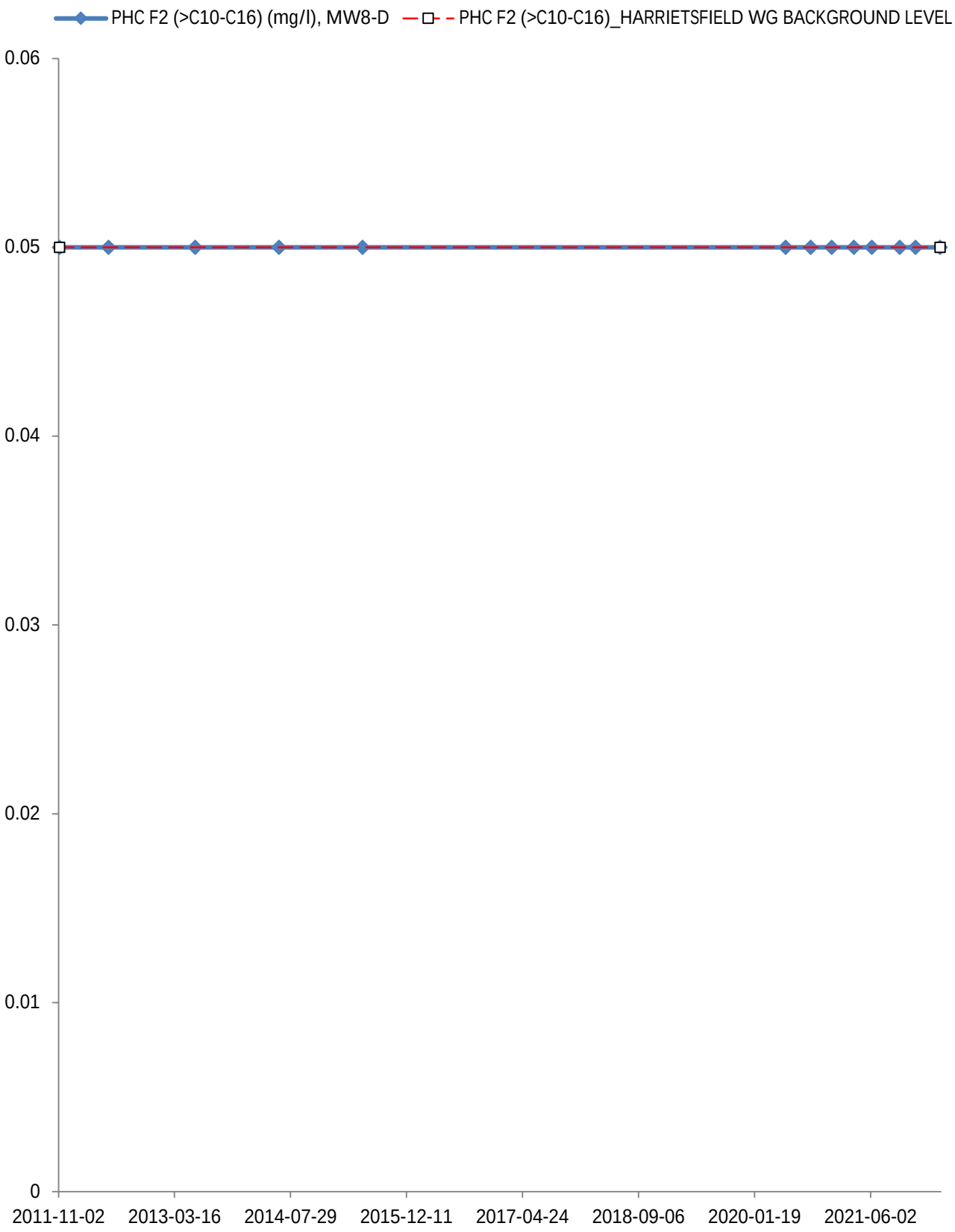
MW8-D-PHC (>C21-C32)



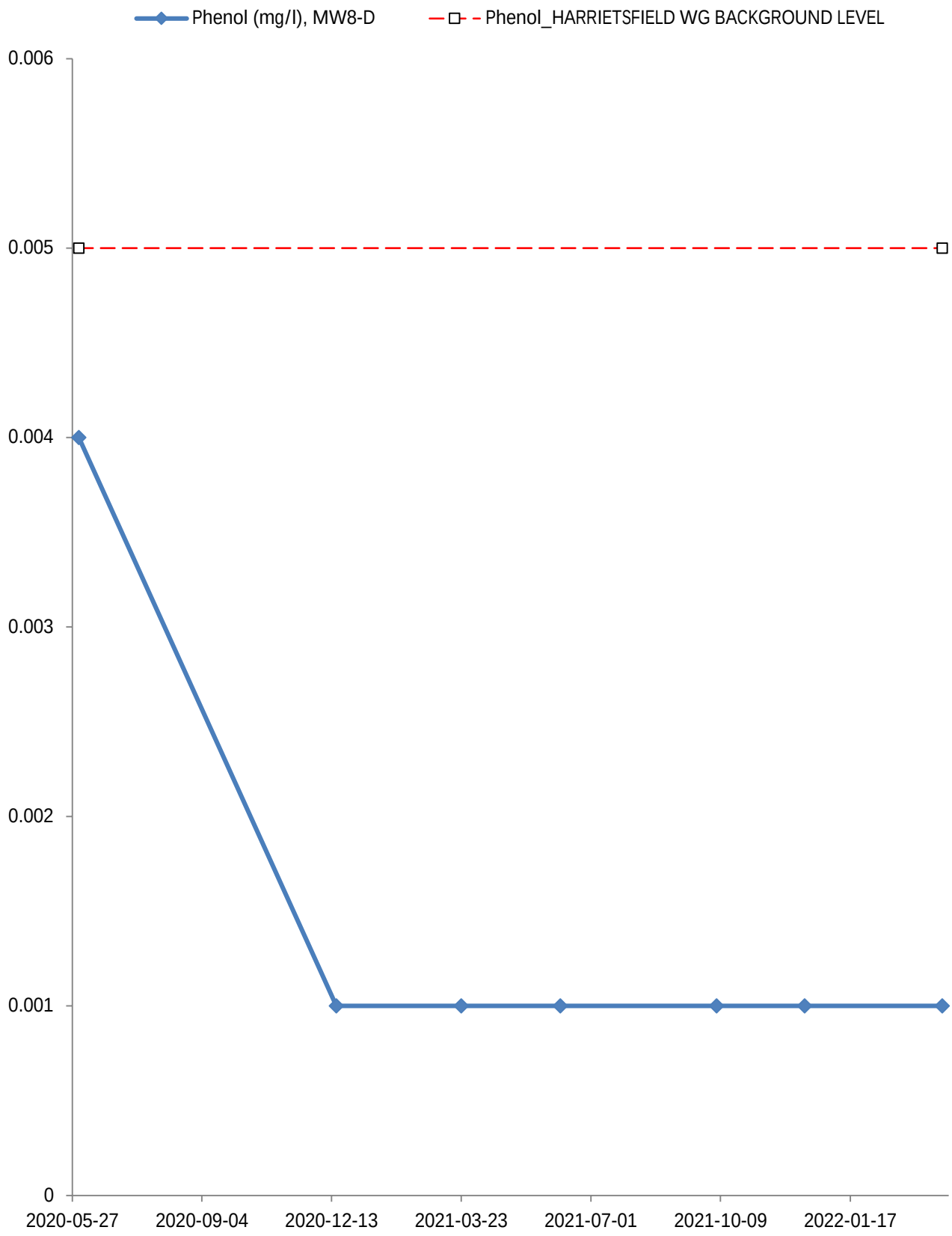
MW8-D-PHC F1 (C6-C10) min BTEX



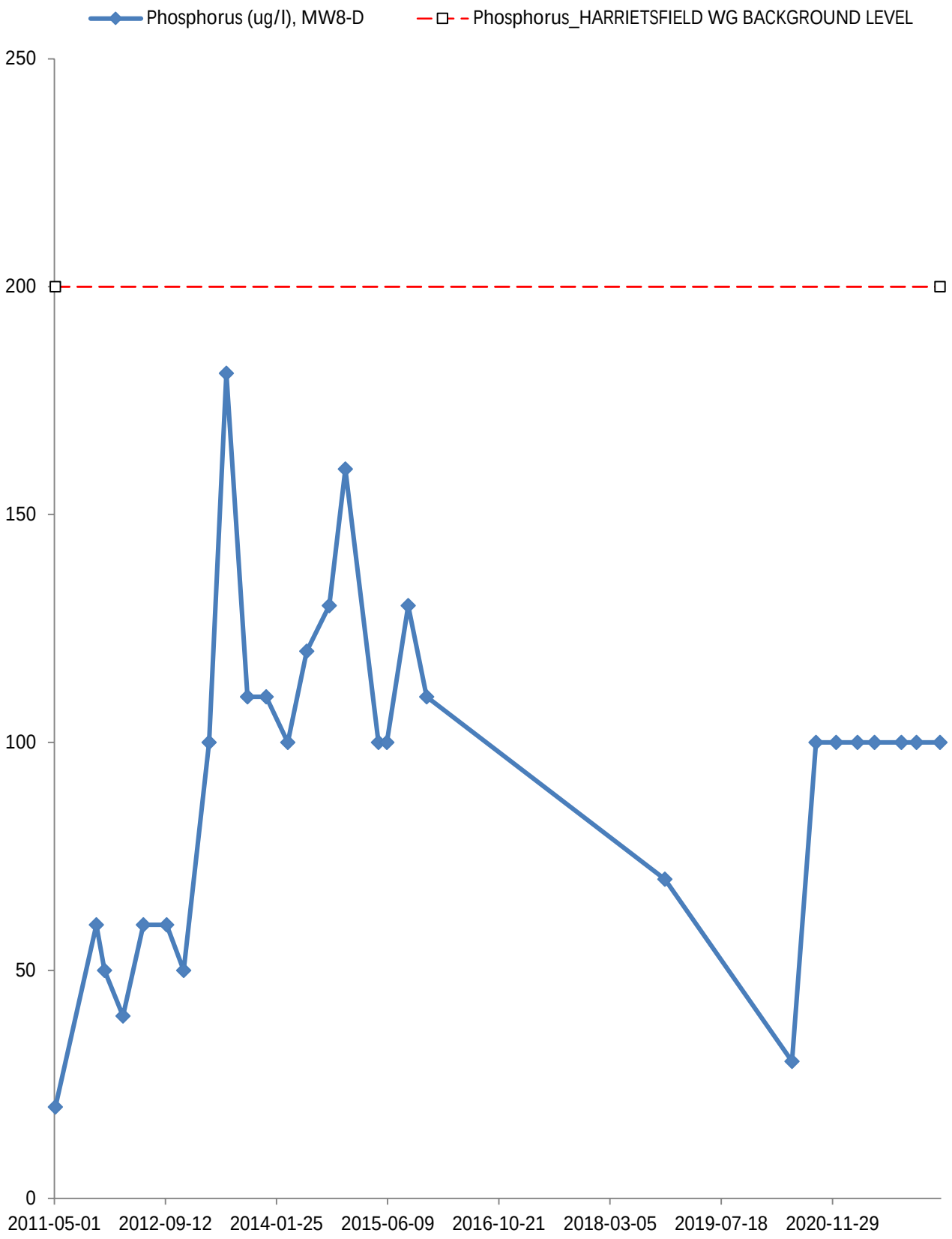
MW8-D-PHC F2 (>C10-C16)



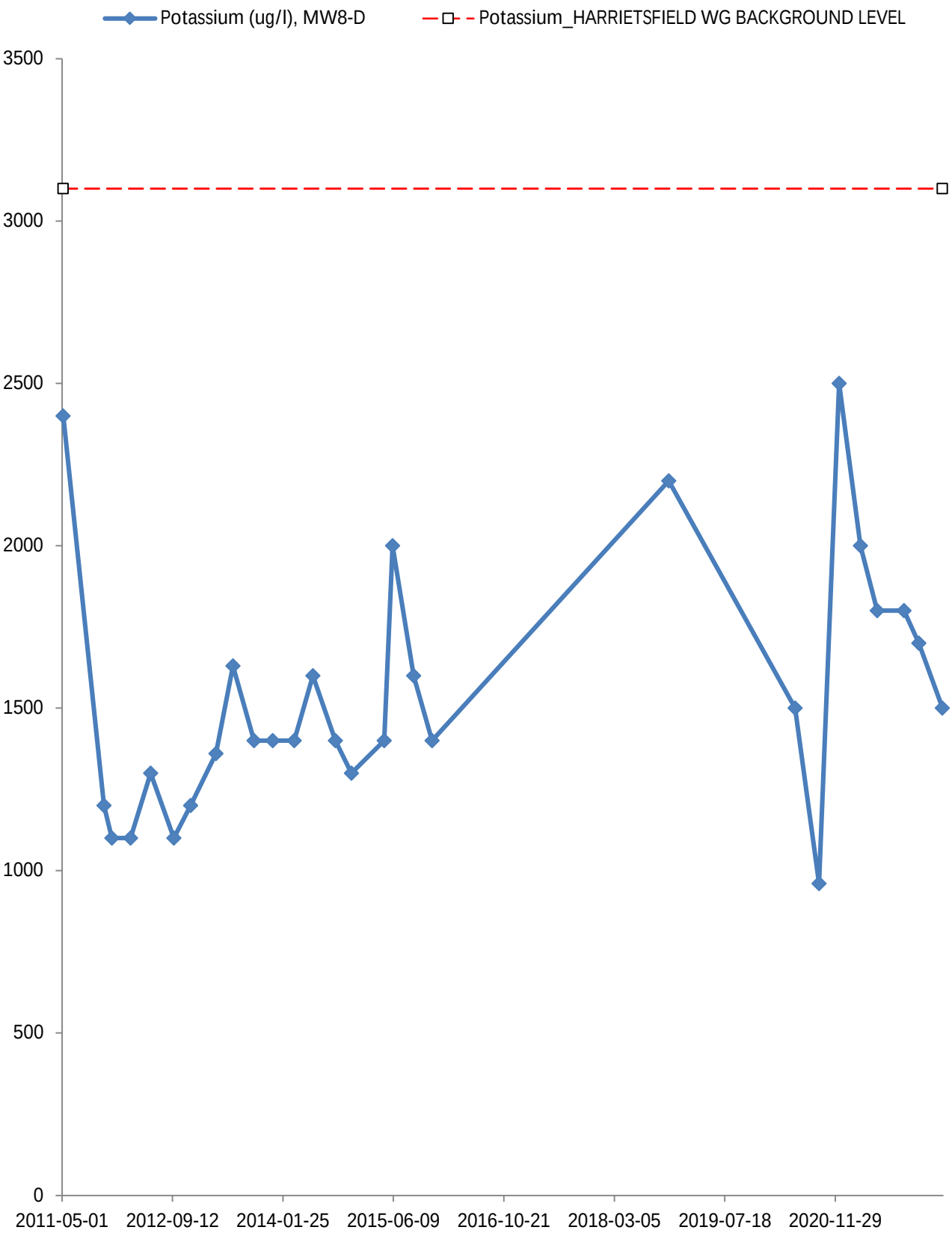
MW8-D-Phenol


Phenol (mg/l), MW8-D
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

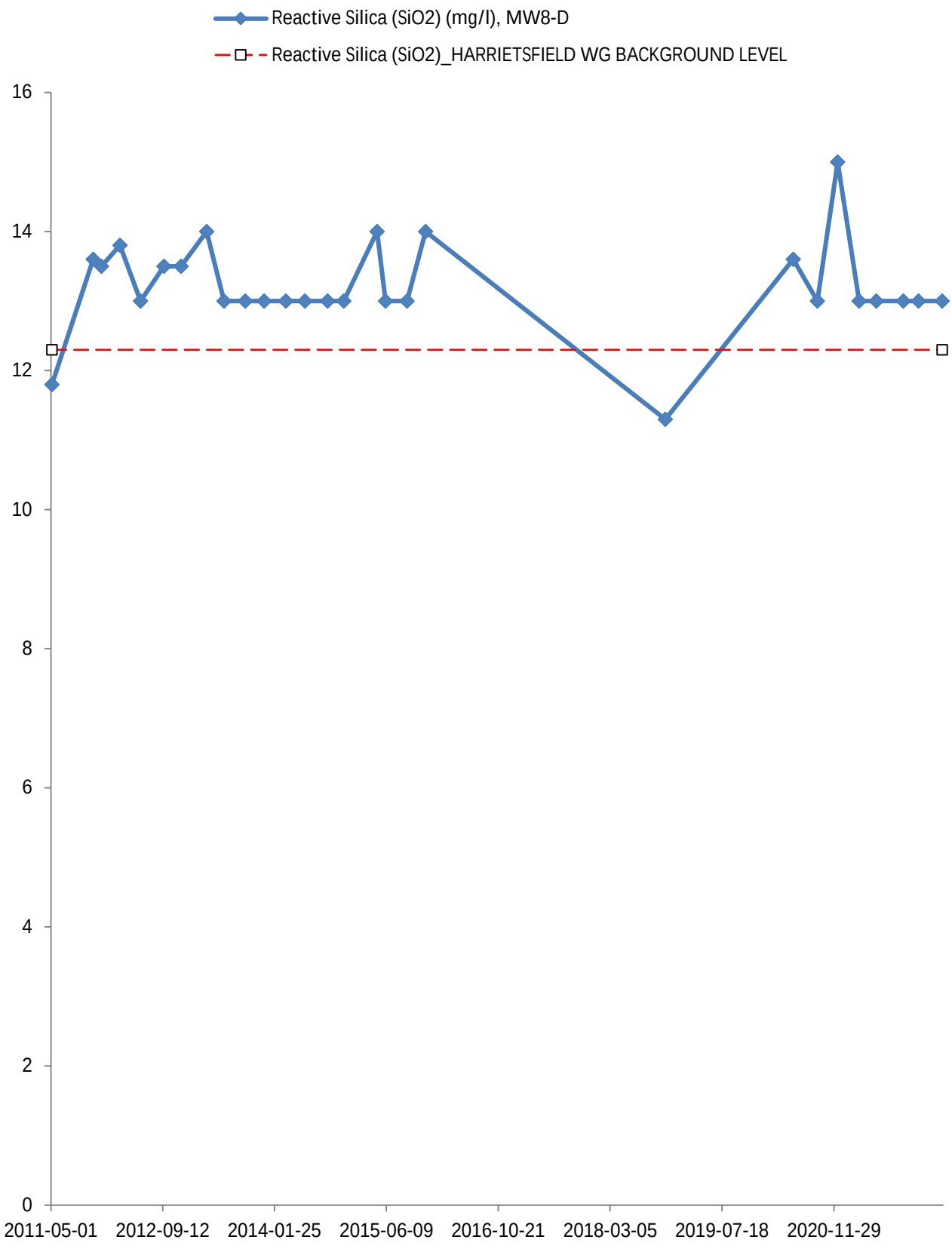
MW8-D-Phosphorus



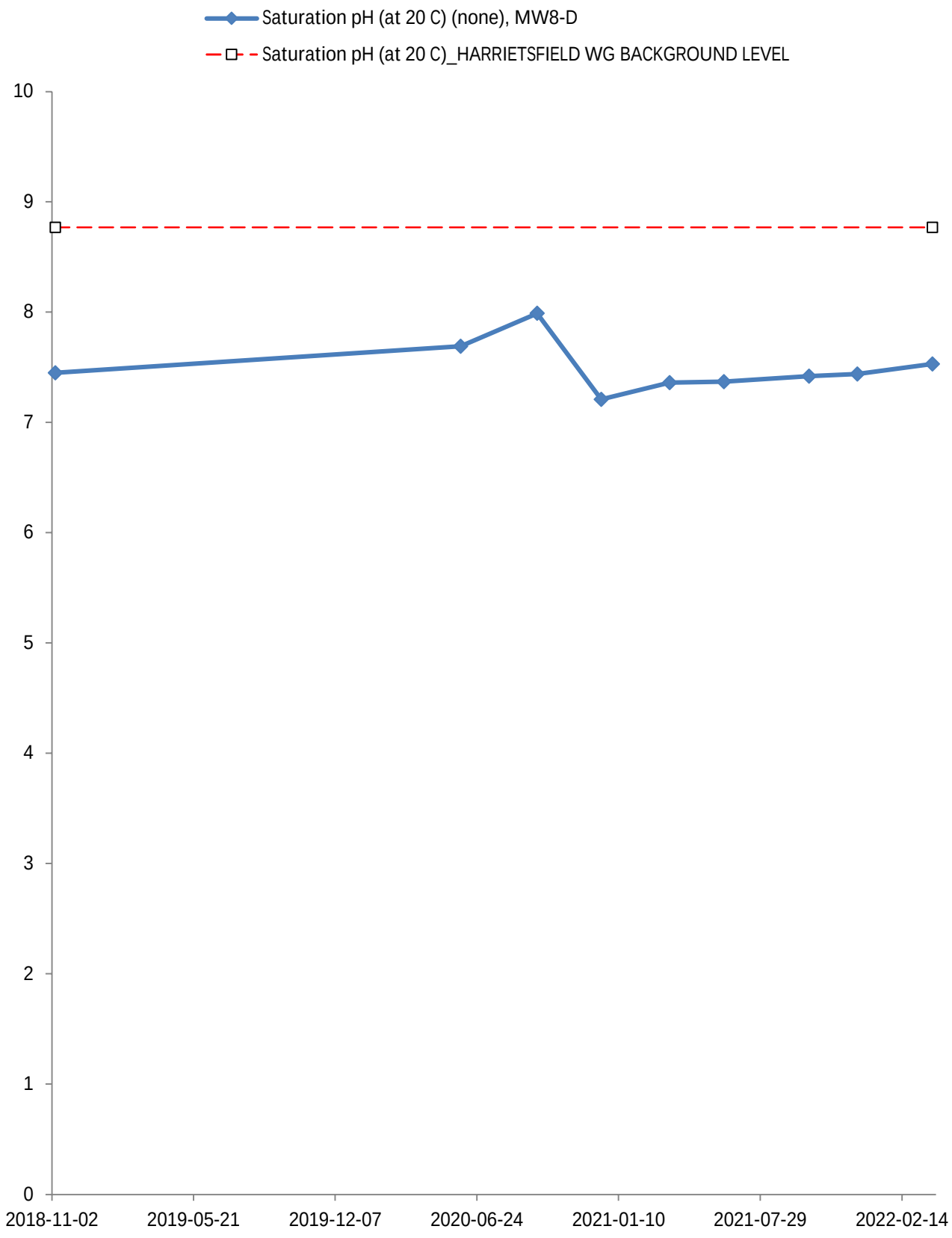
MW8-D-Potassium



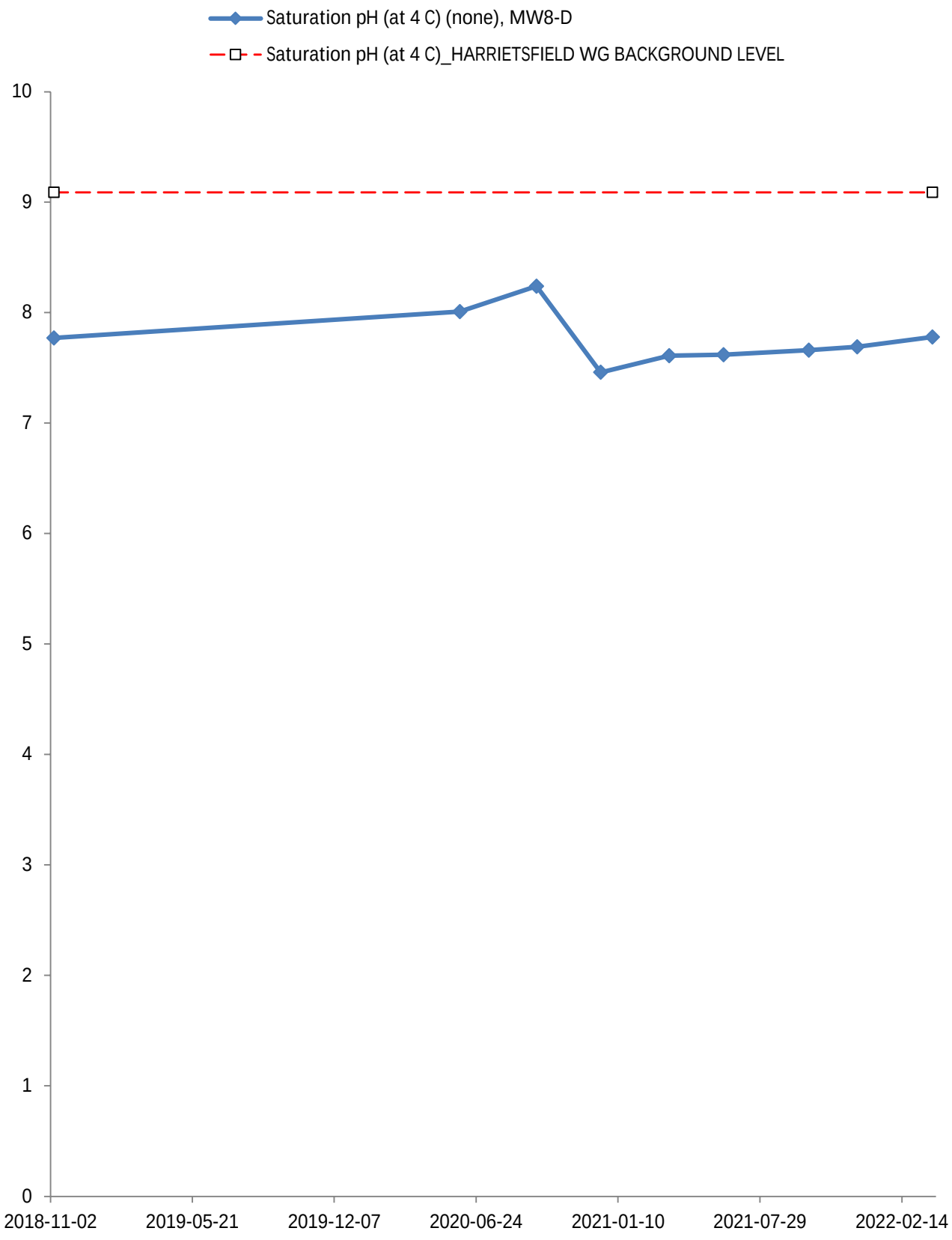
MW8-D-Reactive Silica (SiO2)



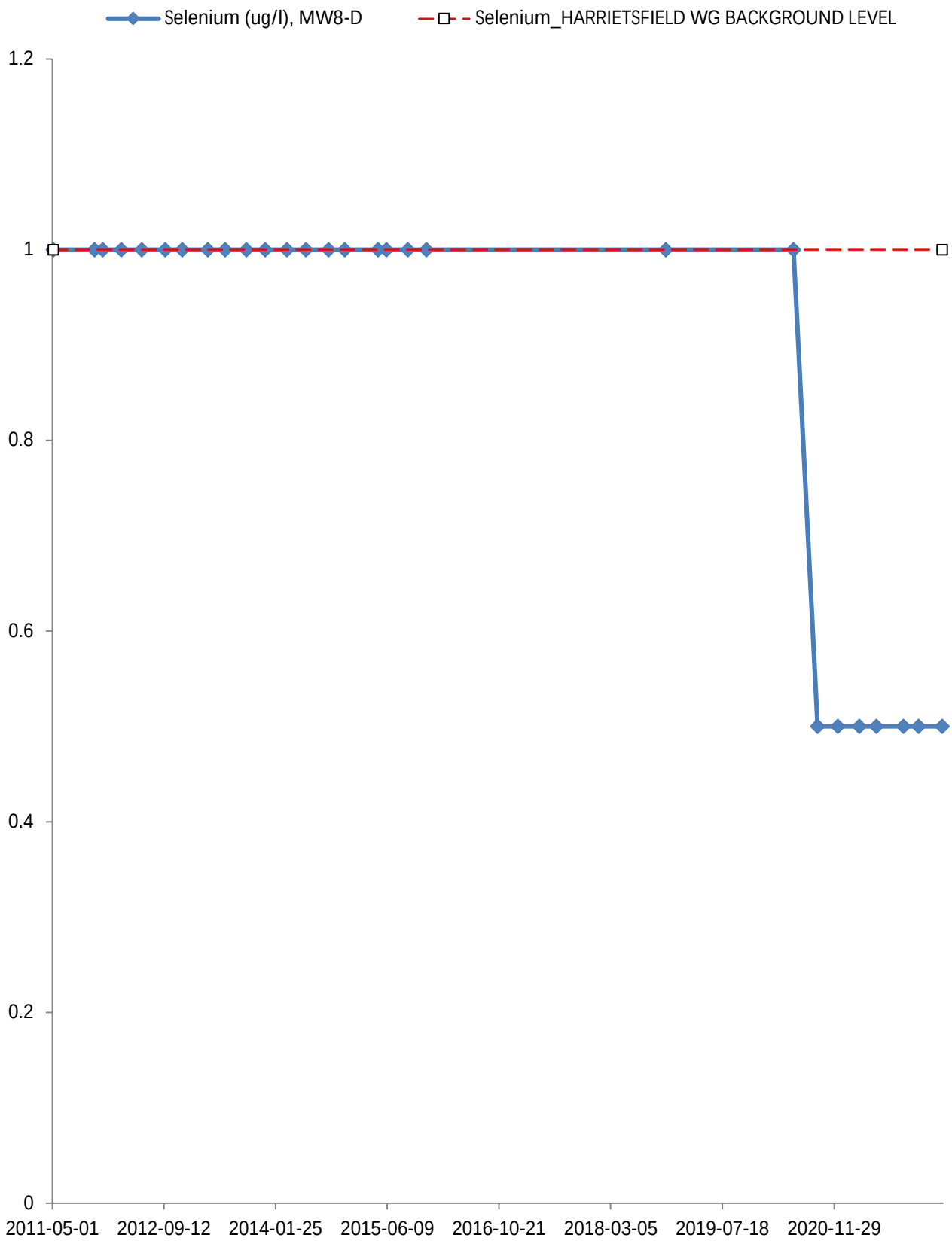
MW8-D-Saturation pH (at 20 C)

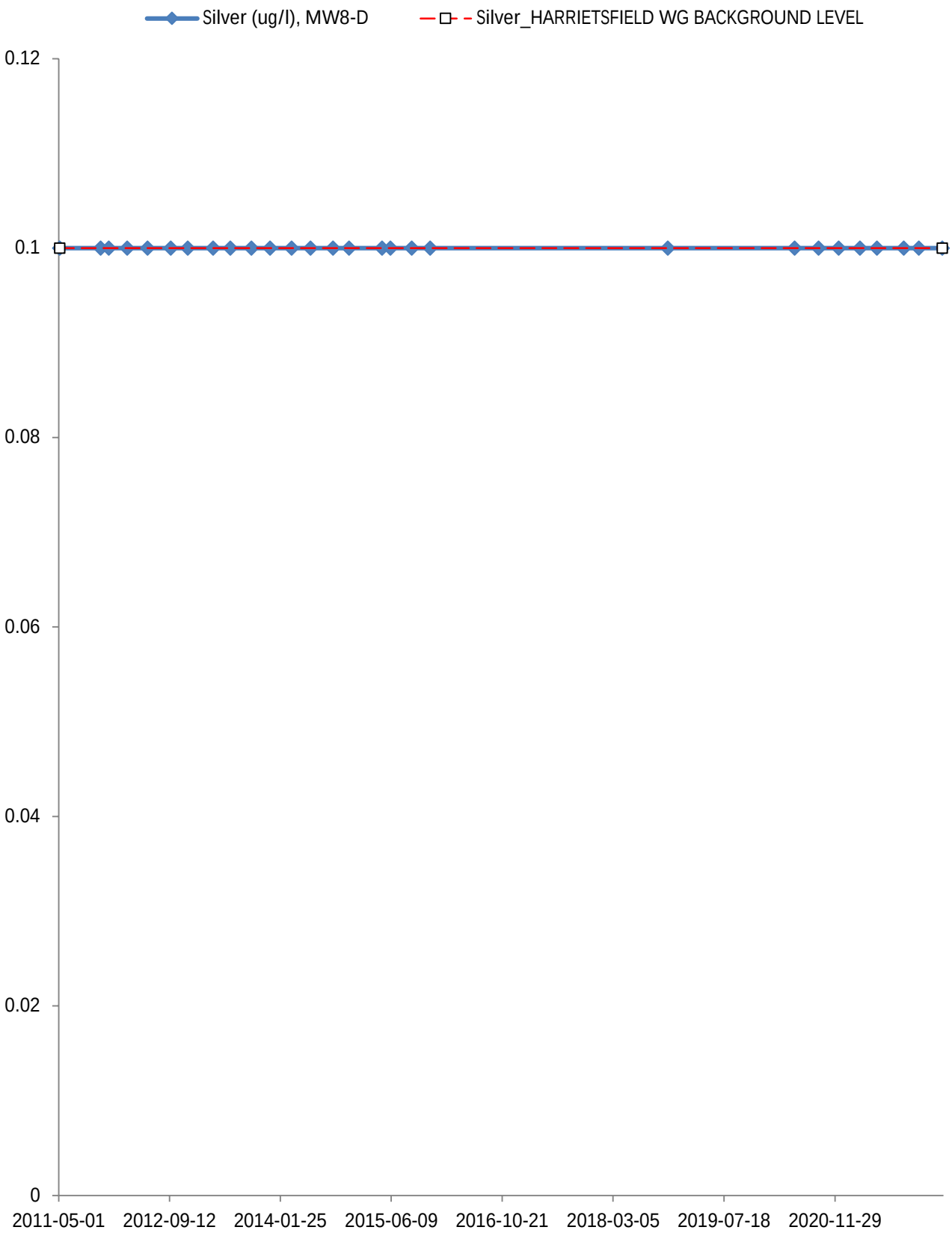


MW8-D-Saturation pH (at 4 C)

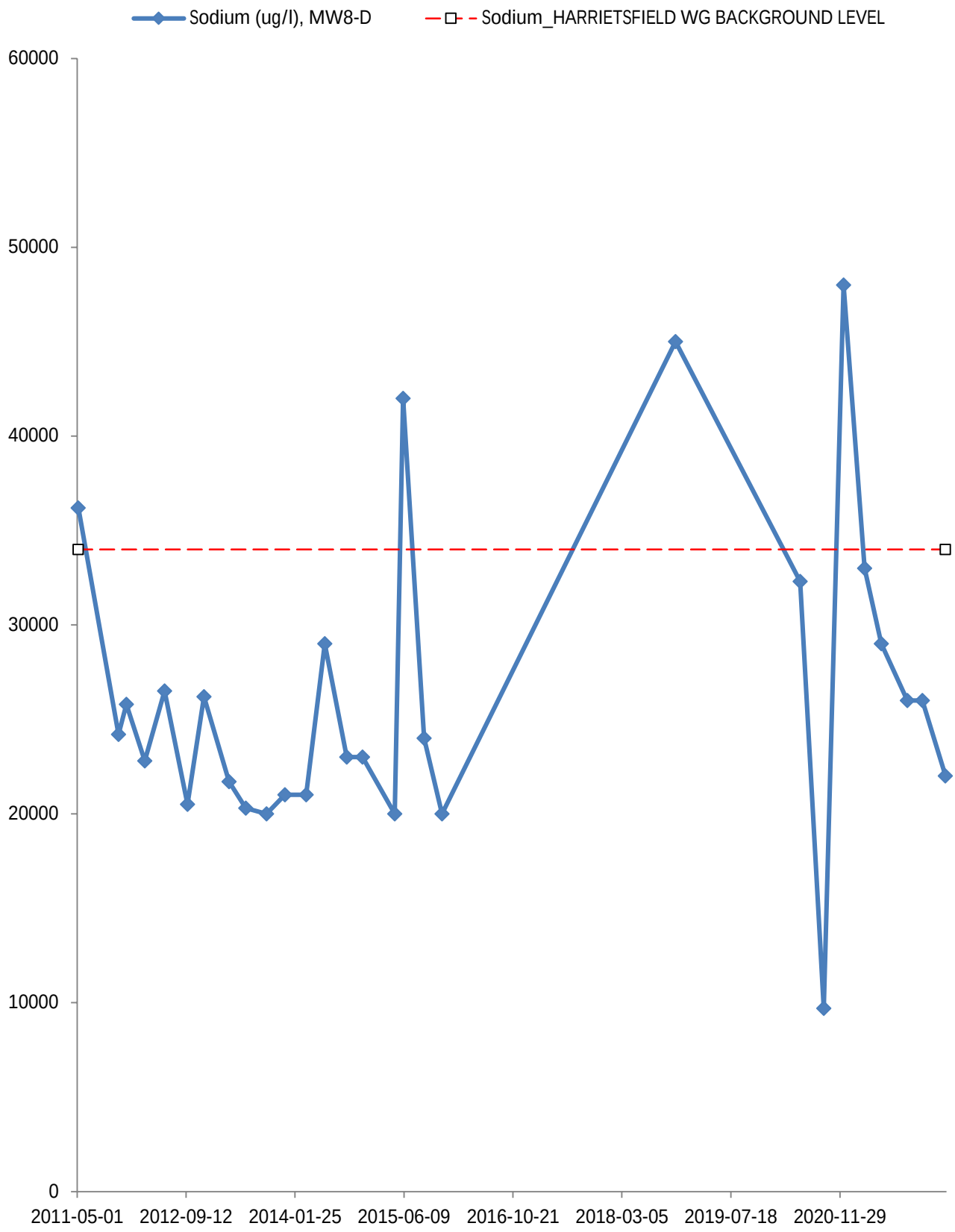


MW8-D-Selenium

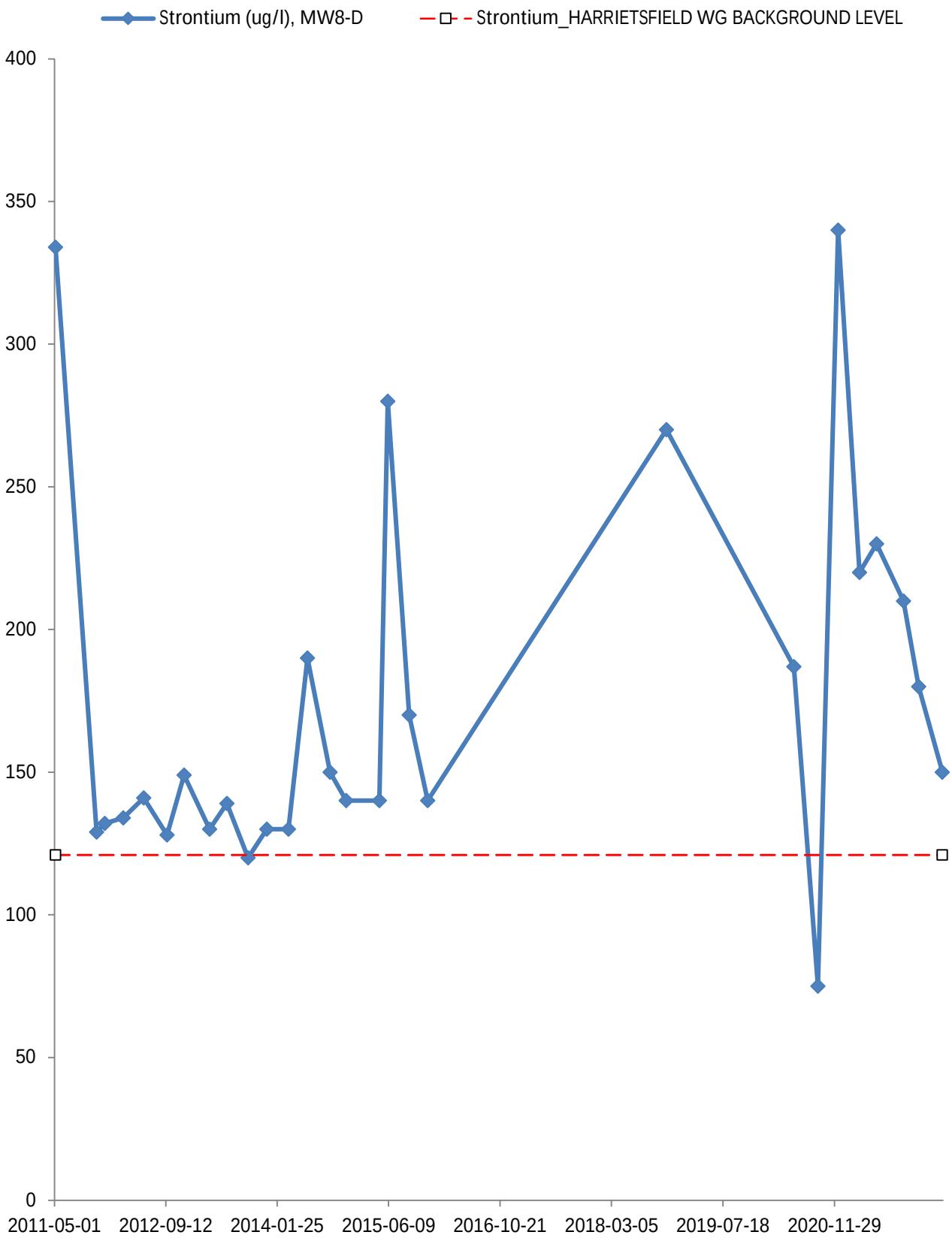



Silver (ug/l), MW8-D
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

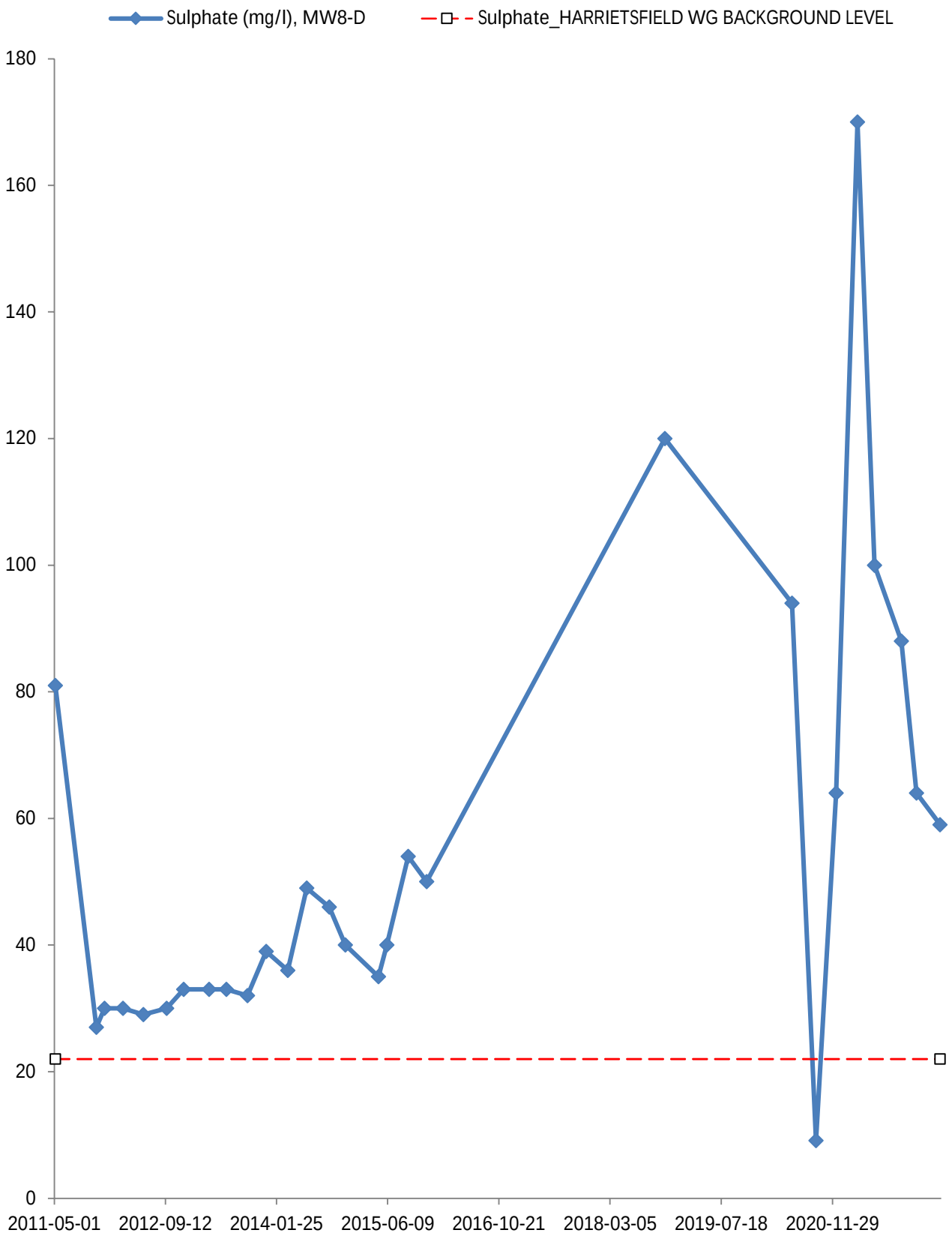
MW8-D-Sodium


Sodium (ug/l), MW8-D
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
60000
50000
40000
30000
20000
10000
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

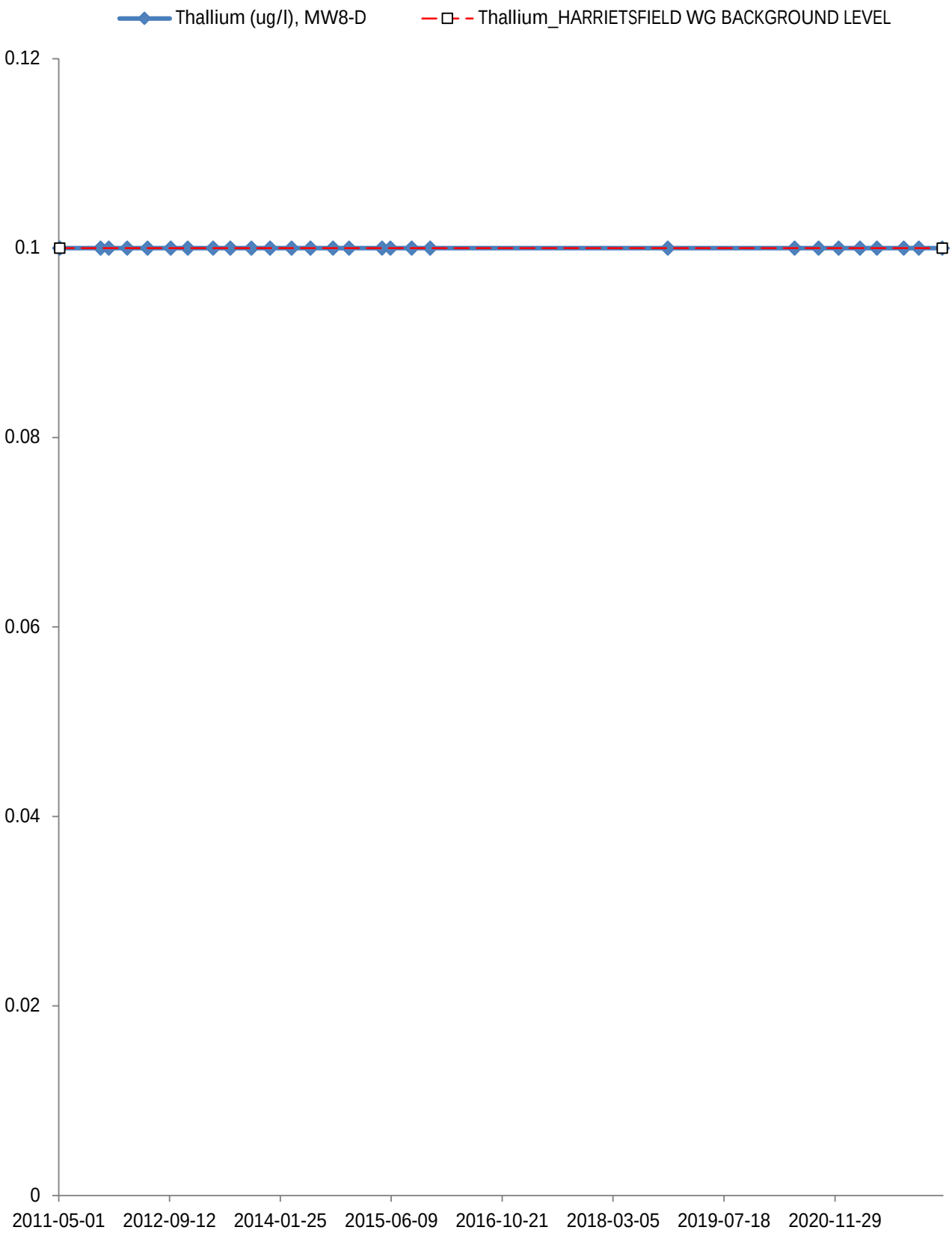
MW8-D-Strontium



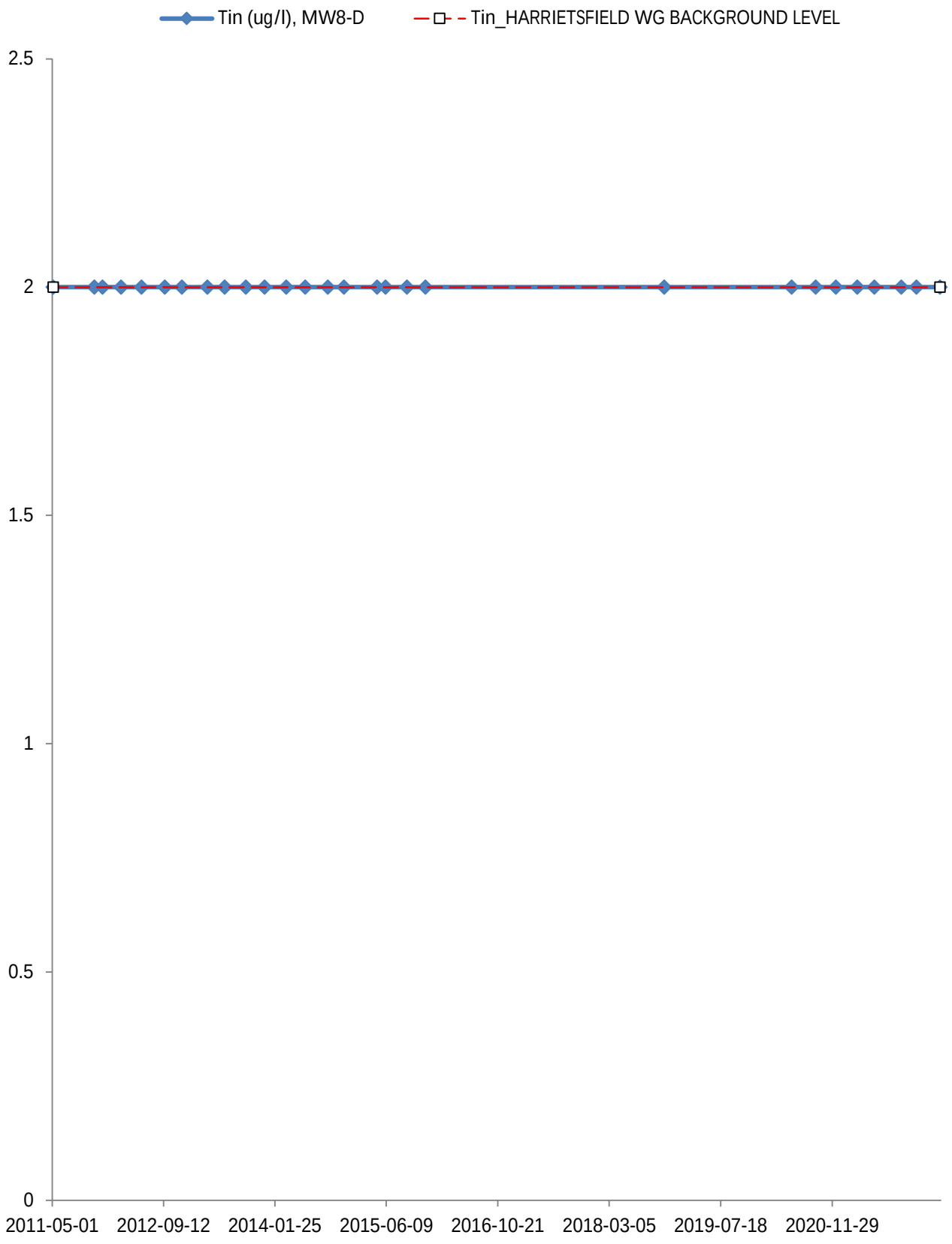
MW8-D-Sulphate



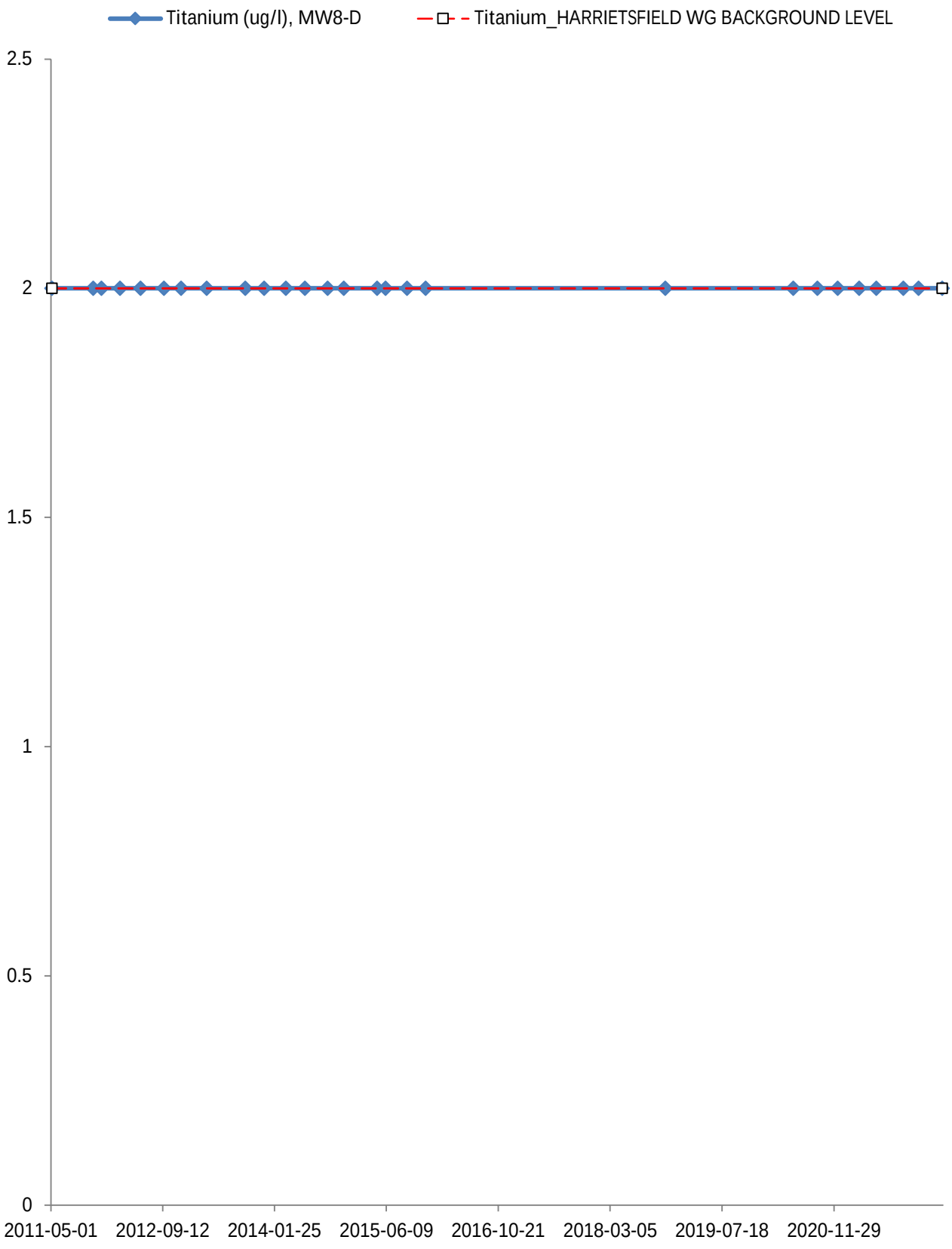
MW8-D-Thallium



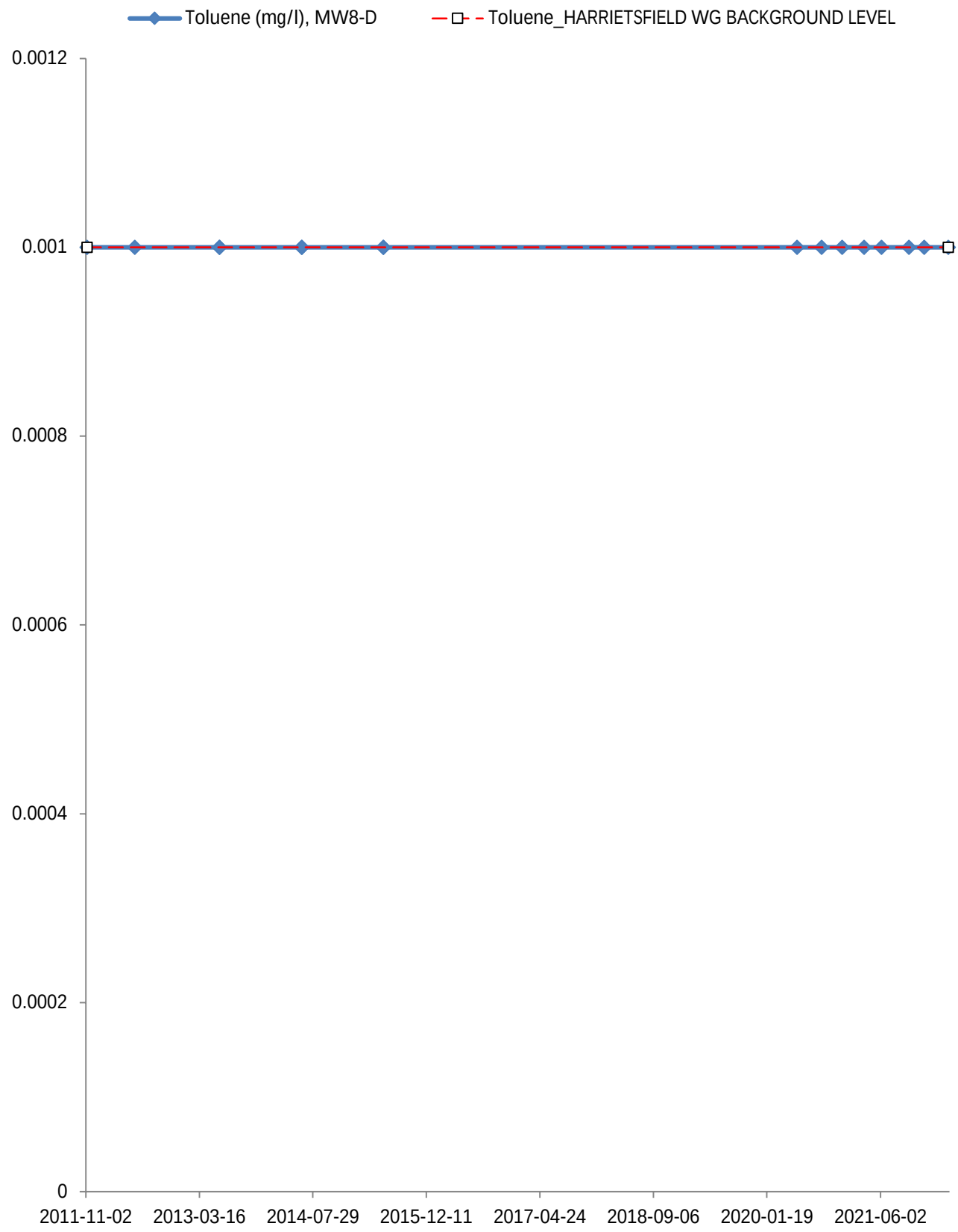
MW8-D-Tin


Tin (ug/l), MW8-D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

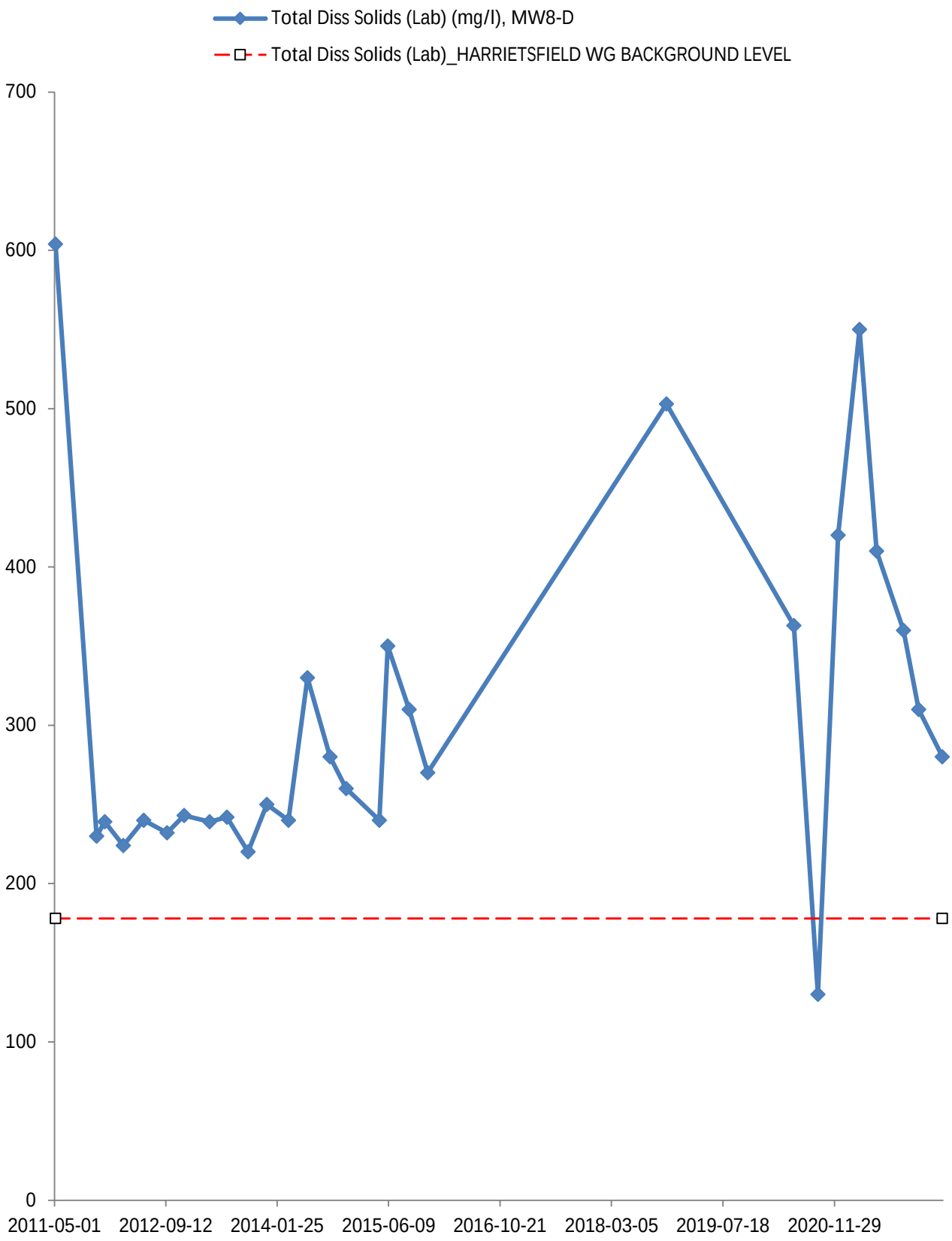
MW8-D-Titanium



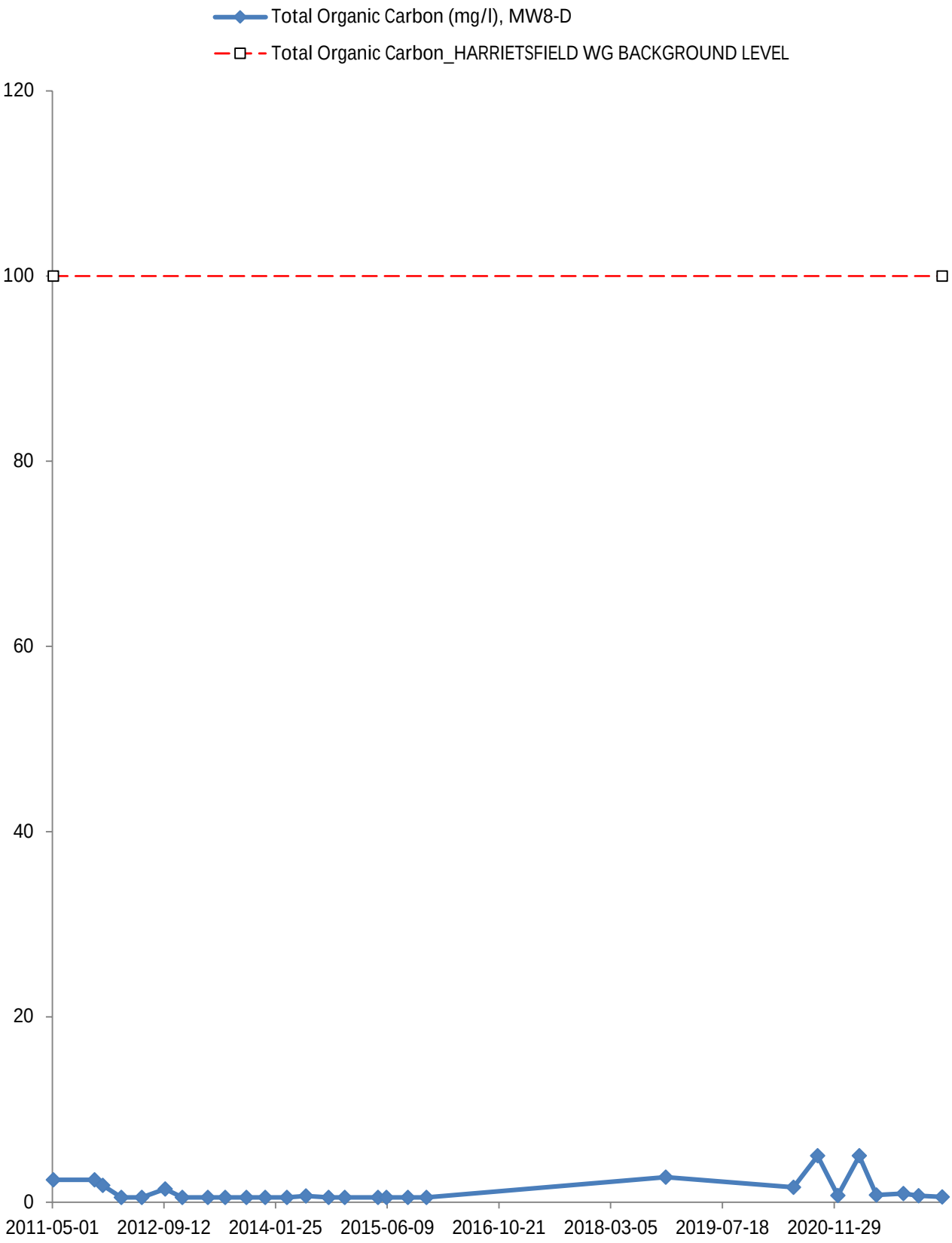
MW8-D-Toluene



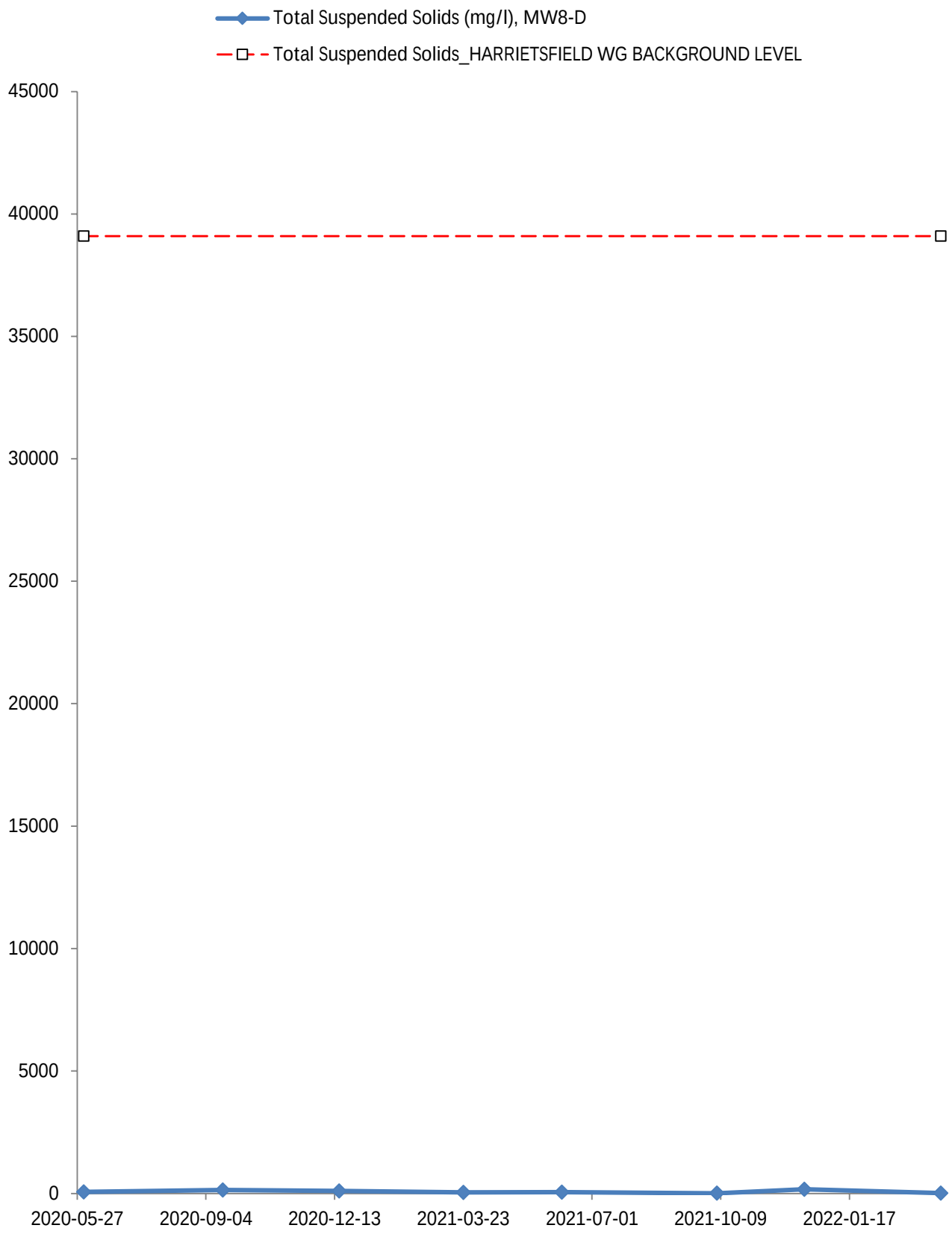
MW8-D-Total Diss Solids (Lab)



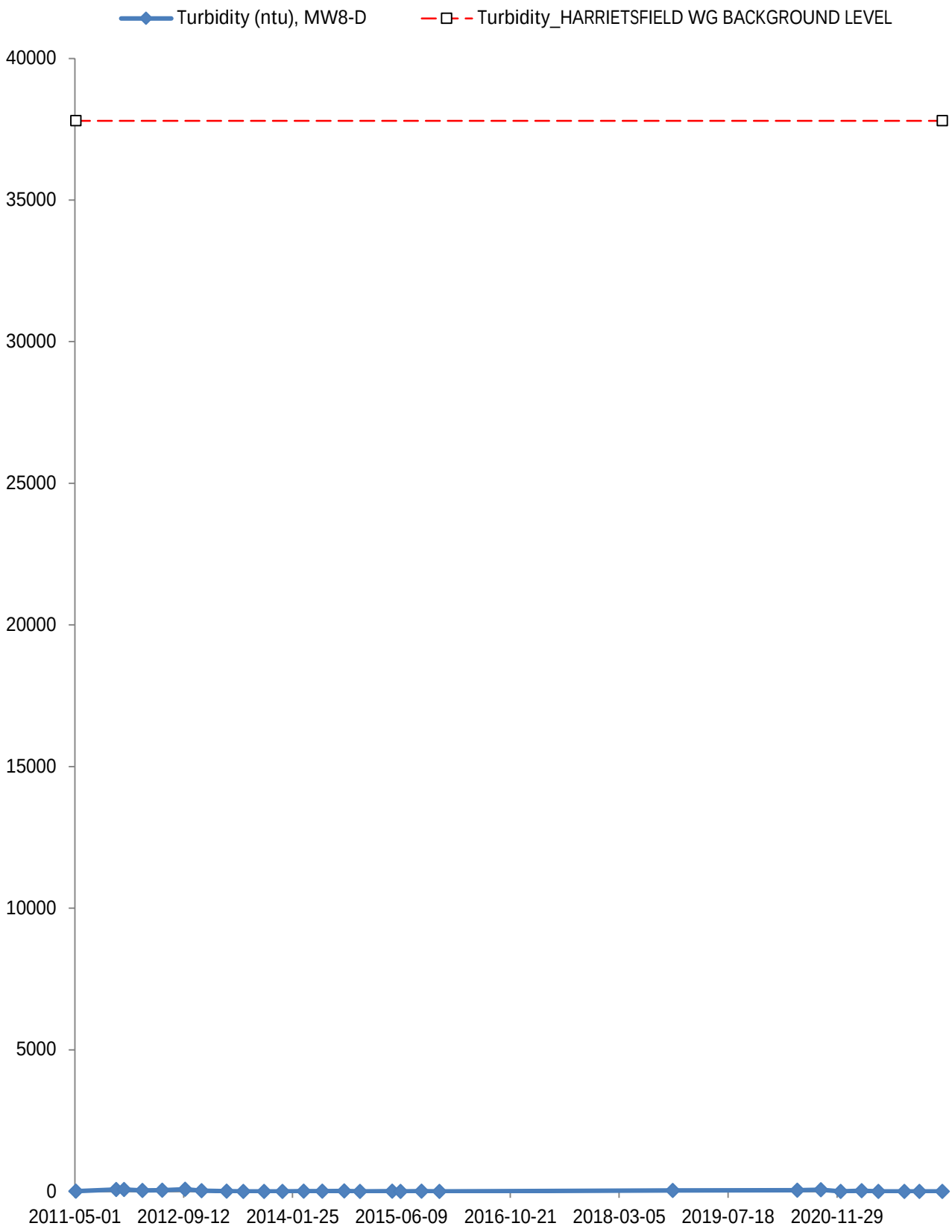
MW8-D-Total Organic Carbon



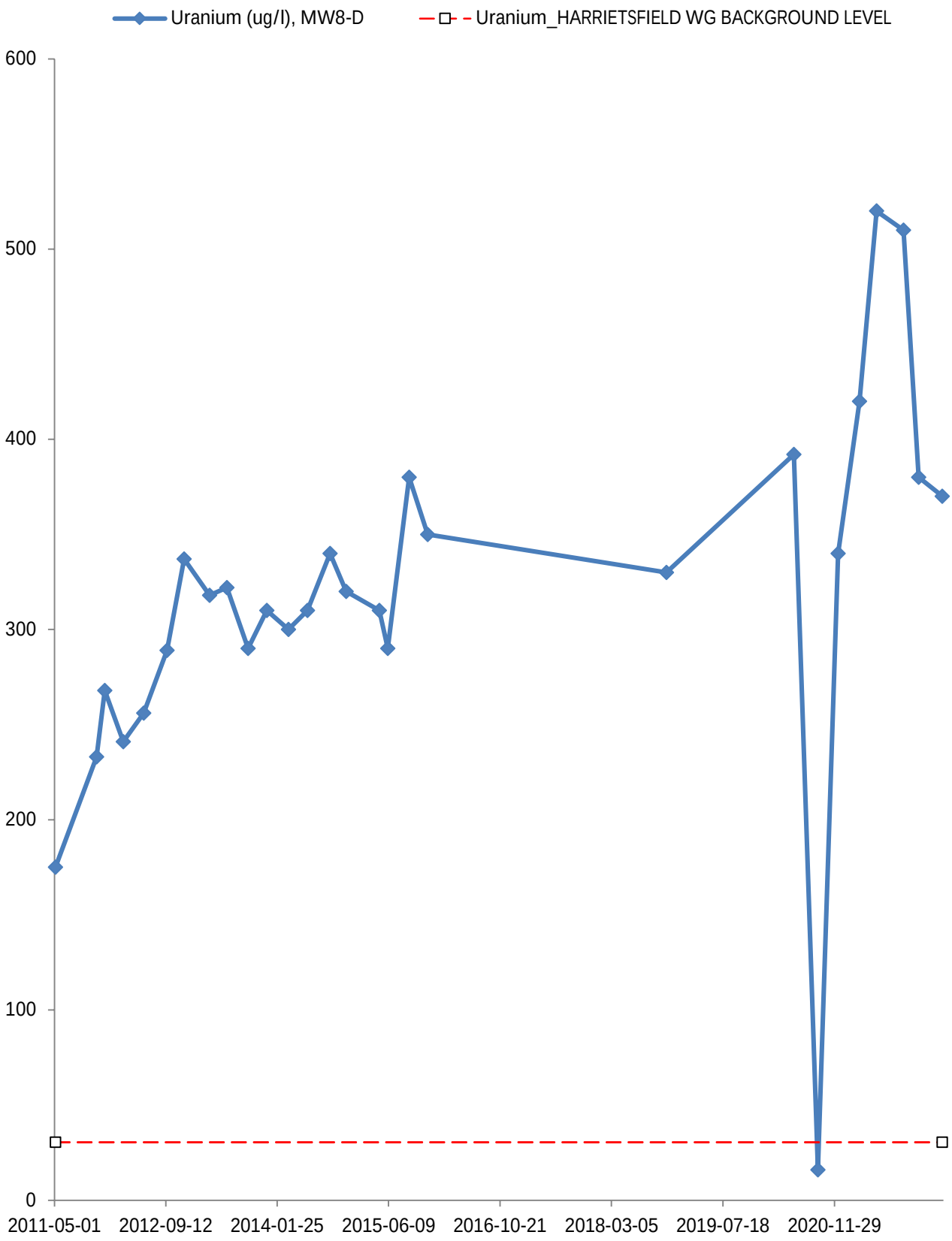
MW8-D-Total Suspended Solids



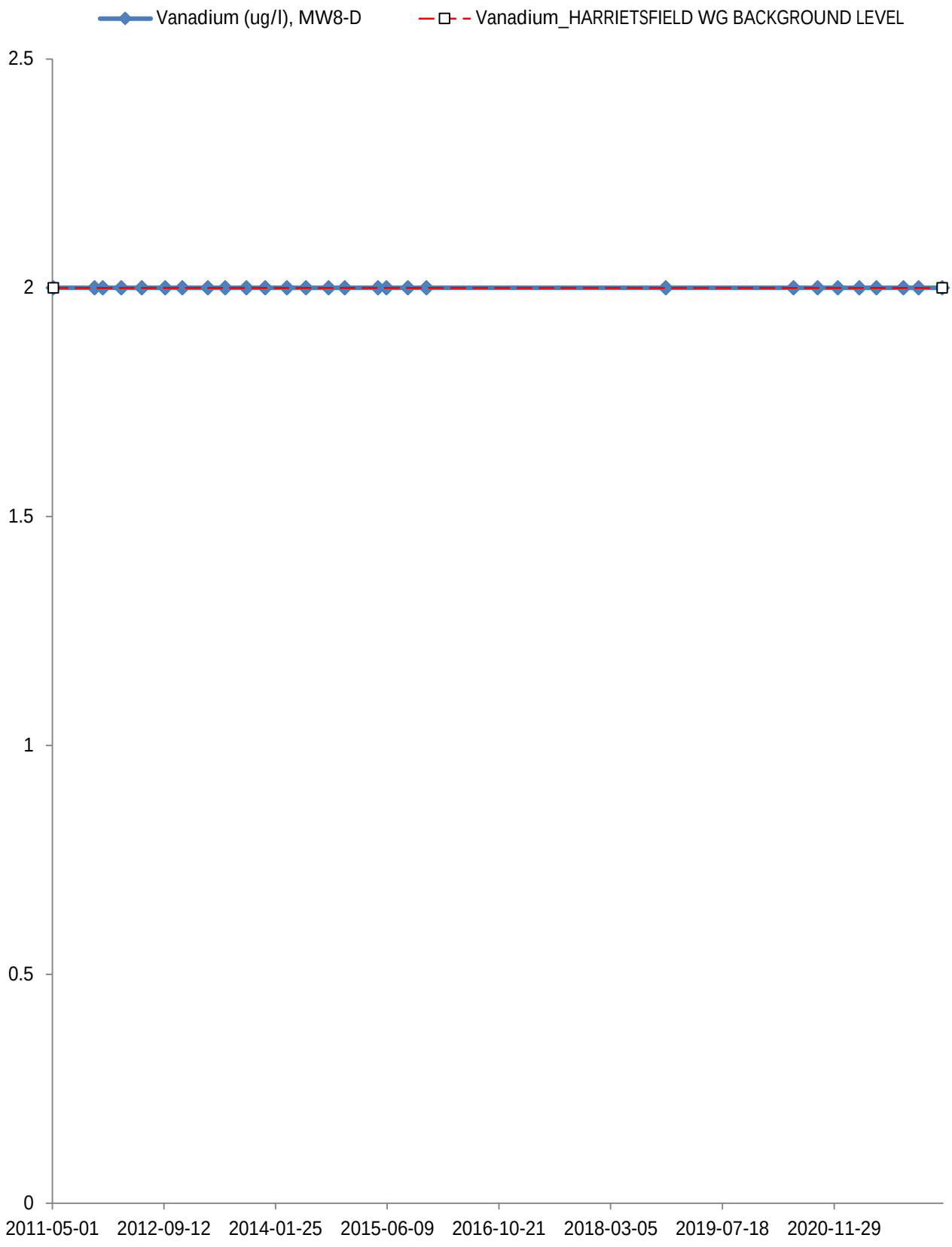
MW8-D-Turbidity



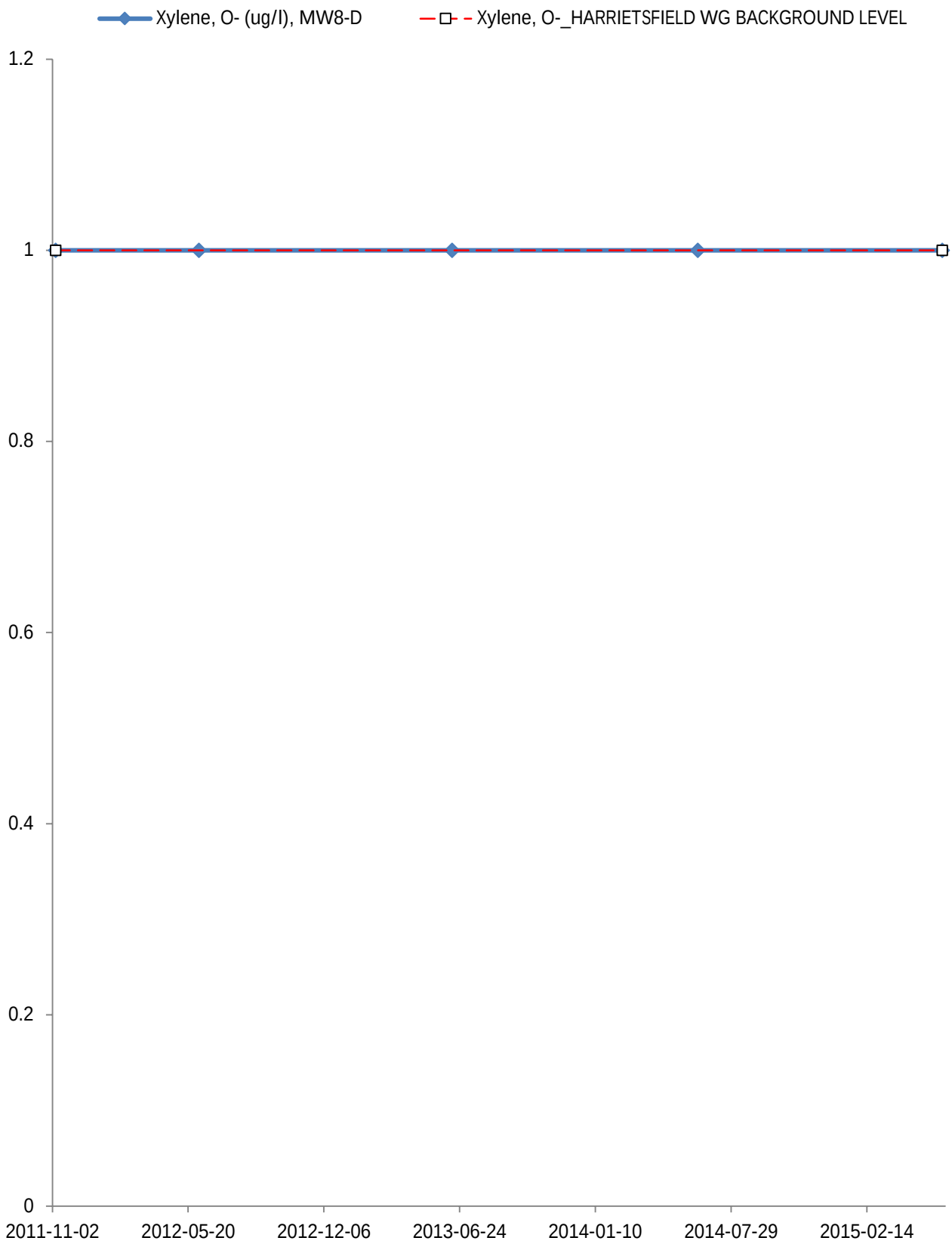
MW8-D-Uranium



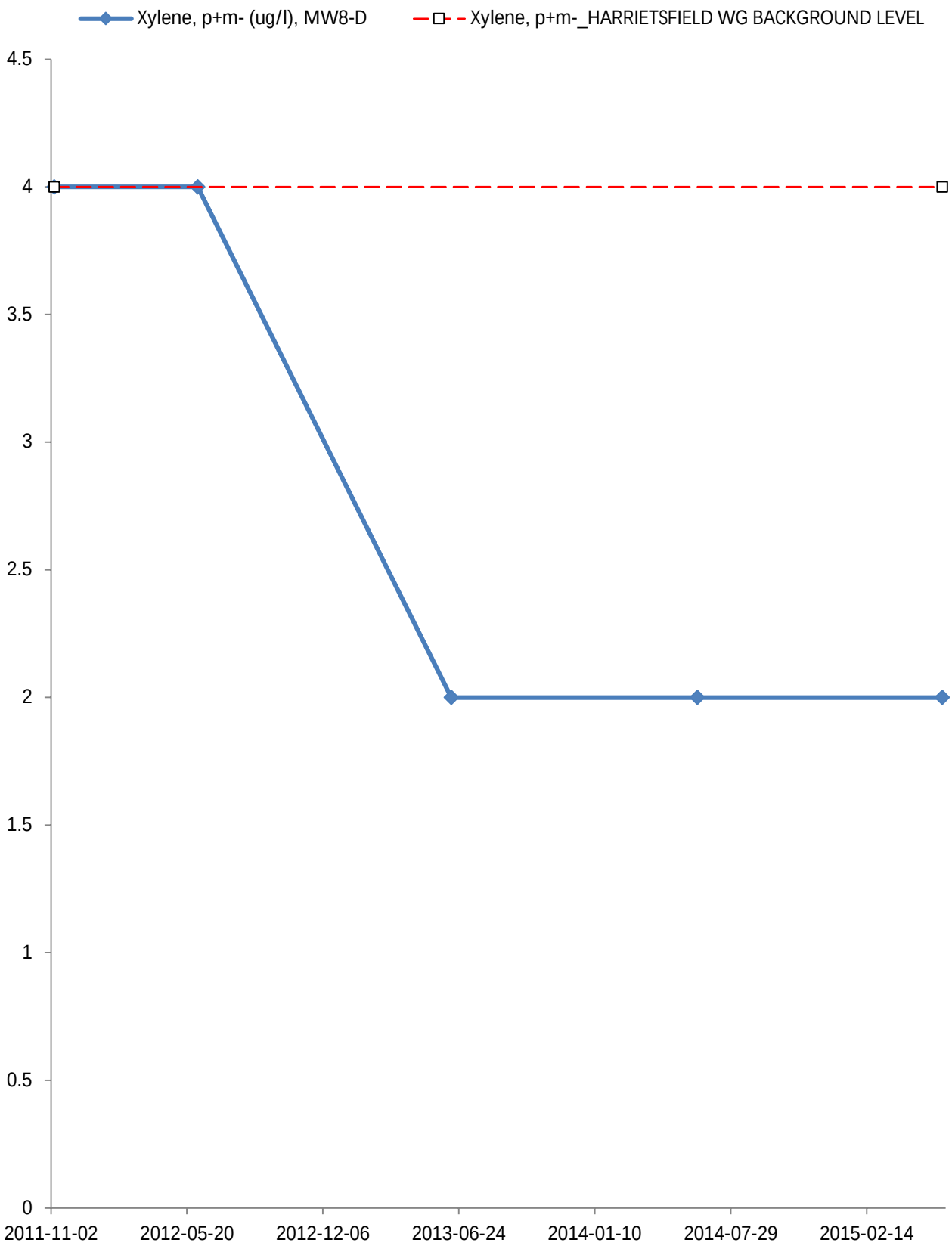
MW8-D-Vanadium



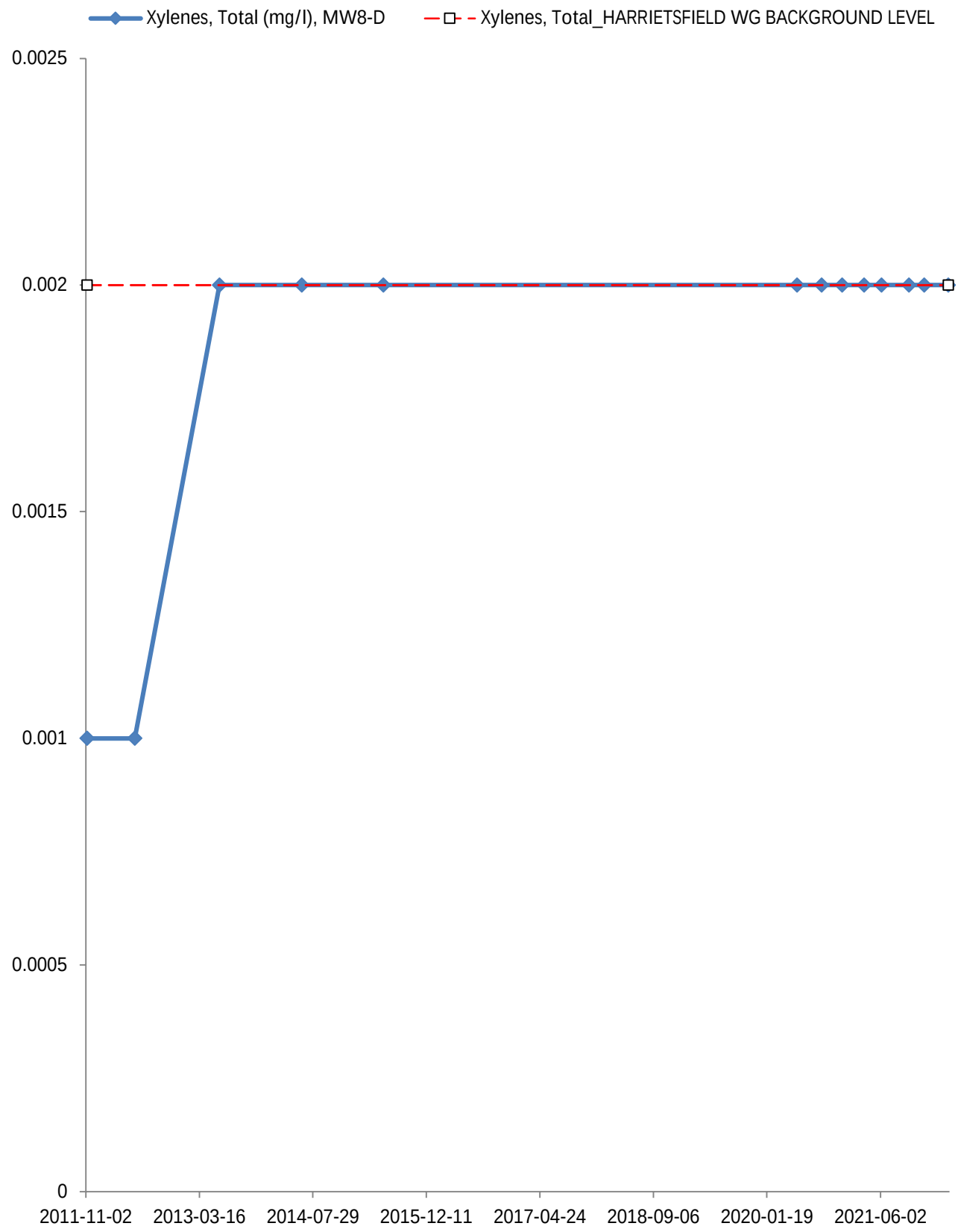
MW8-D-Xylene, O-



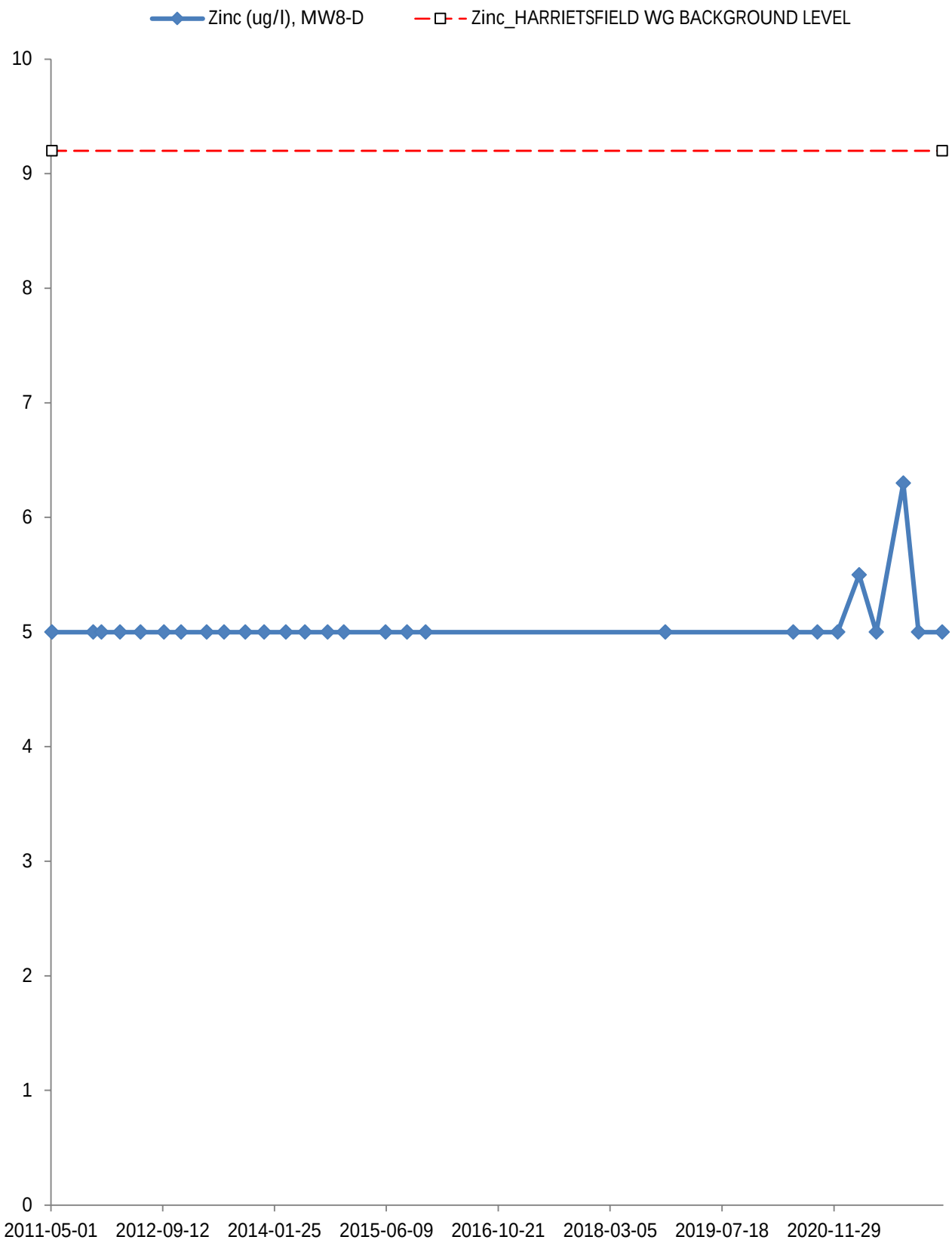
MW8-D-Xylene, p+m-



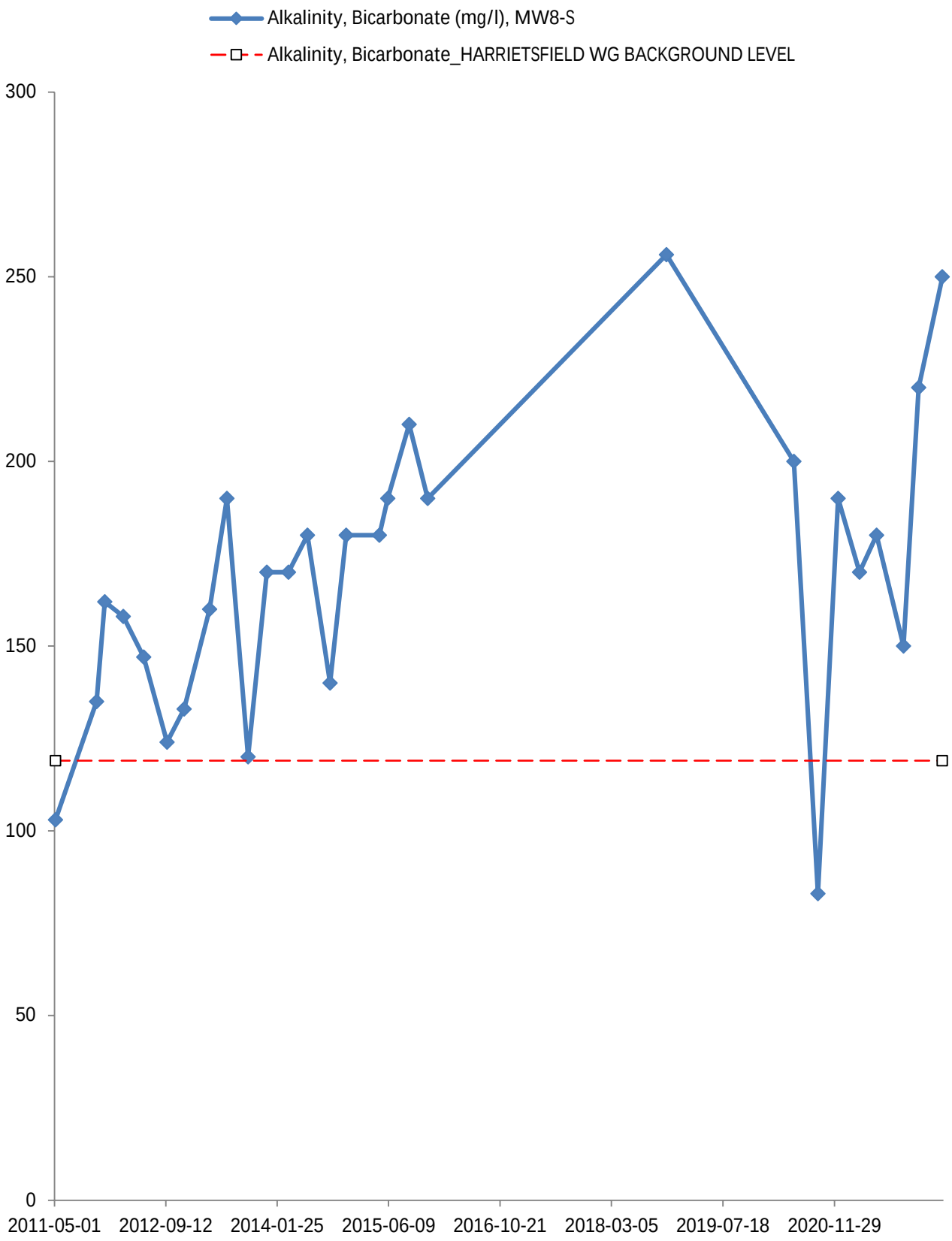
MW8-D-Xylenes, Total



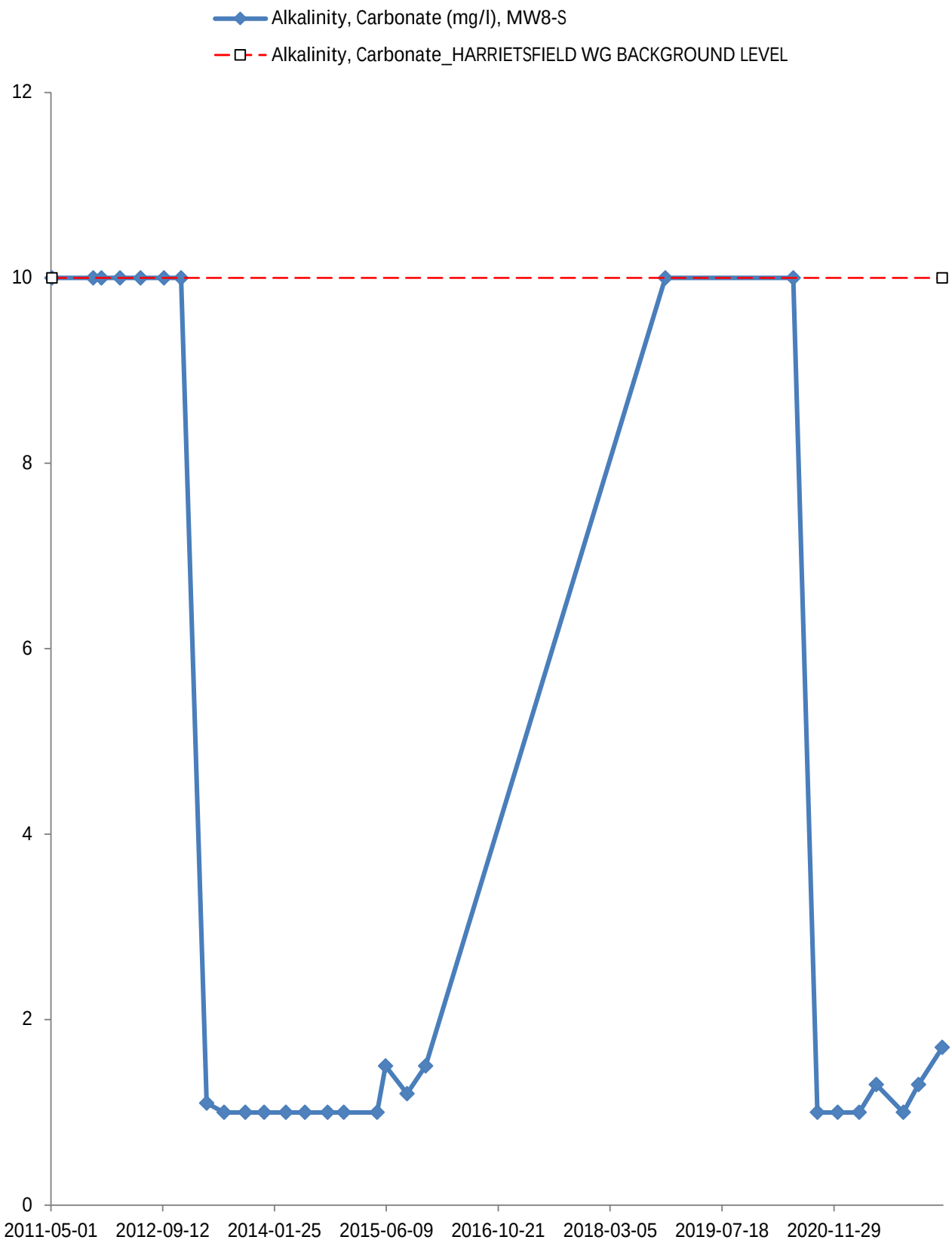
MW8-D-Zinc


Zinc (ug/l), MW8-D
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

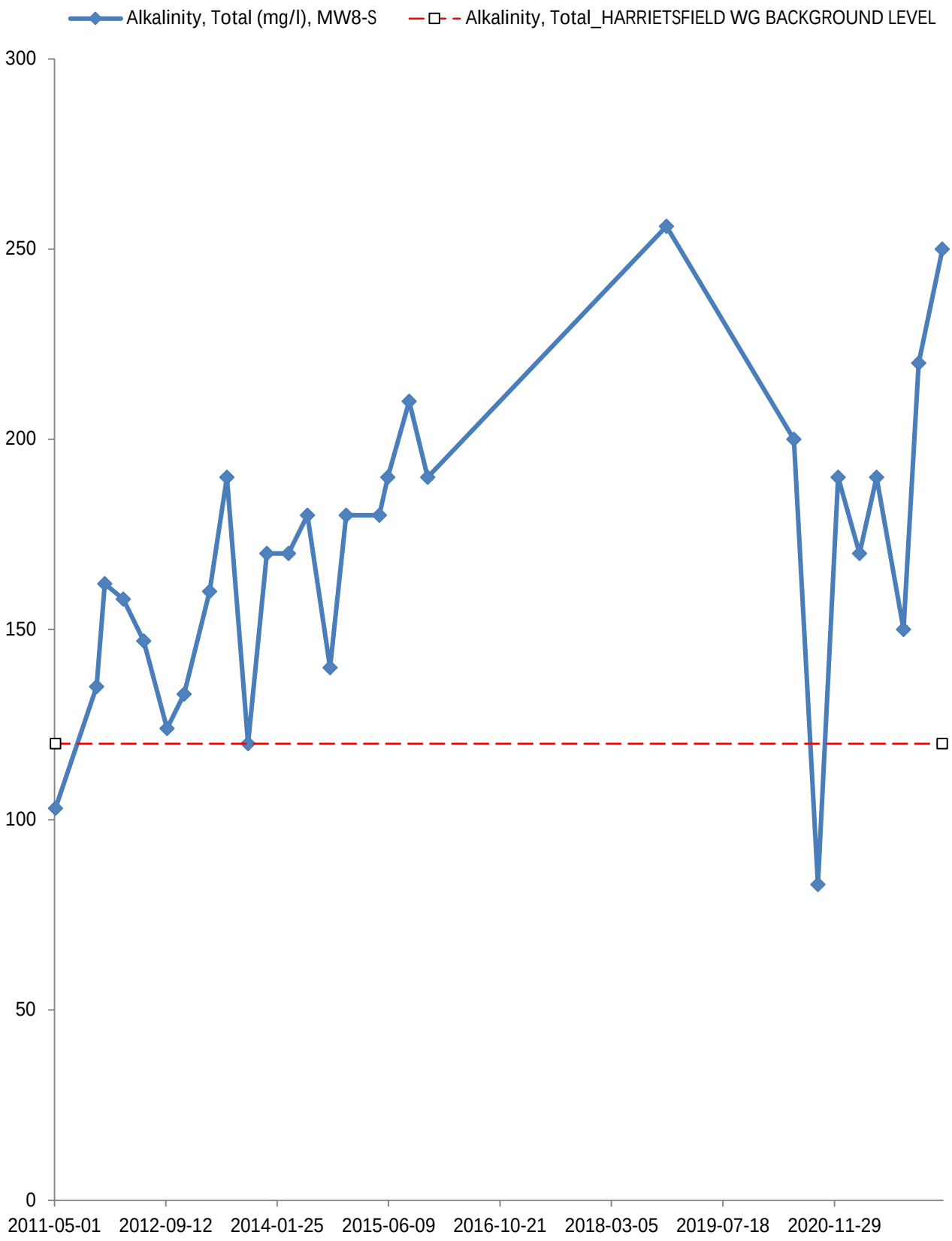
MW8-S-Alkalinity, Bicarbonate



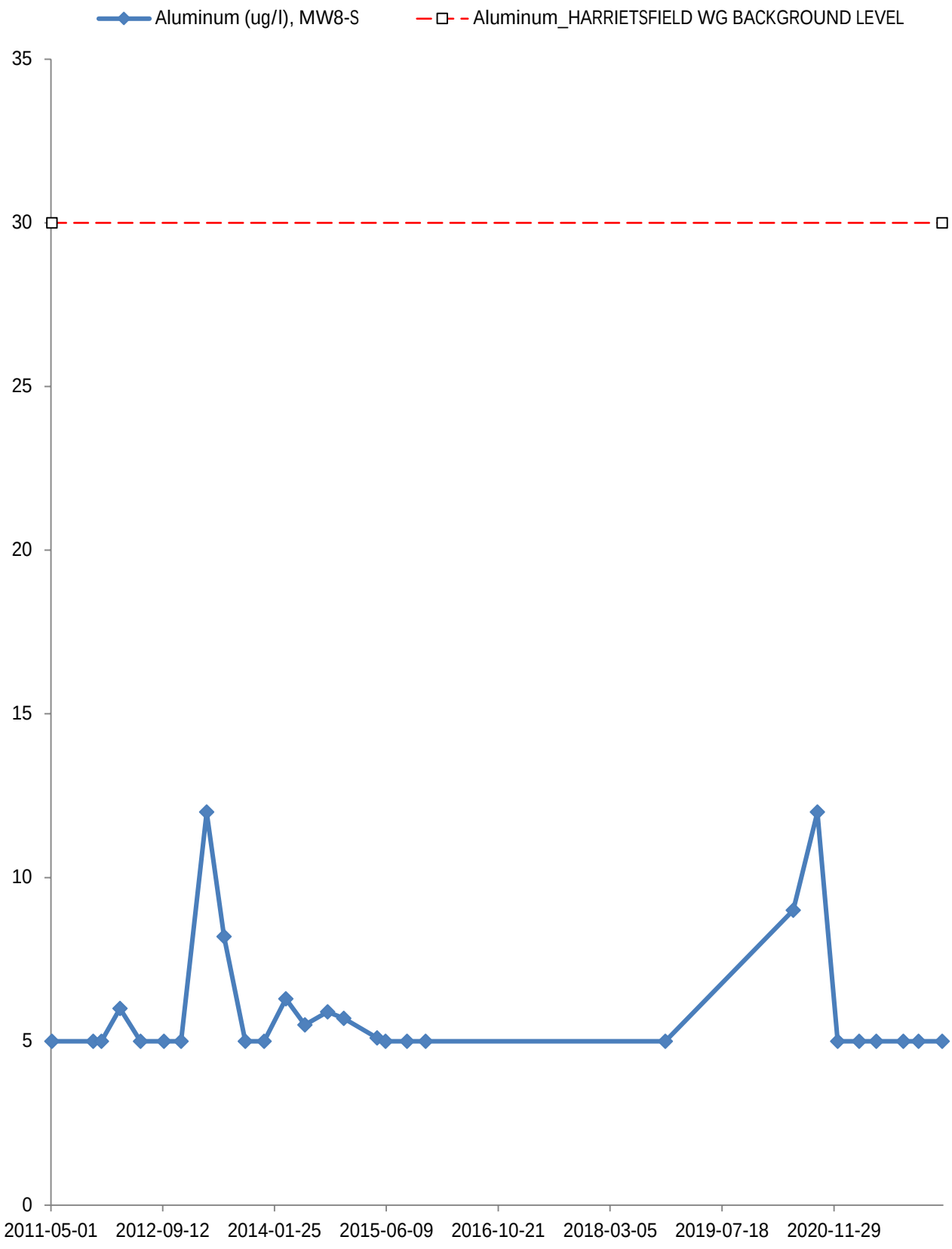
MW8-S-Alkalinity, Carbonate



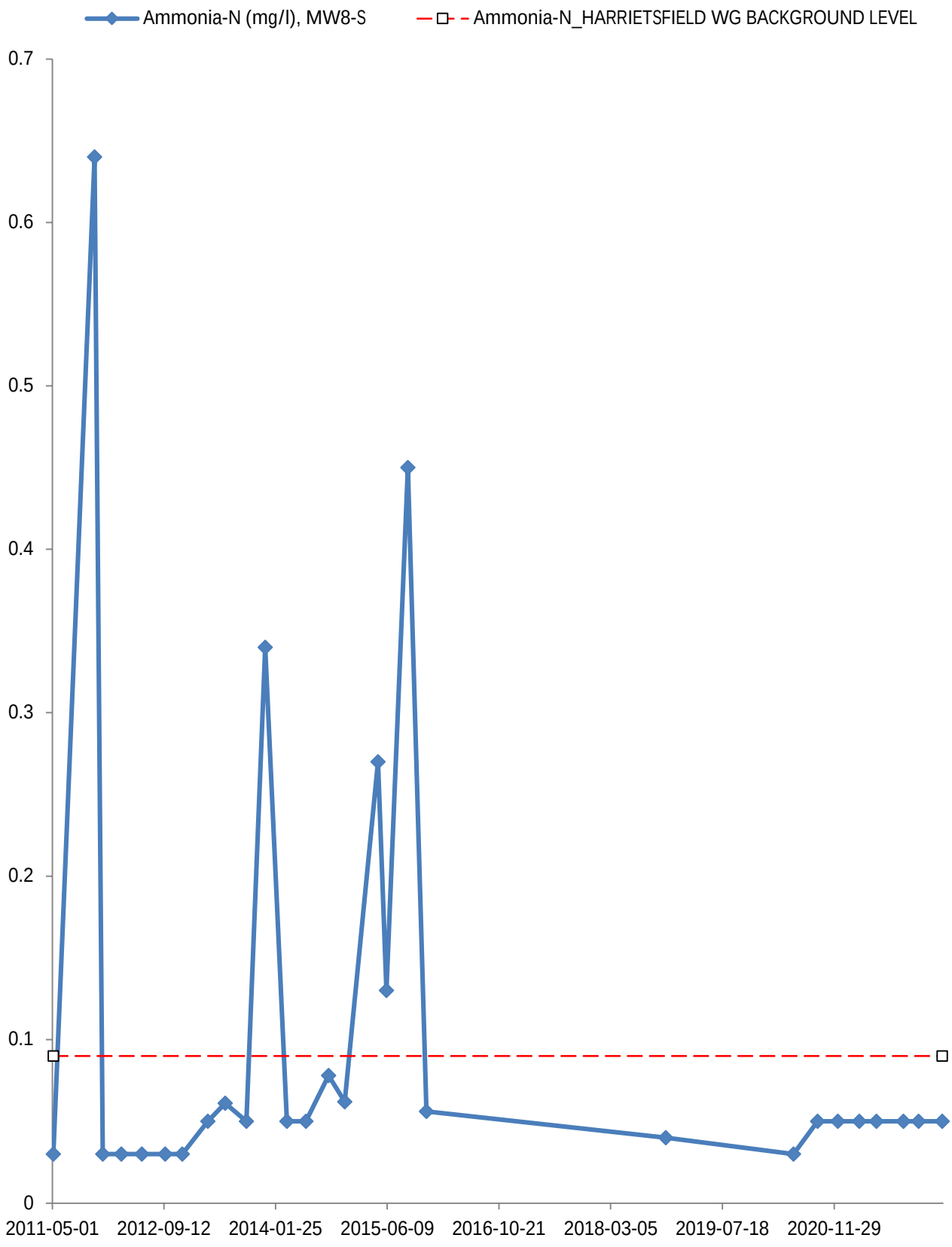
MW8-S-Alkalinity, Total



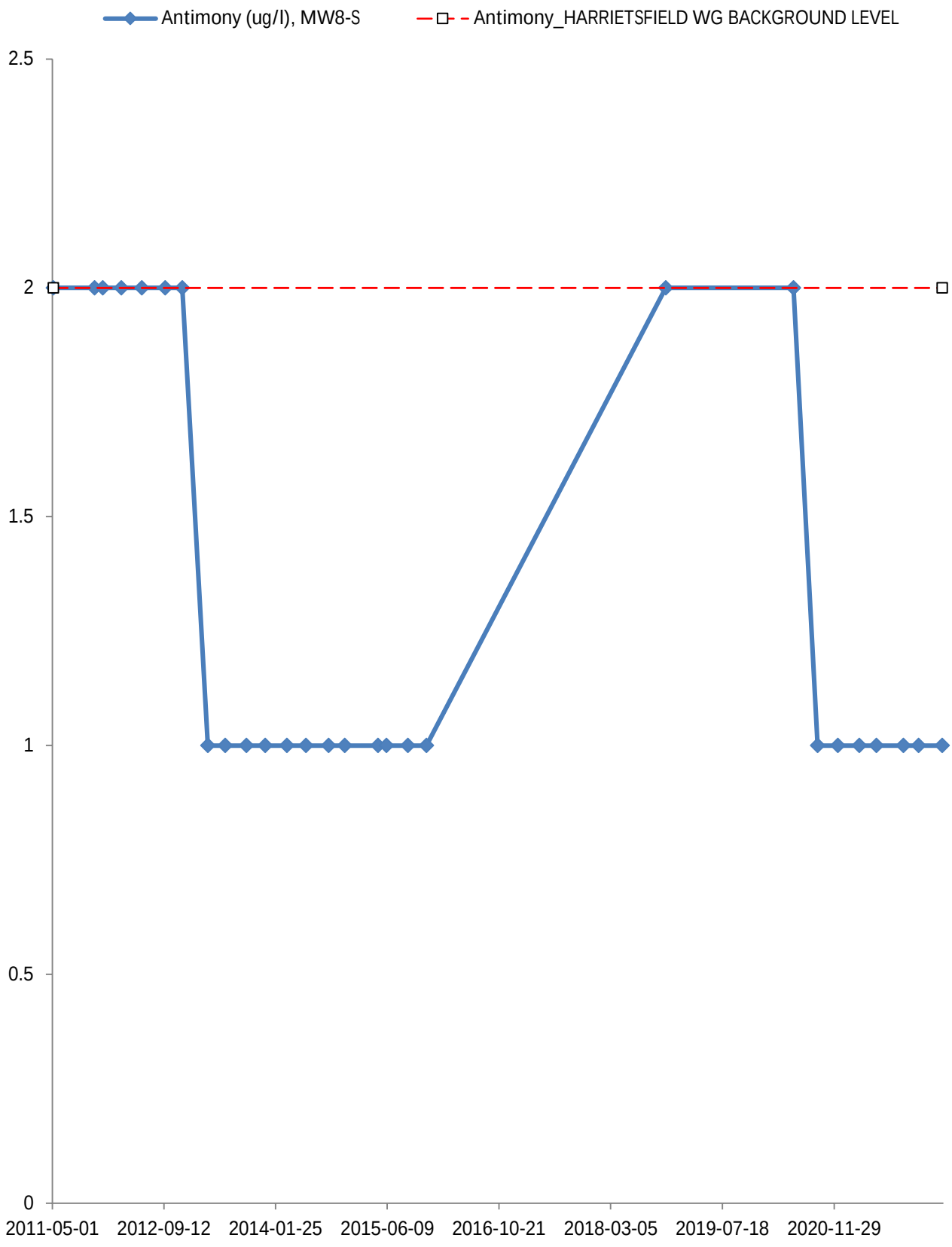
MW8-S-Aluminum



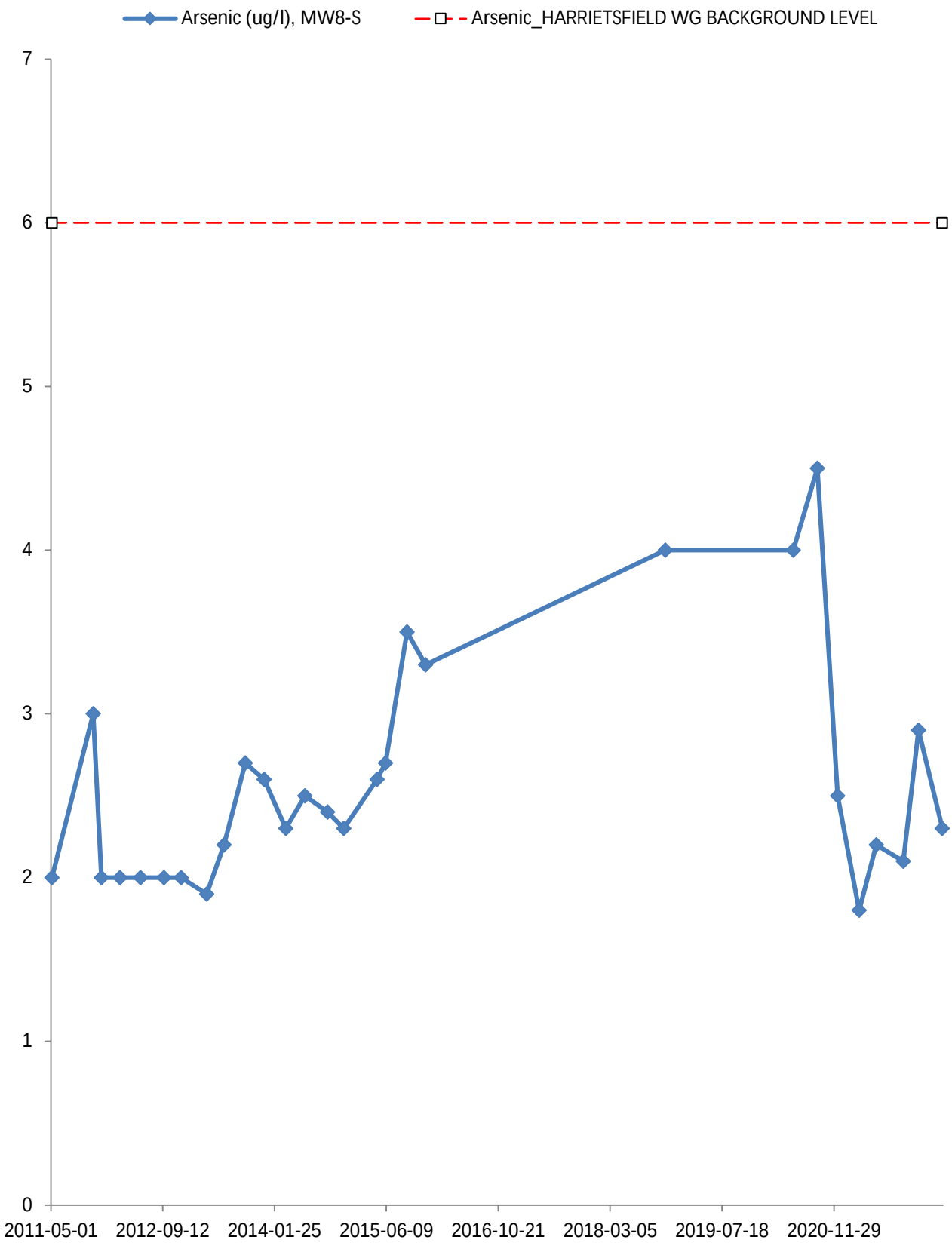
MW8-S-Ammonia-N



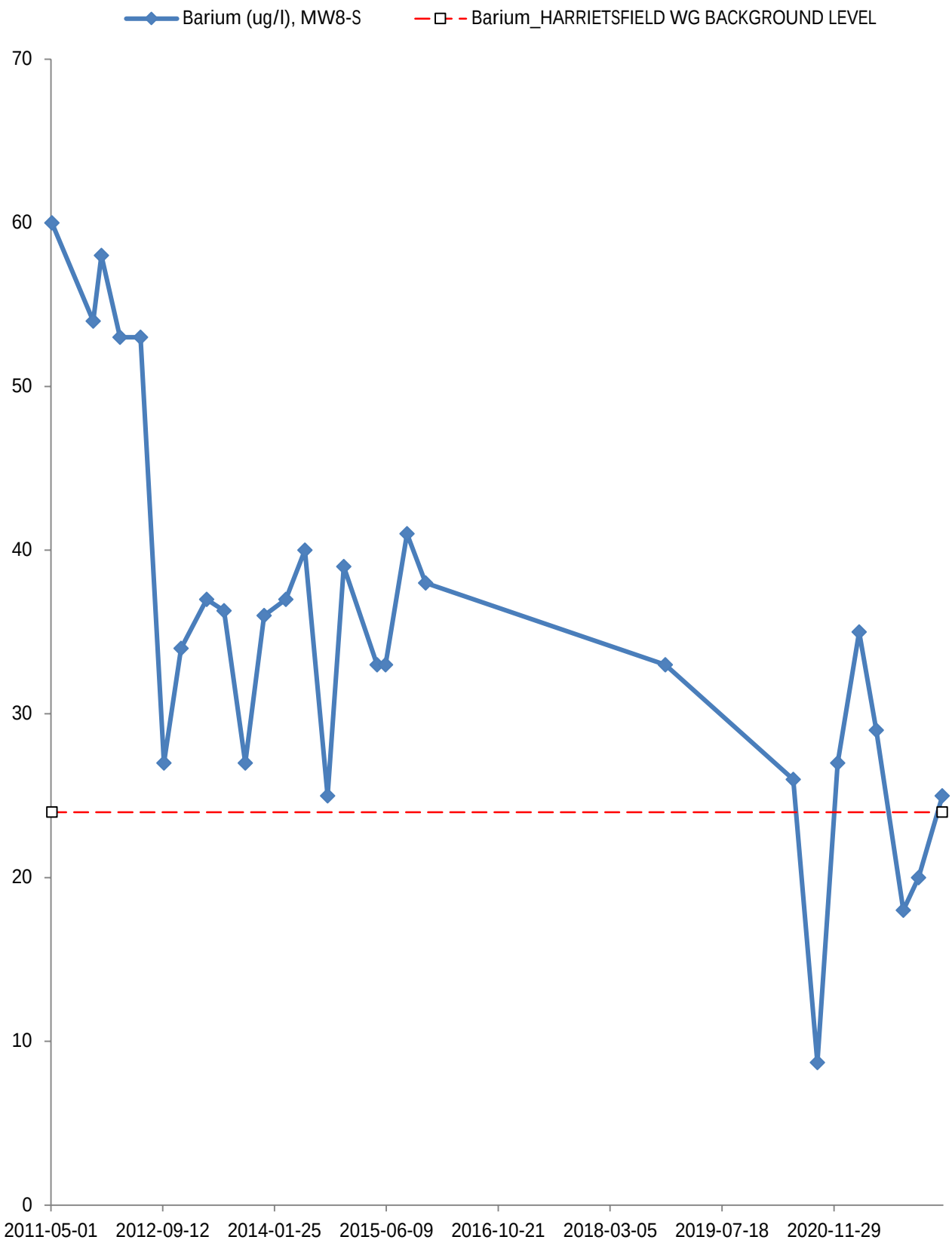
MW8-S-Antimony



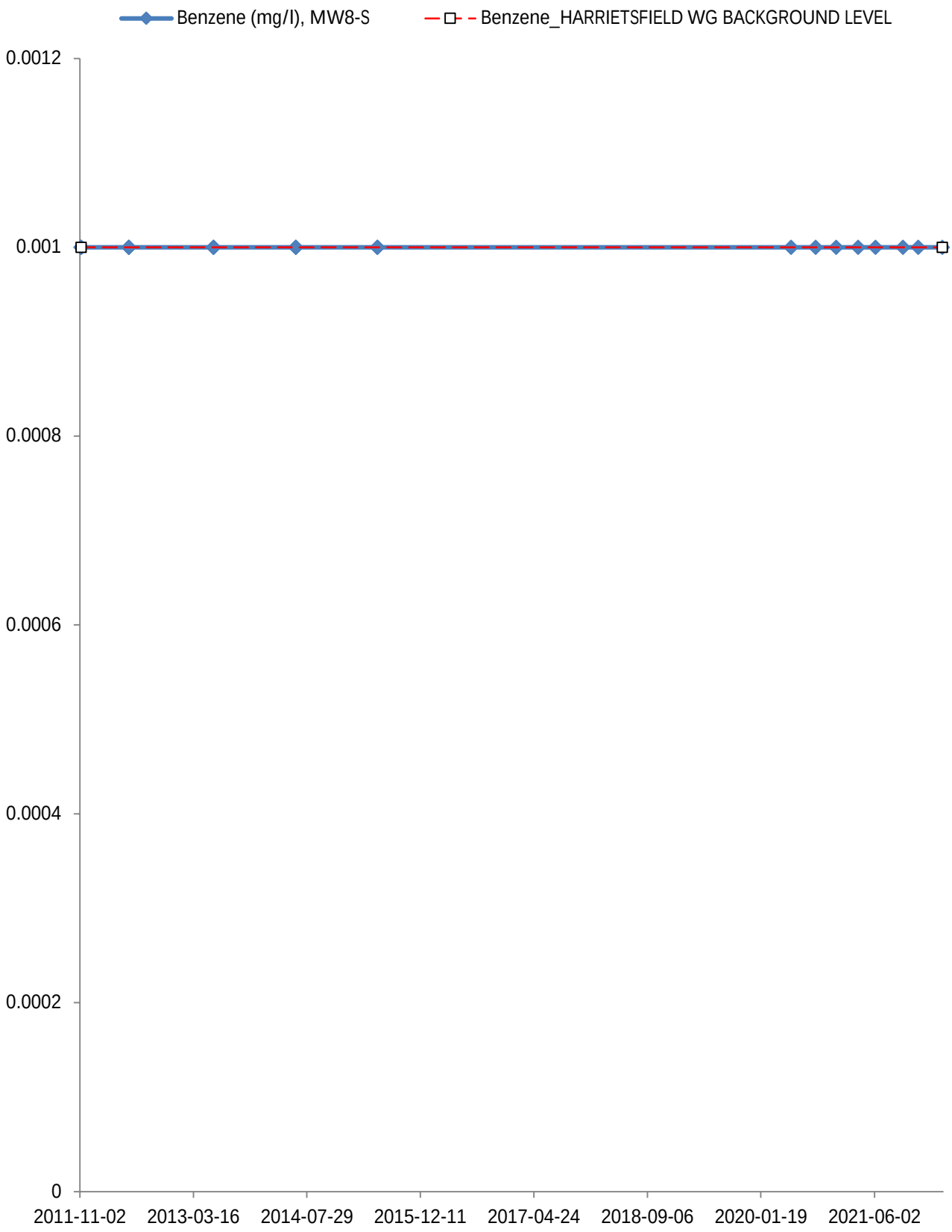
MW8-S-Arsenic



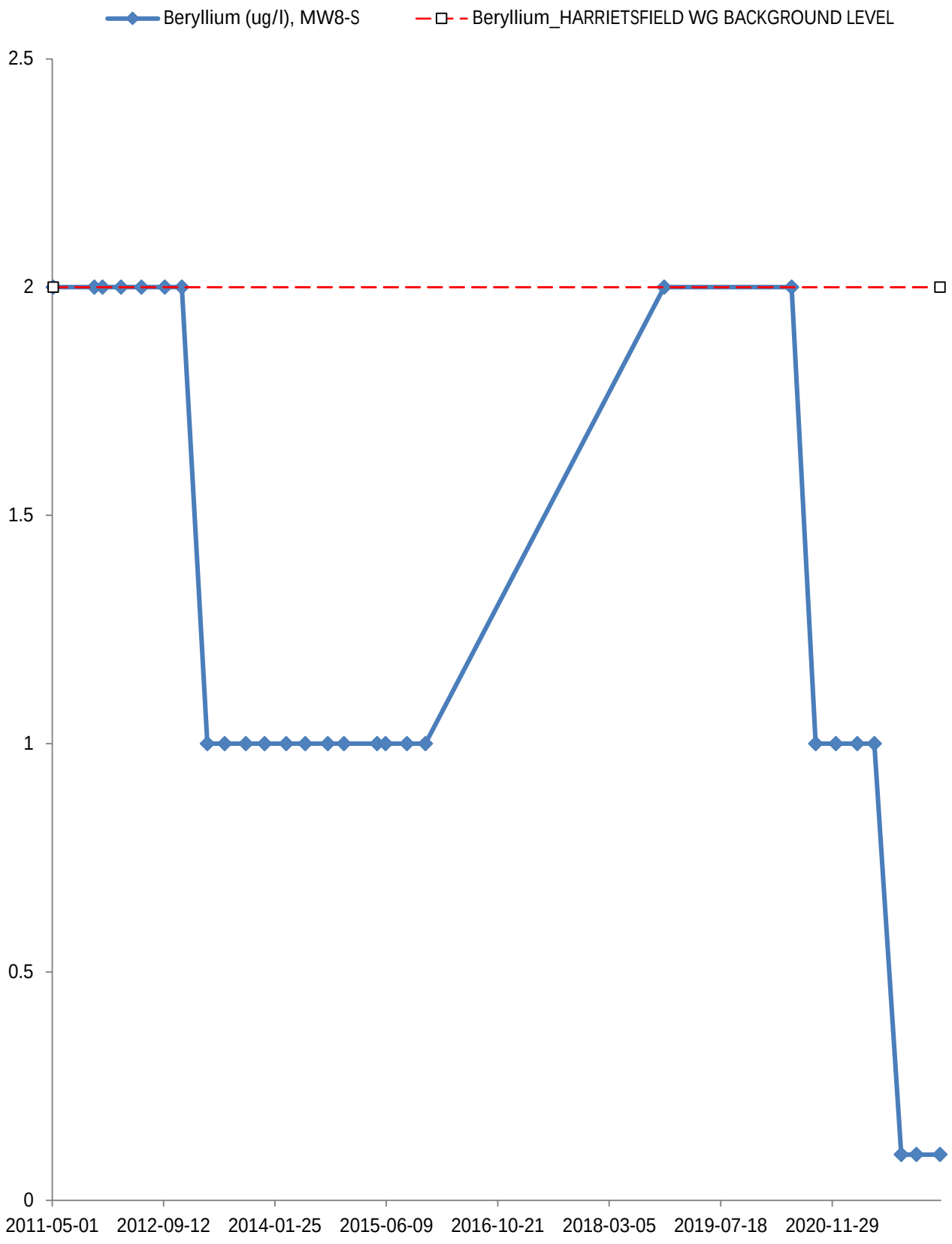
MW8-S-Barium

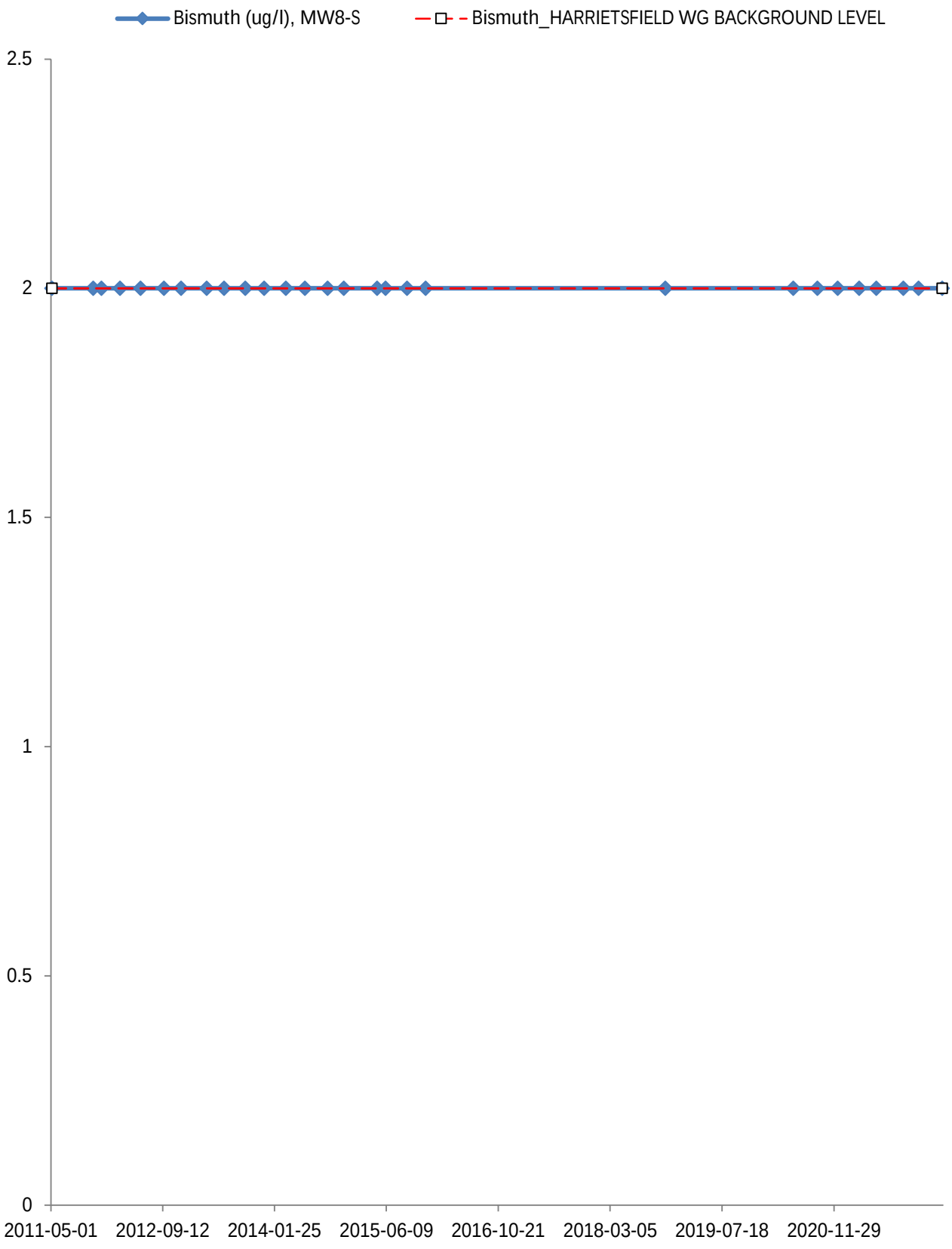

Barium (ug/l), MW8-S
Barium_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

MW8-S-Benzene

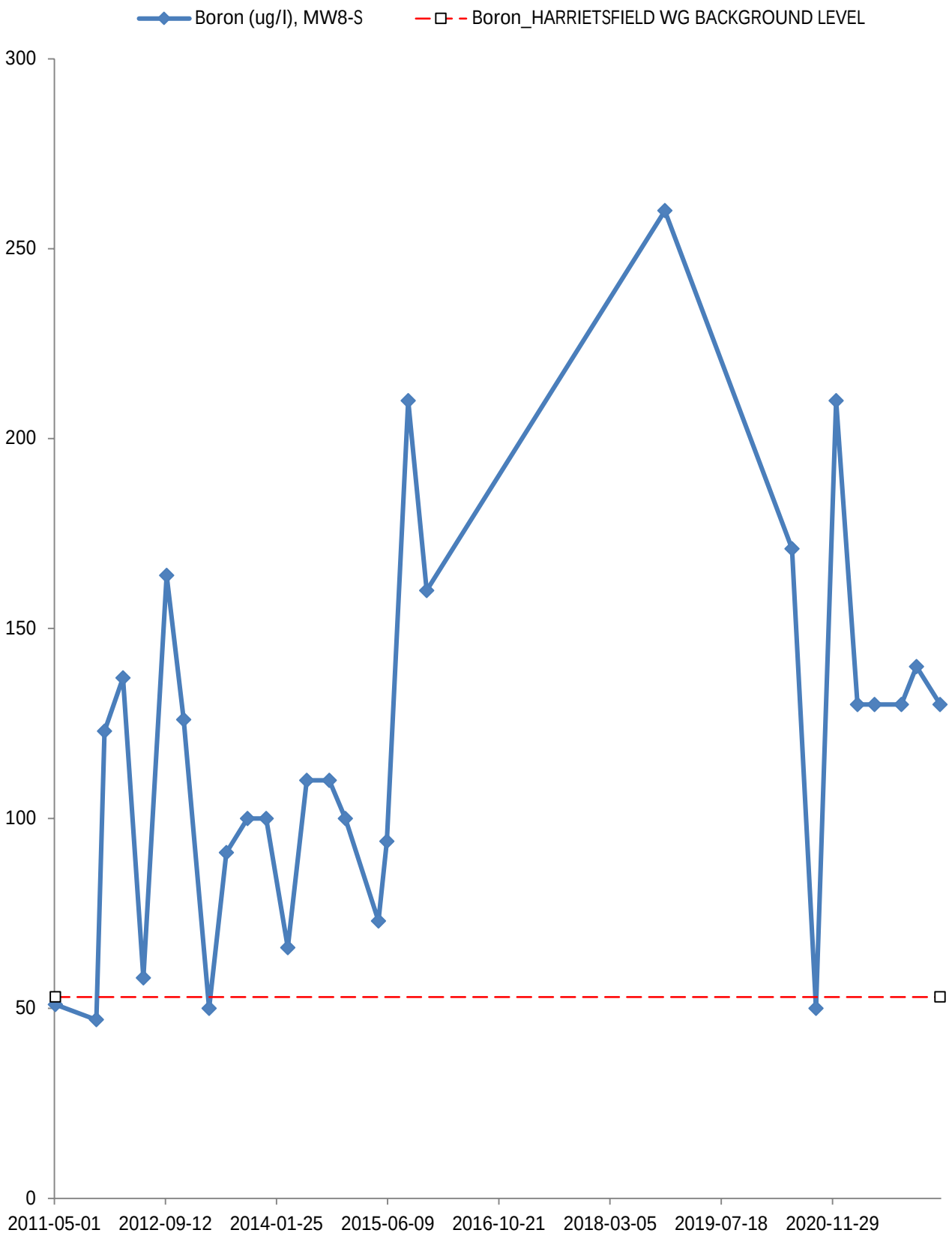


MW8-S-Beryllium

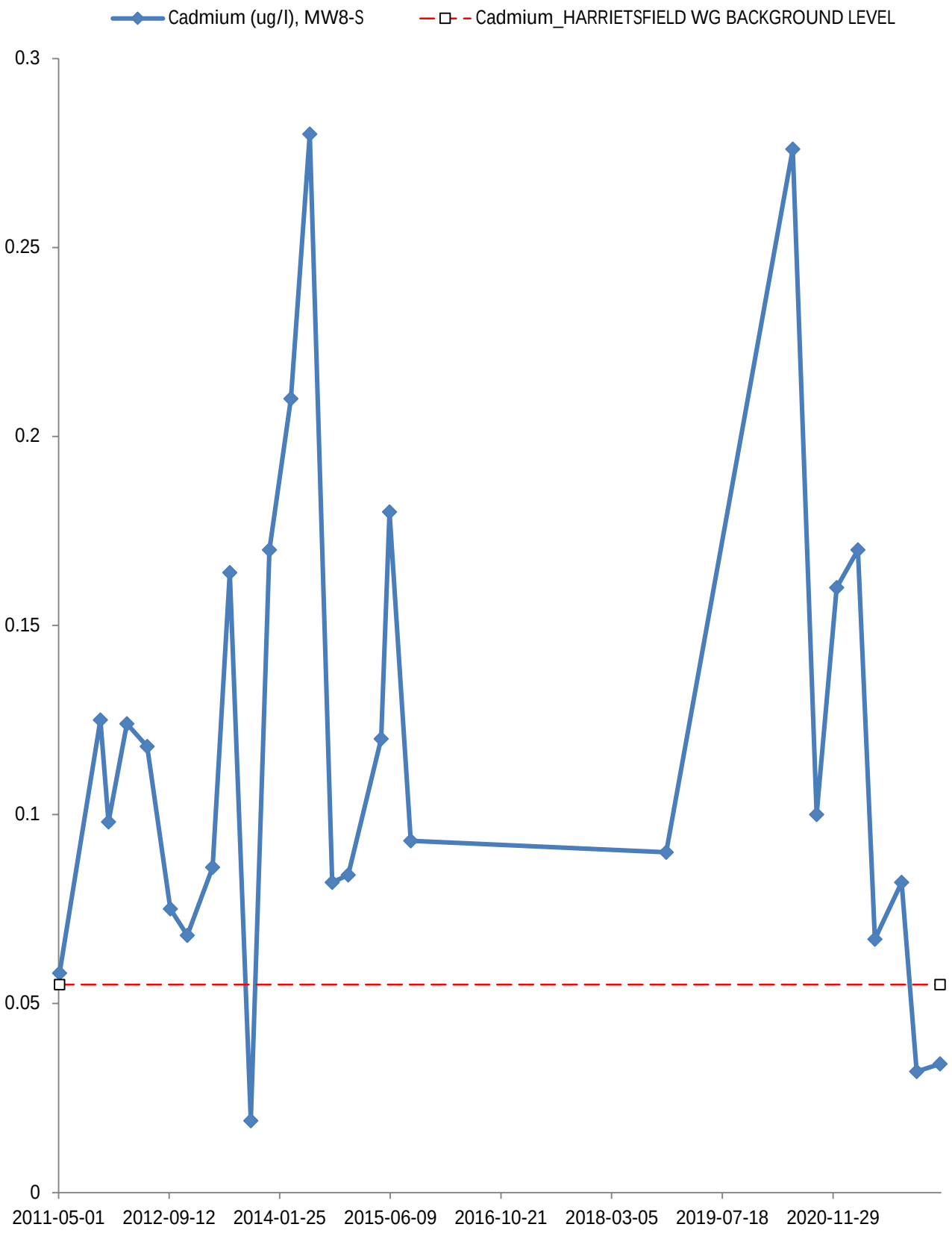



Bismuth (ug/l), MW8-S
Bismuth_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

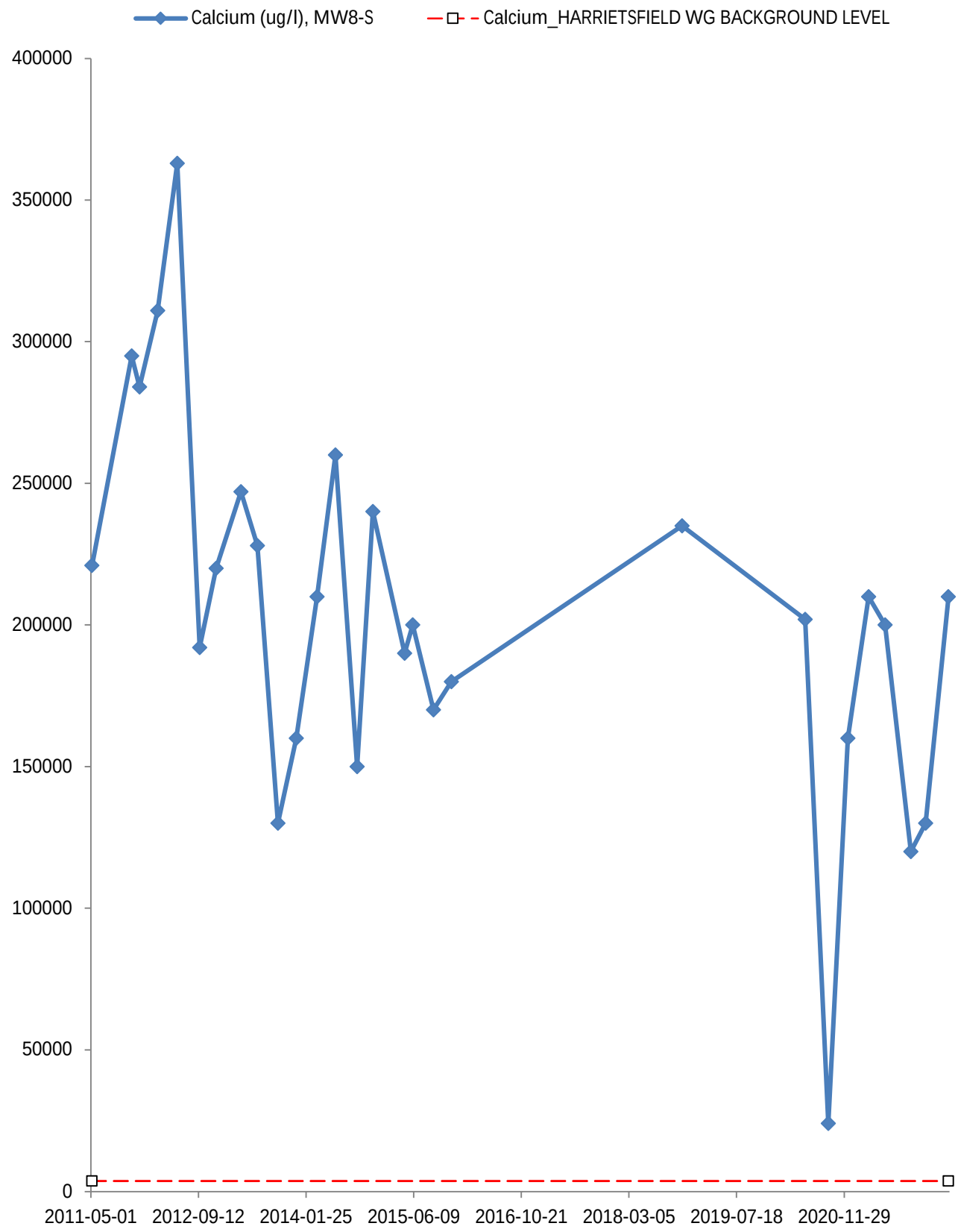
MW8-S-Boron


Boron (ug/l), MW8-S
Boron_HARRIETSFIELD WG BACKGROUND LEVEL
300
250
200
150
100
50
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

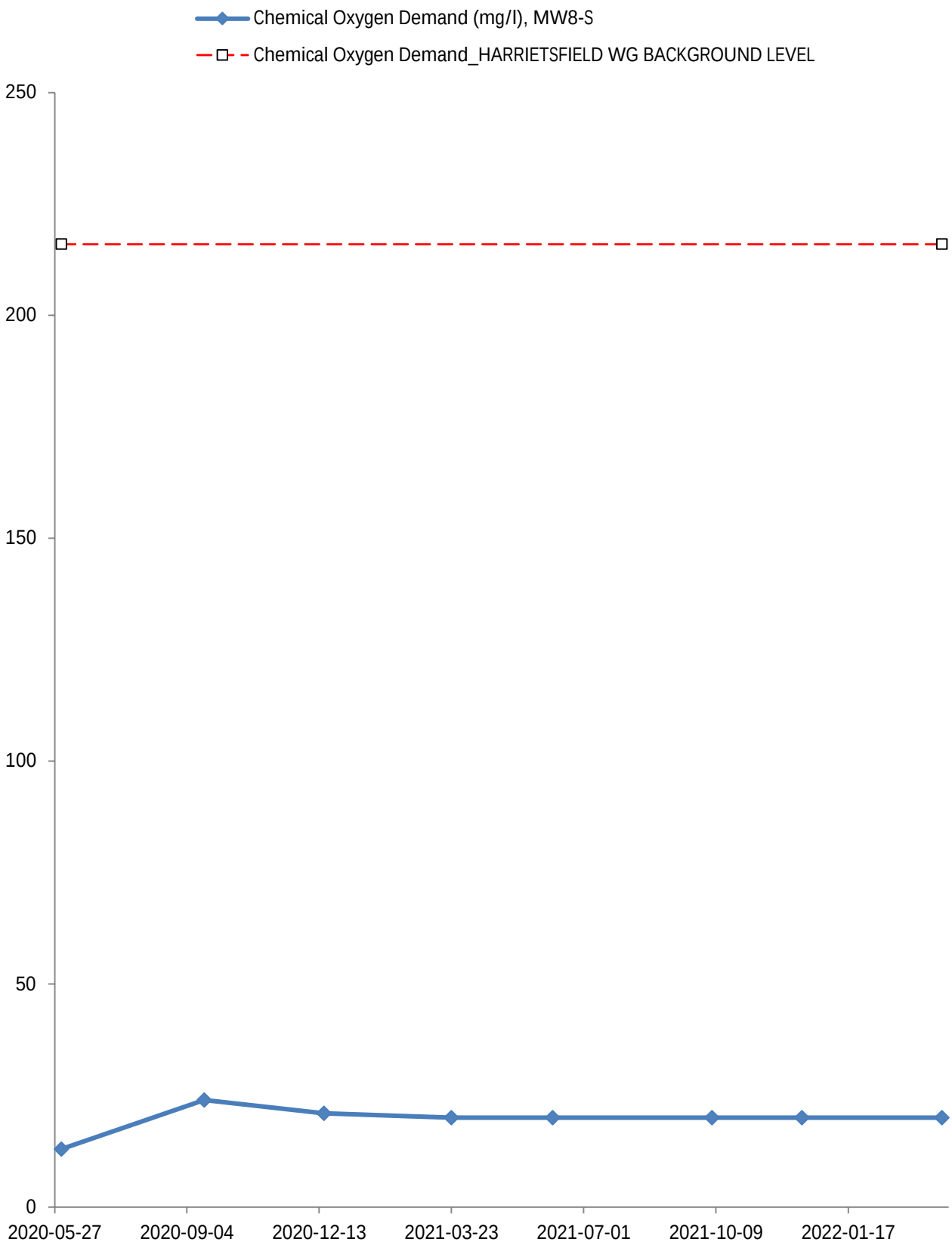
MW8-S-Cadmium



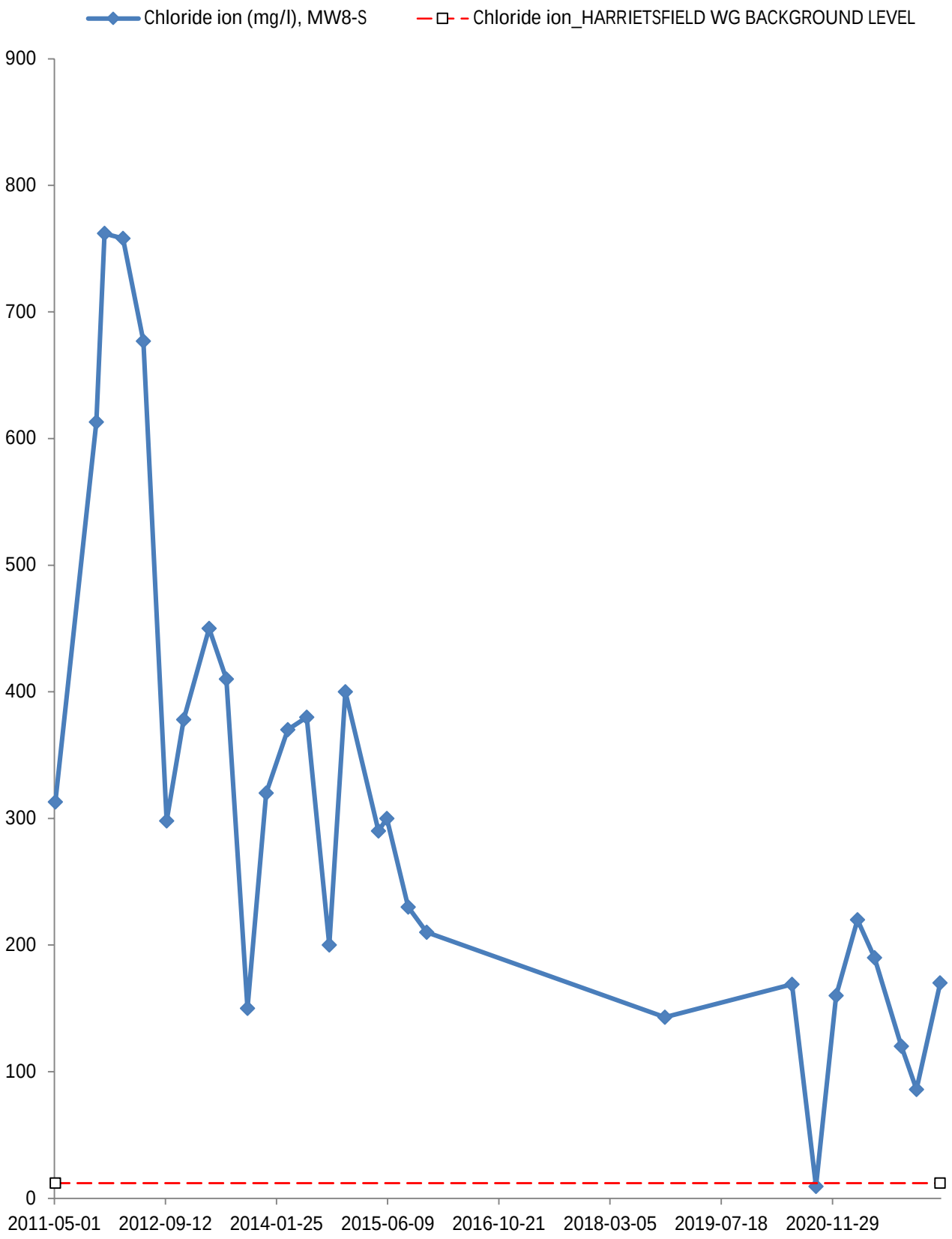
MW8-S-Calcium



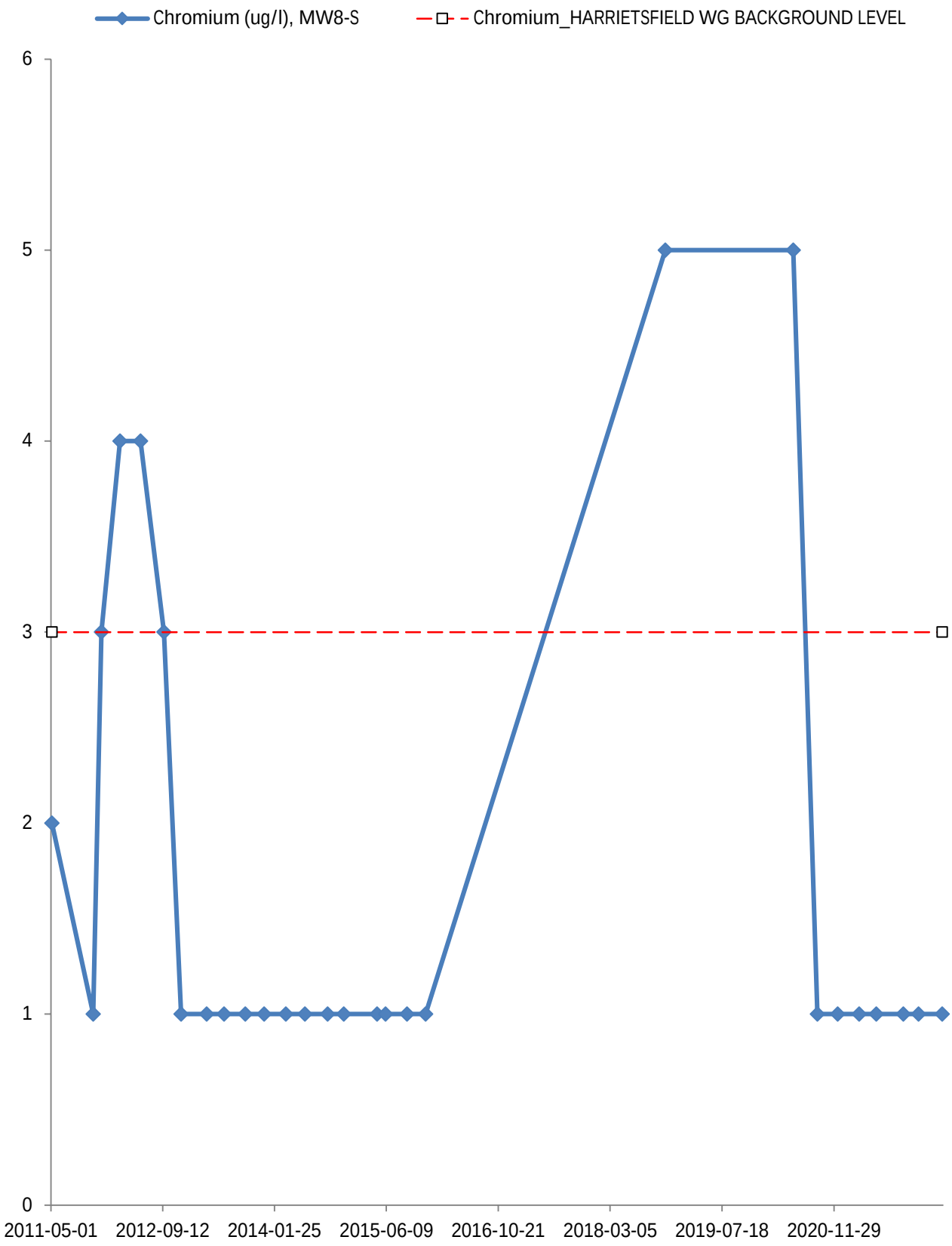
MW8-S-Chemical Oxygen Demand



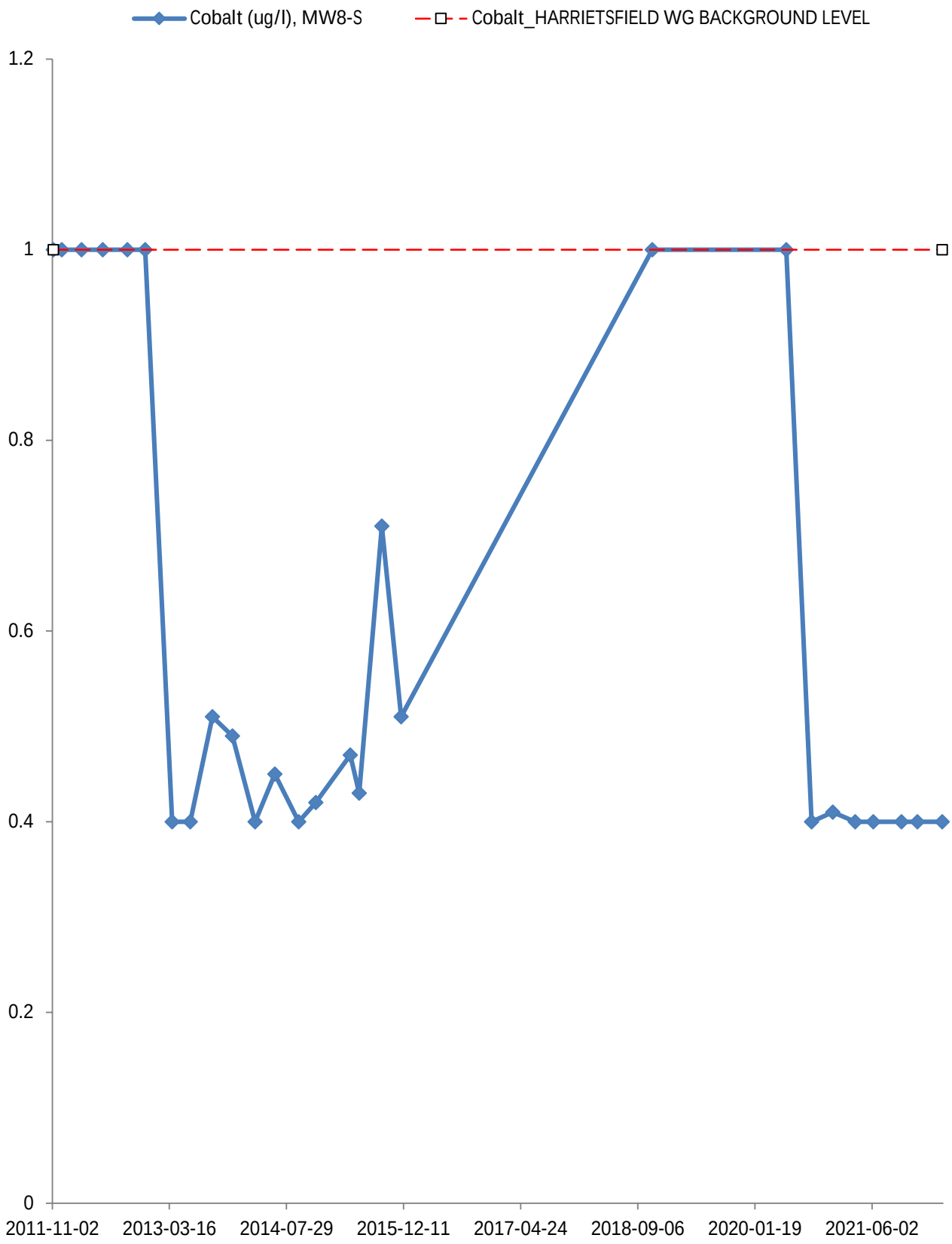
MW8-S-Chloride ion



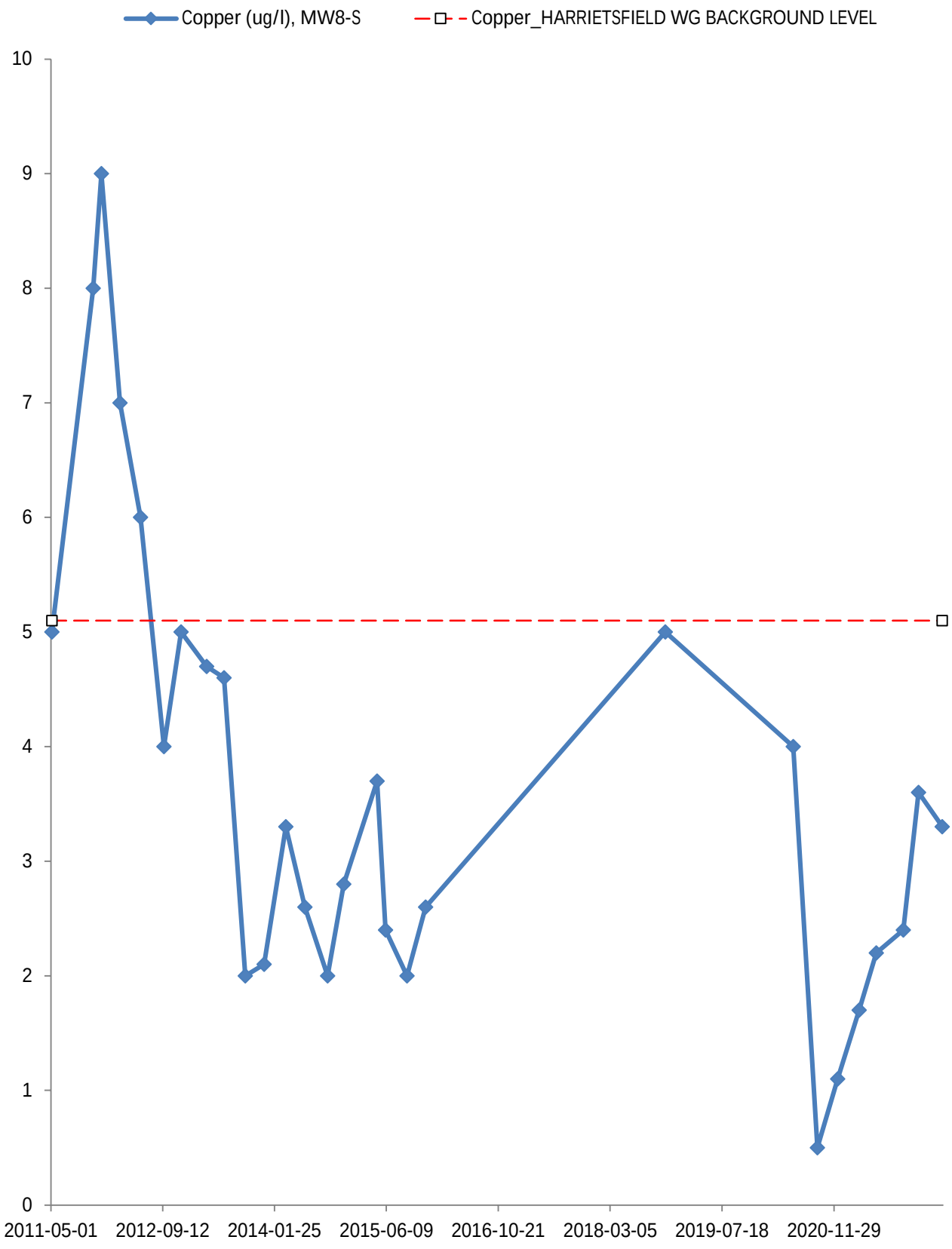
MW8-S-Chromium



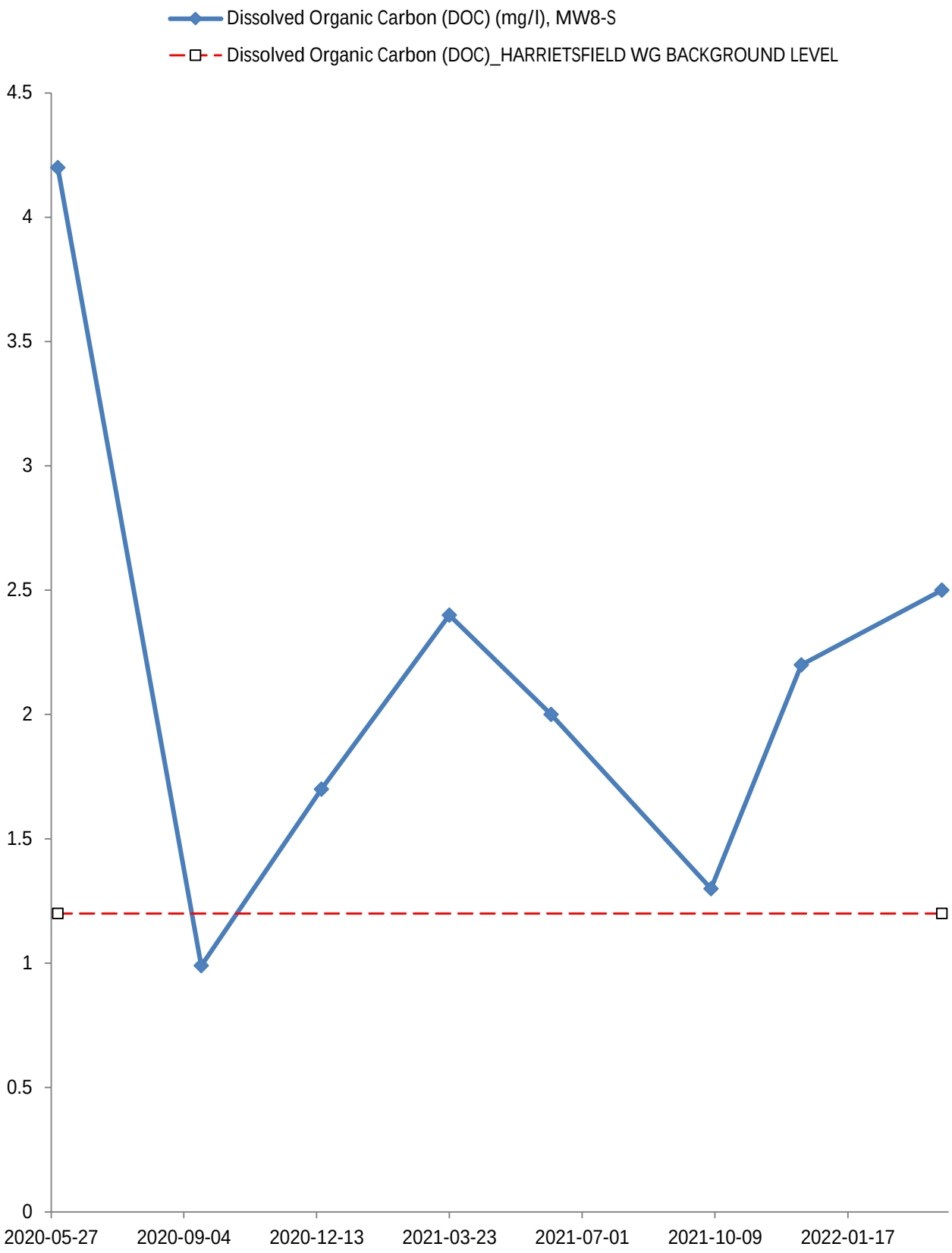
MW8-S-Cobalt


Cobalt (ug/l), MW8-S
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
1.2
1
0.8
0.6
0.4
0.2
0
2011-11-02
2013-03-16
2014-07-29
2015-12-11
2017-04-24
2018-09-06
2020-01-19
2021-06-02

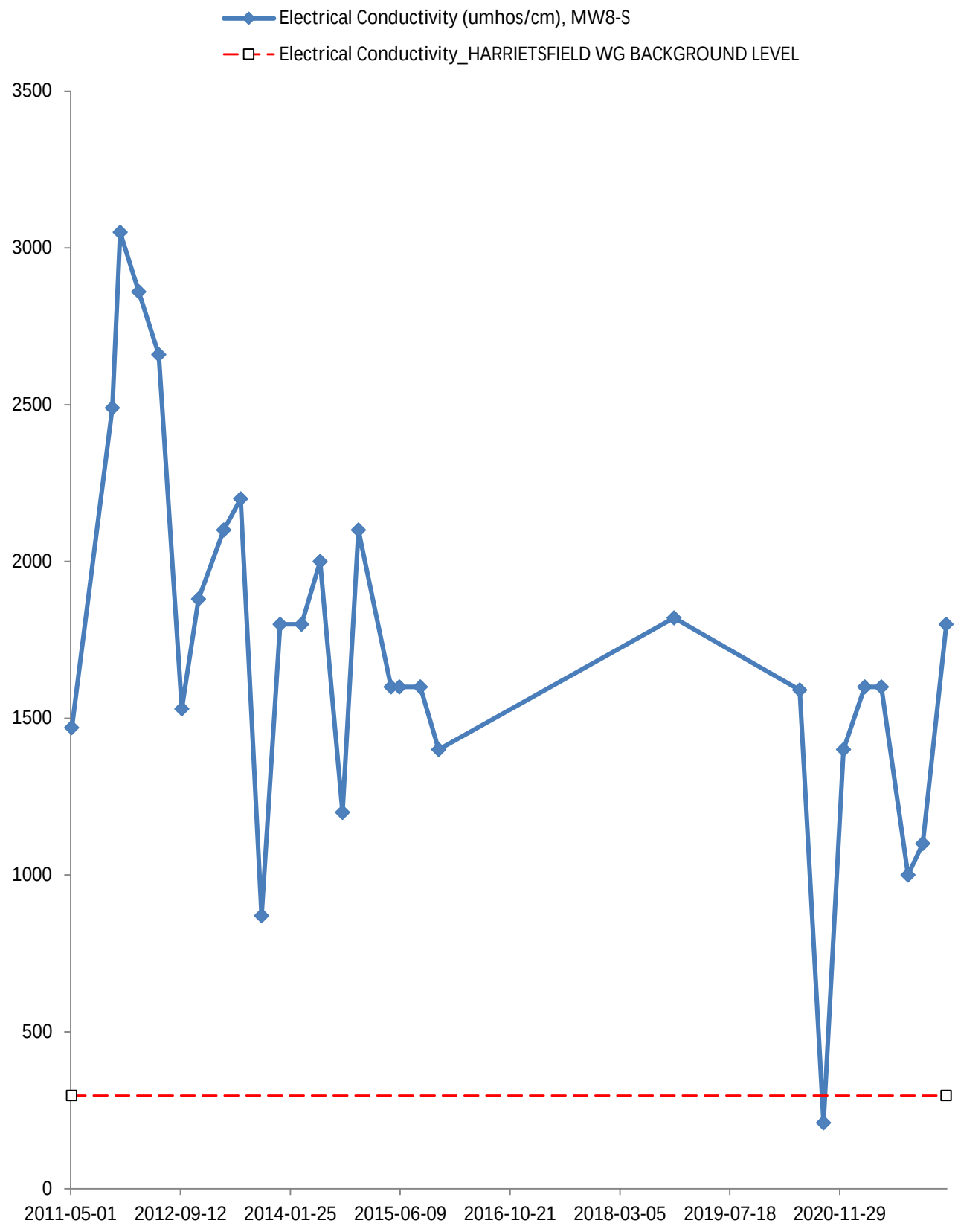
MW8-S-Copper


Copper (ug/l), MW8-S
Copper_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

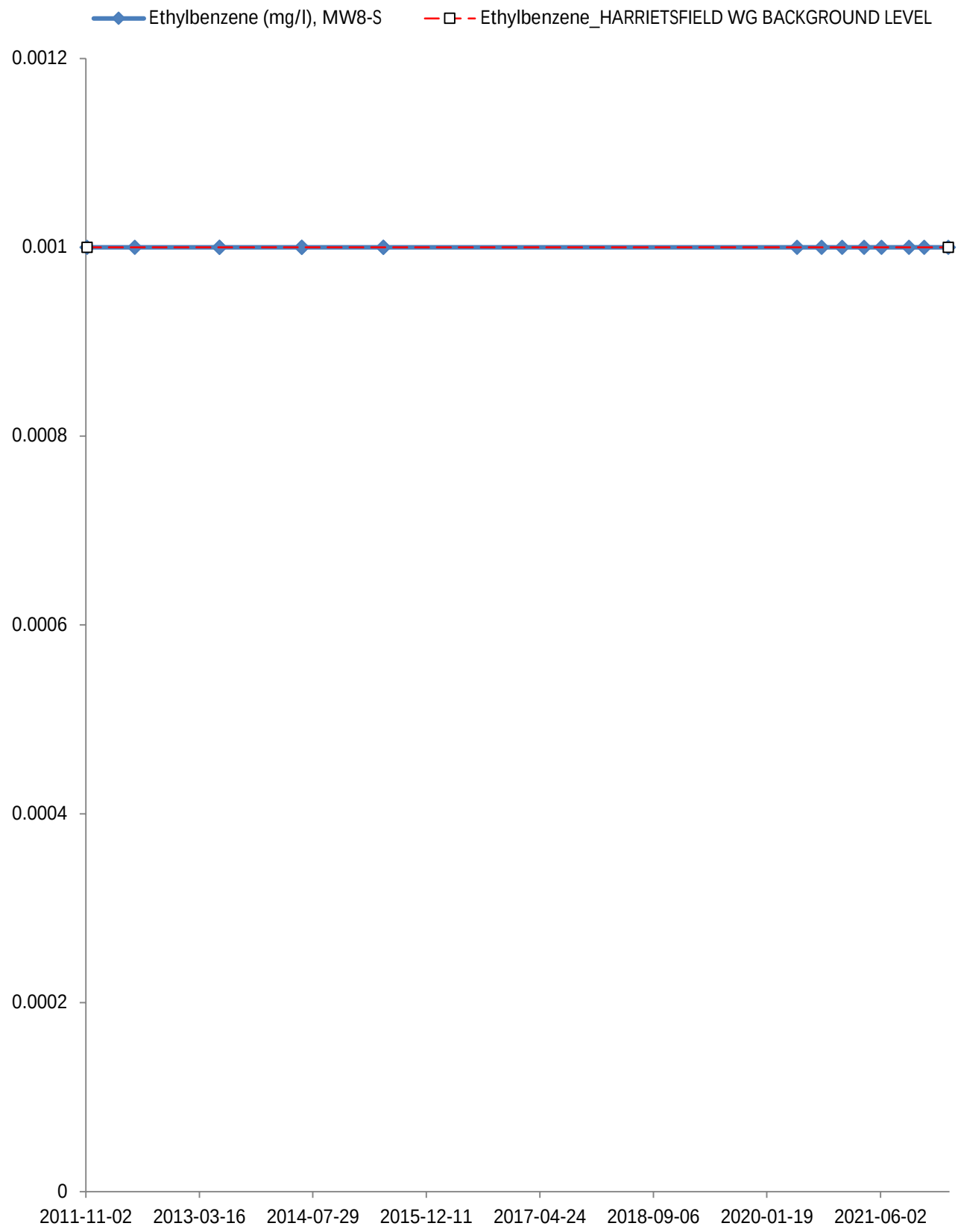
MW8-S-Dissolved Organic Carbon7



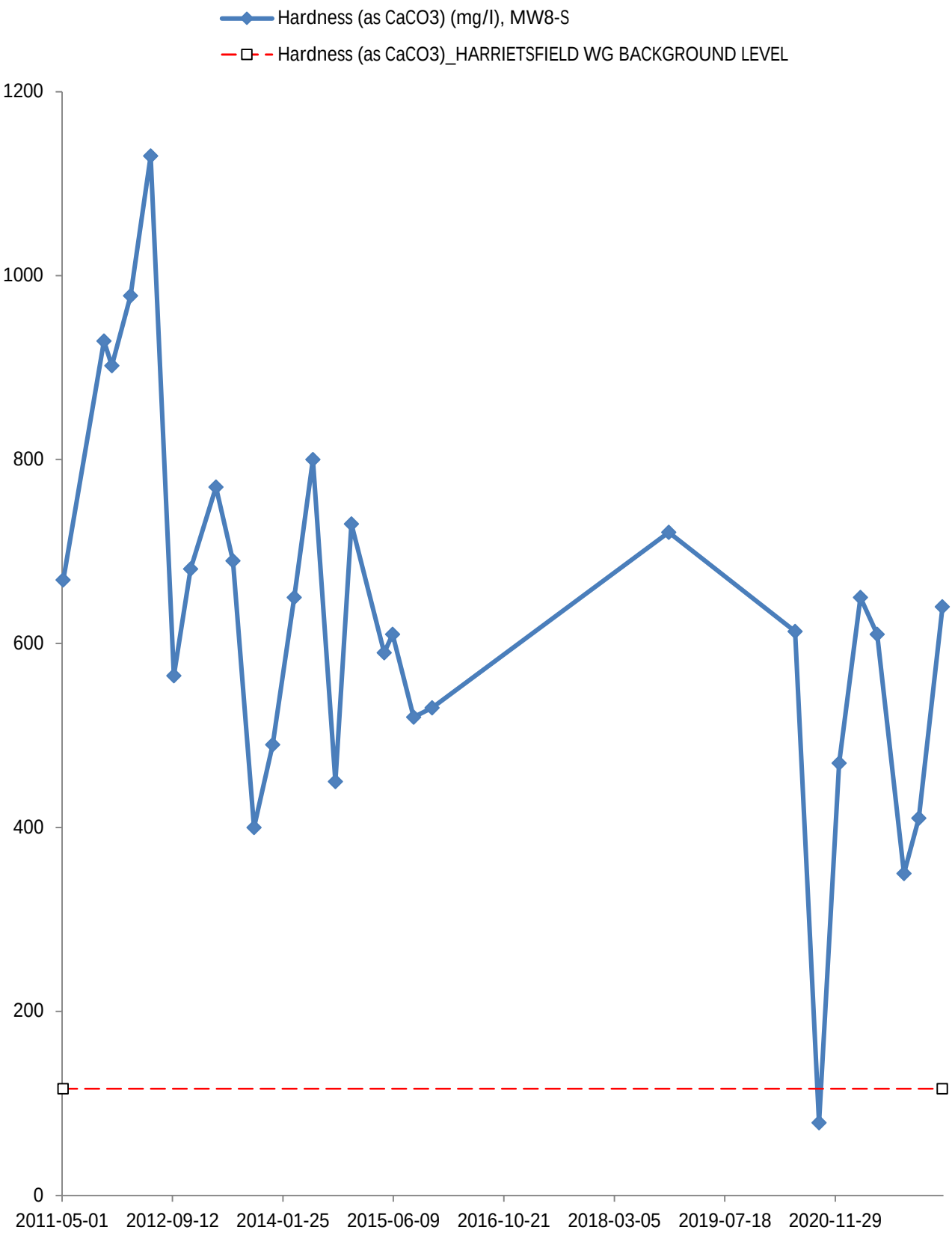
MW8-S-Electrical Conductivity



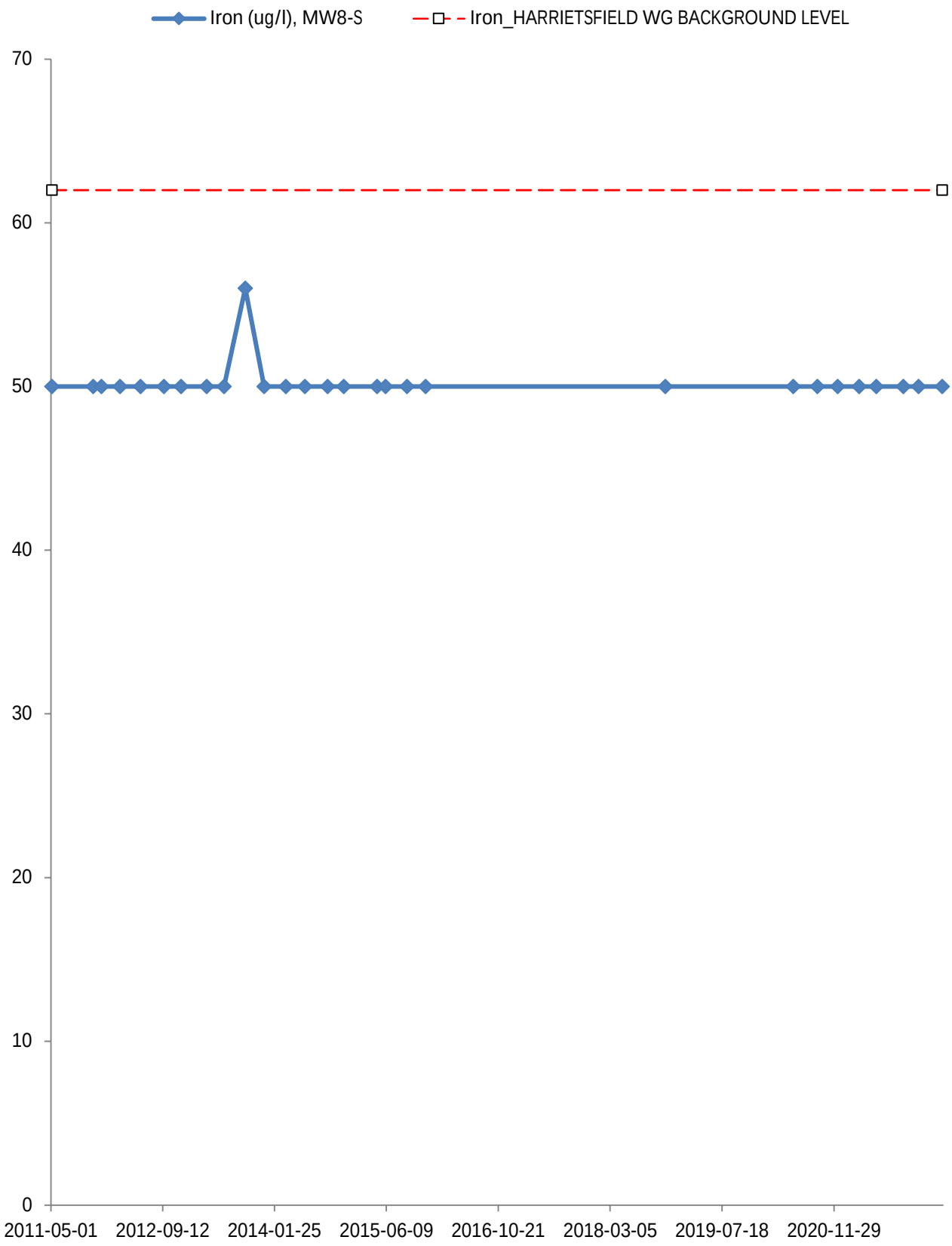
MW8-S-Ethylbenzene



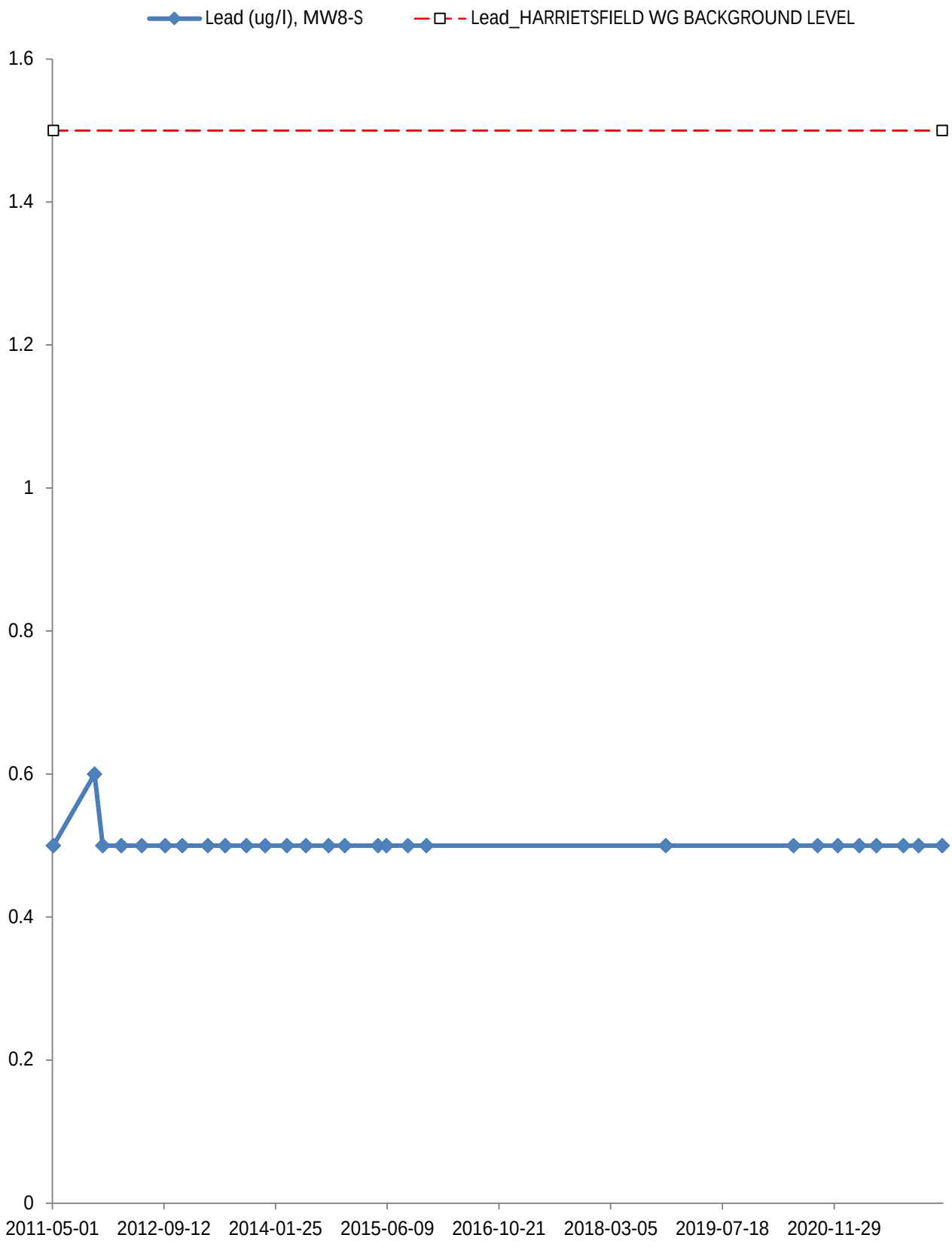
MW8-S-Hardness (as CaCO3)



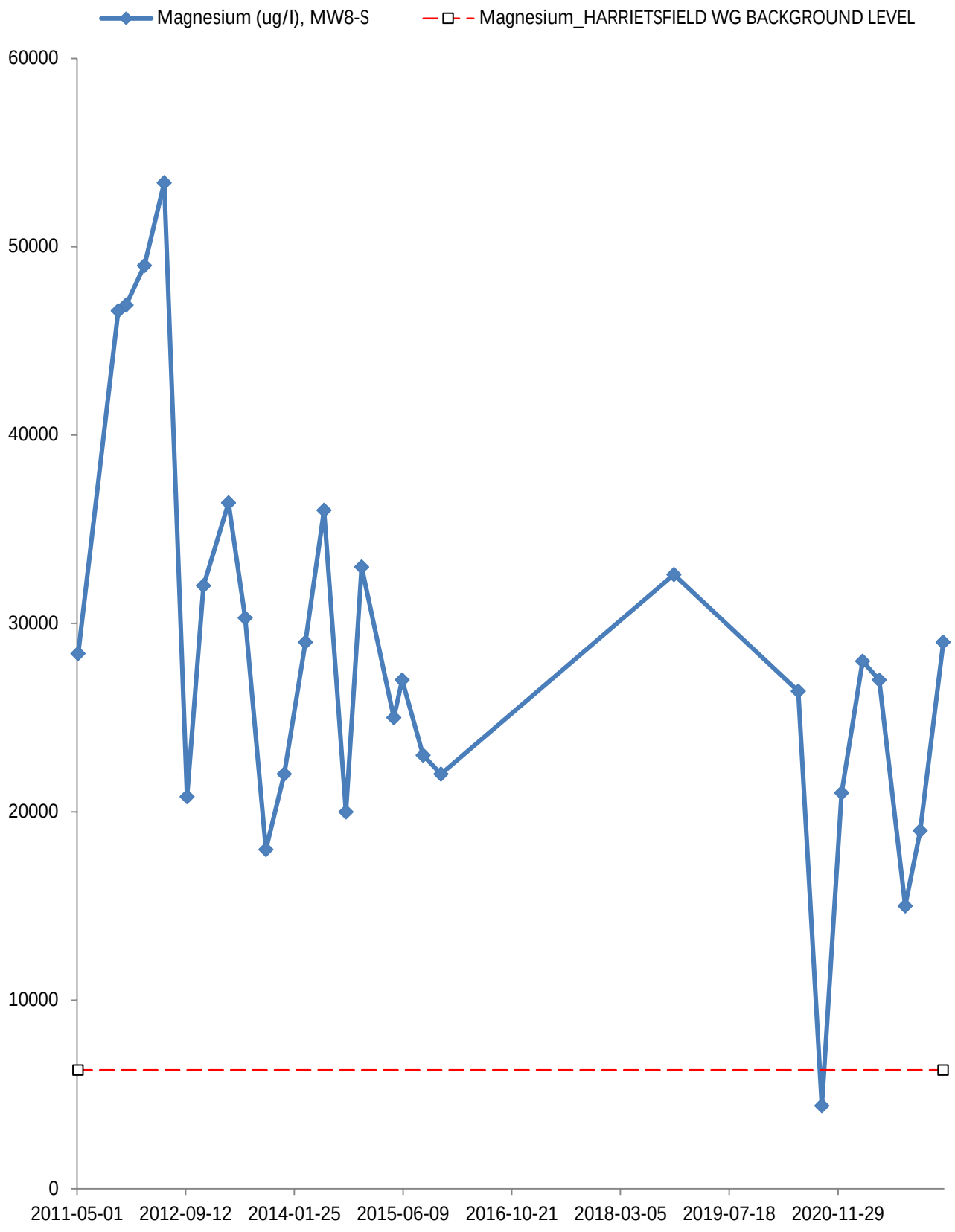
MW8-S-Iron


Iron (ug/l), MW8-S
Iron_HARRIETSFIELD WG BACKGROUND LEVEL
70
60
50
40
30
20
10
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

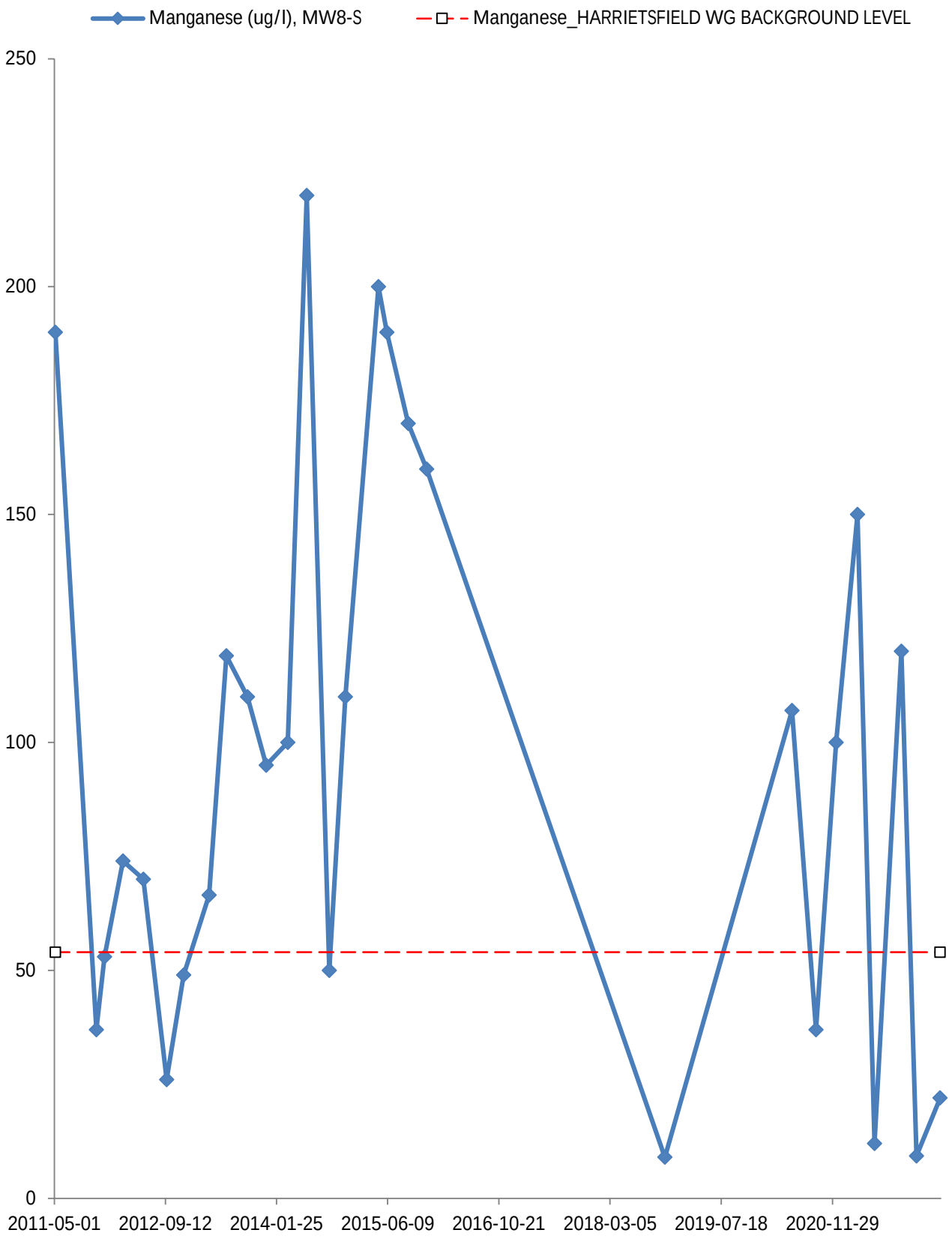
MW8-S-Lead


Lead (ug/l), MW8-S
Lead_HARRIETSFIELD WG BACKGROUND LEVEL
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

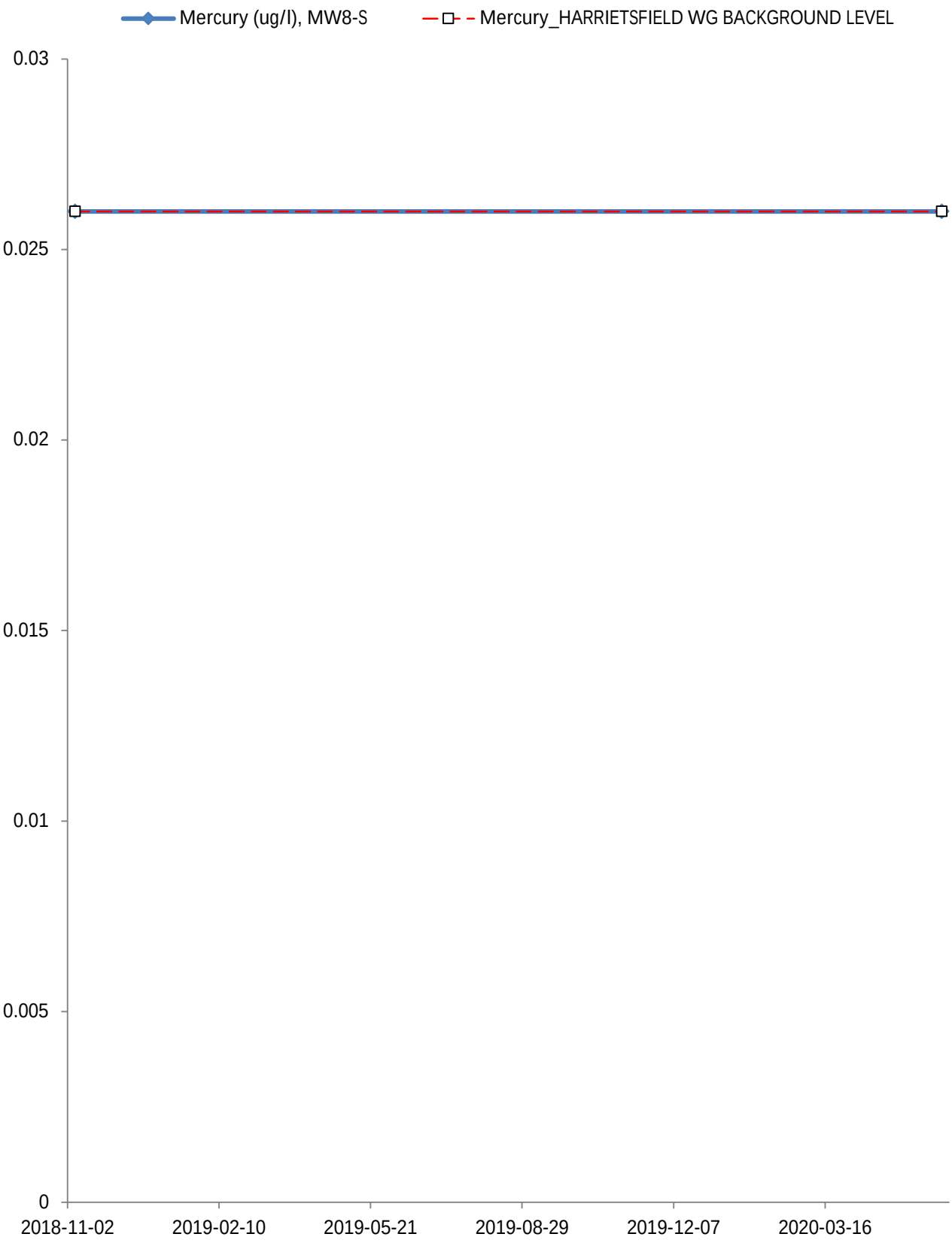
MW8-S-Magnesium



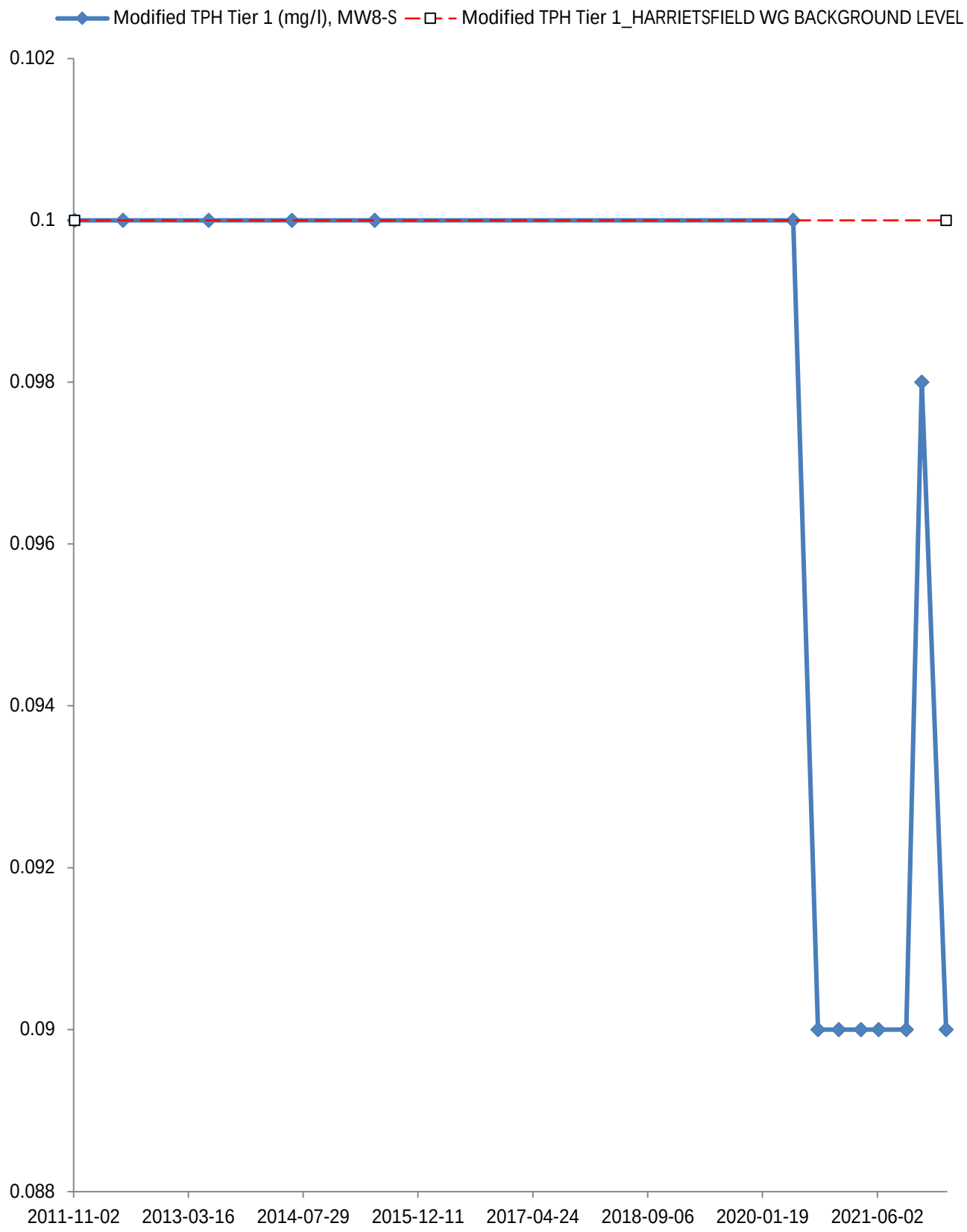
MW8-S-Manganese



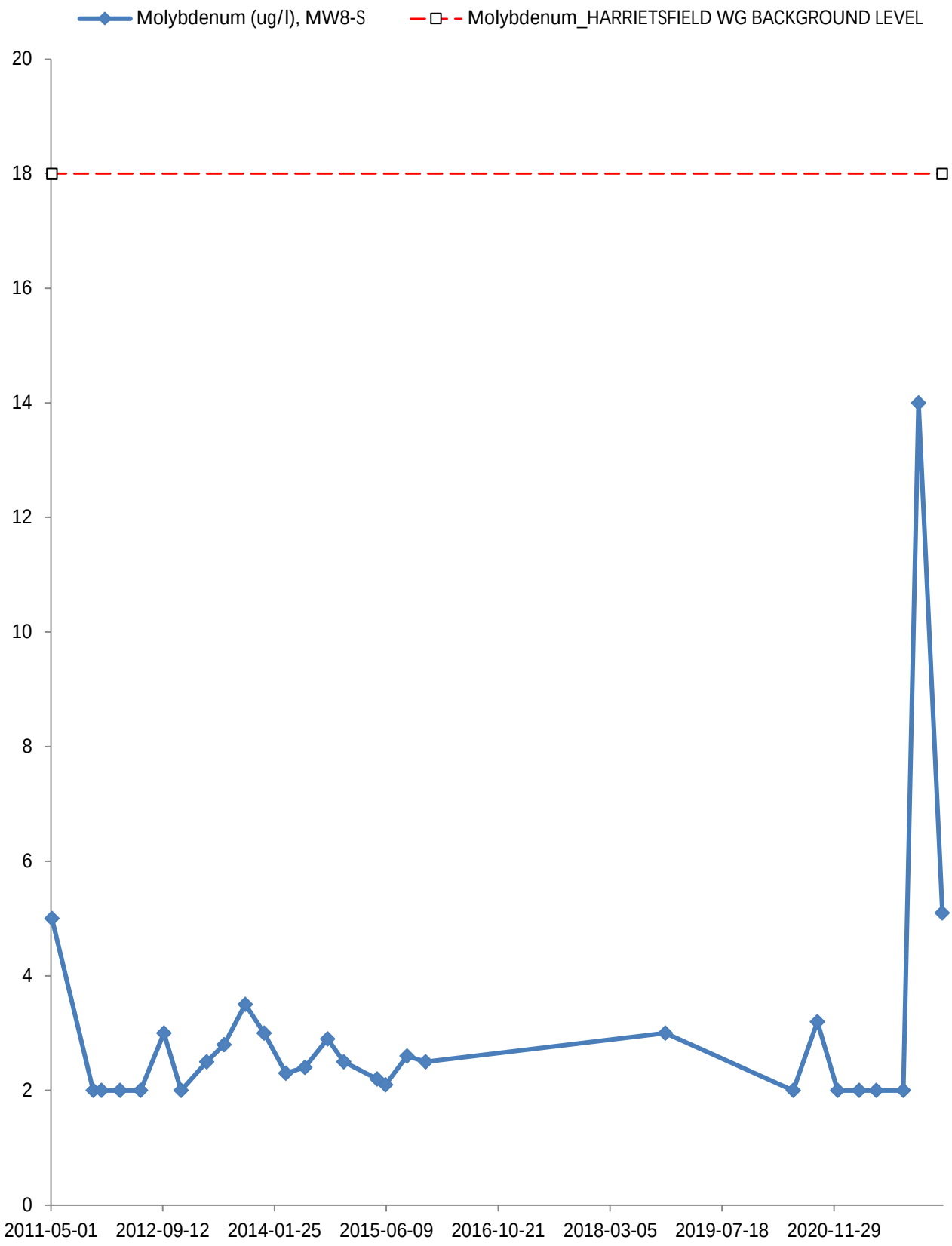
MW8-S-Mercury



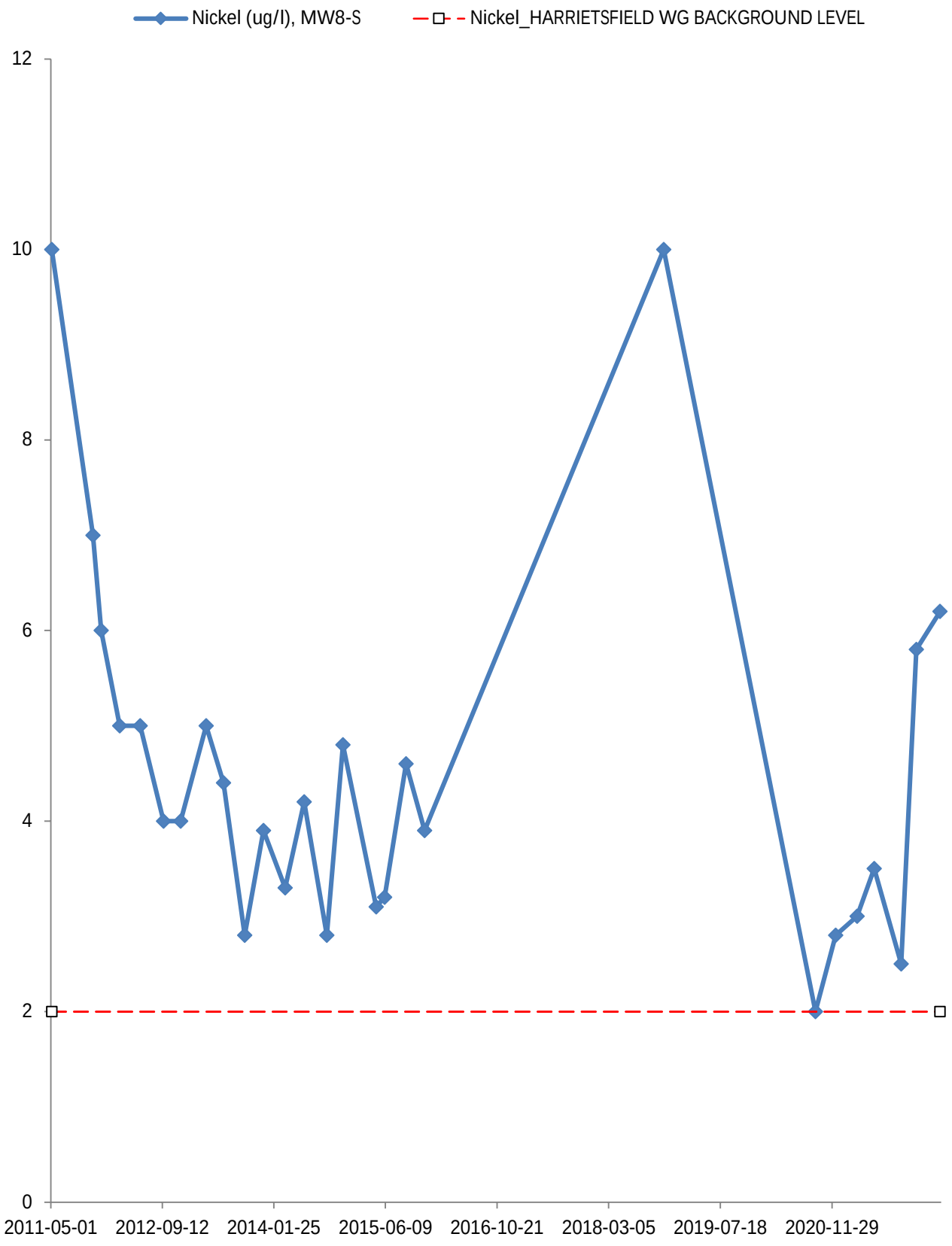
MW8-S-Modified TPH Tier 1



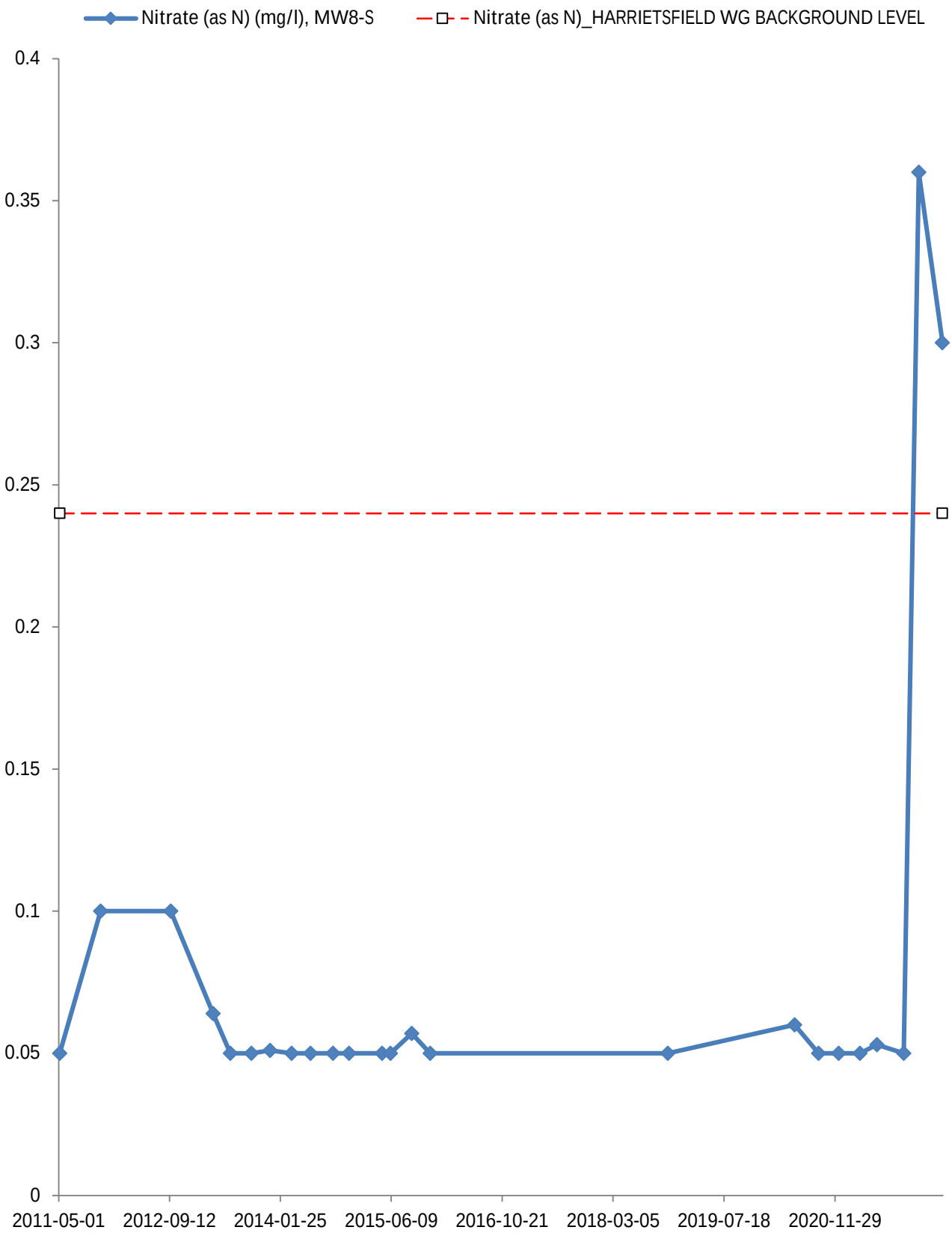
MW8-S-Molybdenum



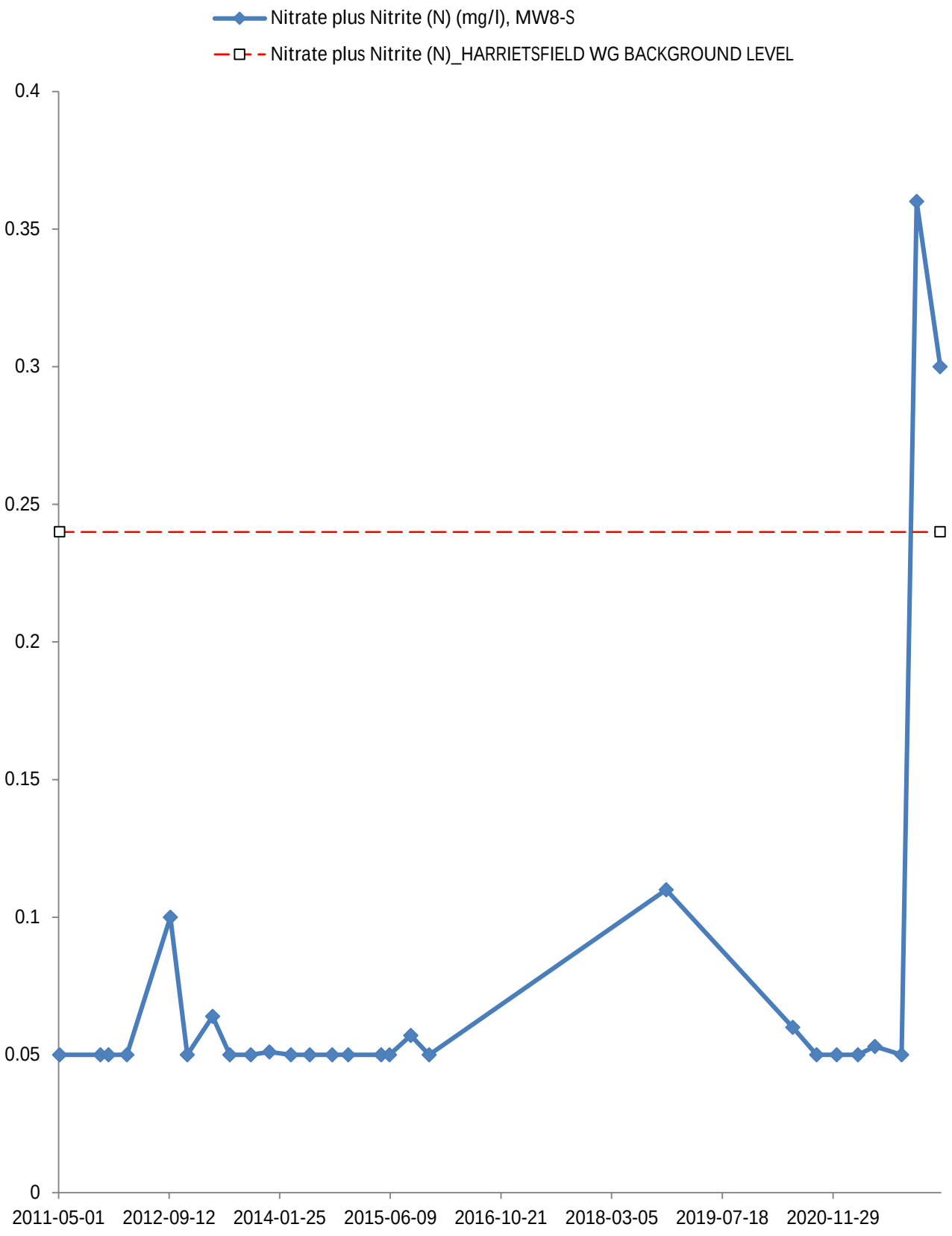
MW8-S-Nickel


Nickel (ug/l), MW8-S
Nickel_HARRIETSFIELD WG BACKGROUND LEVEL
12
10
8
6
4
2
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

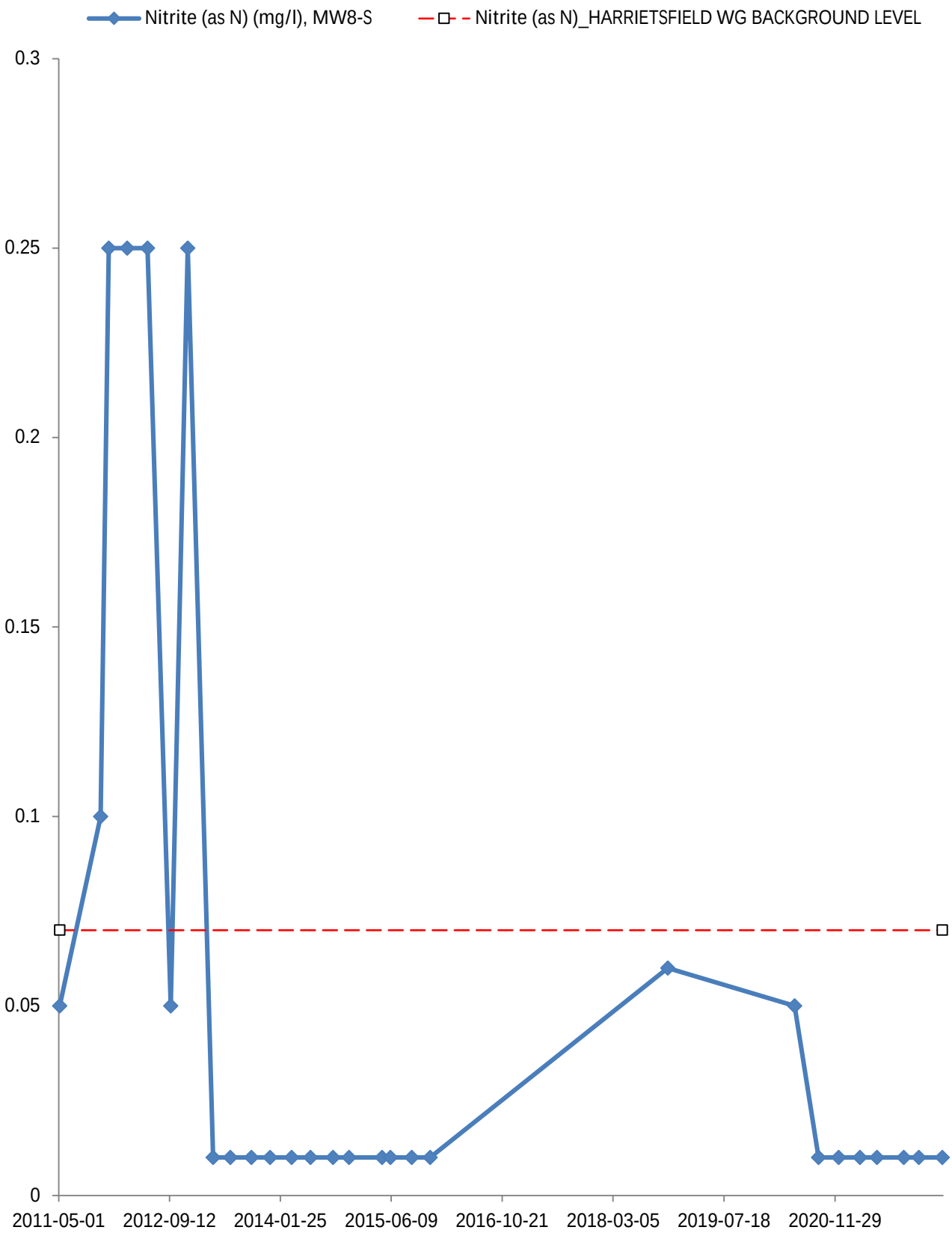
MW8-S-Nitrate (as N)



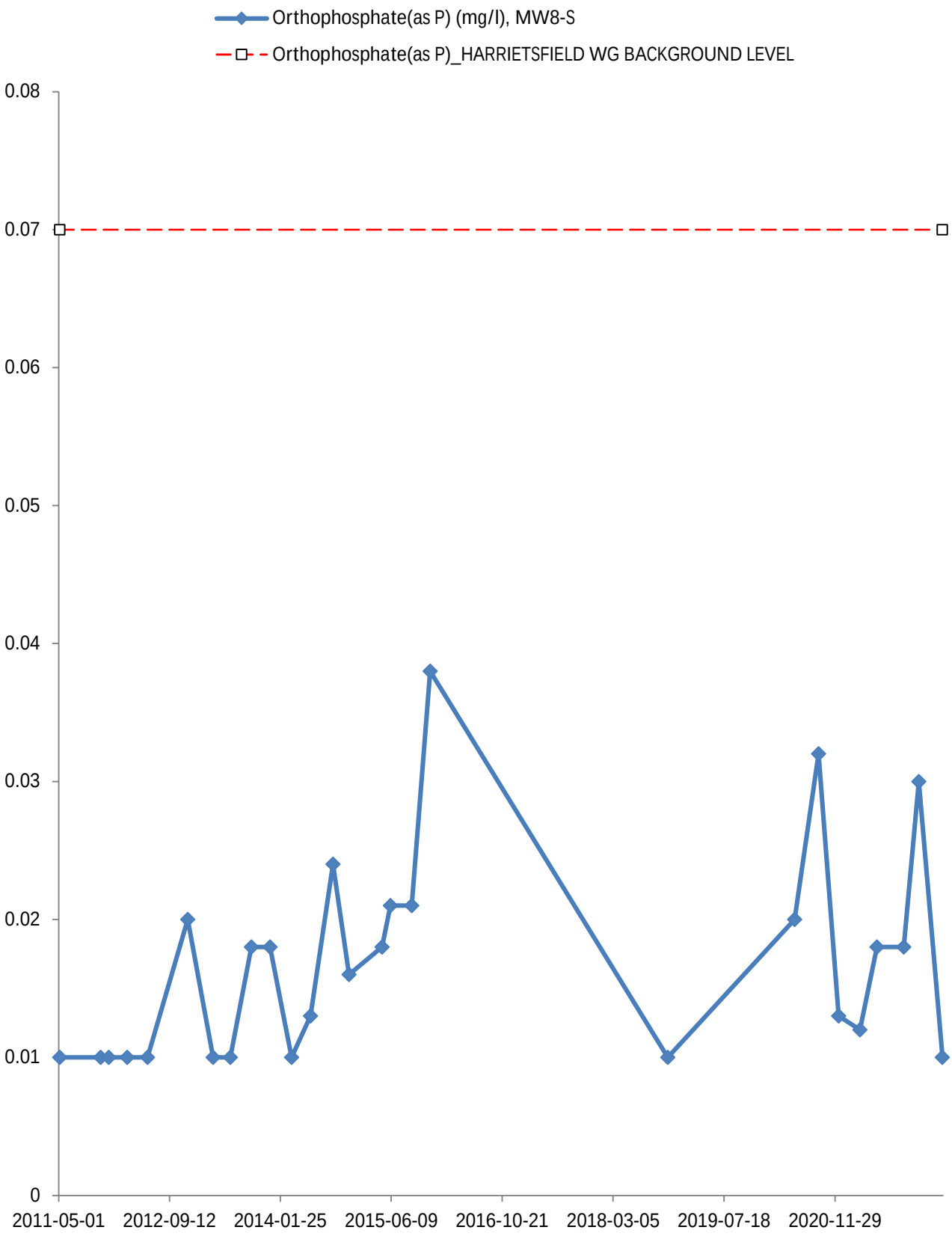
MW8-S-Nitrate plus Nitrite (N)



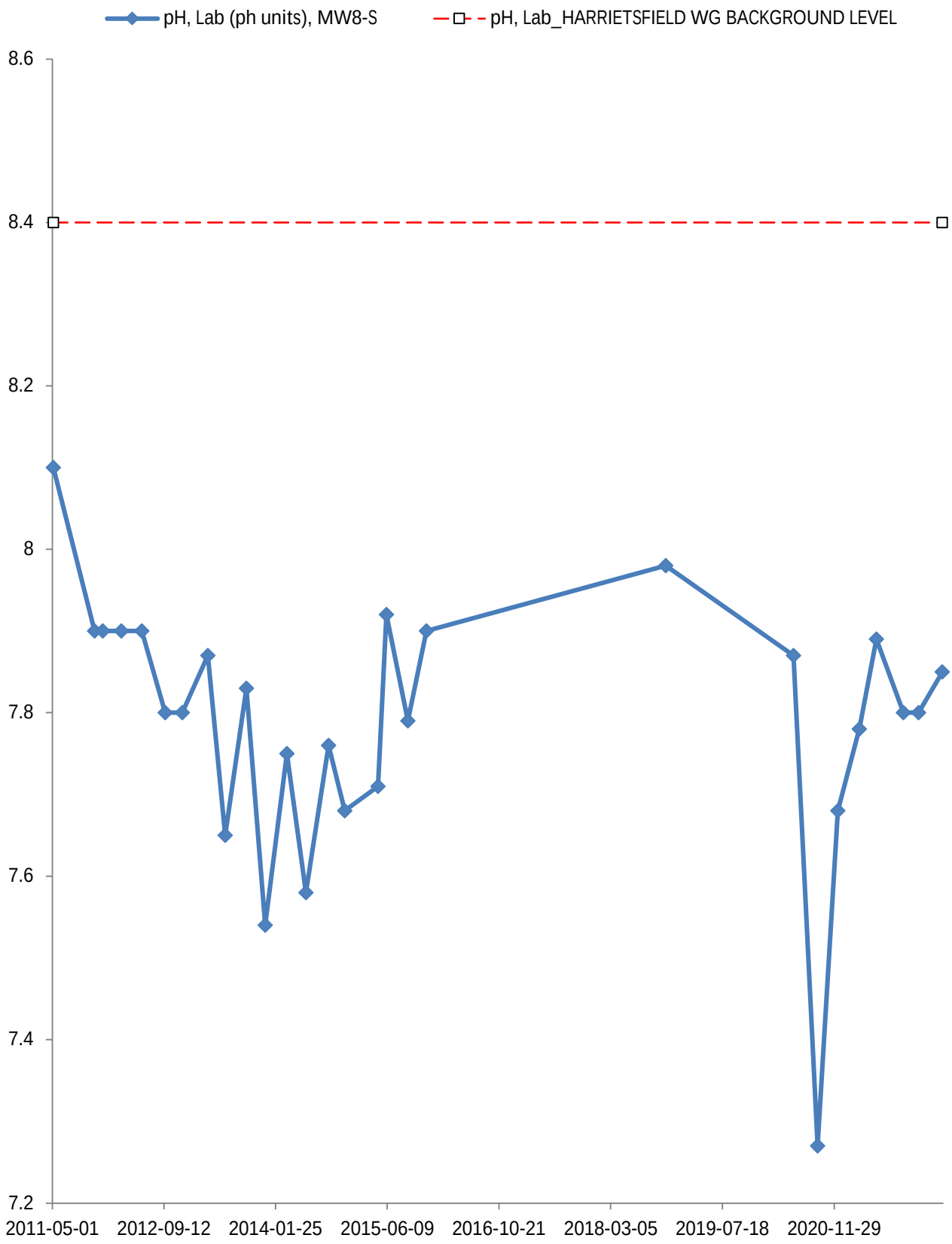
MW8-S-Nitrite (as N)



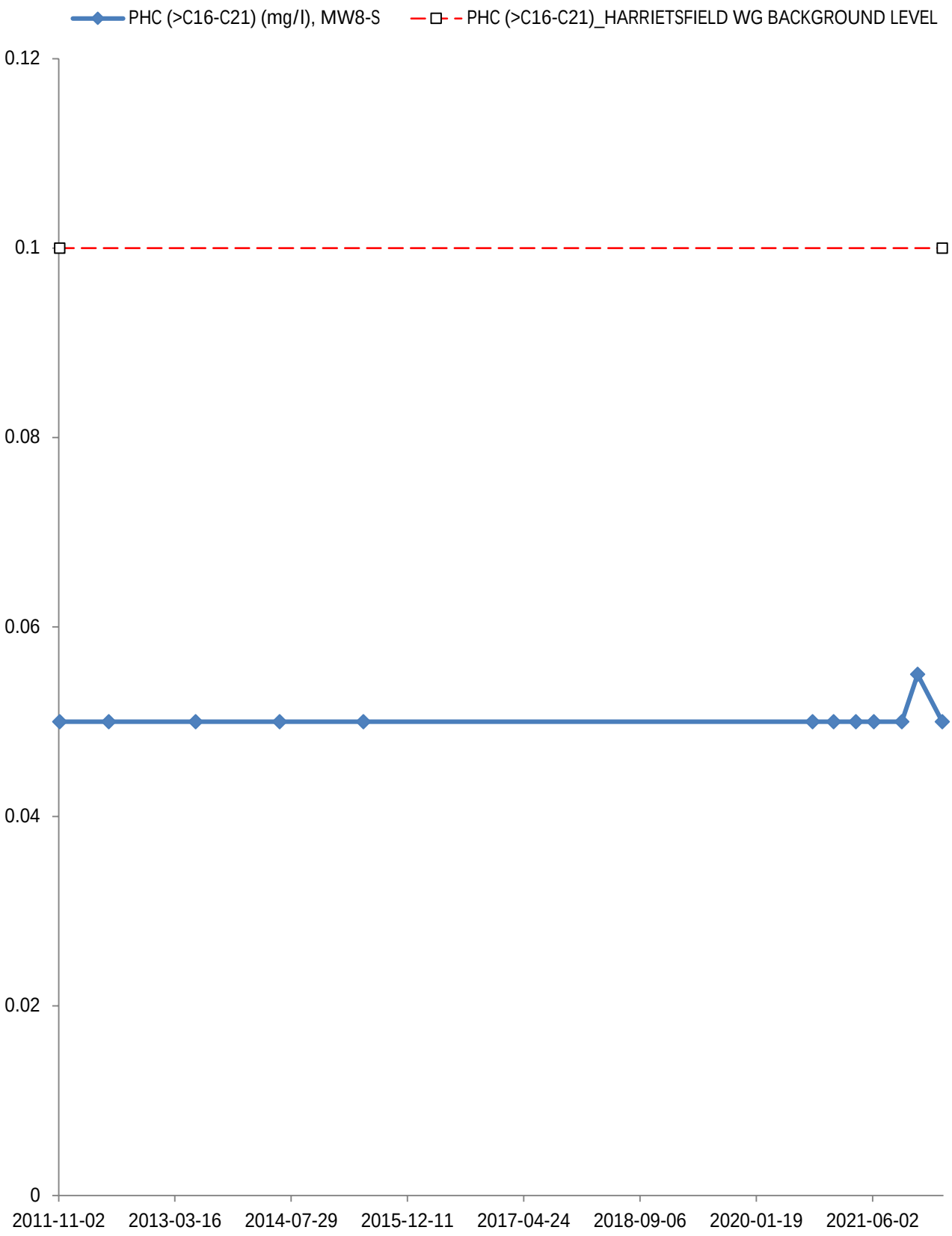
MW8-S-Orthophosphate(as P)



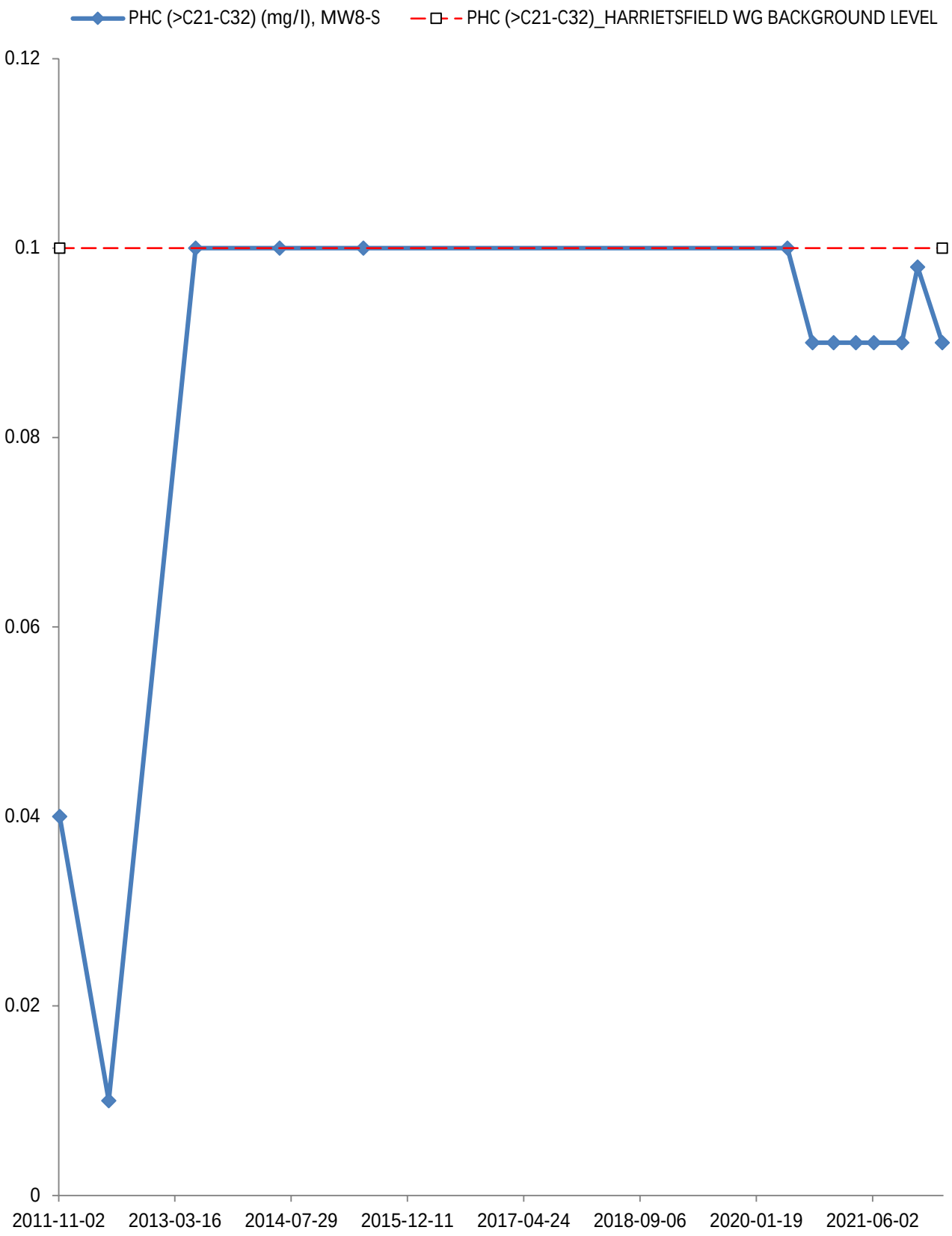
MW8-S-pH, Lab


pH, Lab (ph units), MW8-S
pH, Lab_HARRIETSFIELD WG BACKGROUND LEVEL
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

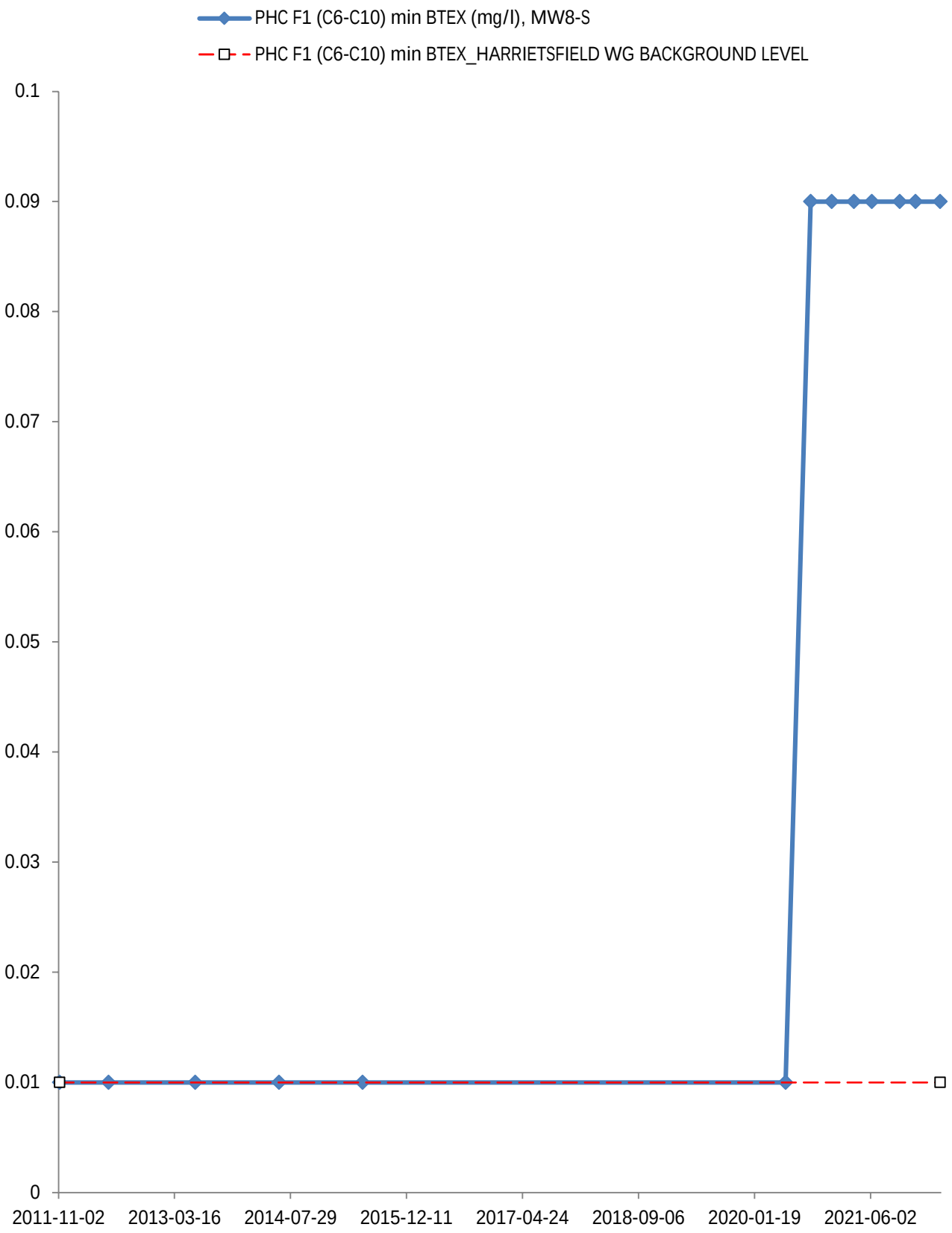
MW8-S-PHC (>C16-C21)



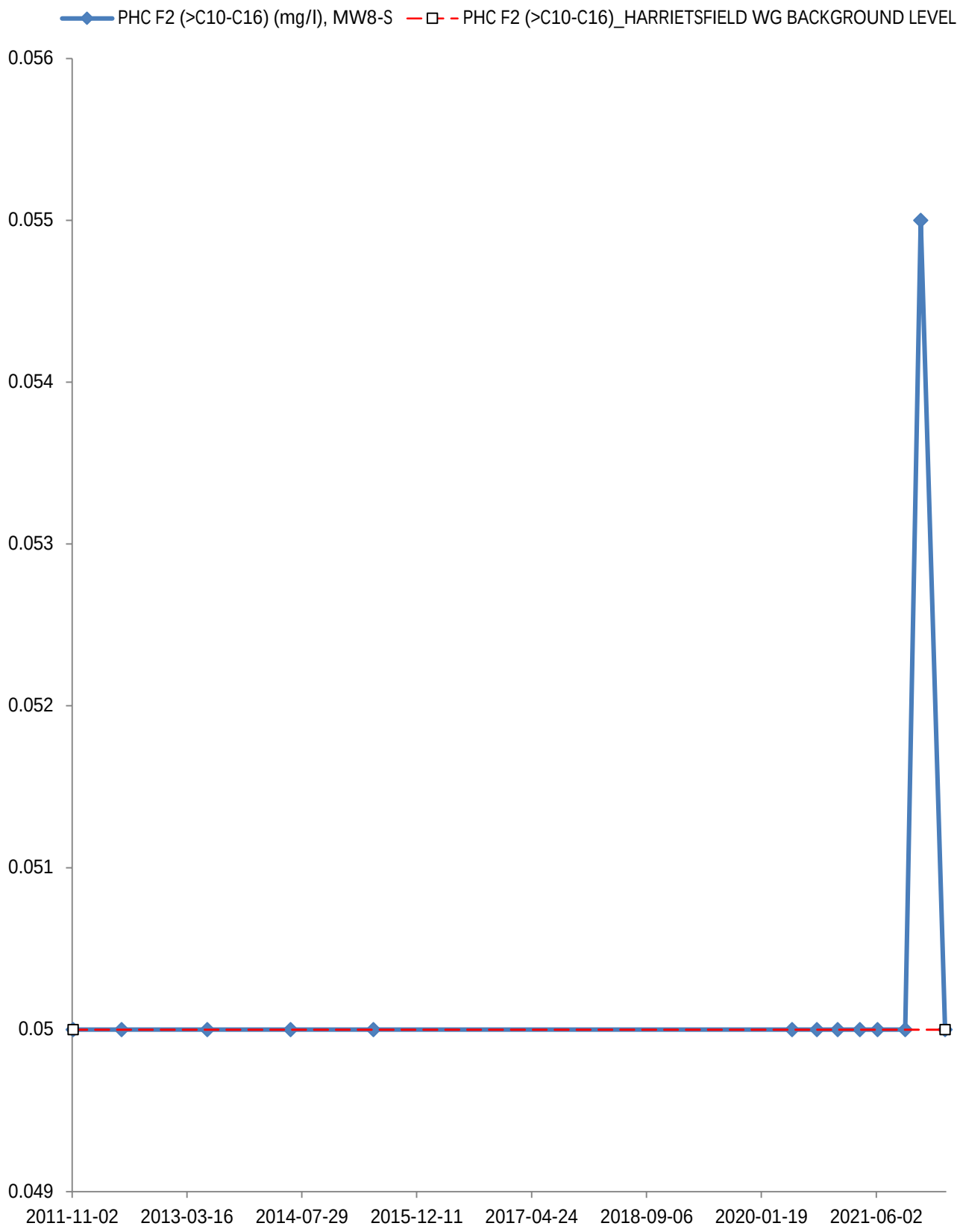
MW8-S-PHC (>C21-C32)



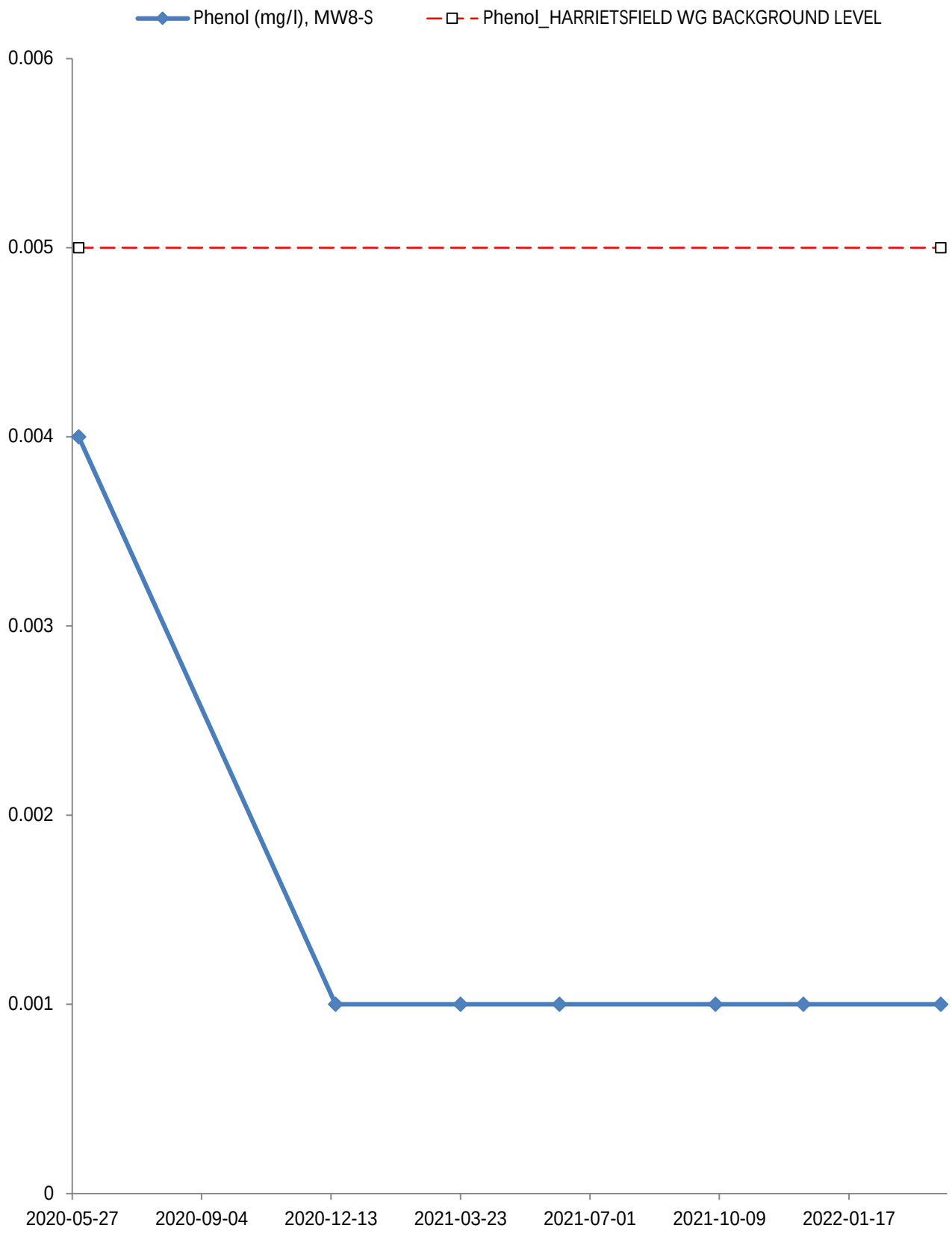
MW8-S-PHC F1 (C6-C10) min BTEX



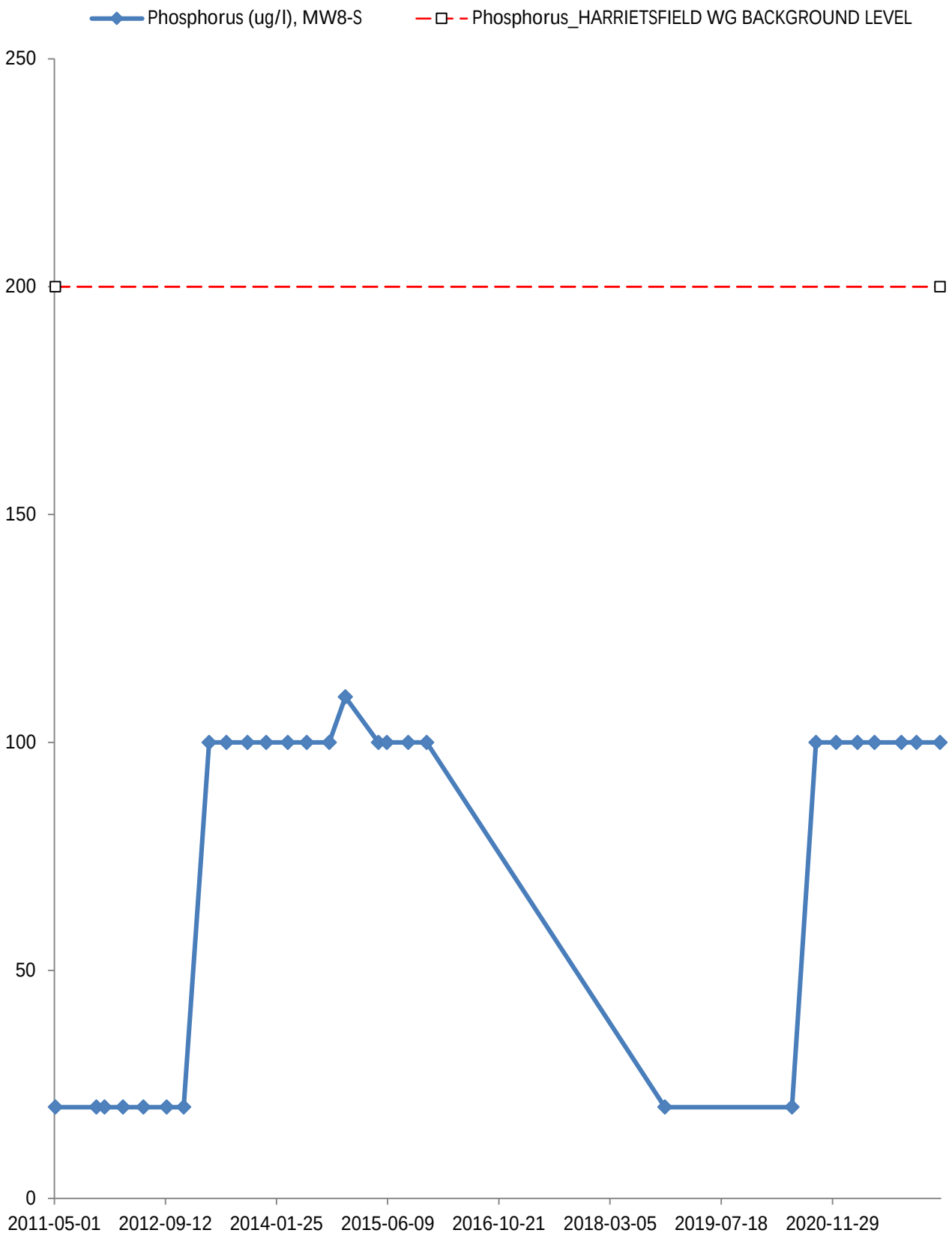
MW8-S-PHC F2 (>C10-C16)



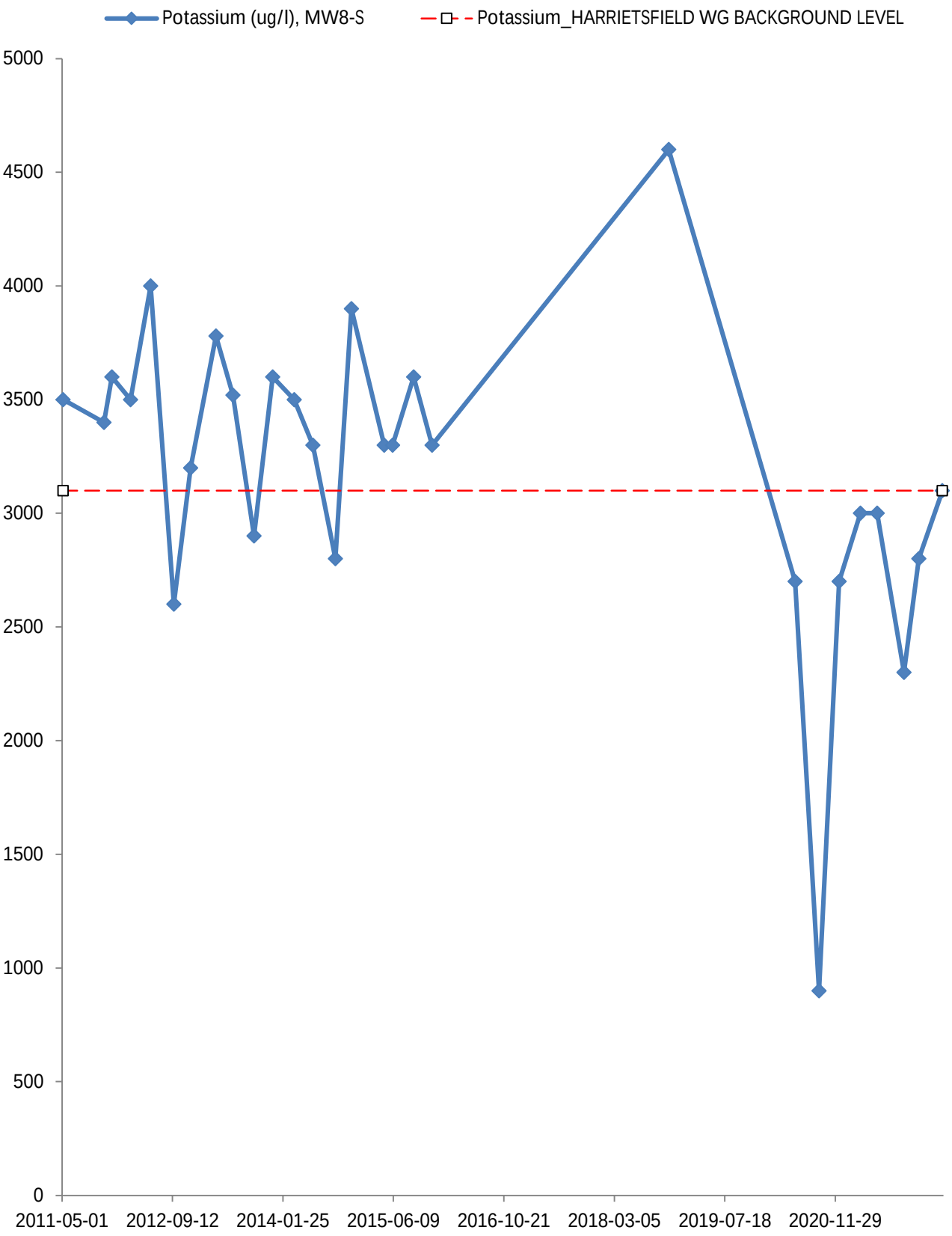
MW8-S-Phenol


Phenol (mg/l), MW8-S
Phenol_HARRIETSFIELD WG BACKGROUND LEVEL
0.006
0.005
0.004
0.003
0.002
0.001
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

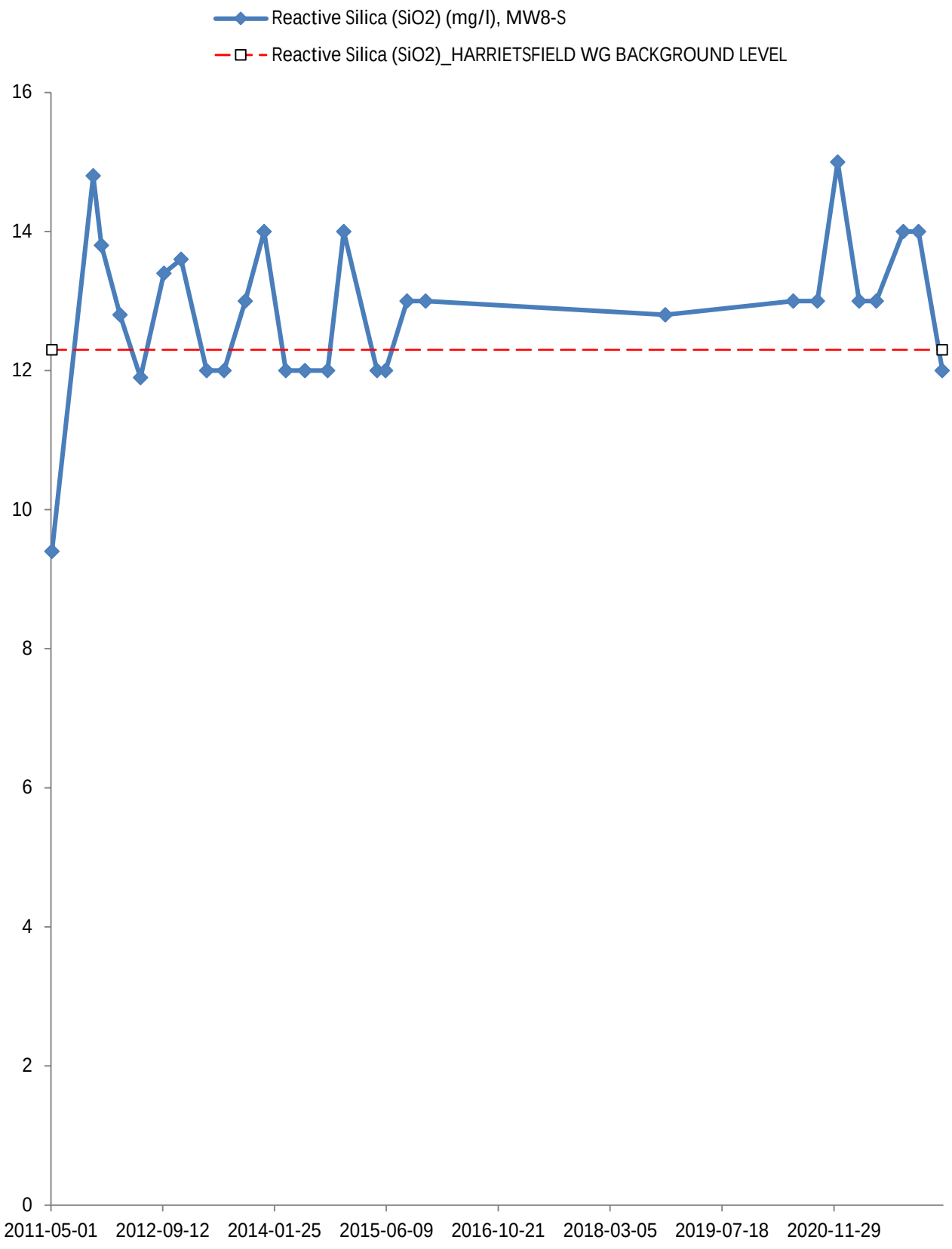
MW8-S-Phosphorus



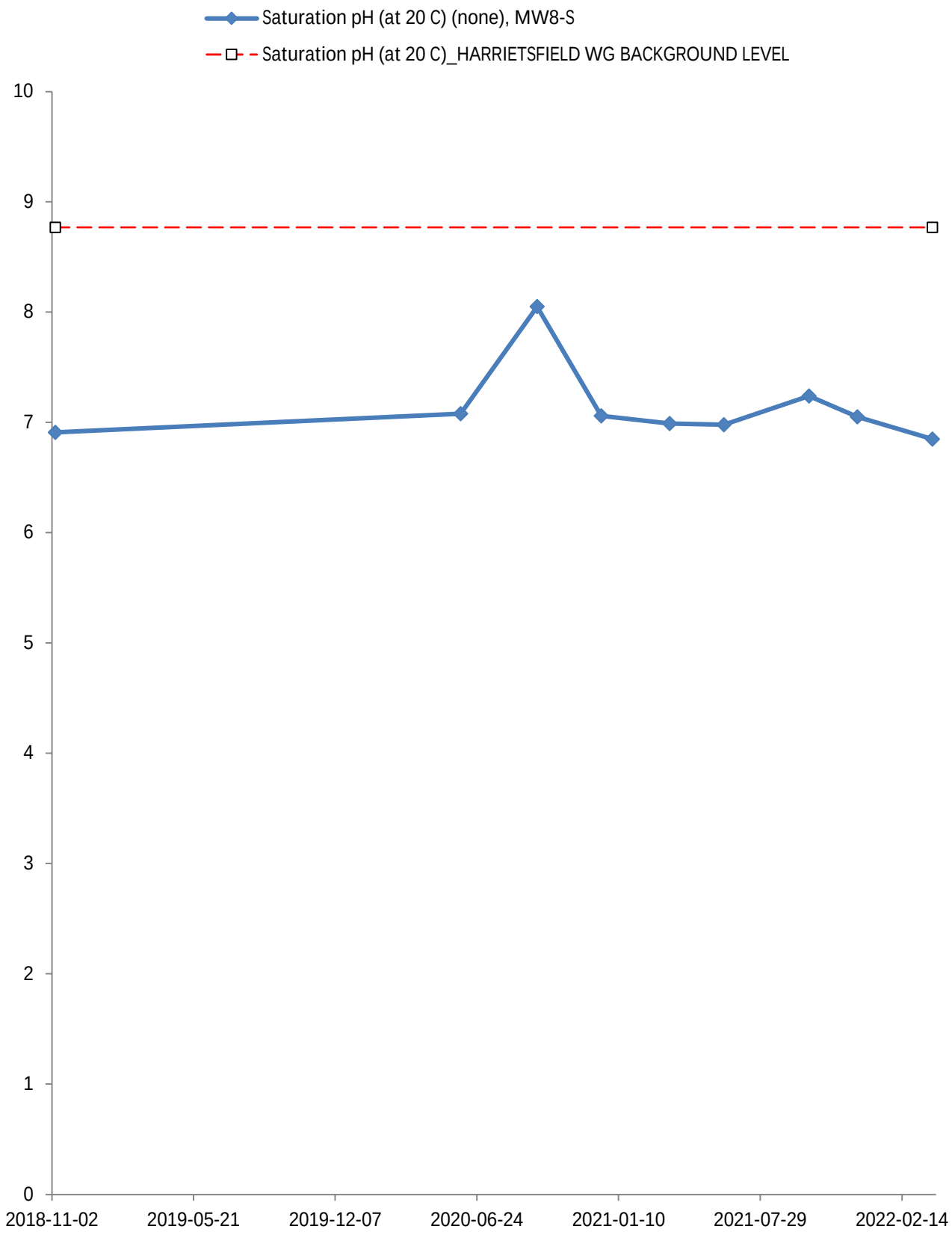
MW8-S-Potassium



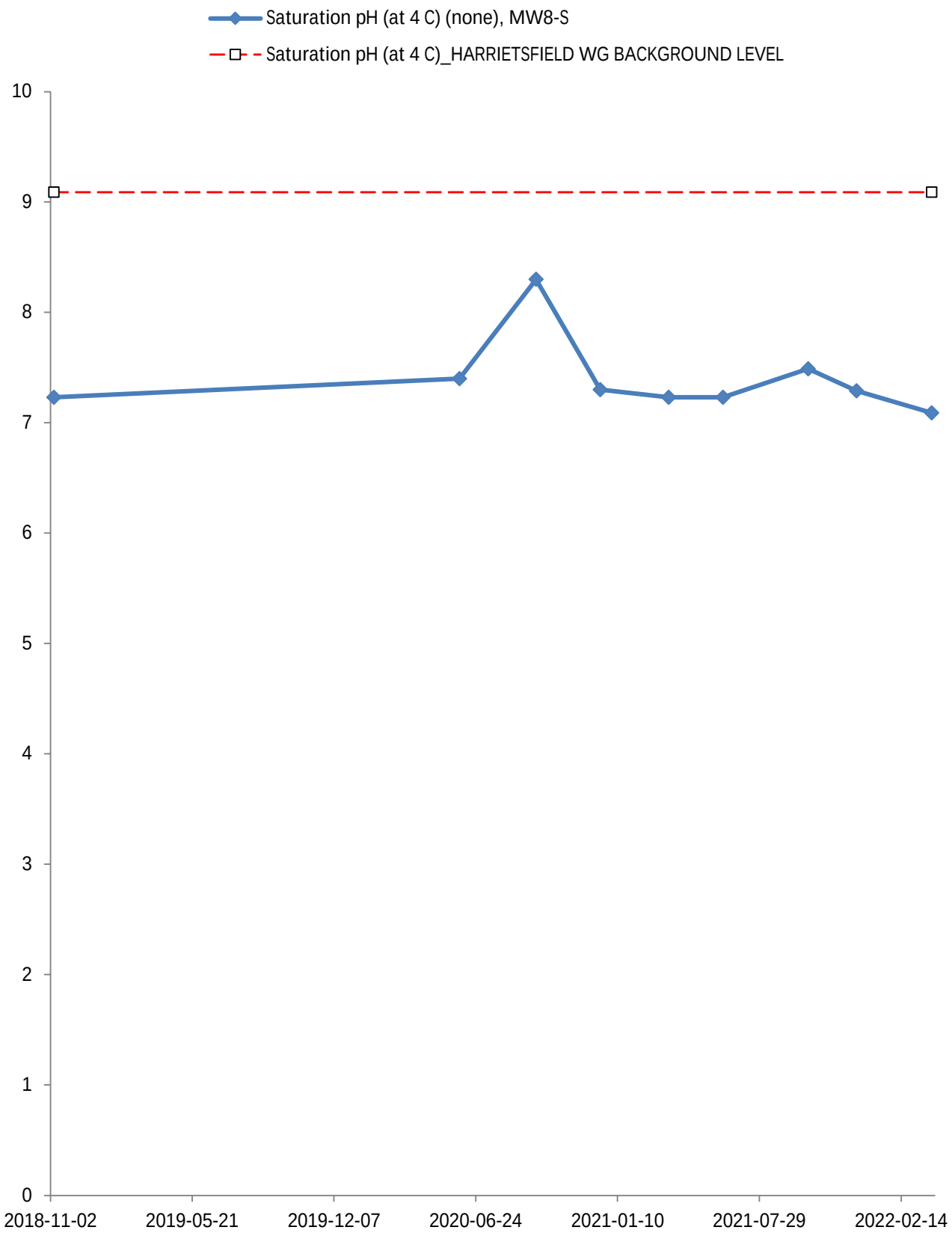
MW8-S-Reactive Silica (SiO2)



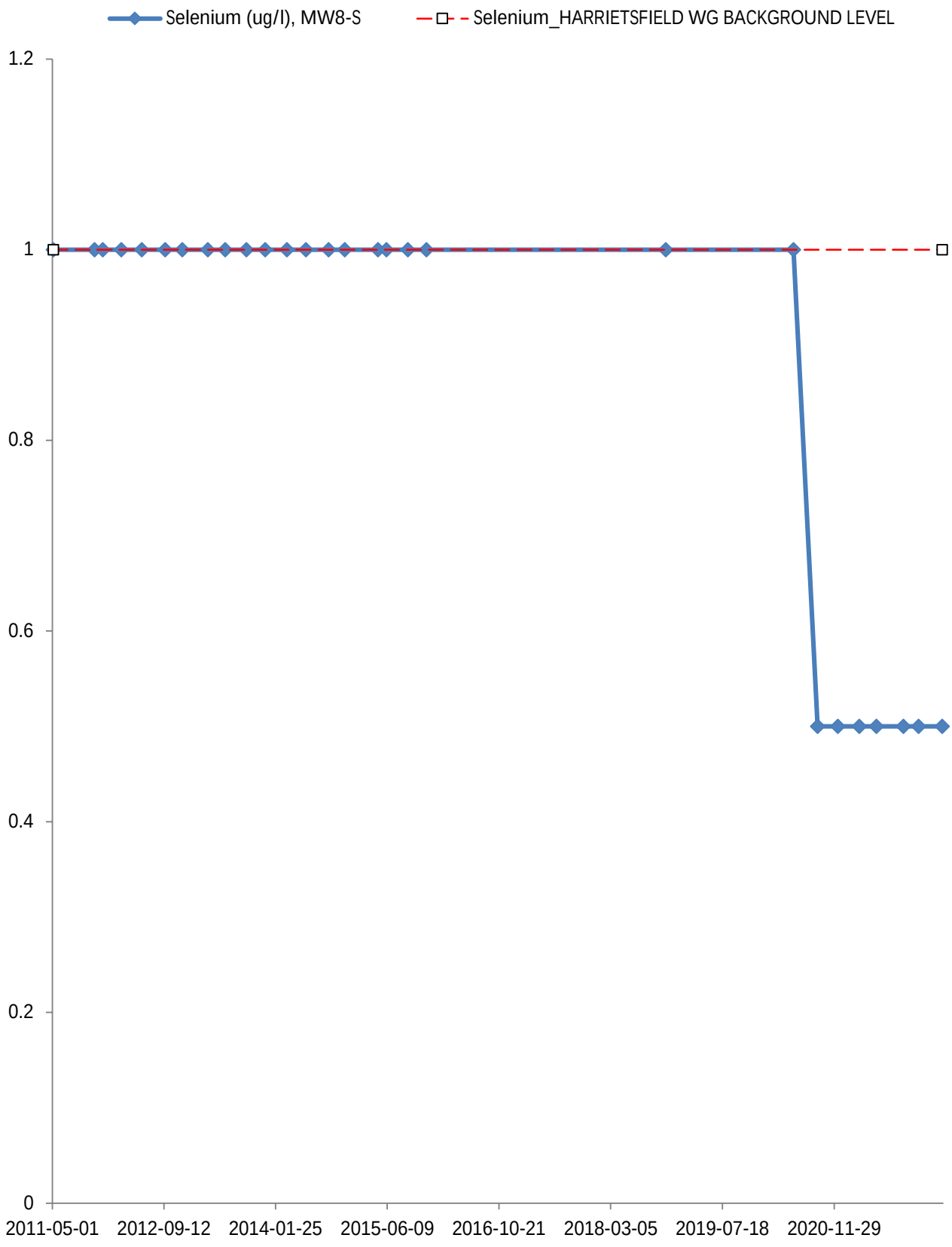
MW8-S-Saturation pH (at 20 C)



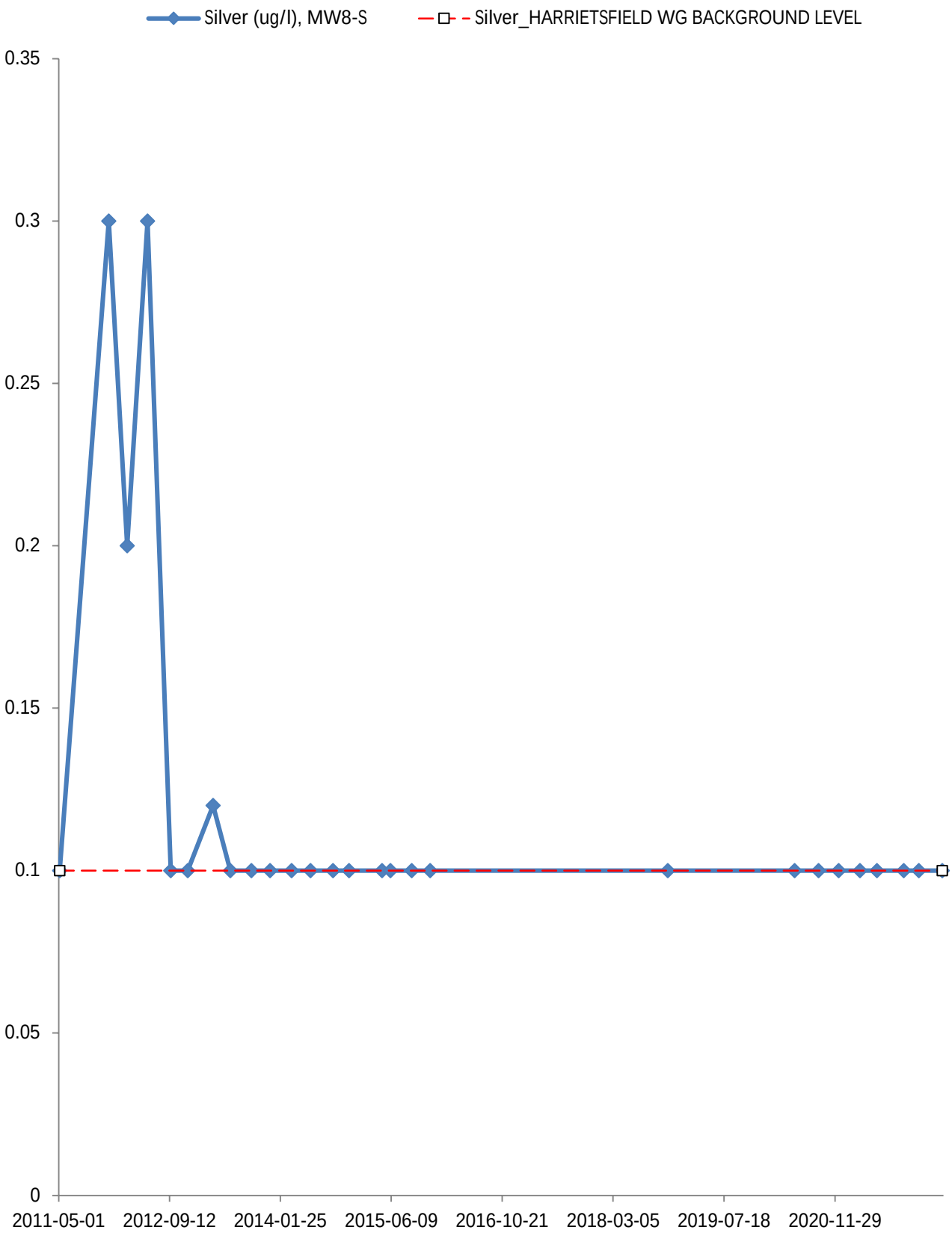
MW8-S-Saturation pH (at 4 C)

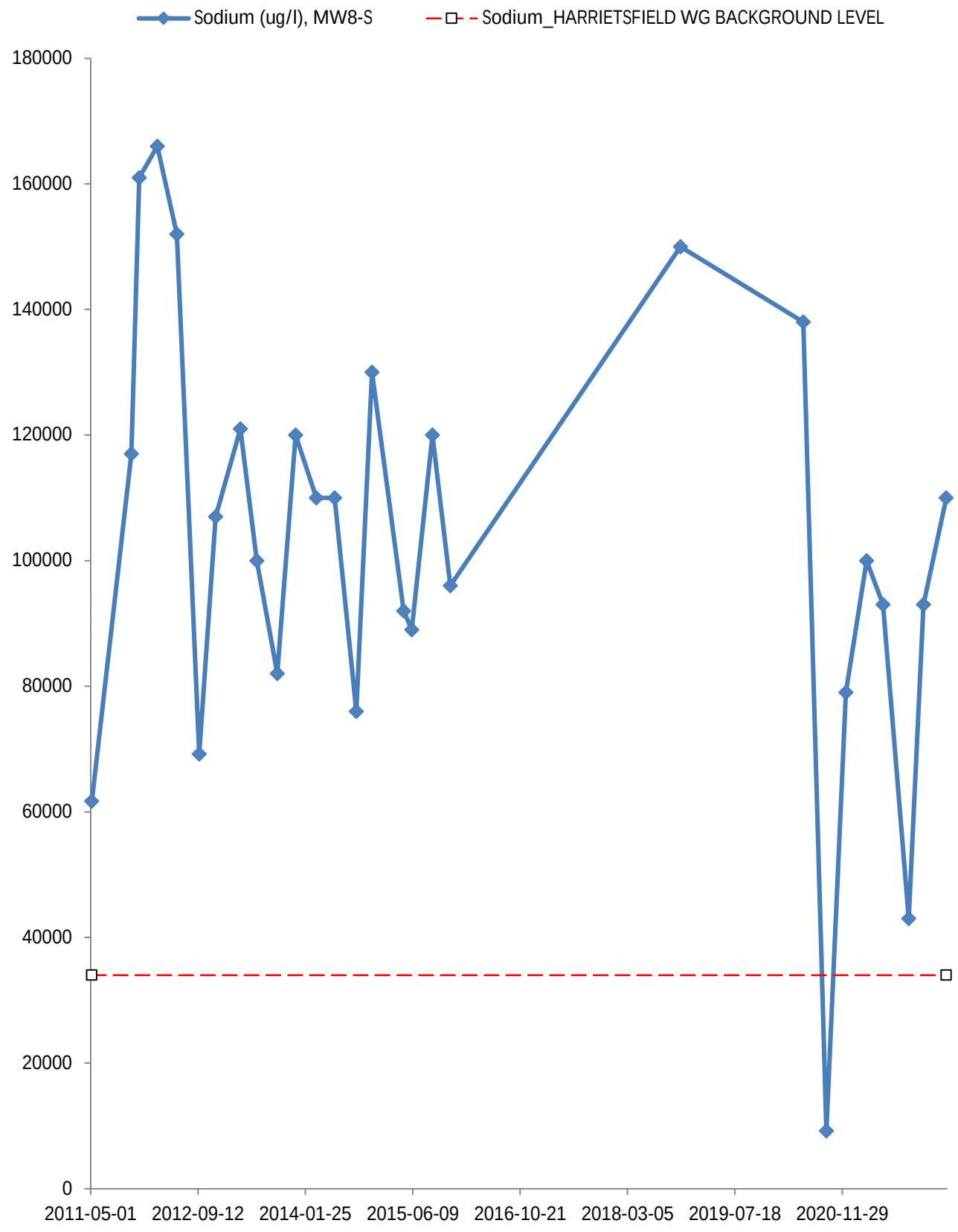


MW8-S-Selenium

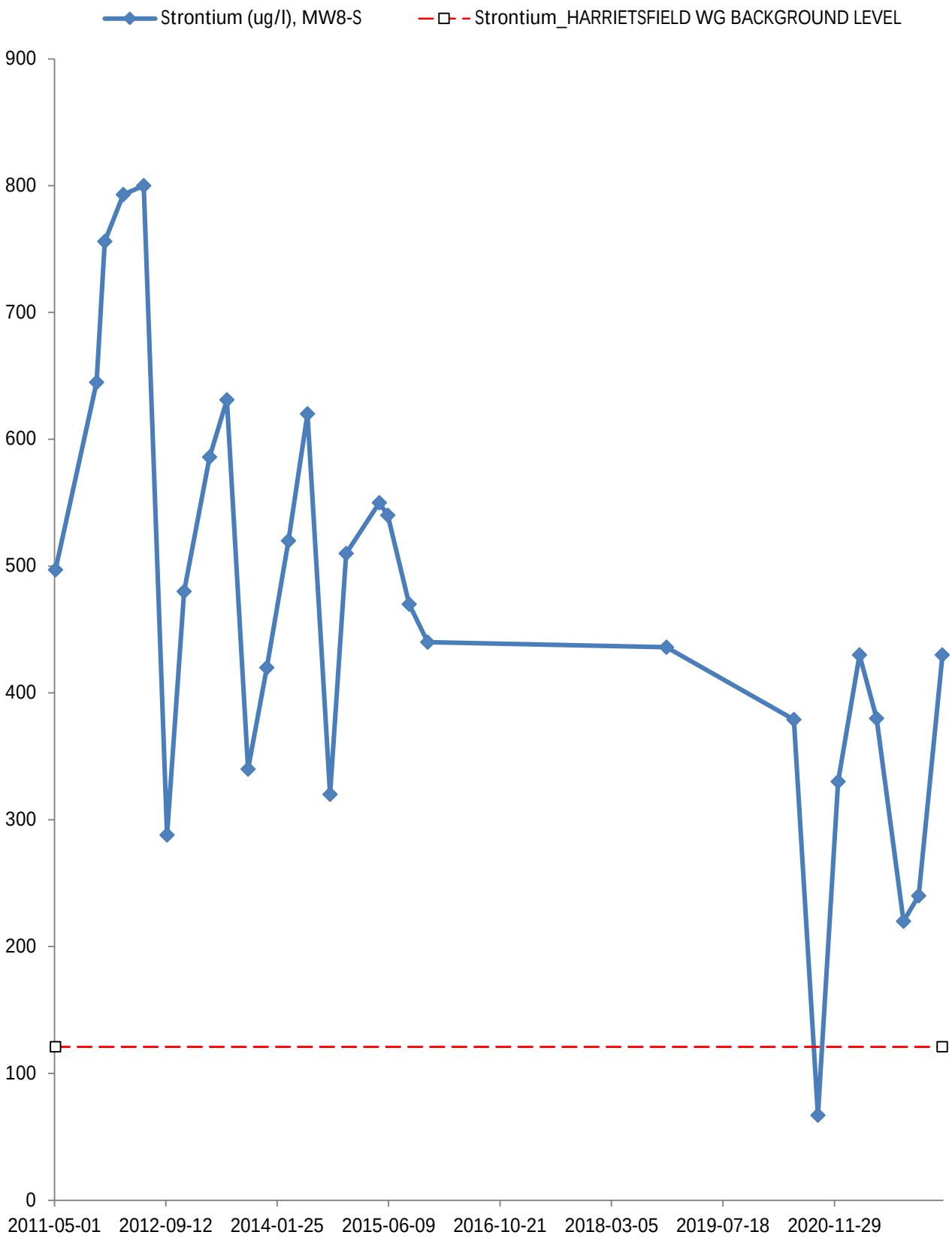


MW8-S-Silver

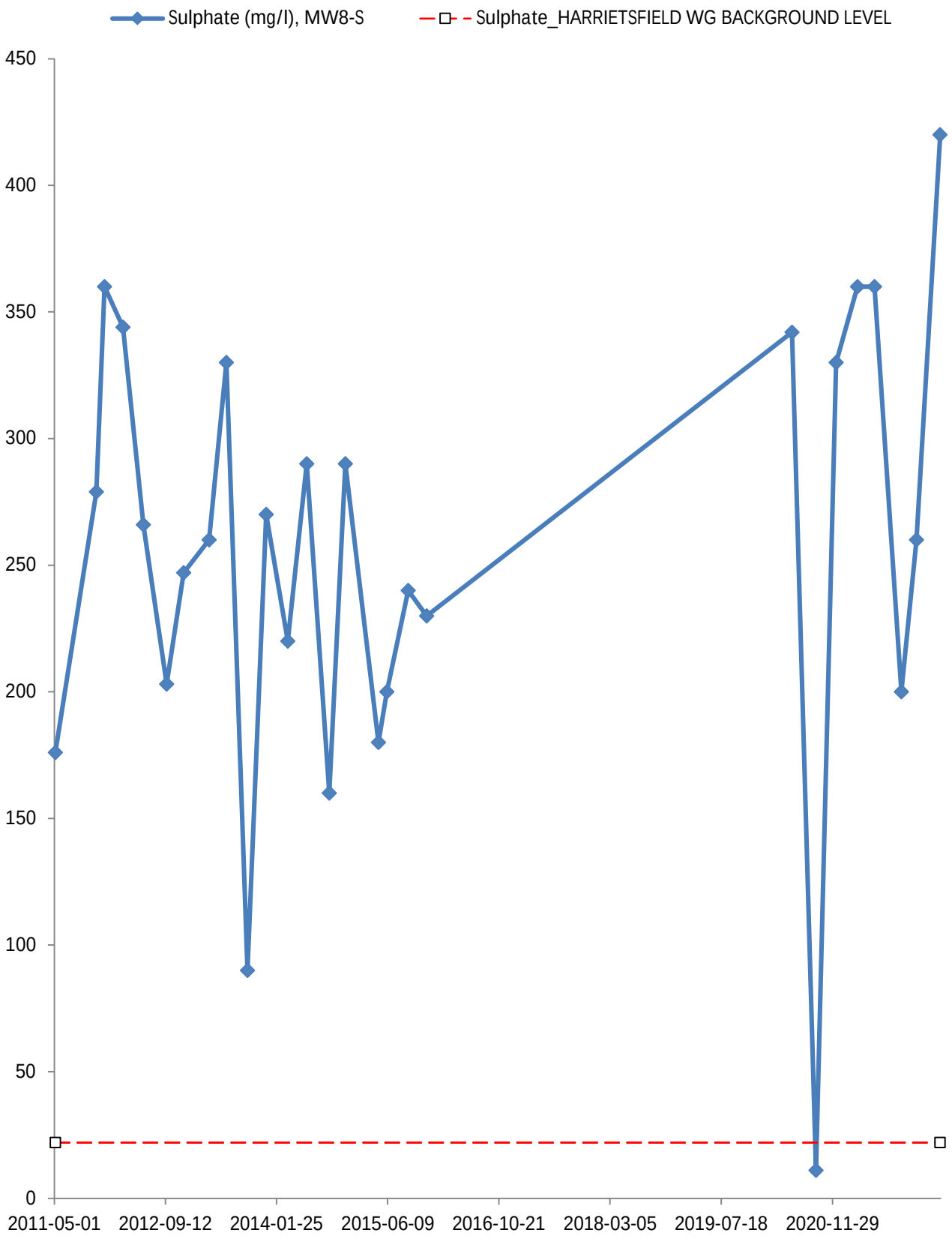

Silver (ug/l), MW8-S
Silver_HARRIETSFIELD WG BACKGROUND LEVEL
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29


Sodium (ug/l), MW8-S
Sodium_HARRIETSFIELD WG BACKGROUND LEVEL
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

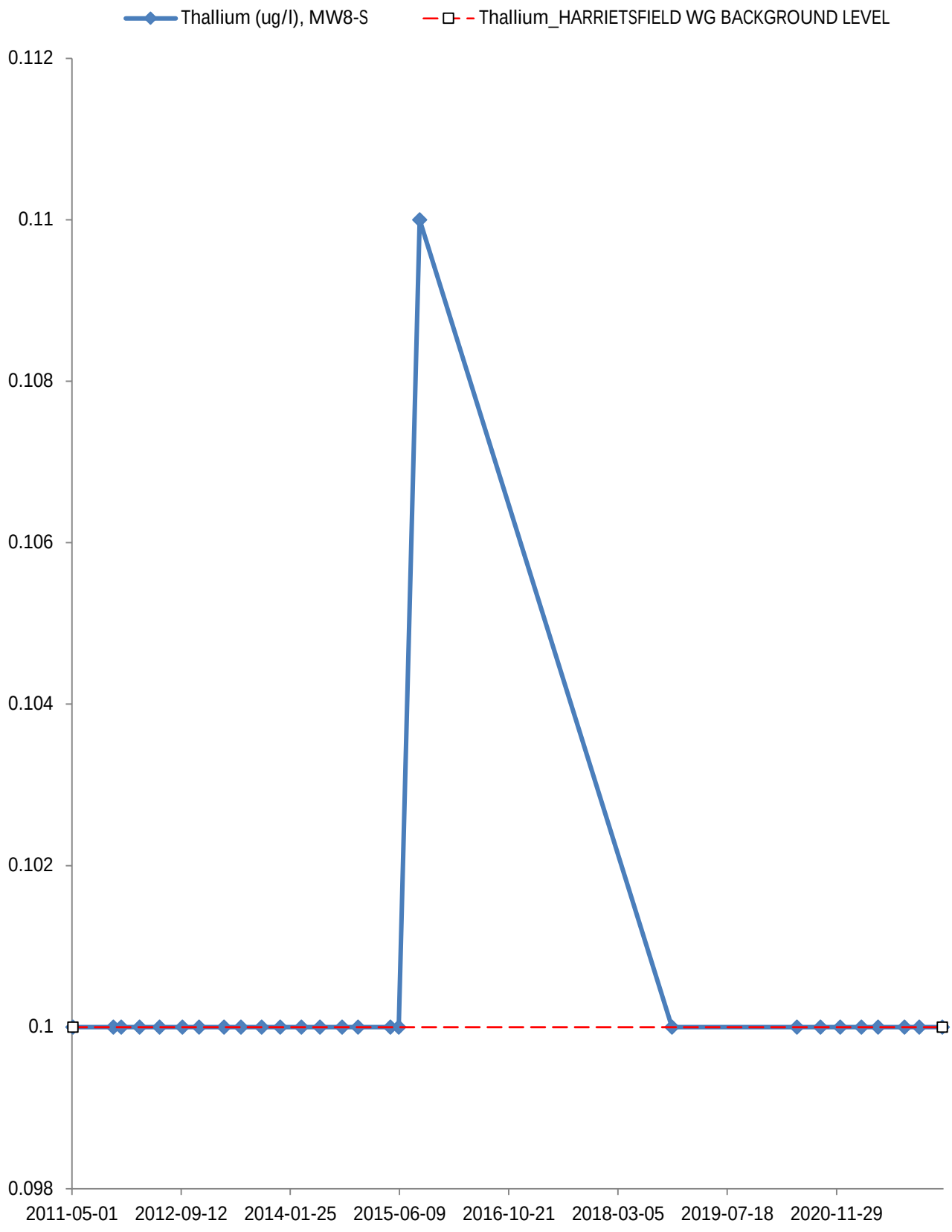
MW8-S-Strontium



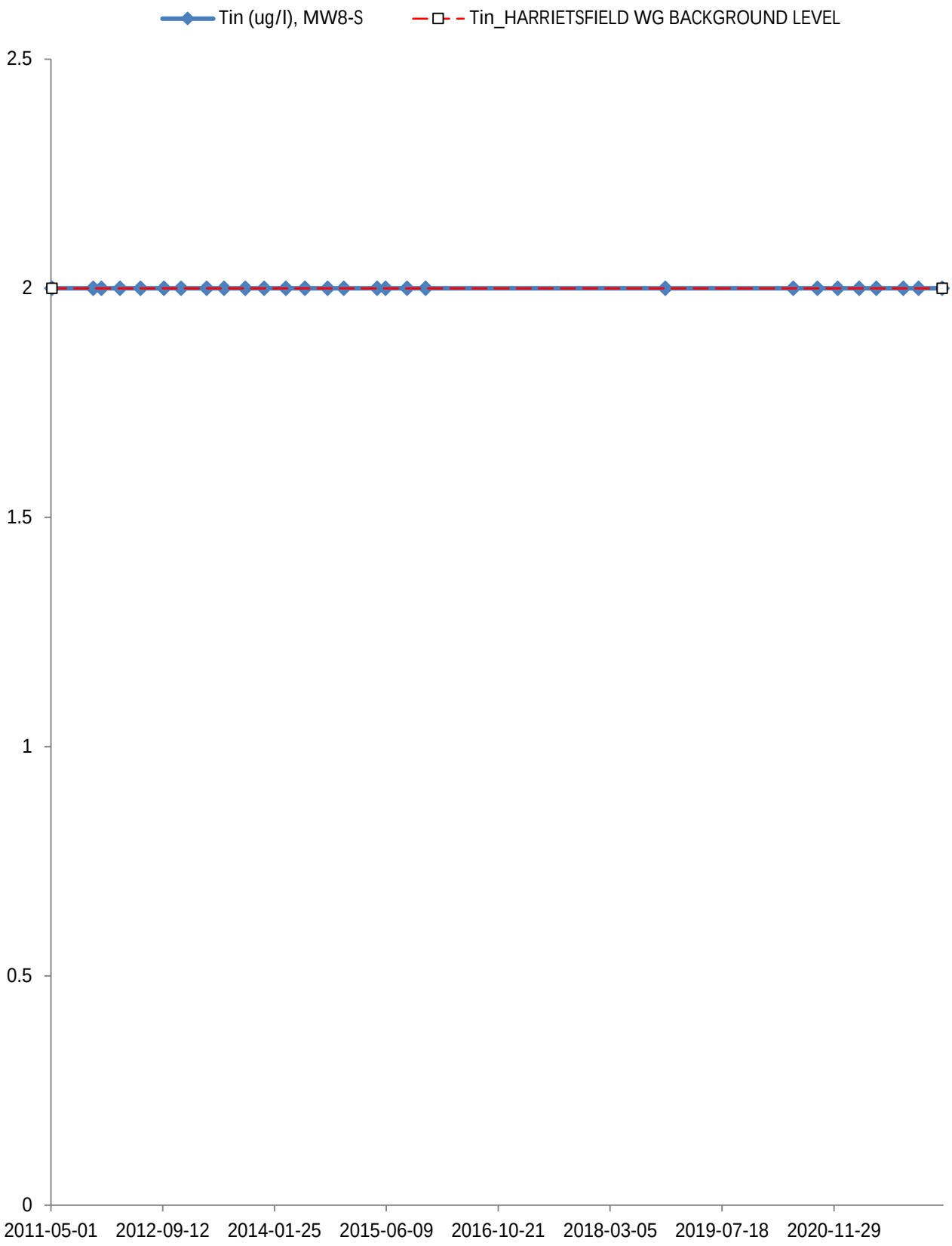
MW8-S-Sulphate



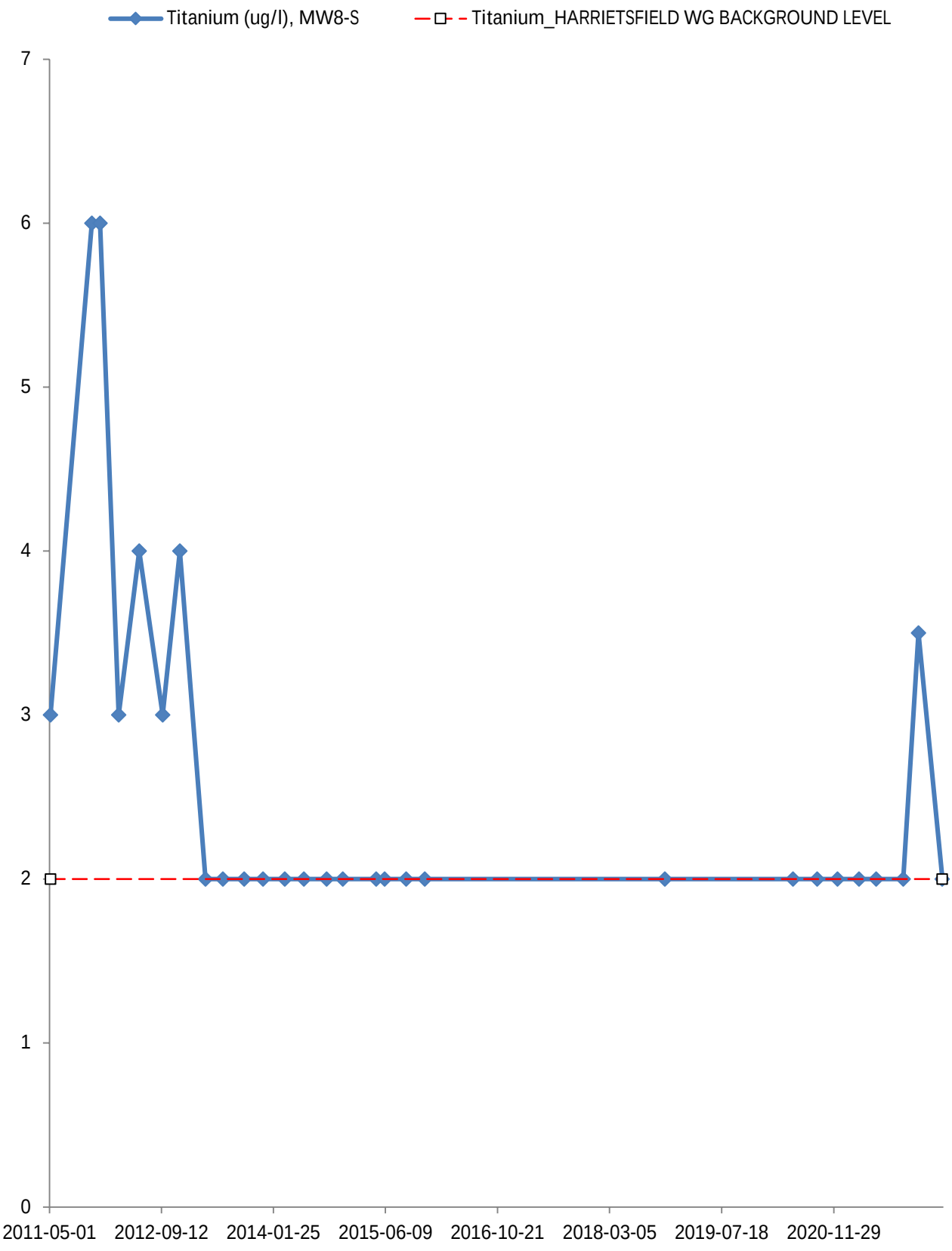
MW8-S-Thallium



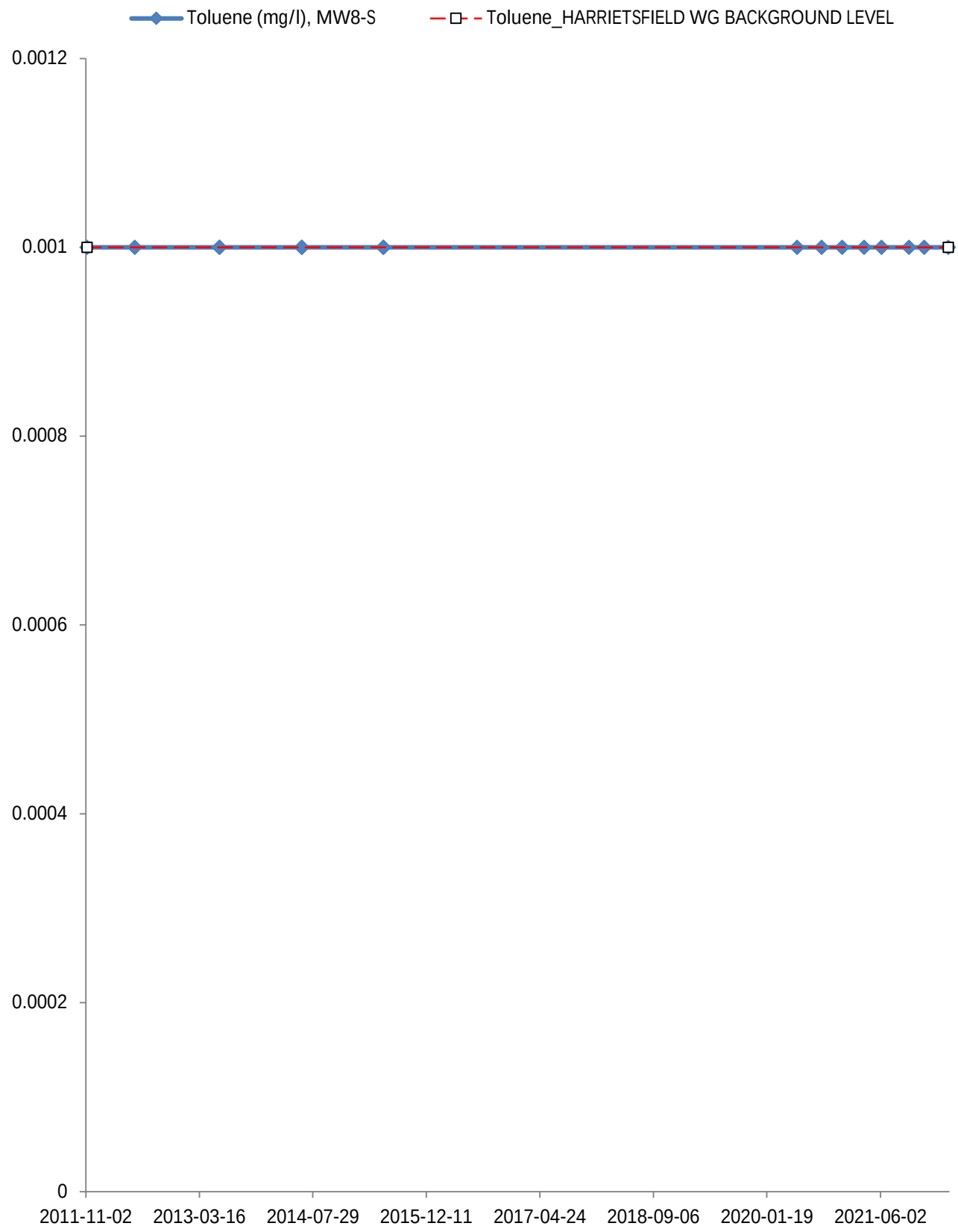
MW8-S-Tin


Tin (ug/l), MW8-S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

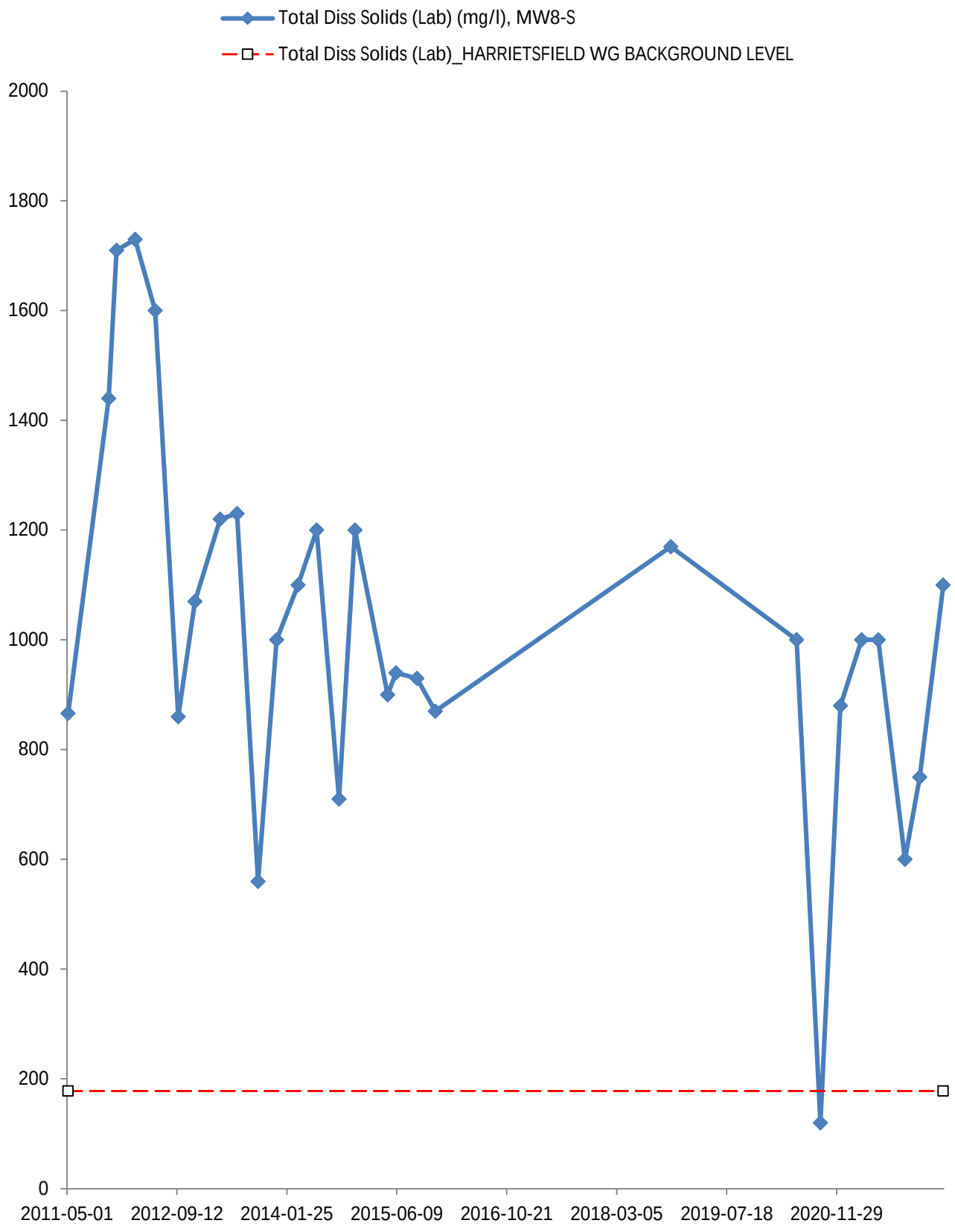
MW8-S-Titanium



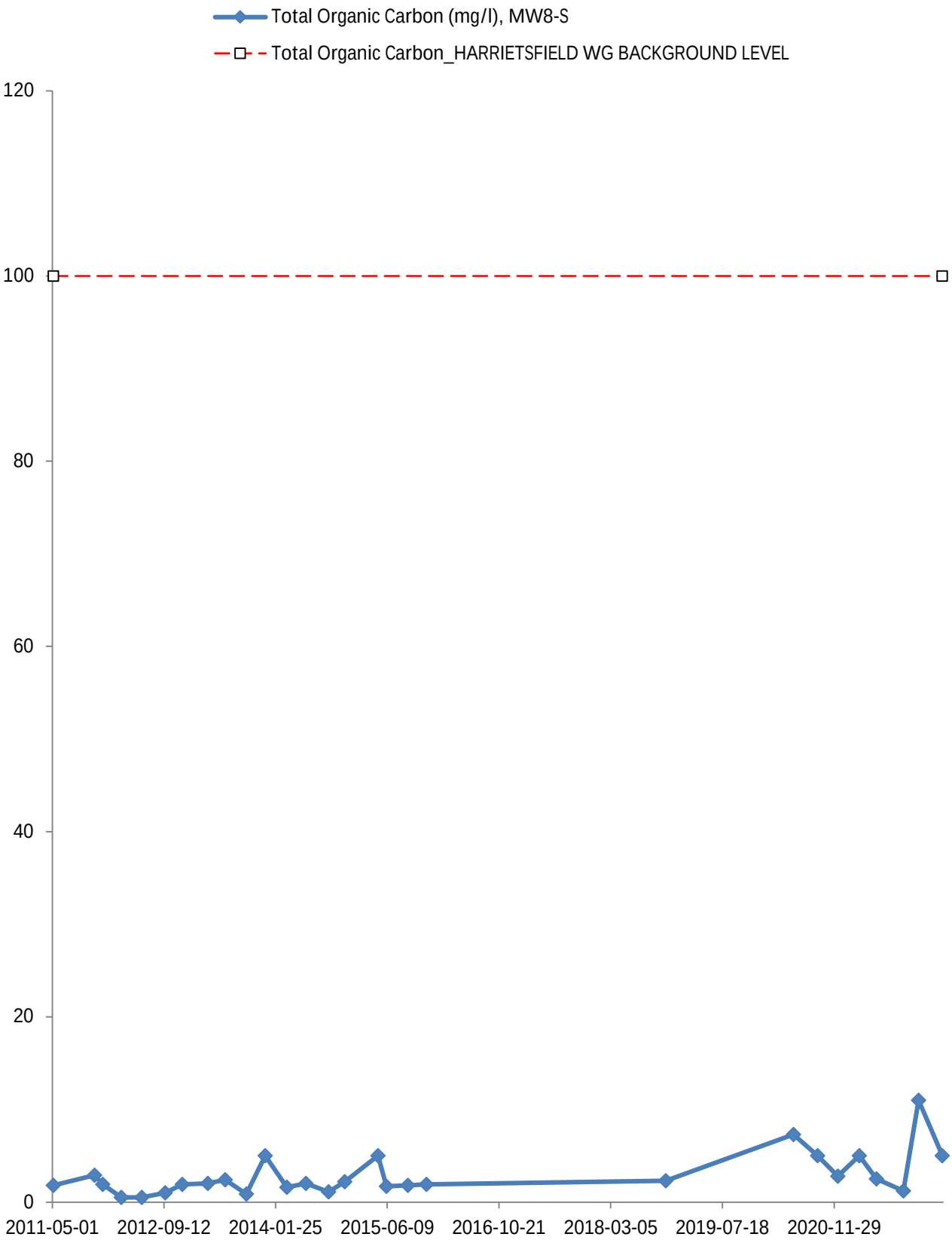
MW8-S-Toluene



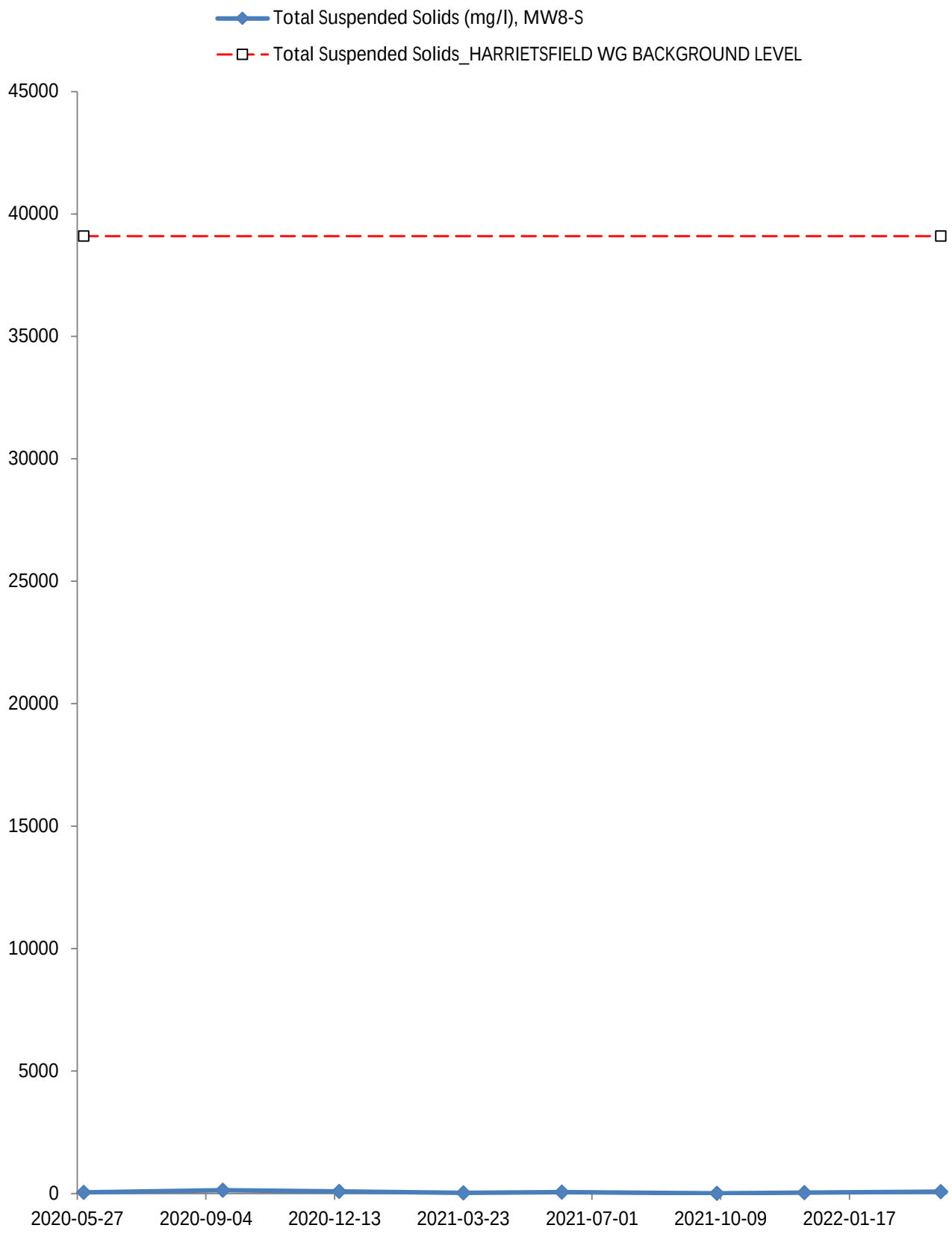
MW8-S-Total Diss Solids (Lab)



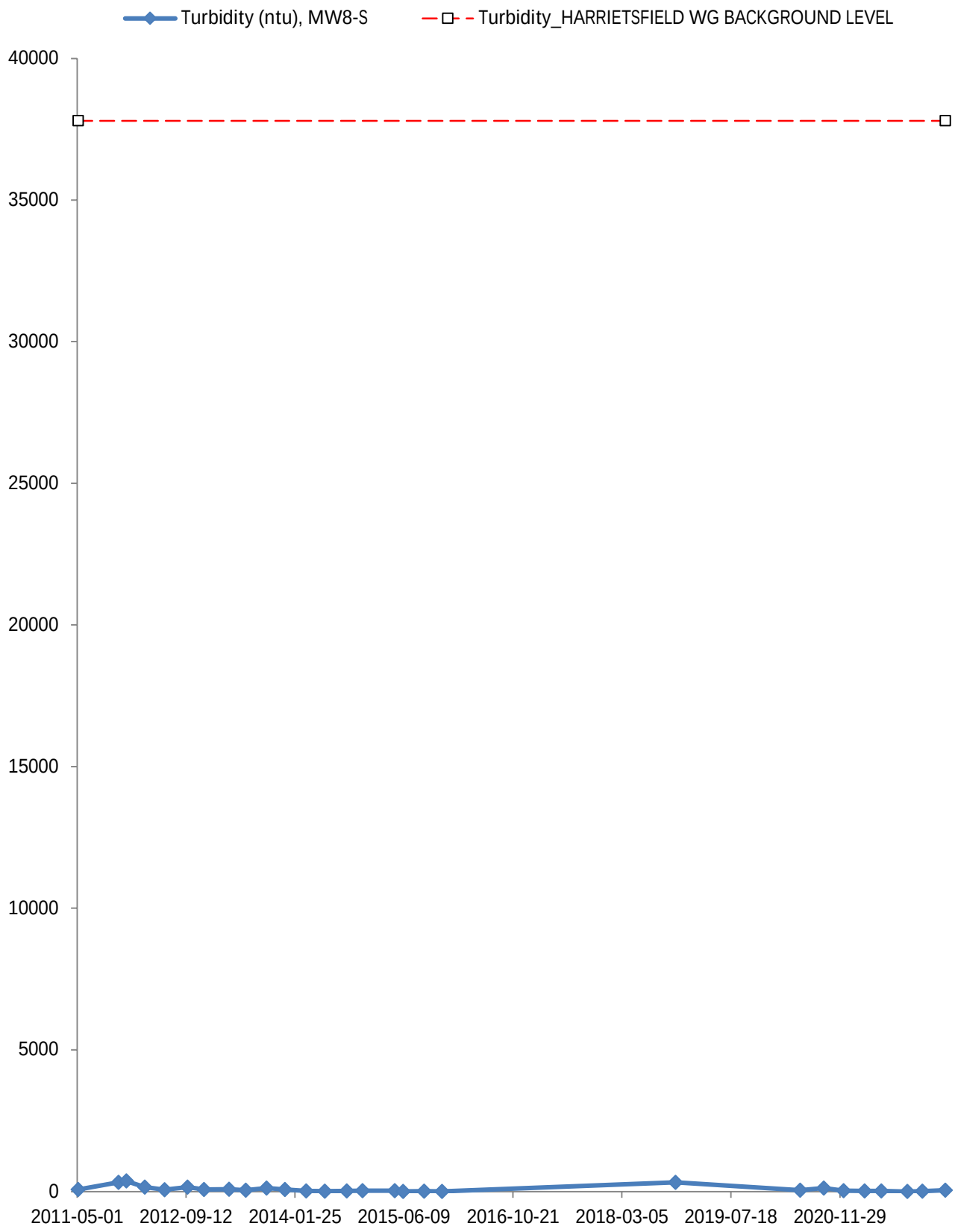
MW8-S-Total Organic Carbon



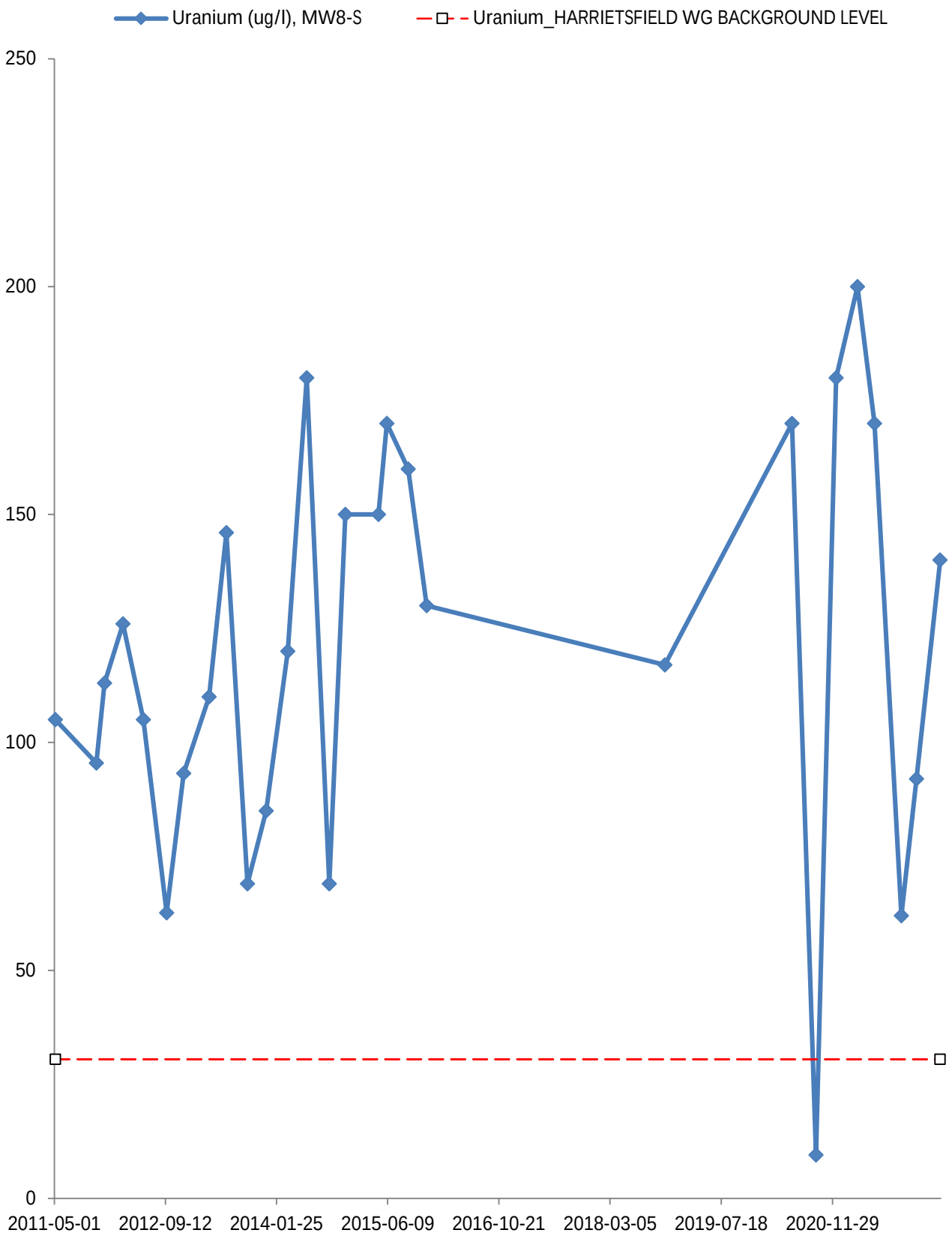
MW8-S-Total Suspended Solids



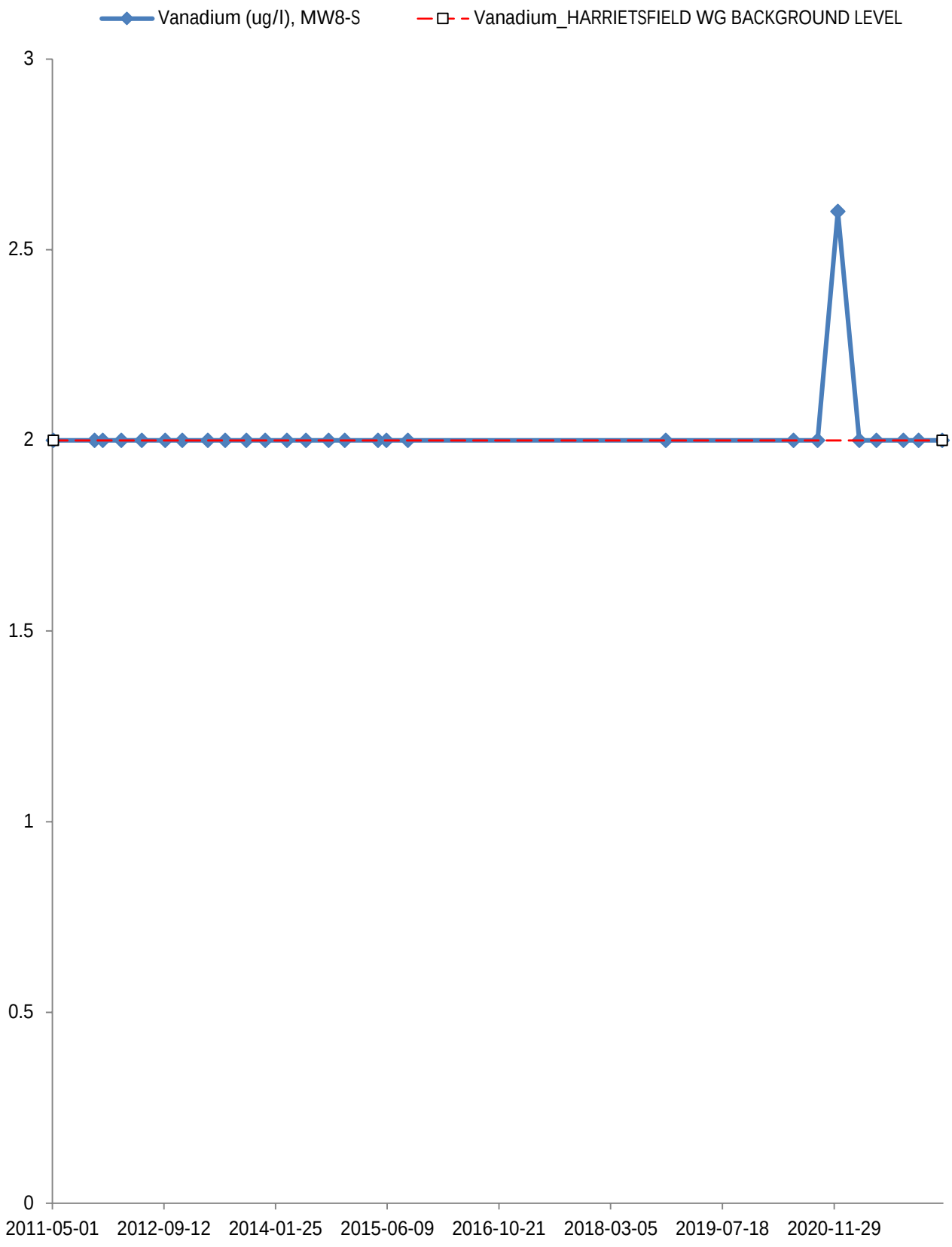
MW8-S-Turbidity



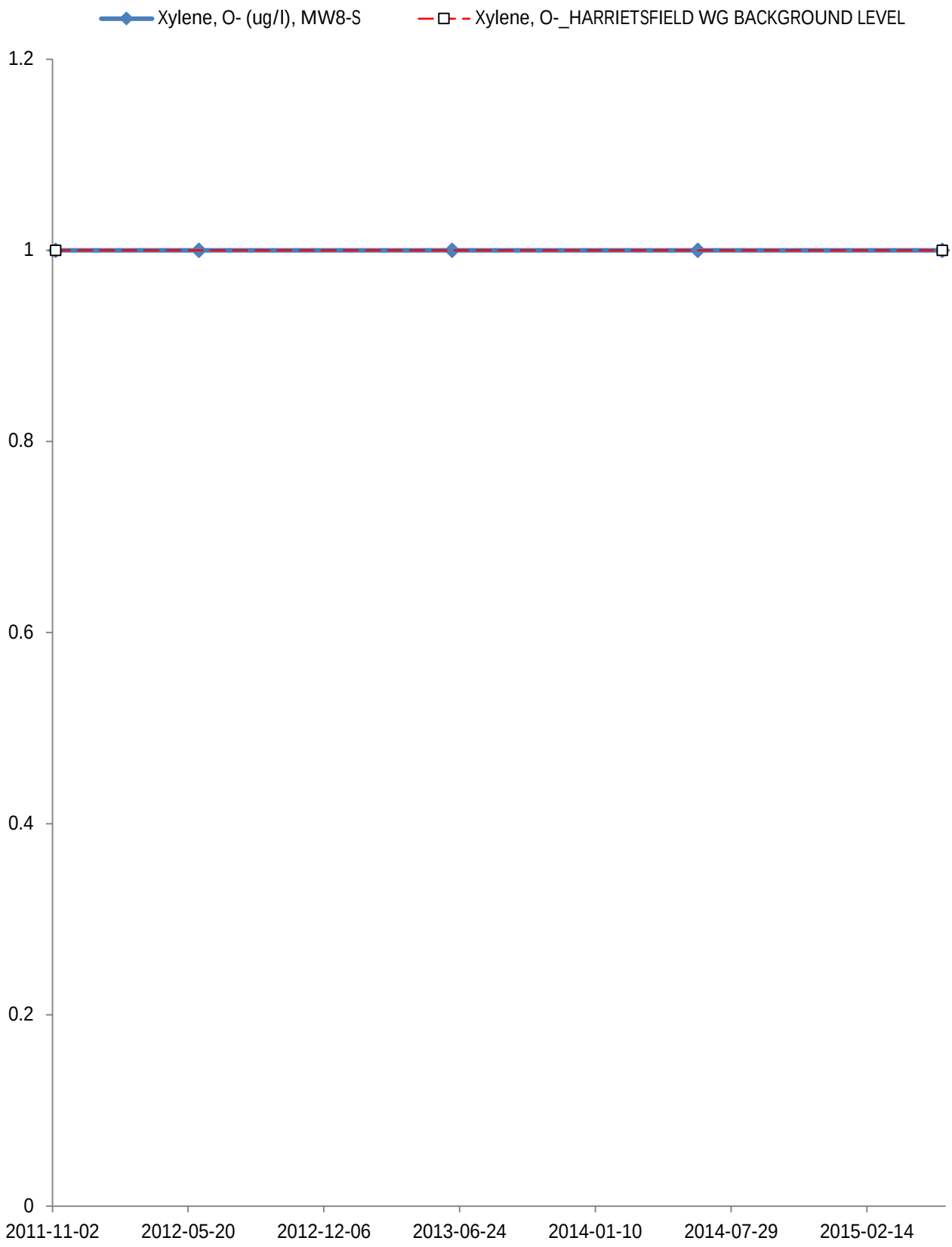
MW8-S-Uranium



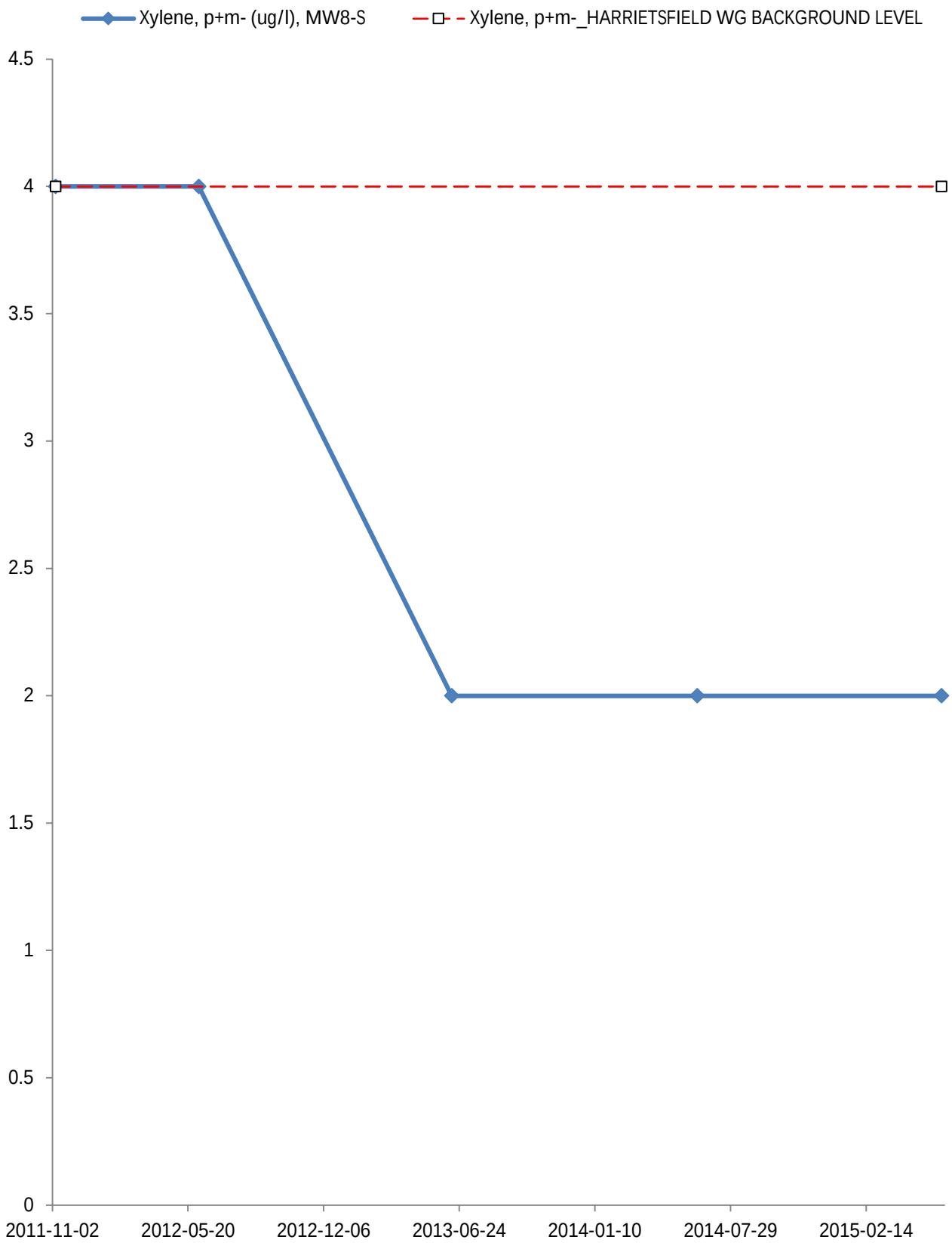
MW8-S-Vanadium



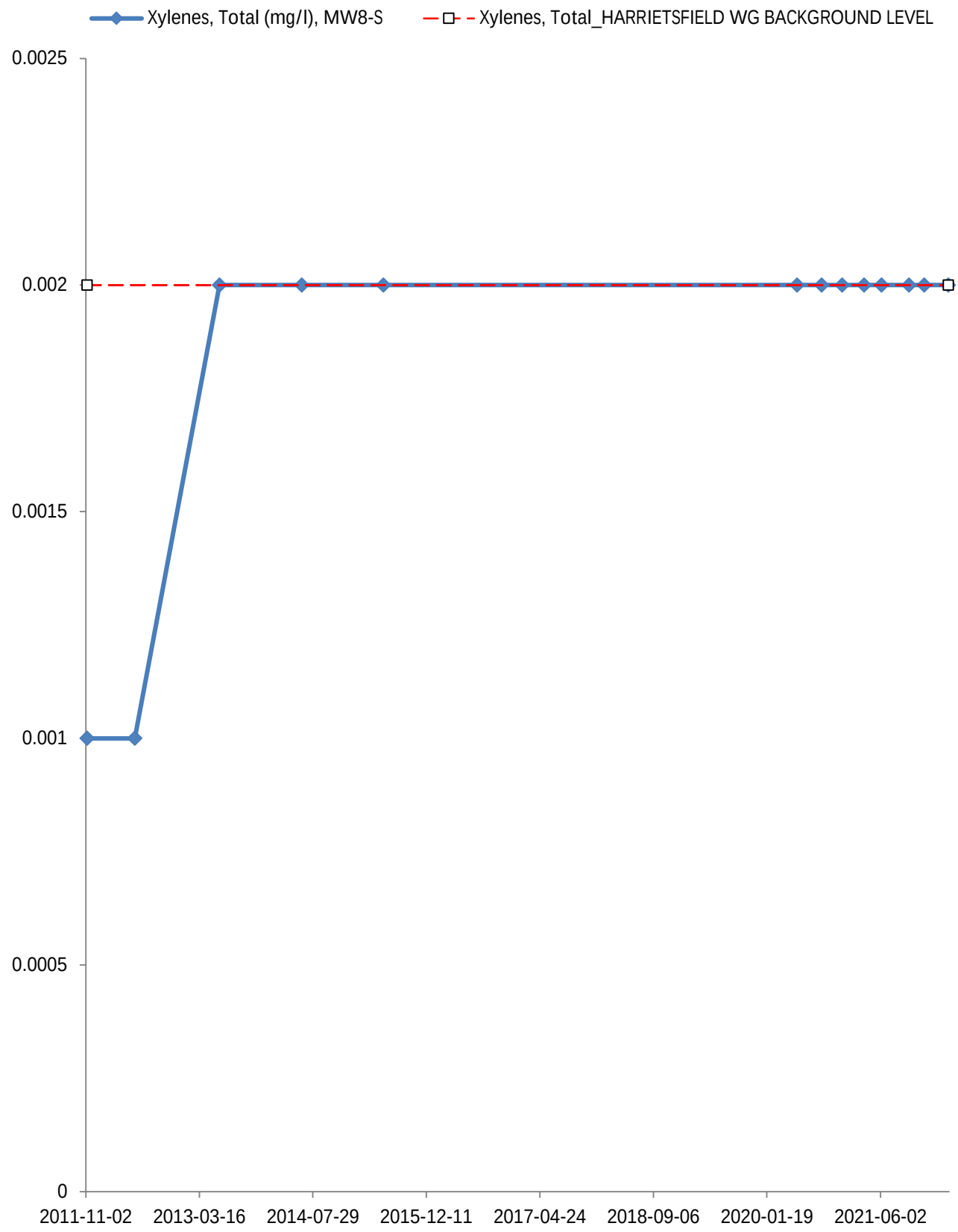
MW8-S-Xylene, O-



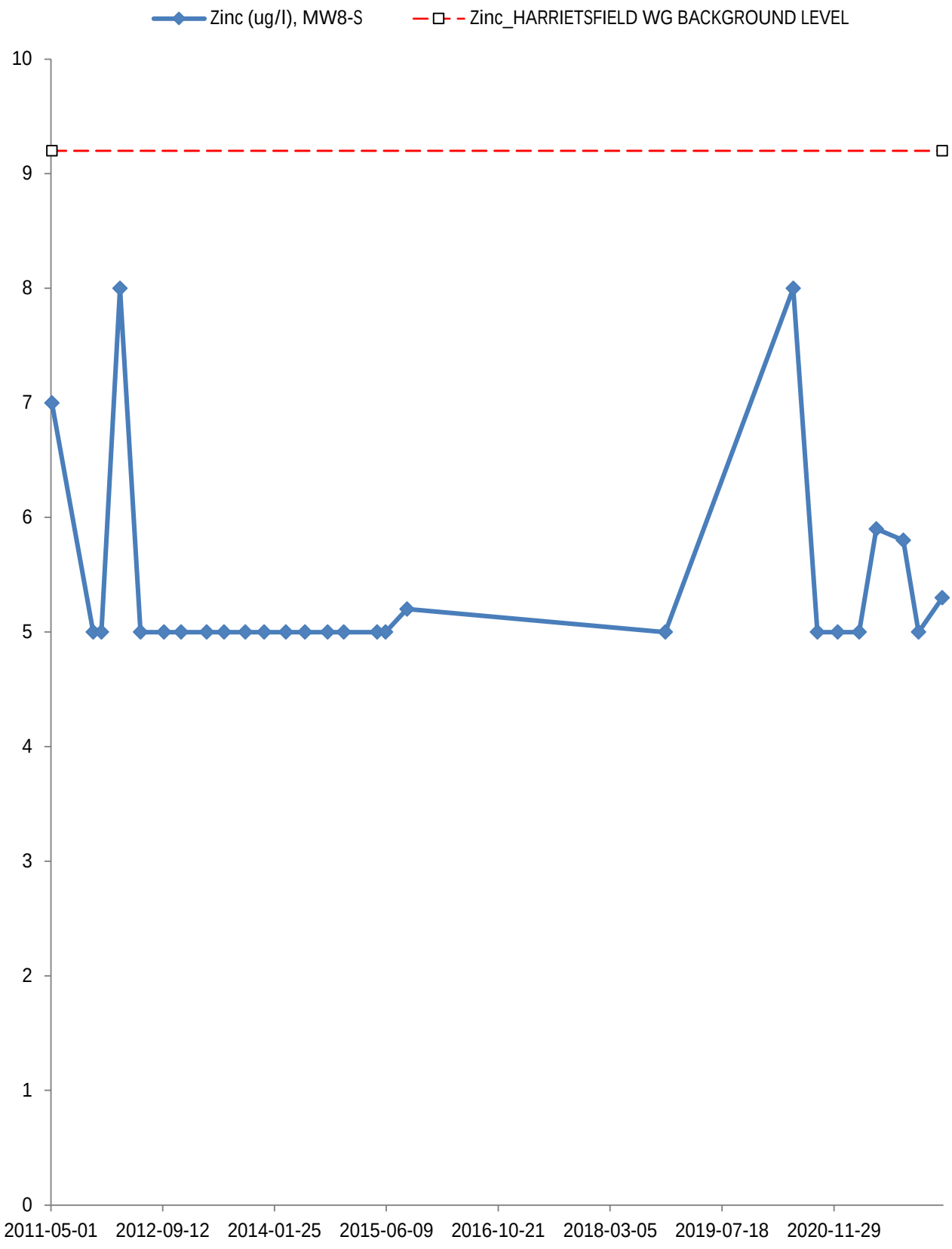
MW8-S-Xylene, p+m-



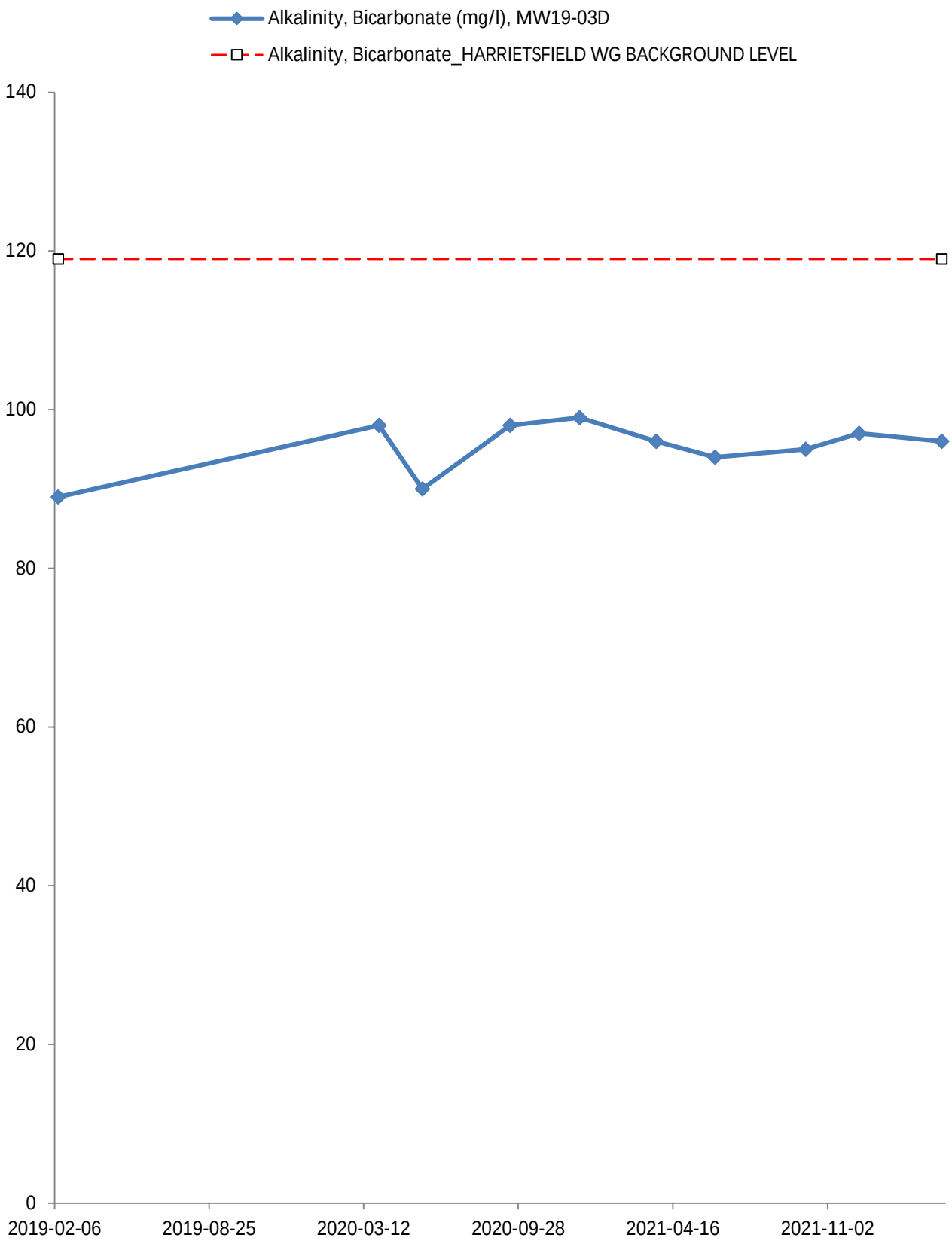
MW8-S-Xylenes, Total



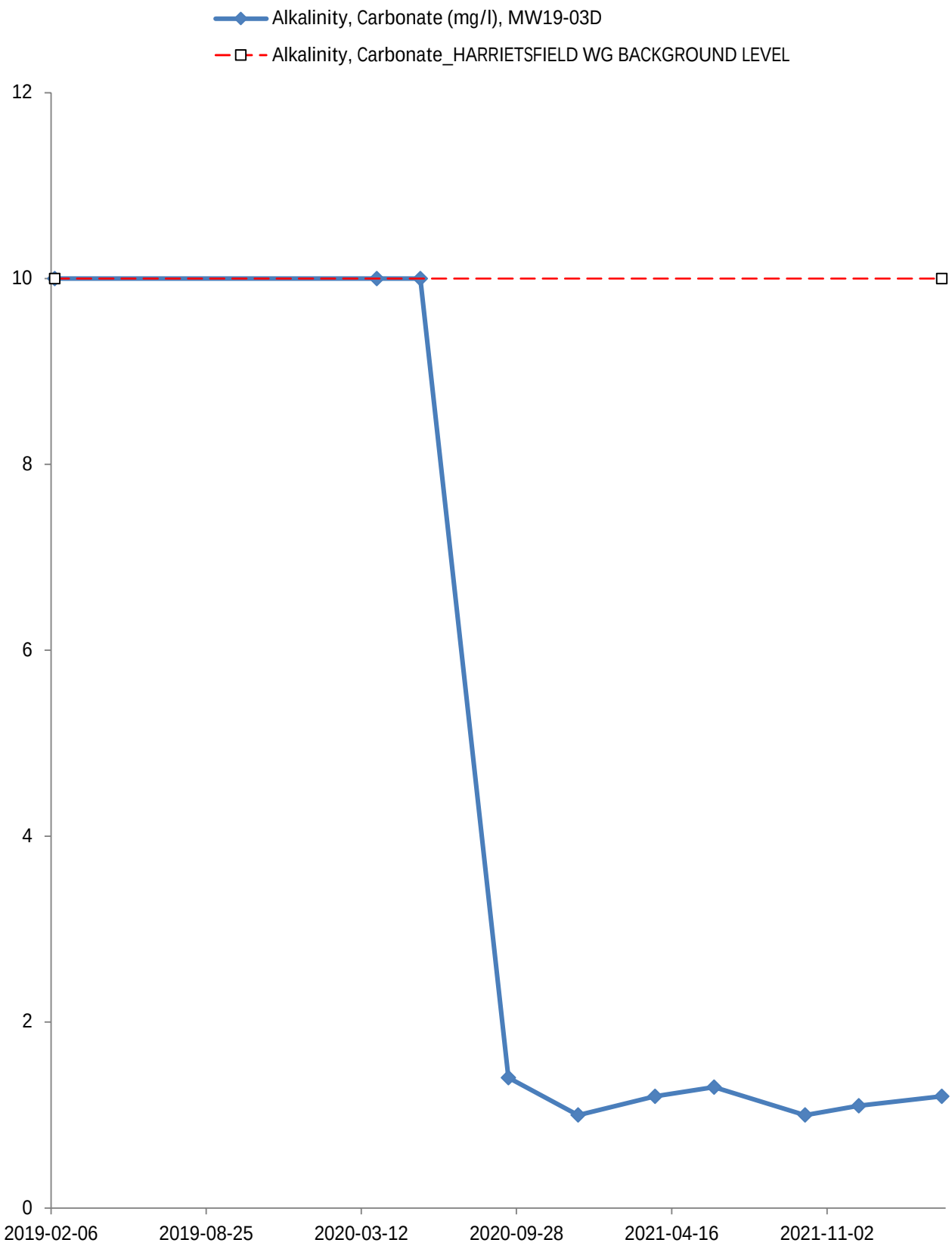
MW8-S-Zinc


Zinc (ug/l), MW8-S
Zinc_HARRIETSFIELD WG BACKGROUND LEVEL
10
9
8
7
6
5
4
3
2
1
0
2011-05-01
2012-09-12
2014-01-25
2015-06-09
2016-10-21
2018-03-05
2019-07-18
2020-11-29

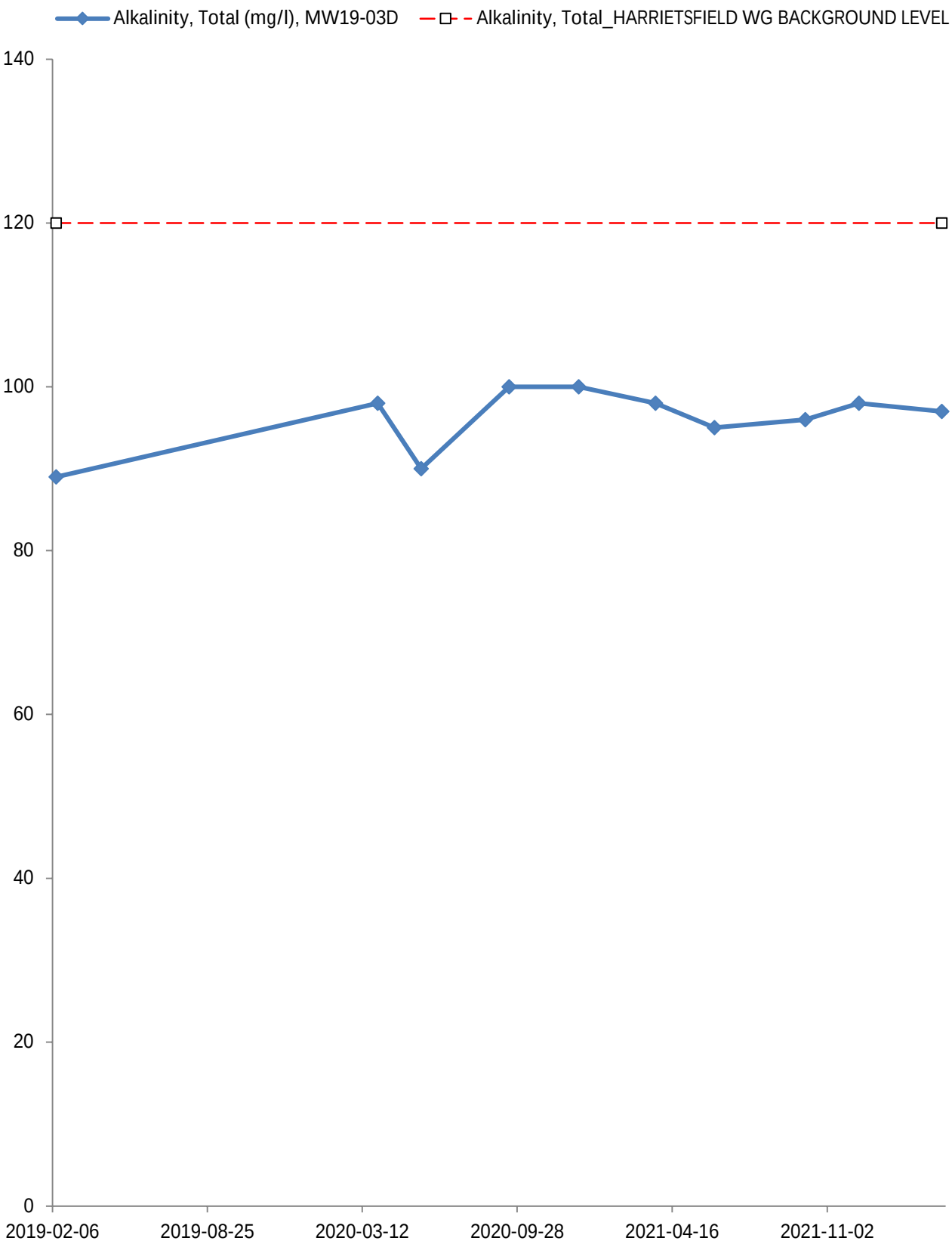
MW19-03D-Alkalinity, Bicarbonate



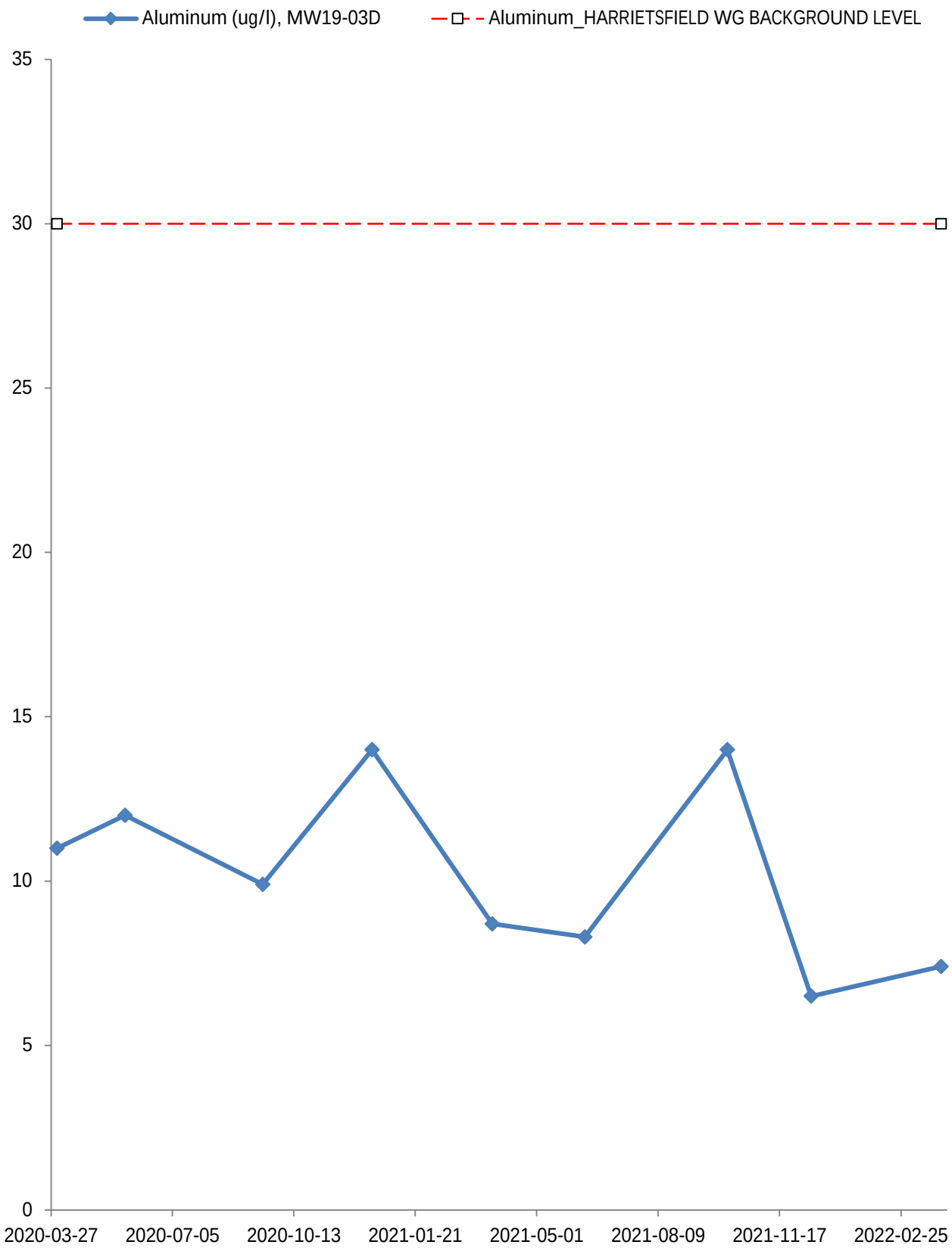
MW19-03D-Alkalinity, Carbonate



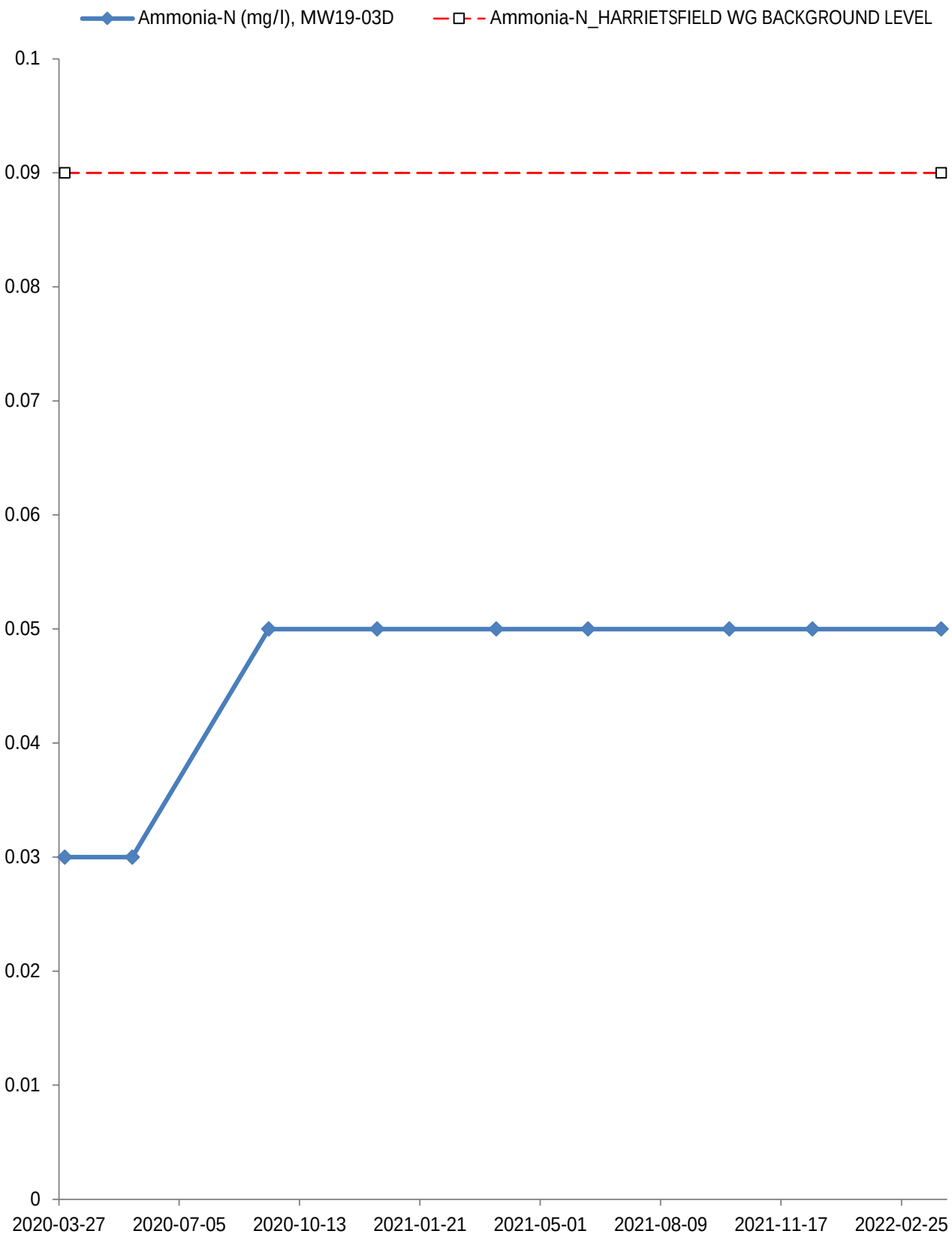
MW19-03D-Alkalinity, Total



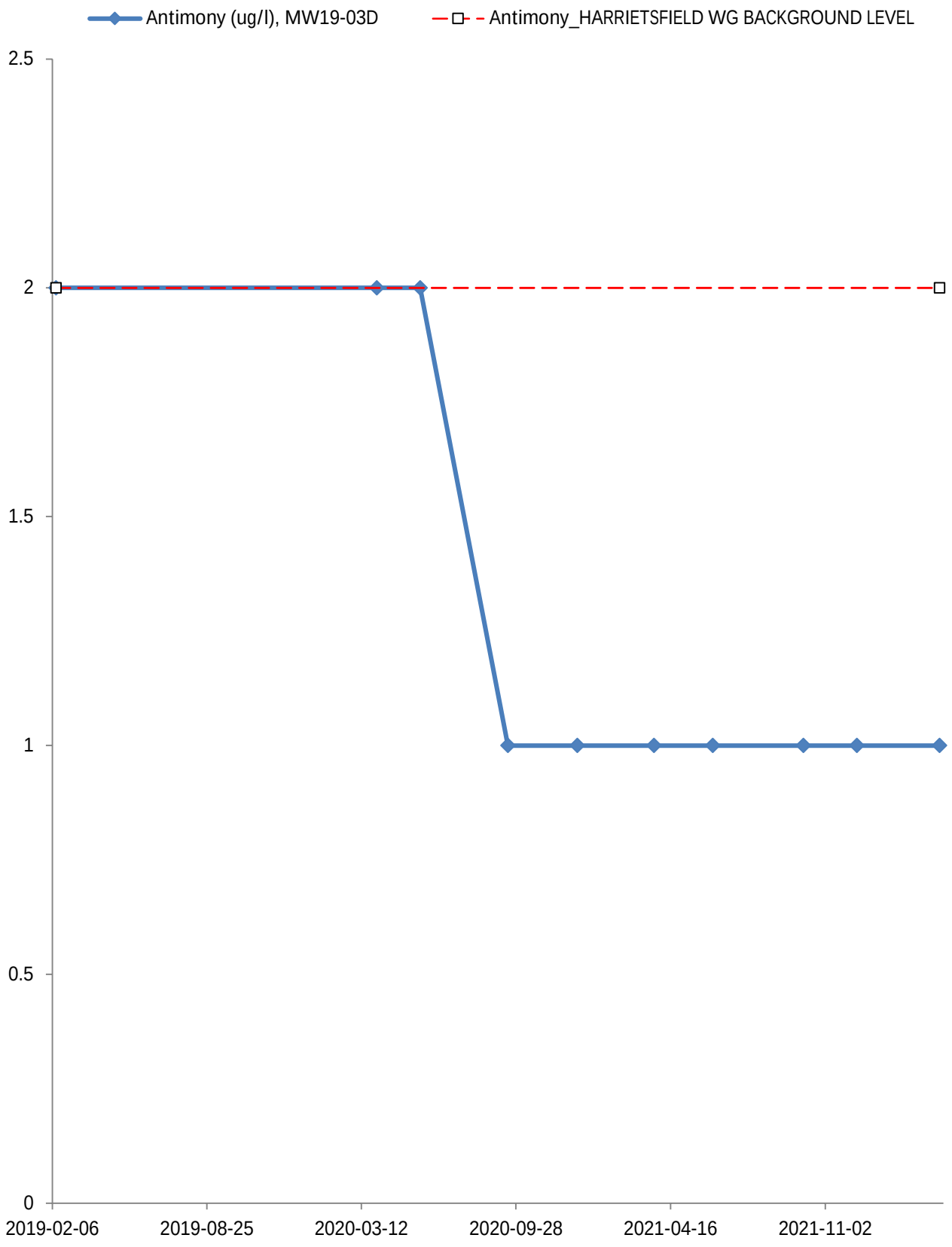
MW19-03D-Aluminum



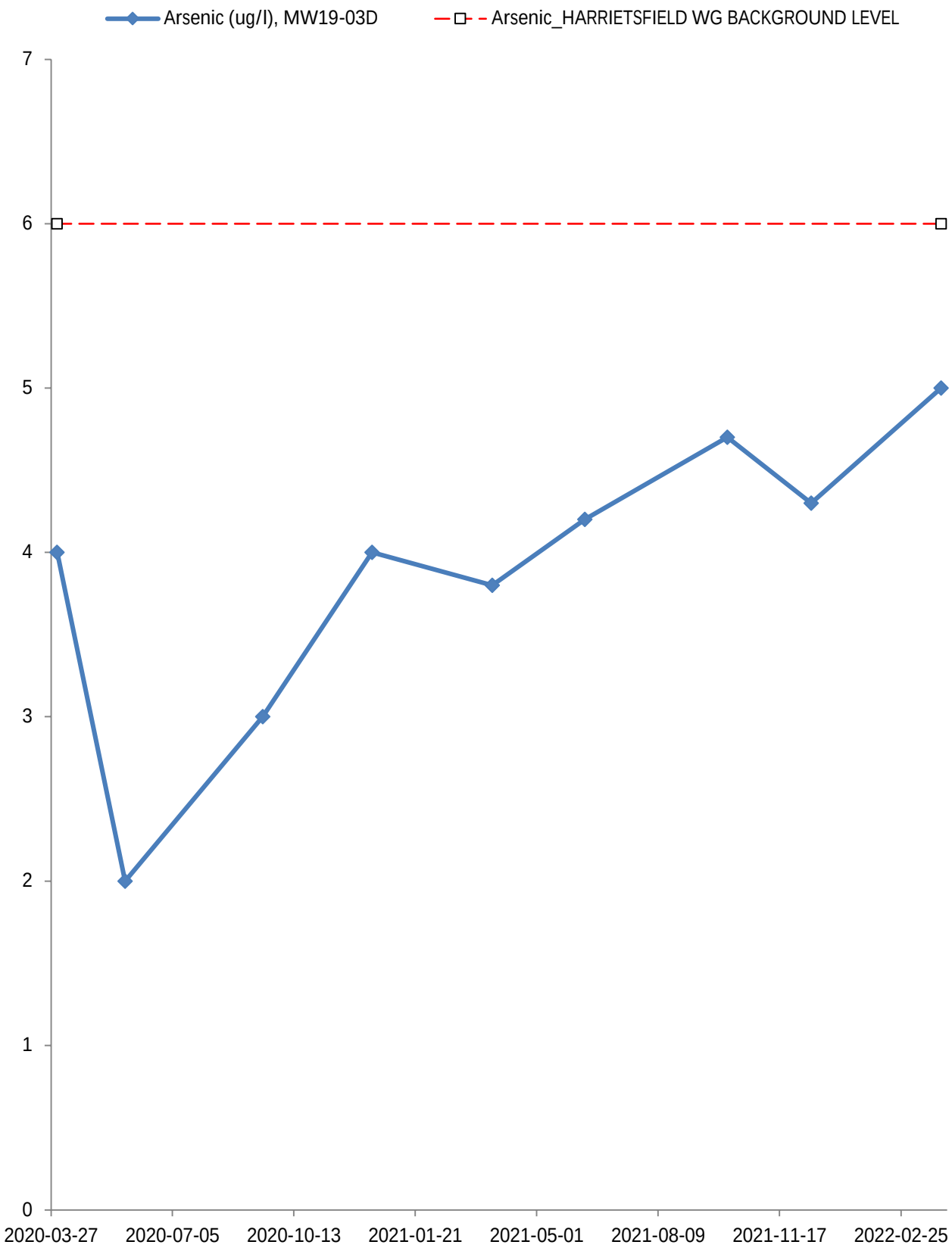
MW19-03D-Ammonia-N



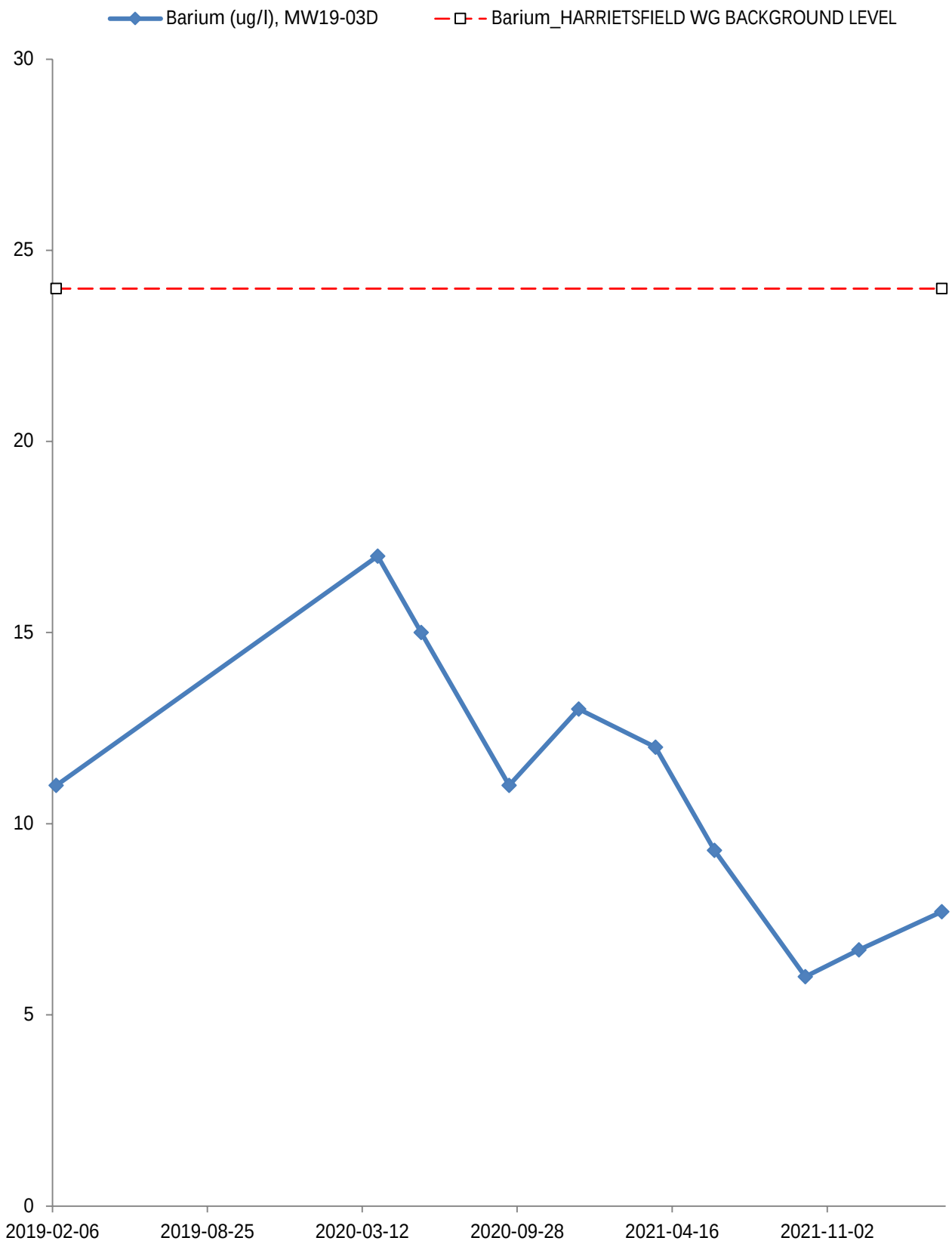
MW19-03D-Antimony



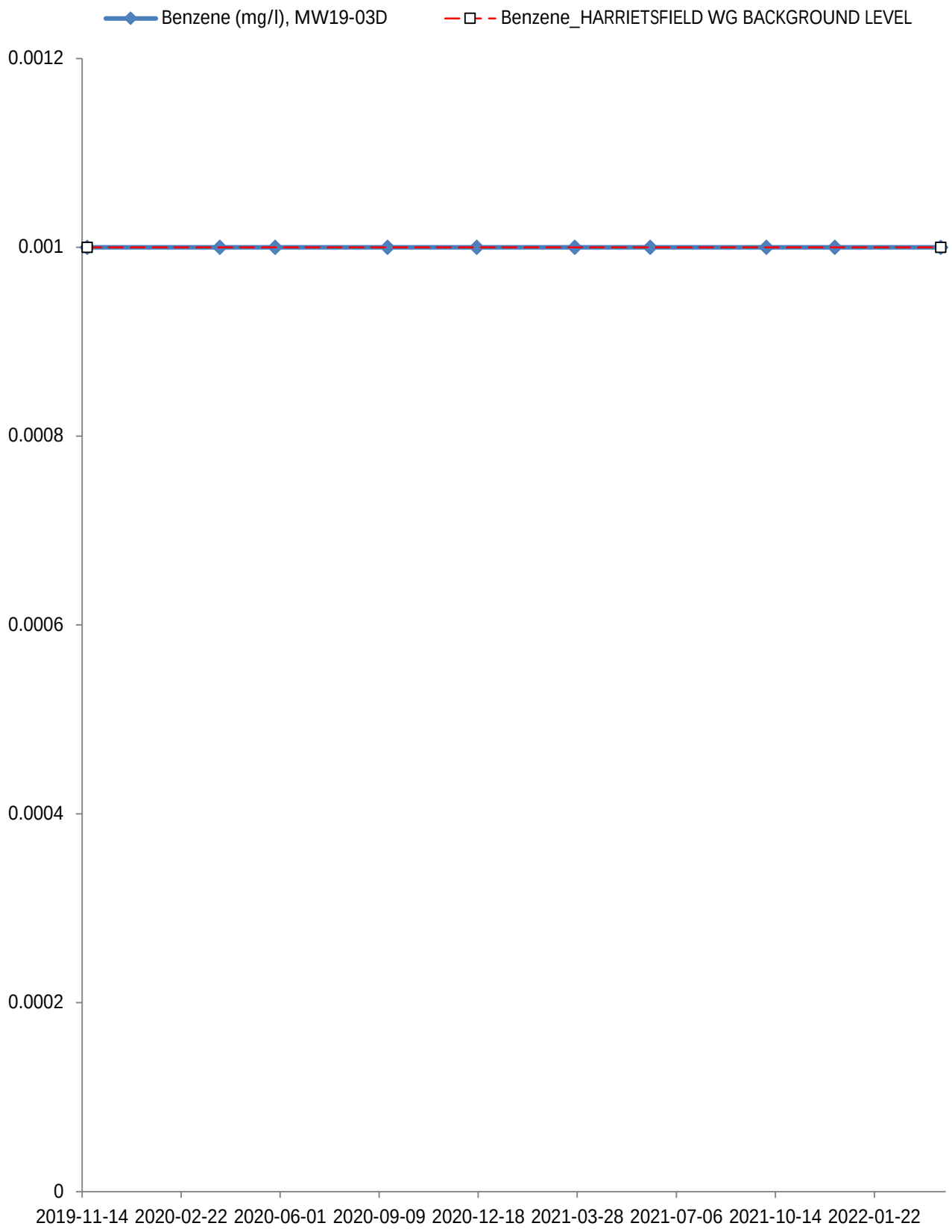
MW19-03D-Arsenic



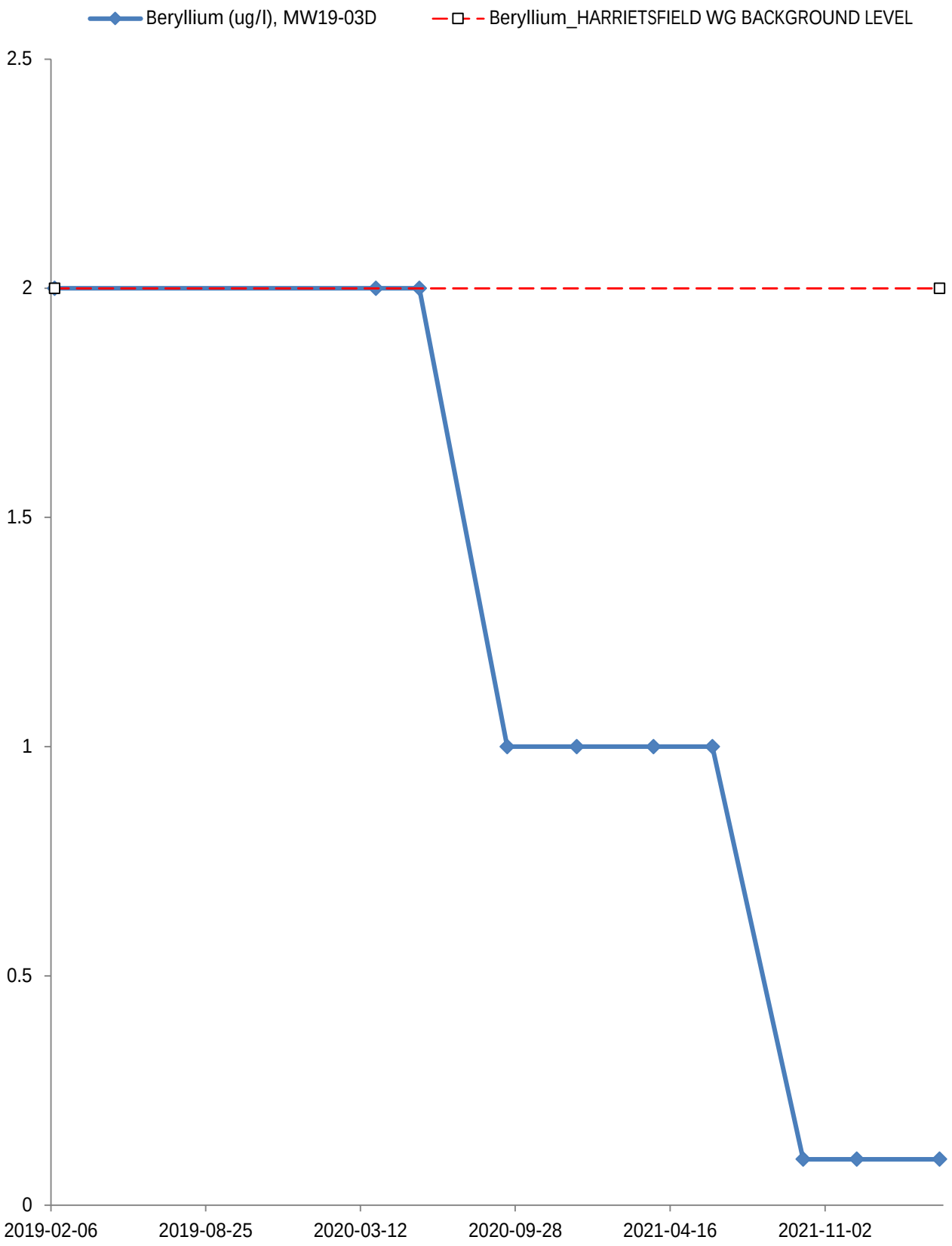
MW19-03D-Barium



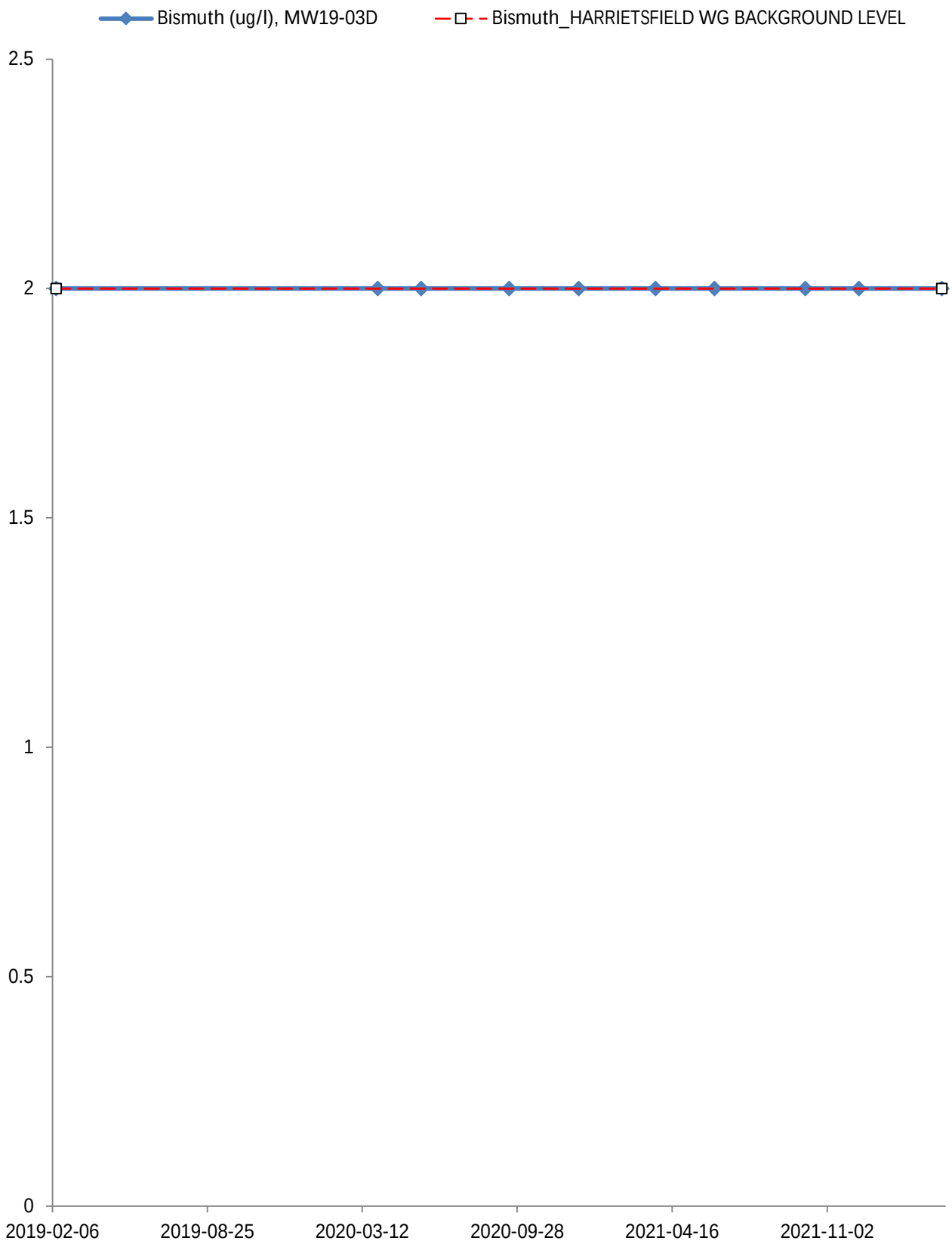
MW19-03D-Benzene



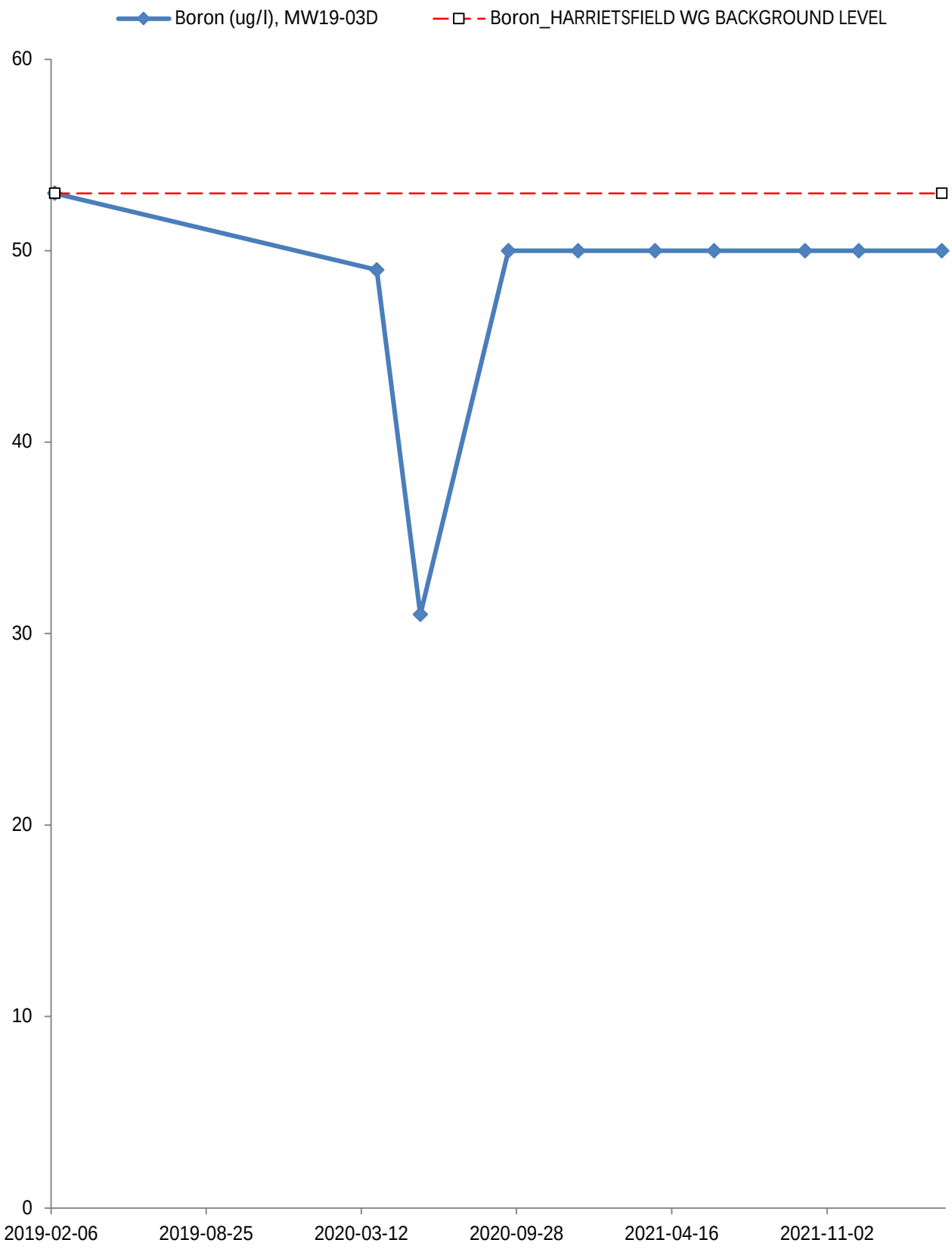
MW19-03D-Beryllium



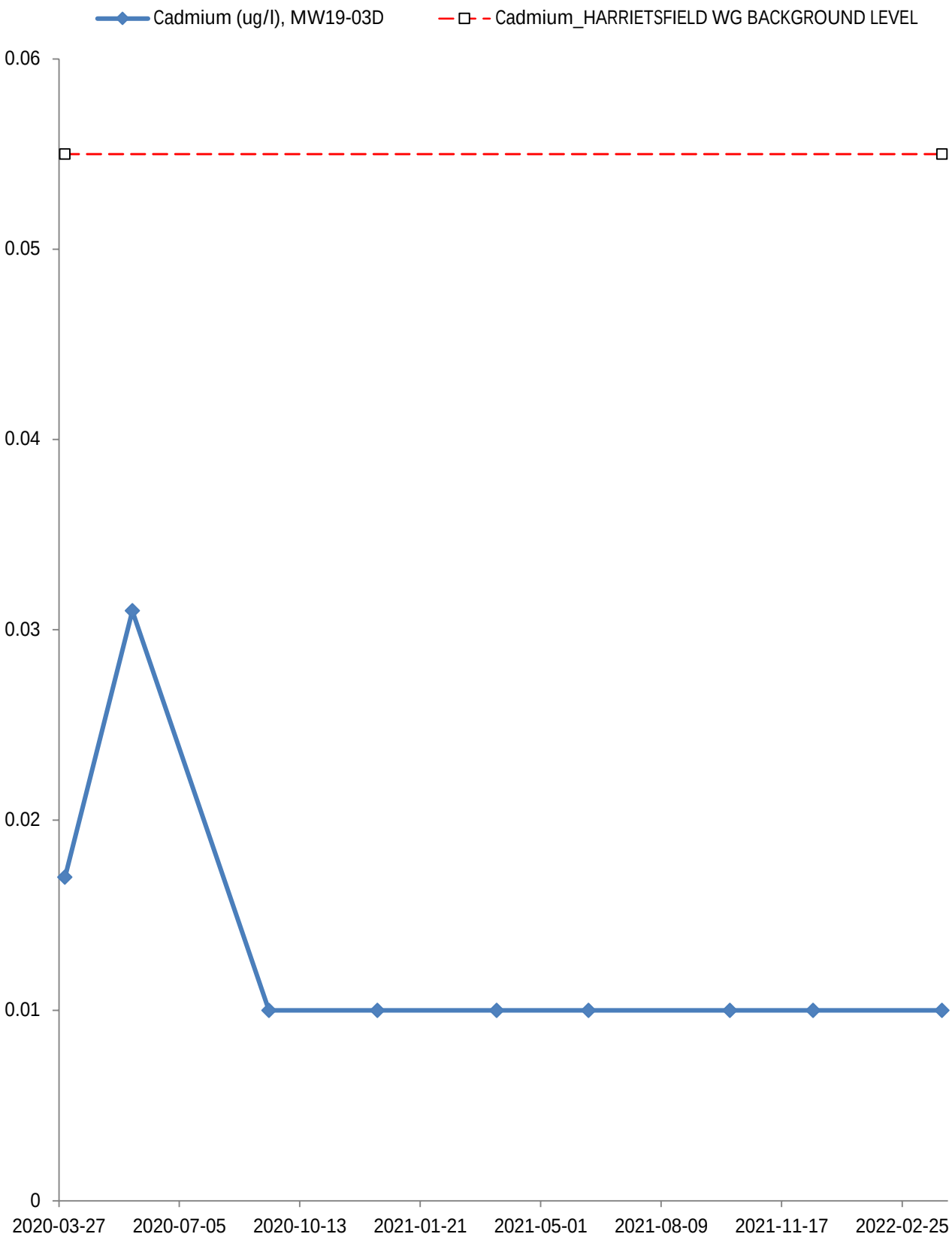
MW19-03D-Bismuth



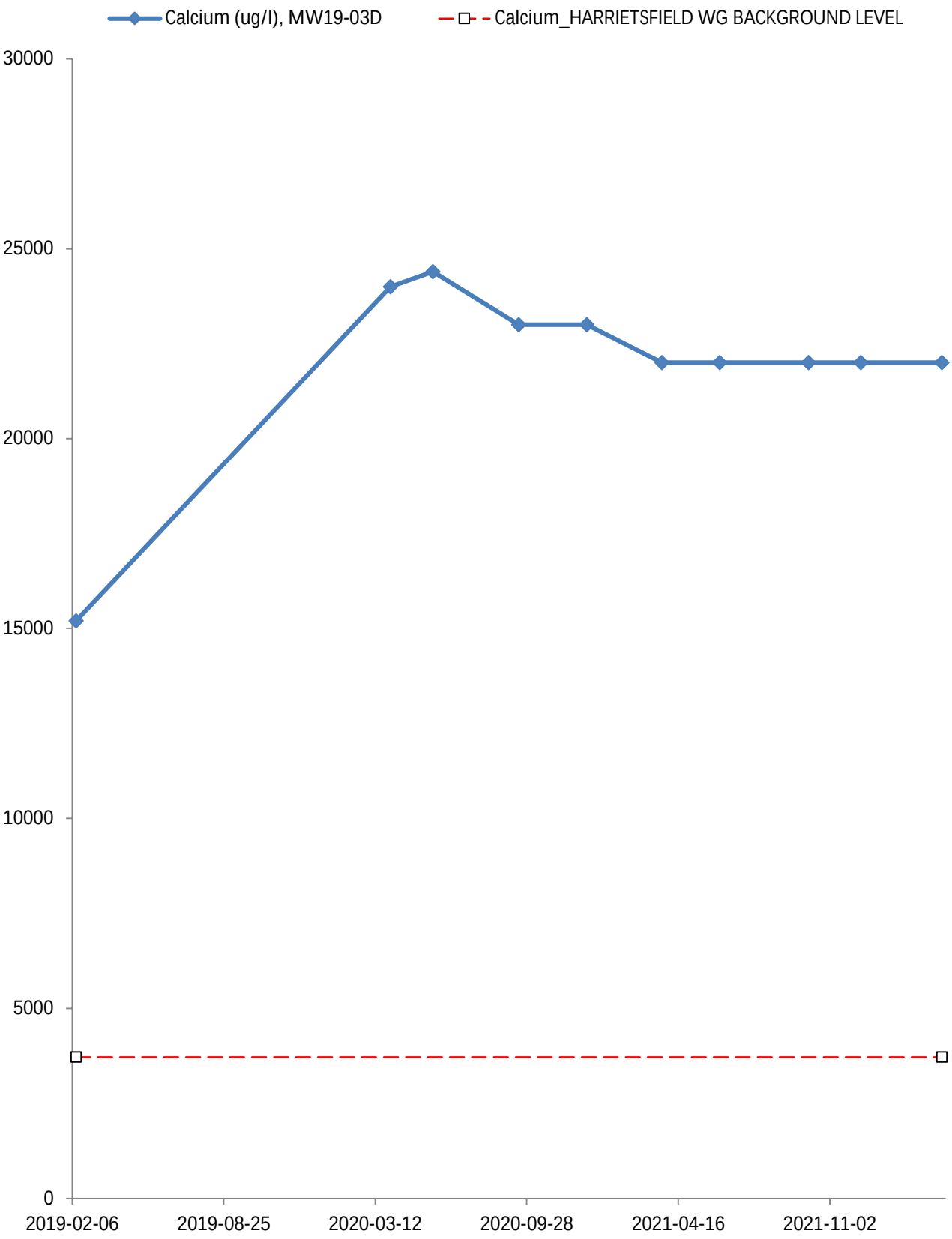
MW19-03D-Boron



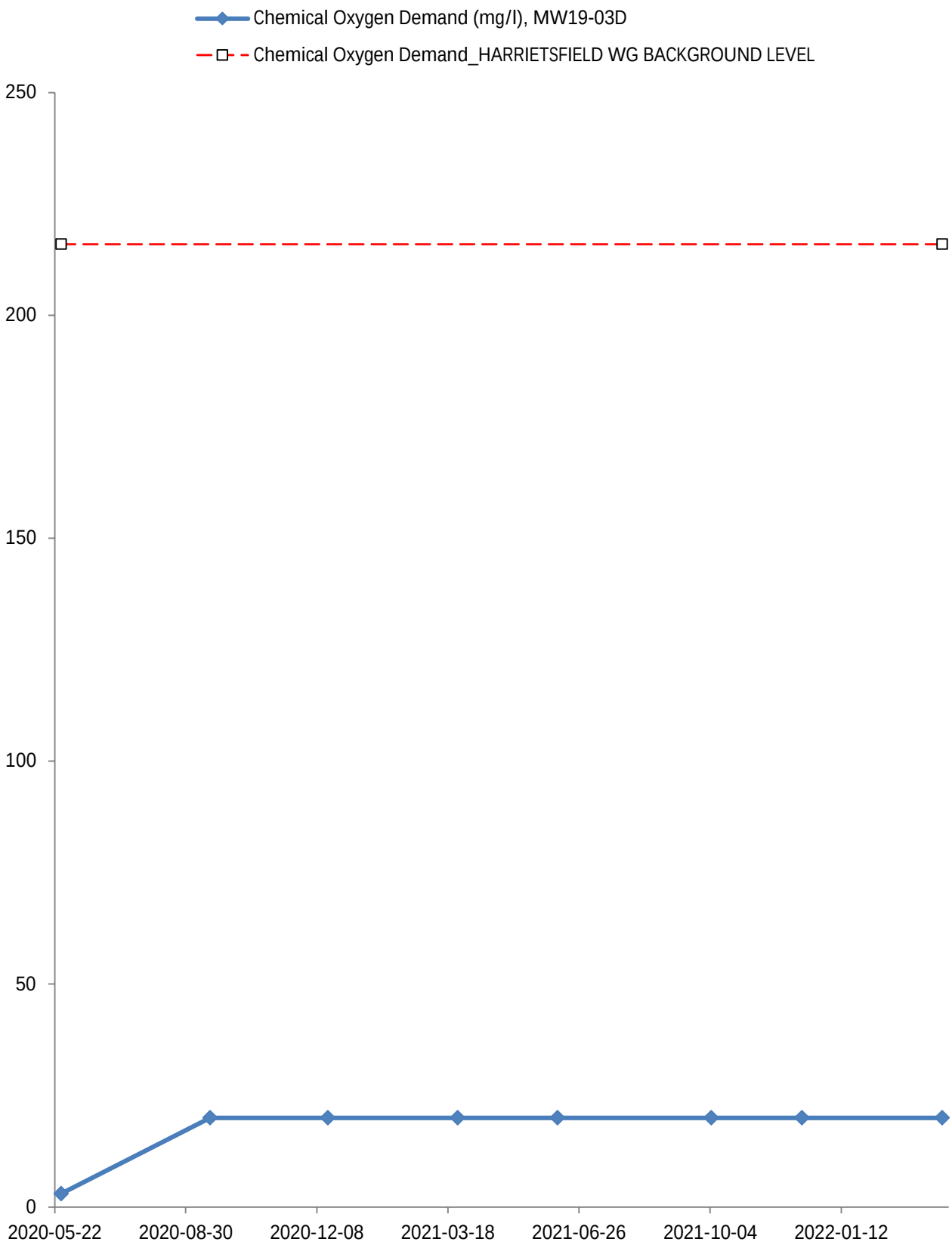
MW19-03D-Cadmium



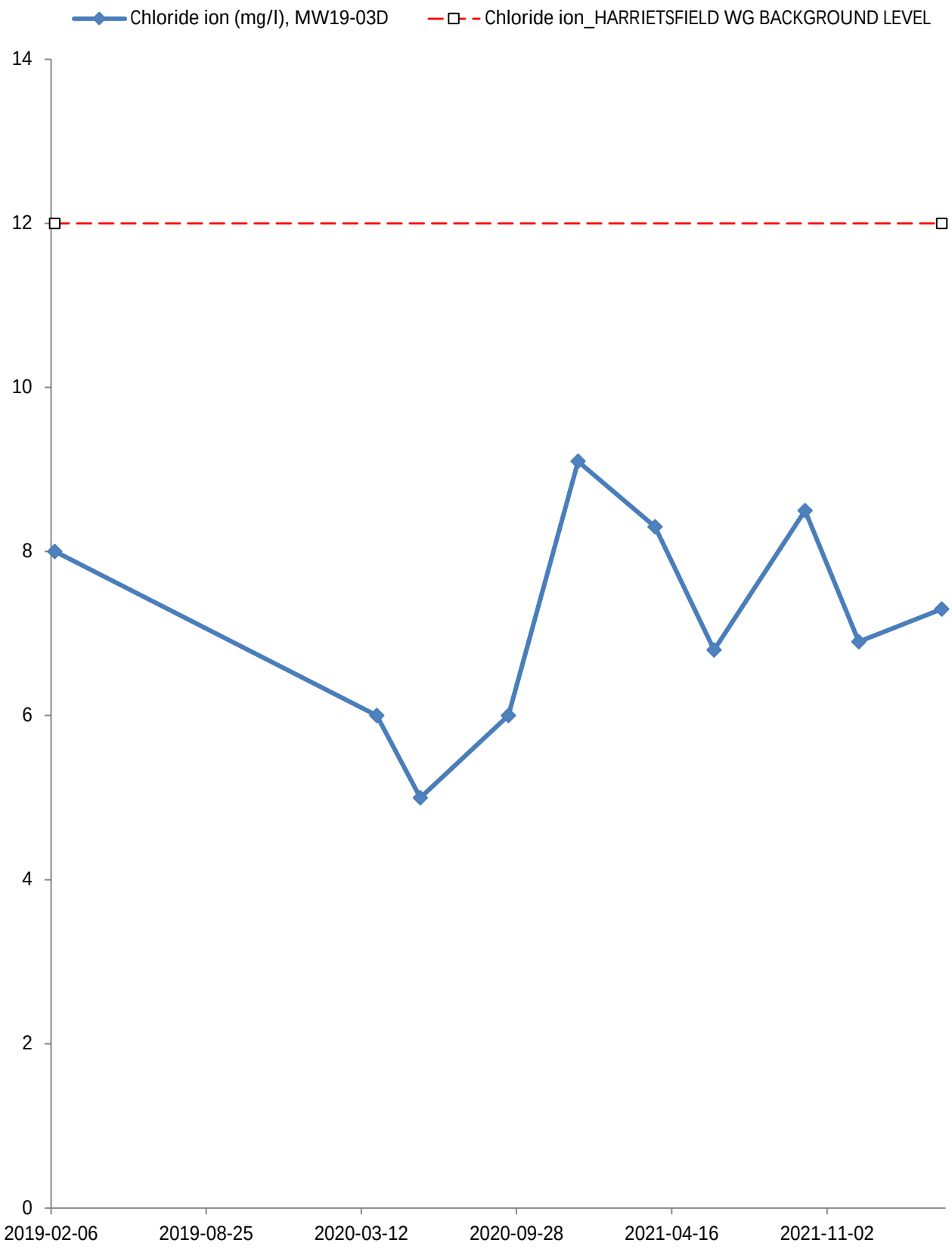
MW19-03D-Calcium



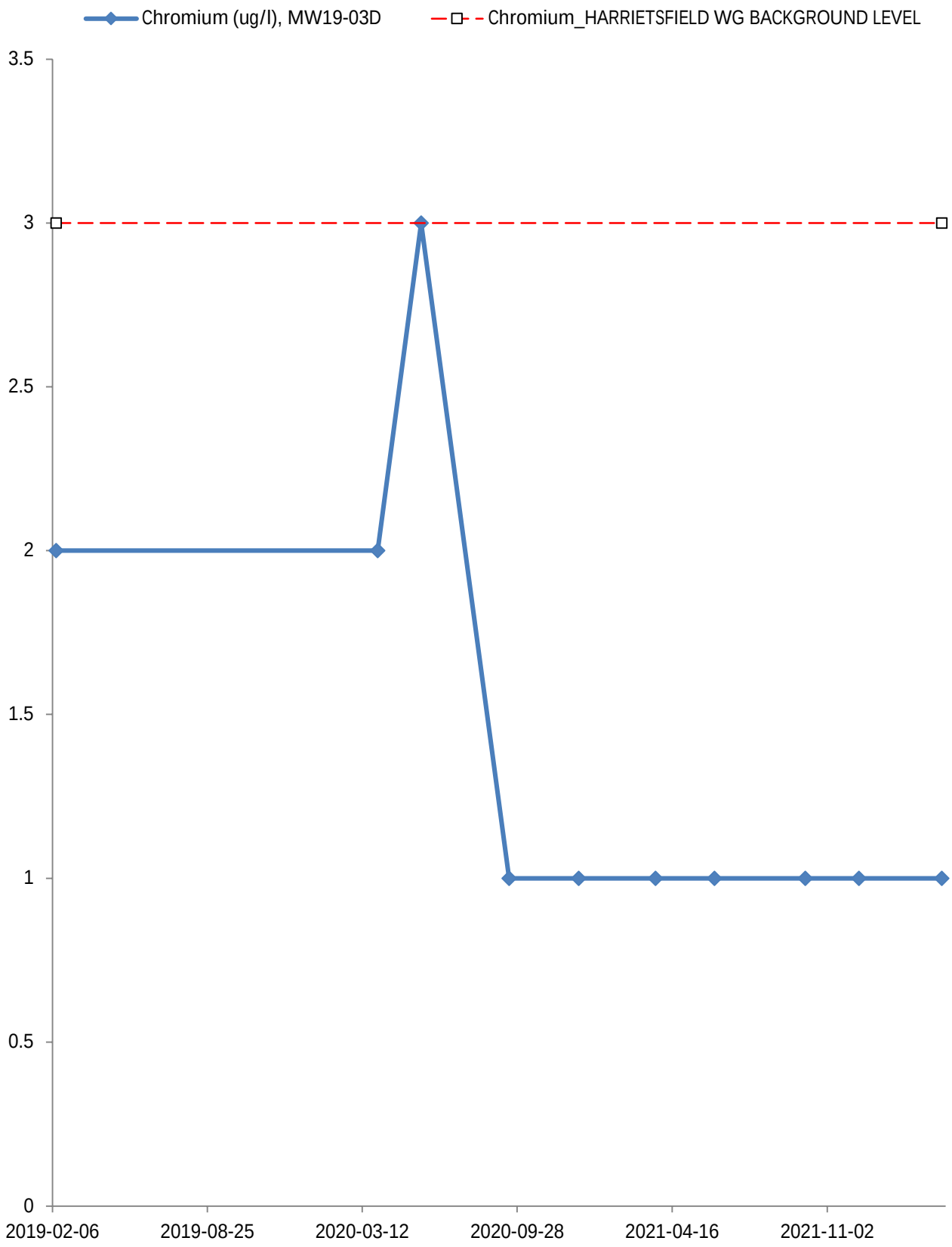
MW19-03D-Chemical Oxygen Demand



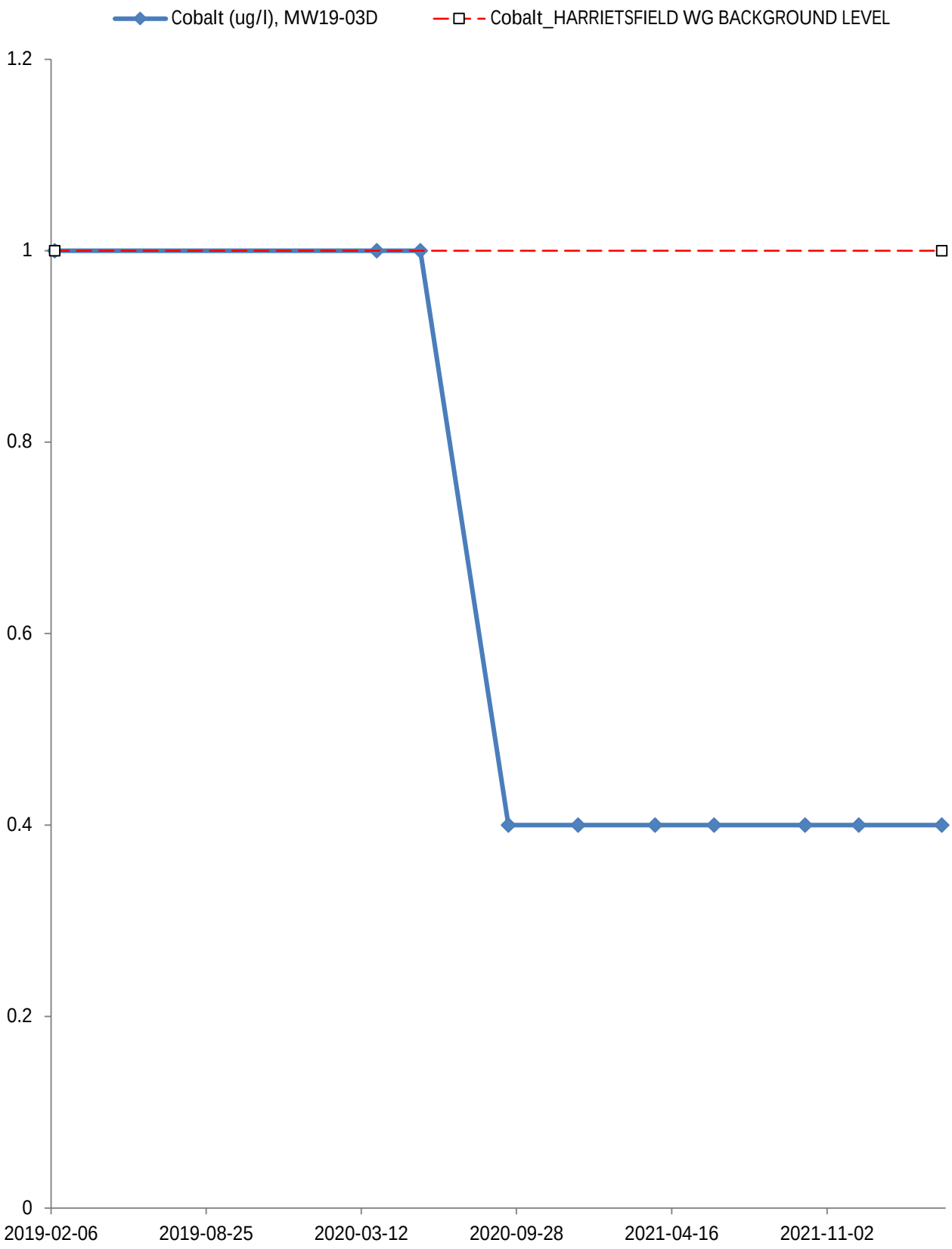
MW19-03D-Chloride ion



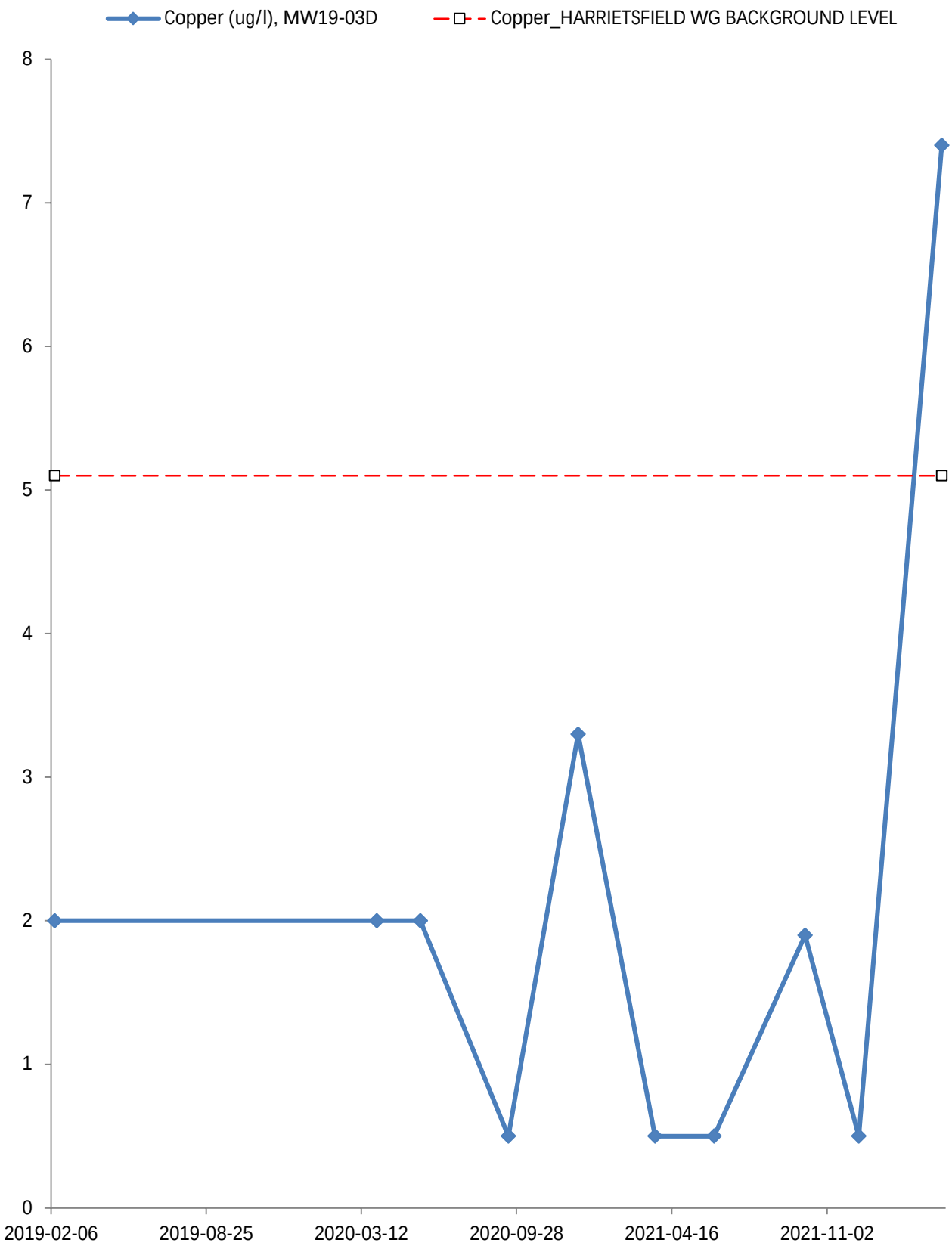
MW19-03D-Chromium



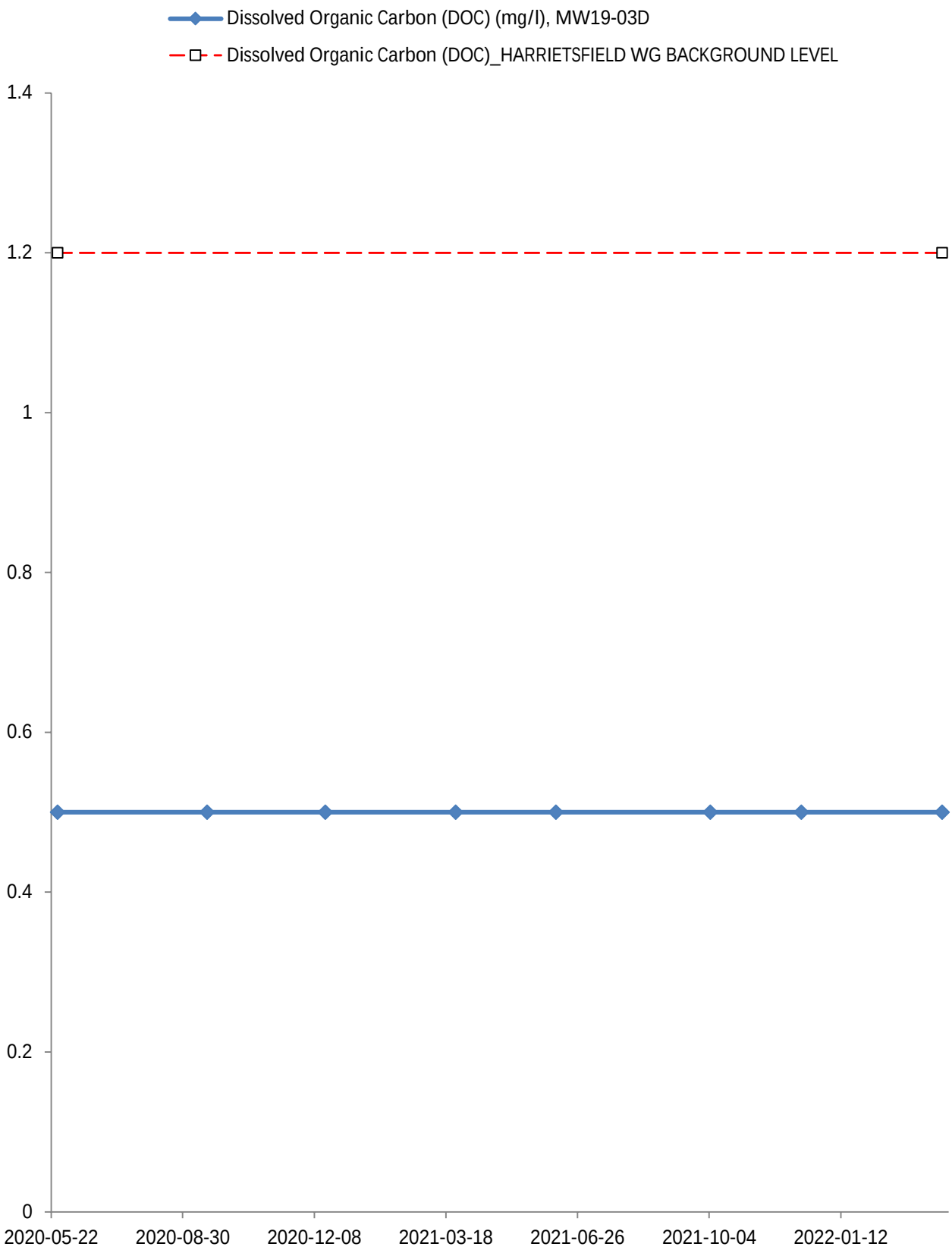
MW19-03D-Cobalt



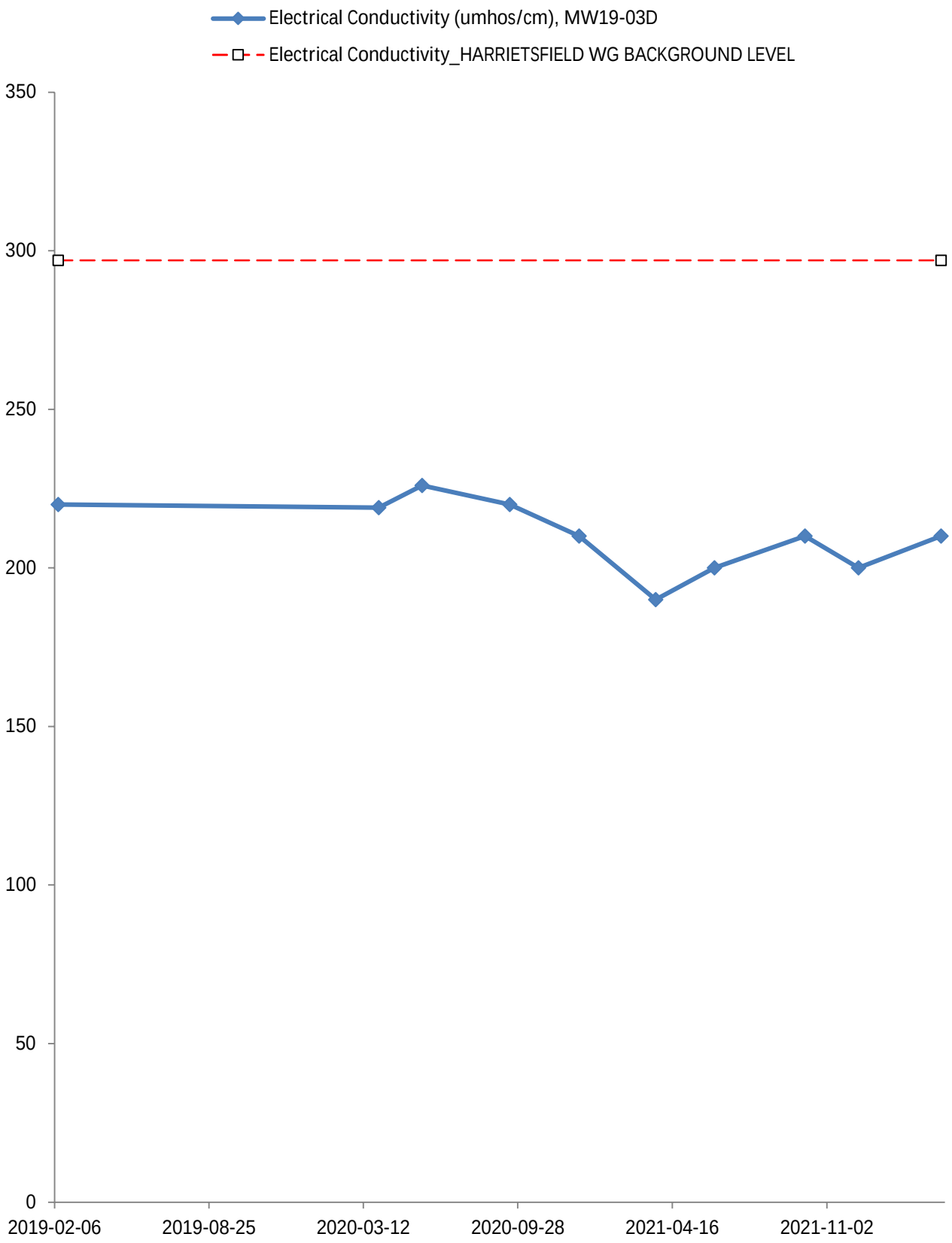
MW19-03D-Copper



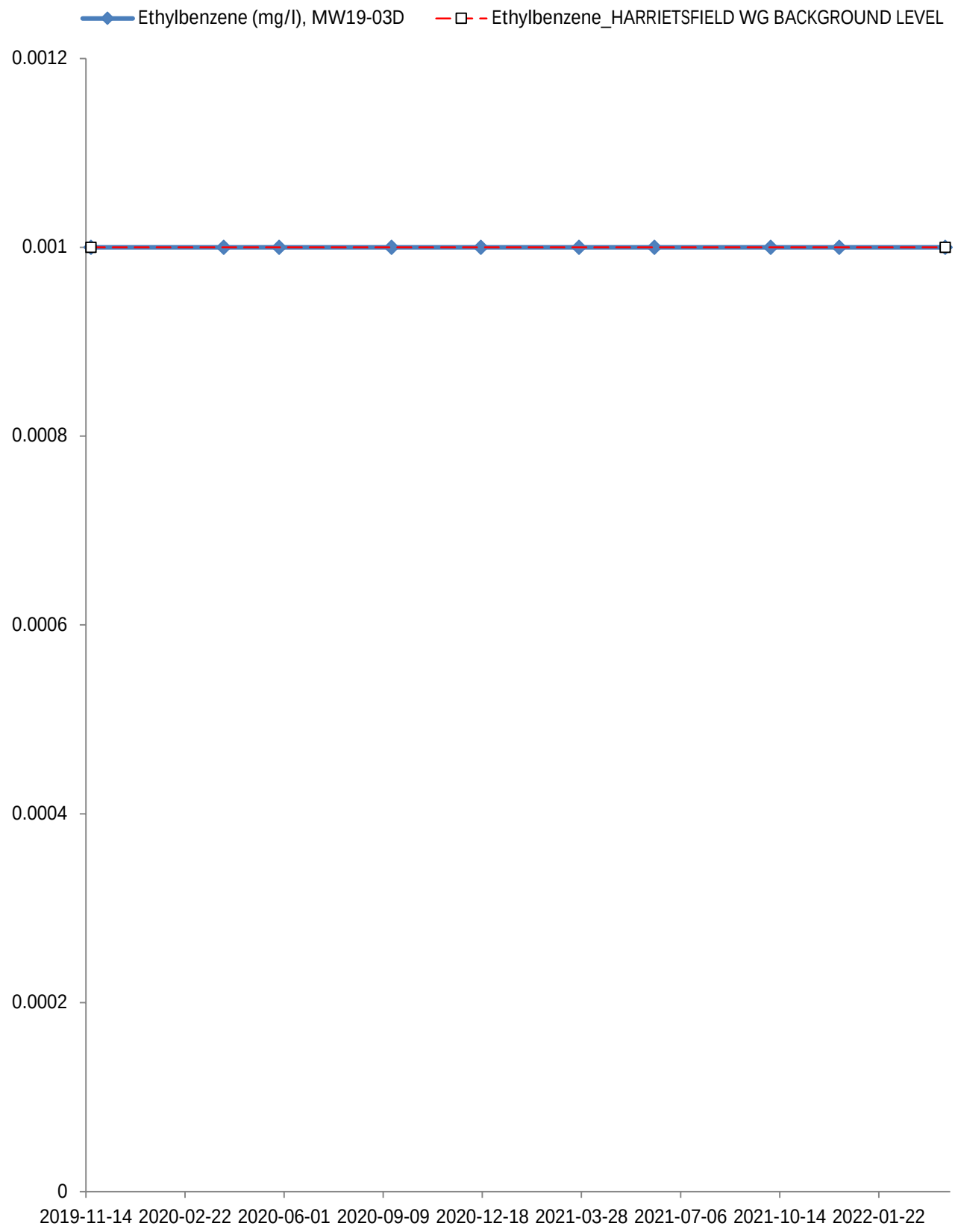
MW19-03D-Dissolved Organic Carbon7



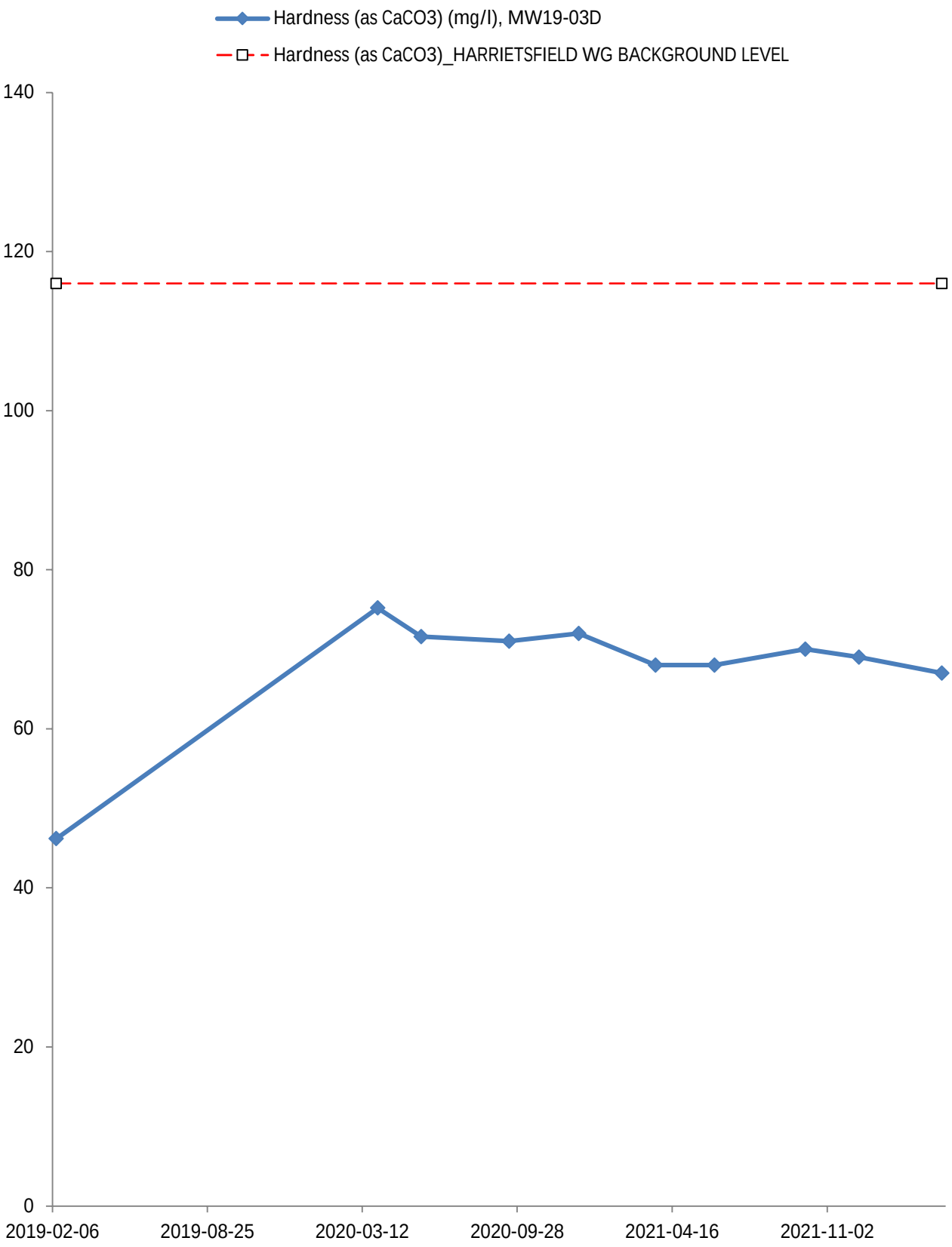
MW19-03D-Electrical Conductivity



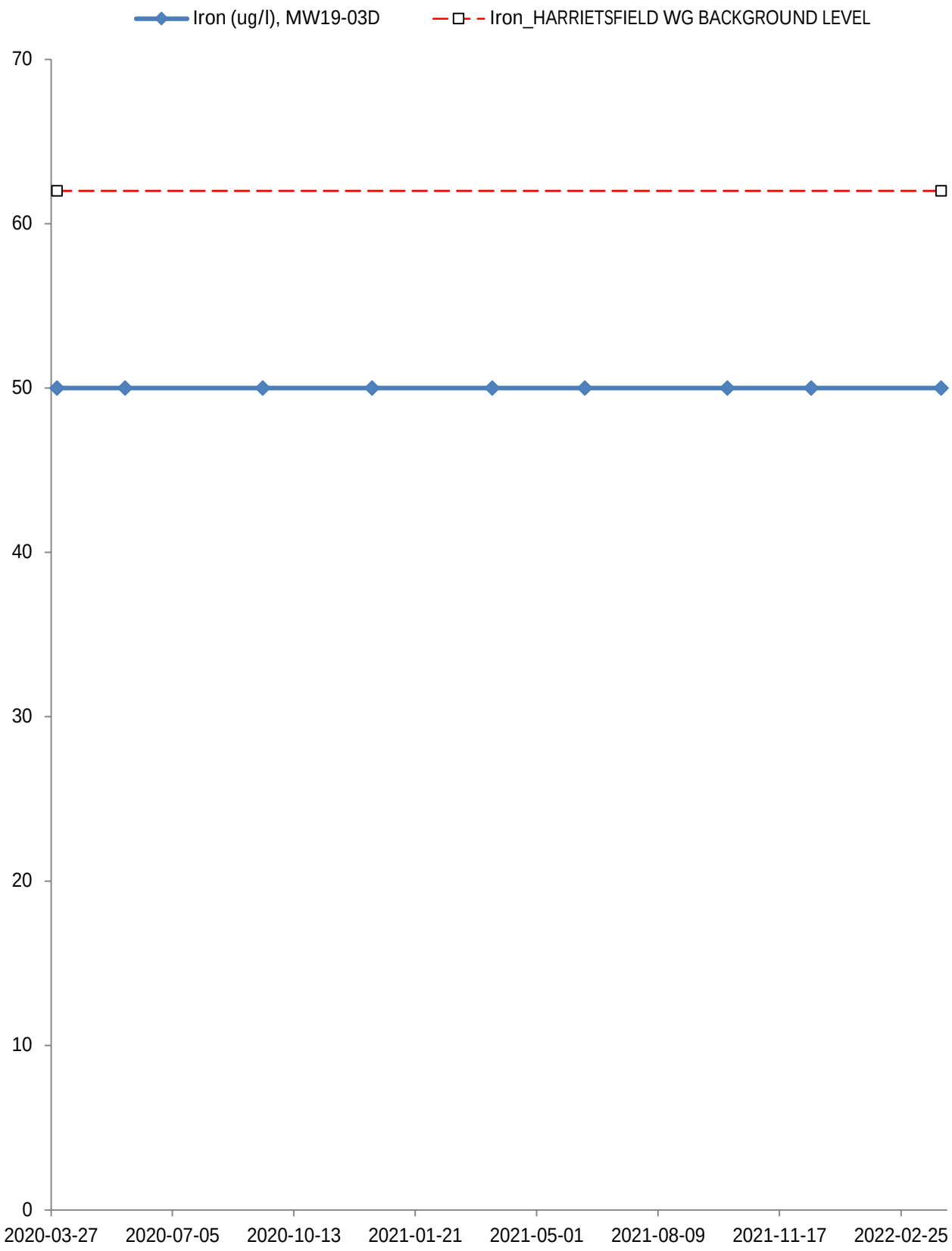
MW19-03D-Ethylbenzene



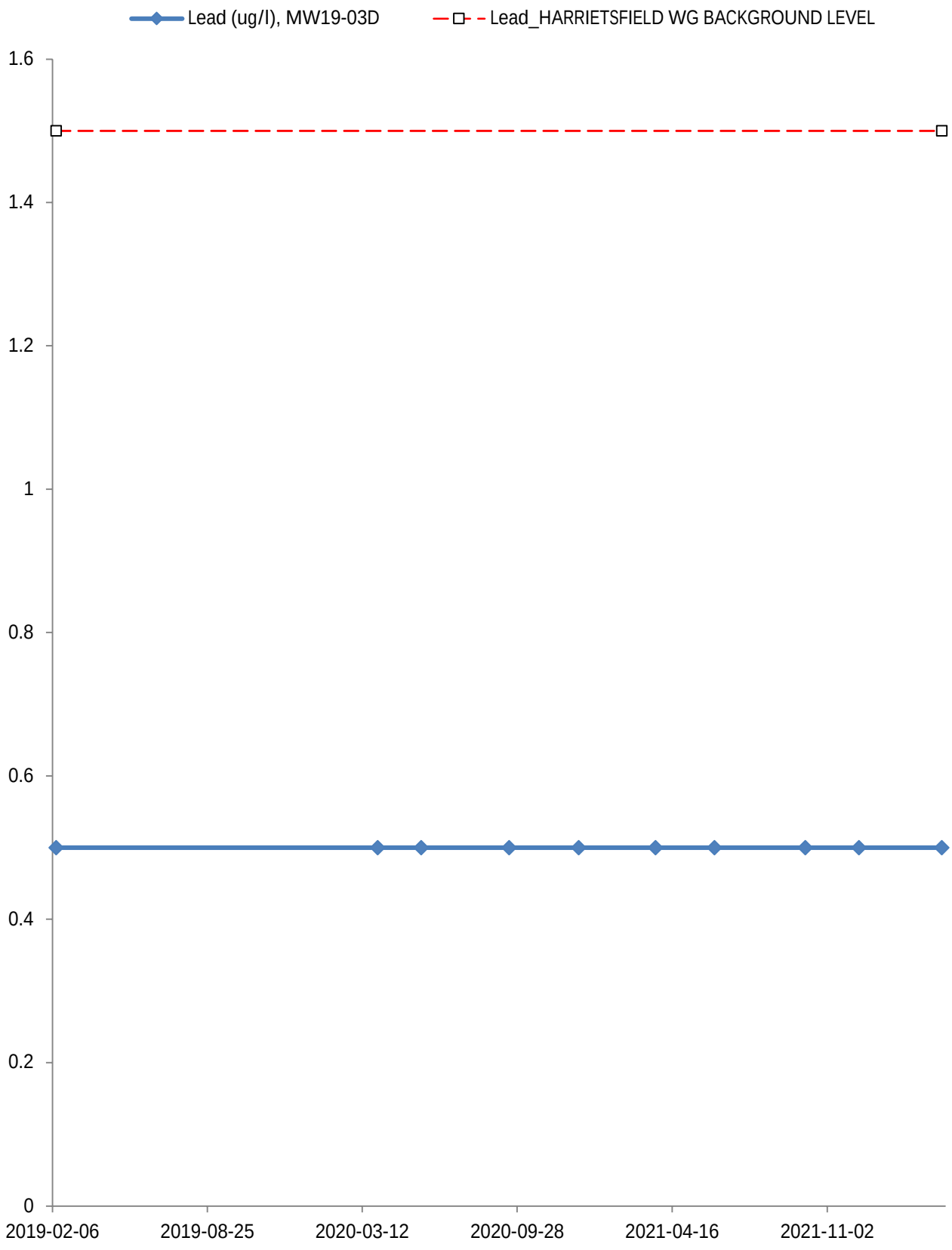
MW19-03D-Hardness (as CaCO3)



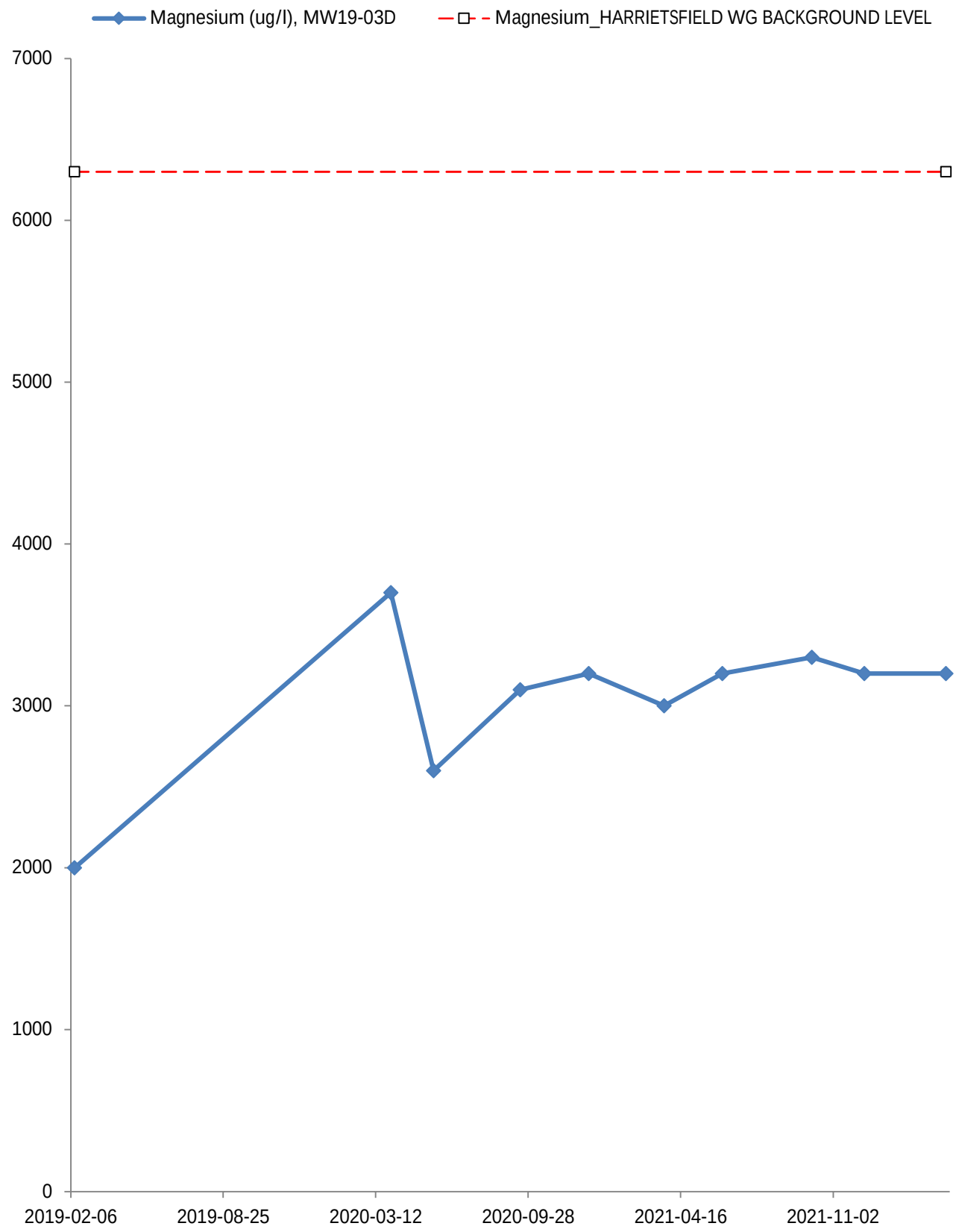
MW19-03D-Iron



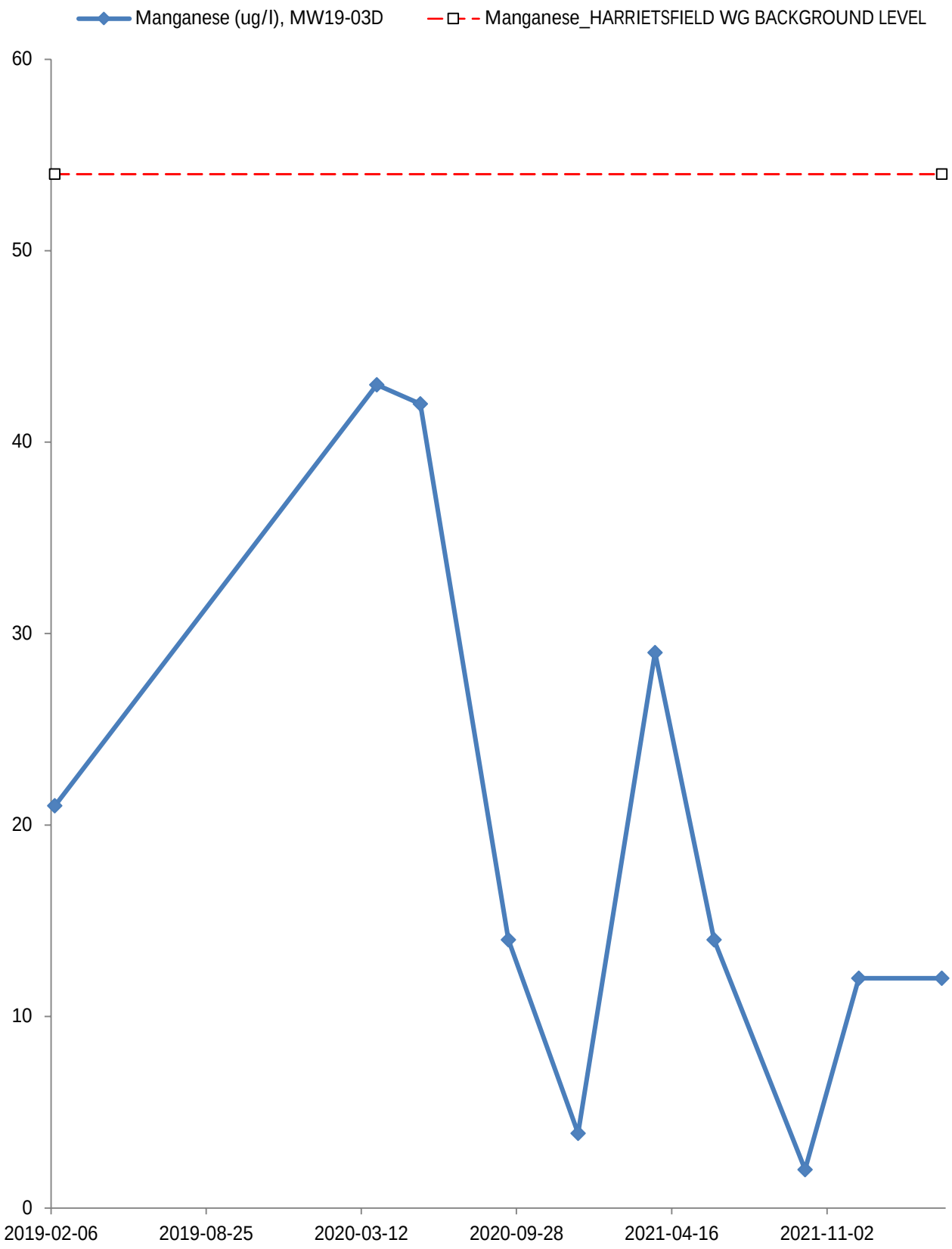
MW19-03D-Lead



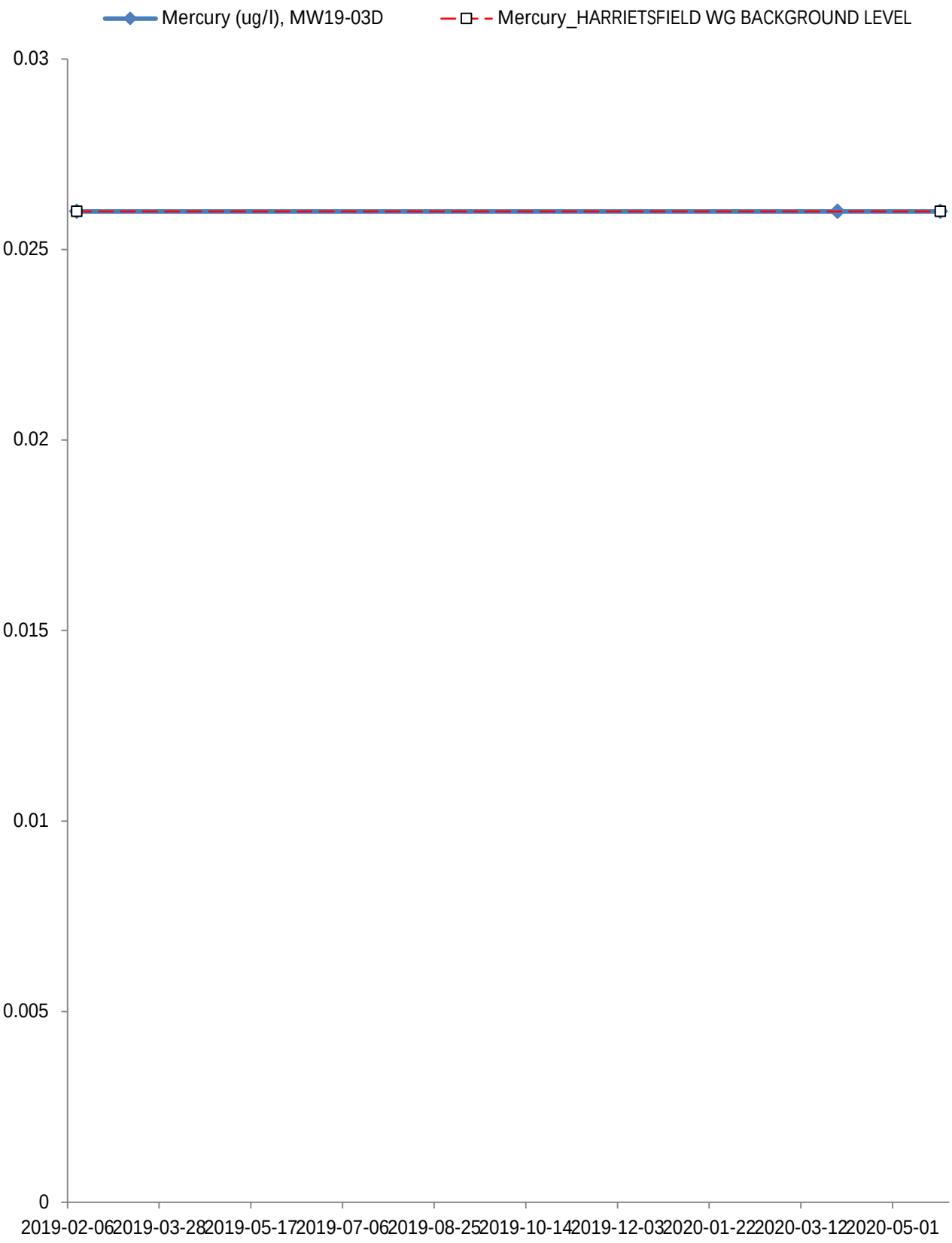
MW19-03D-Magnesium



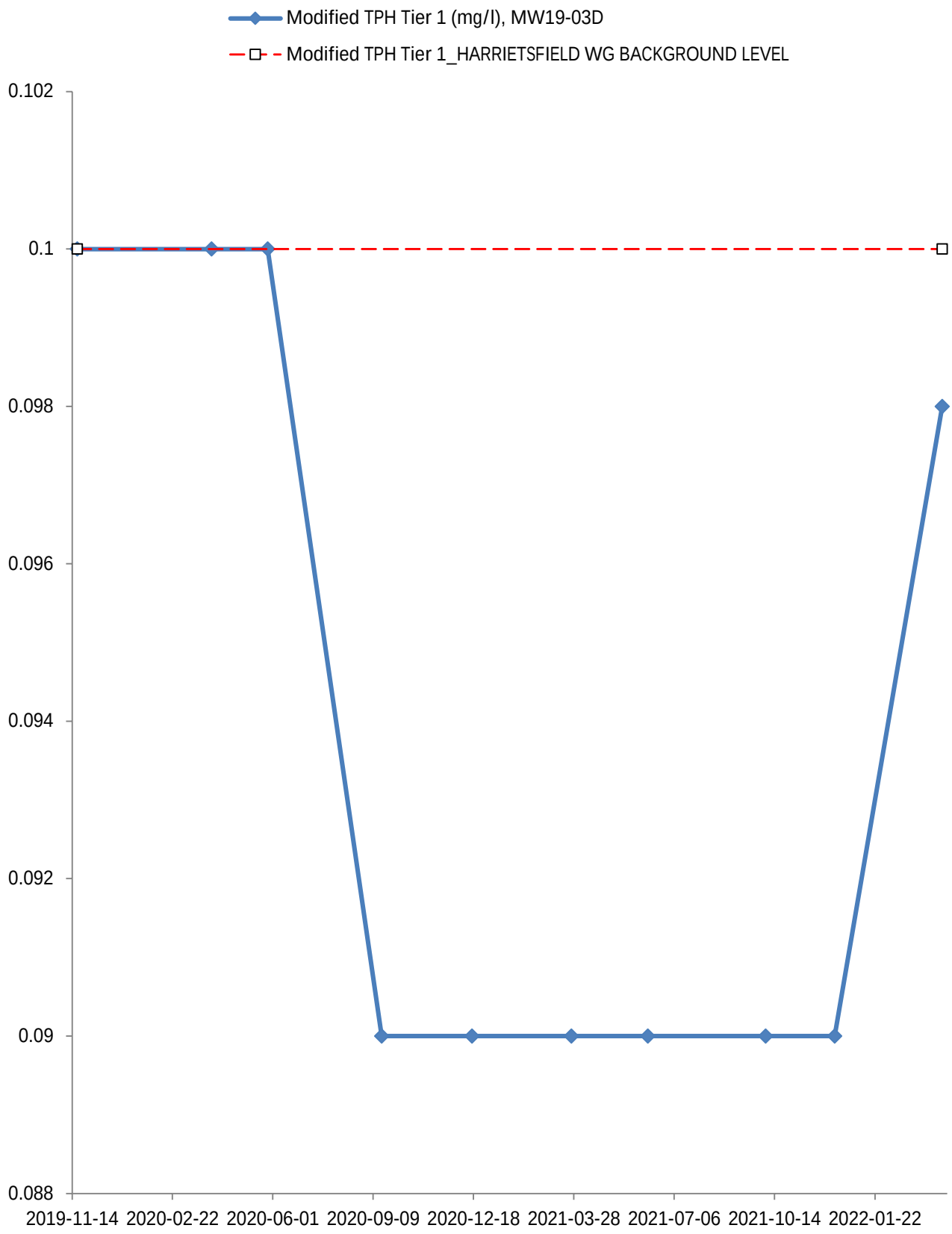
MW19-03D-Manganese



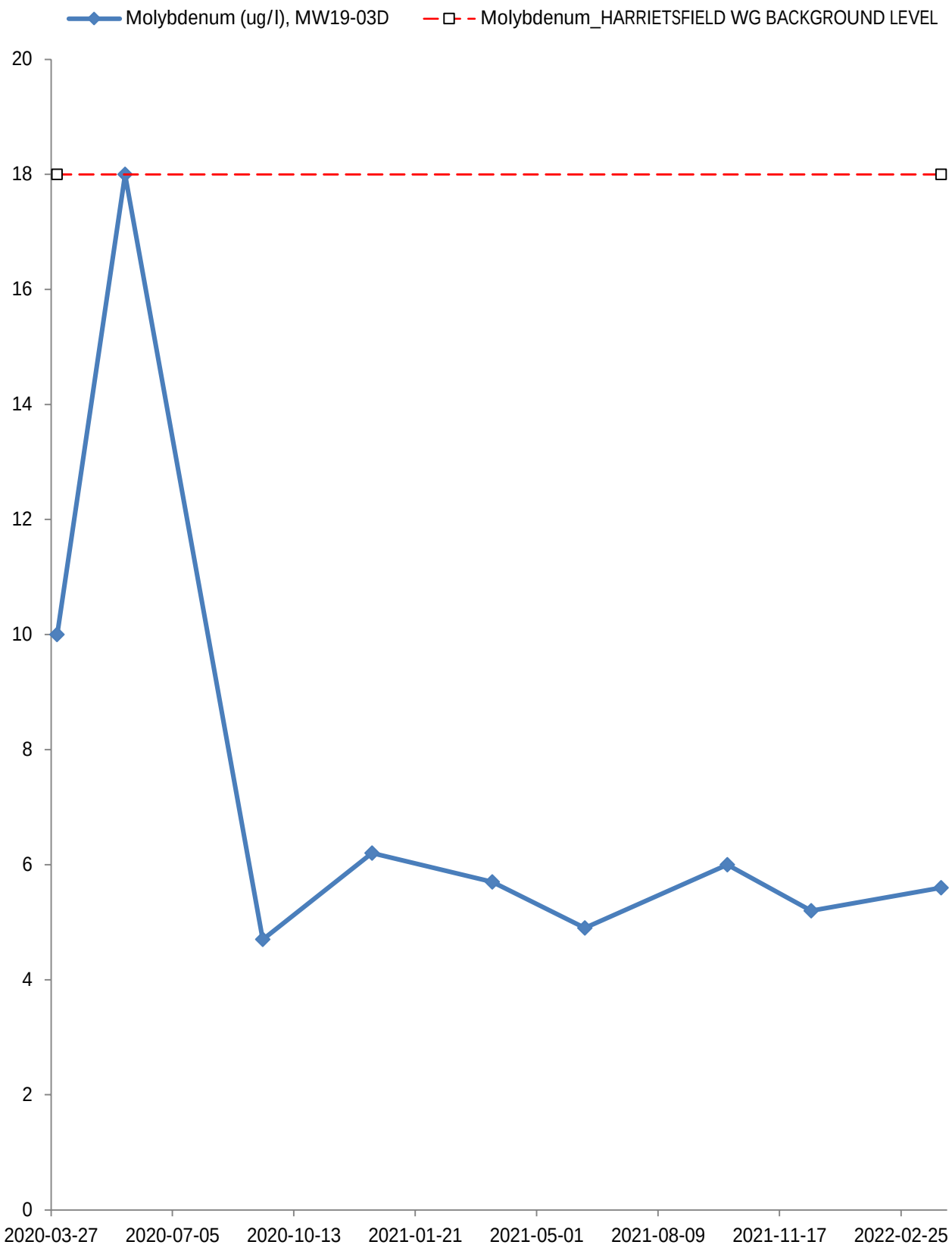
MW19-03D-Mercury



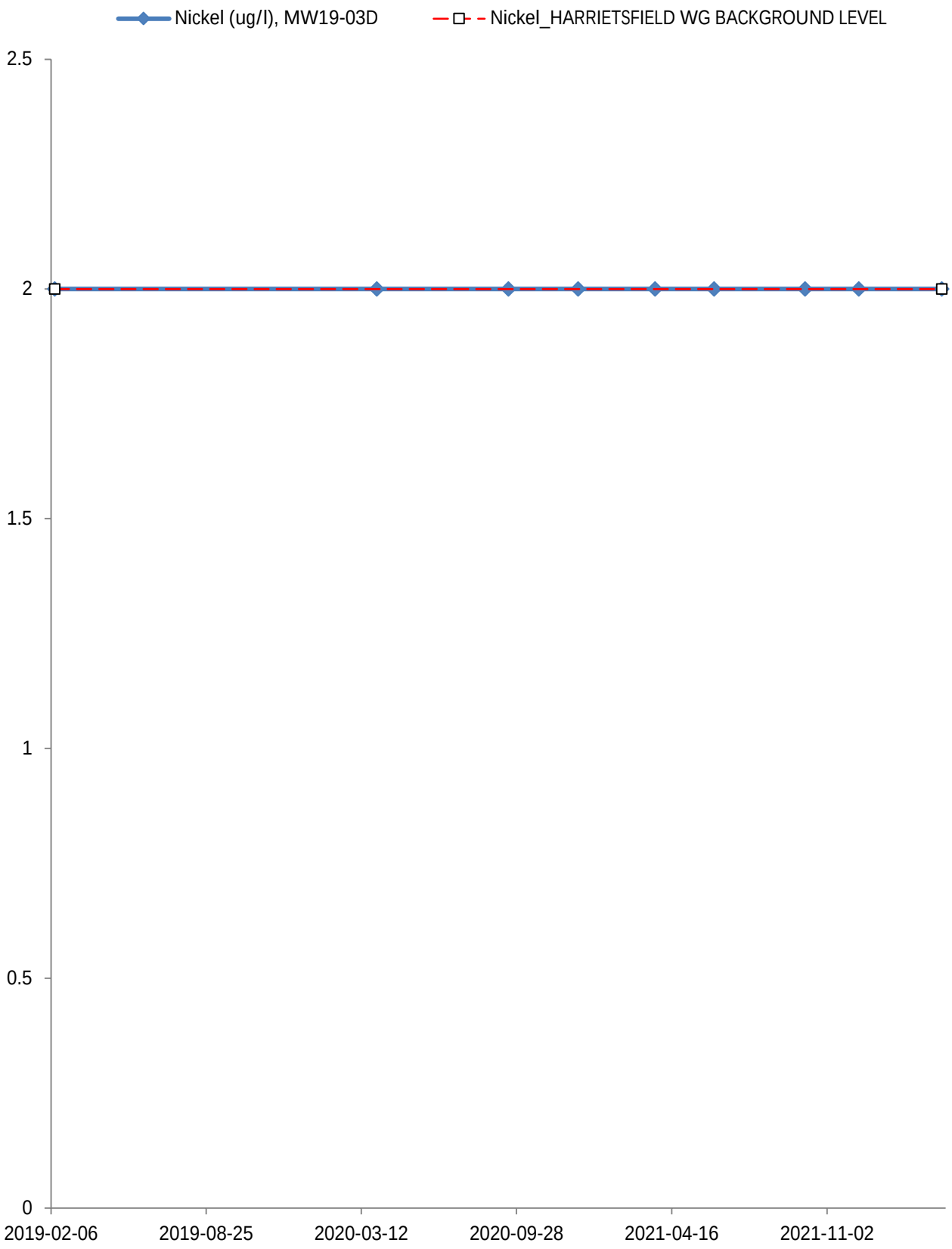
MW19-03D-Modified TPH Tier 1



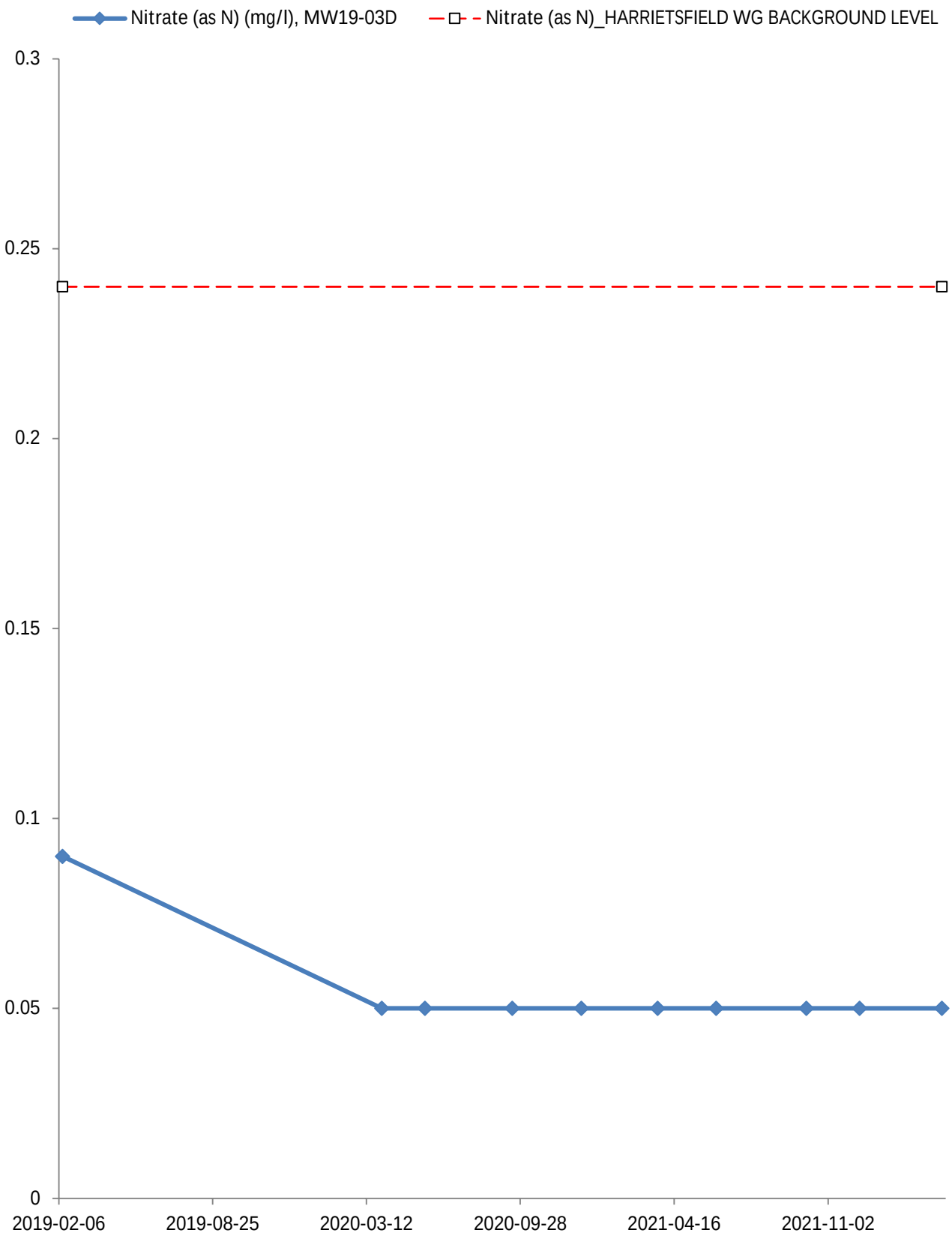
MW19-03D-Molybdenum



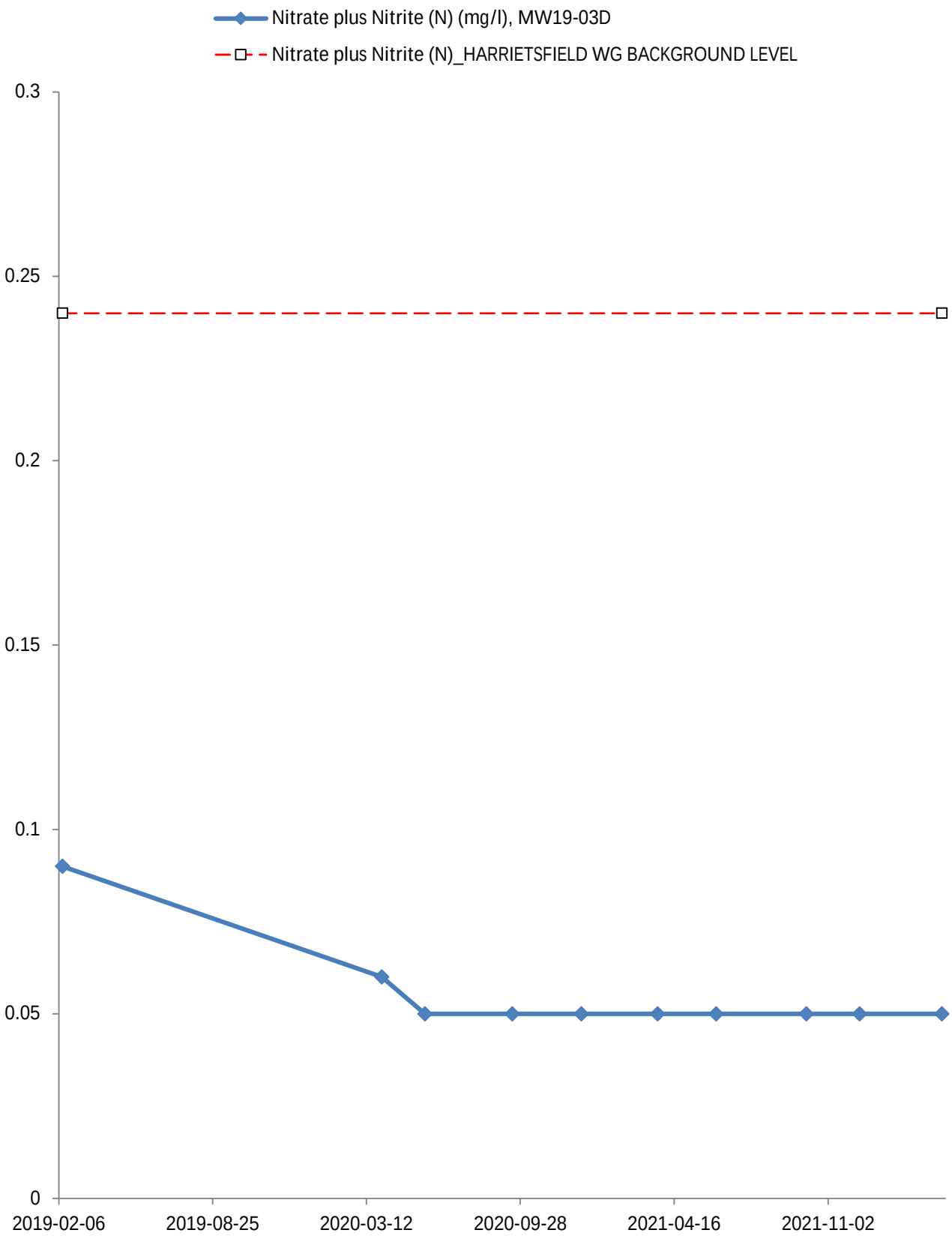
MW19-03D-Nickel



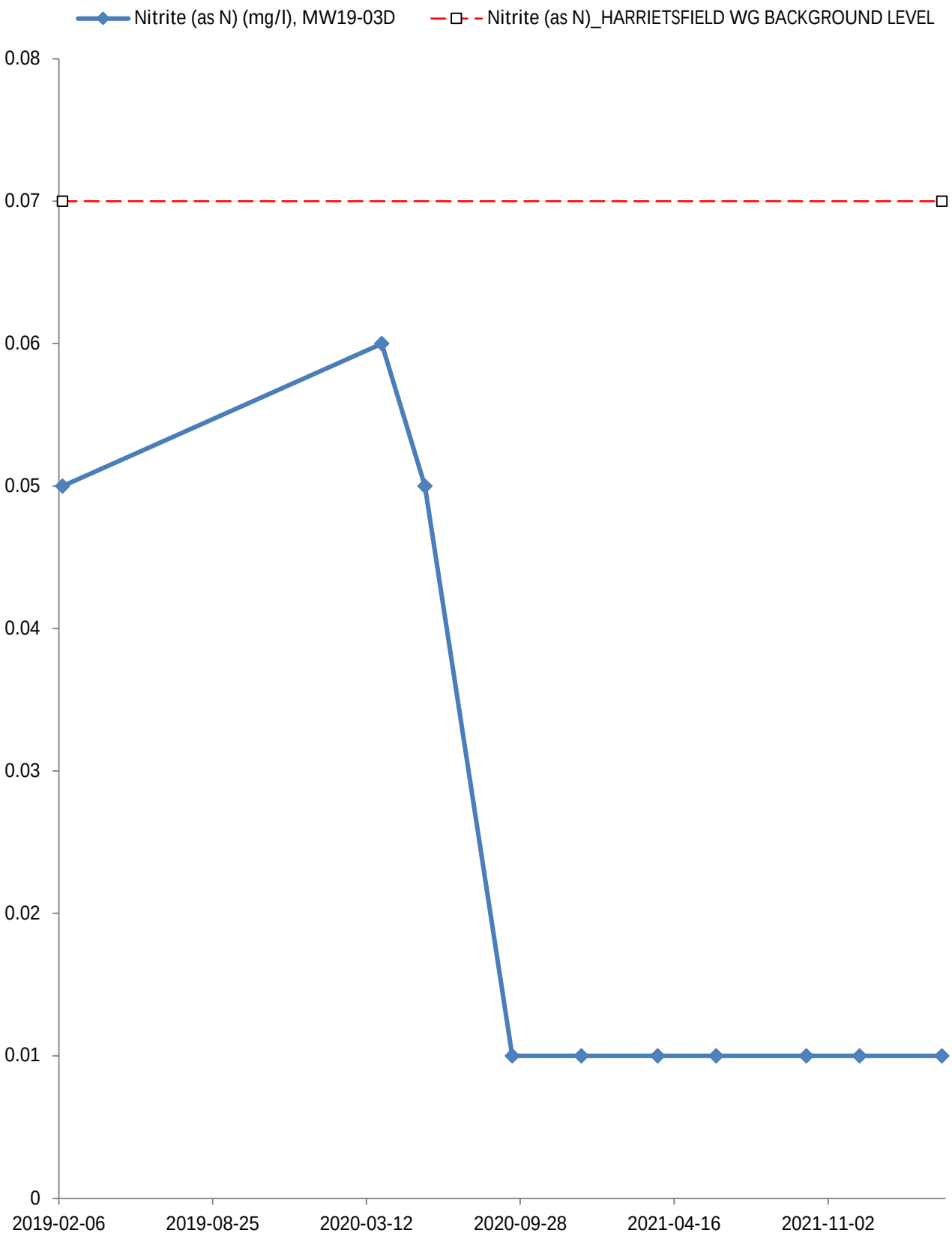
MW19-03D-Nitrate (as N)



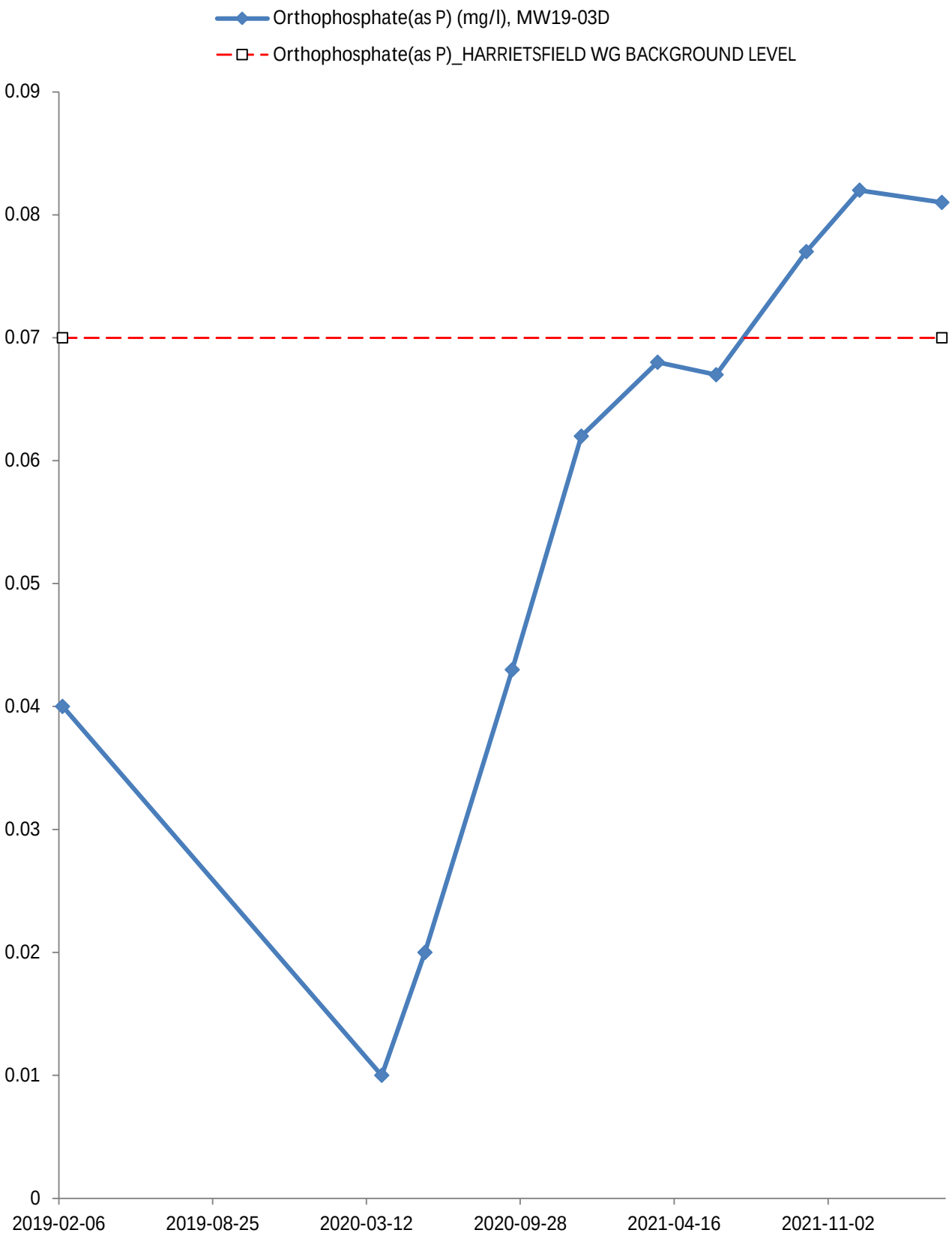
MW19-03D-Nitrate plus Nitrite (N)



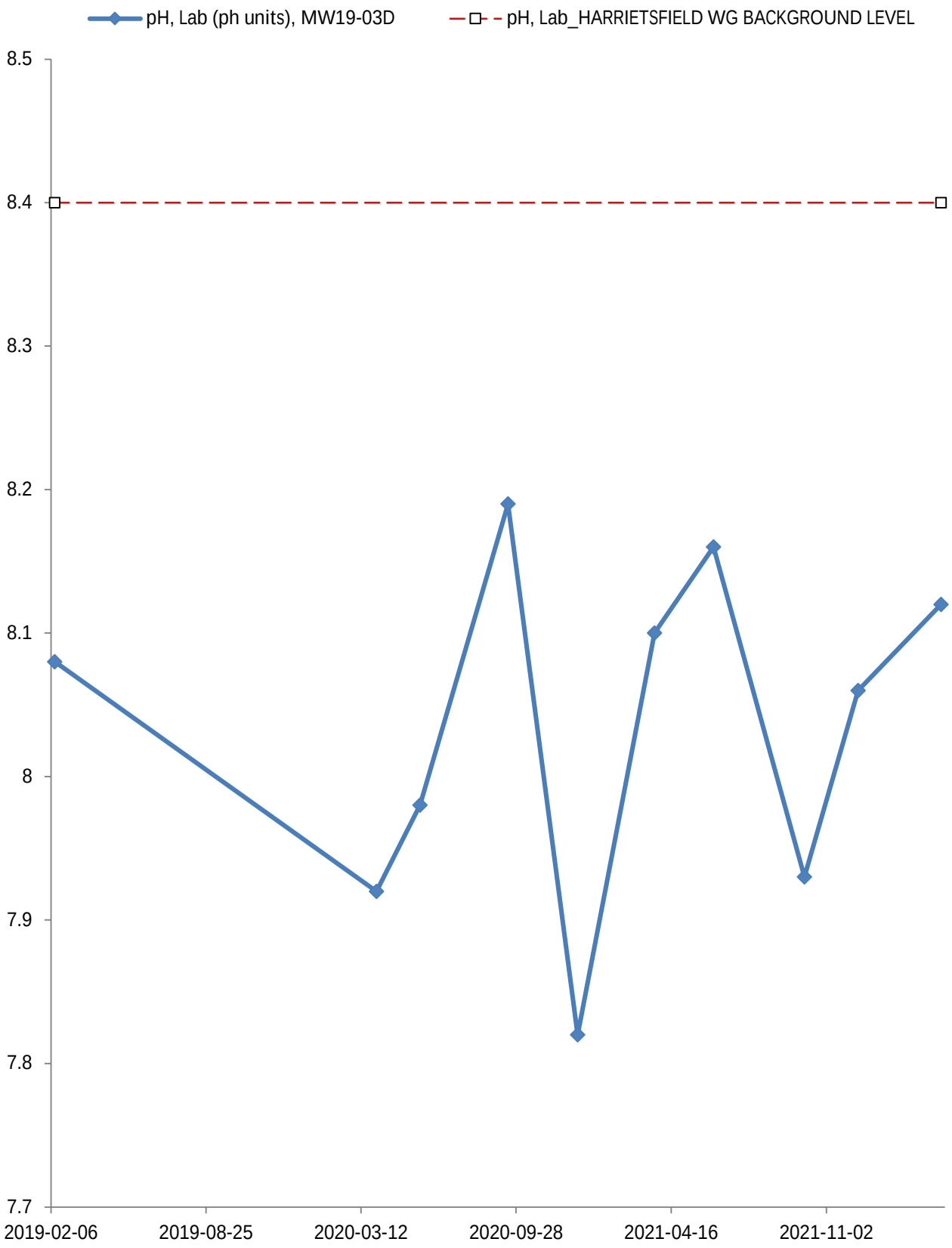
MW19-03D-Nitrite (as N)



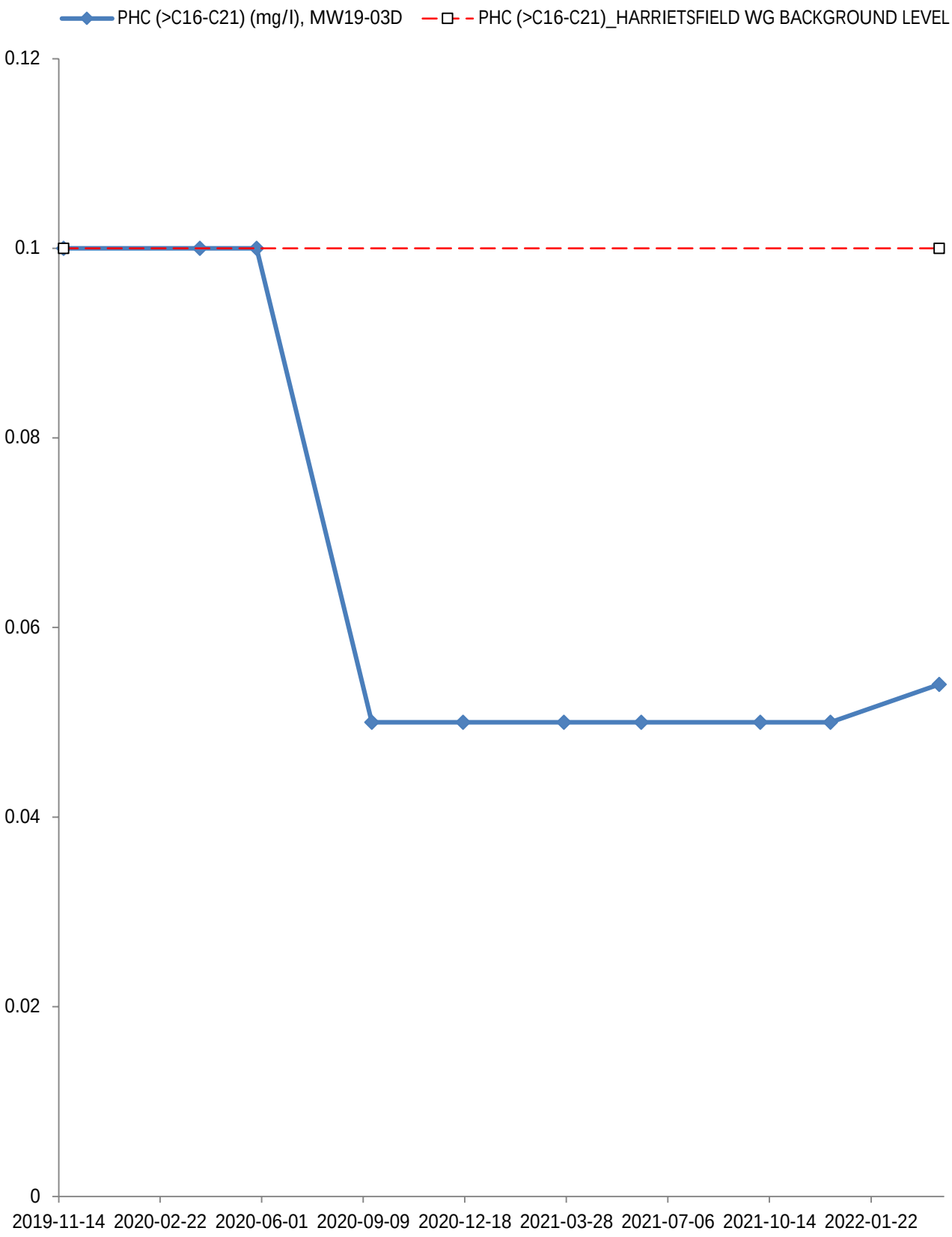
MW19-03D-Orthophosphate(as P)



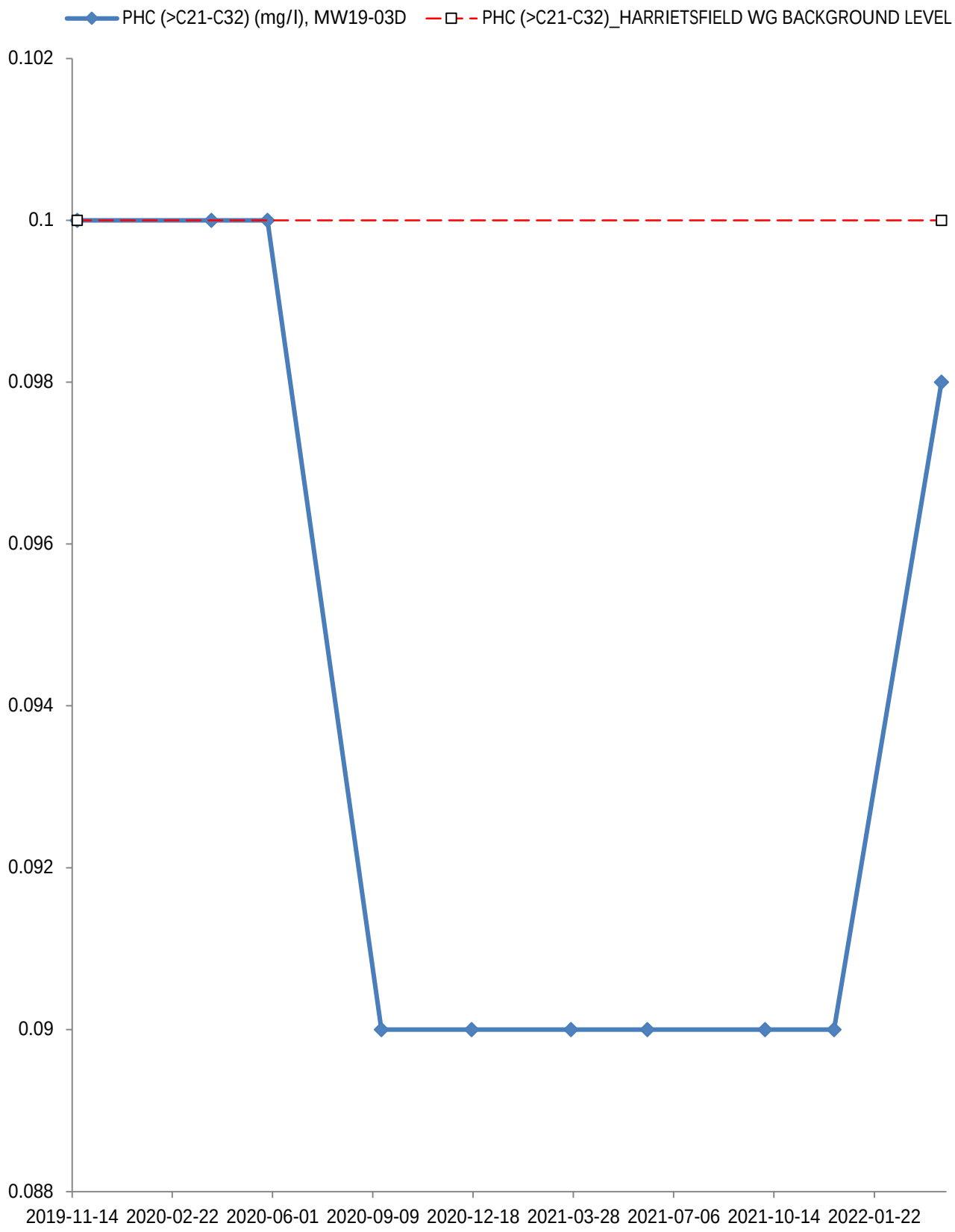
MW19-03D-pH, Lab



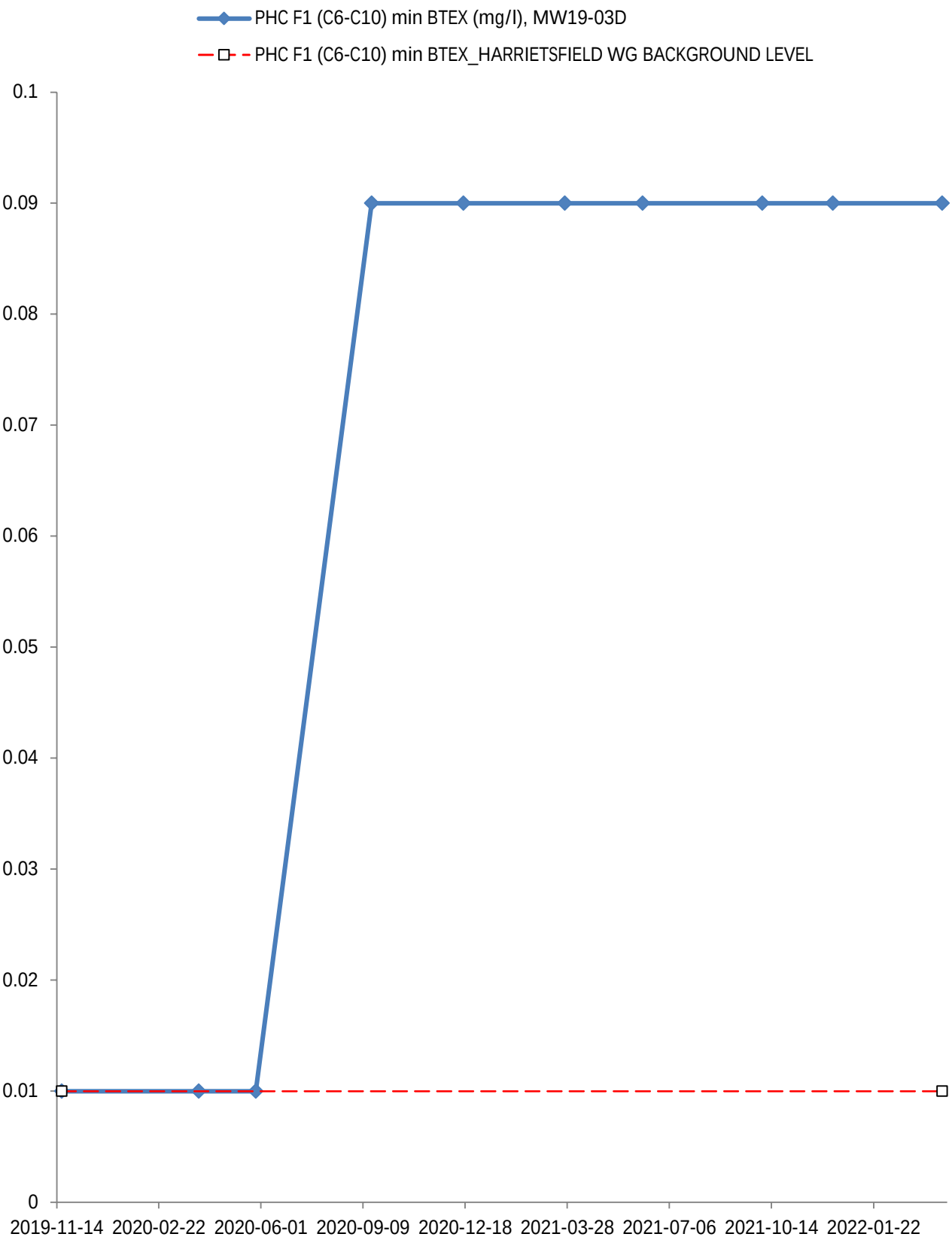
MW19-03D-PHC (>C16-C21)



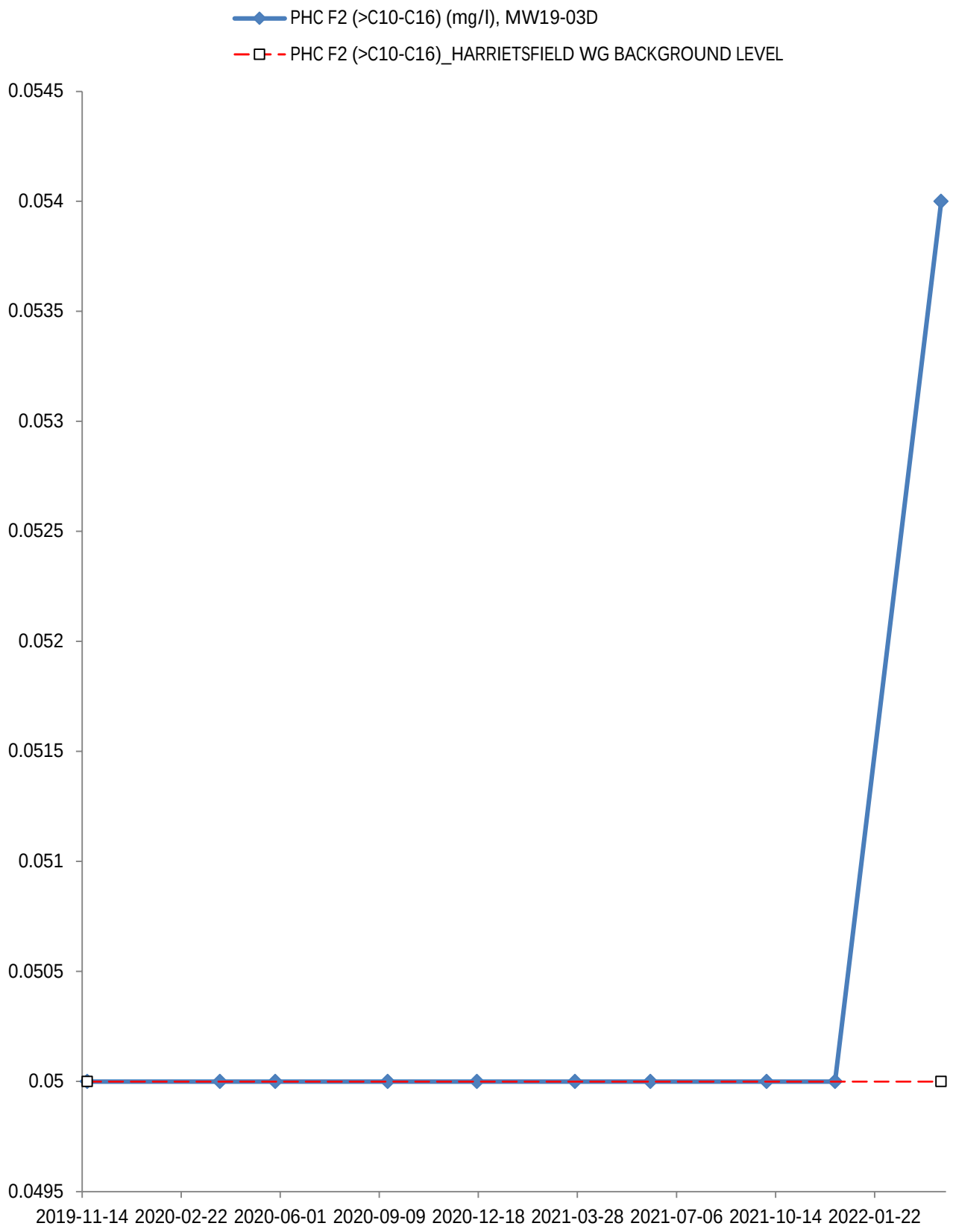
MW19-03D-PHC (>C21-C32)



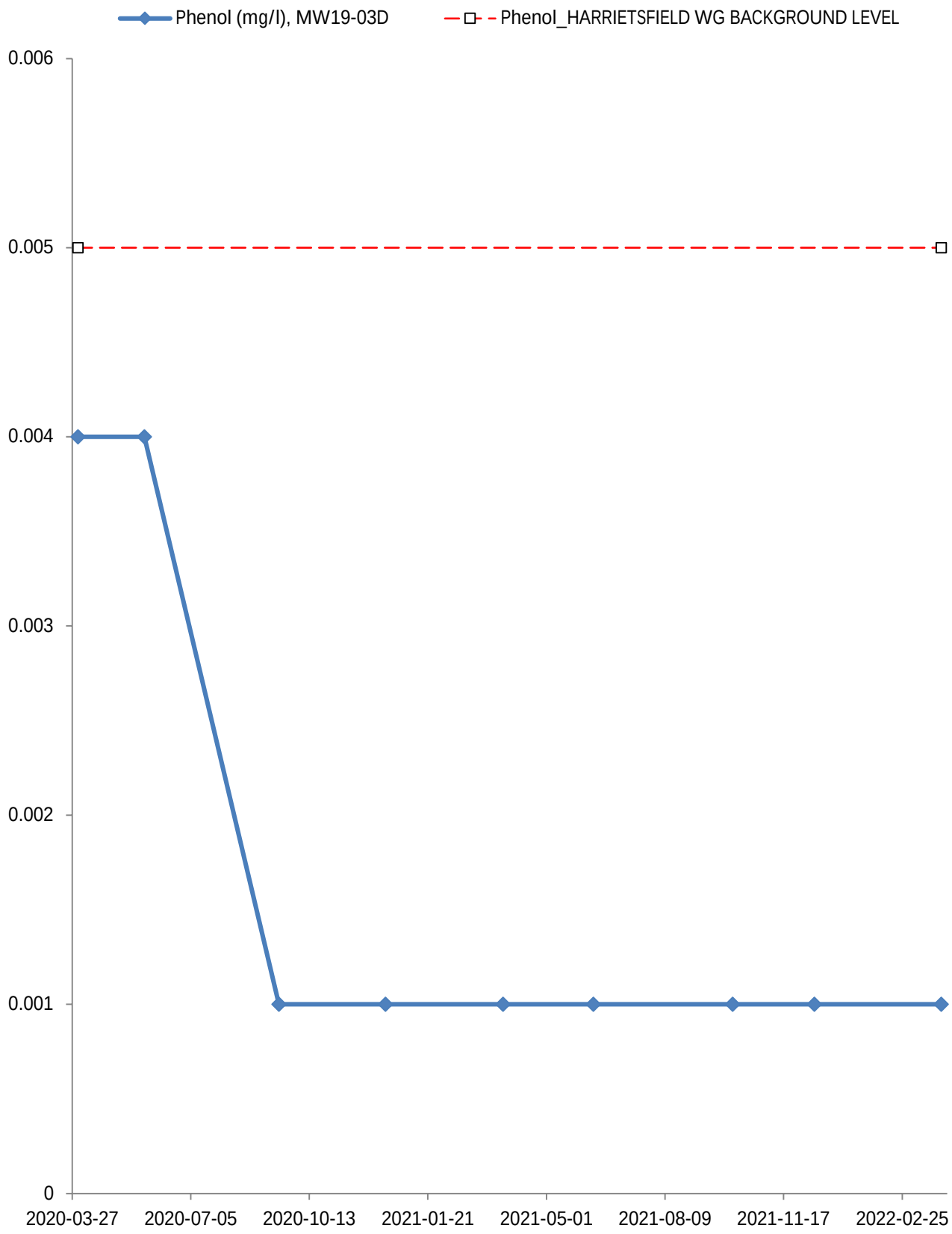
MW19-03D-PHC F1 (C6-C10) min BTEX



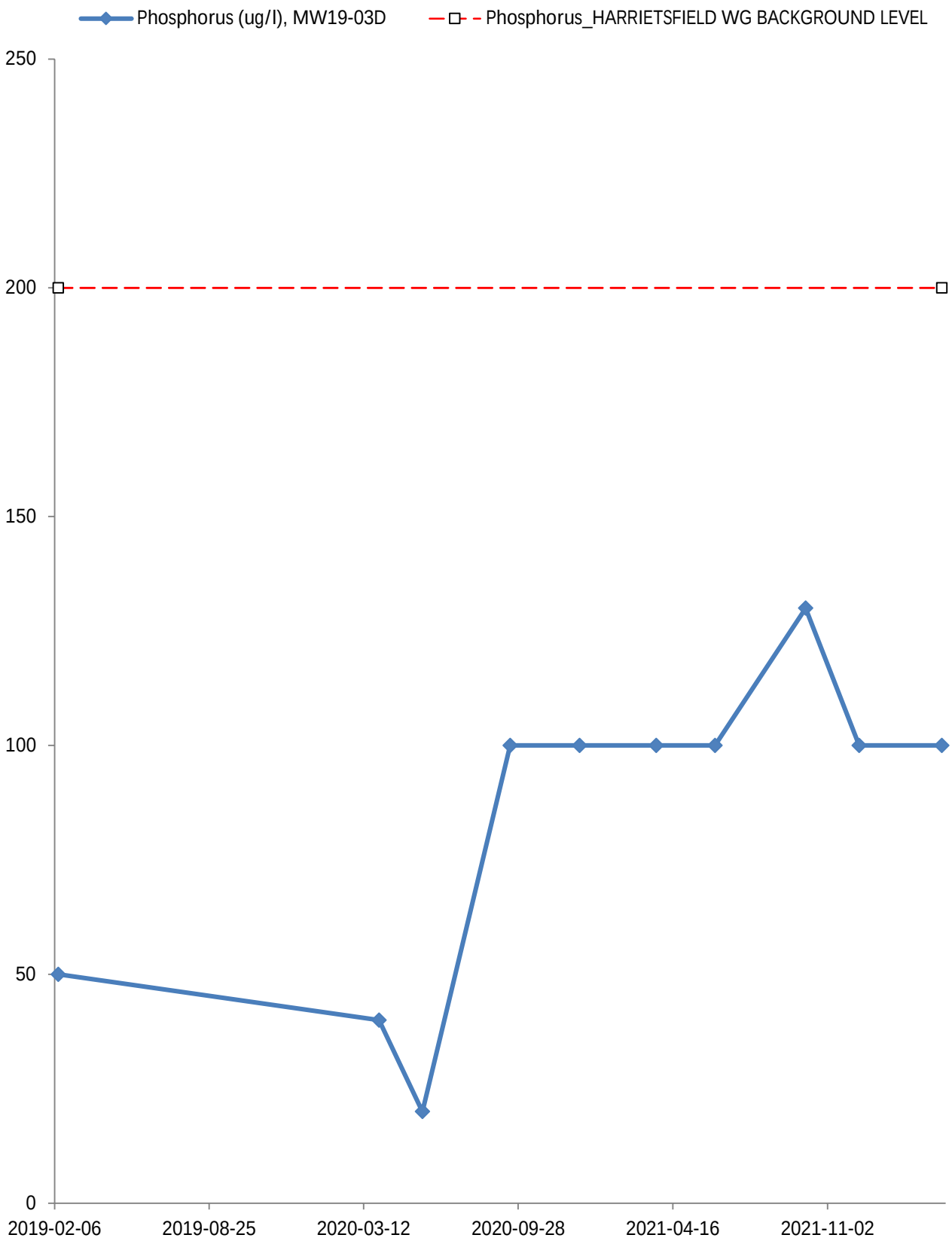
MW19-03D-PHC F2 (>C10-C16)



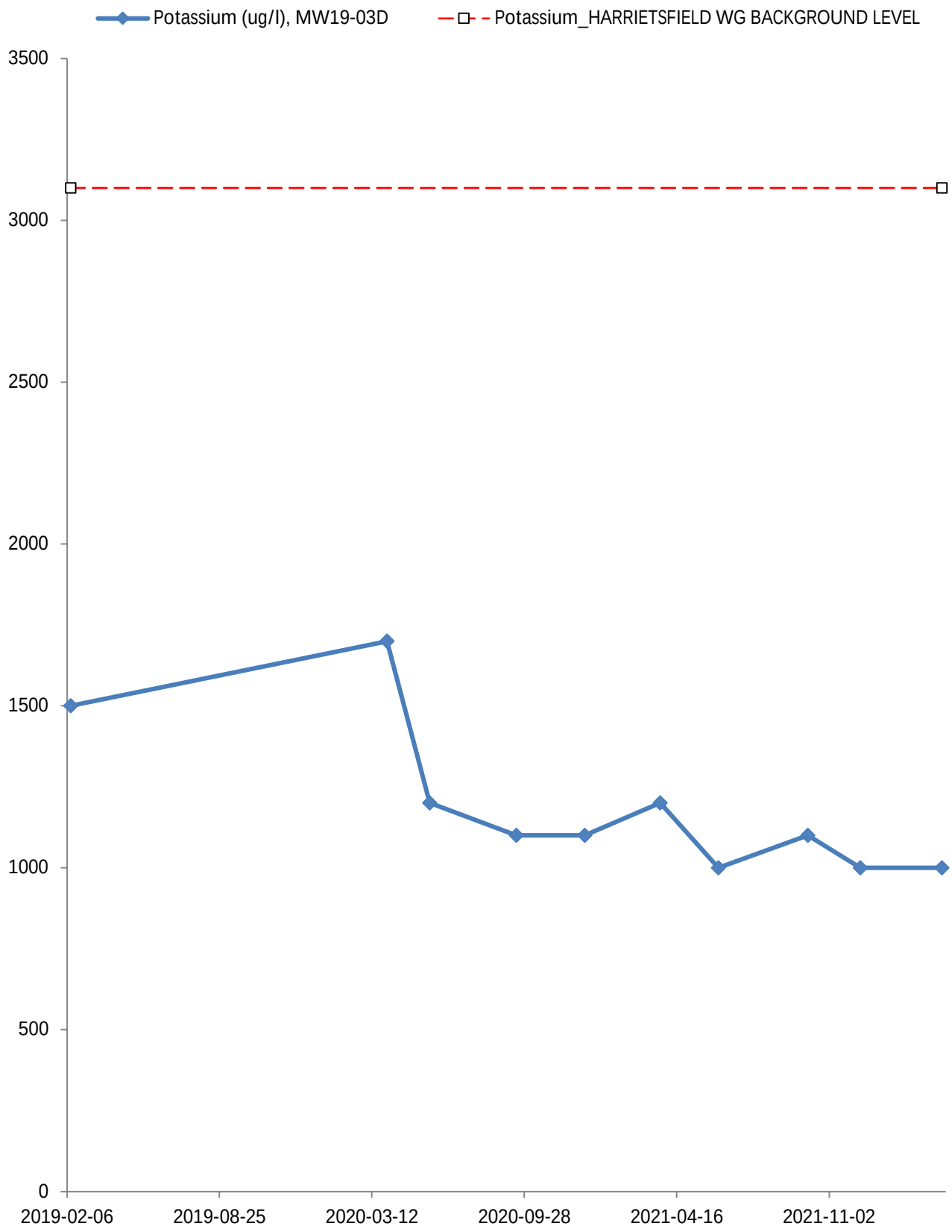
MW19-03D-Phenol



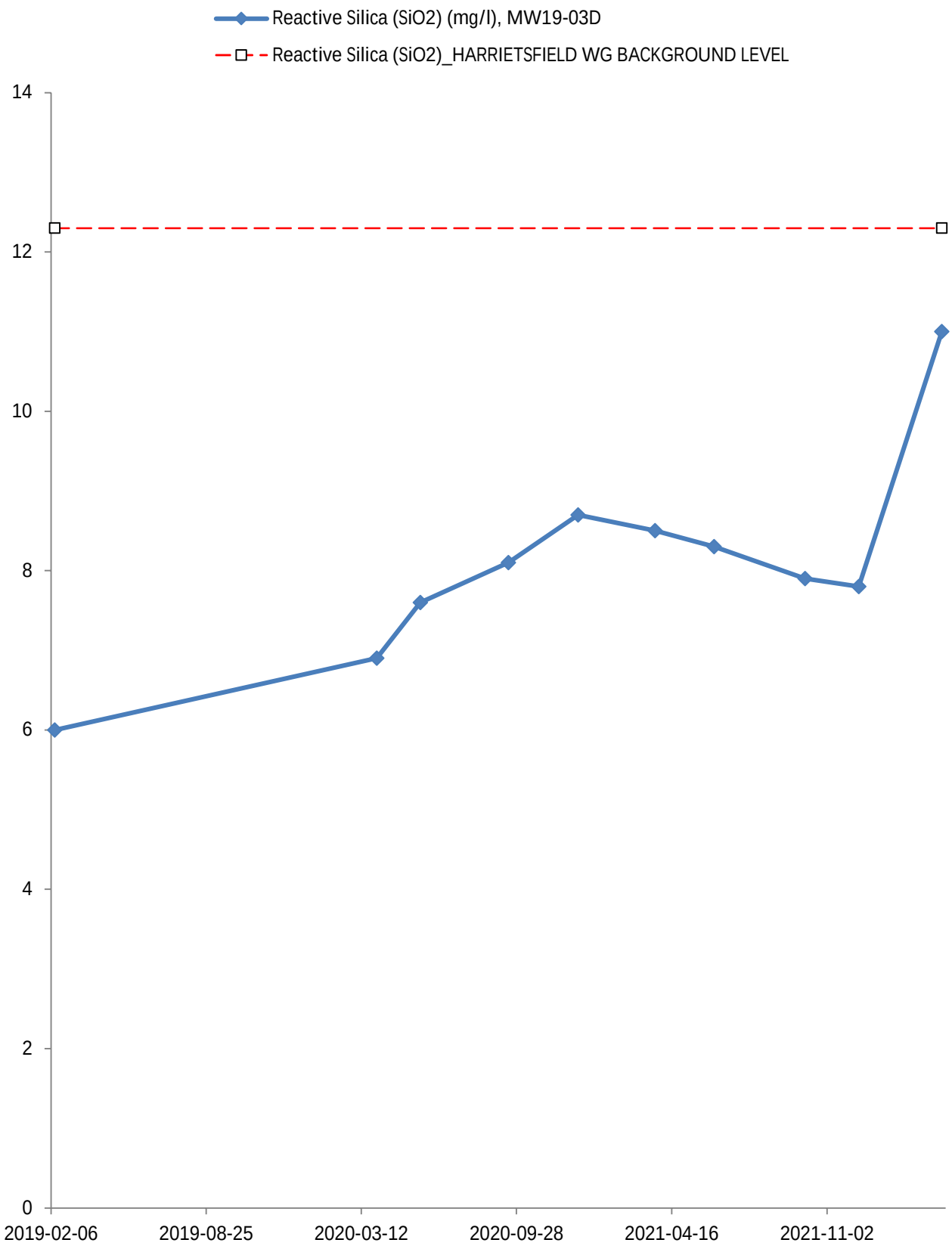
MW19-03D-Phosphorus



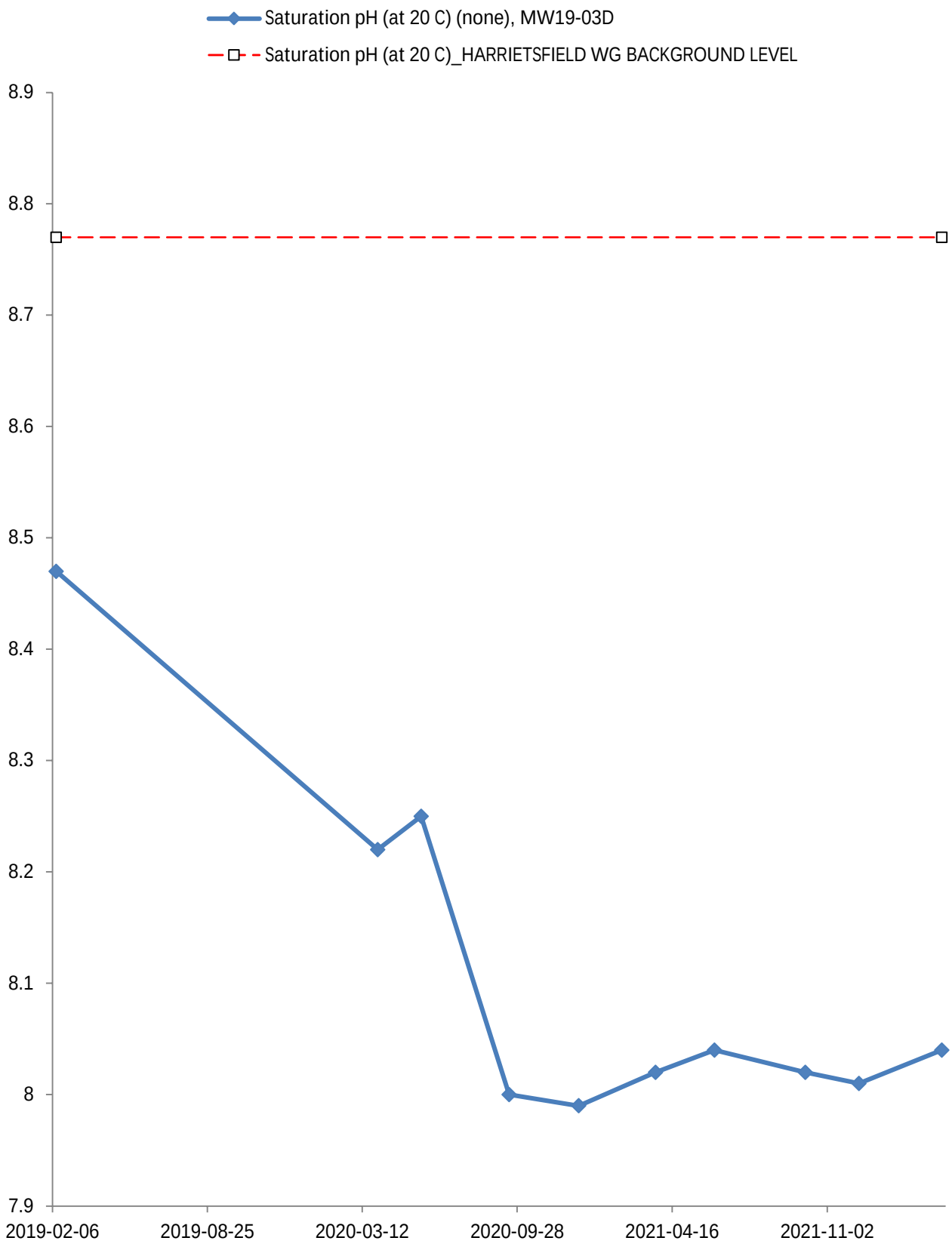
MW19-03D-Potassium



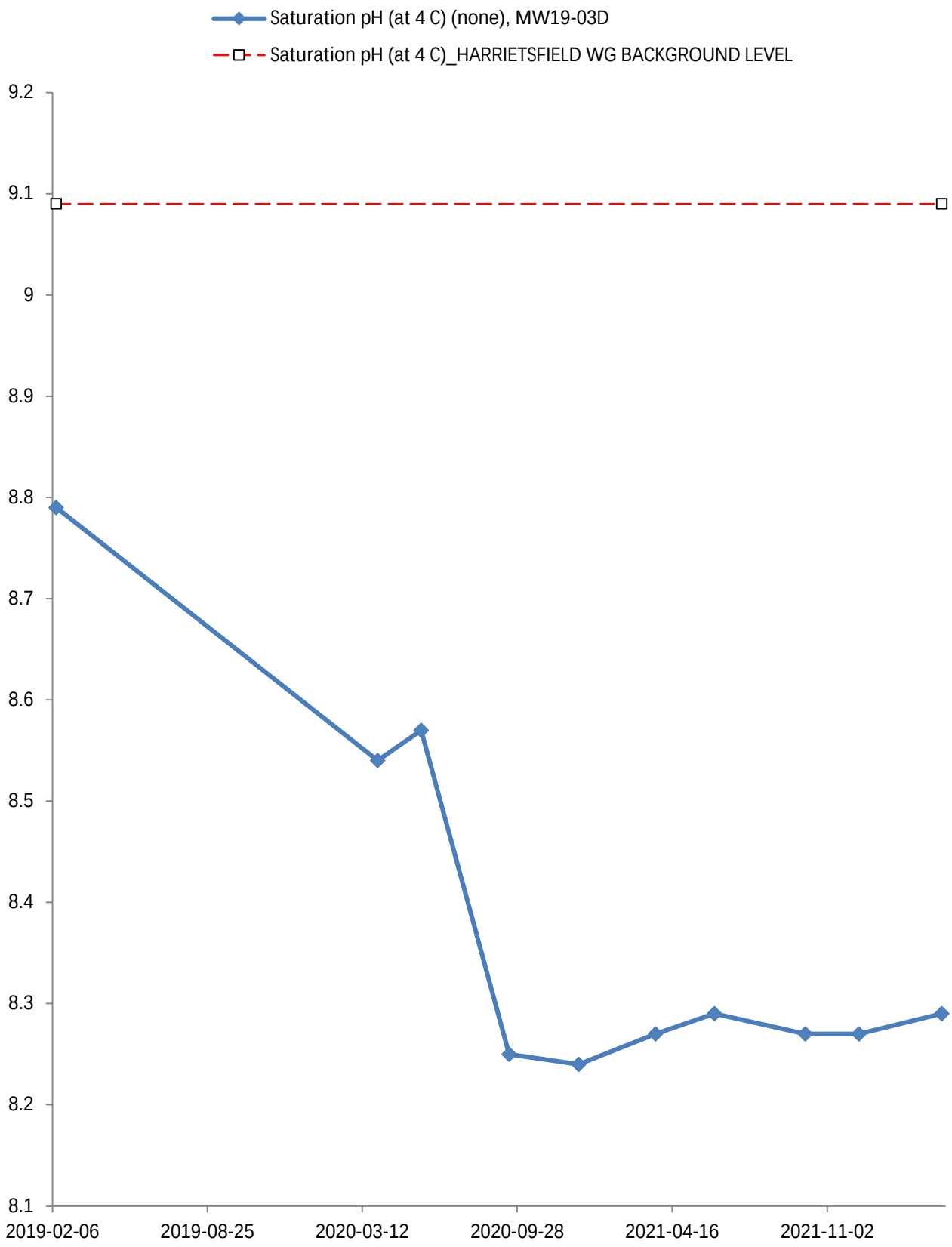
MW19-03D-Reactive Silica (SiO2)



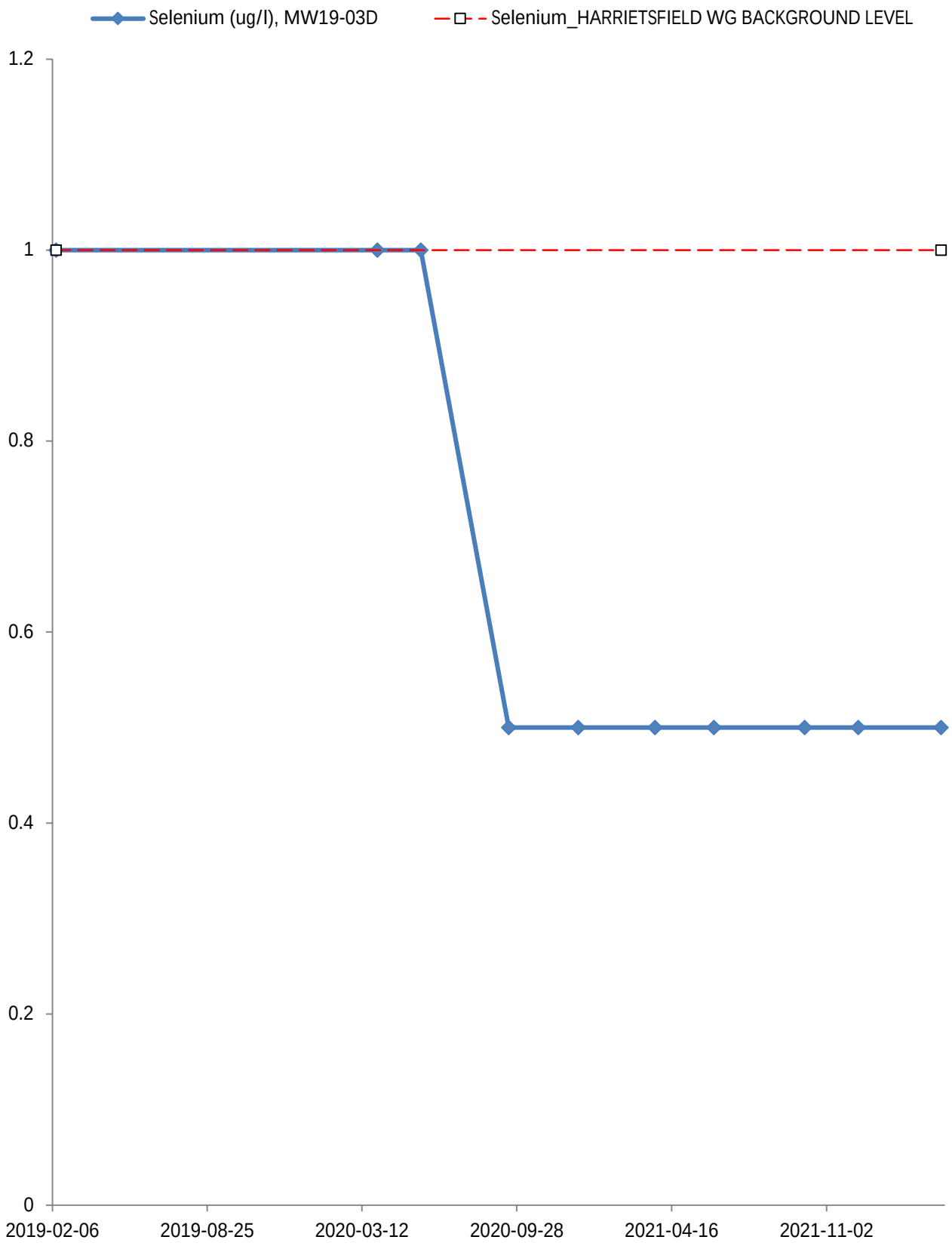
MW19-03D-Saturation pH (at 20 C)



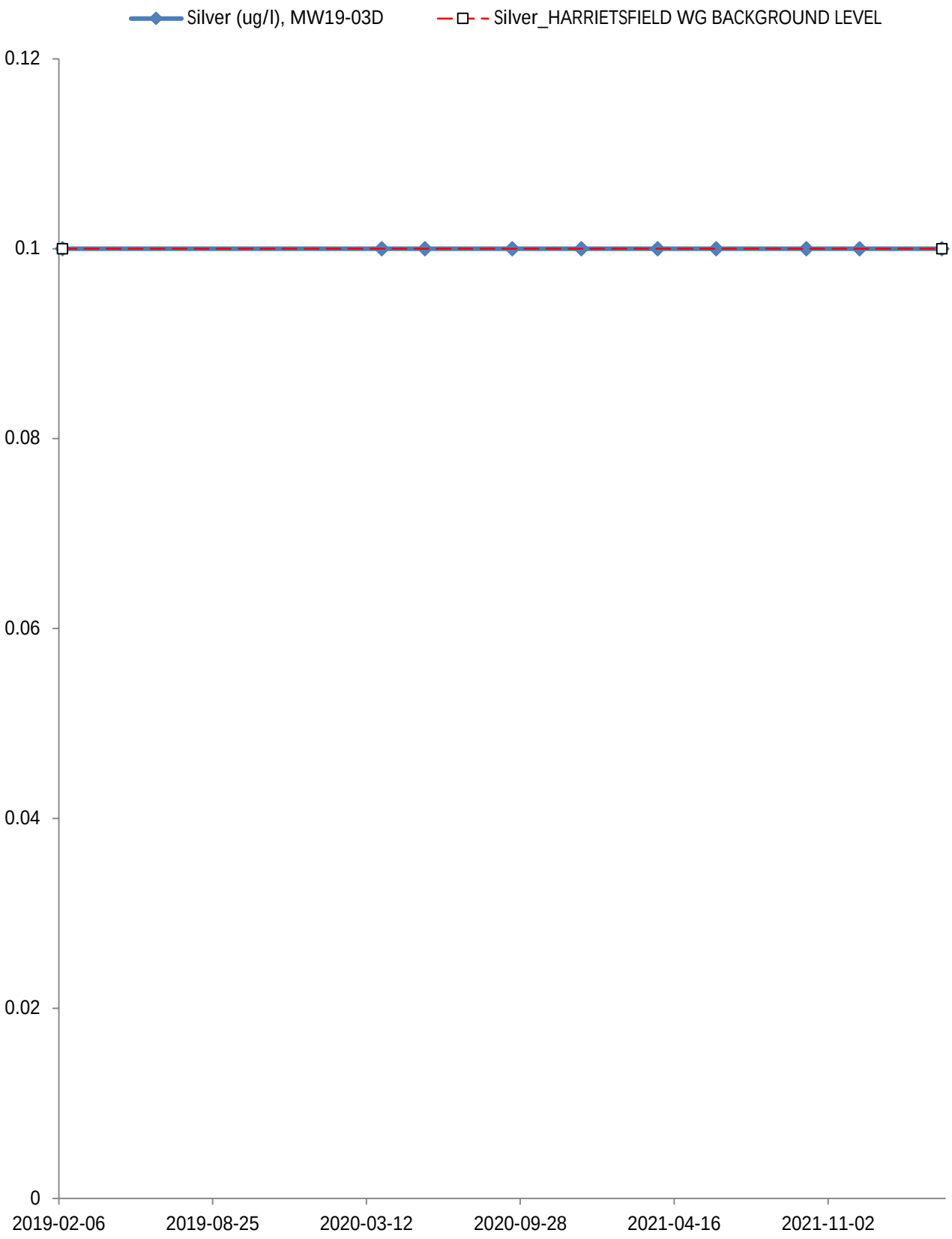
MW19-03D-Saturation pH (at 4 C)



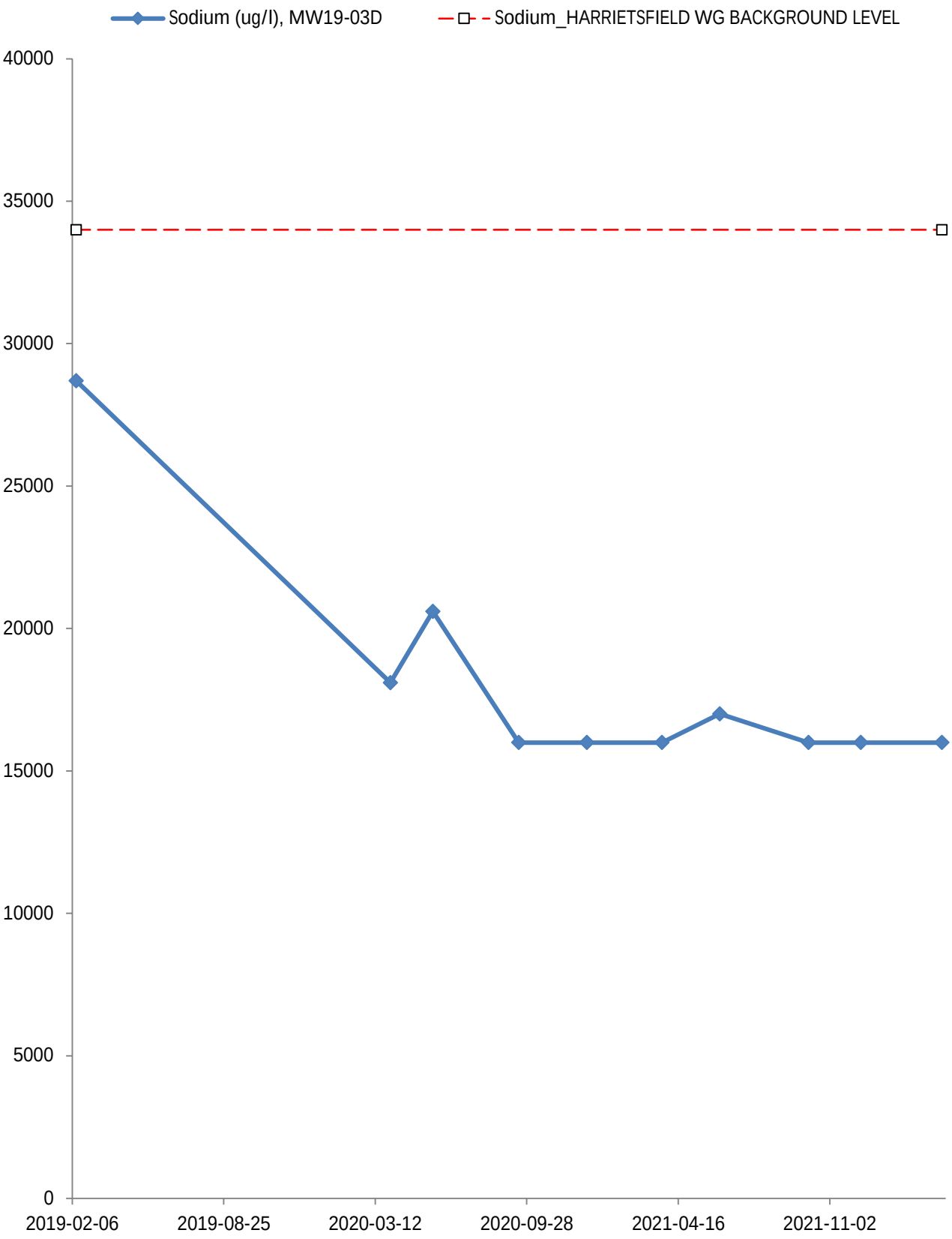
MW19-03D-Selenium



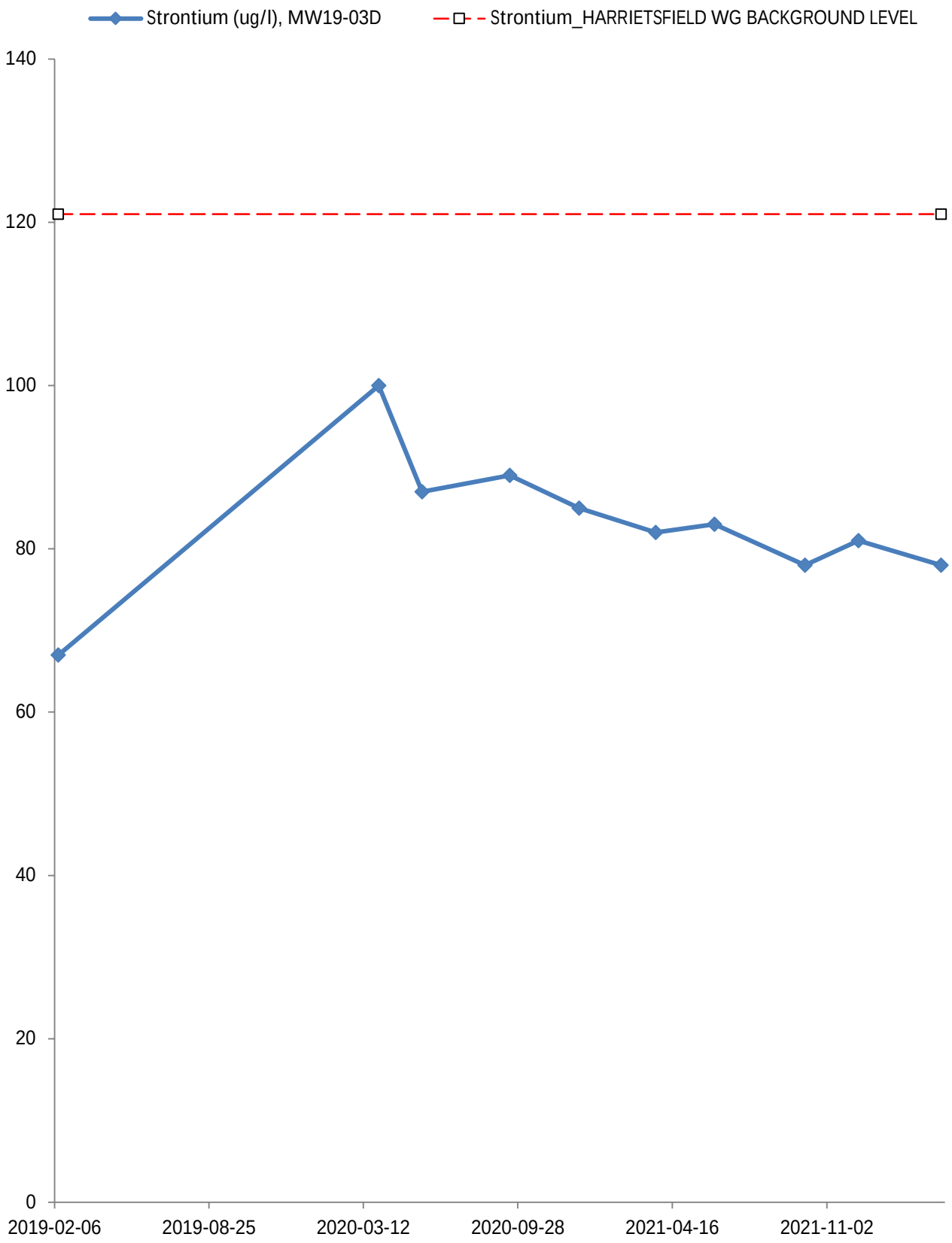
MW19-03D-Silver



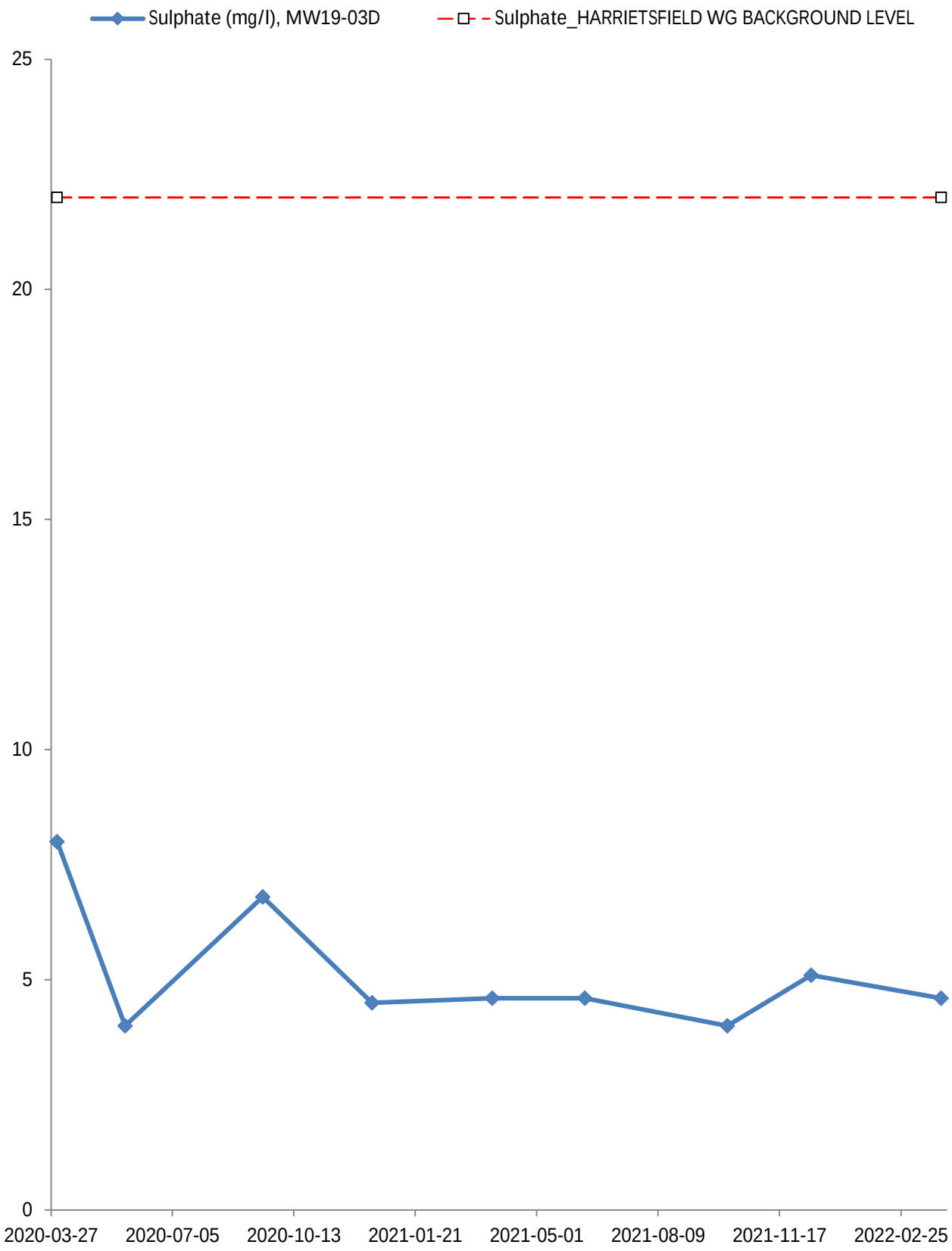
MW19-03D-Sodium



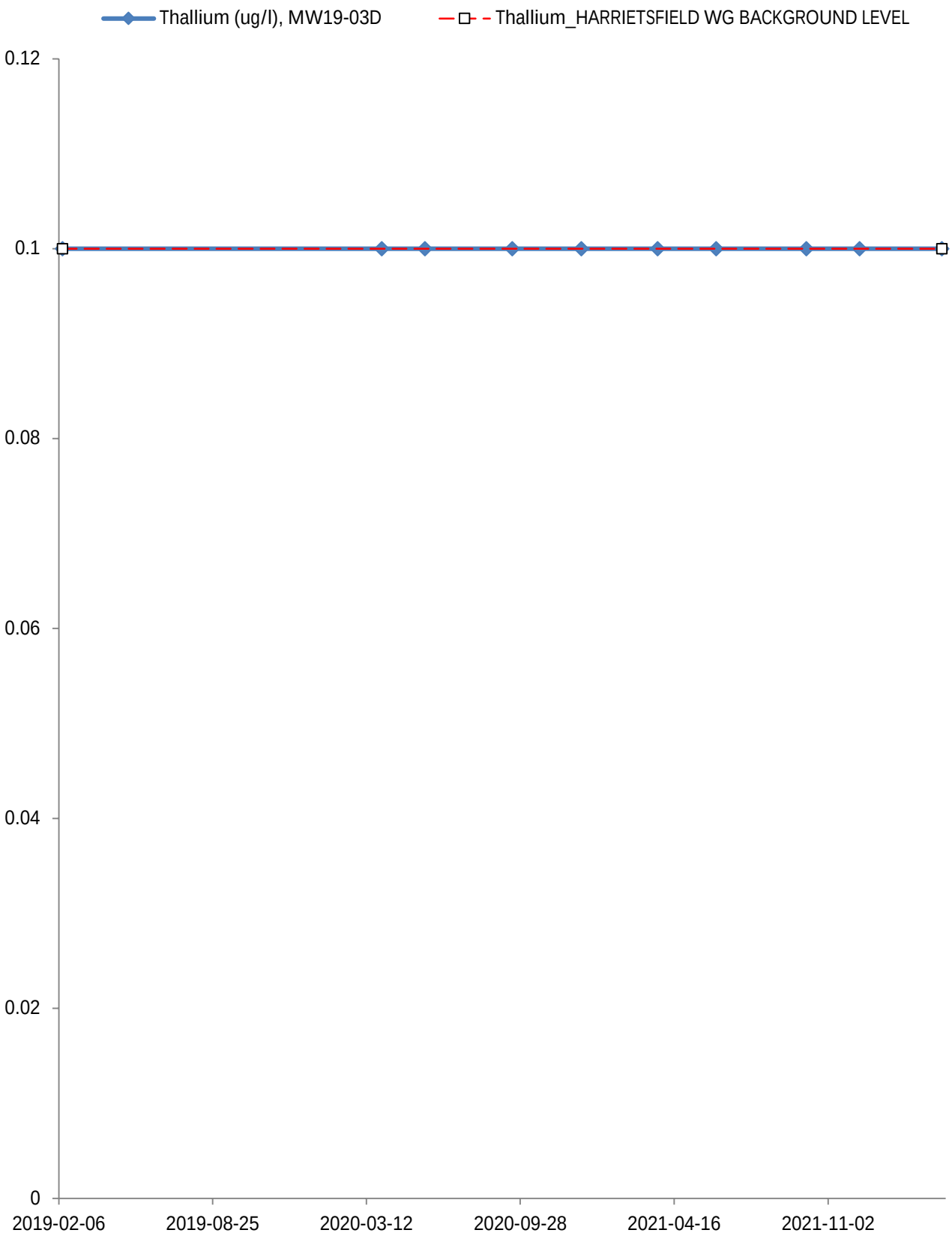
MW19-03D-Strontium



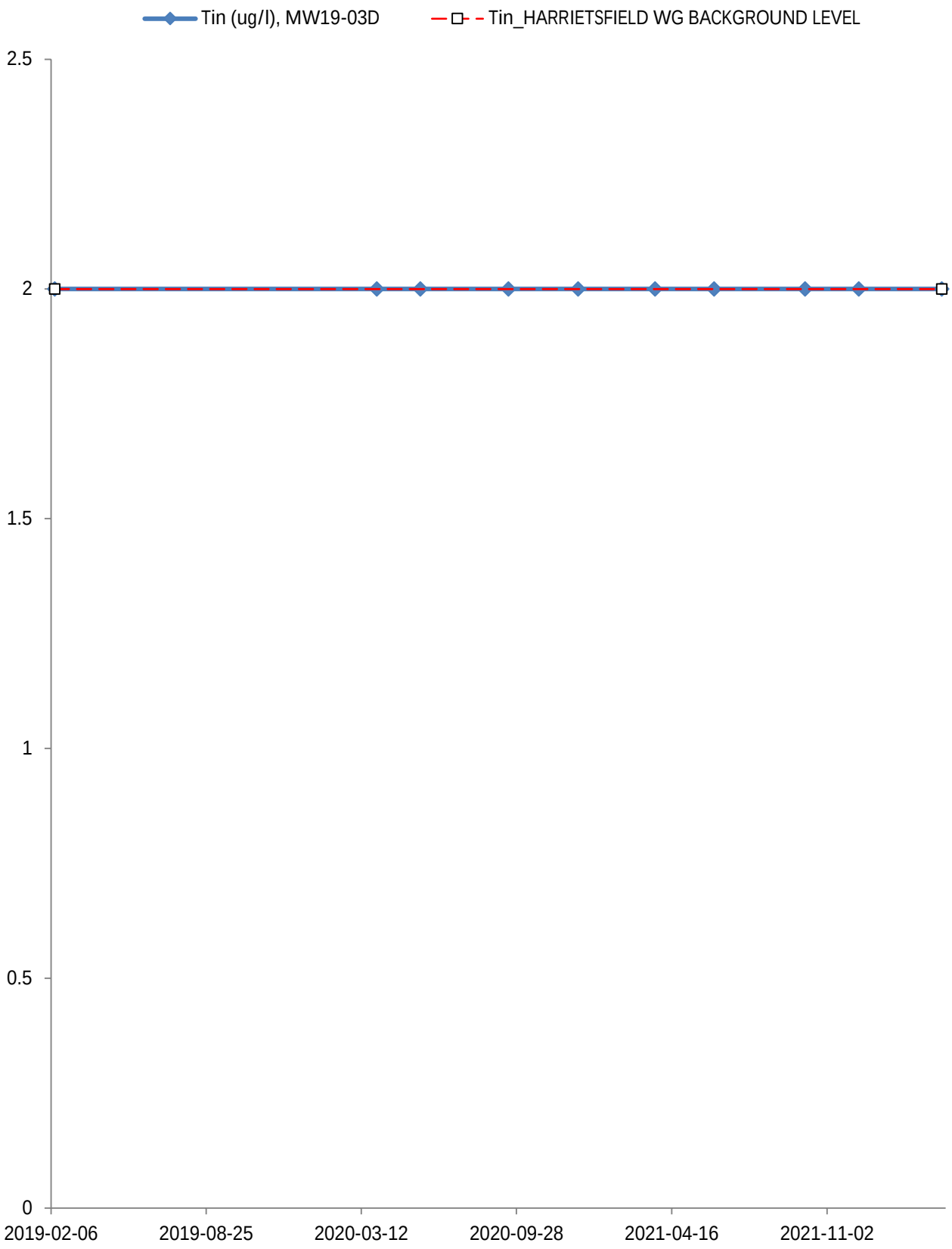
MW19-03D-Sulphate



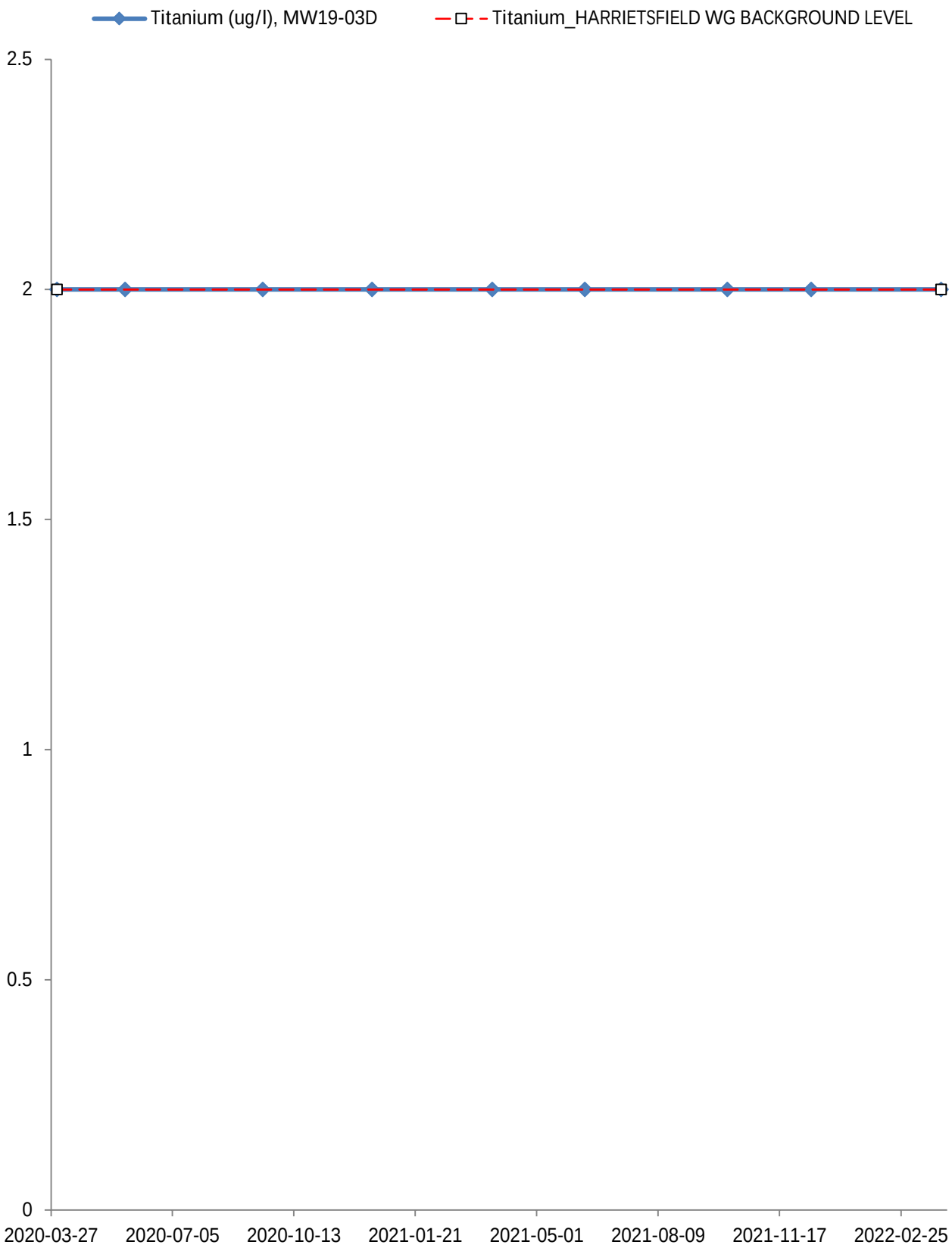
MW19-03D-Thallium



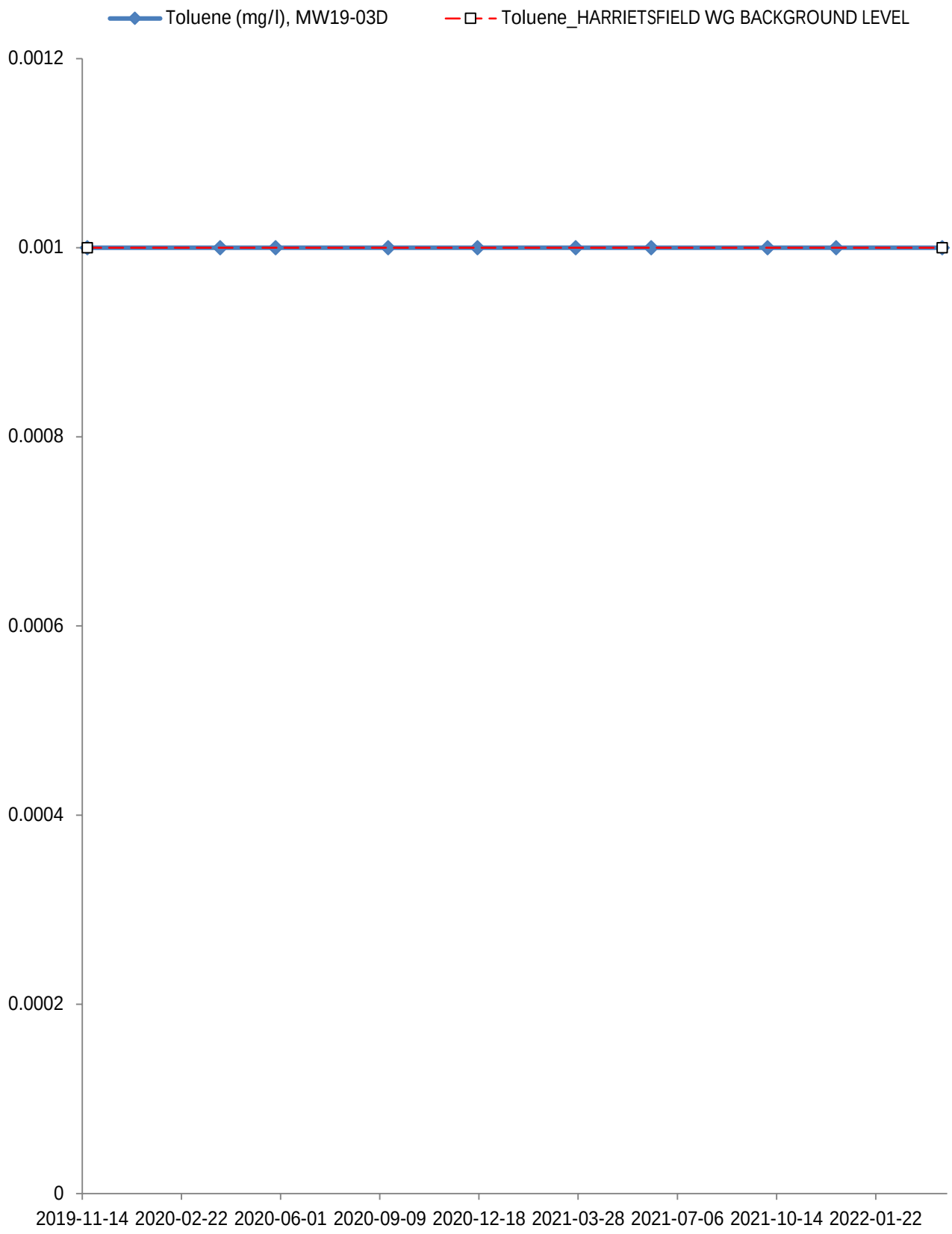
MW19-03D-Tin


Tin (ug/l), MW19-03D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2019-02-06
2019-08-25
2020-03-12
2020-09-28
2021-04-16
2021-11-02

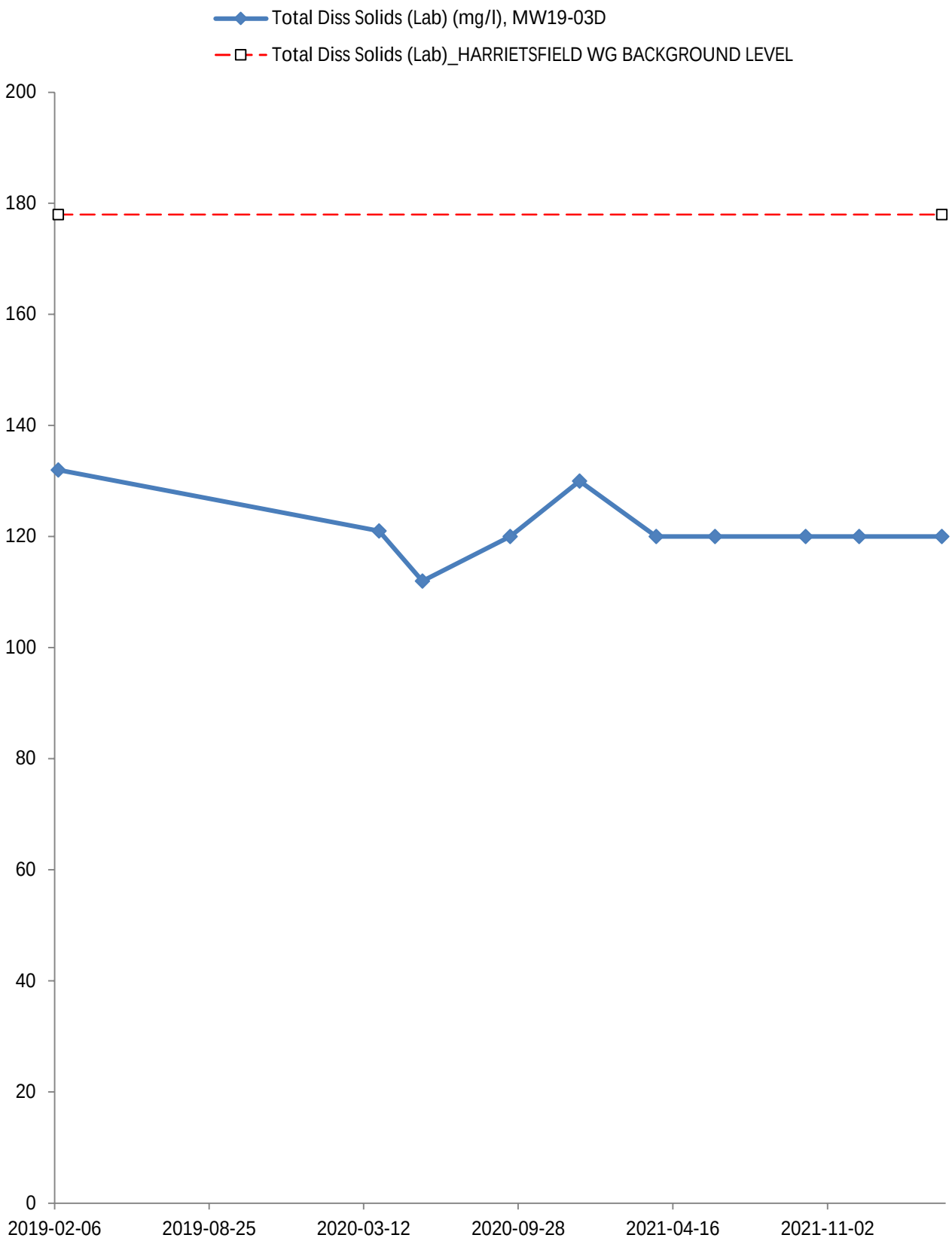
MW19-03D-Titanium



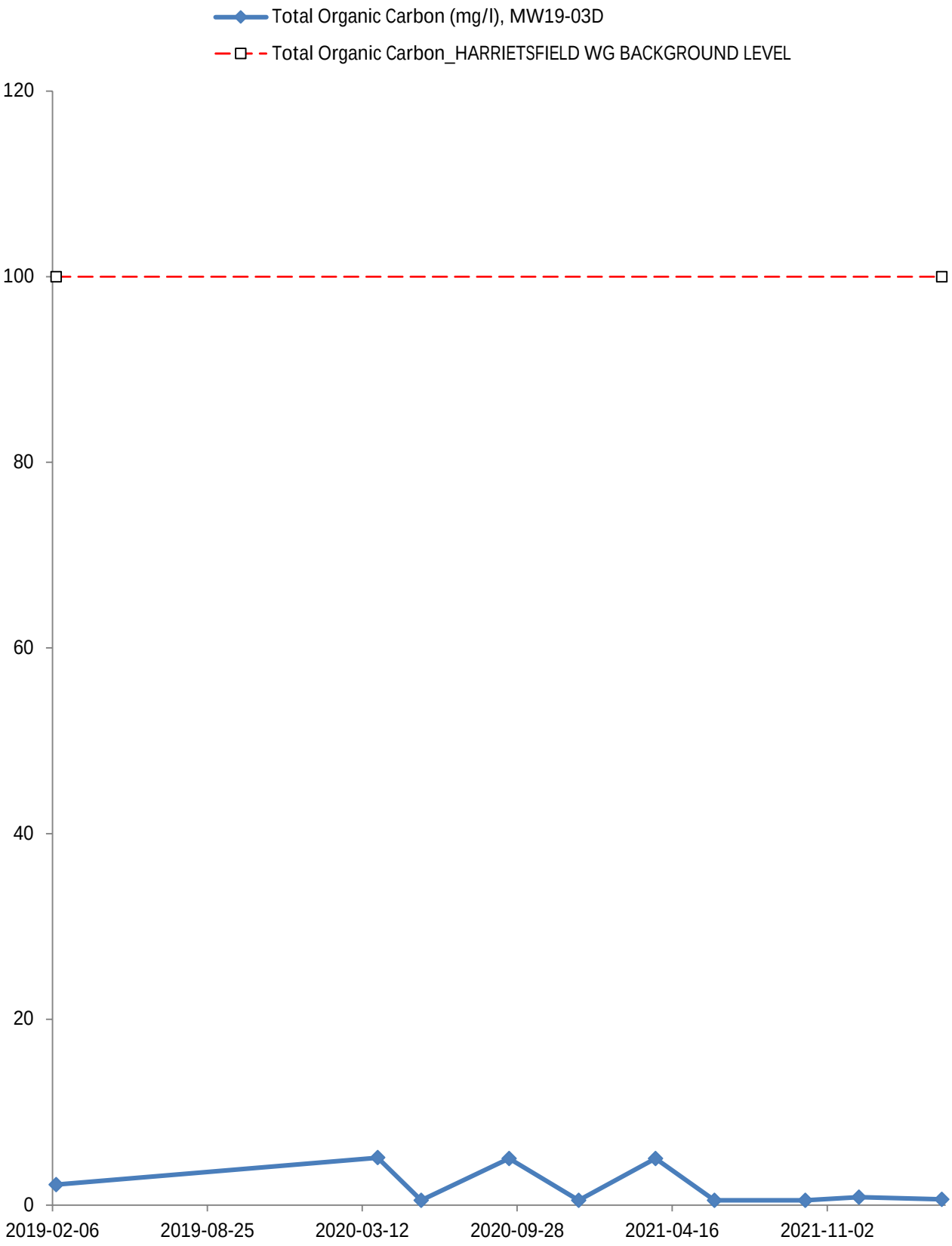
MW19-03D-Toluene



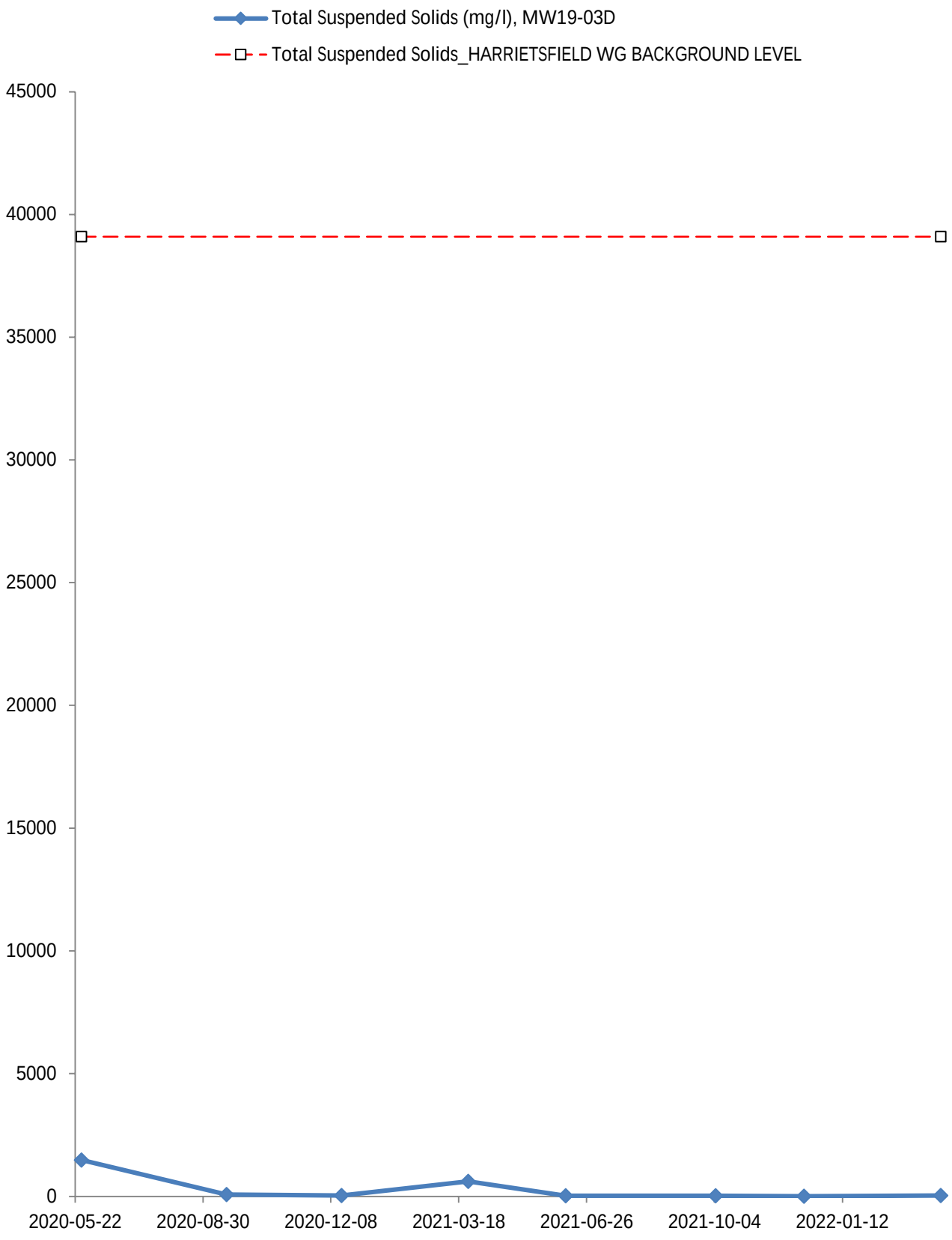
MW19-03D-Total Diss Solids (Lab)



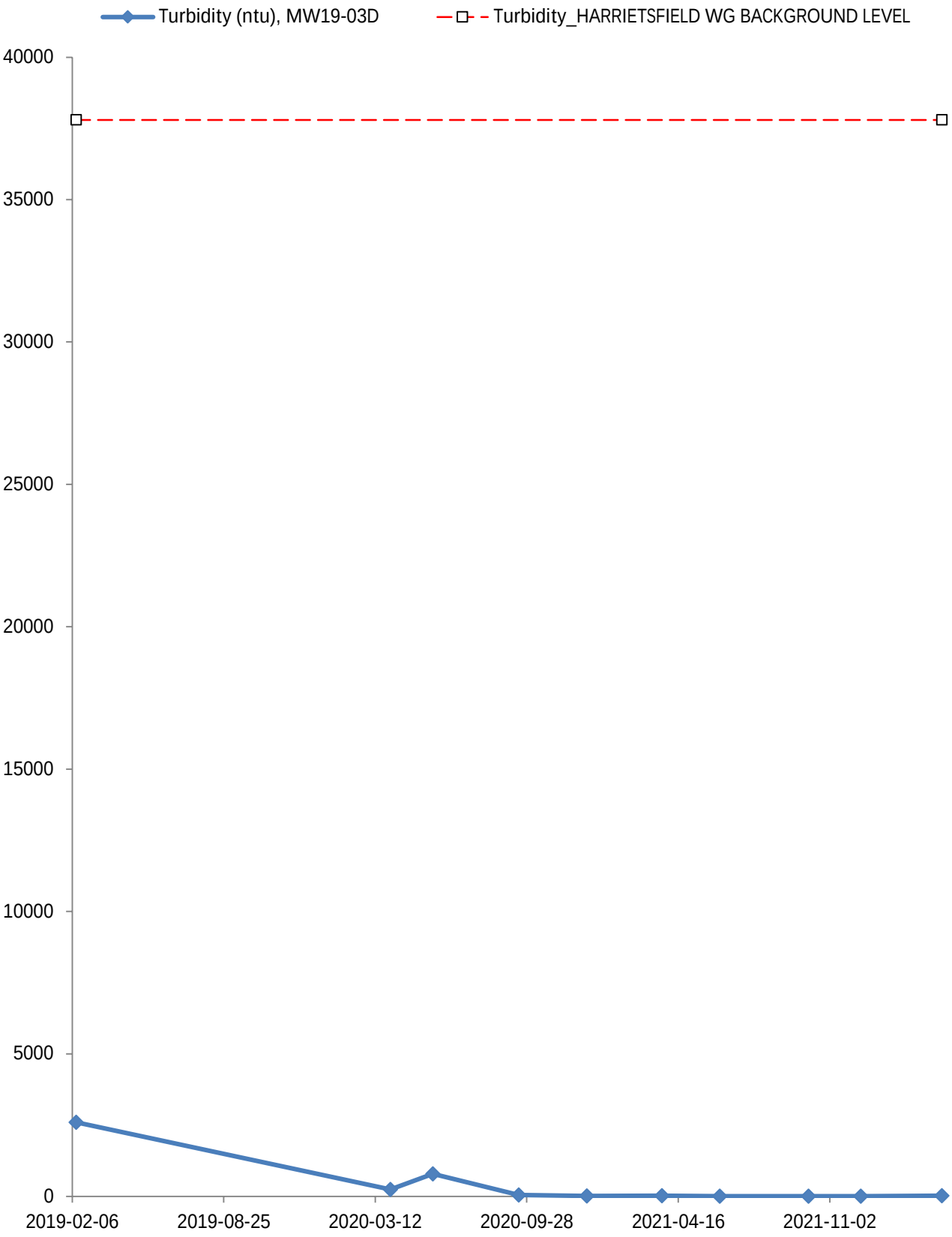
MW19-03D-Total Organic Carbon



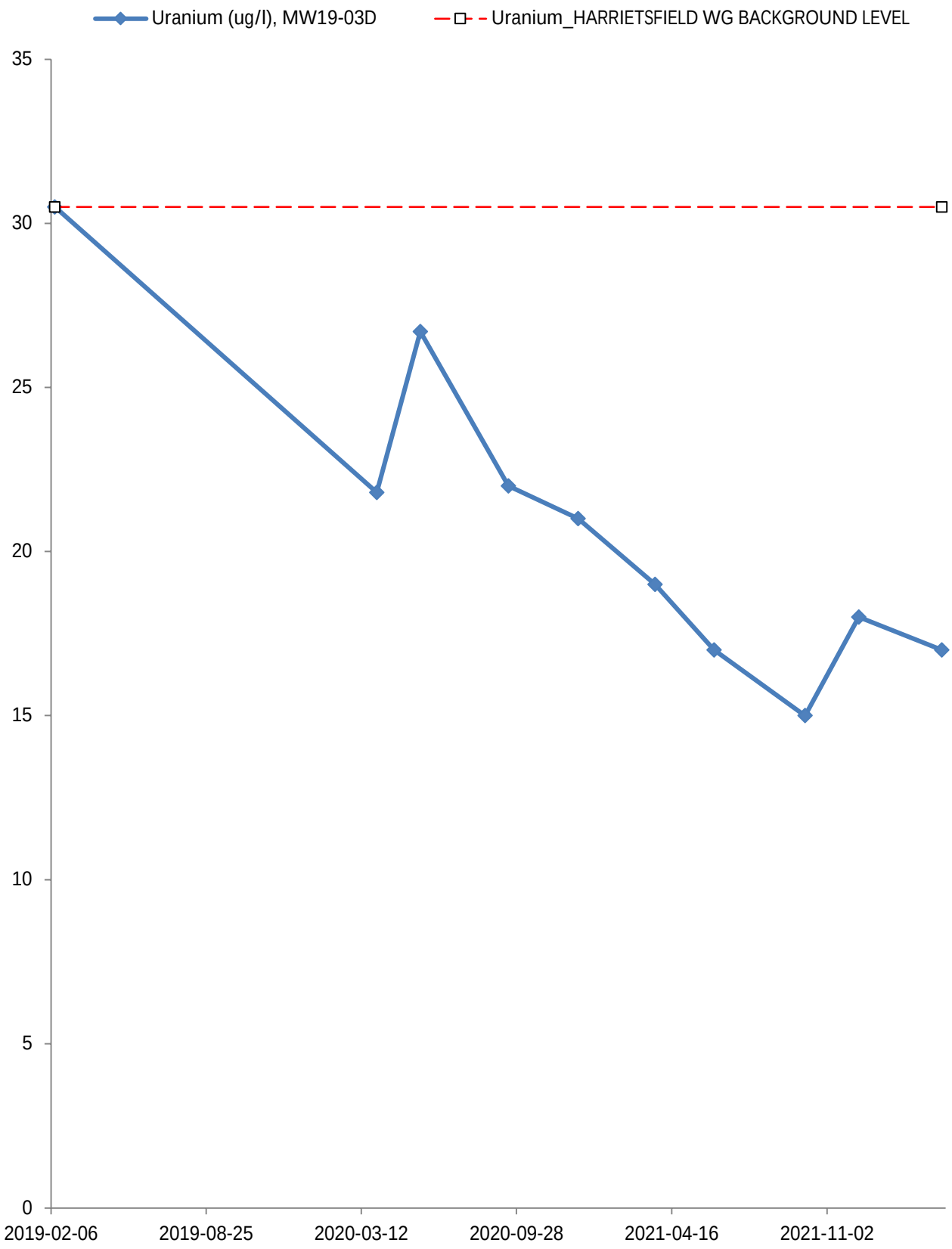
MW19-03D-Total Suspended Solids



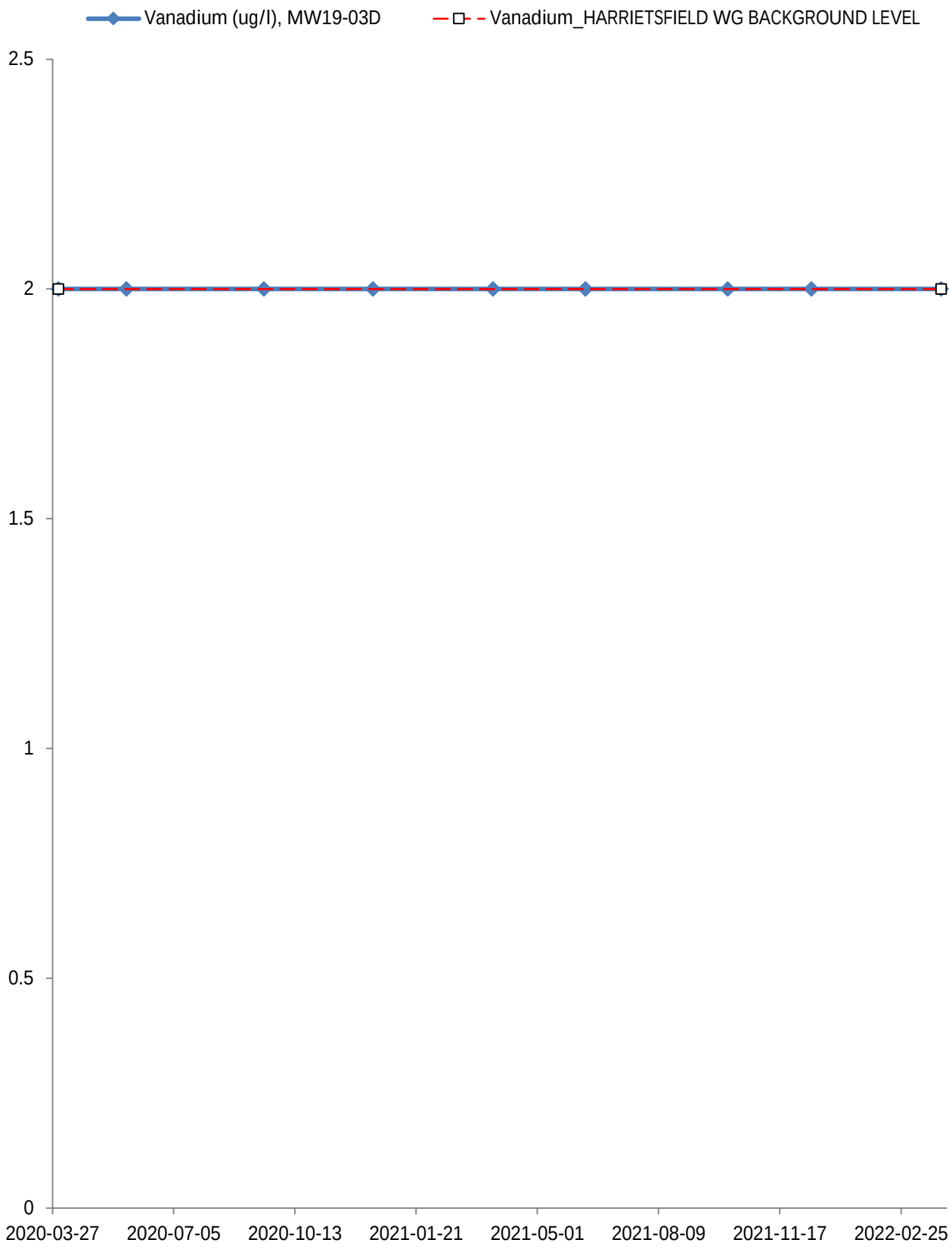
MW19-03D-Turbidity



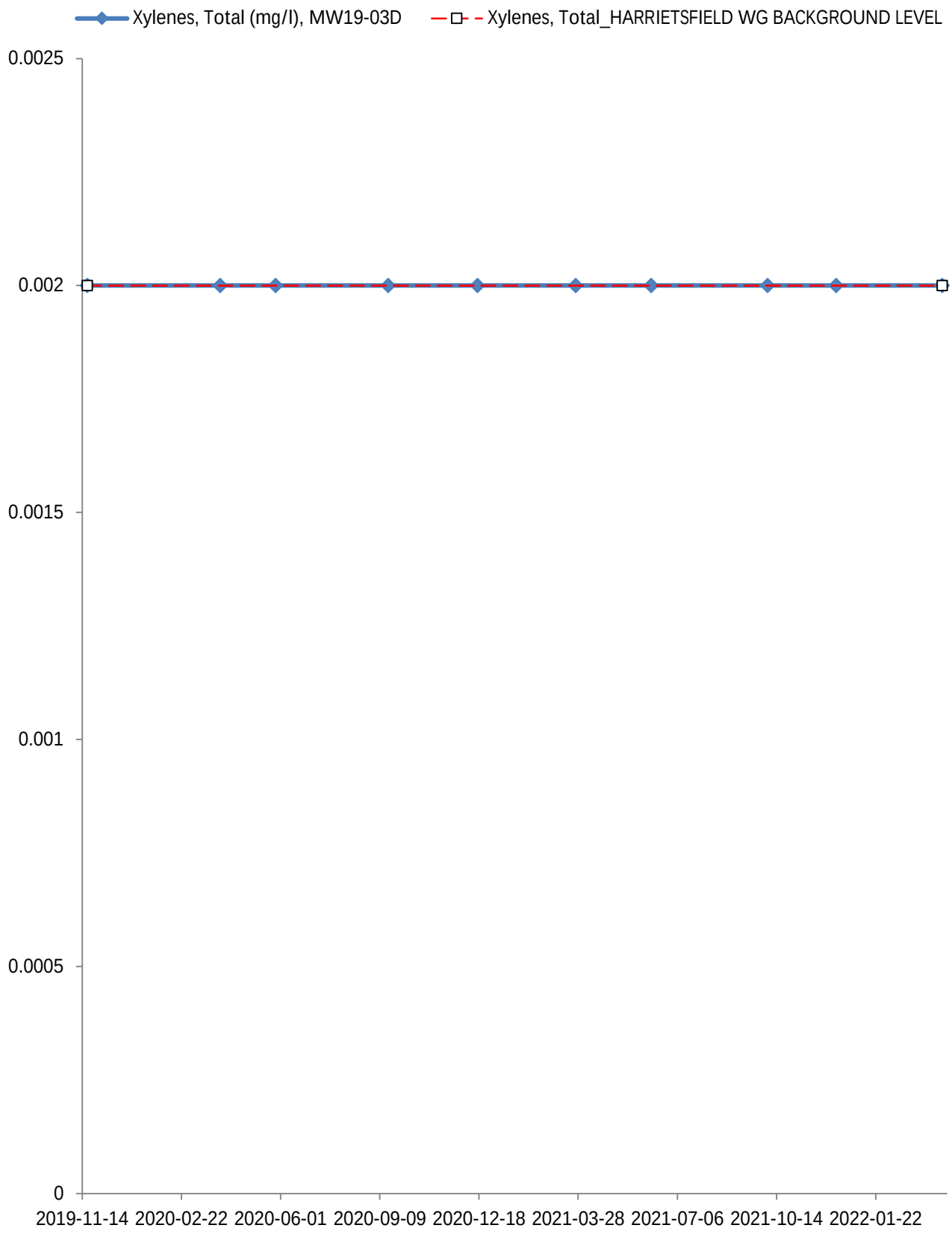
MW19-03D-Uranium



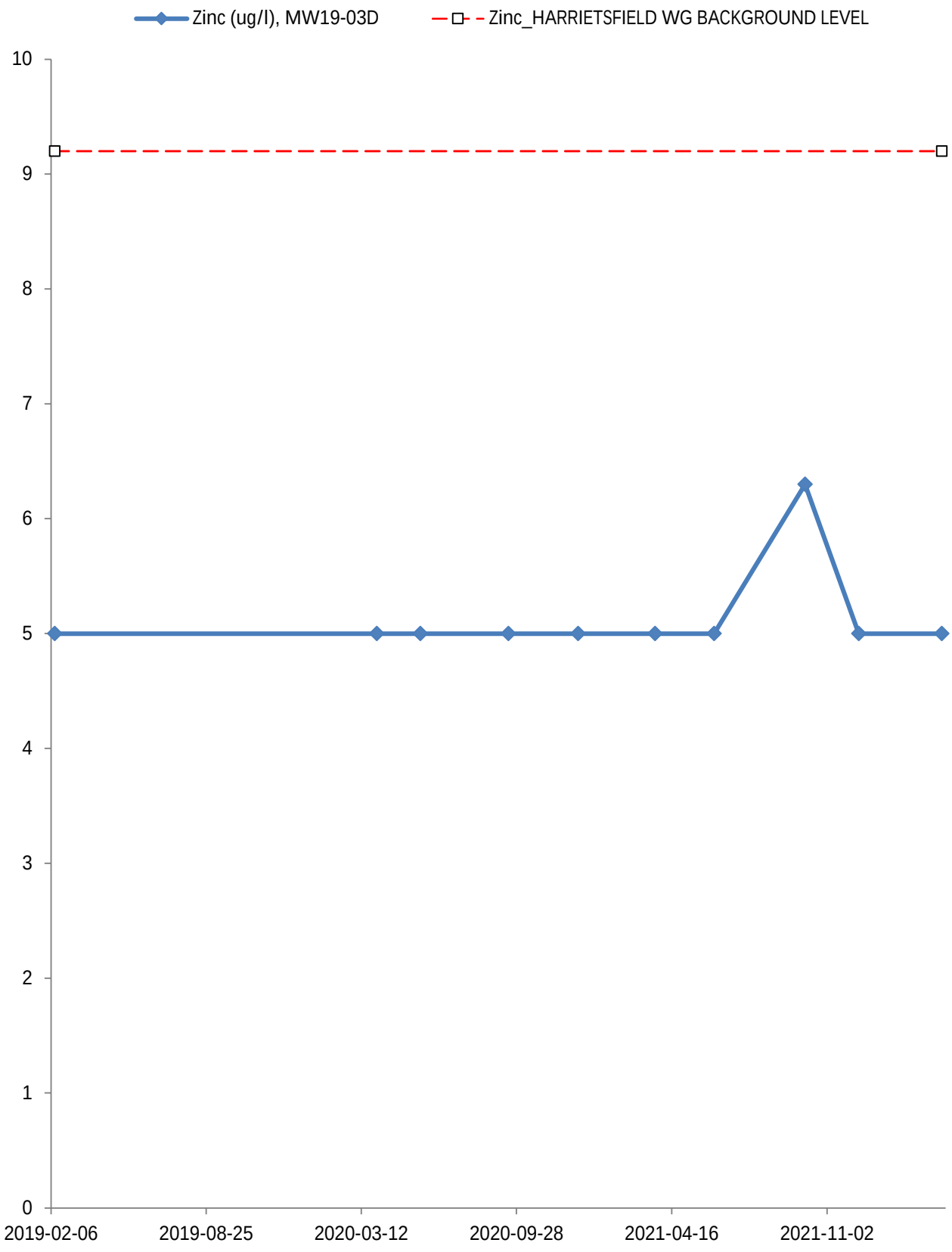
MW19-03D-Vanadium



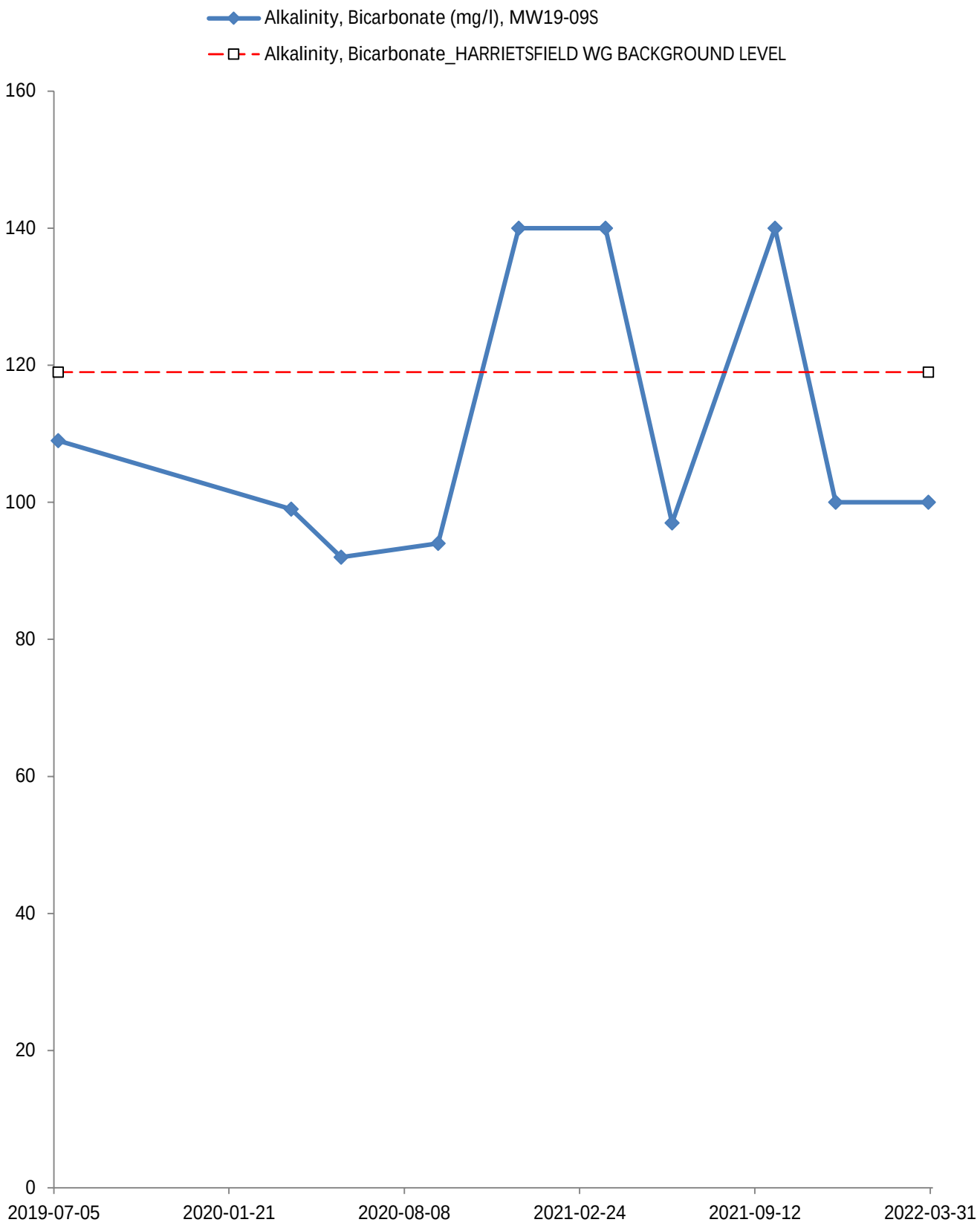
MW19-03D-Xylenes, Total



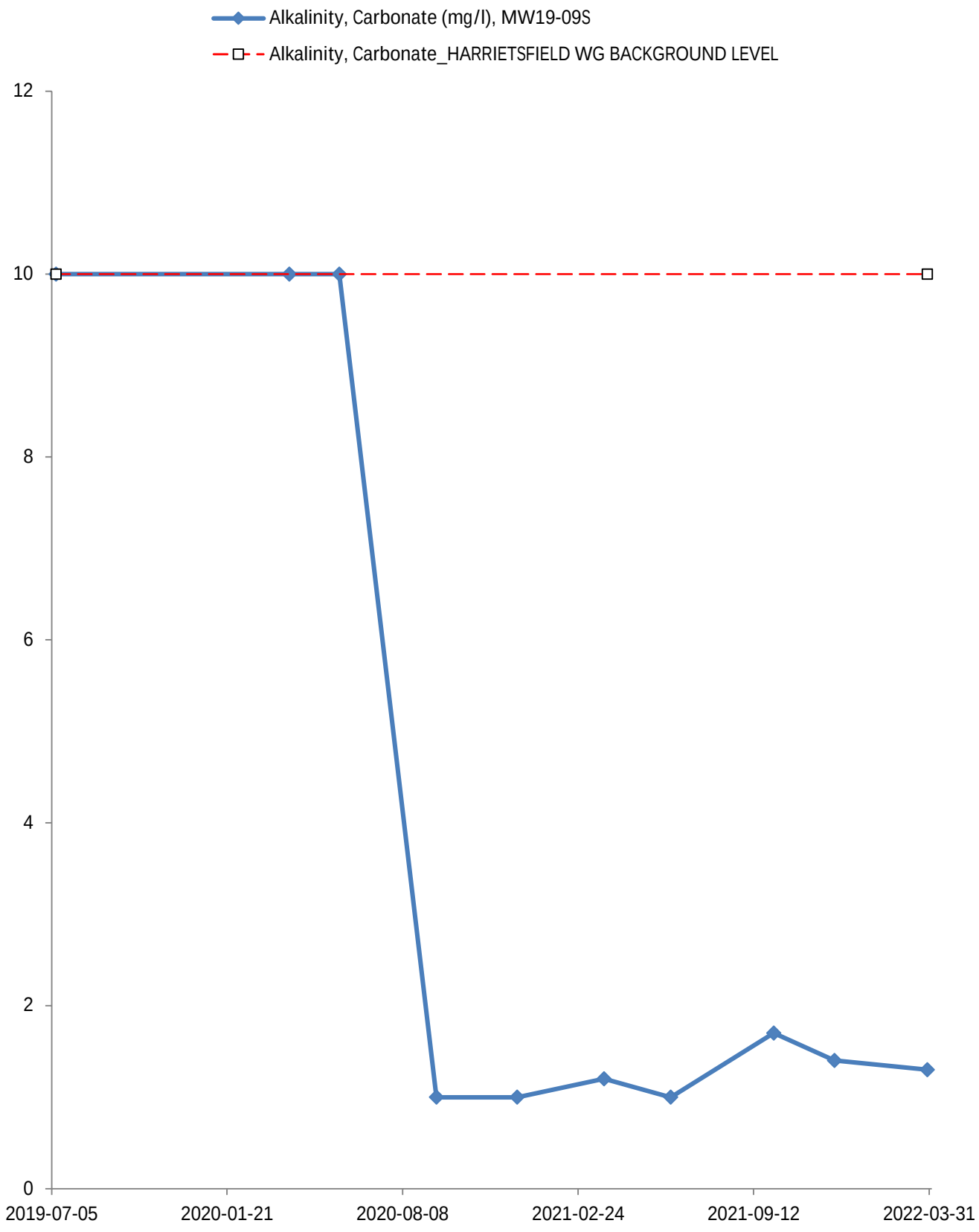
MW19-03D-Zinc



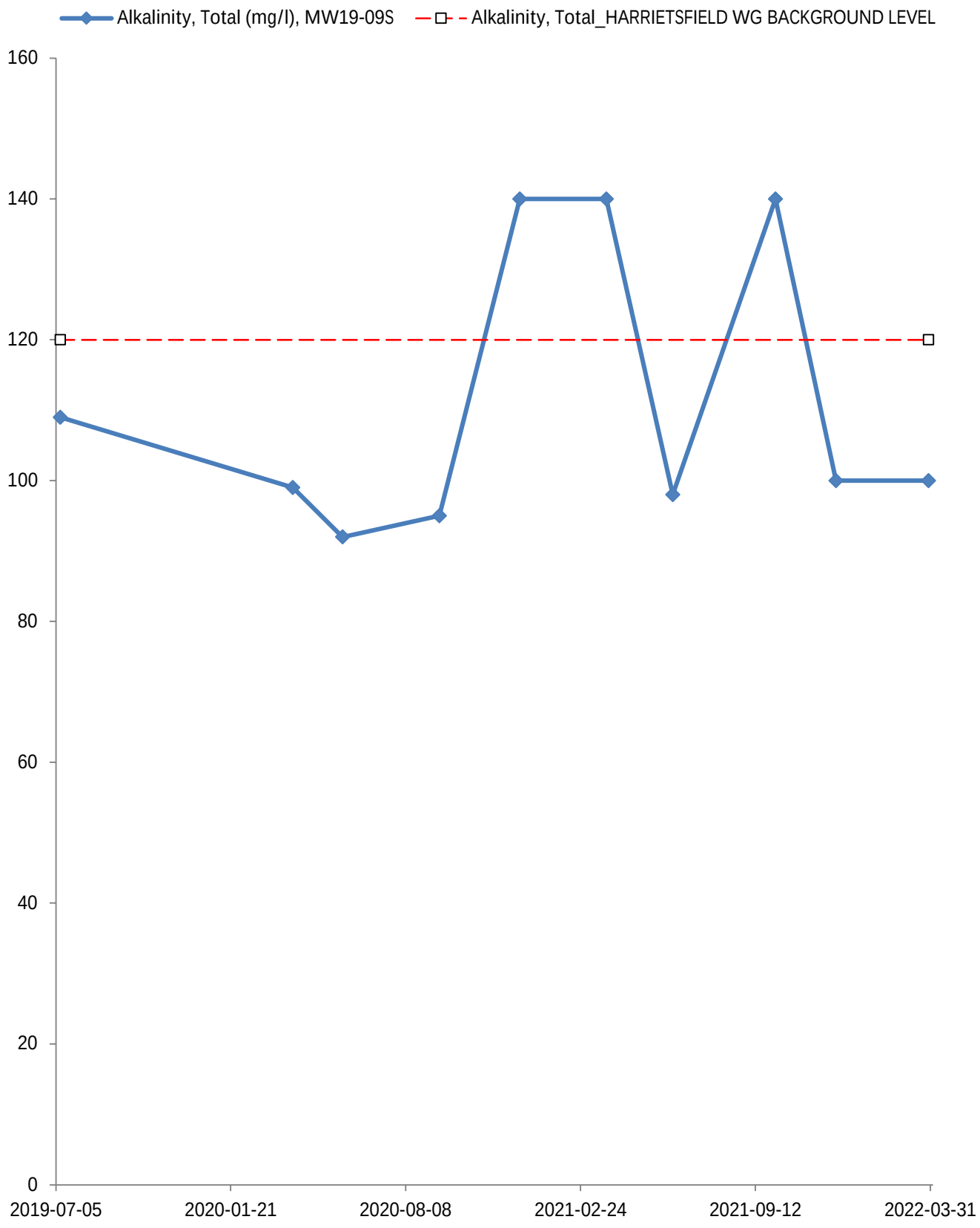
MW19-09S - Alkalinity, Bicarbonate



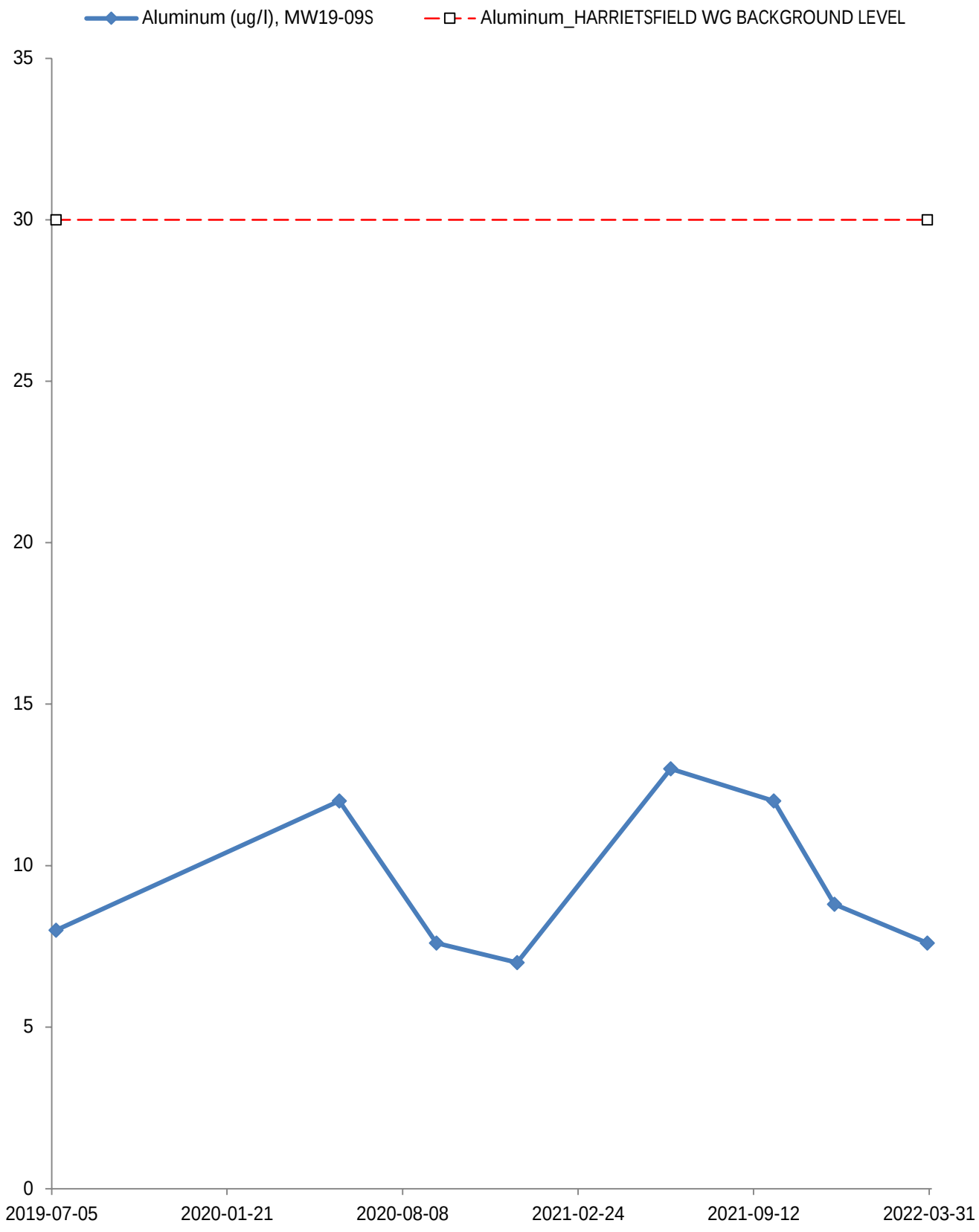
MW19-09S - Alkalinity, Carbonate



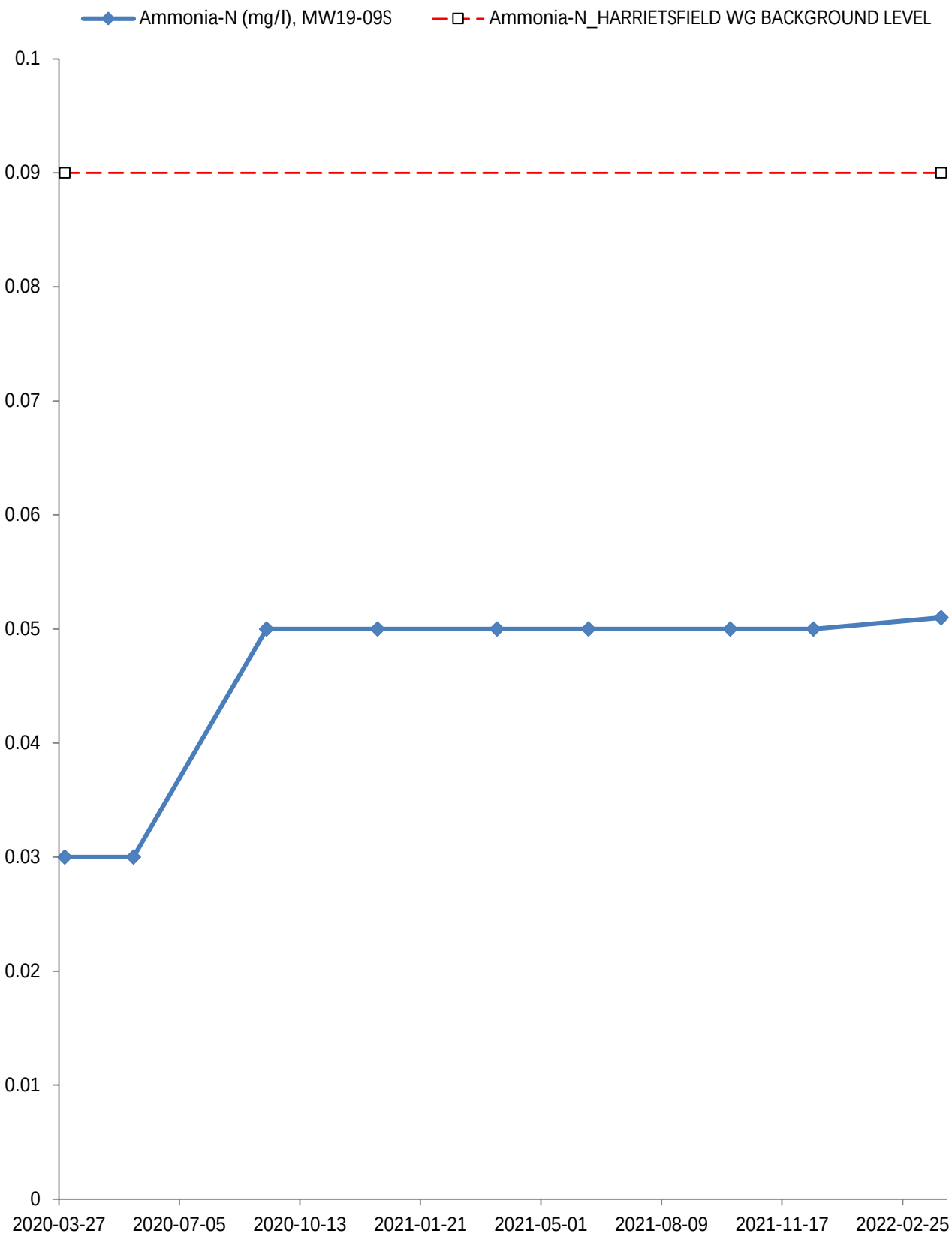
MW19-09S - Alkalinity, Total



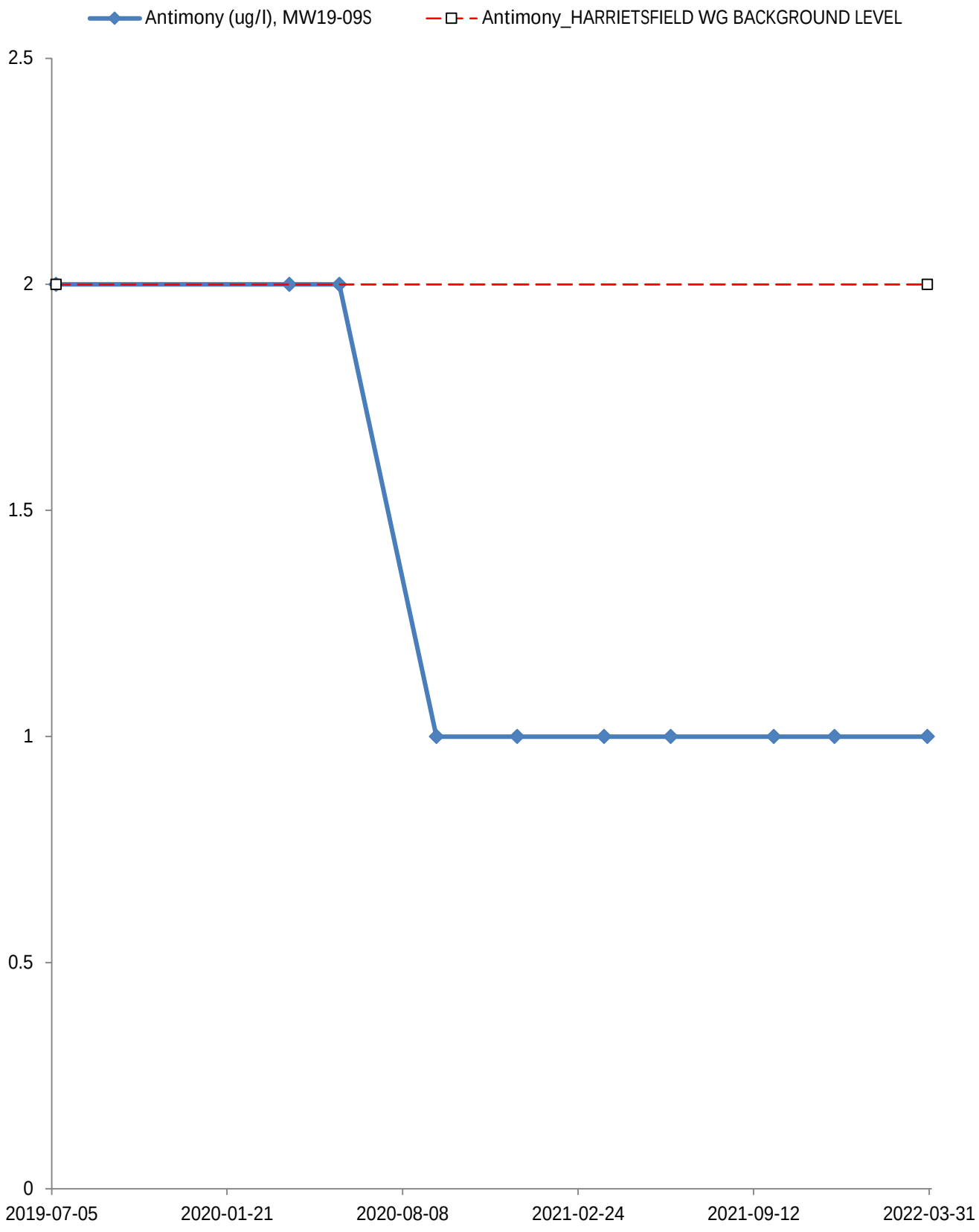
MW19-09S - Aluminum



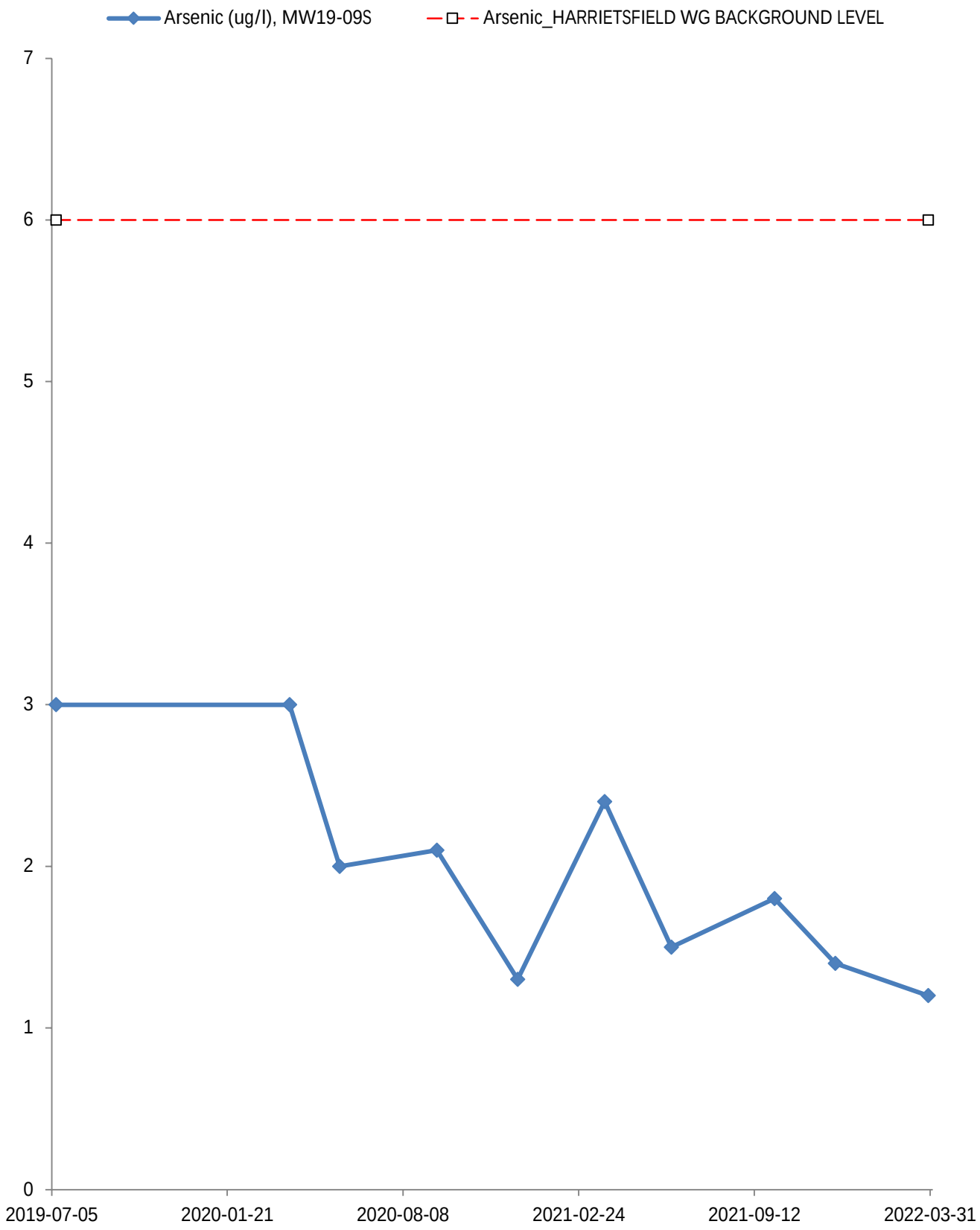
MW19-09S - Ammonia-N



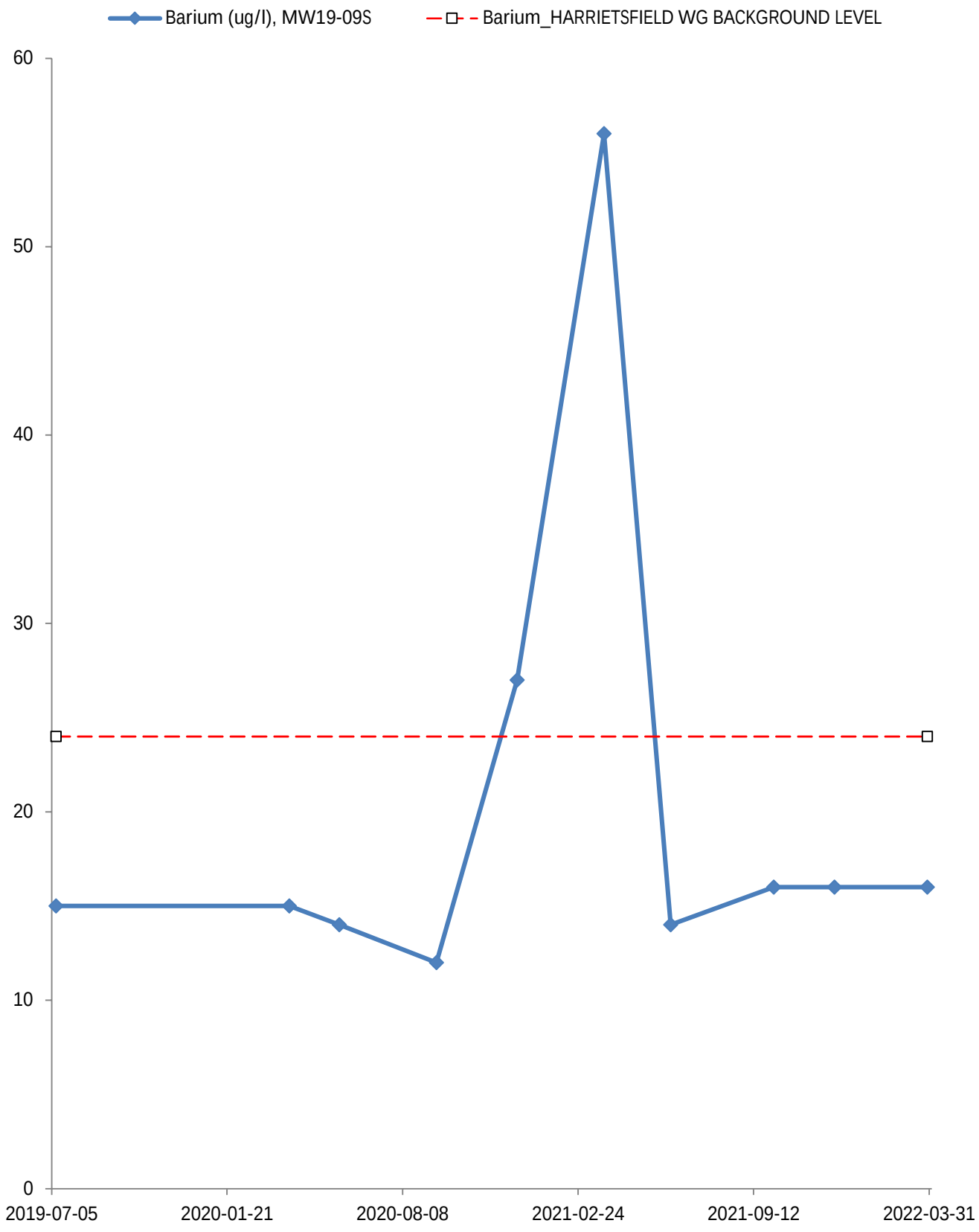
MW19-09S - Antimony



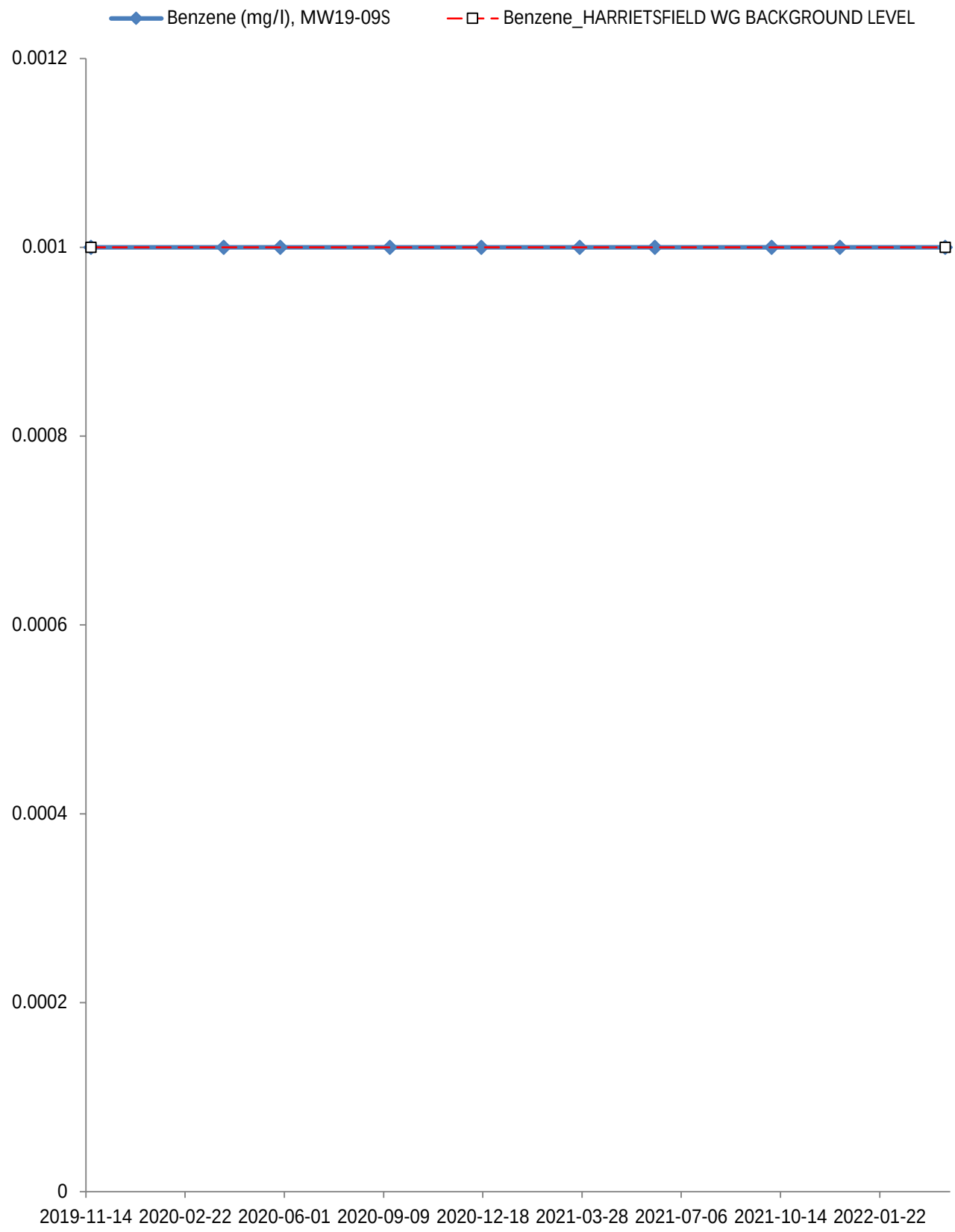
MW19-09S - Arsenic



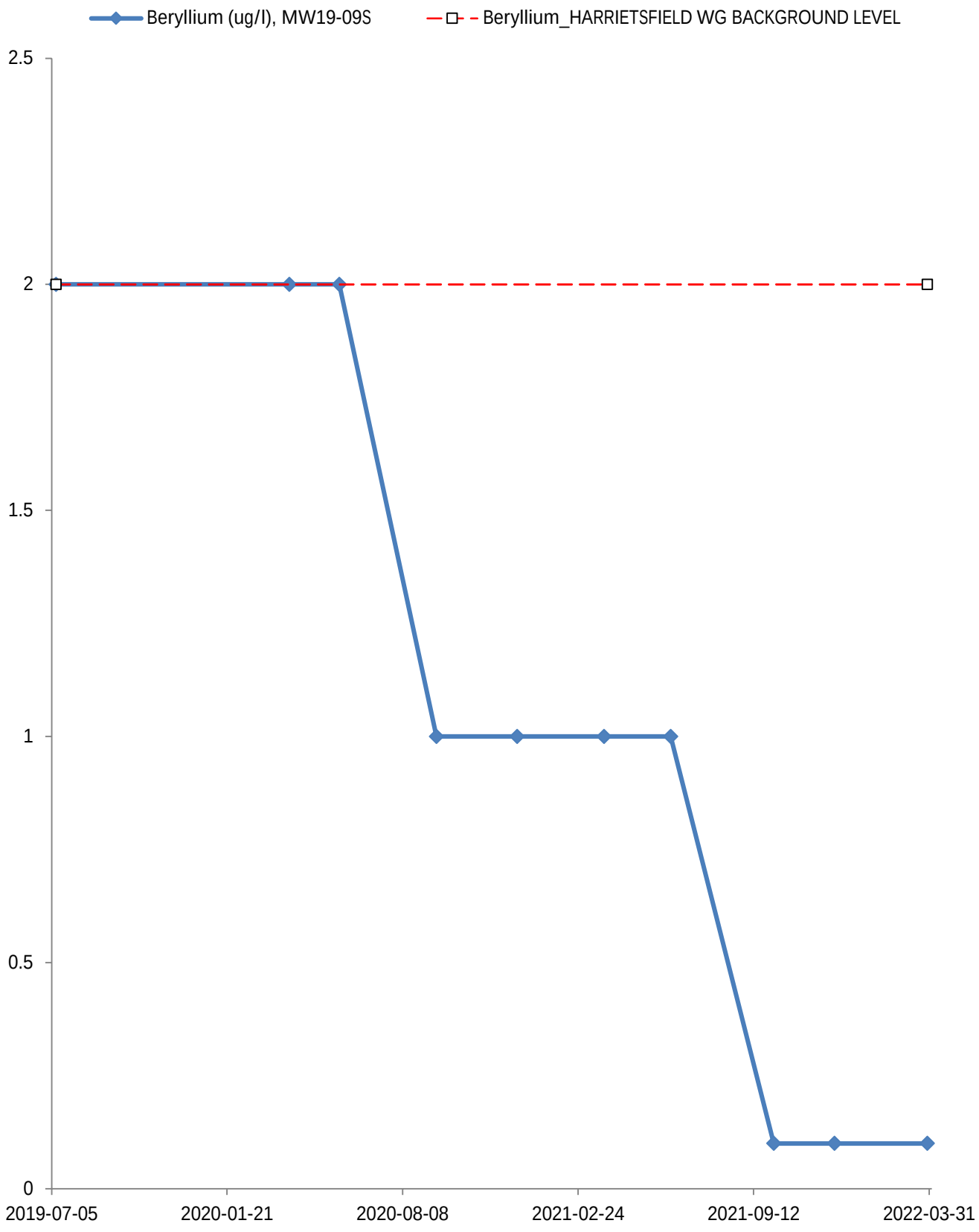
MW19-09S - Barium



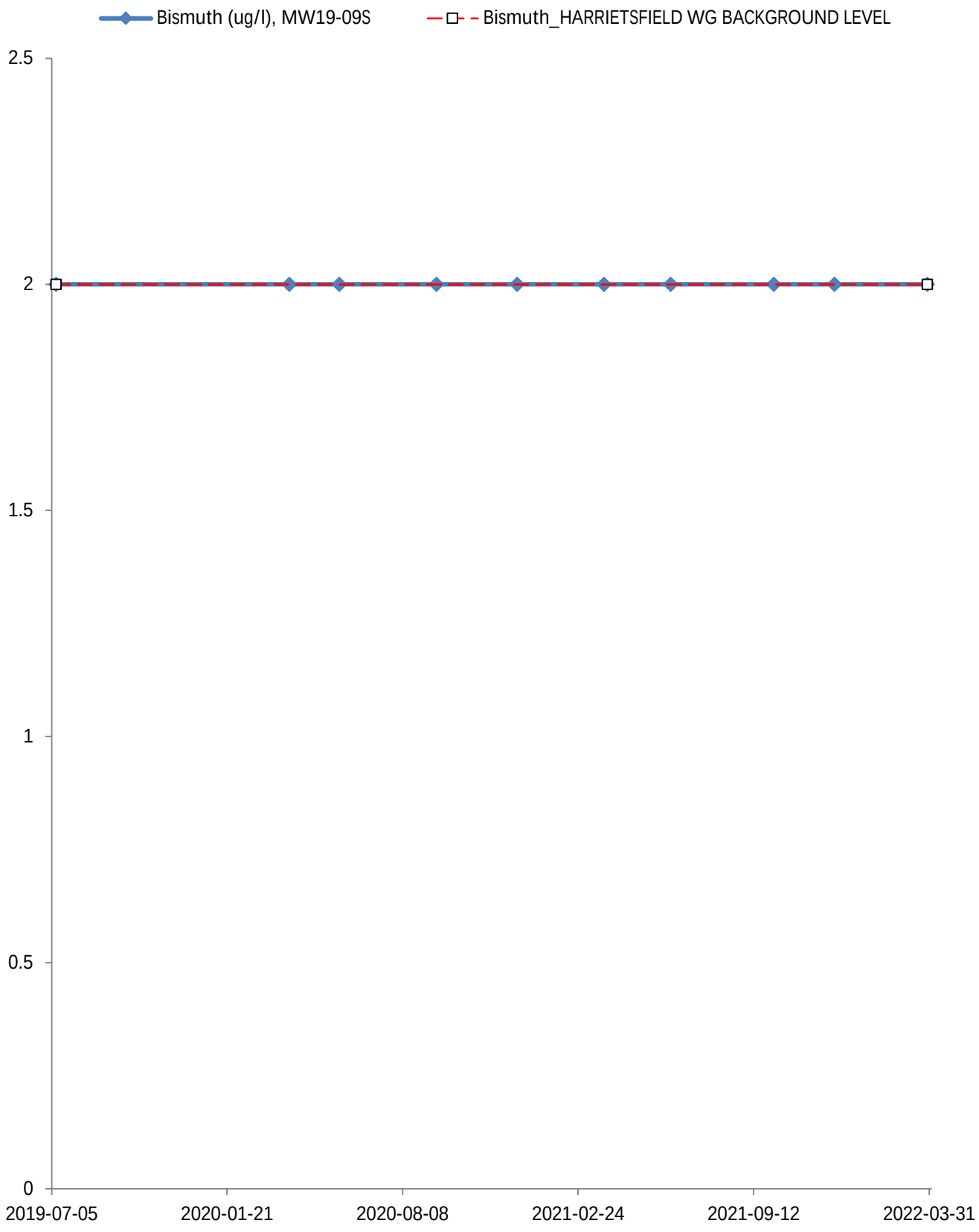
MW19-09S - Benzene



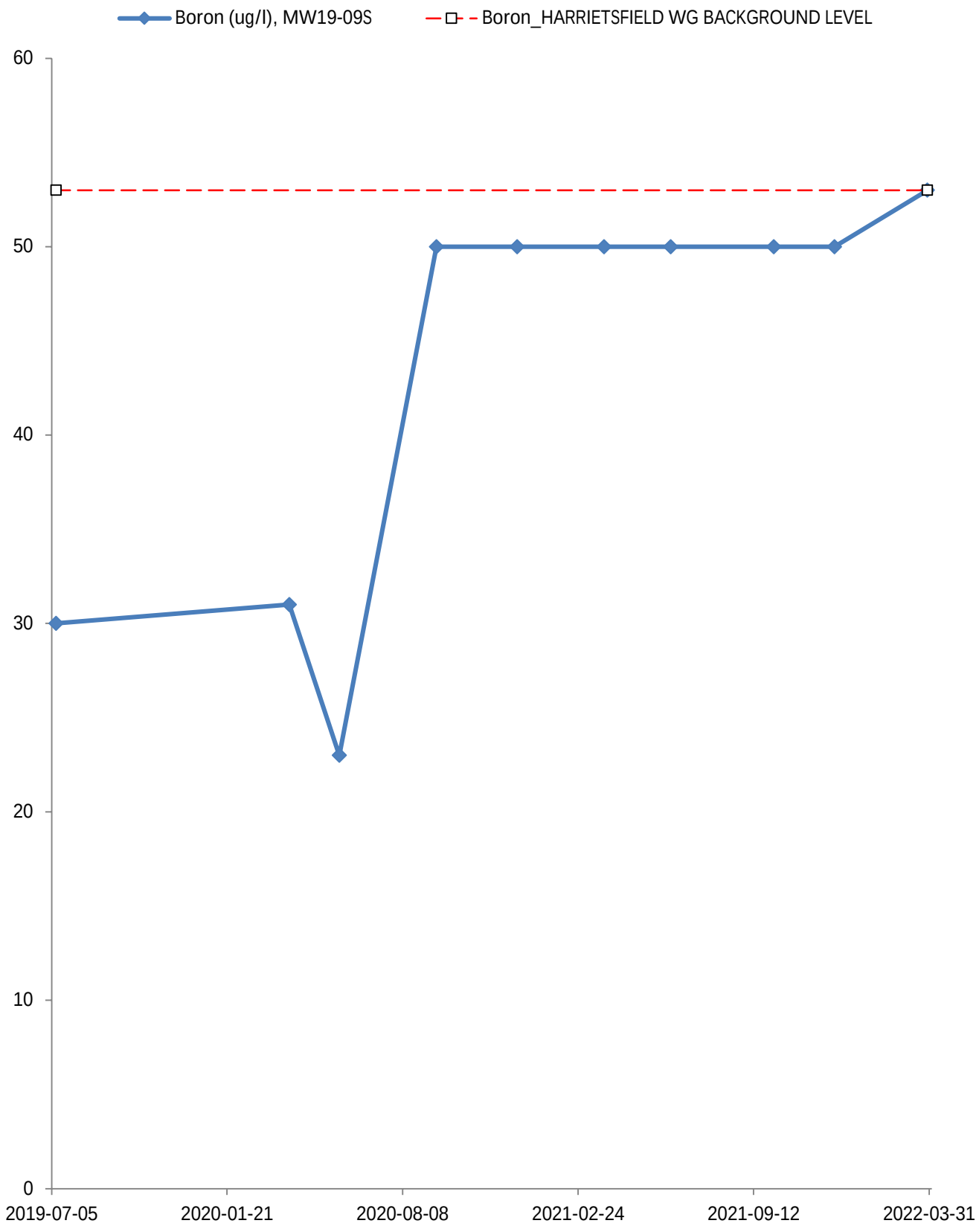
MW19-09S - Beryllium



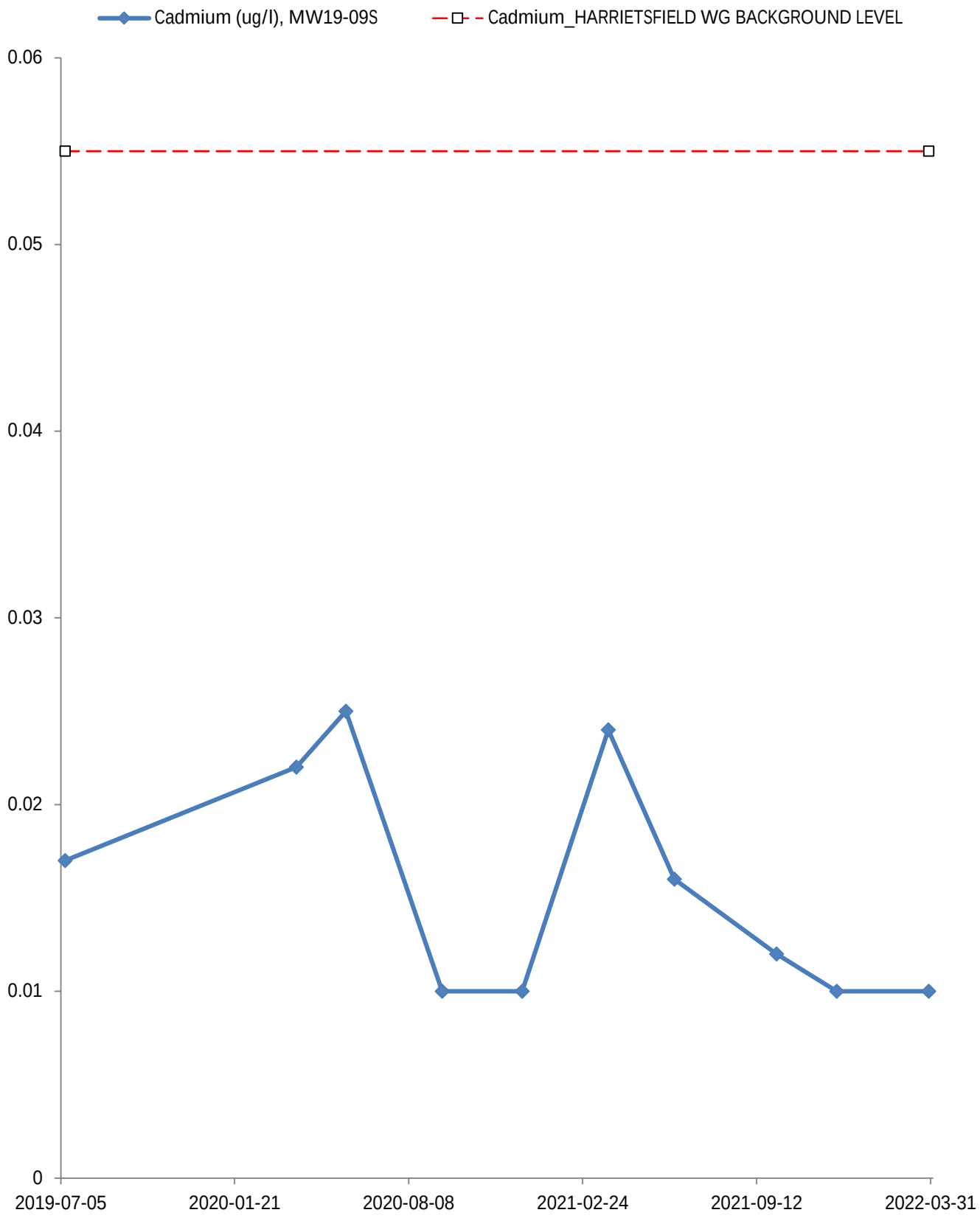
MW19-09S - Bismuth



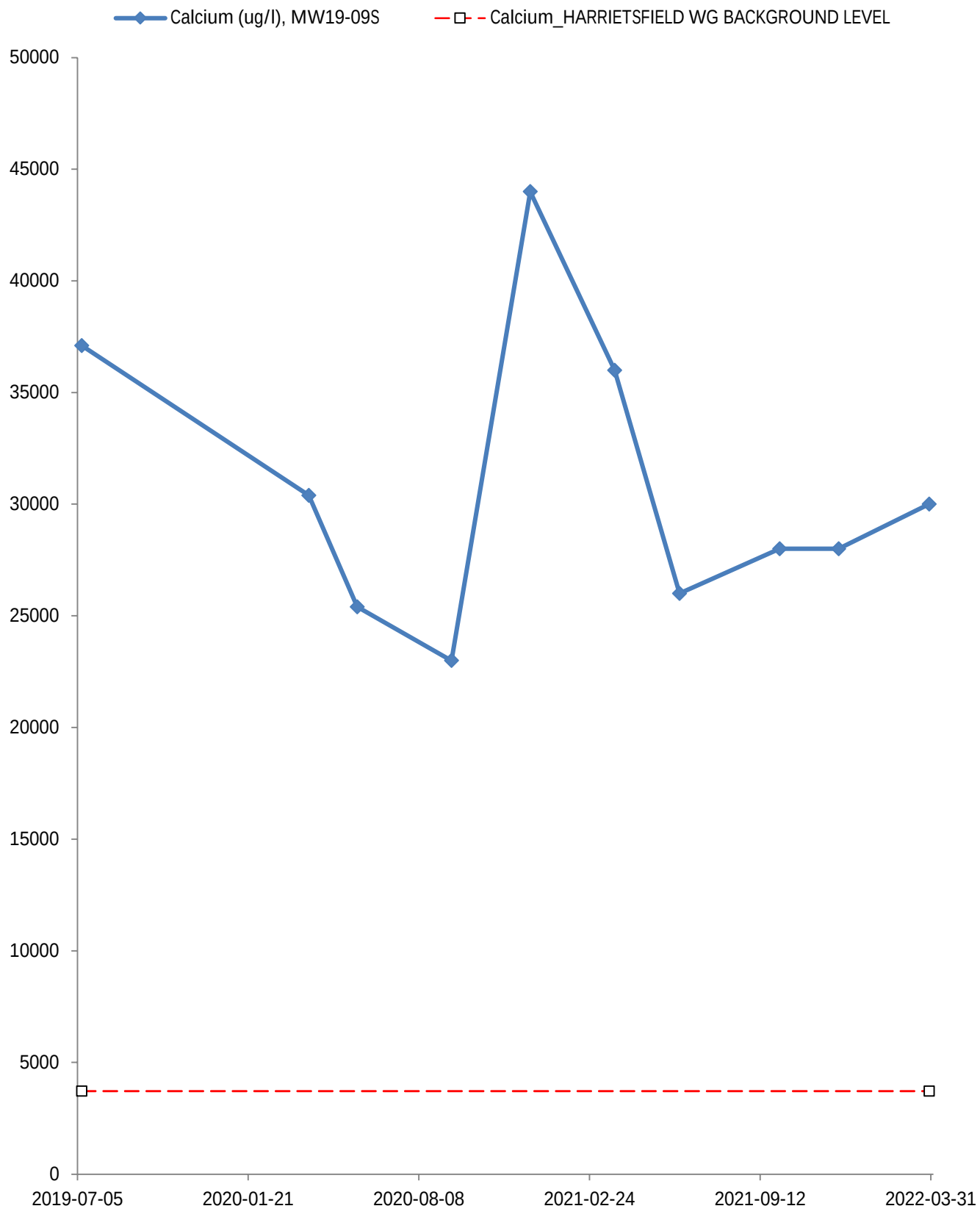
MW19-09S - Boron



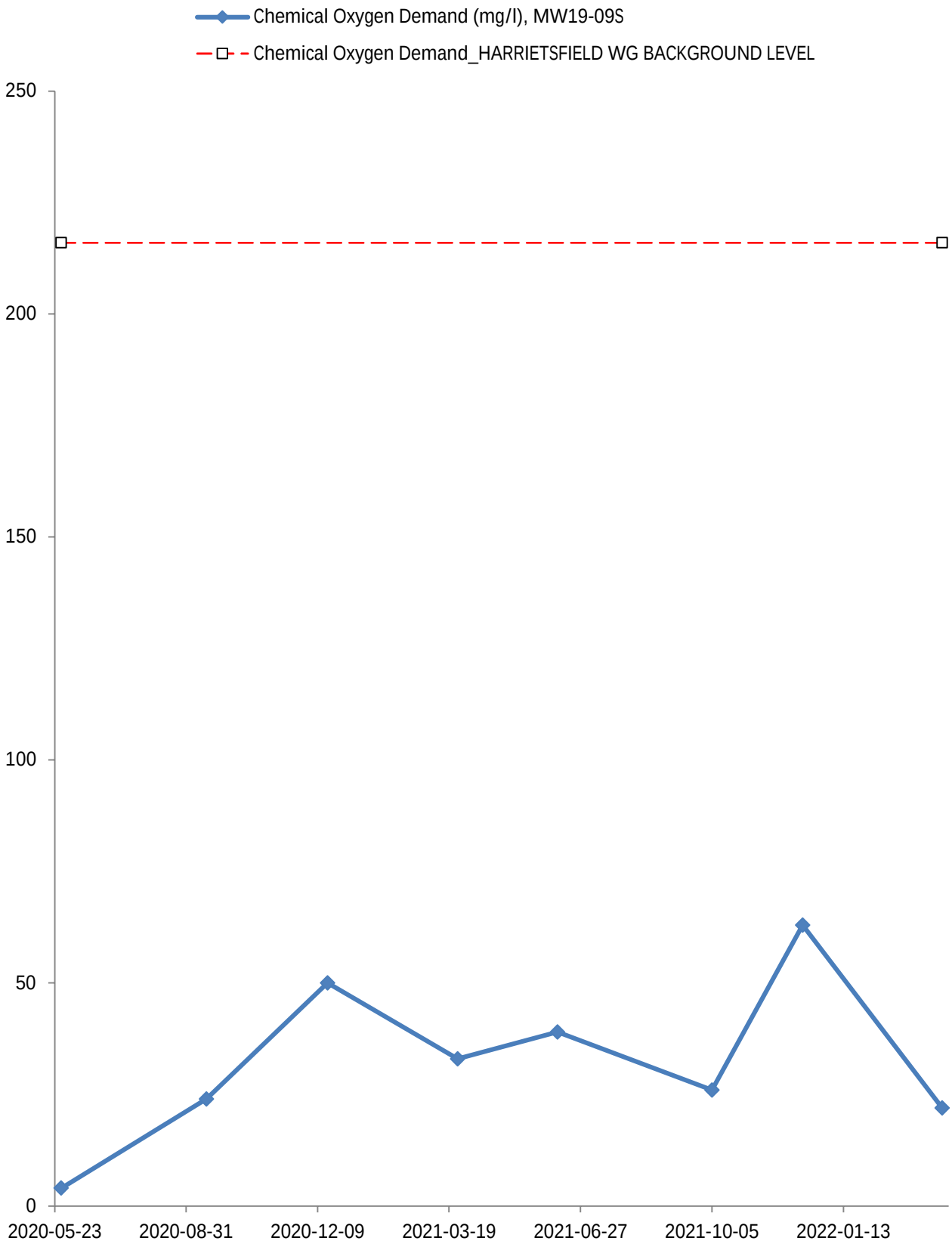
MW19-09S - Cadmium



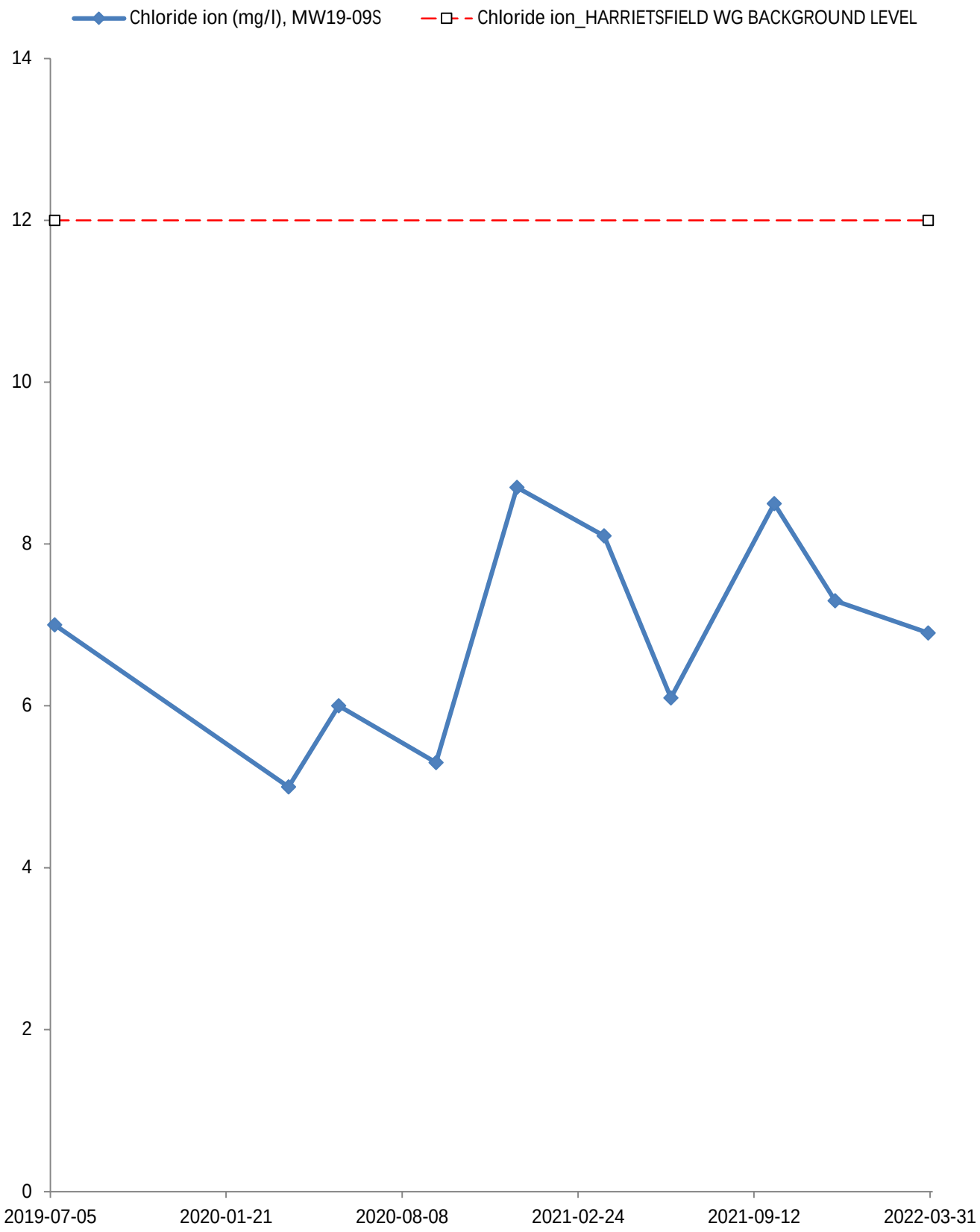
MW19-09S - Calcium



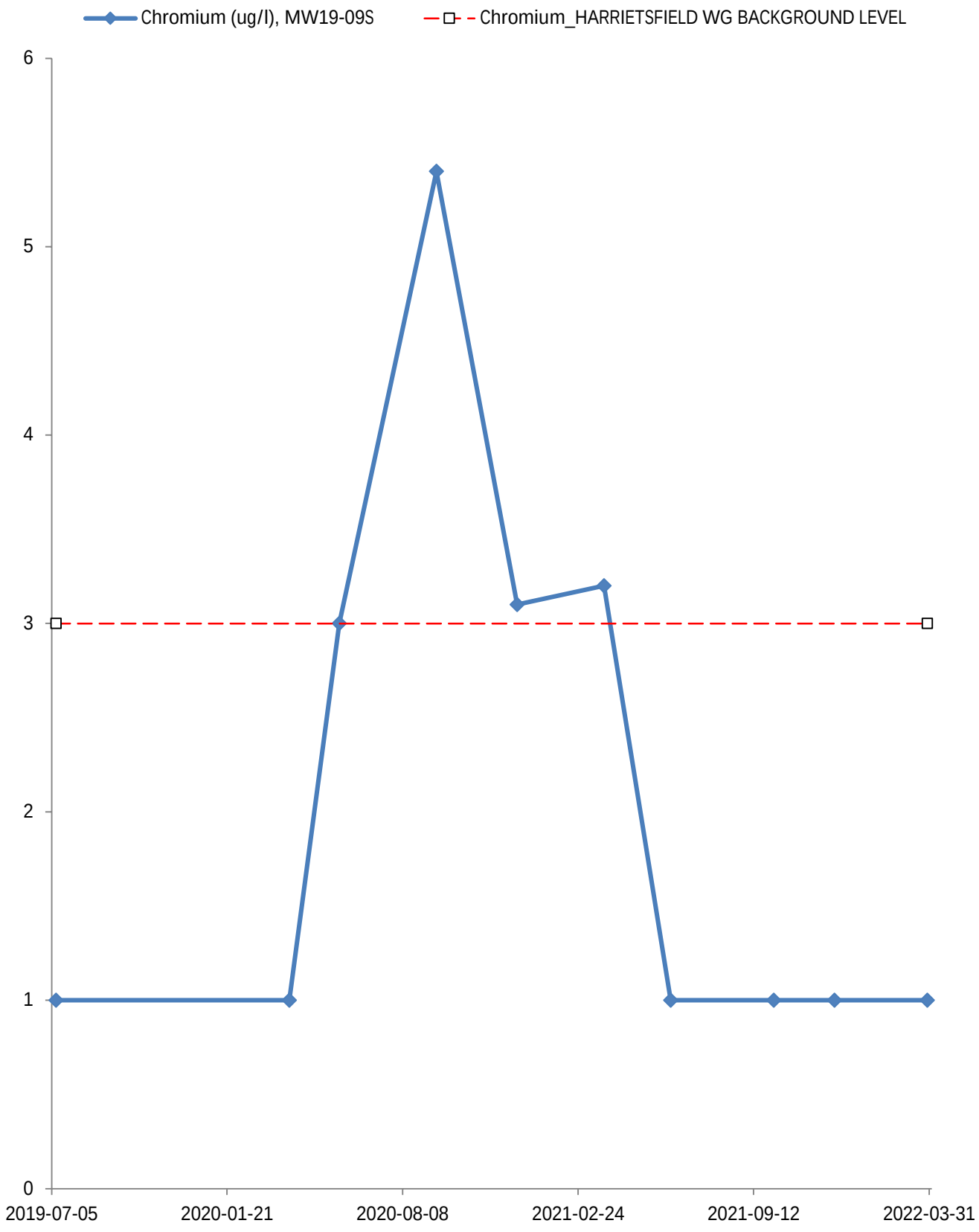
MW19-09S - Chemical Oxygen Demand



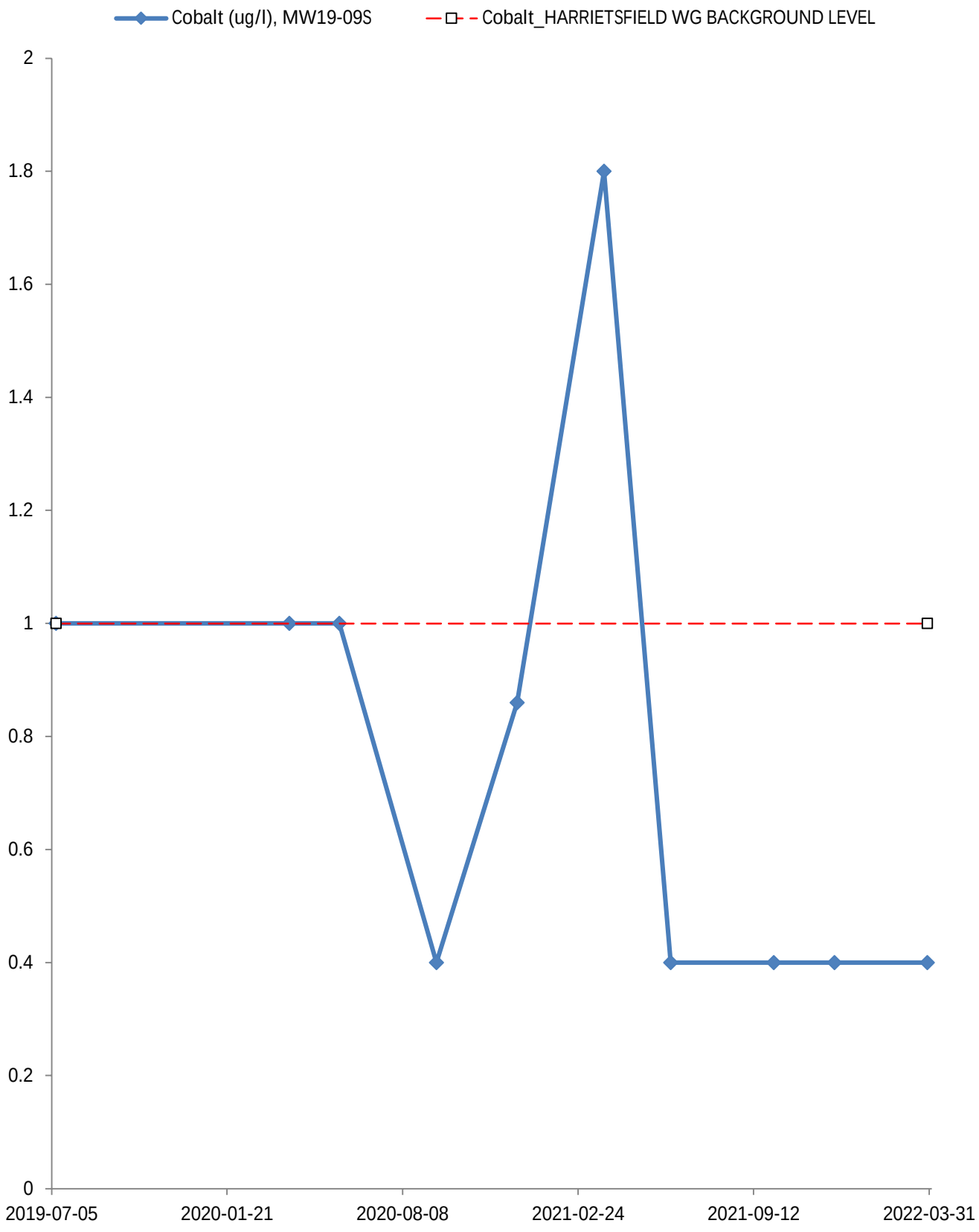
MW19-09S - Chloride ion



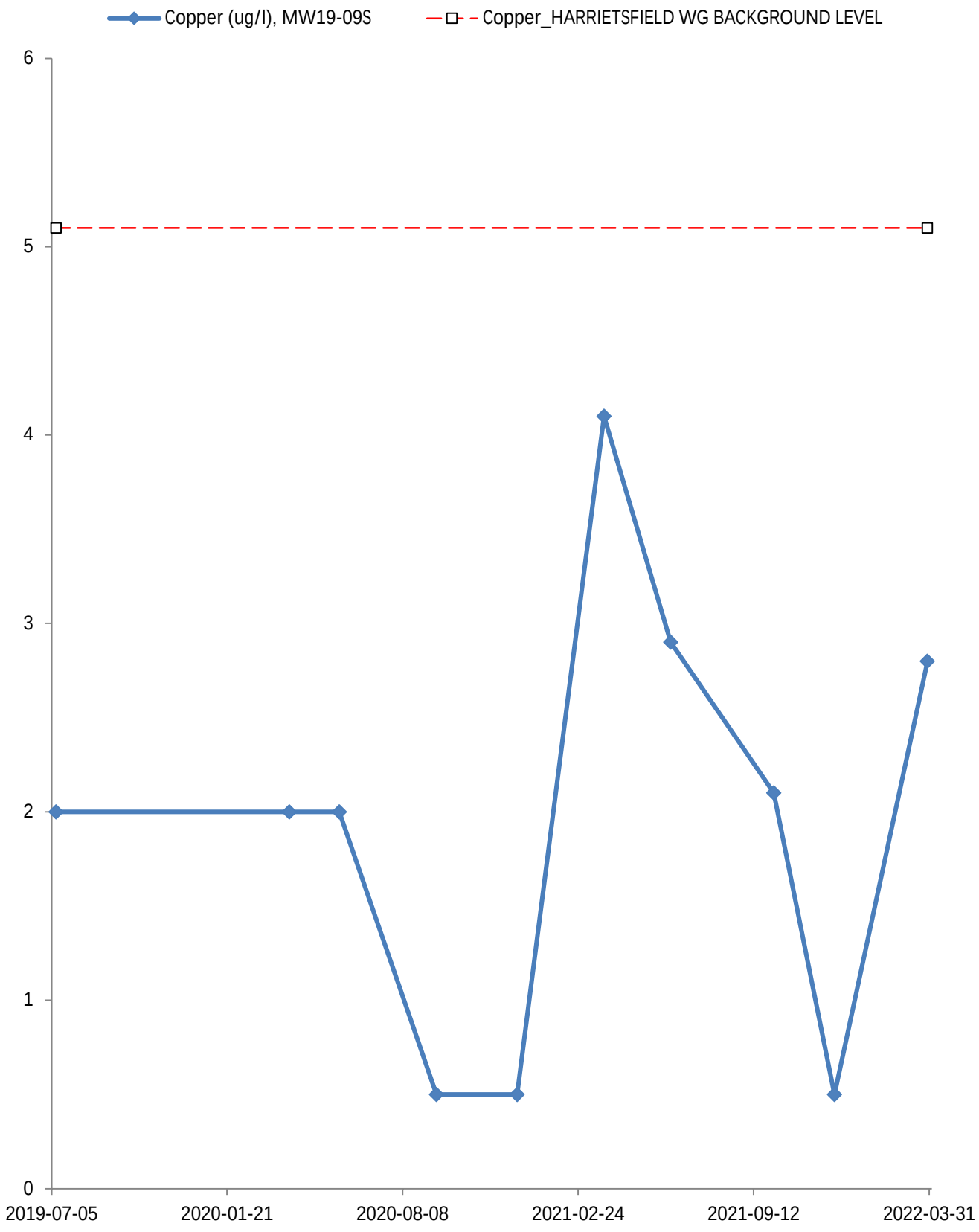
MW19-09S - Chromium



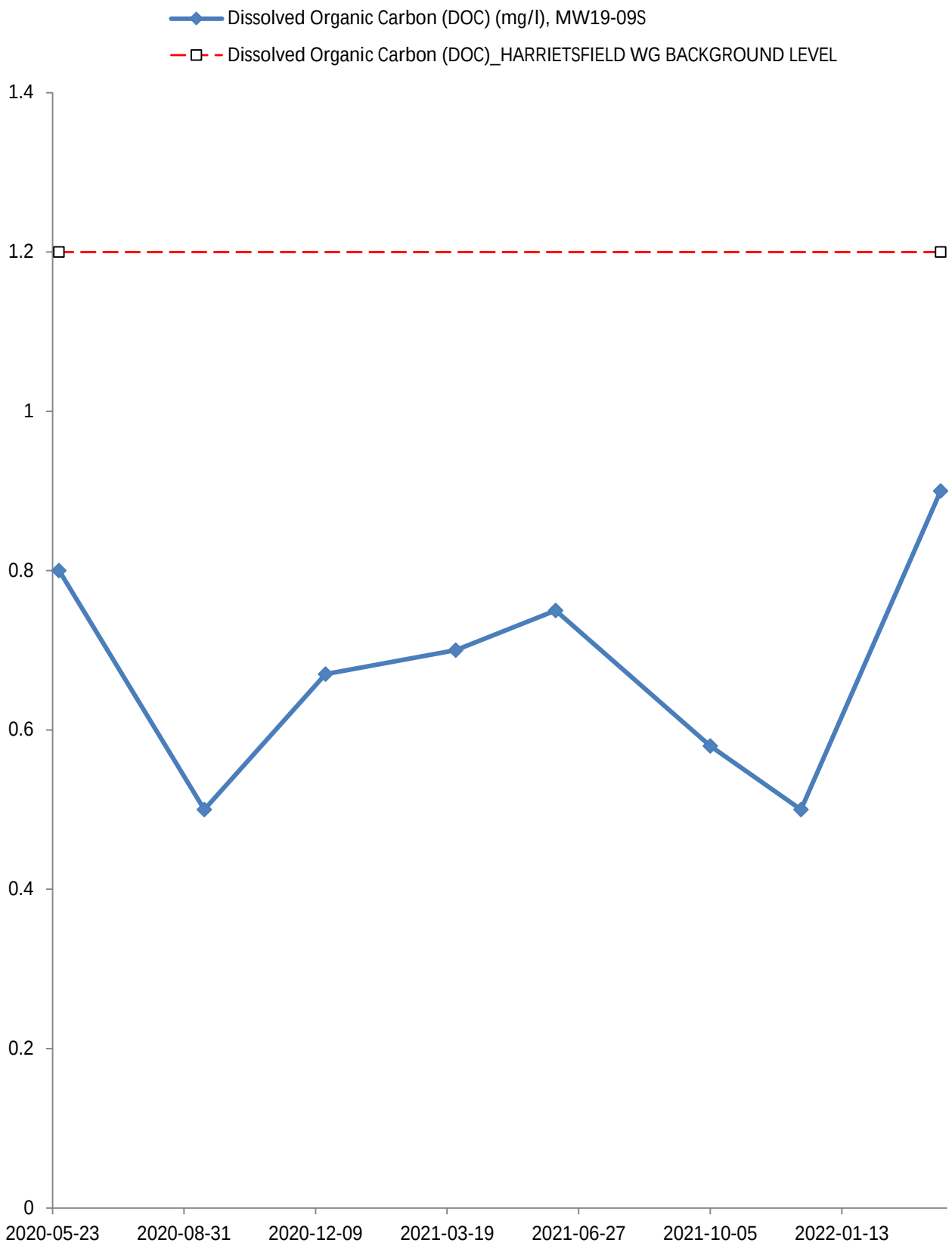
MW19-09S - Cobalt



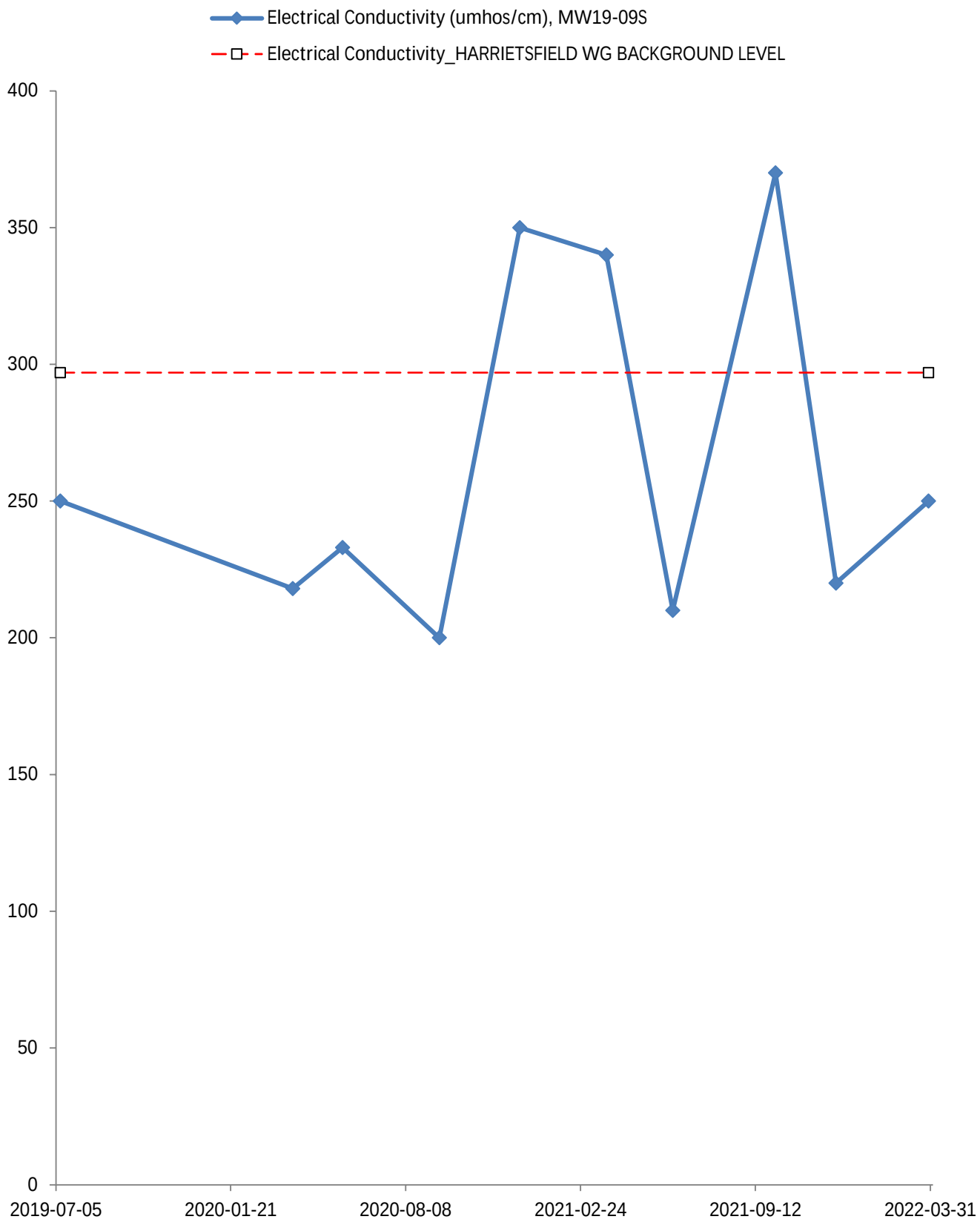
MW19-09S - Copper



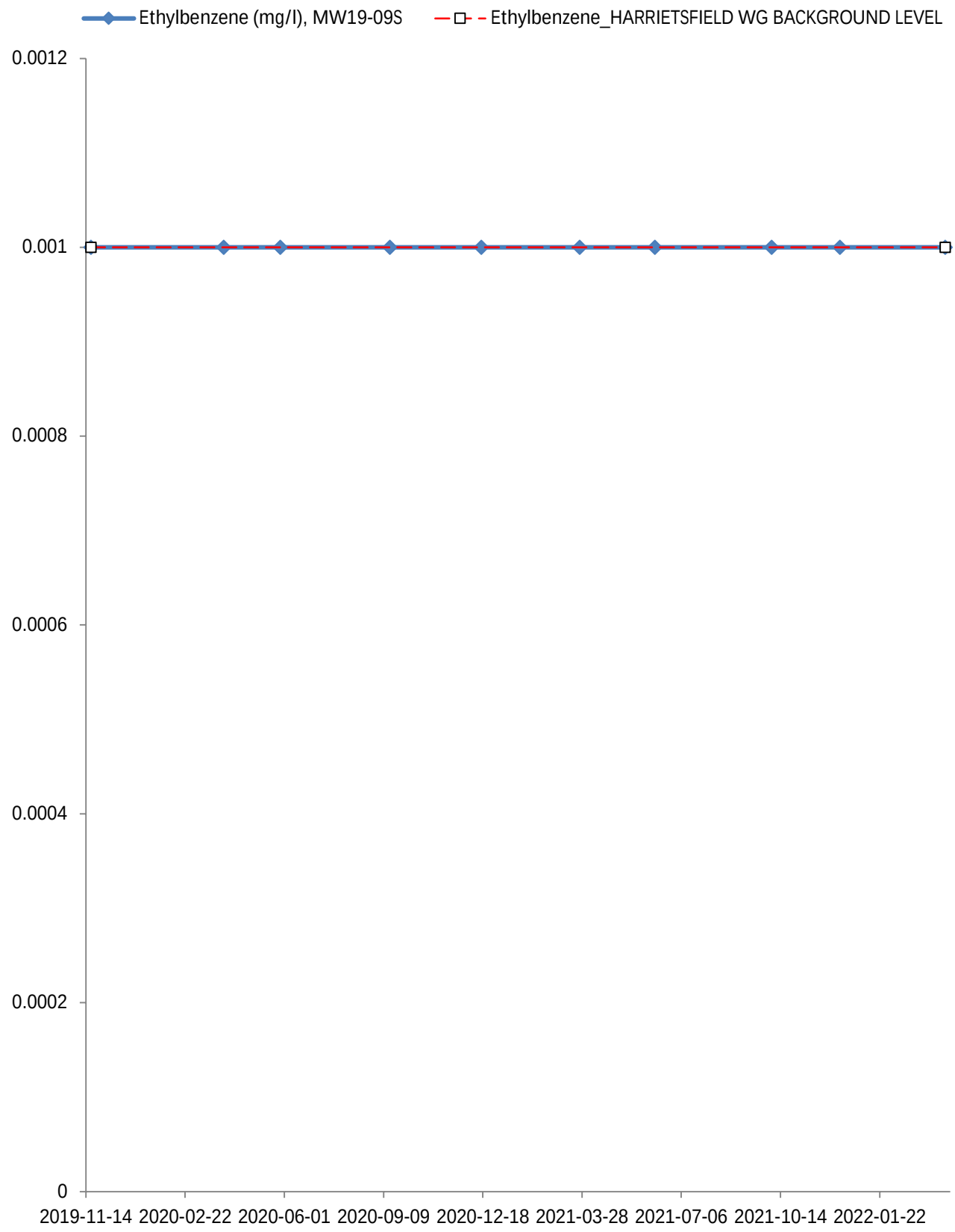
MW19-09S - Dissolved Organic Carbon7



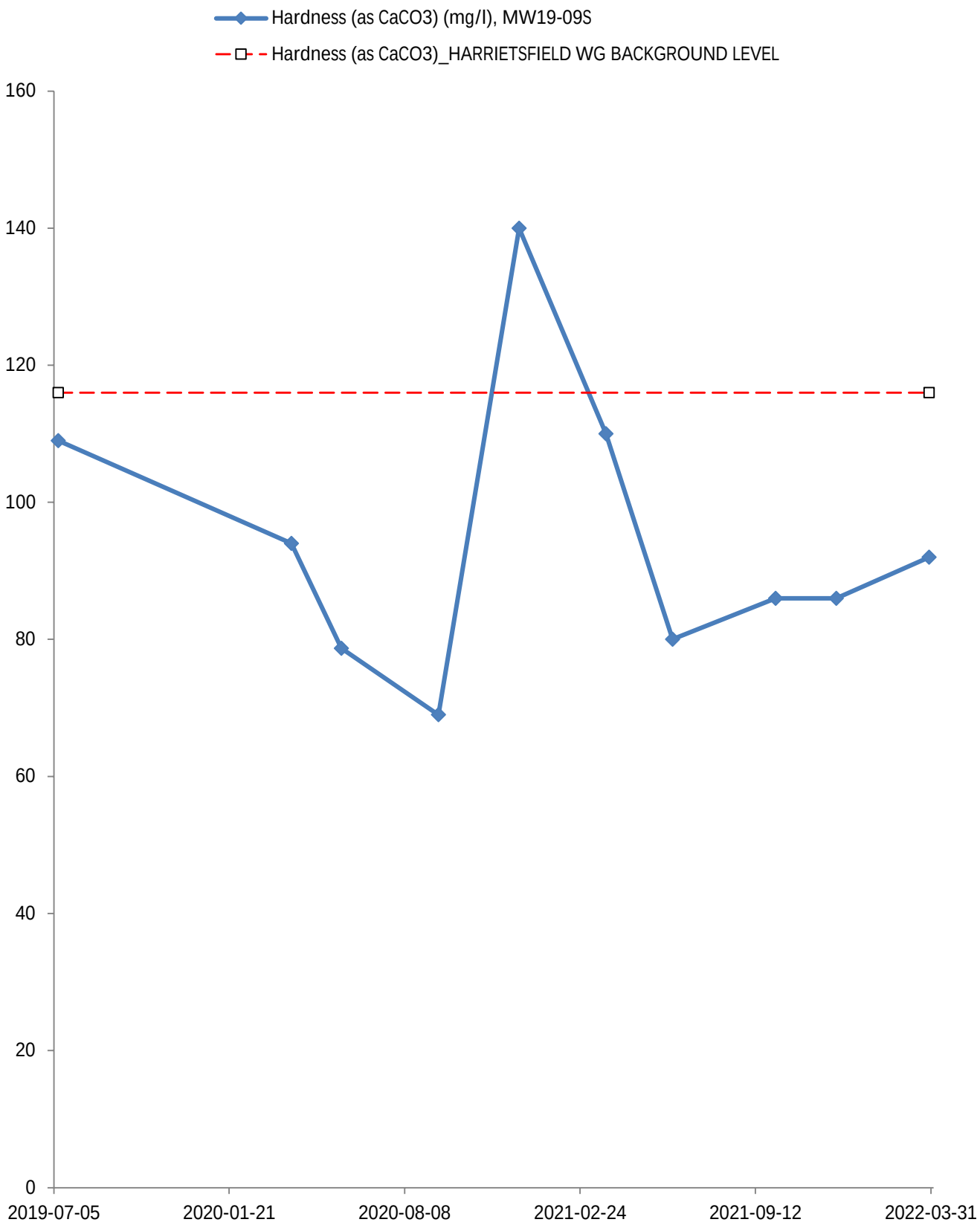
MW19-09S - Electrical Conductivity



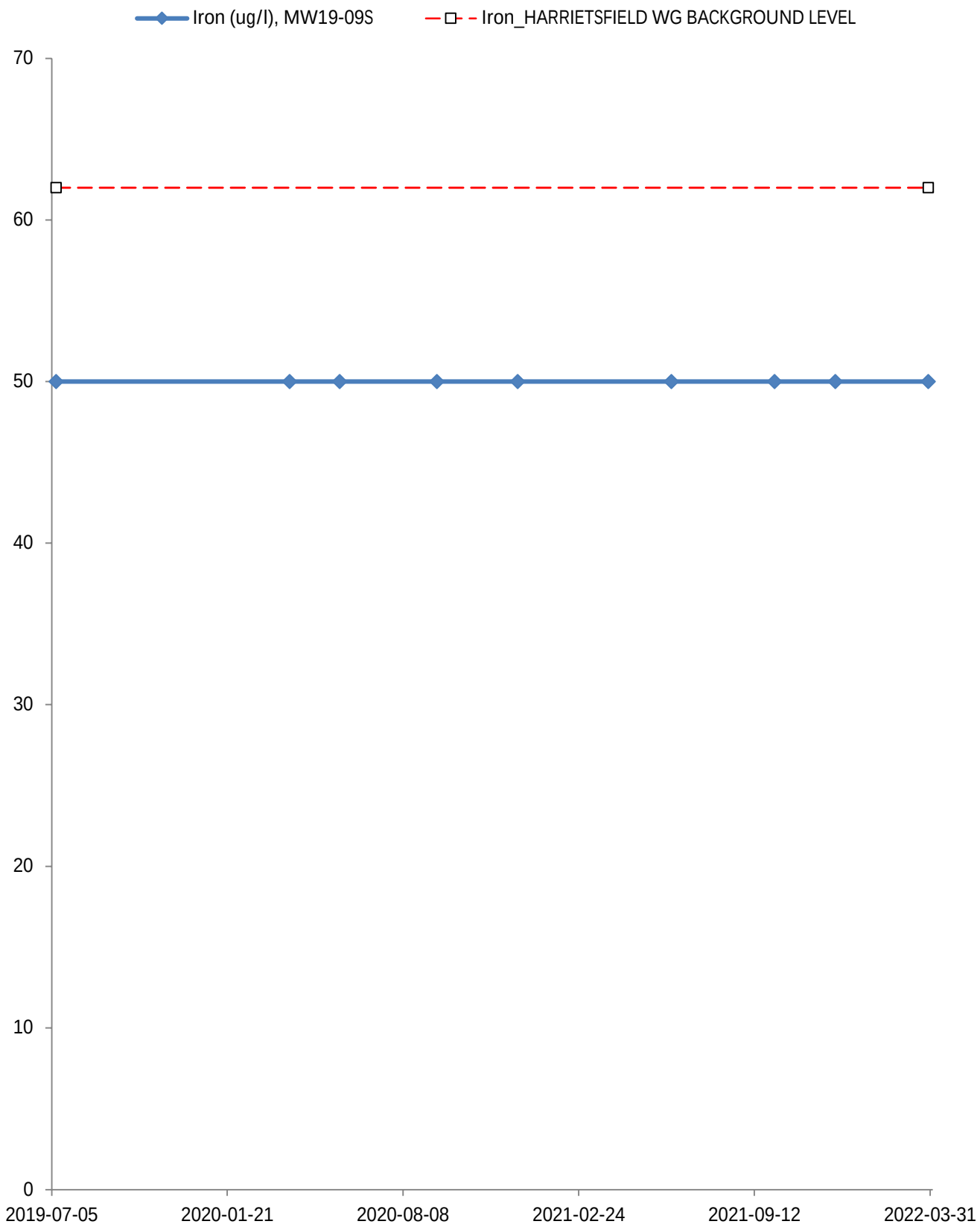
MW19-09S - Ethylbenzene



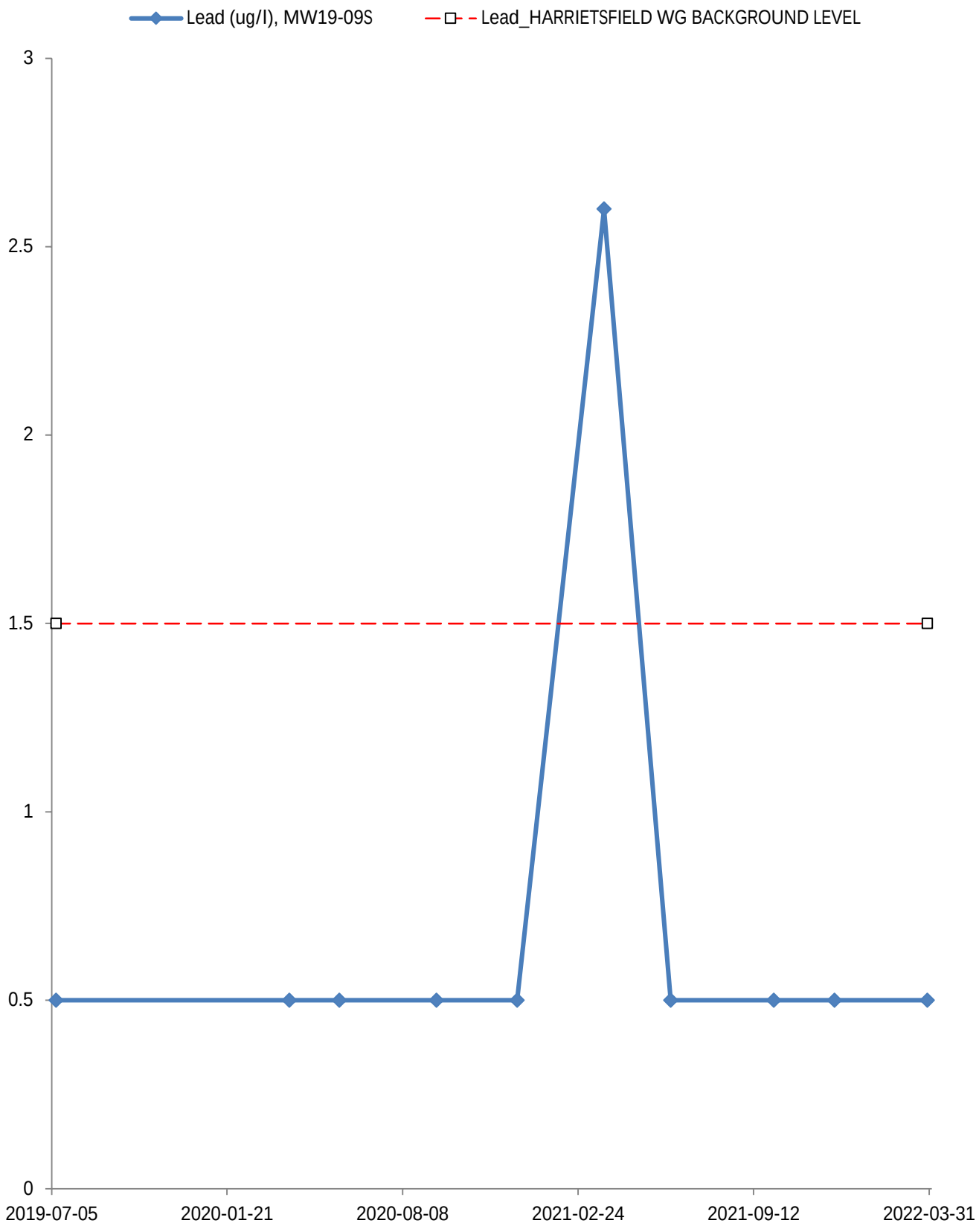
MW19-09S - Hardness (as CaCO3)



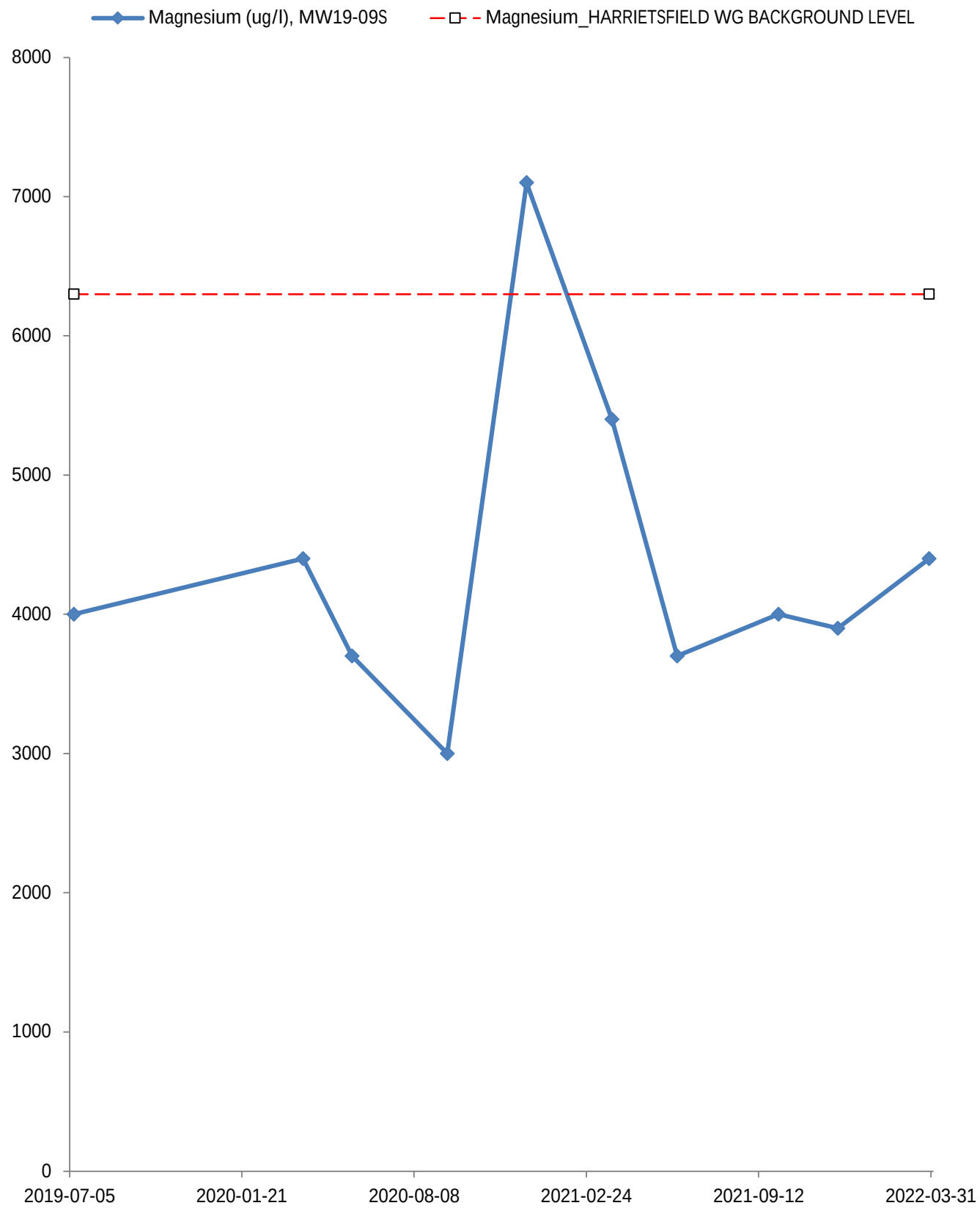
MW19-09S - Iron



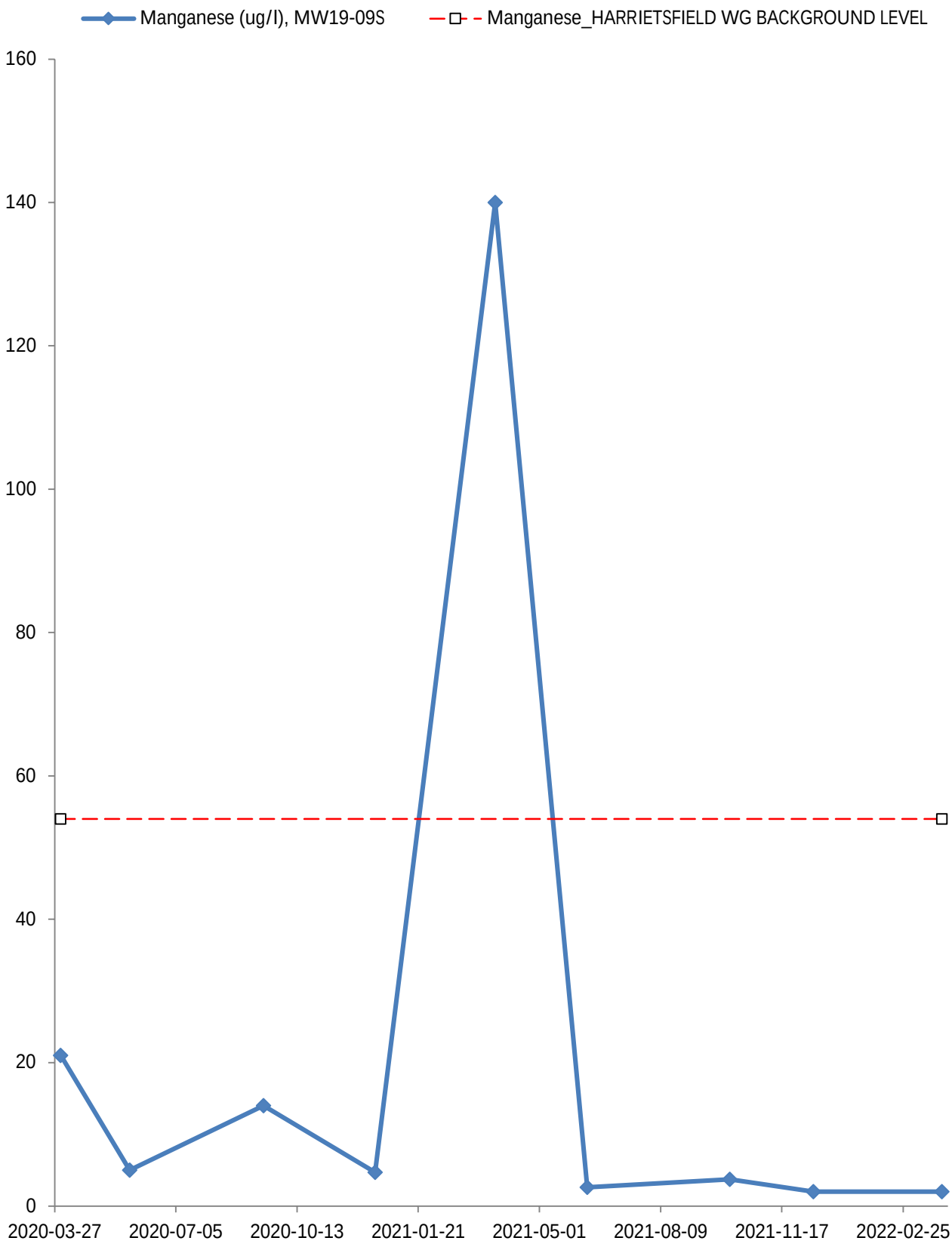
MW19-09S - Lead



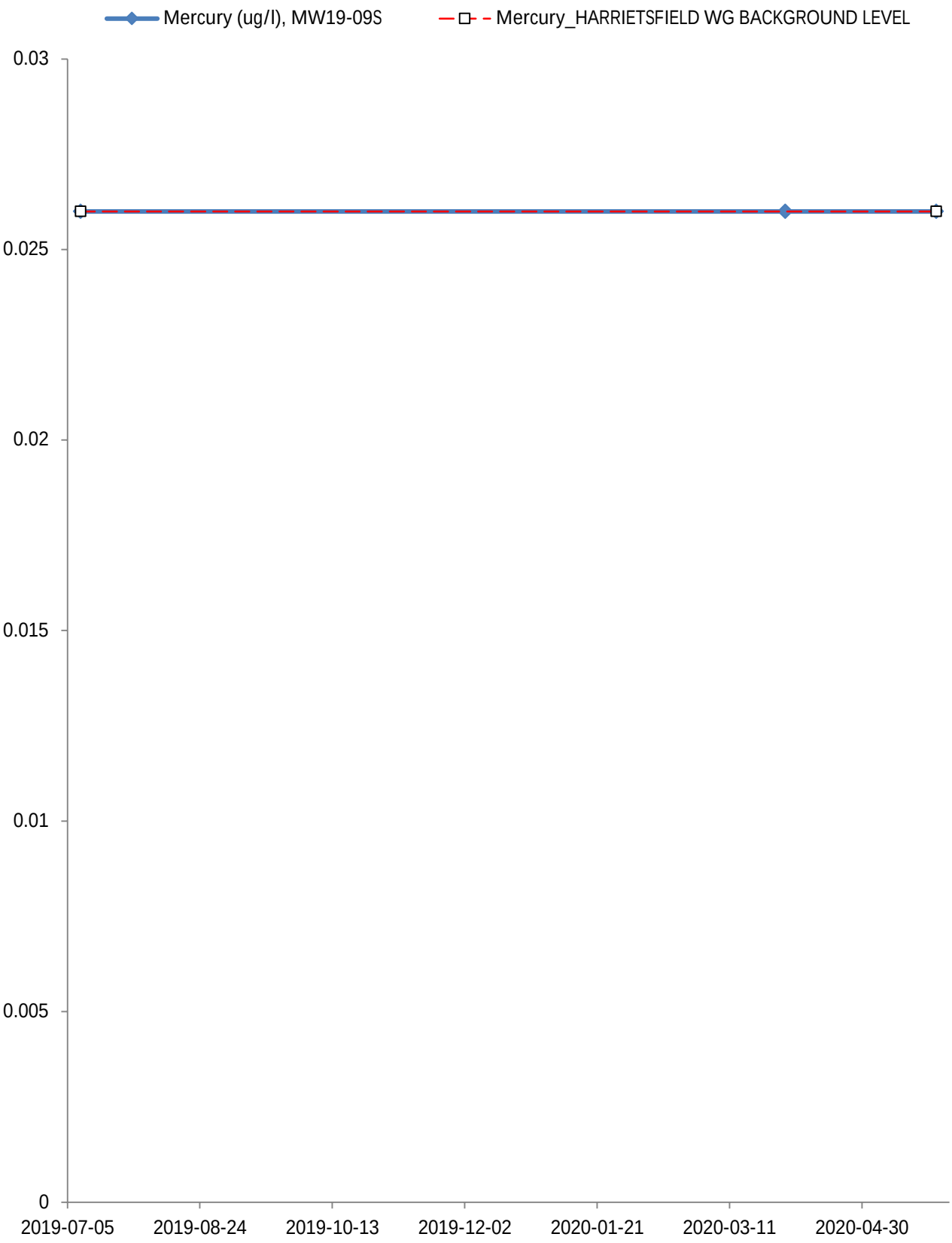
MW19-09S - Magnesium



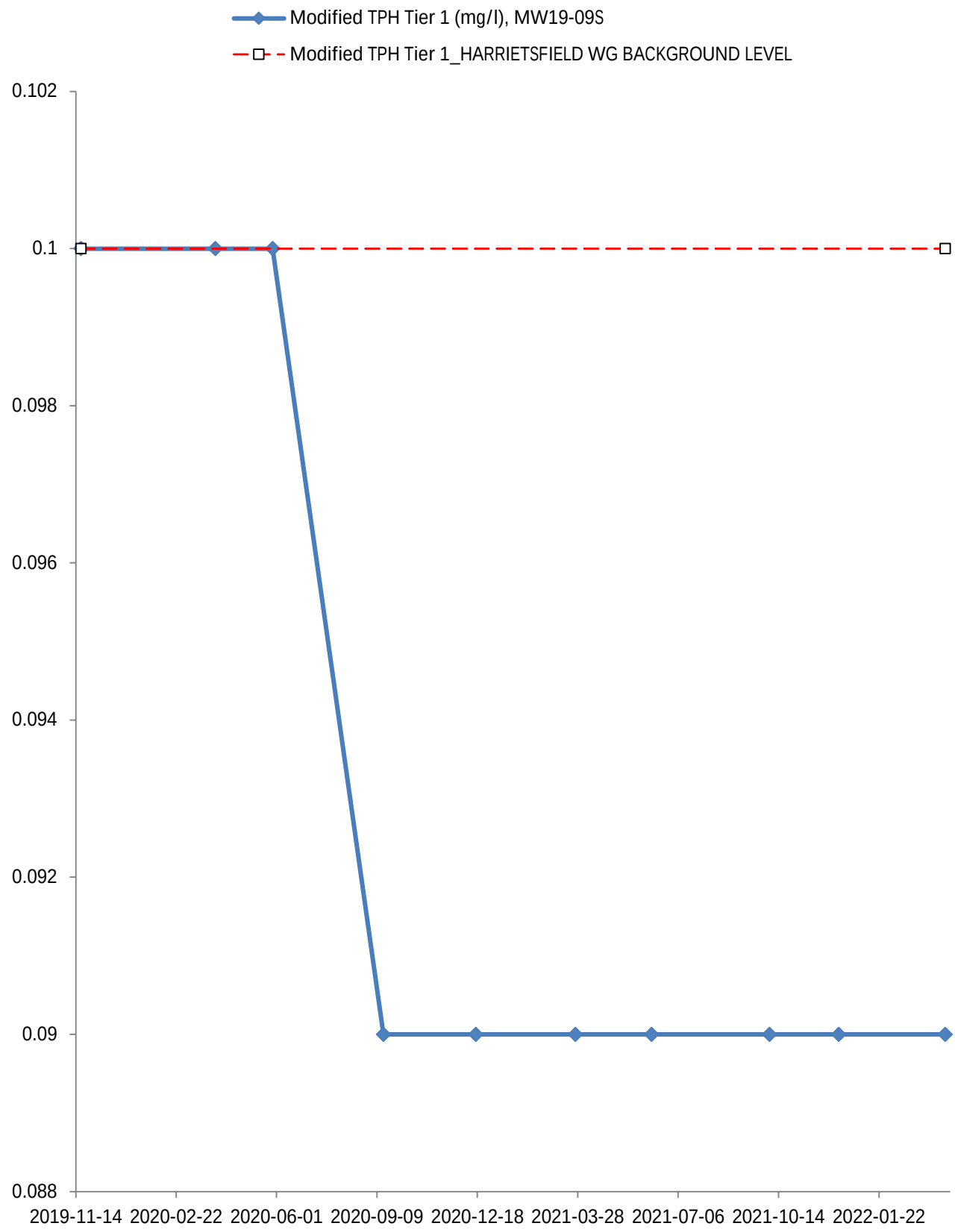
MW19-09S - Manganese



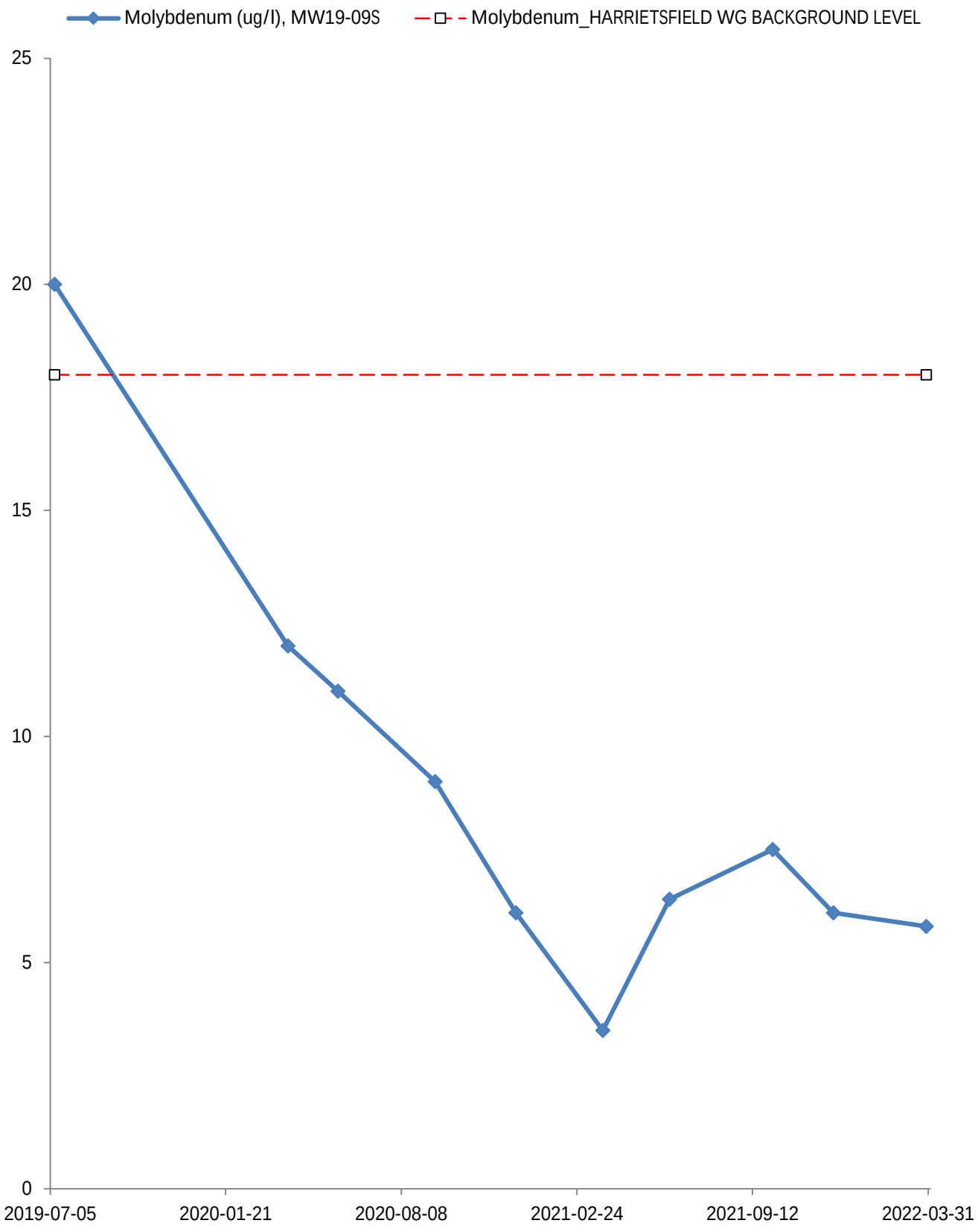
MW19-09S - Mercury



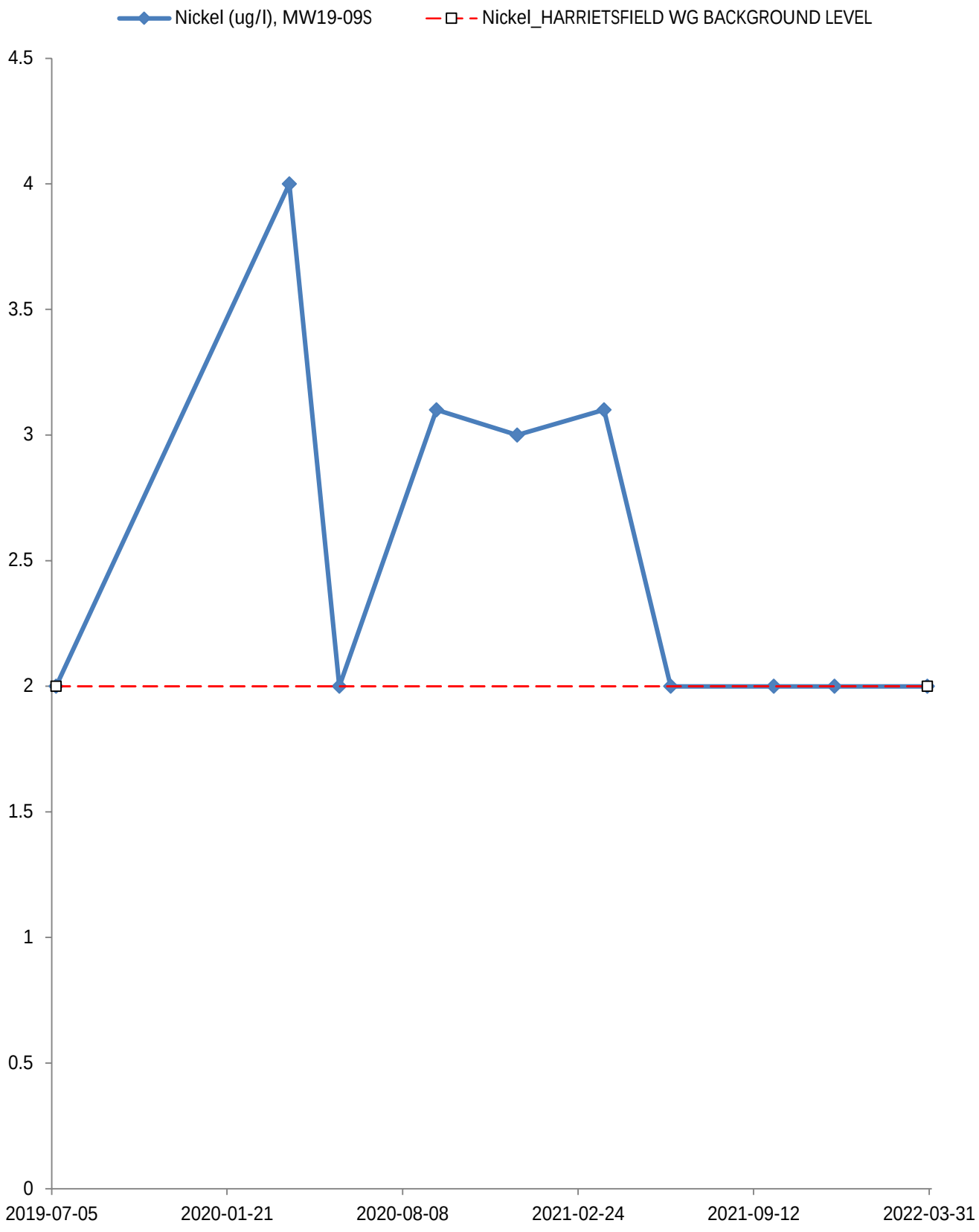
MW19-09S - Modified TPH Tier 1



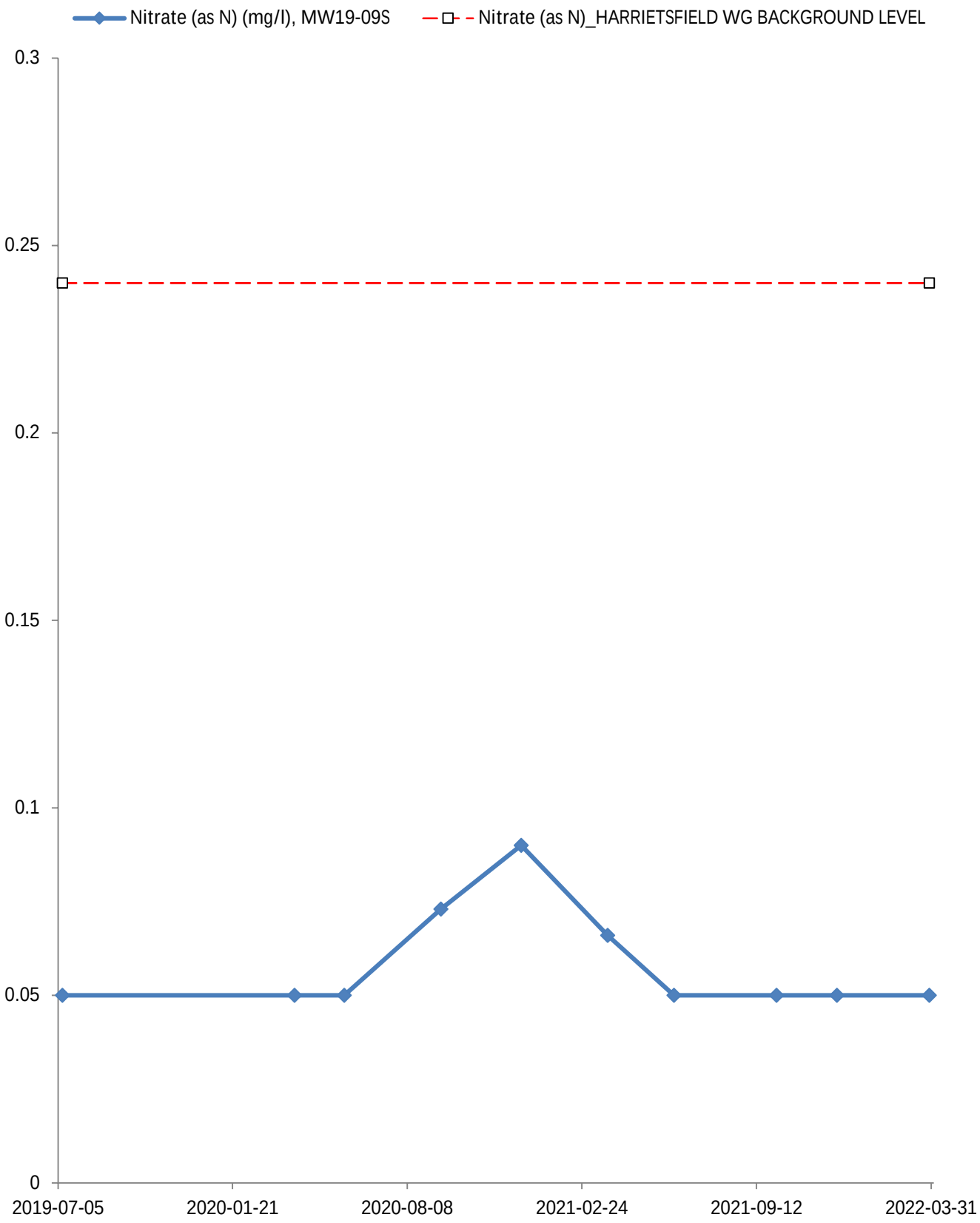
MW19-09S - Molybdenum



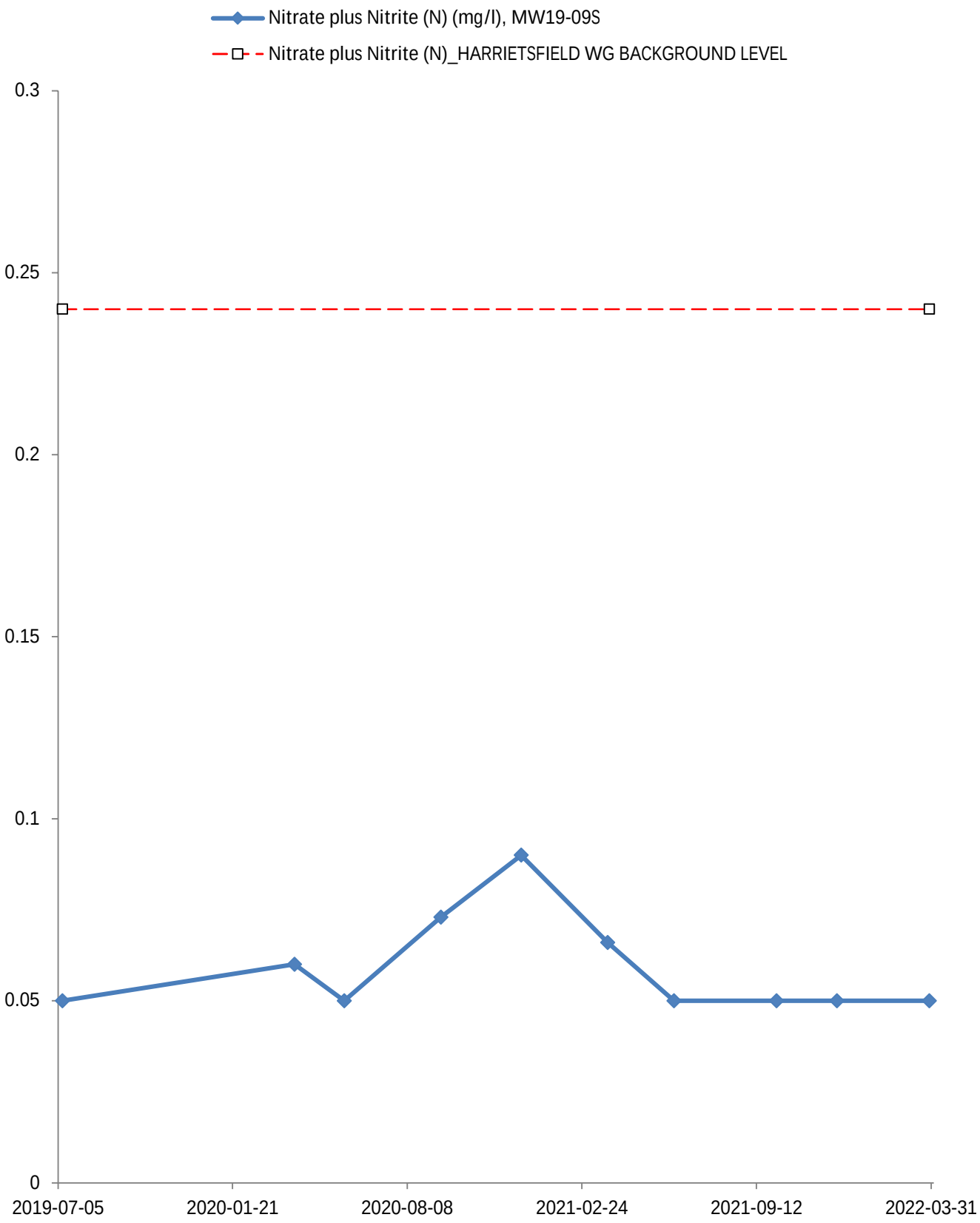
MW19-09S - Nickel



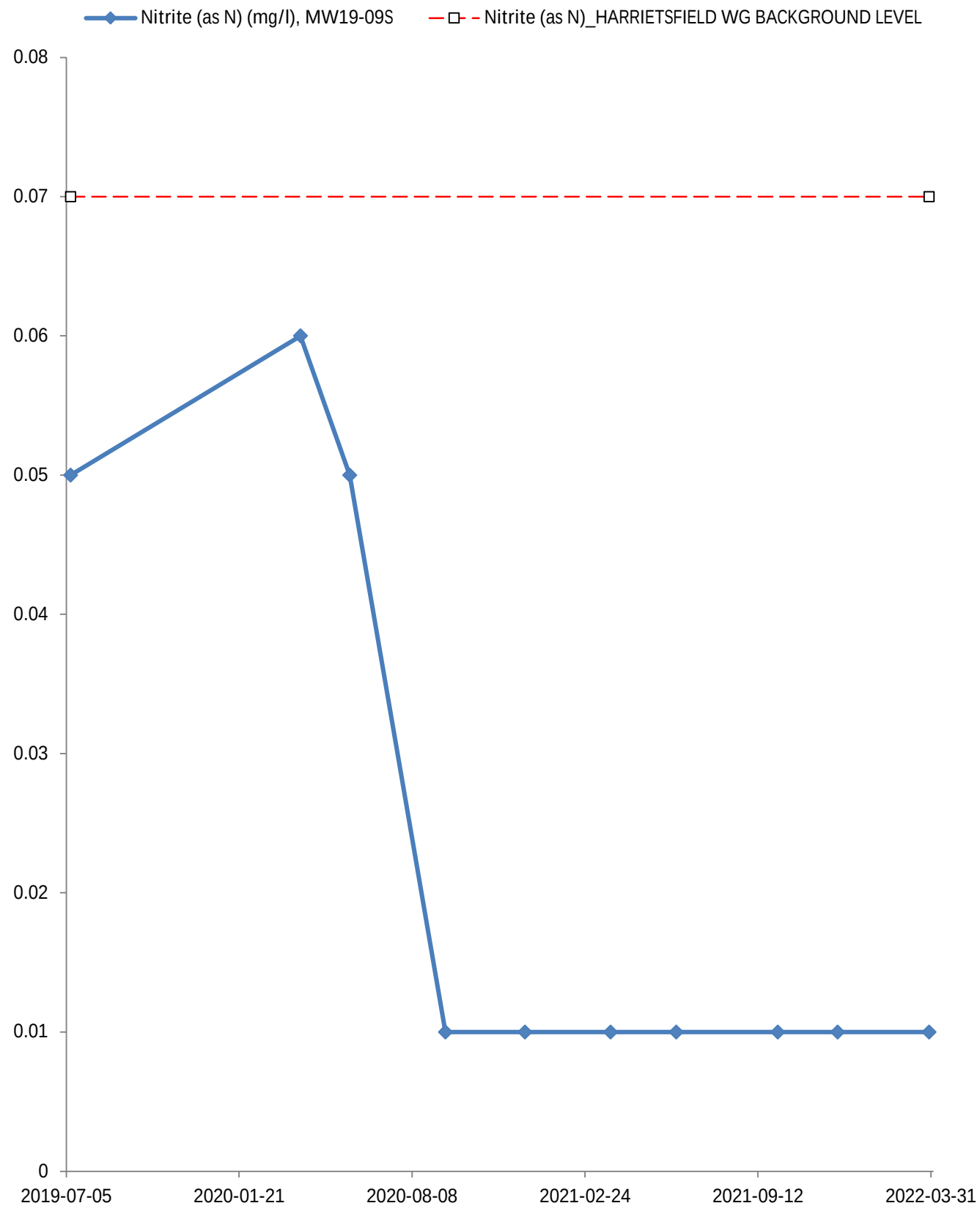
MW19-09S - Nitrate (as N)



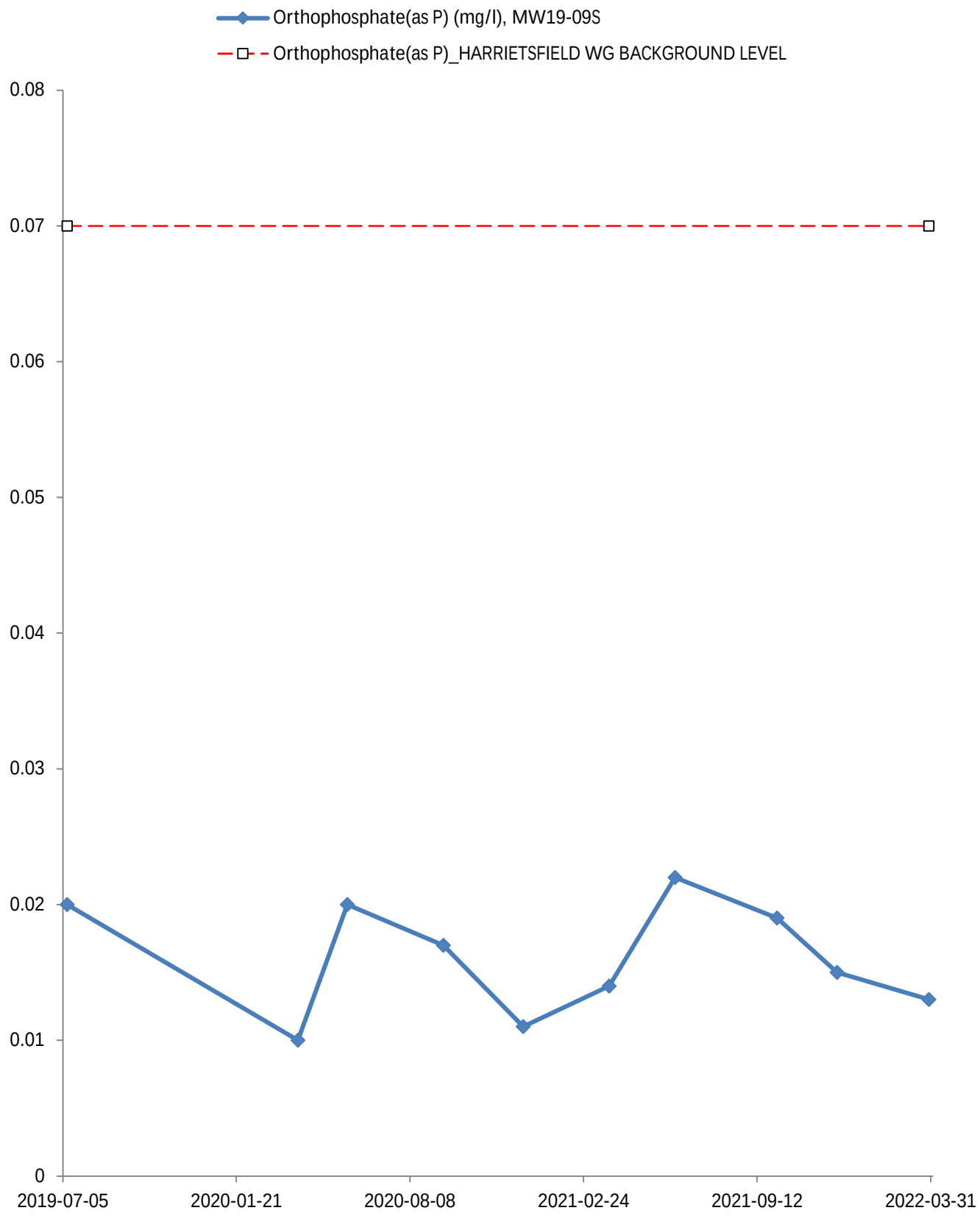
MW19-09S - Nitrate plus Nitrite (N)



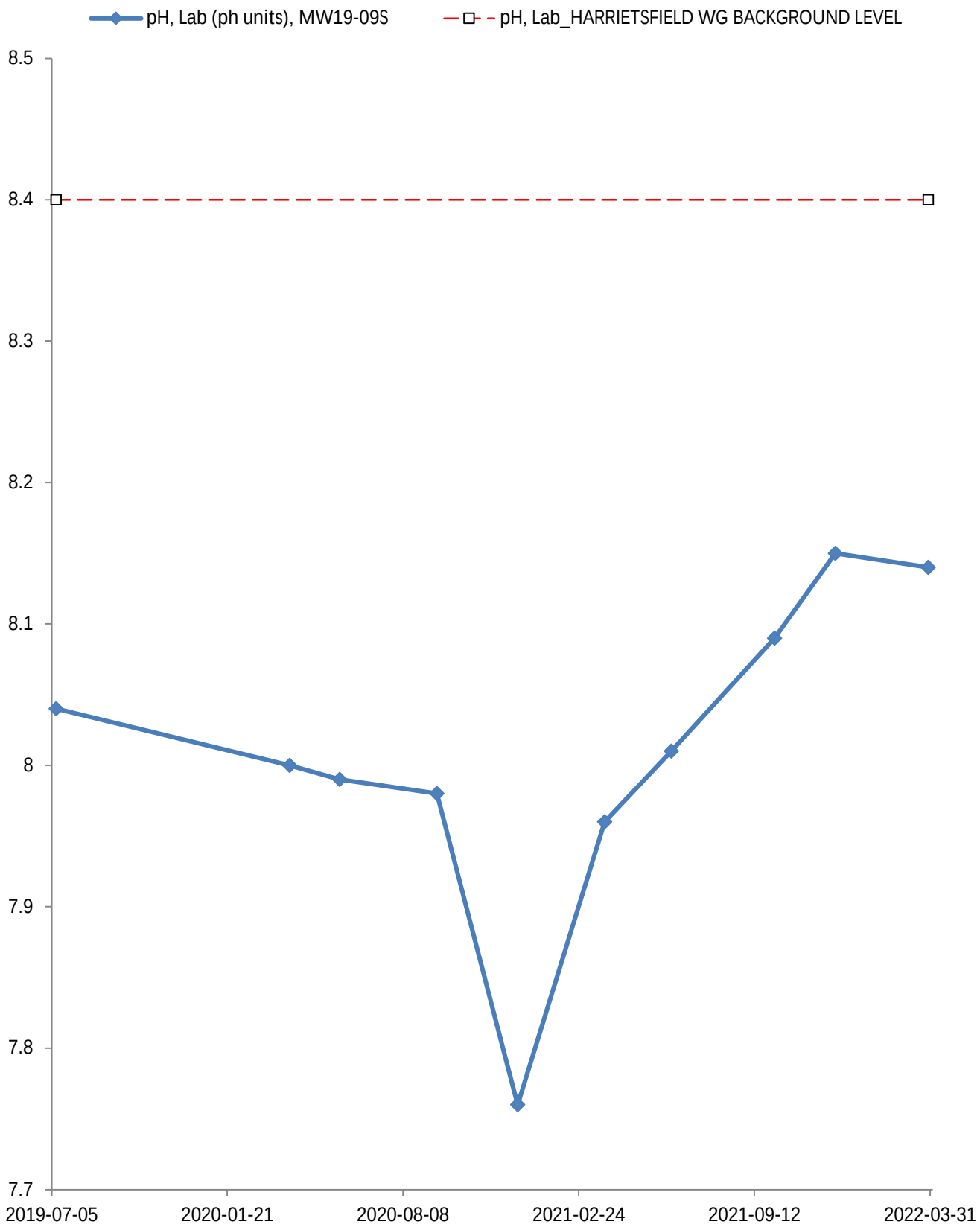
MW19-09S - Nitrite (as N)



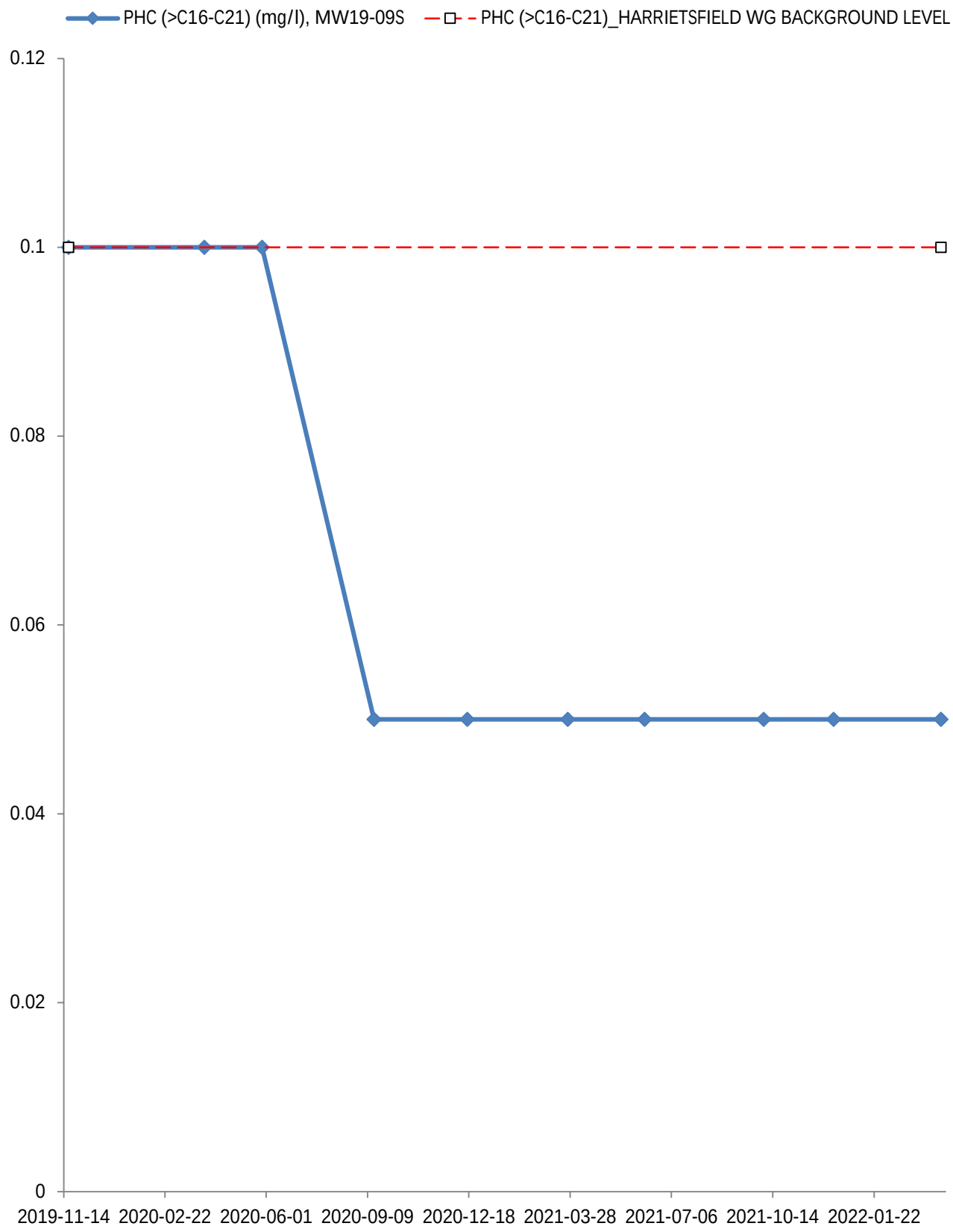
MW19-09S - Orthophosphate(as P)



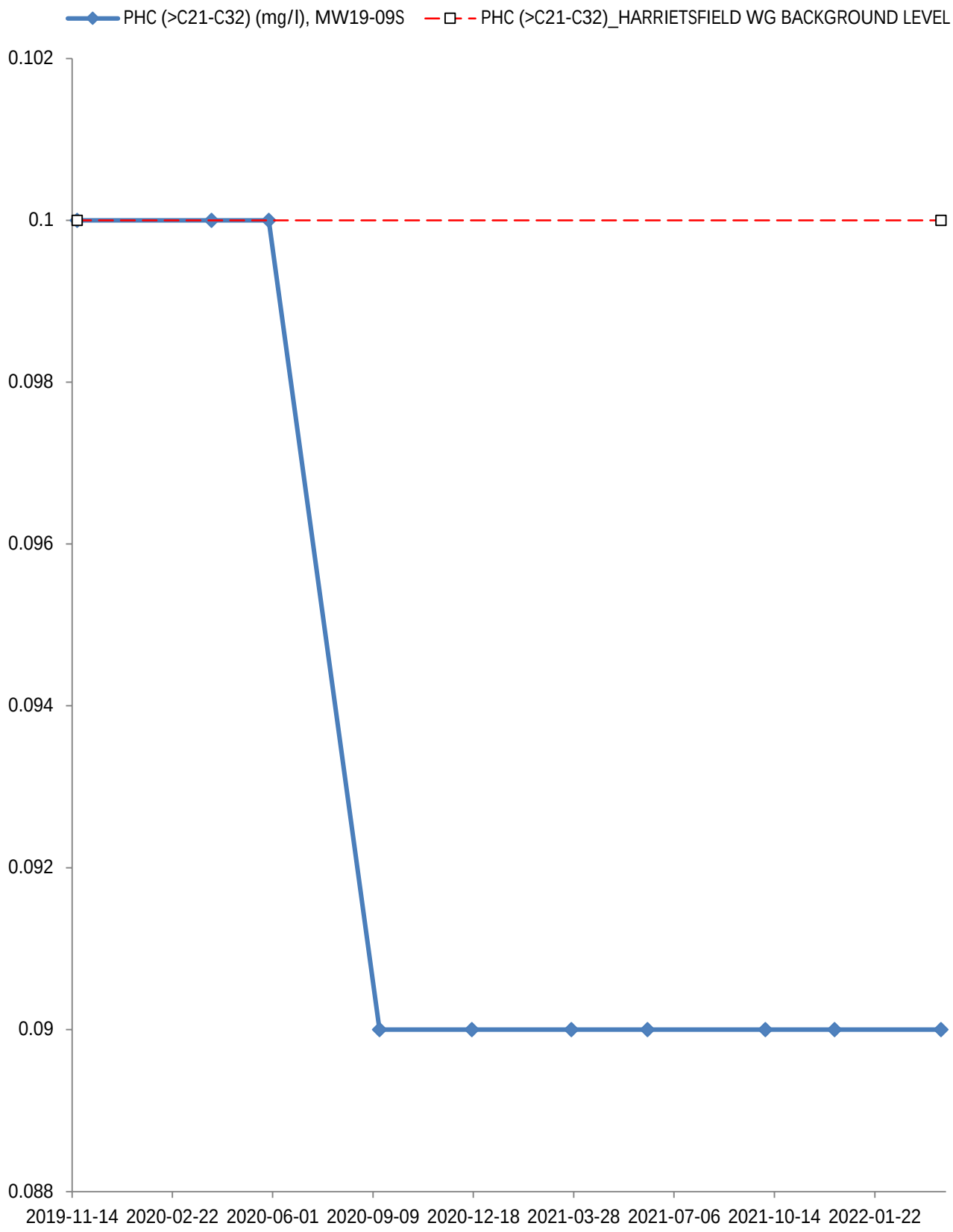
MW19-09S - pH, Lab



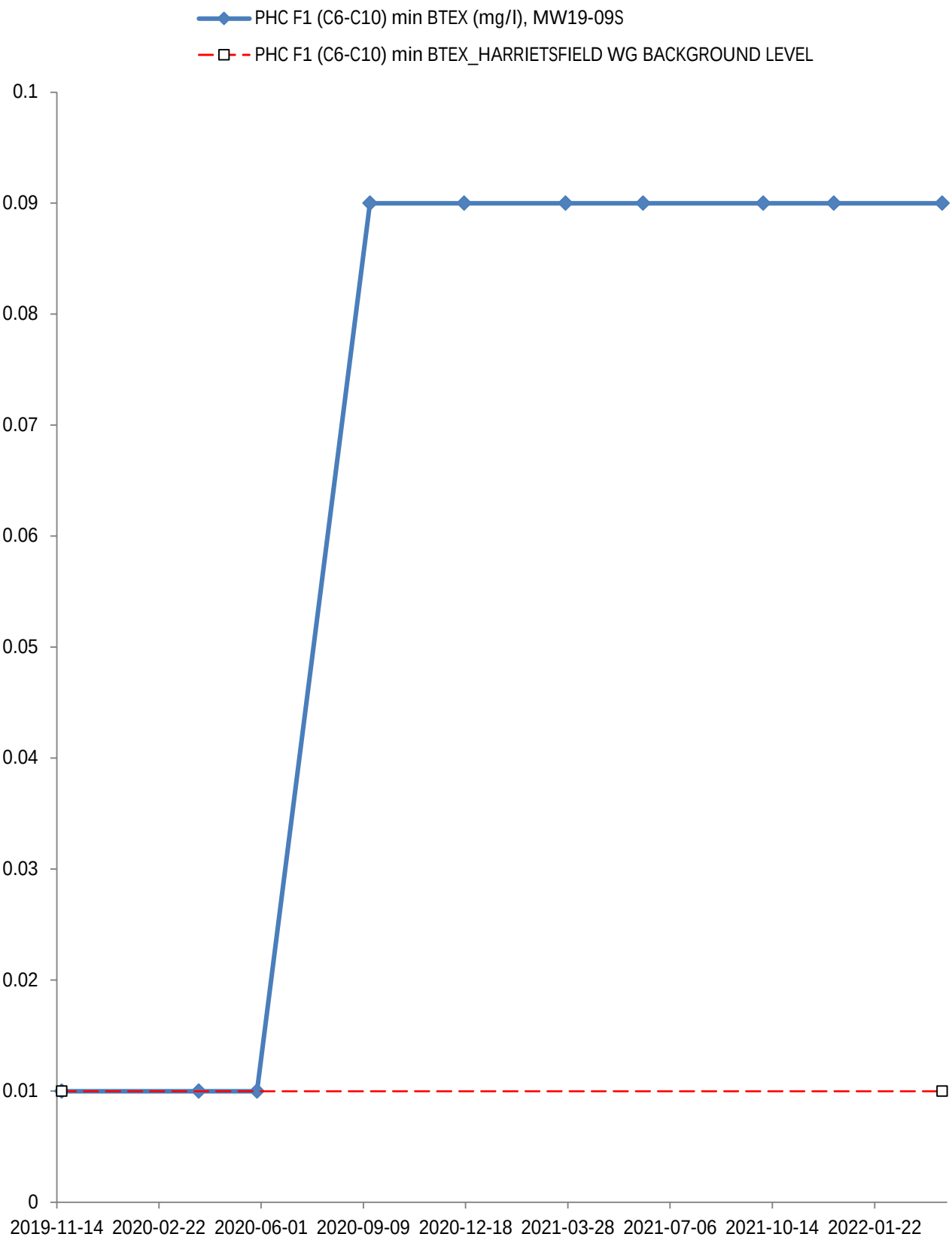
MW19-09S - PHC (>C16-C21)



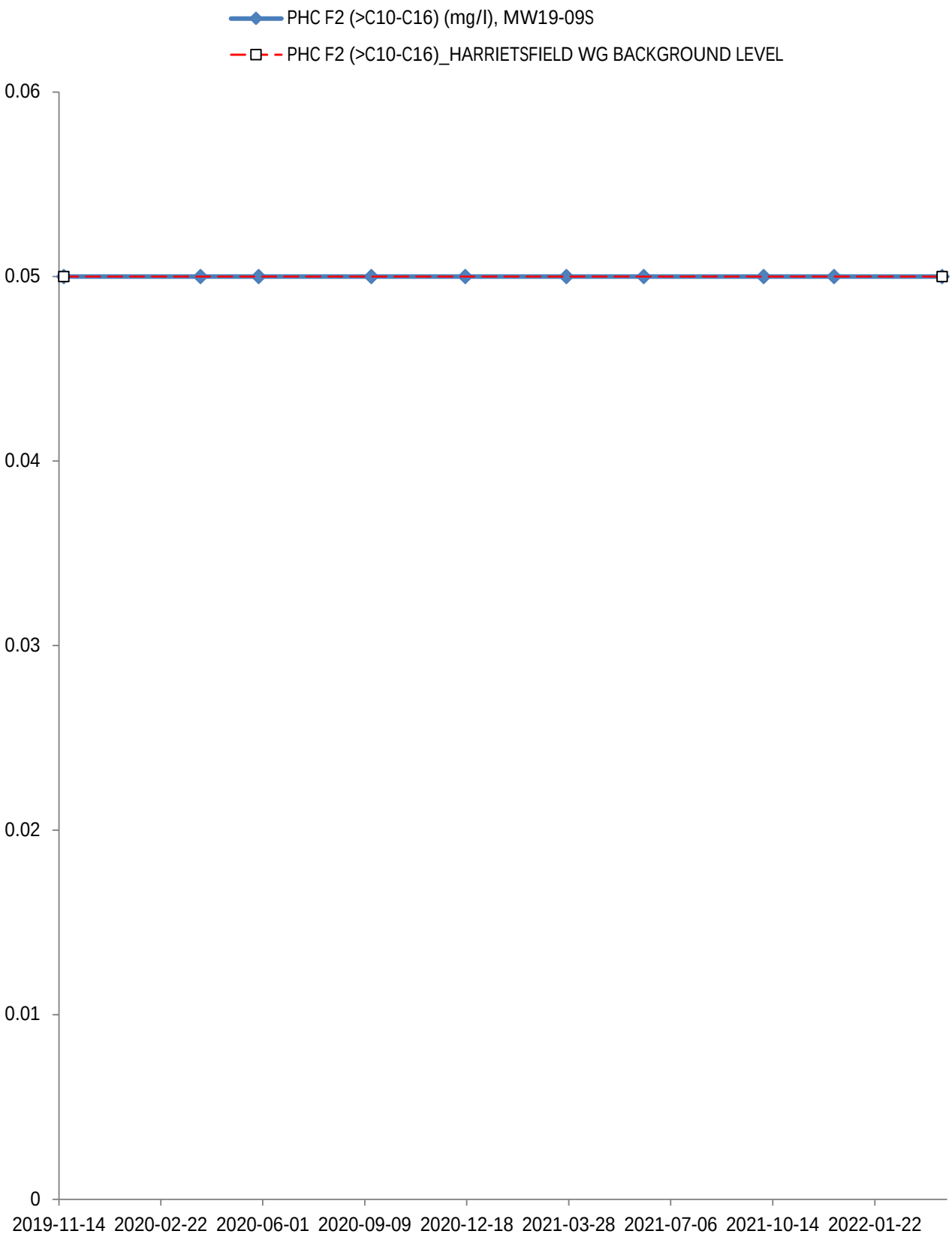
MW19-09S - PHC (>C21-C32)



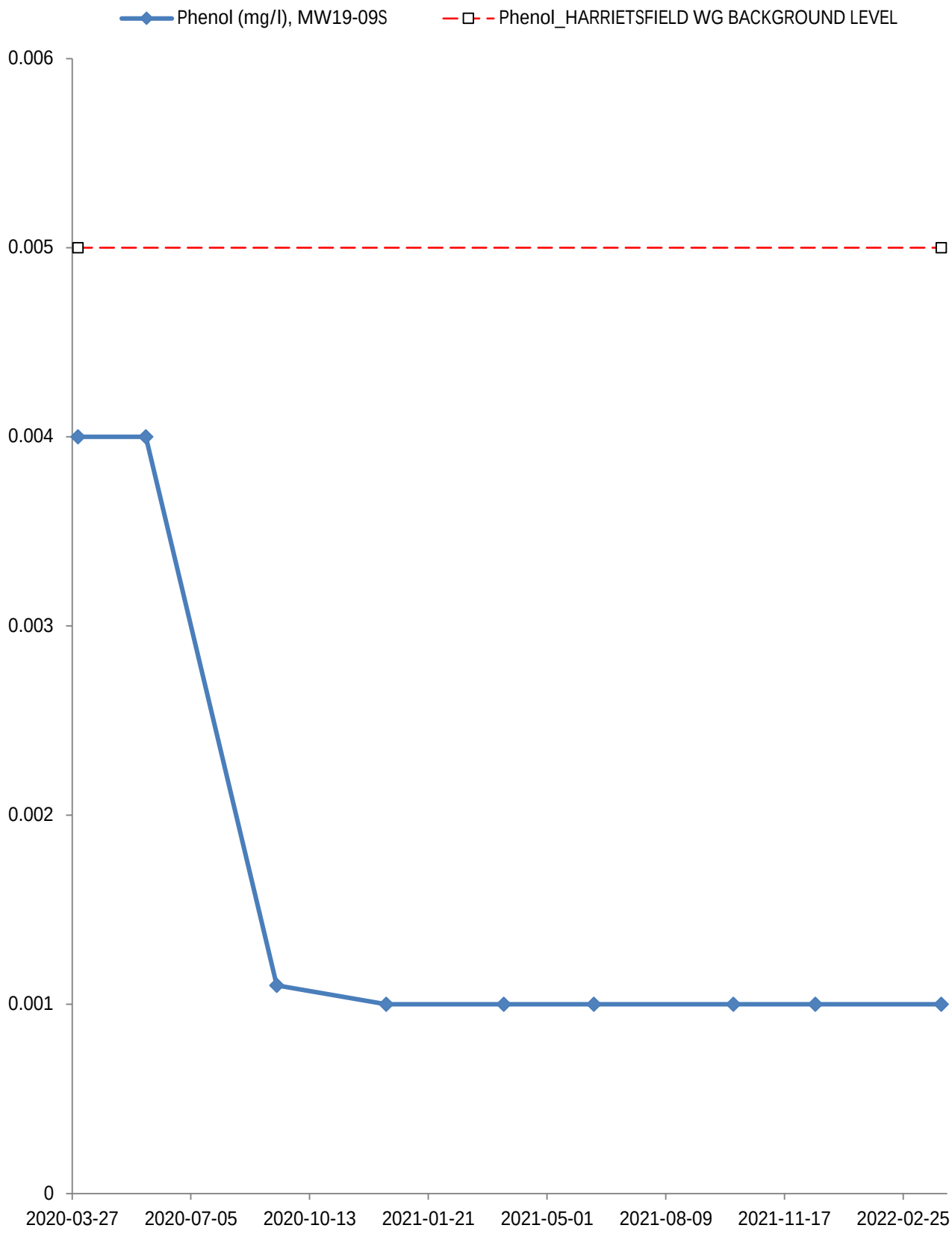
MW19-09S - PHC F1 (C6-C10) min BTEX



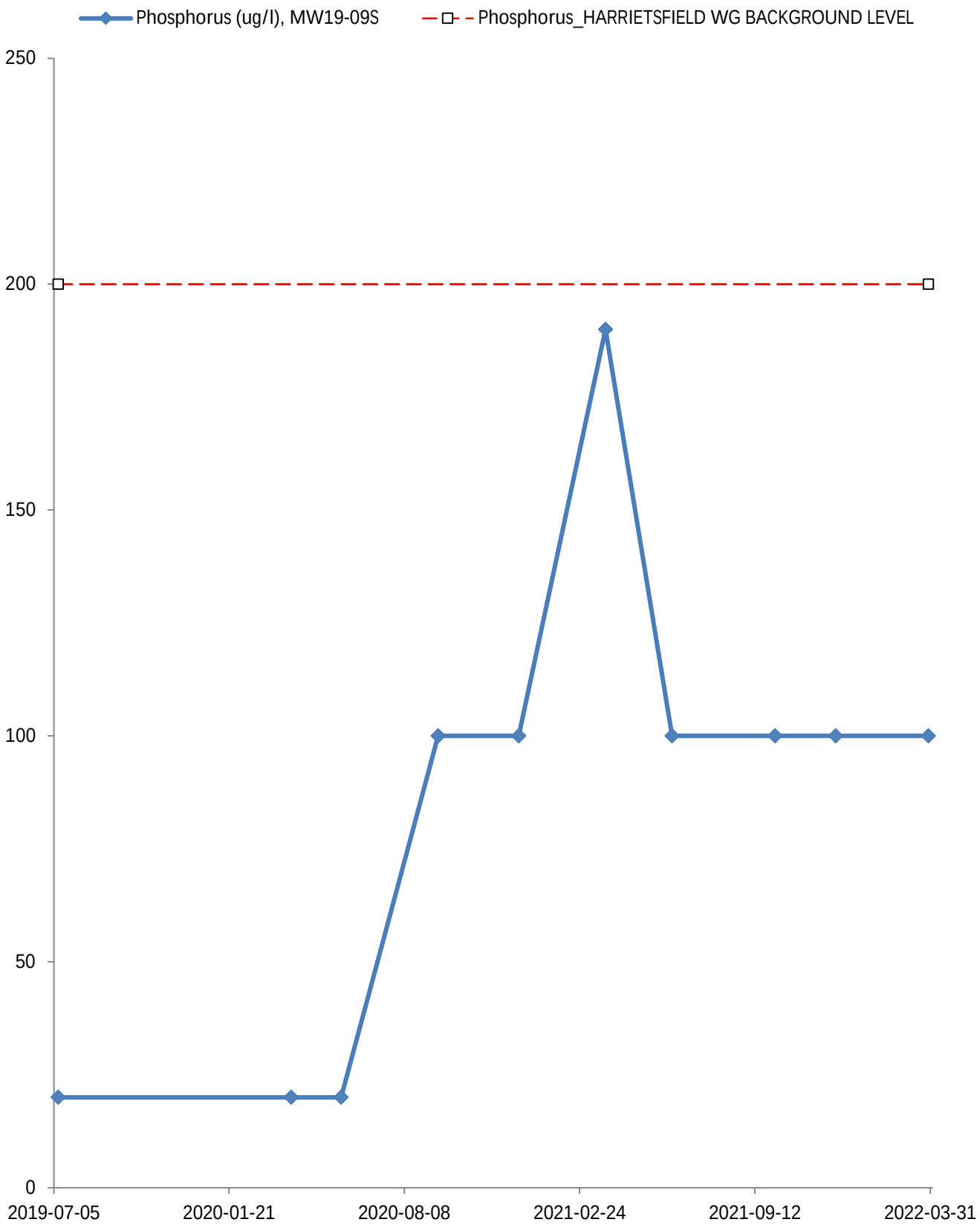
MW19-09S - PHC F2 (>C10-C16)



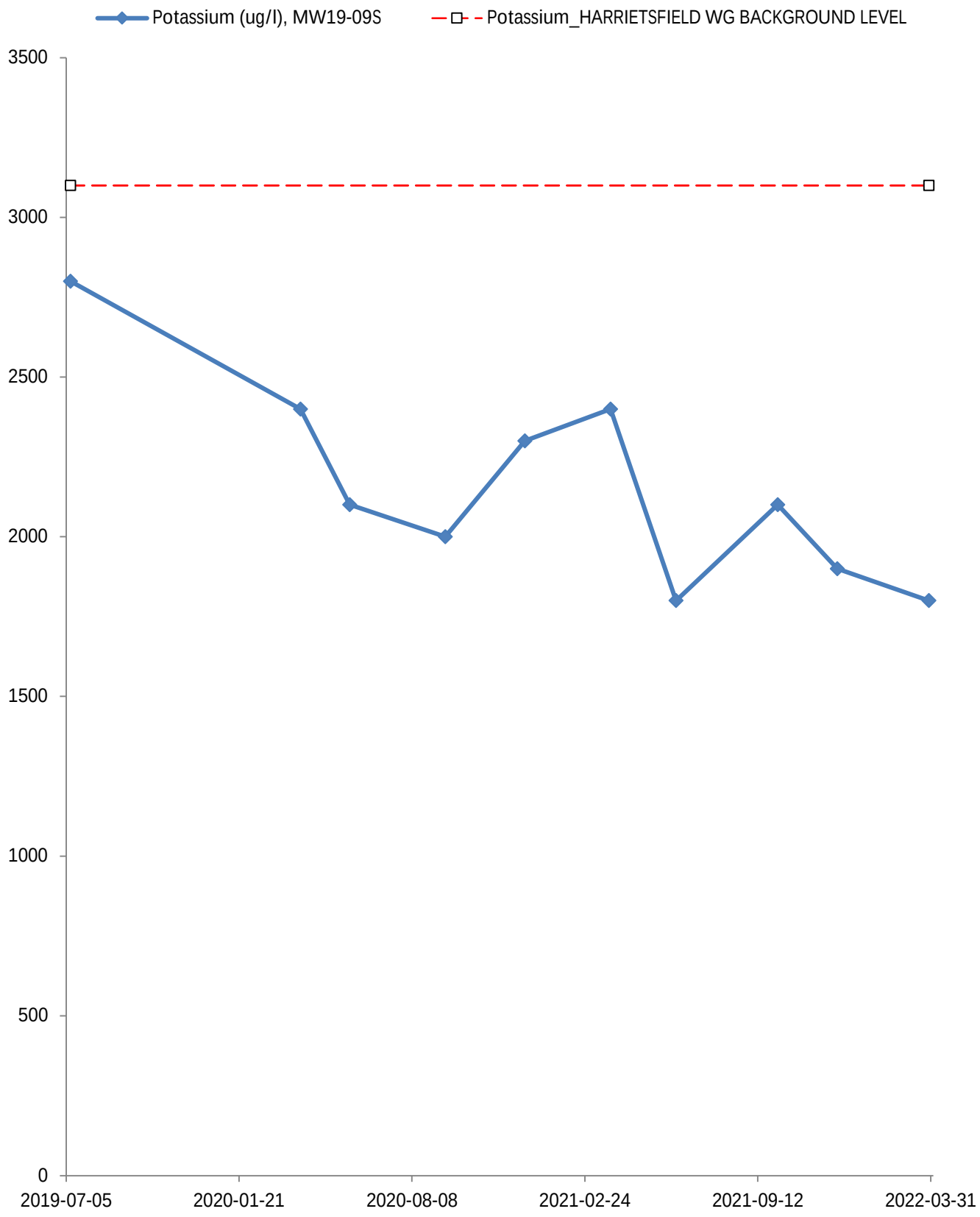
MW19-09S - Phenol



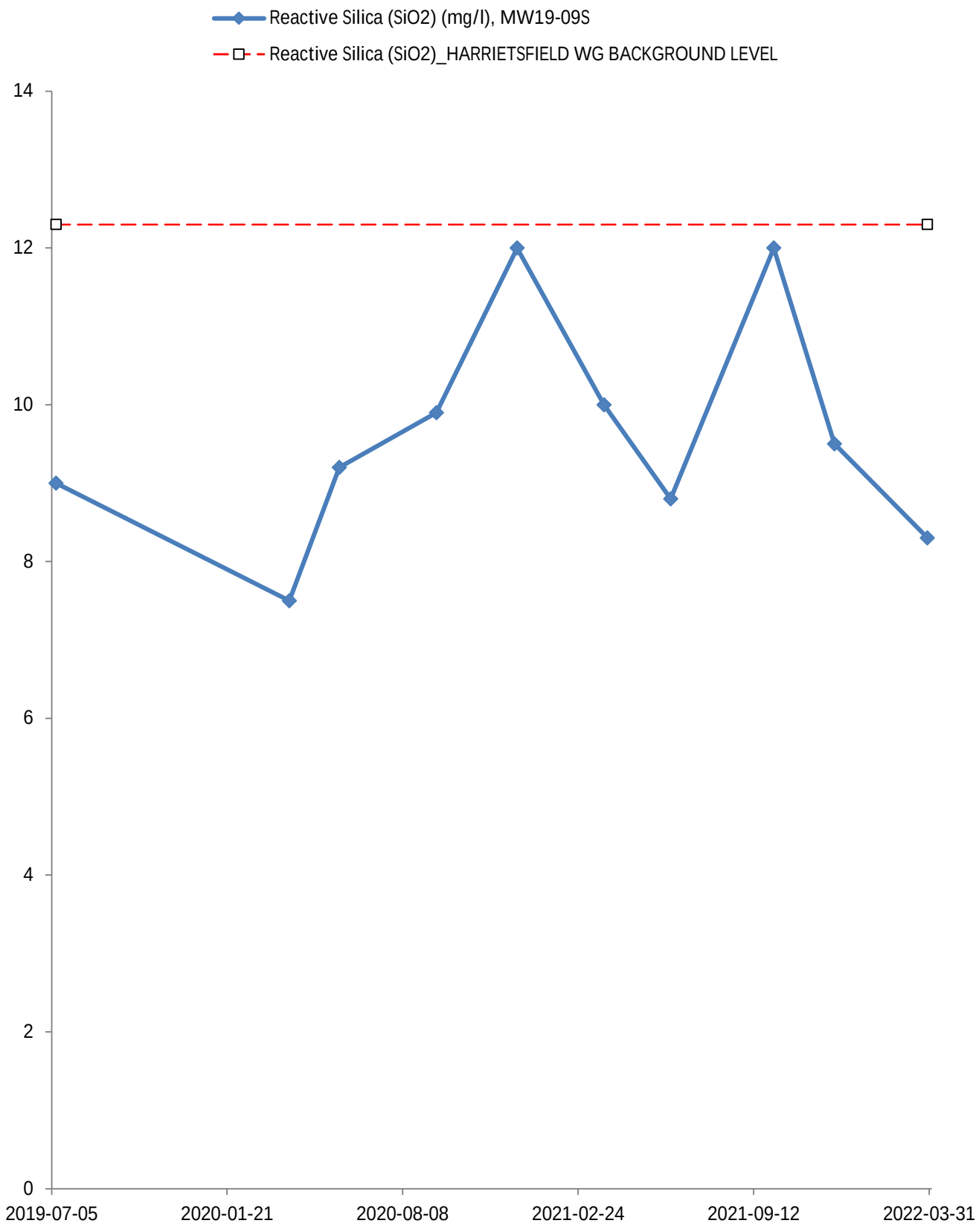
MW19-09S - Phosphorus



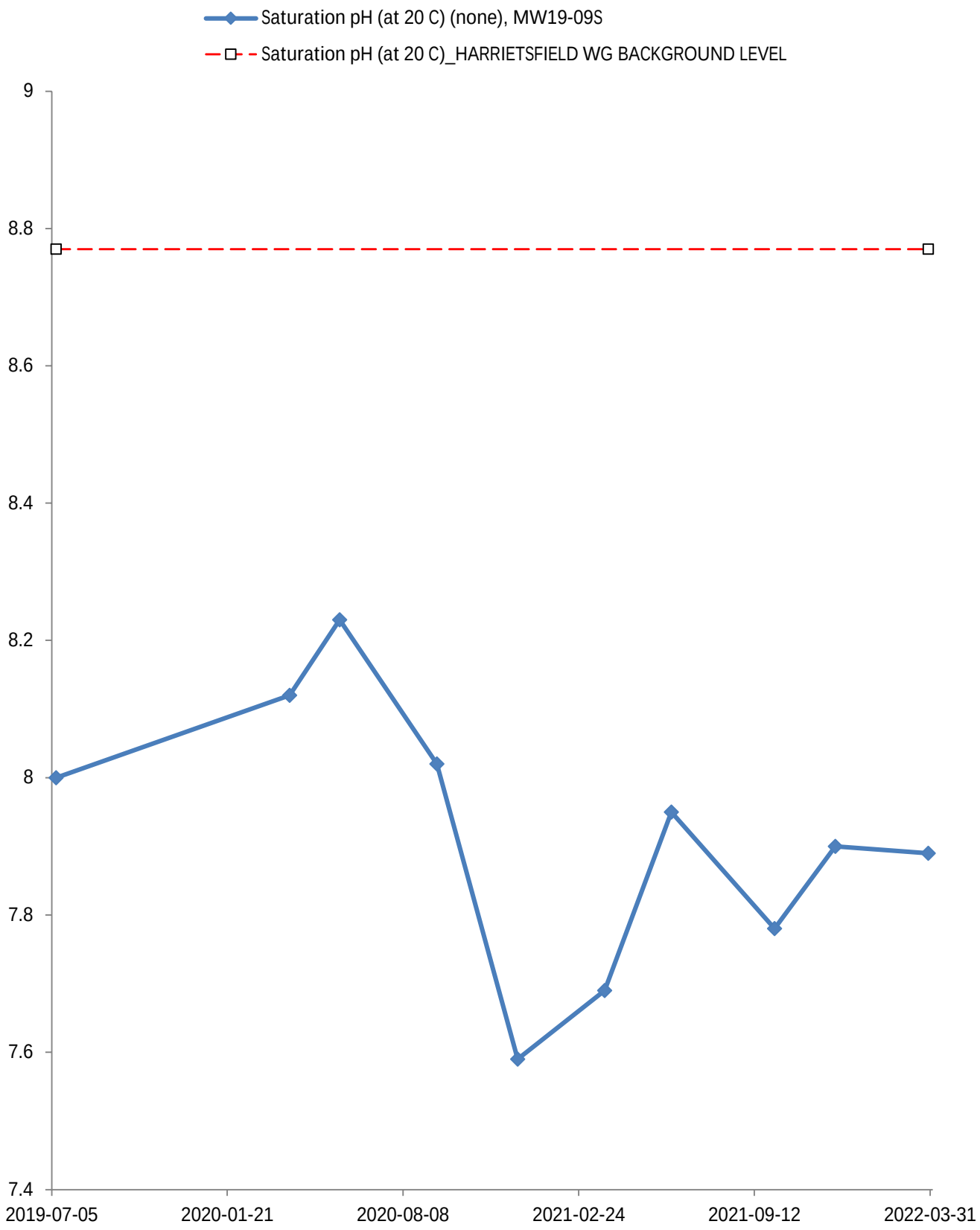
MW19-09S - Potassium



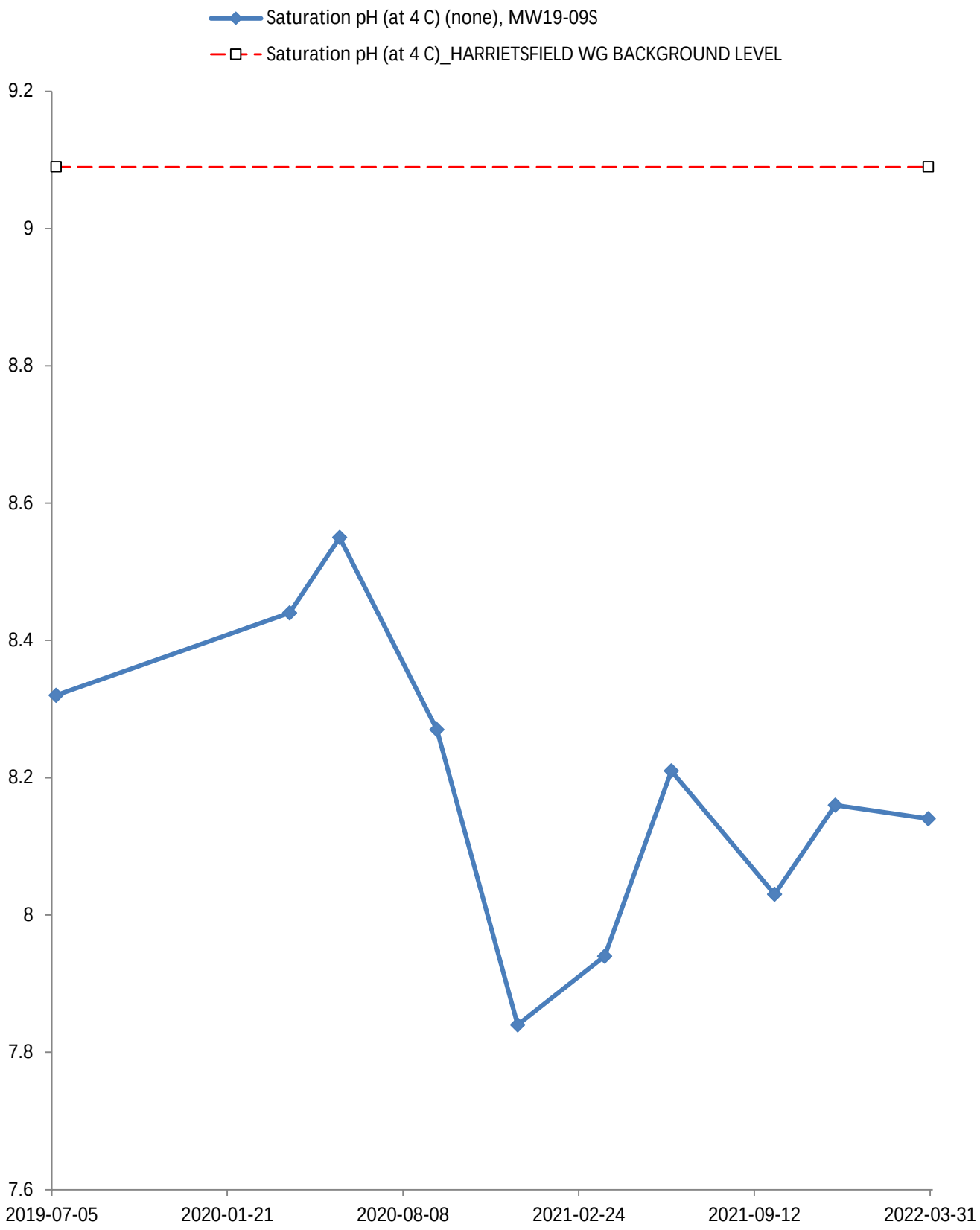
MW19-09S - Reactive Silica (SiO2)



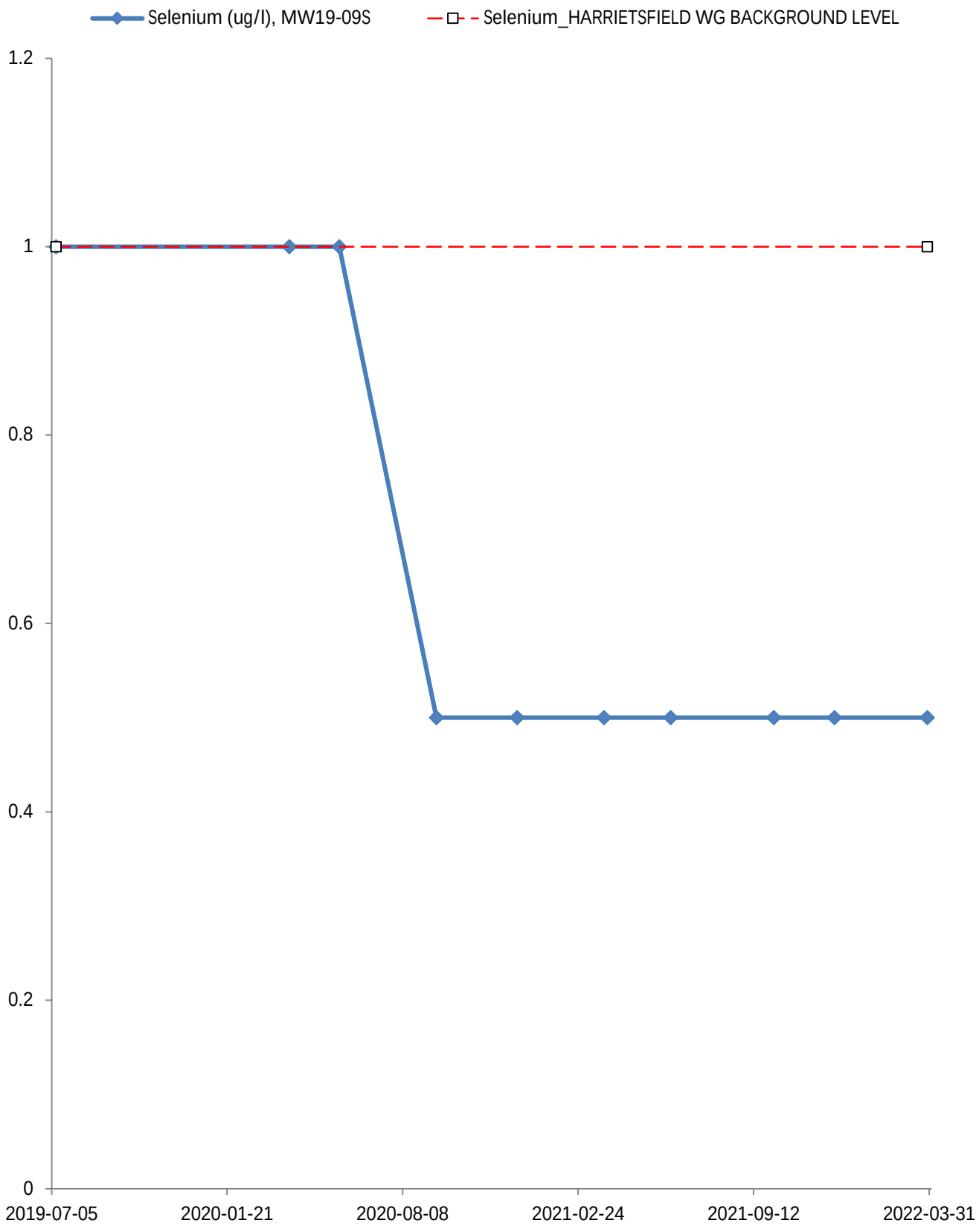
MW19-09S - Saturation pH (at 20 C)



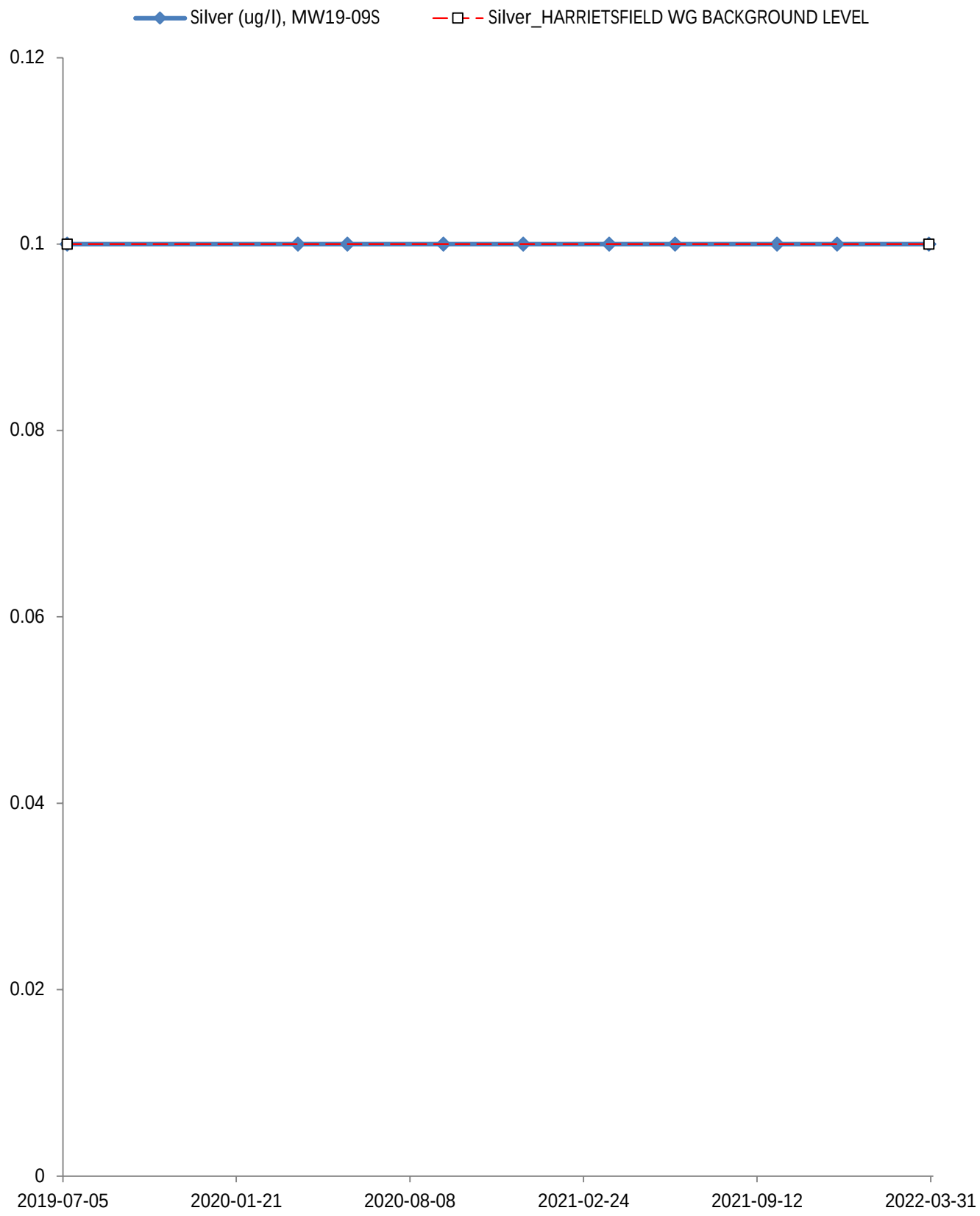
MW19-09S - Saturation pH (at 4 C)



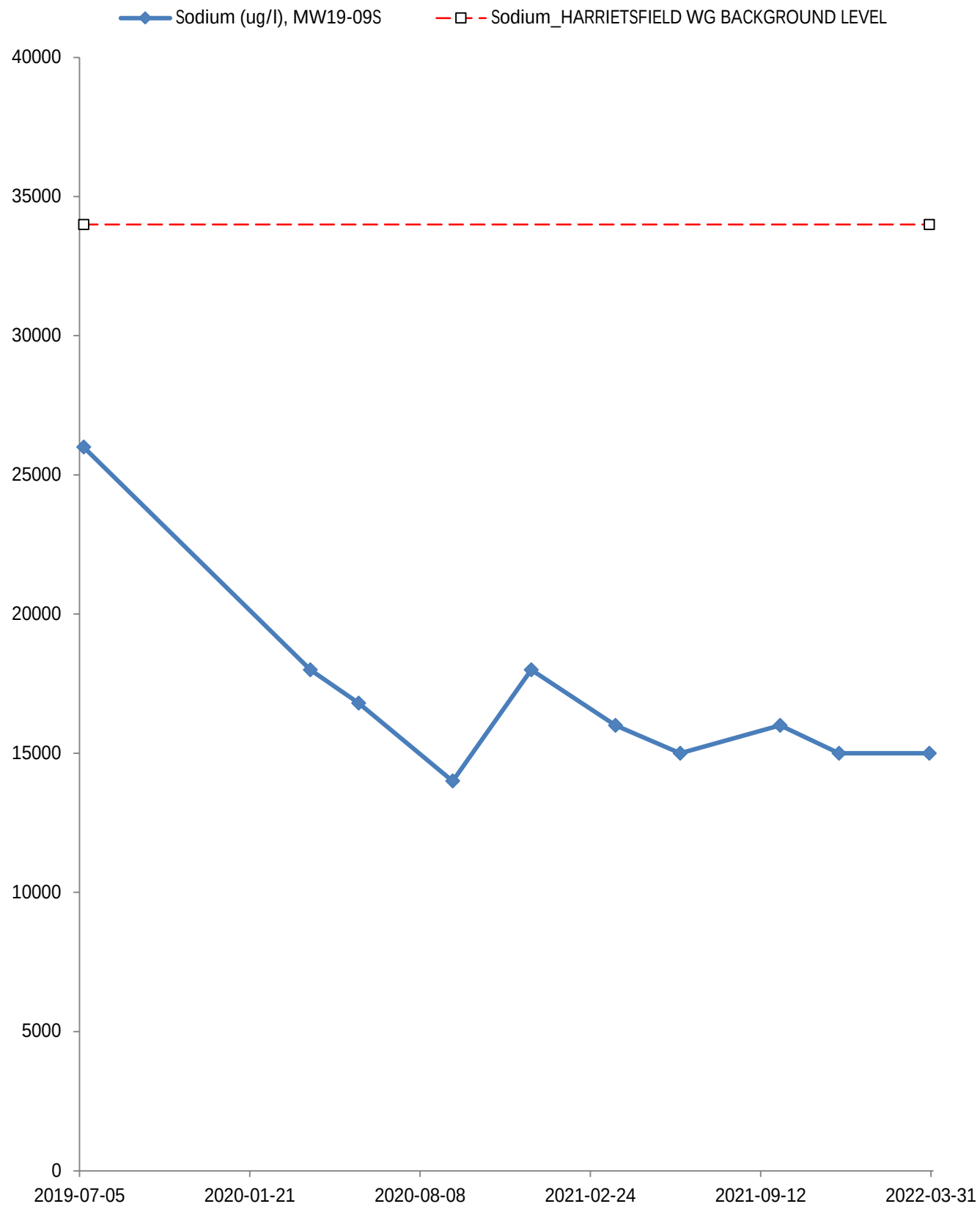
MW19-09S - Selenium



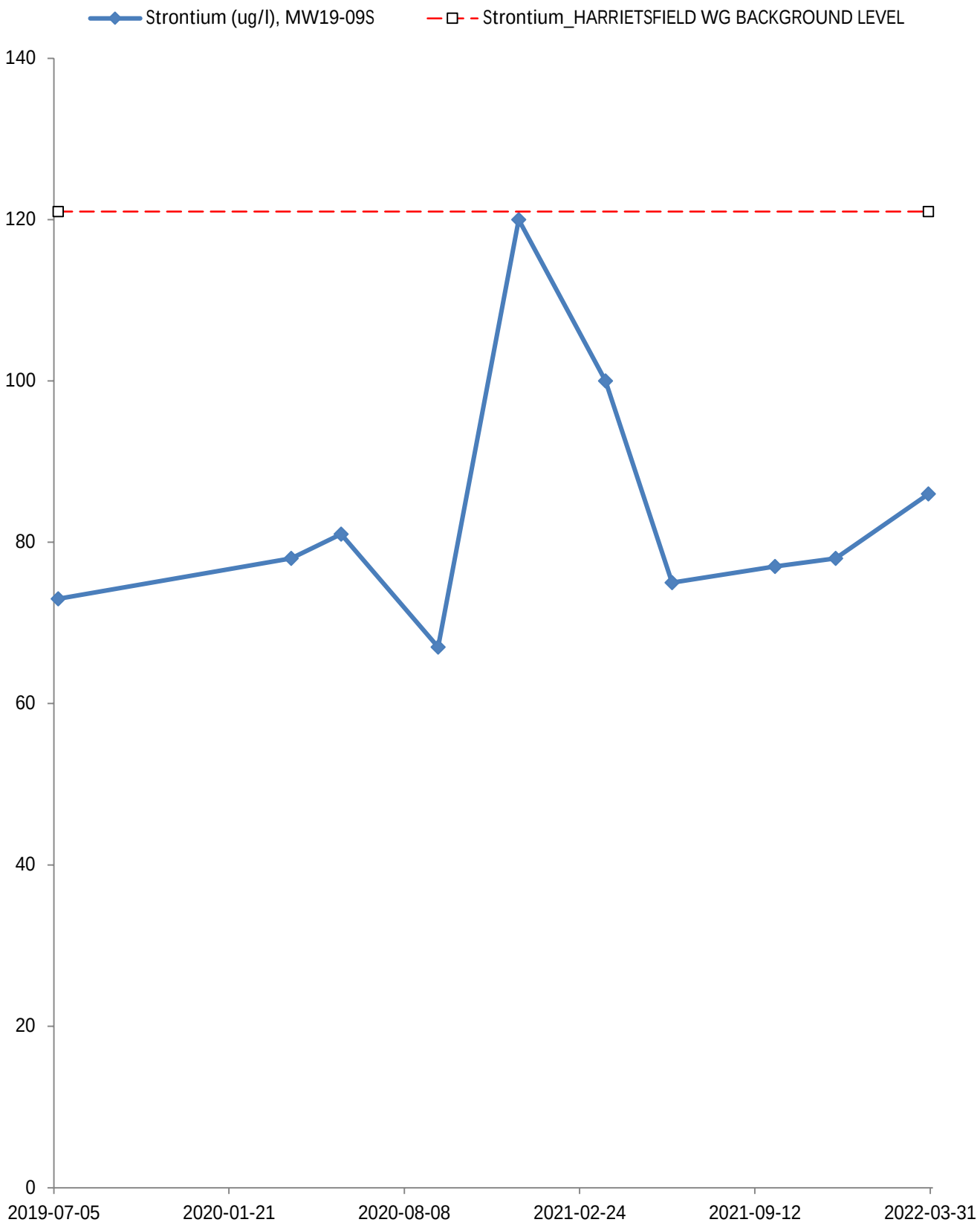
MW19-09S - Silver



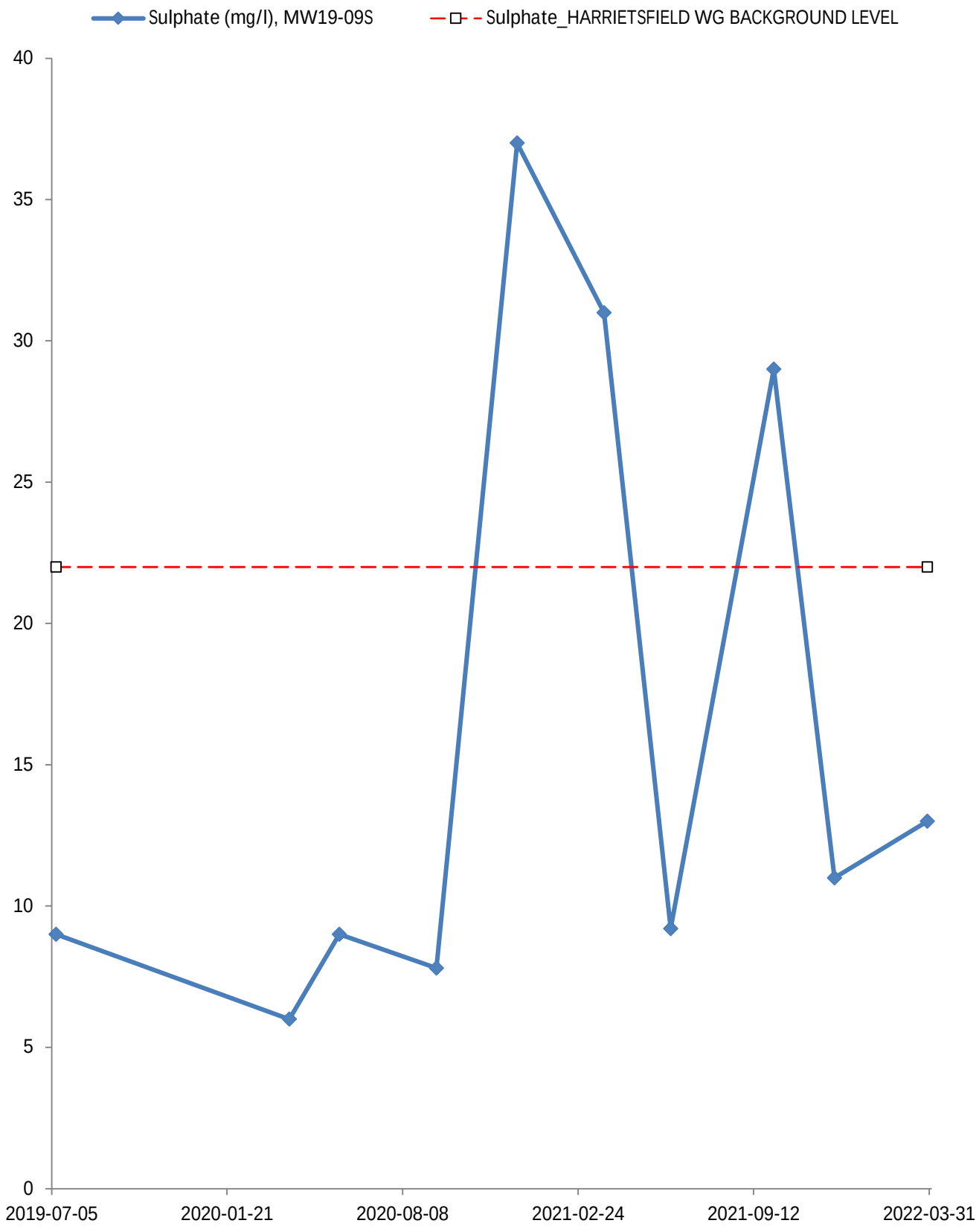
MW19-09S - Sodium



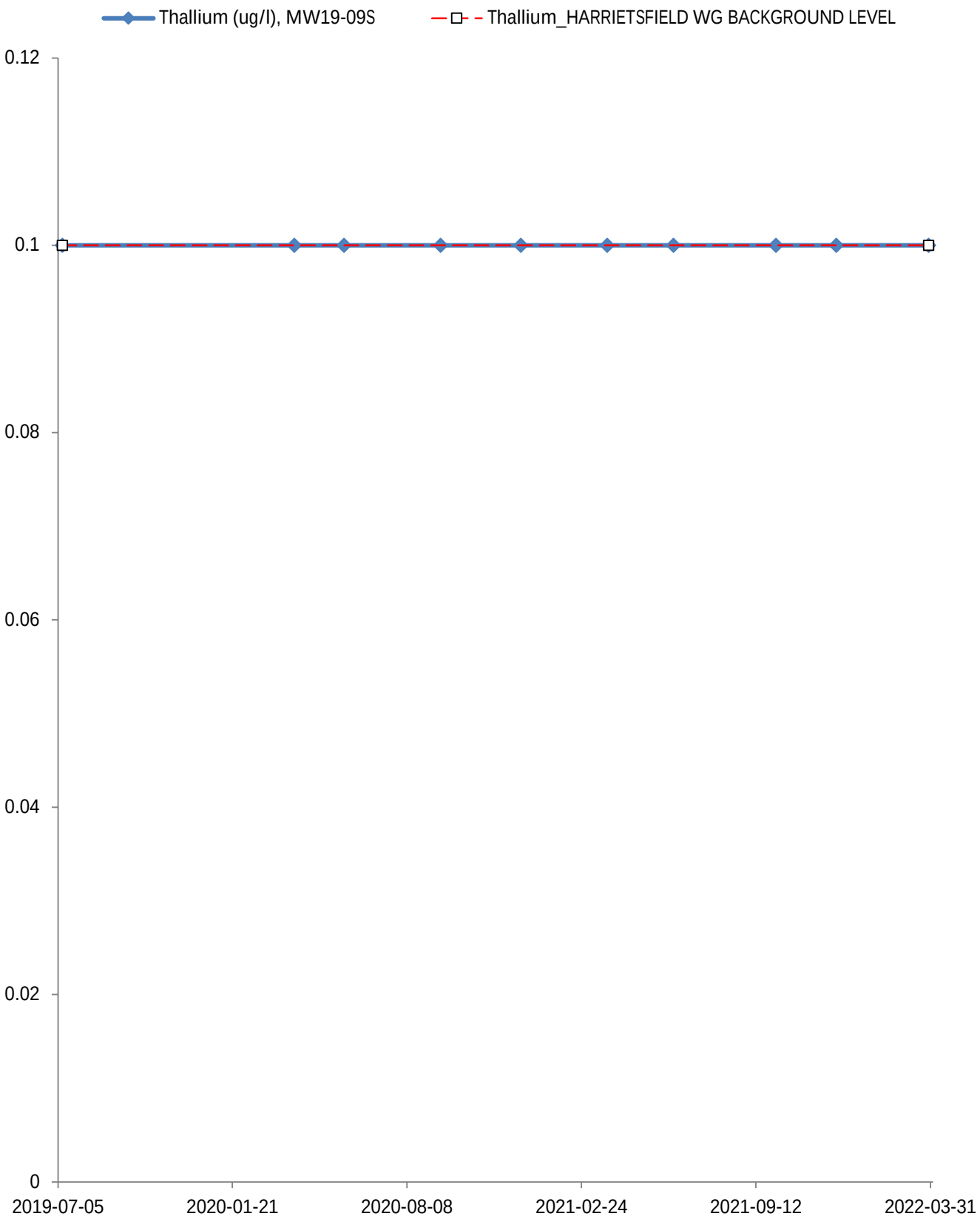
MW19-09S - Strontium



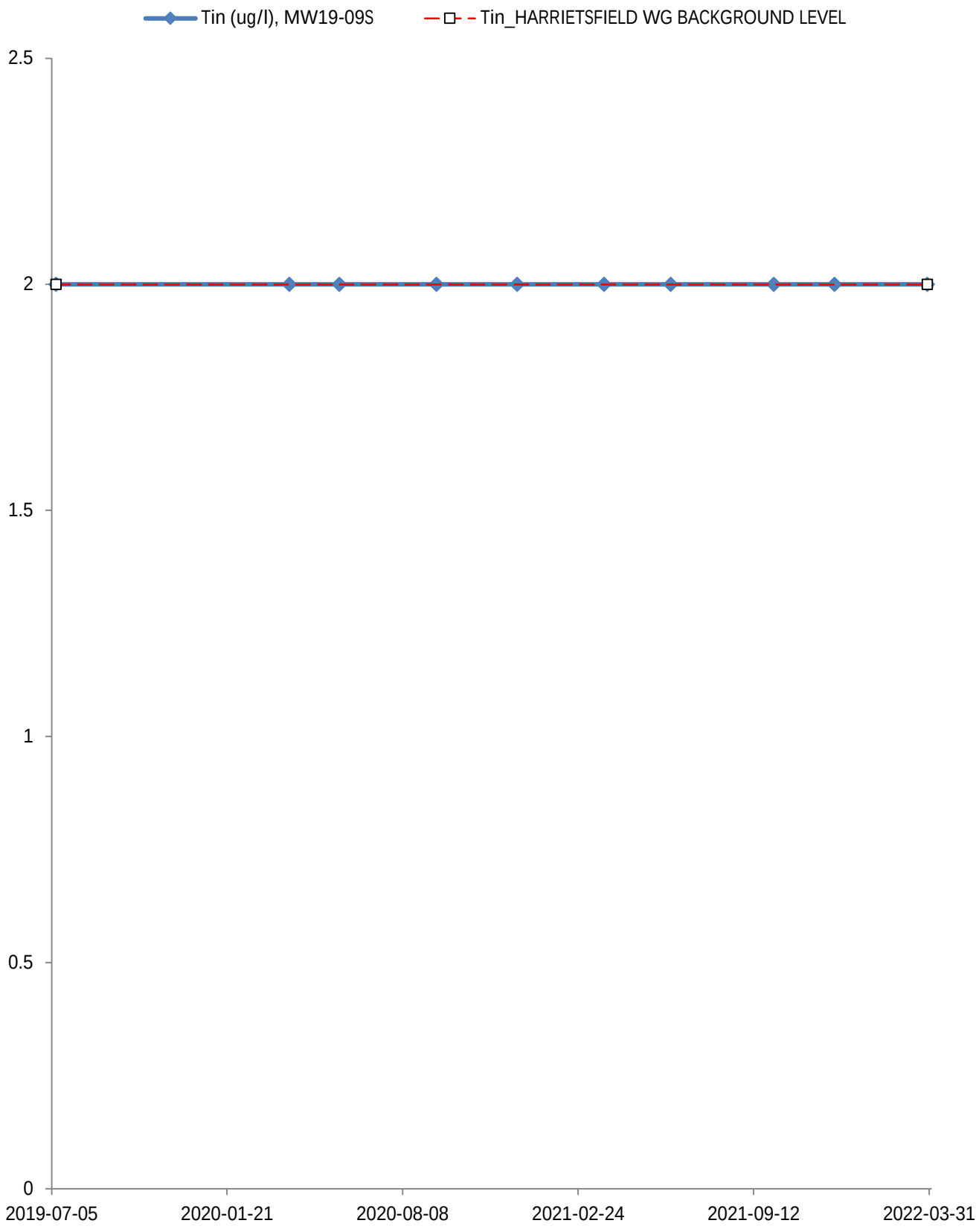
MW19-09S - Sulphate



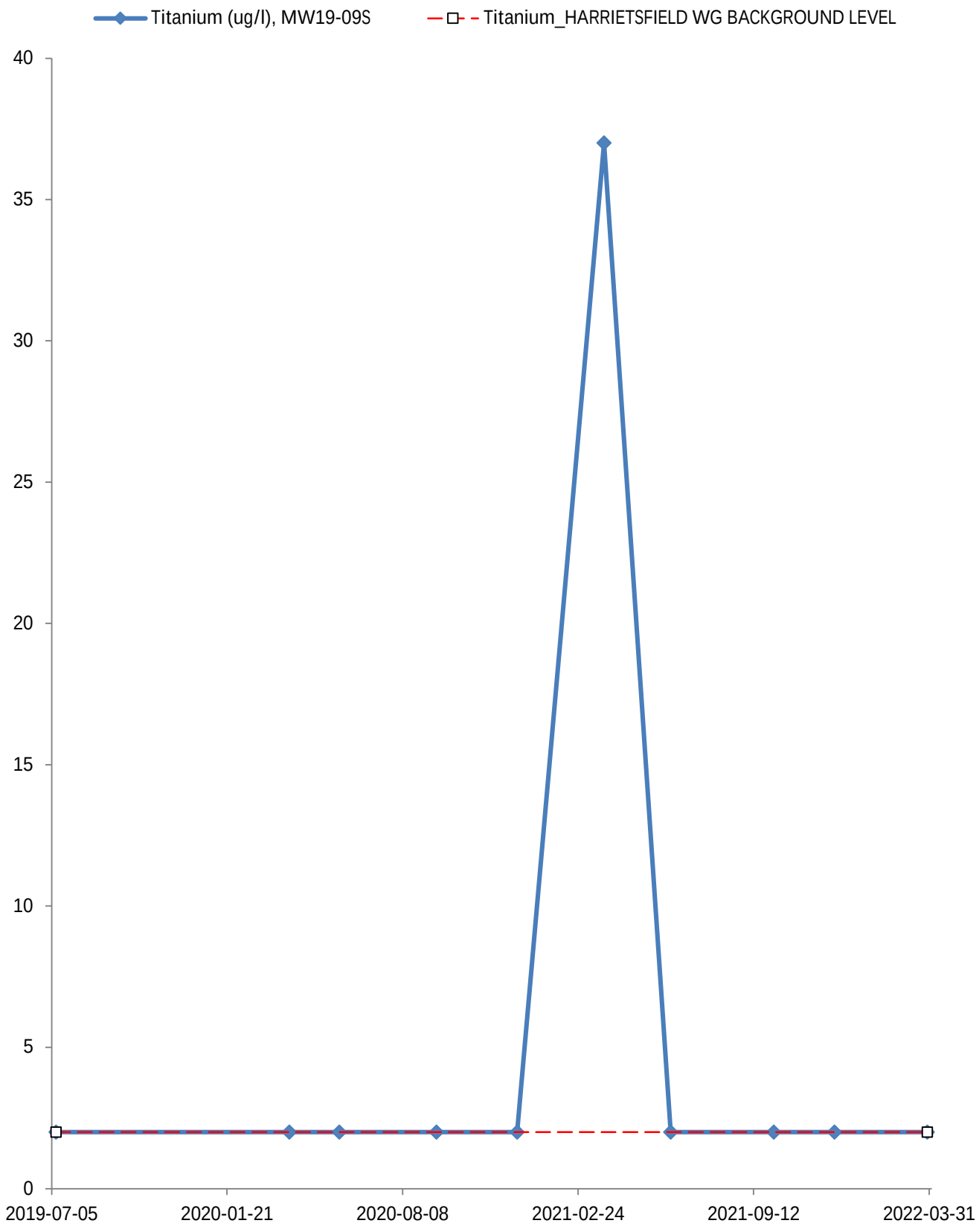
MW19-09S - Thallium



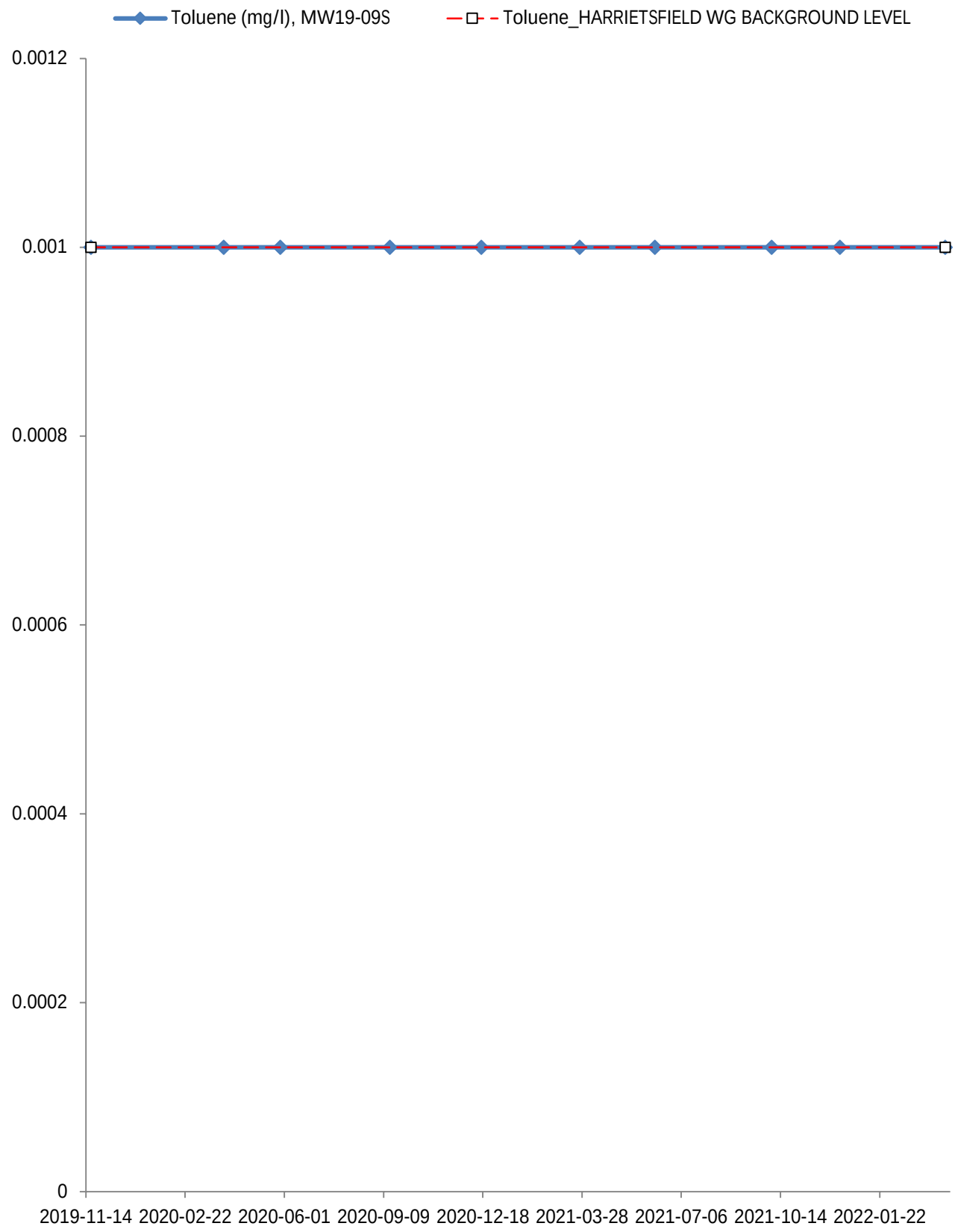
MW19-09S - Tin


Tin (ug/l), MW19-09S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2019-07-05
2020-01-21
2020-08-08
2021-02-24
2021-09-12
2022-03-31

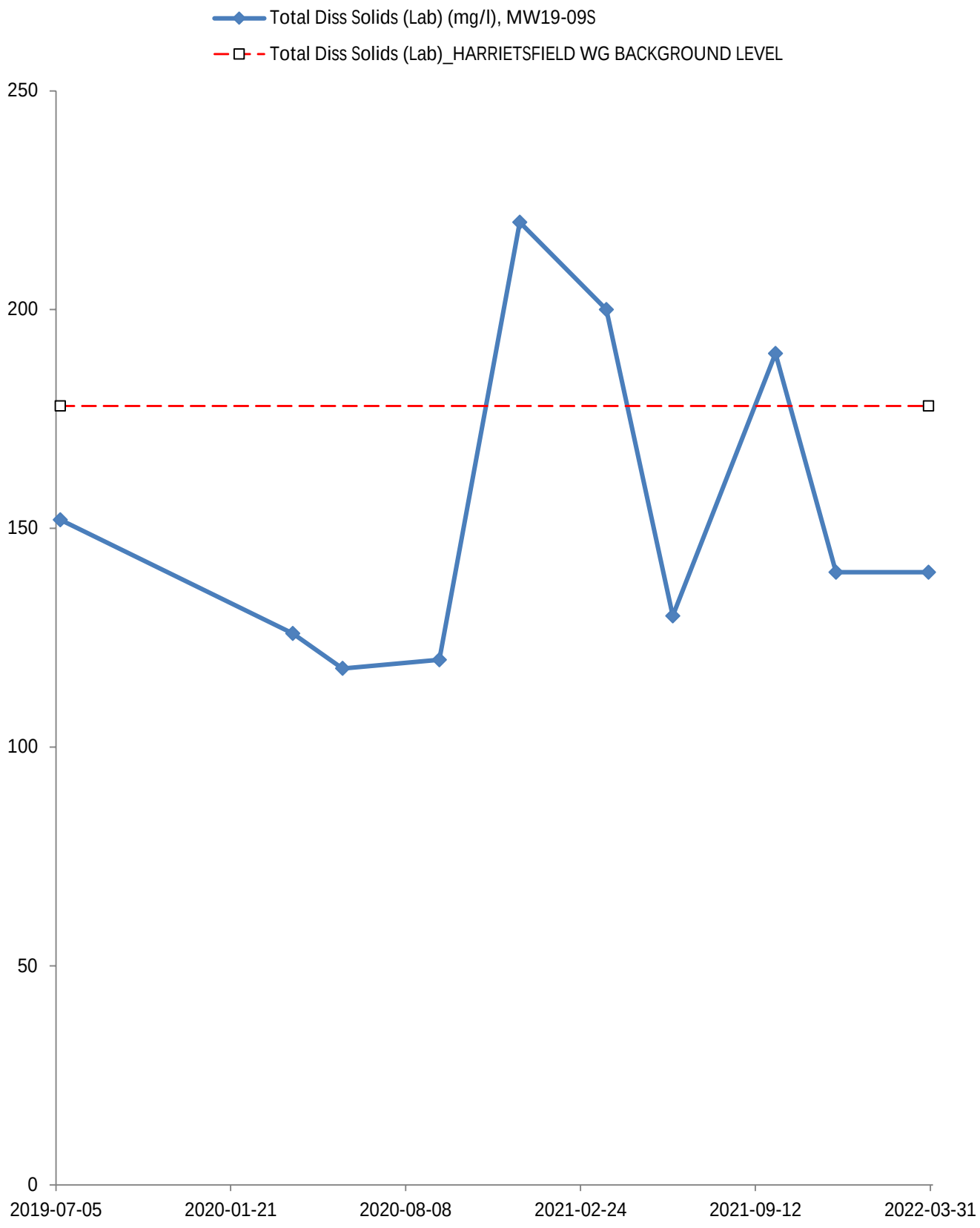
MW19-09S - Titanium



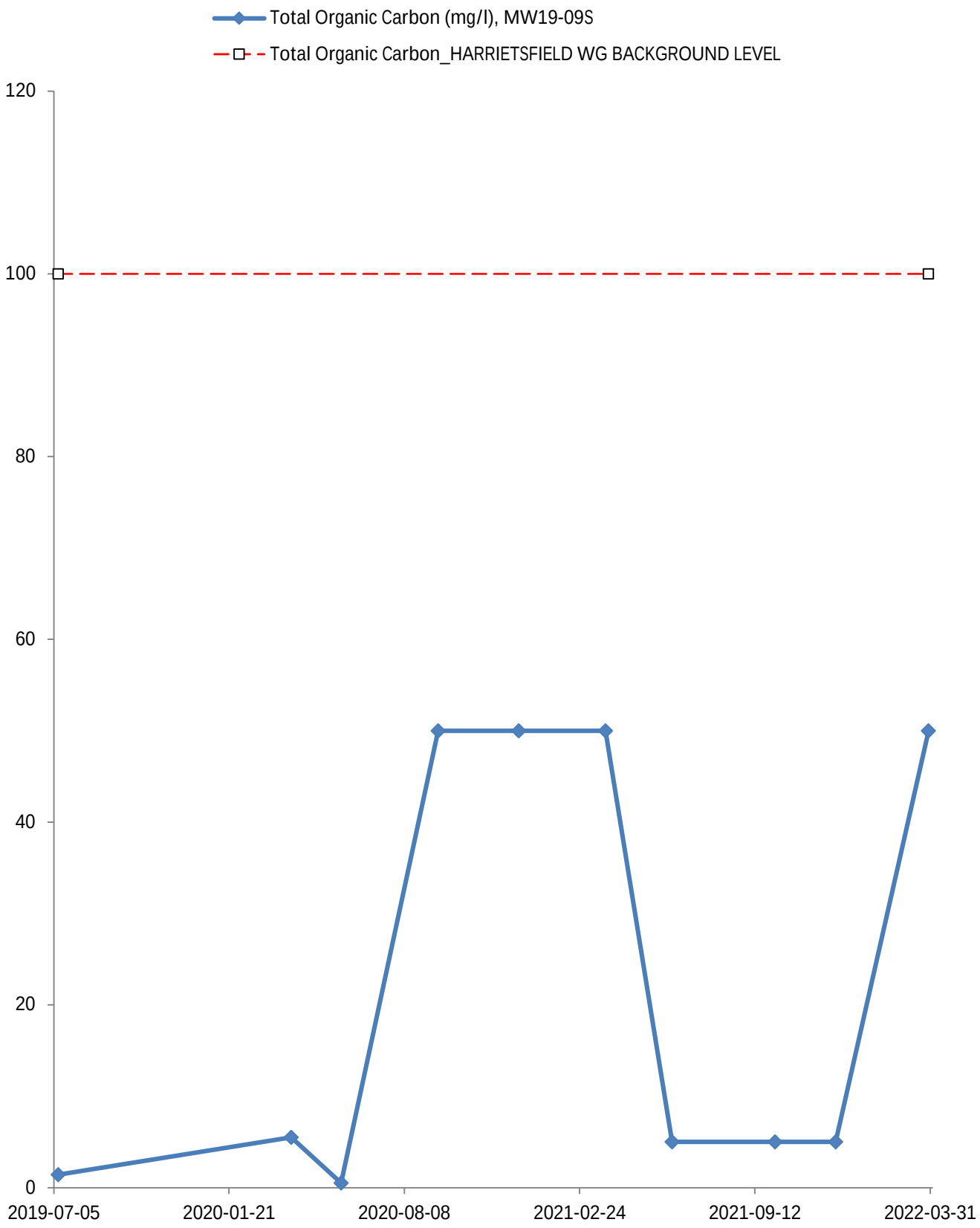
MW19-09S - Toluene



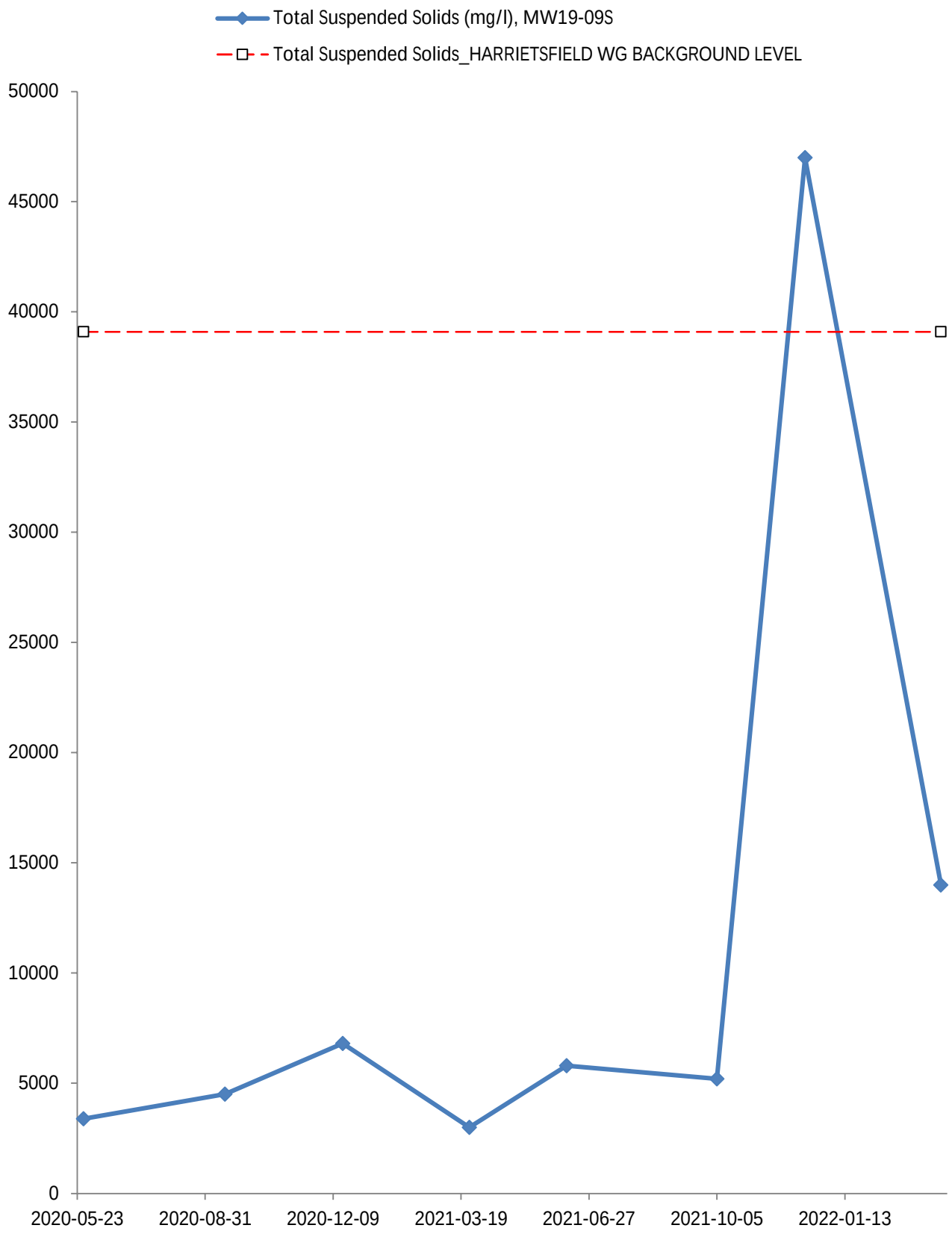
MW19-09S - Total Diss Solids (Lab)



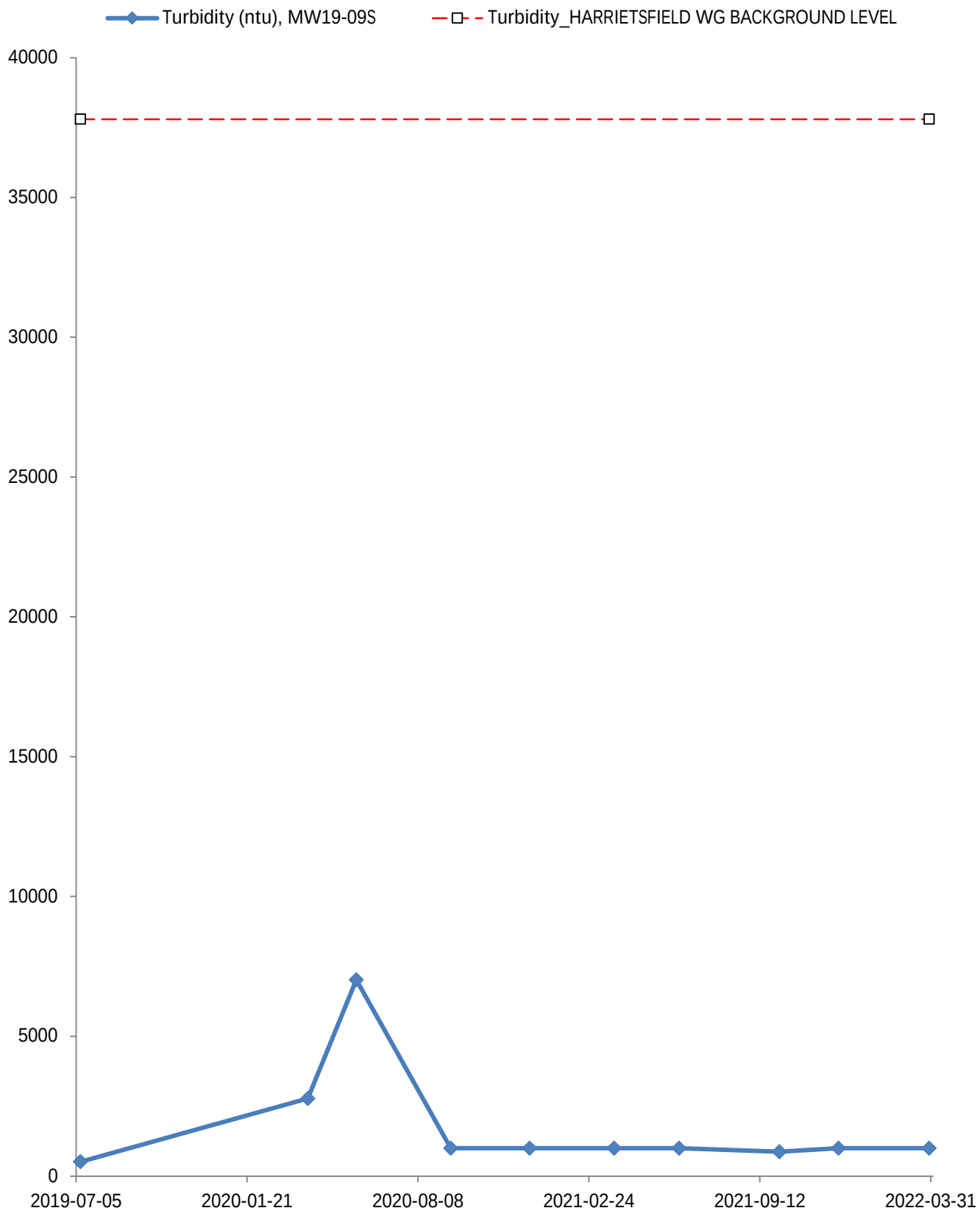
MW19-09S - Total Organic Carbon



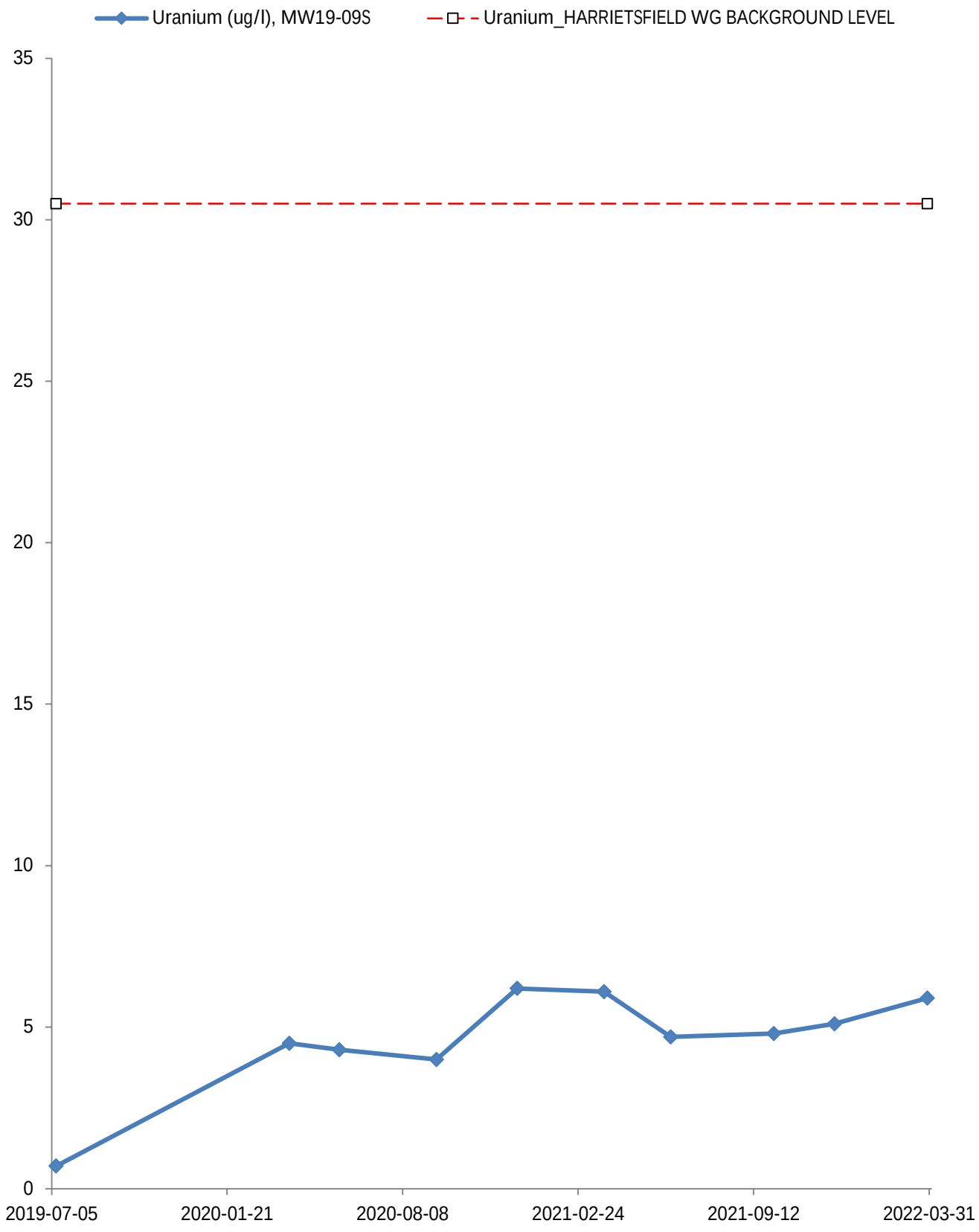
MW19-09S - Total Suspended Solids



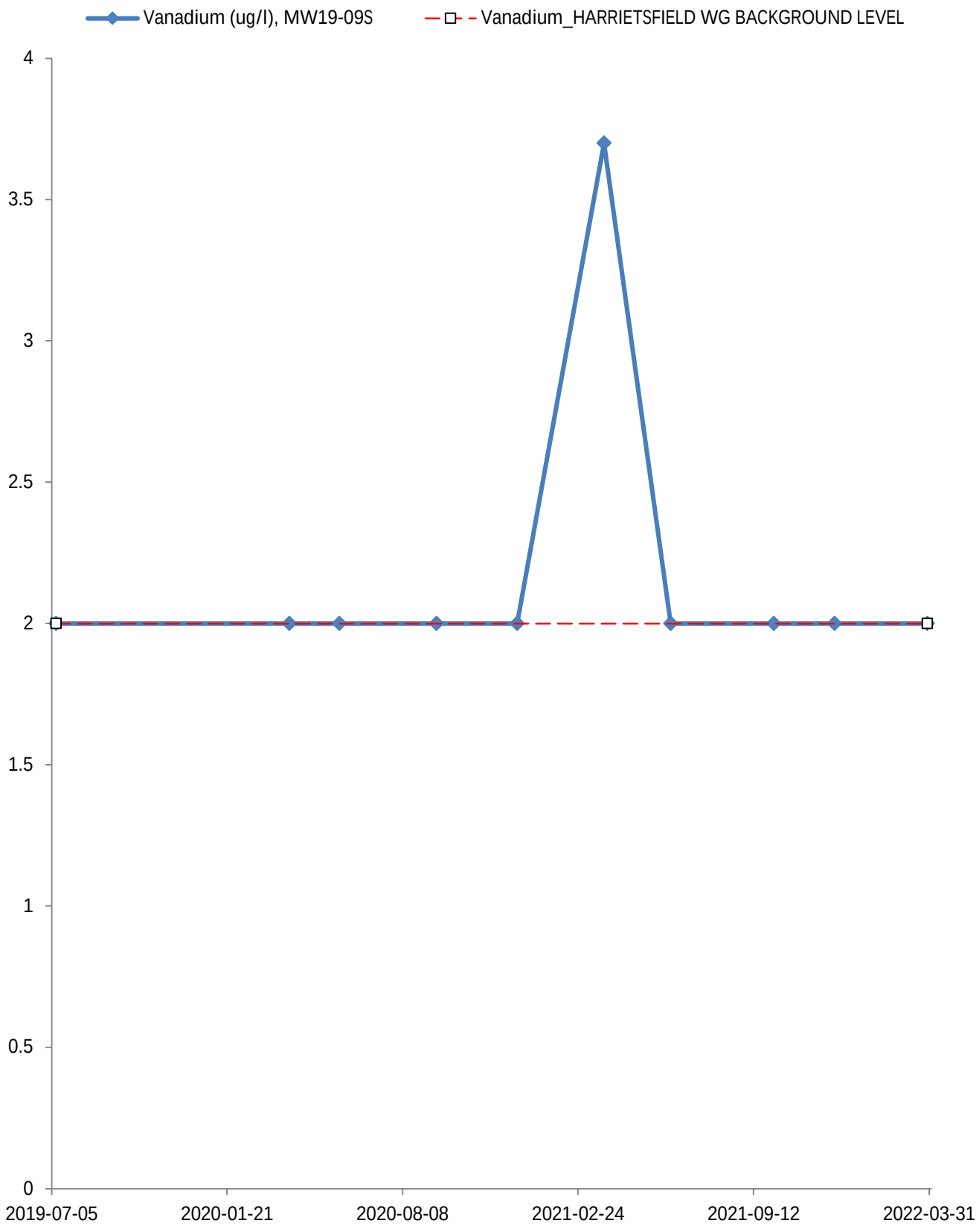
MW19-09S - Turbidity



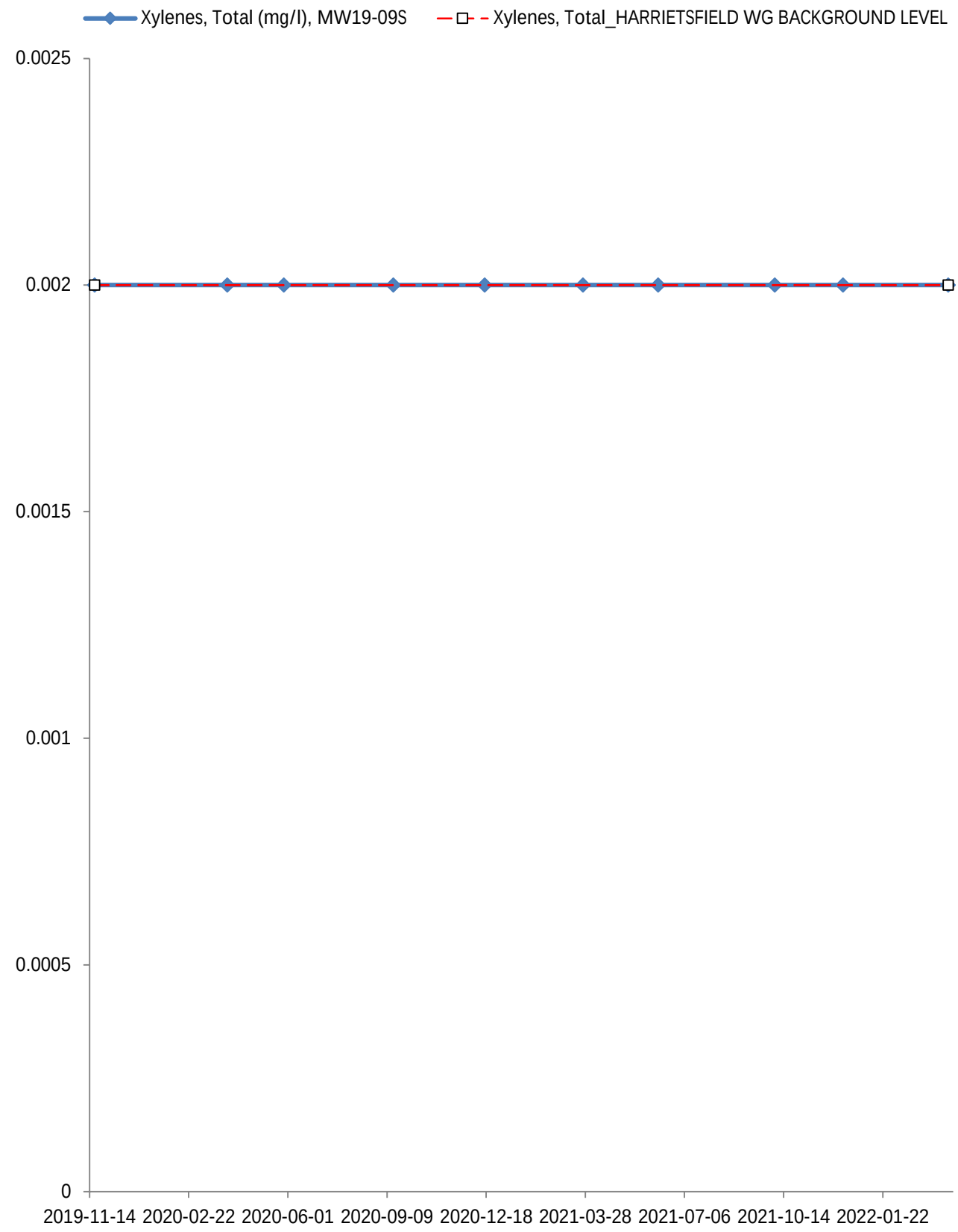
MW19-09S - Uranium



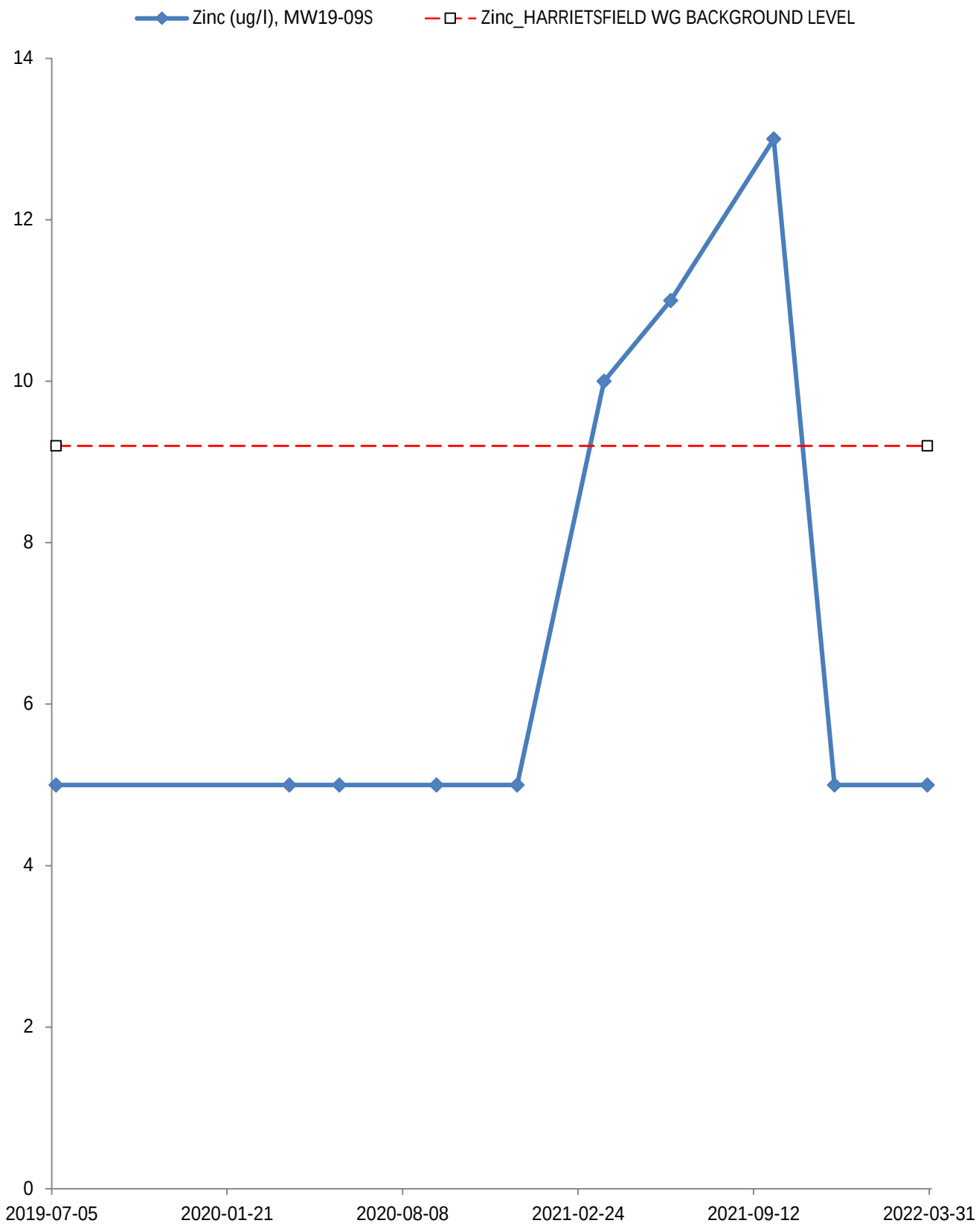
MW19-09S - Vanadium



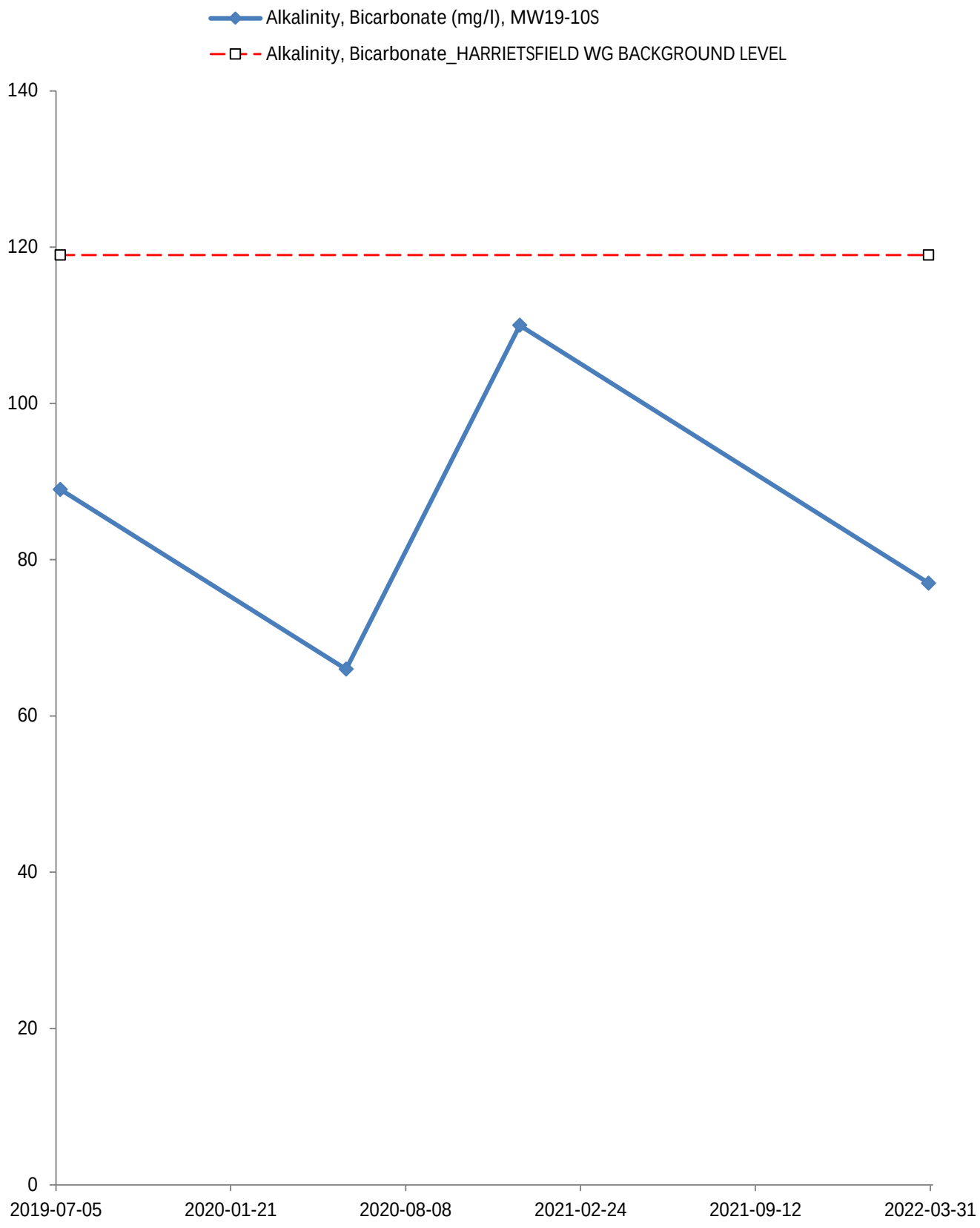
MW19-09S - Xylenes, Total



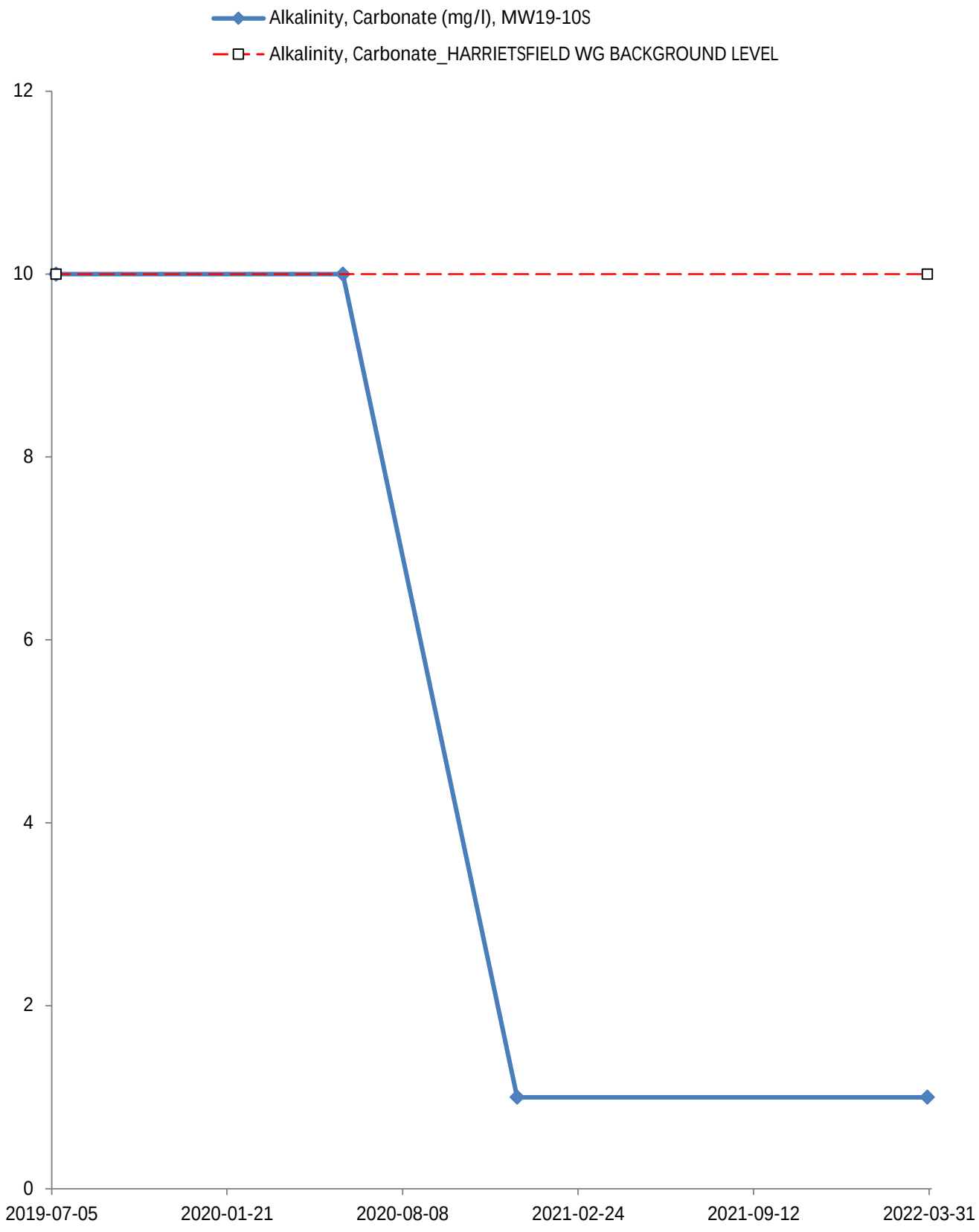
MW19-09S - Zinc



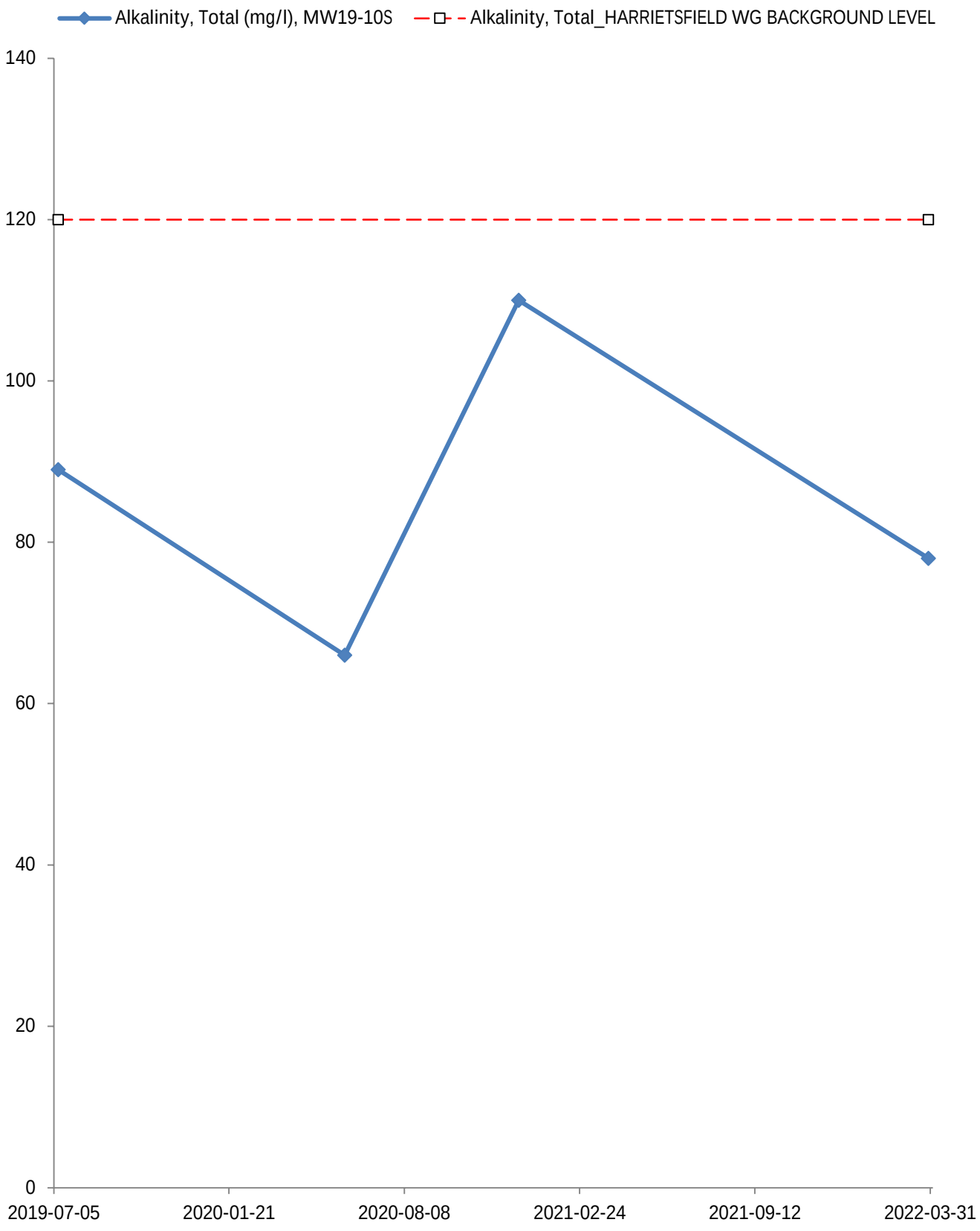
MW19-10S-Alkalinity, Bicarbonate



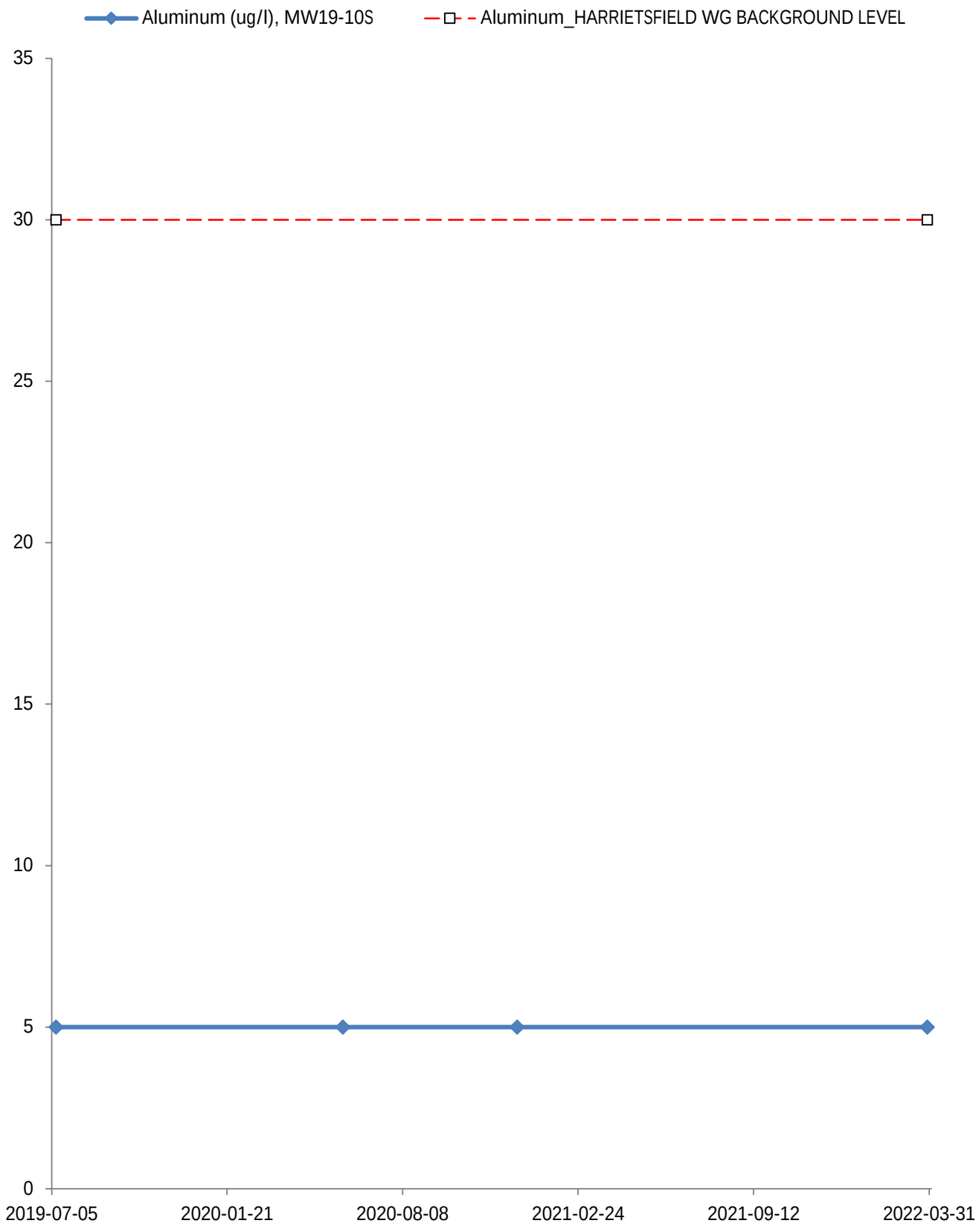
MW19-10S-Alkalinity, Carbonate



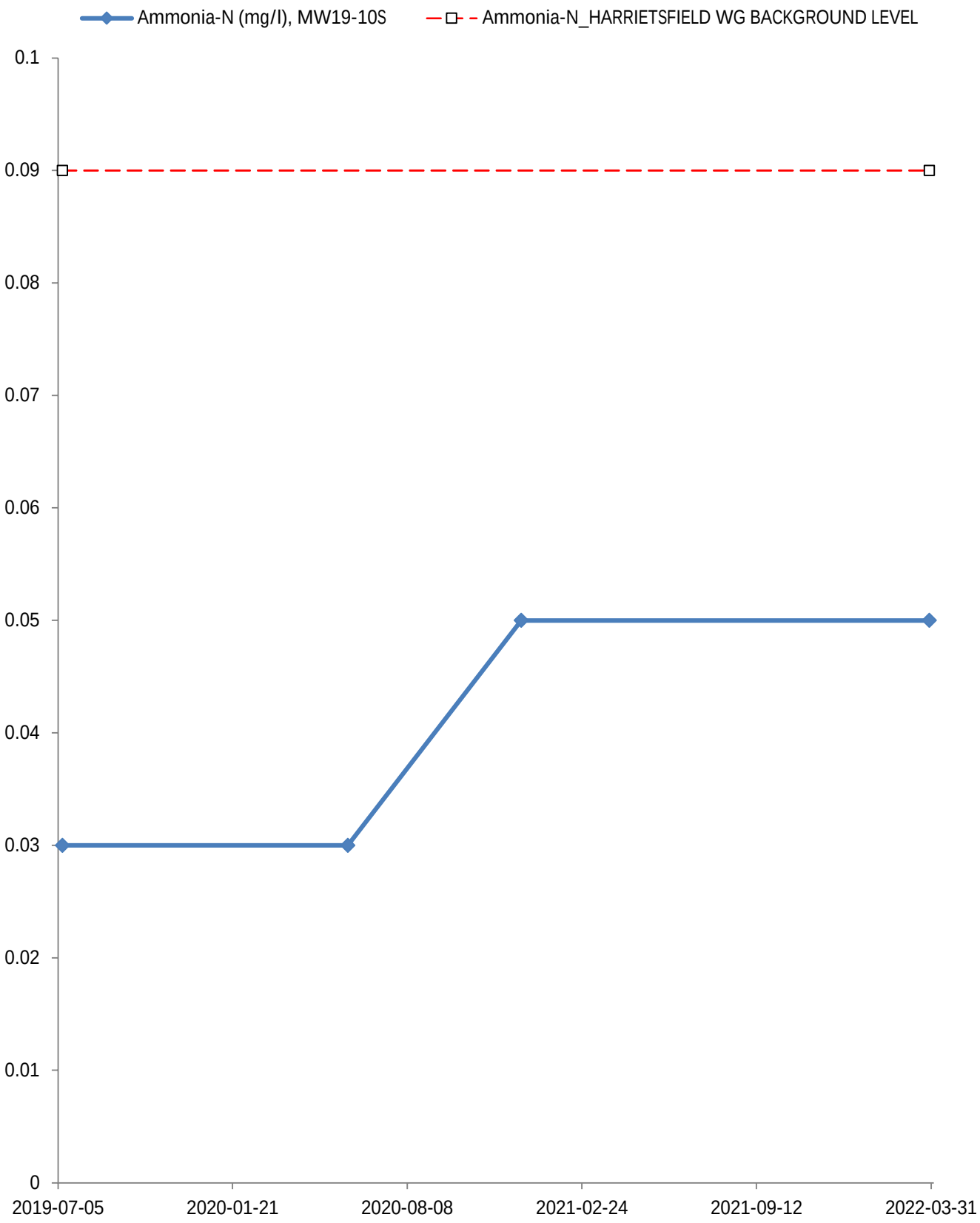
MW19-10S-Alkalinity, Total



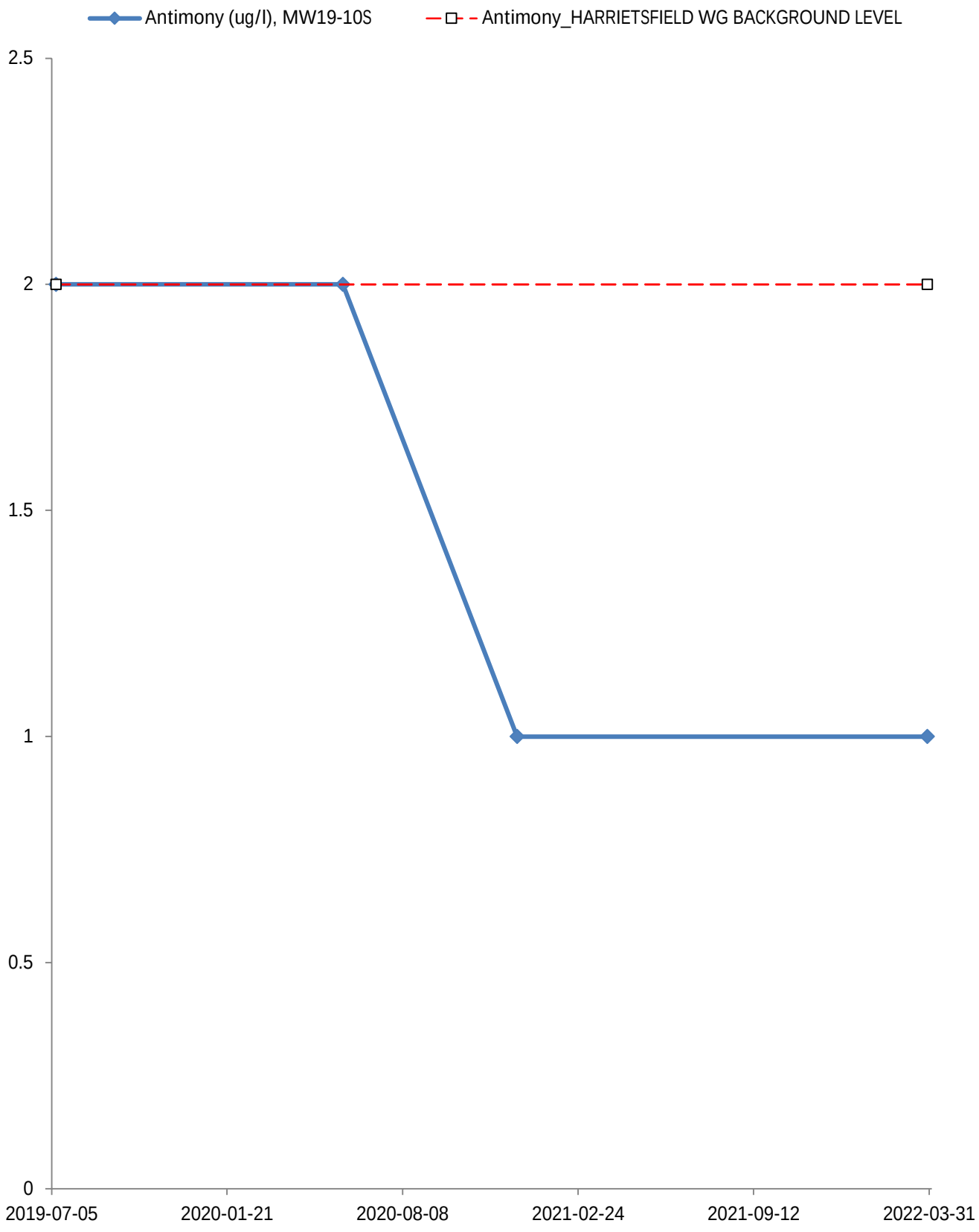
MW19-10S-Aluminum



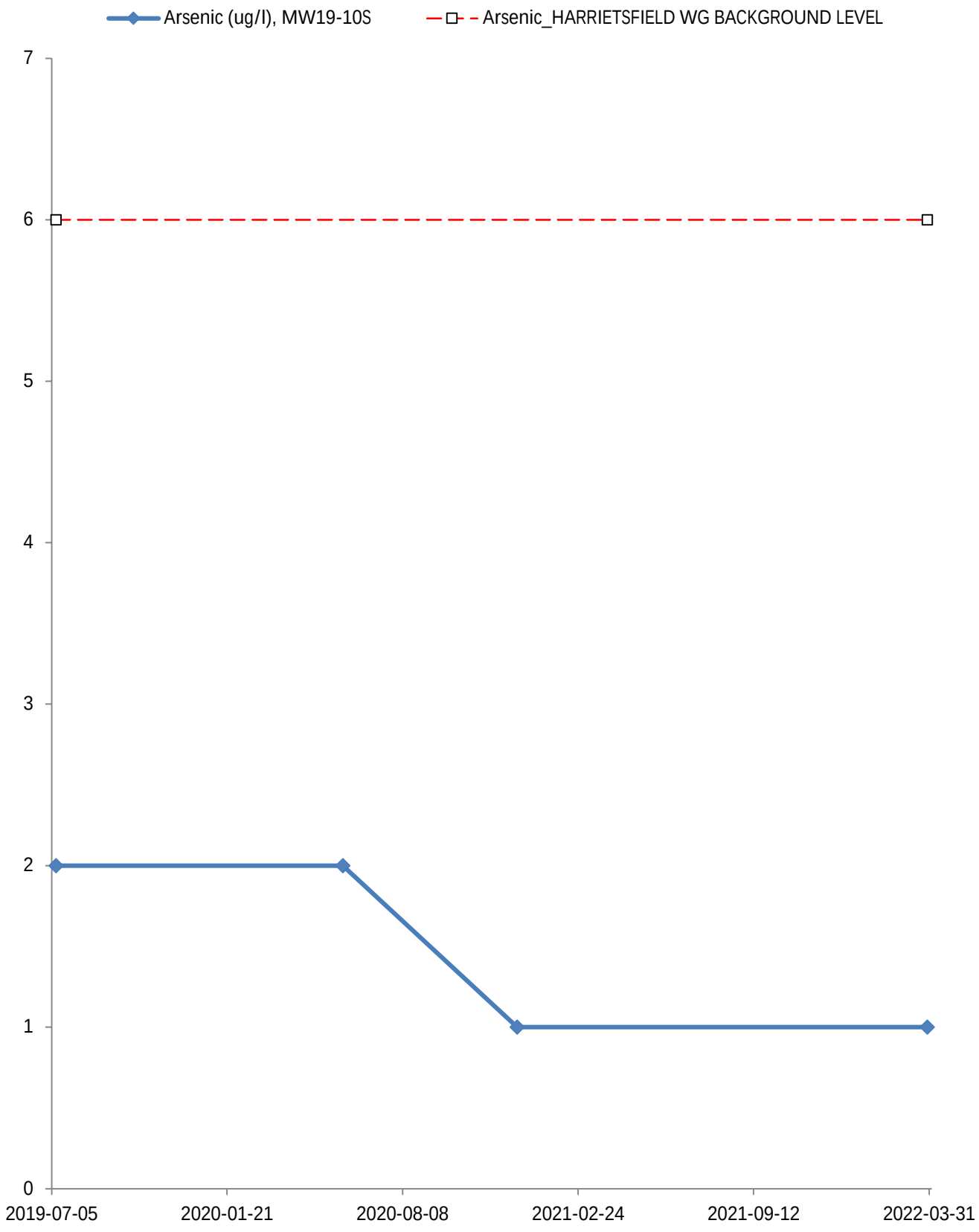
MW19-10S-Ammonia-N



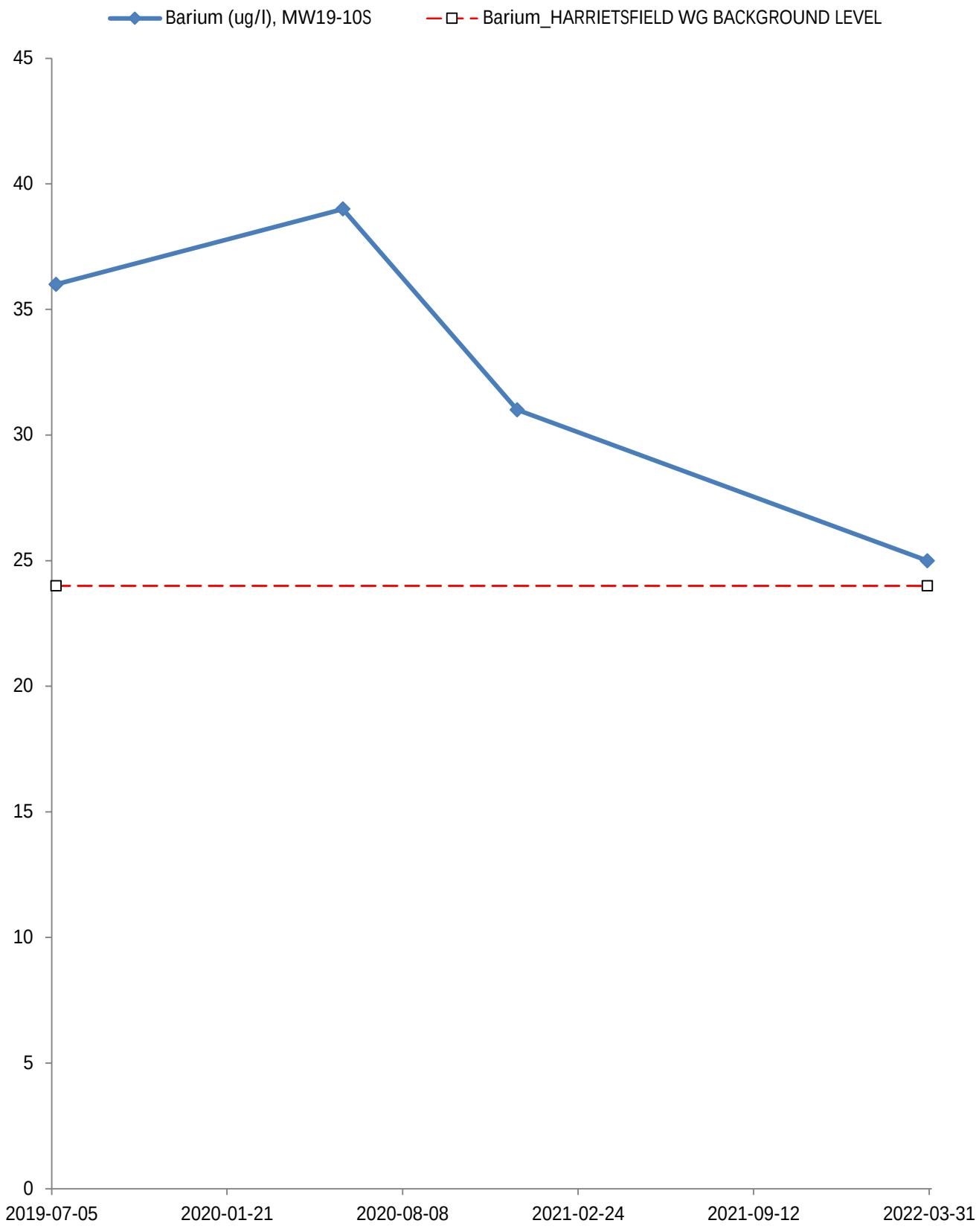
MW19-10S-Antimony



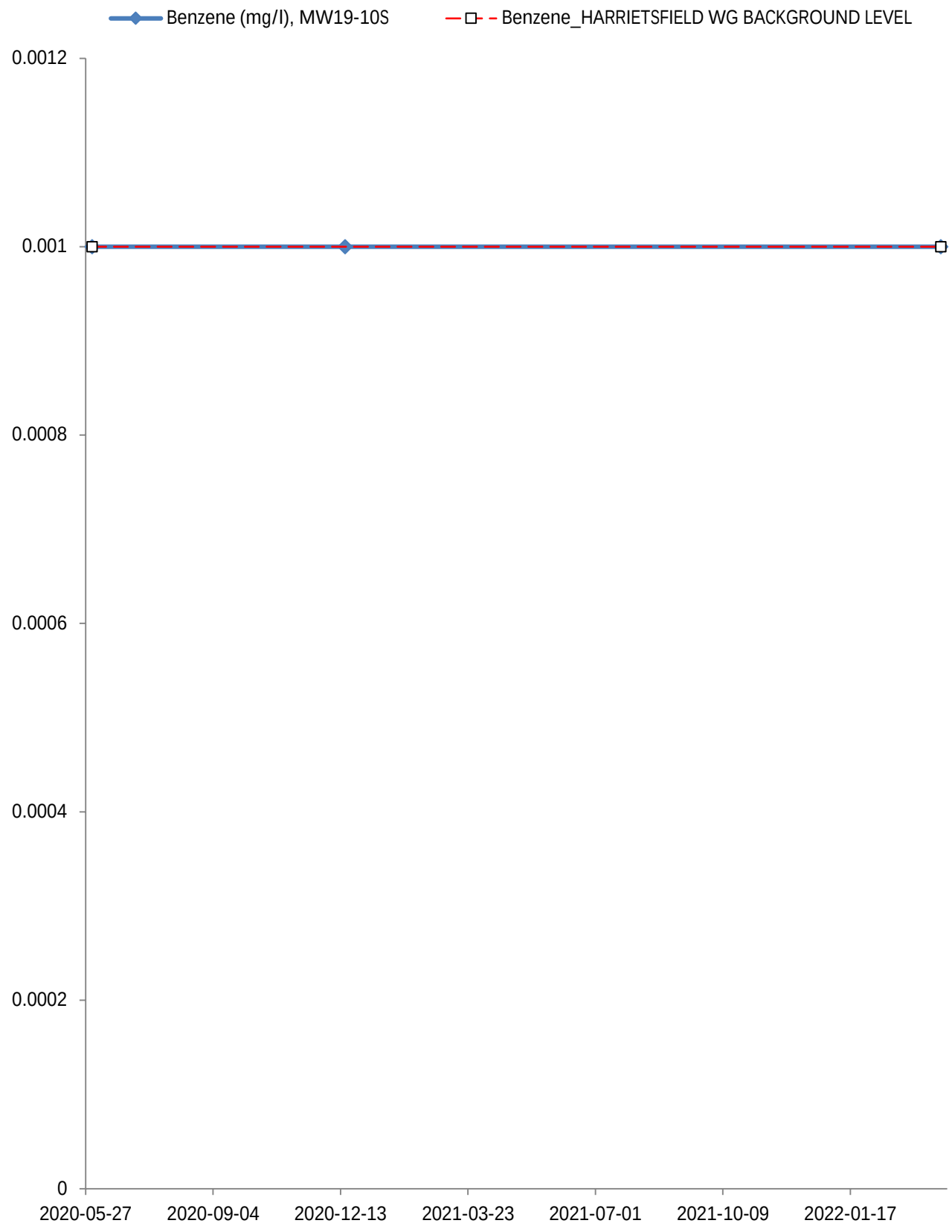
MW19-10S-Arsenic



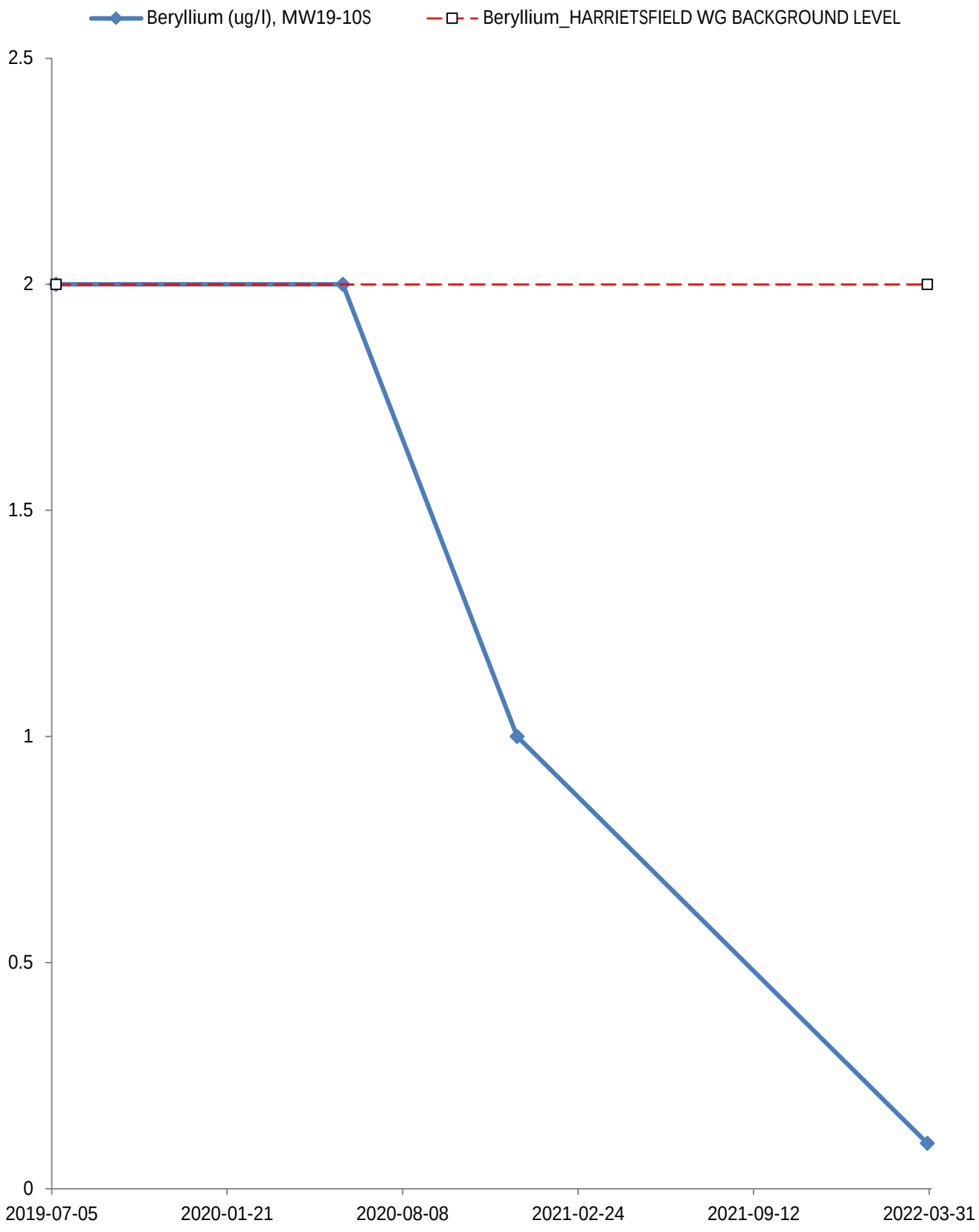
MW19-10S-Barium



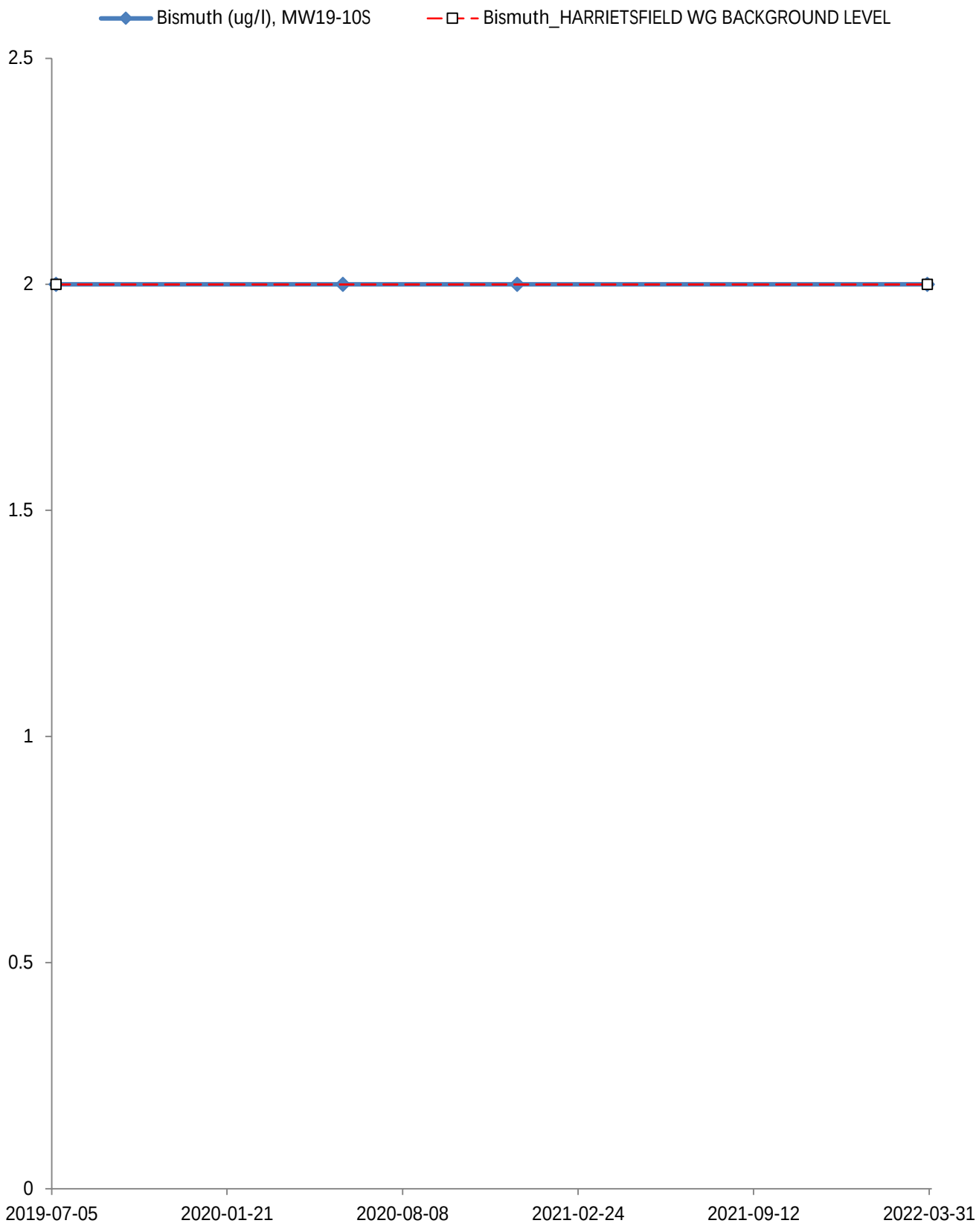
MW19-10S-Benzene



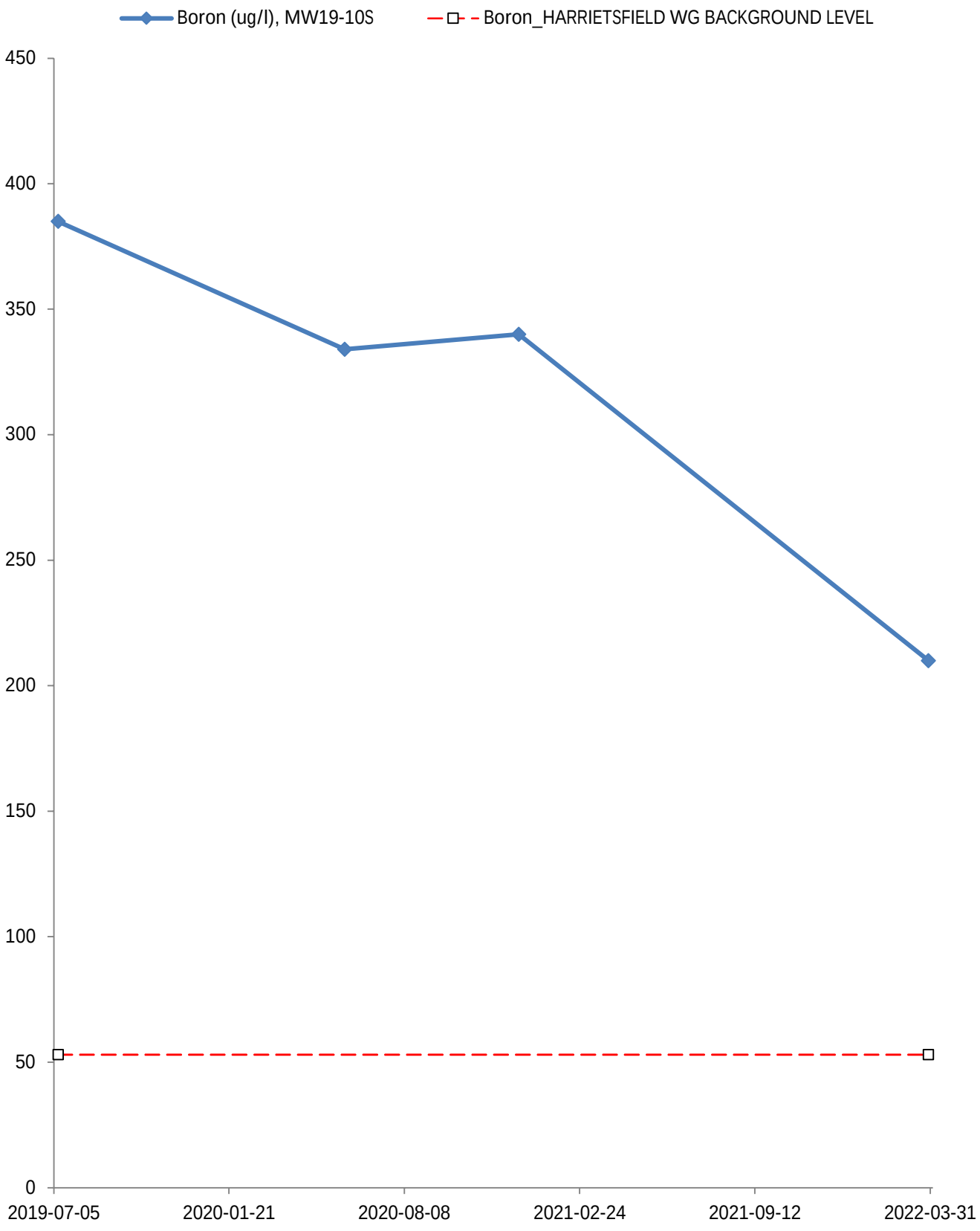
MW19-10S-Beryllium



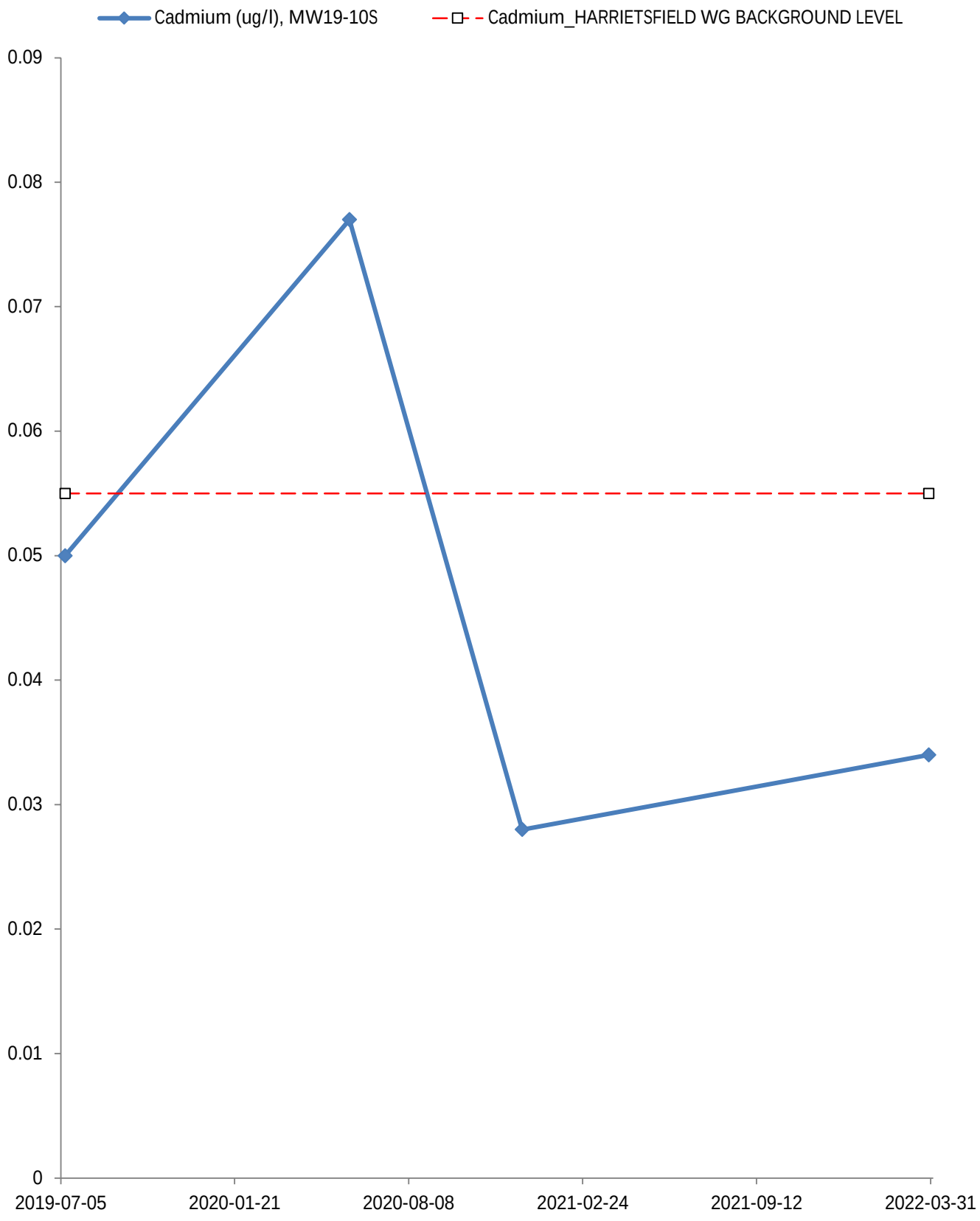
MW19-10S-Bismuth



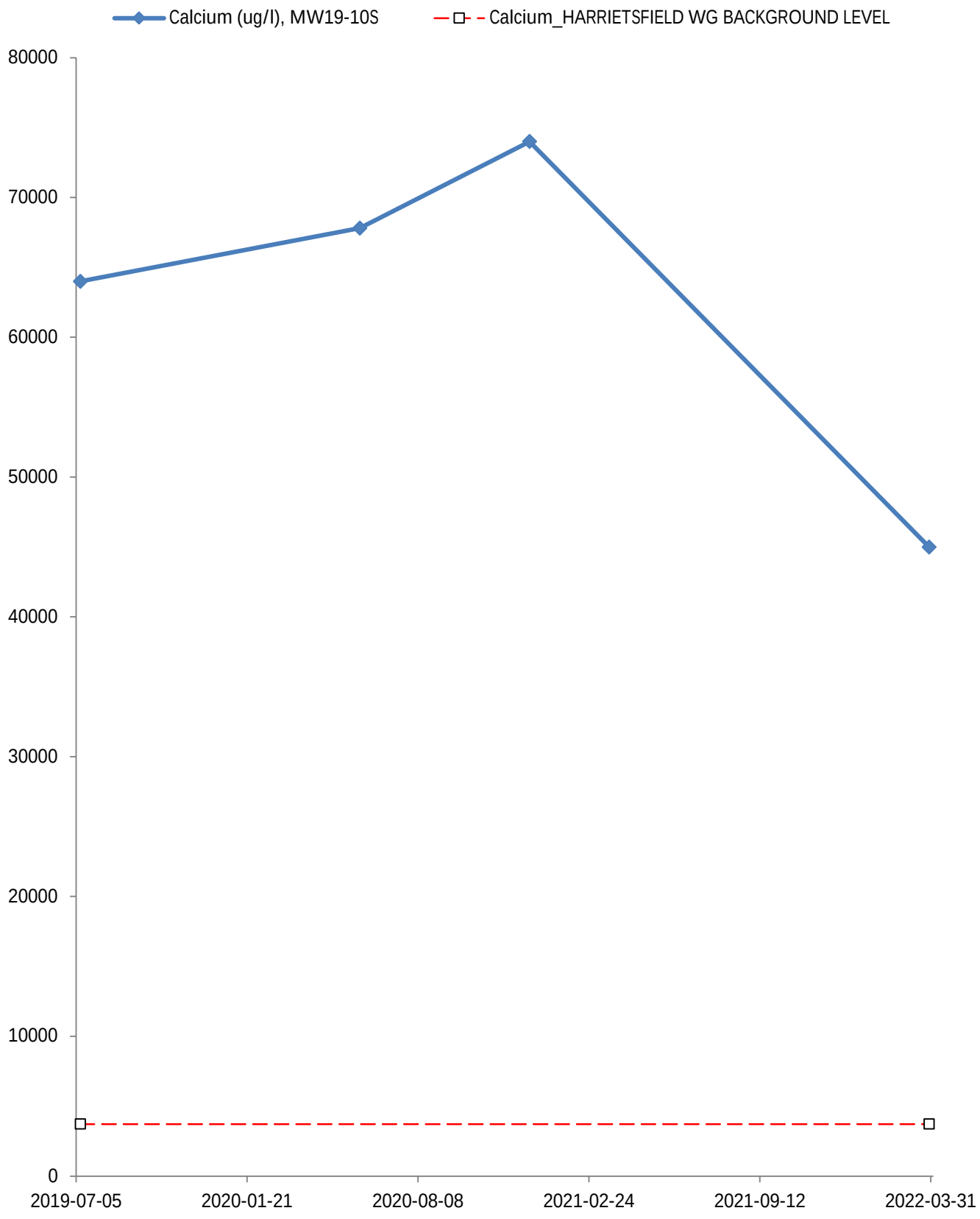
MW19-10S-Boron



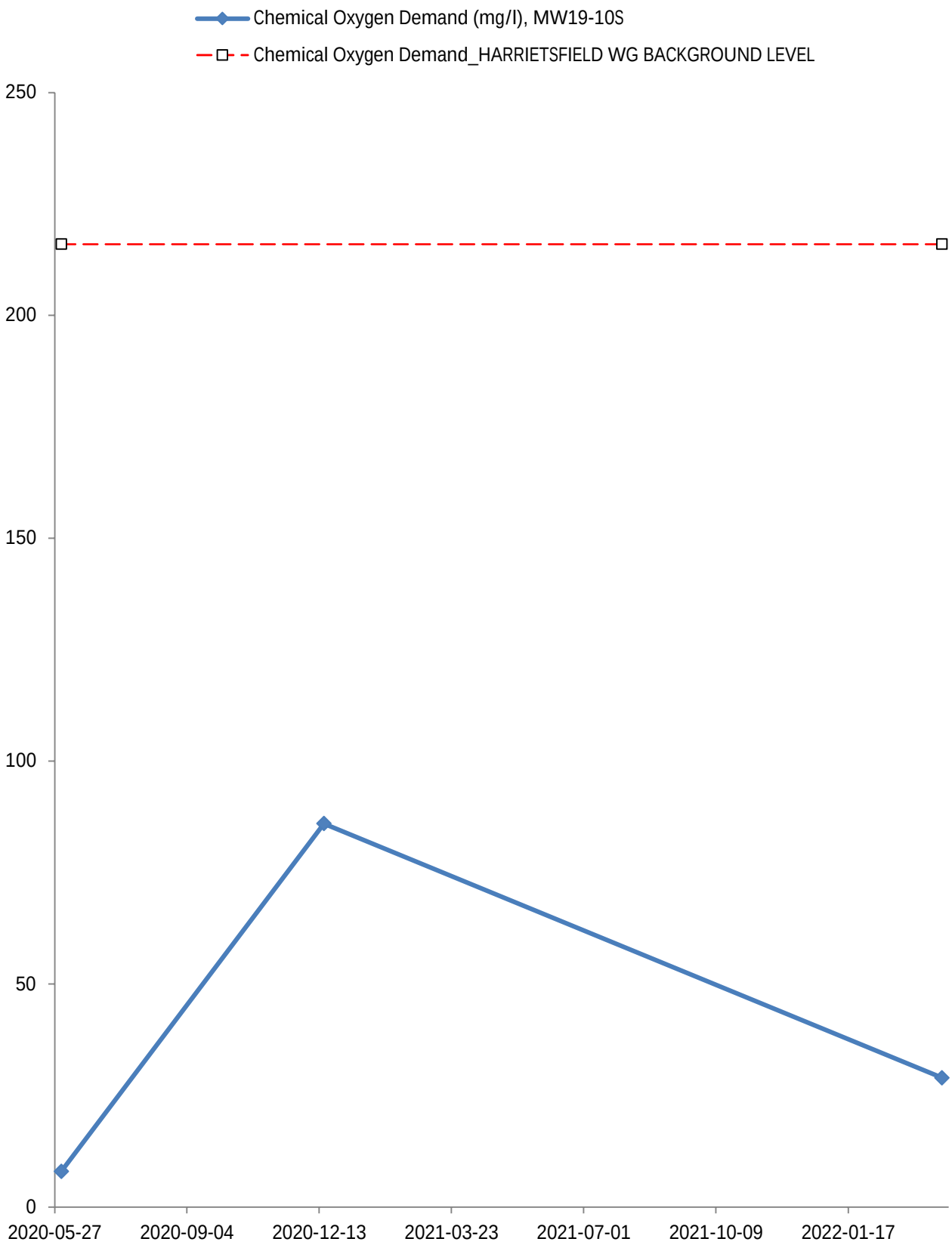
MW19-10S-Cadmium



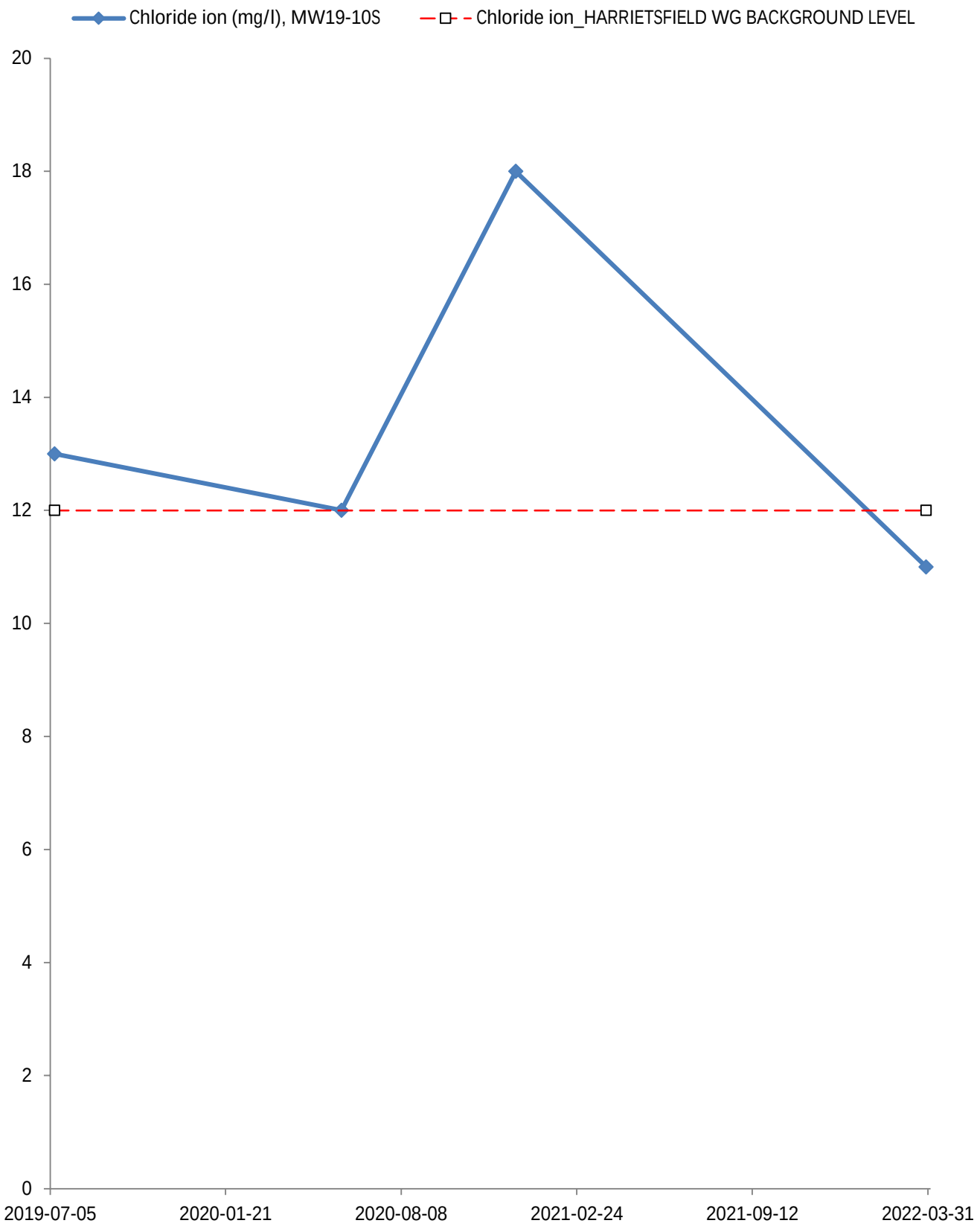
MW19-10S-Calcium



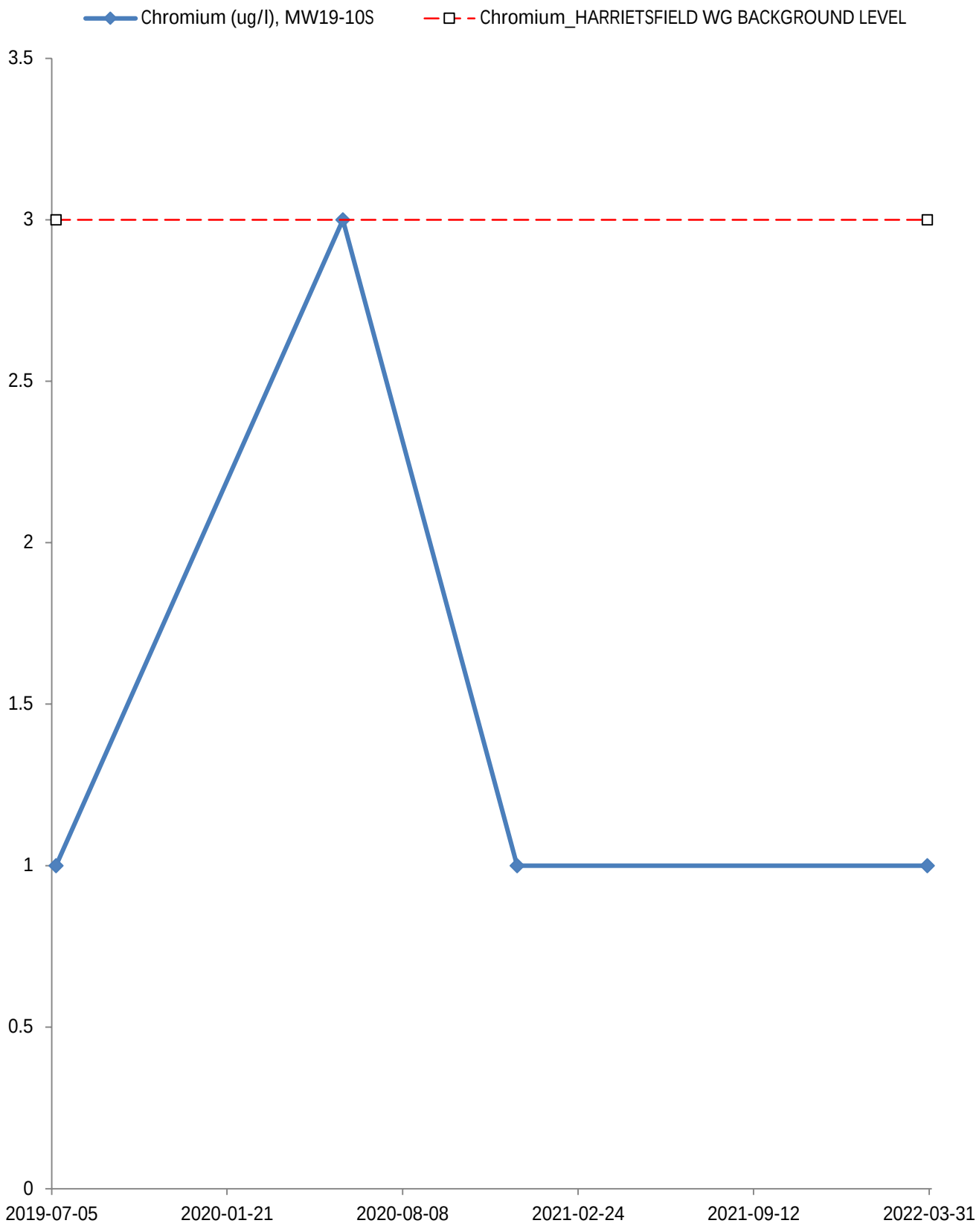
MW19-10S-Chemical Oxygen Demand



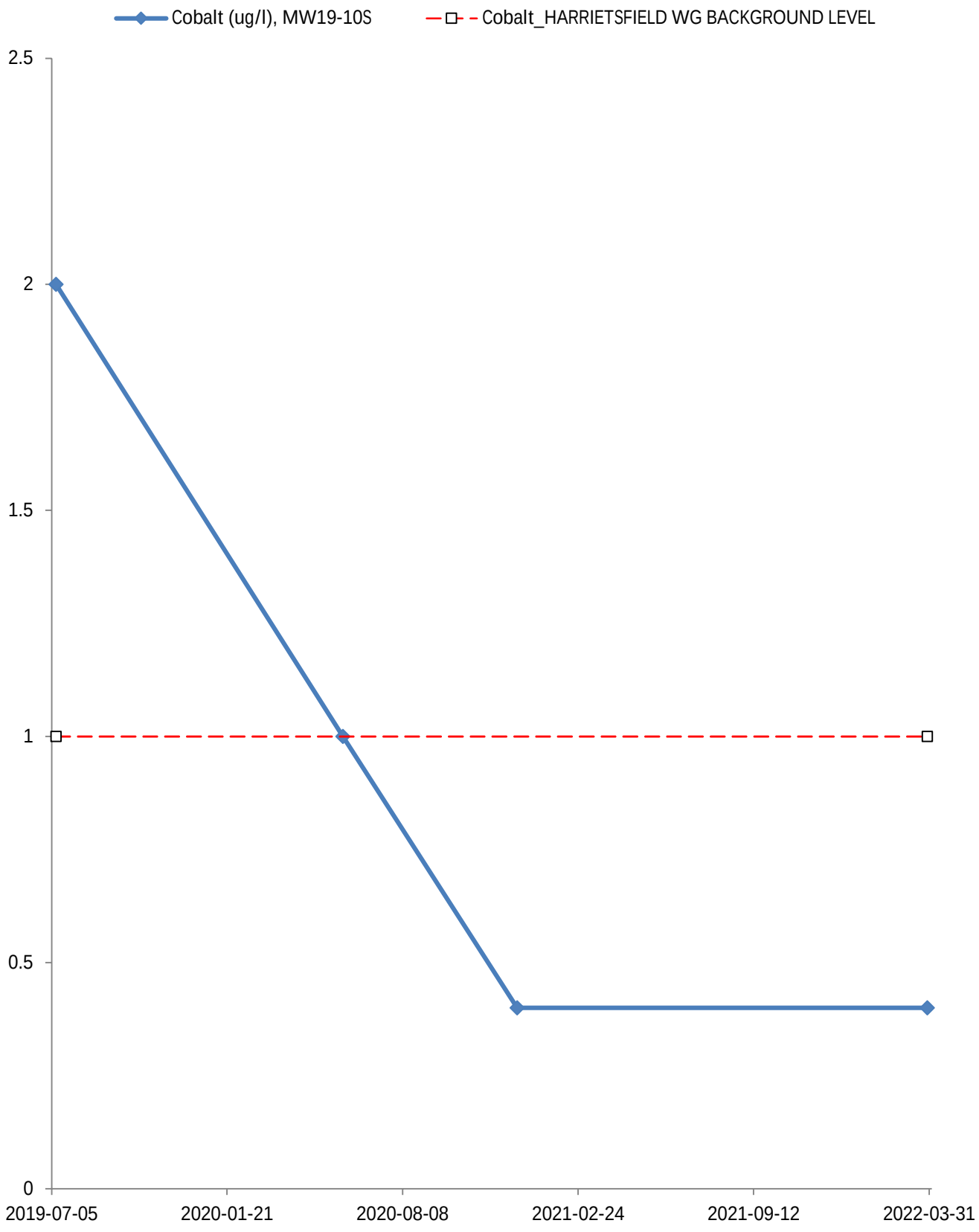
MW19-10S-Chloride ion



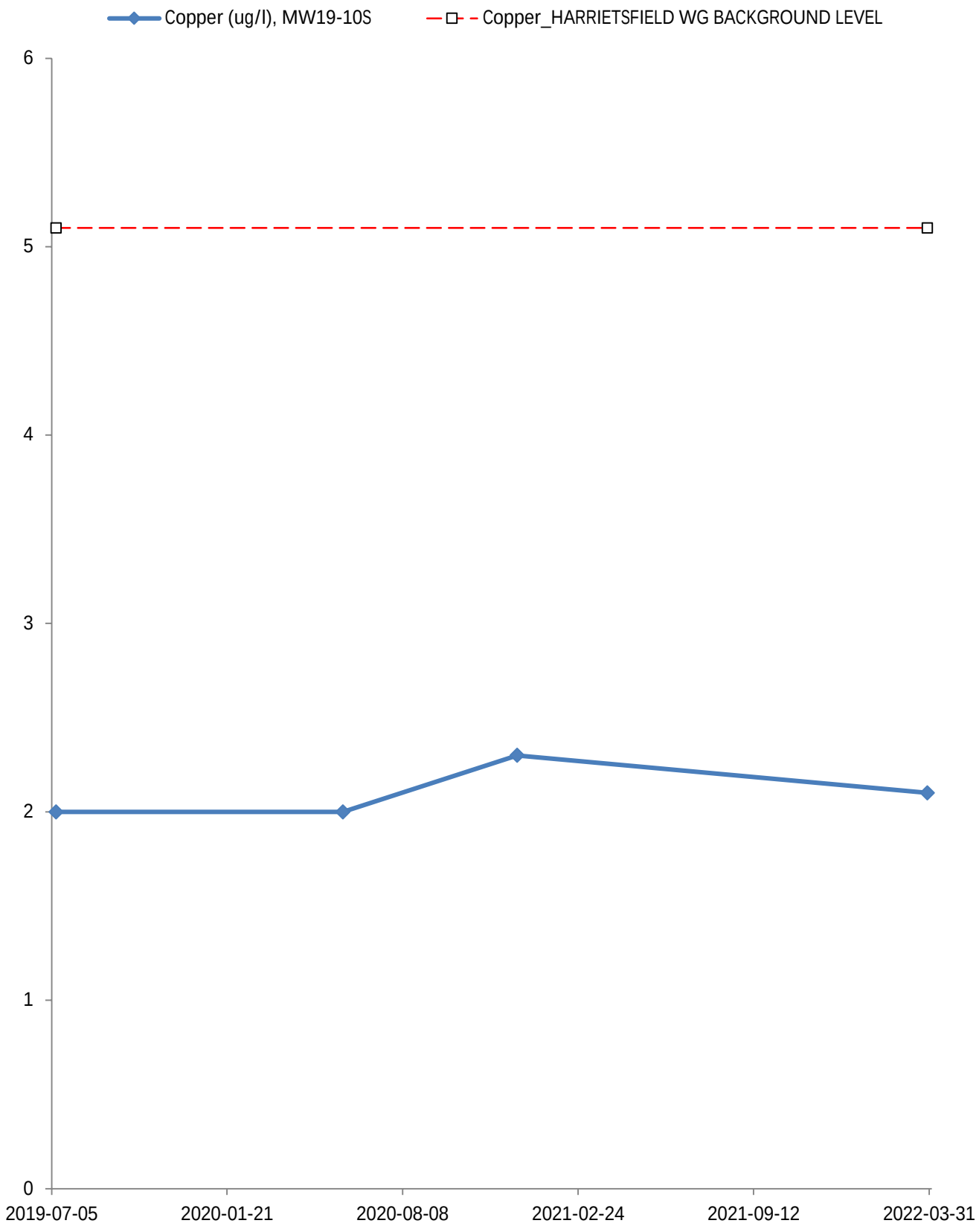
MW19-10S-Chromium



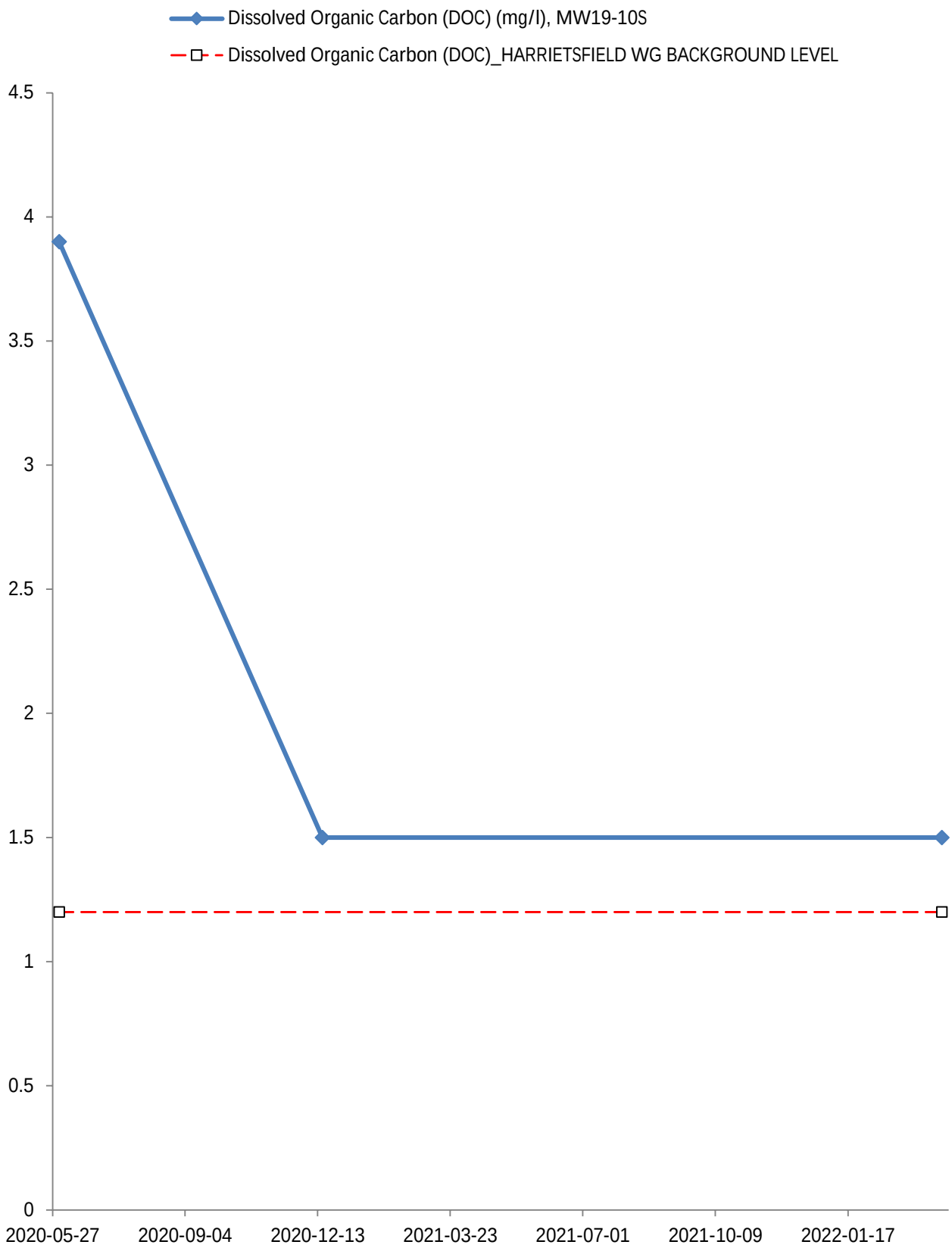
MW19-10S-Cobalt



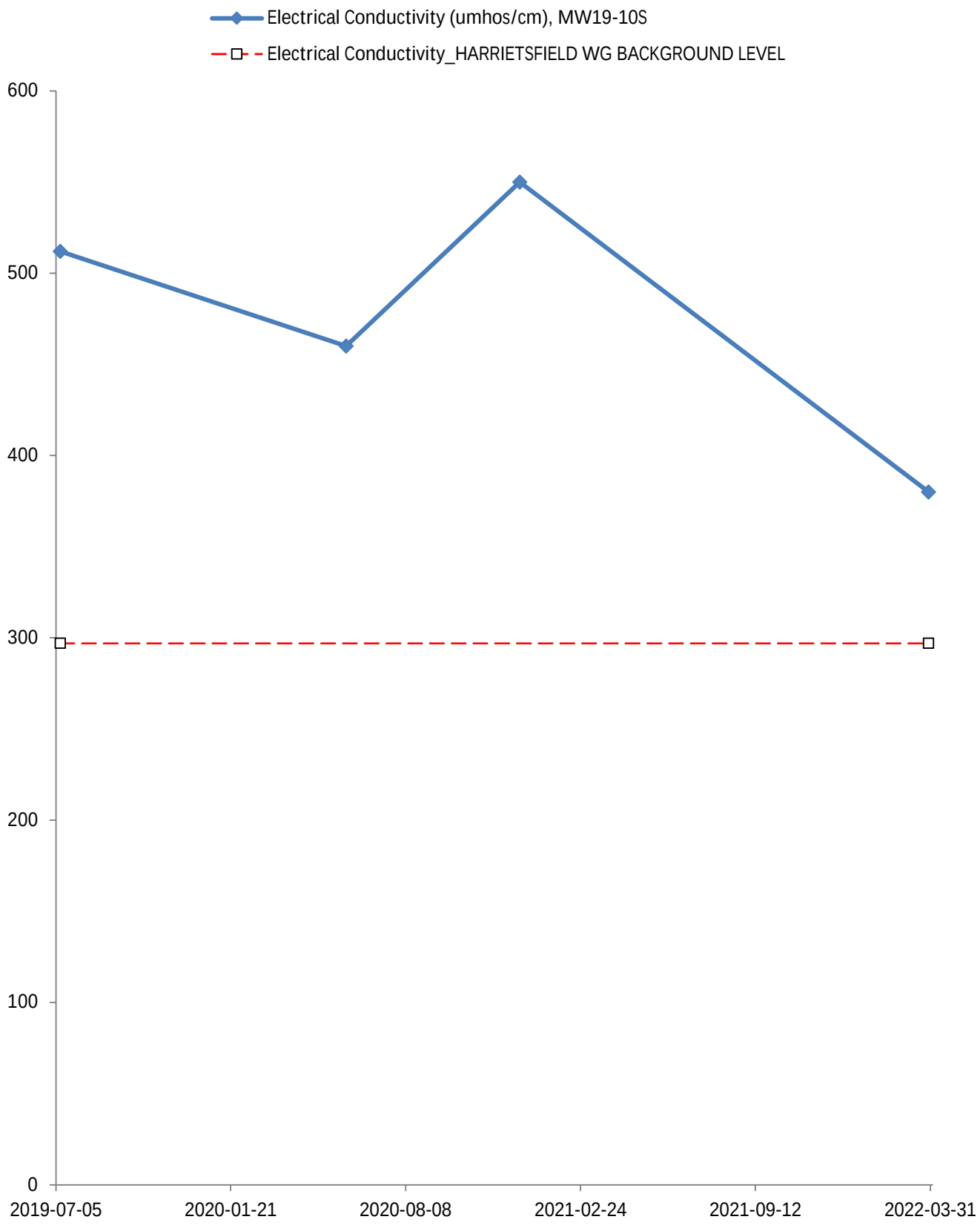
MW19-10S-Copper



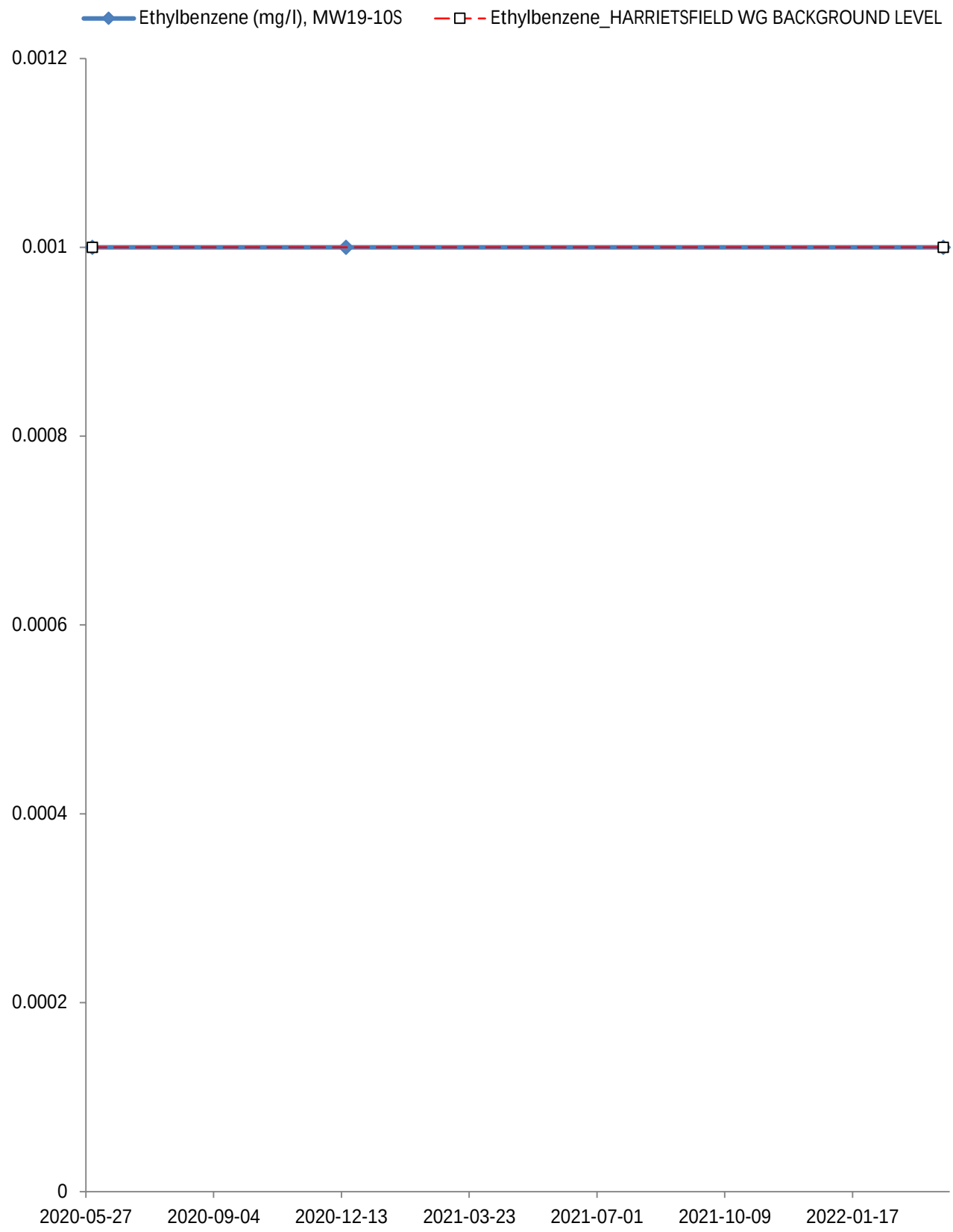
MW19-10S-Dissolved Organic Carbon7



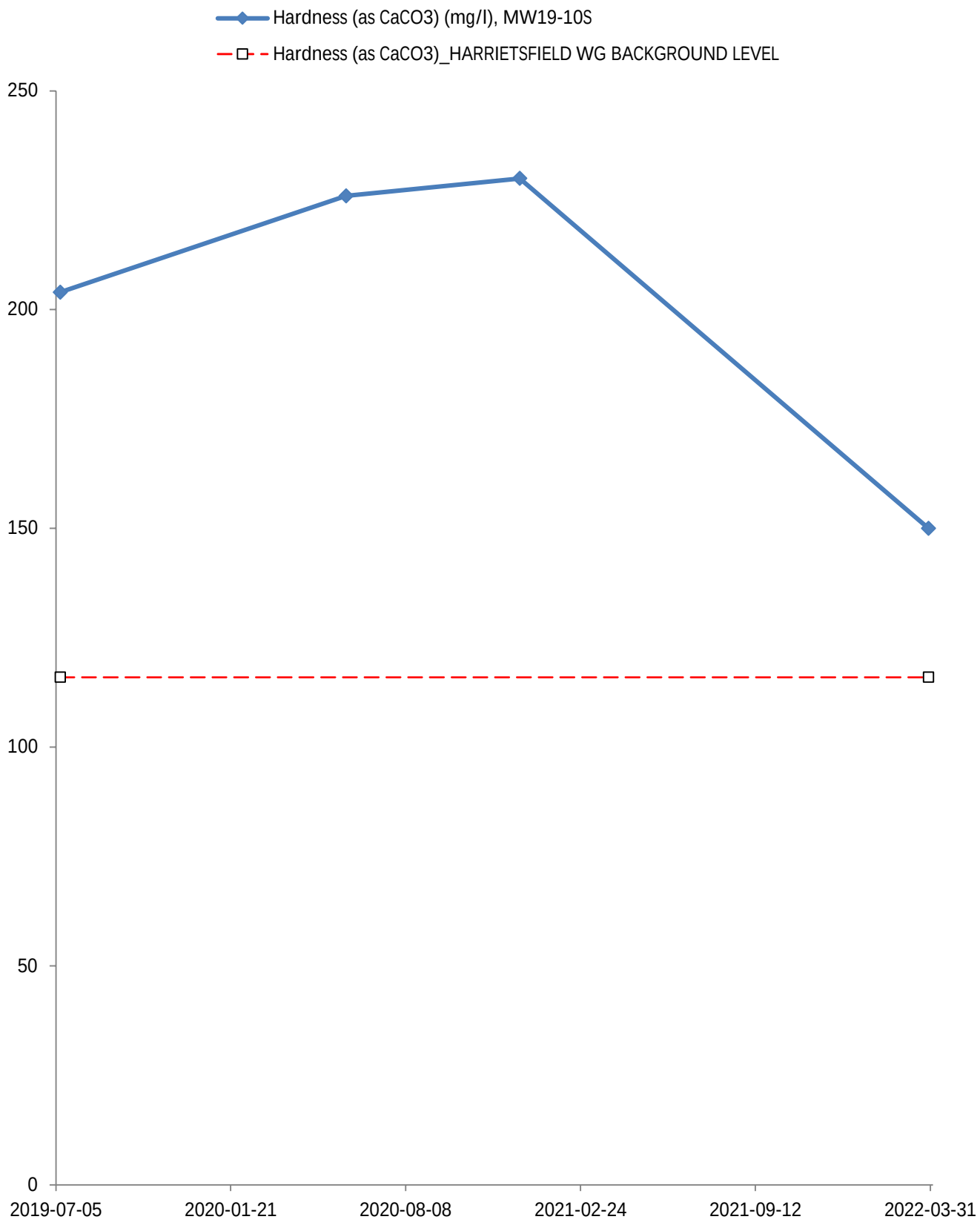
MW19-10S-Electrical Conductivity



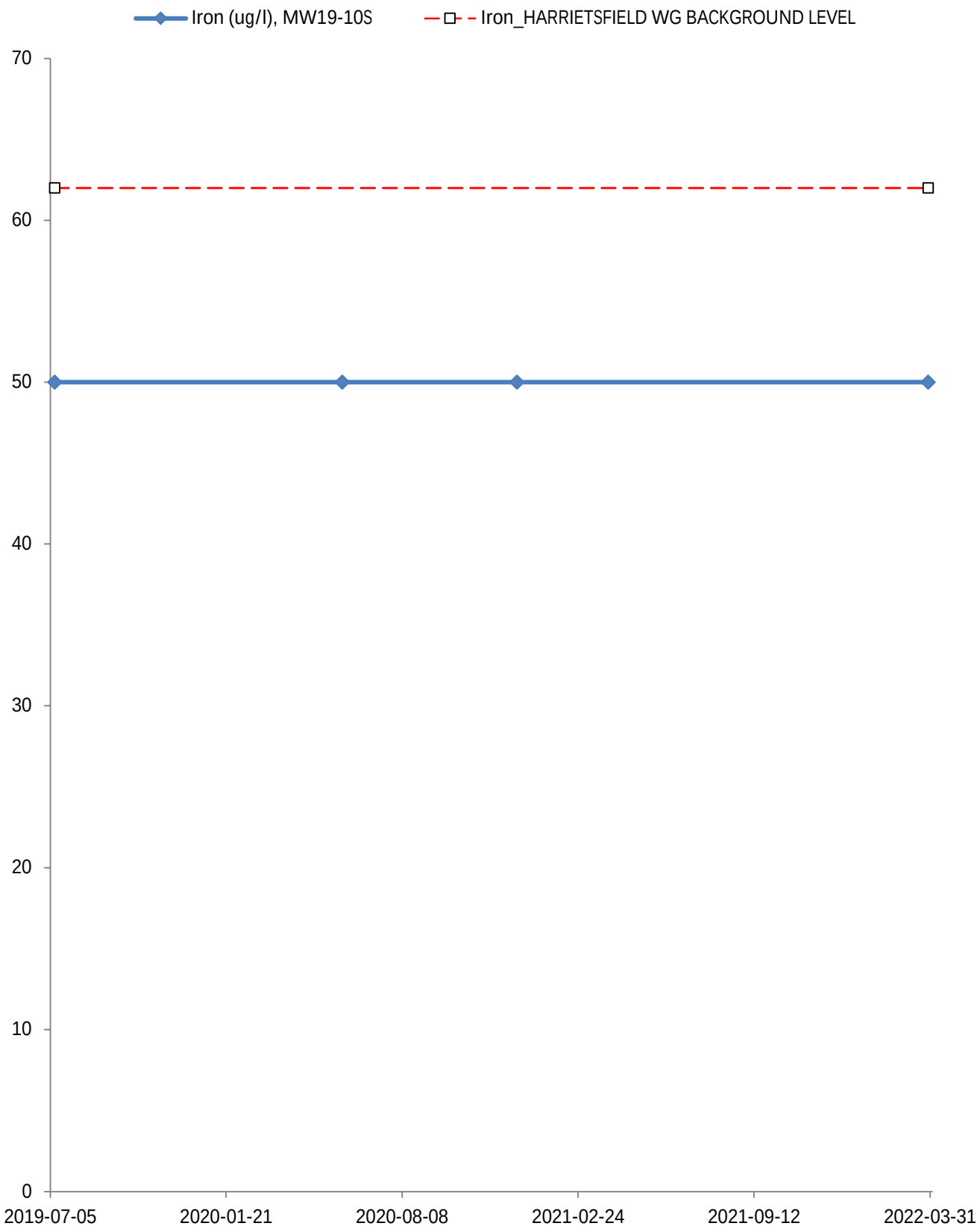
MW19-10S-Ethylbenzene



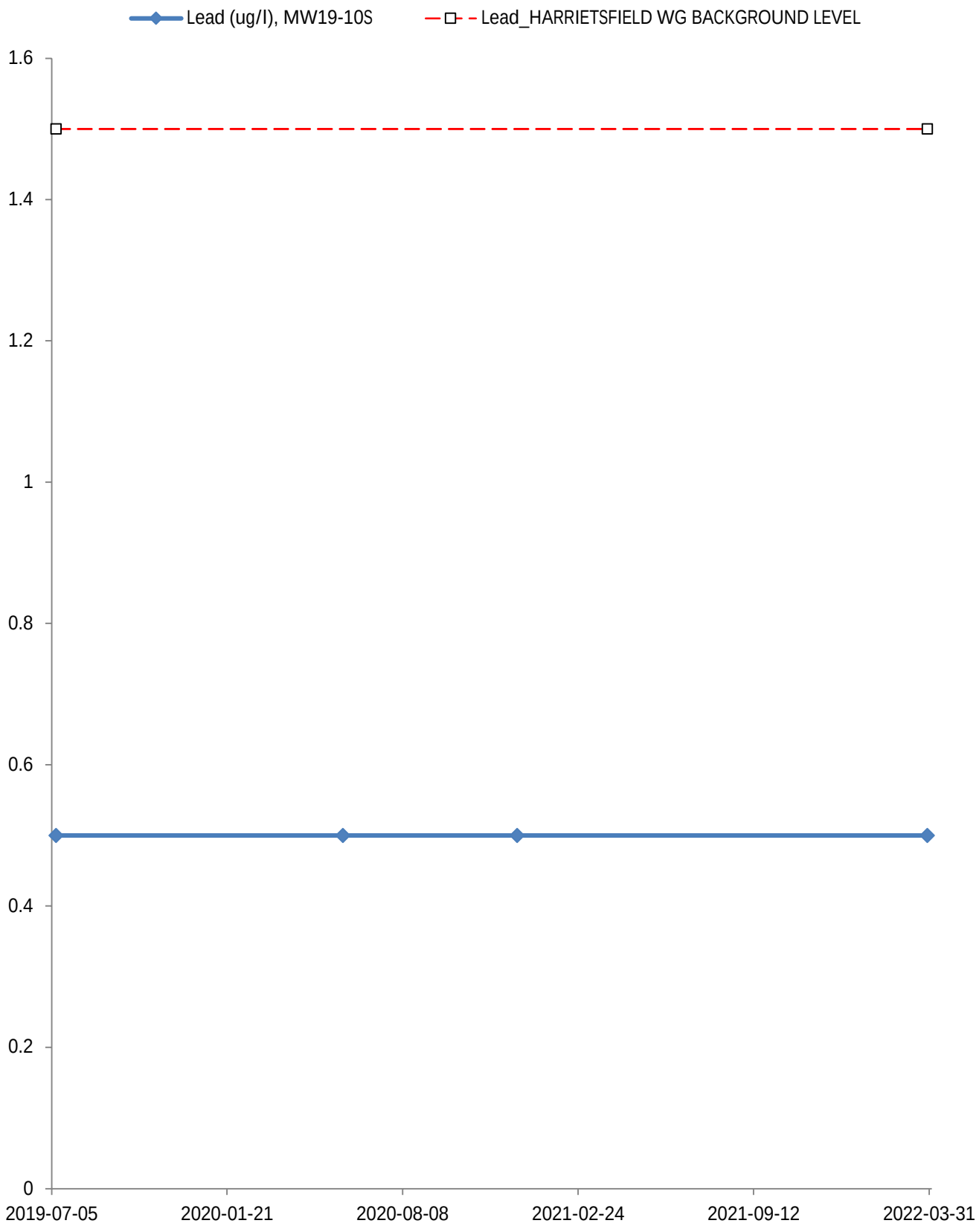
MW19-10S-Hardness (as CaCO3)



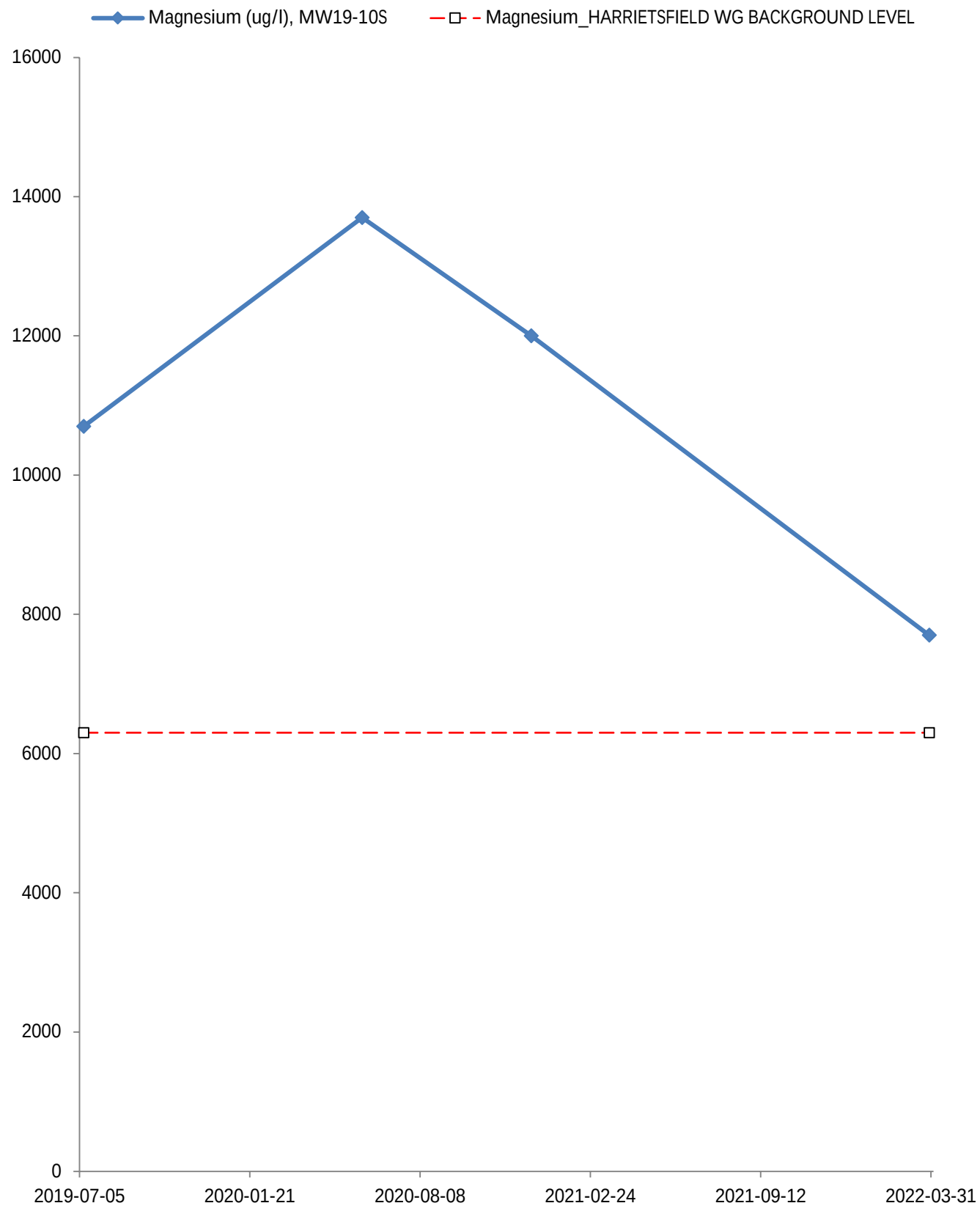
MW19-10S-Iron



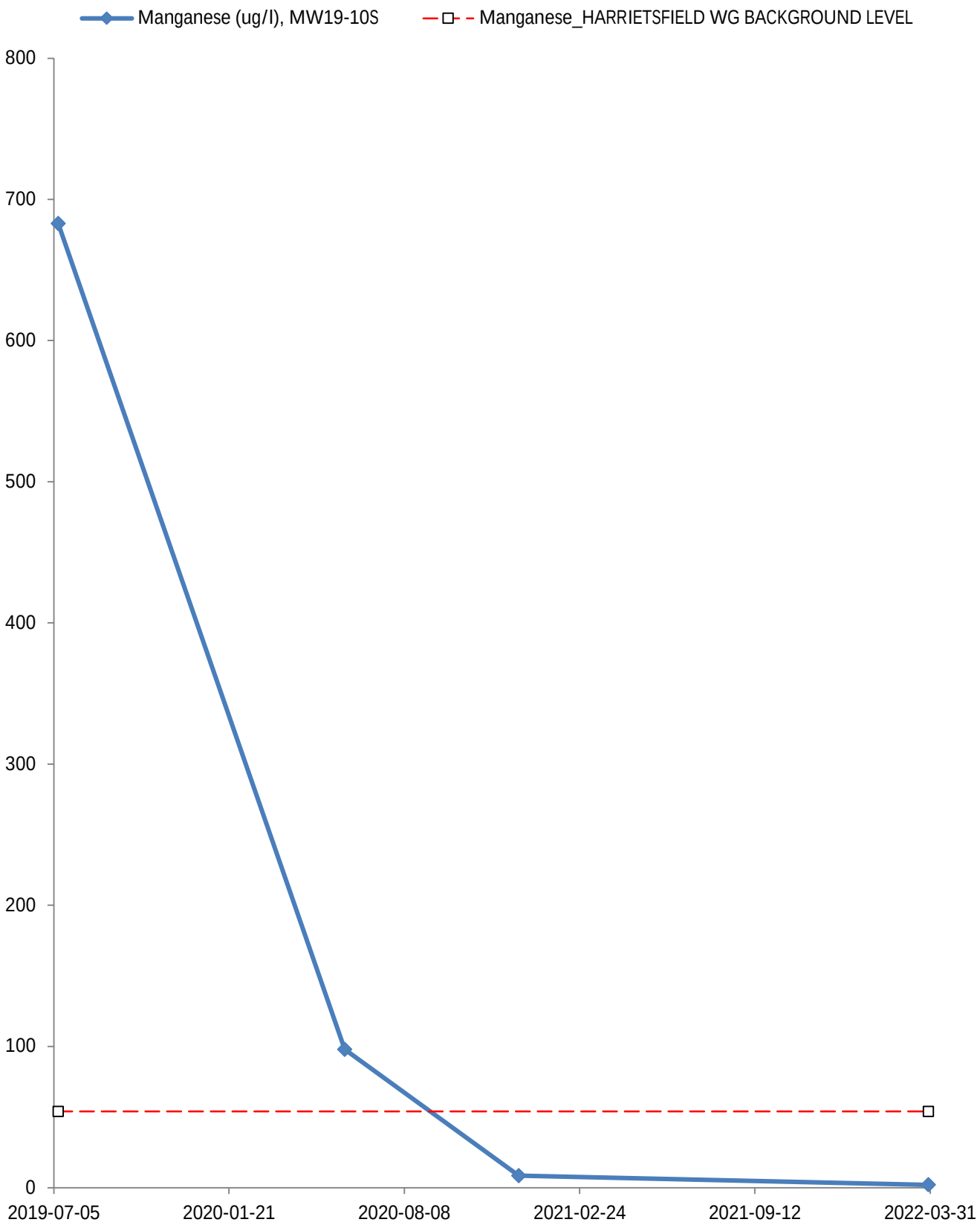
MW19-10S-Lead



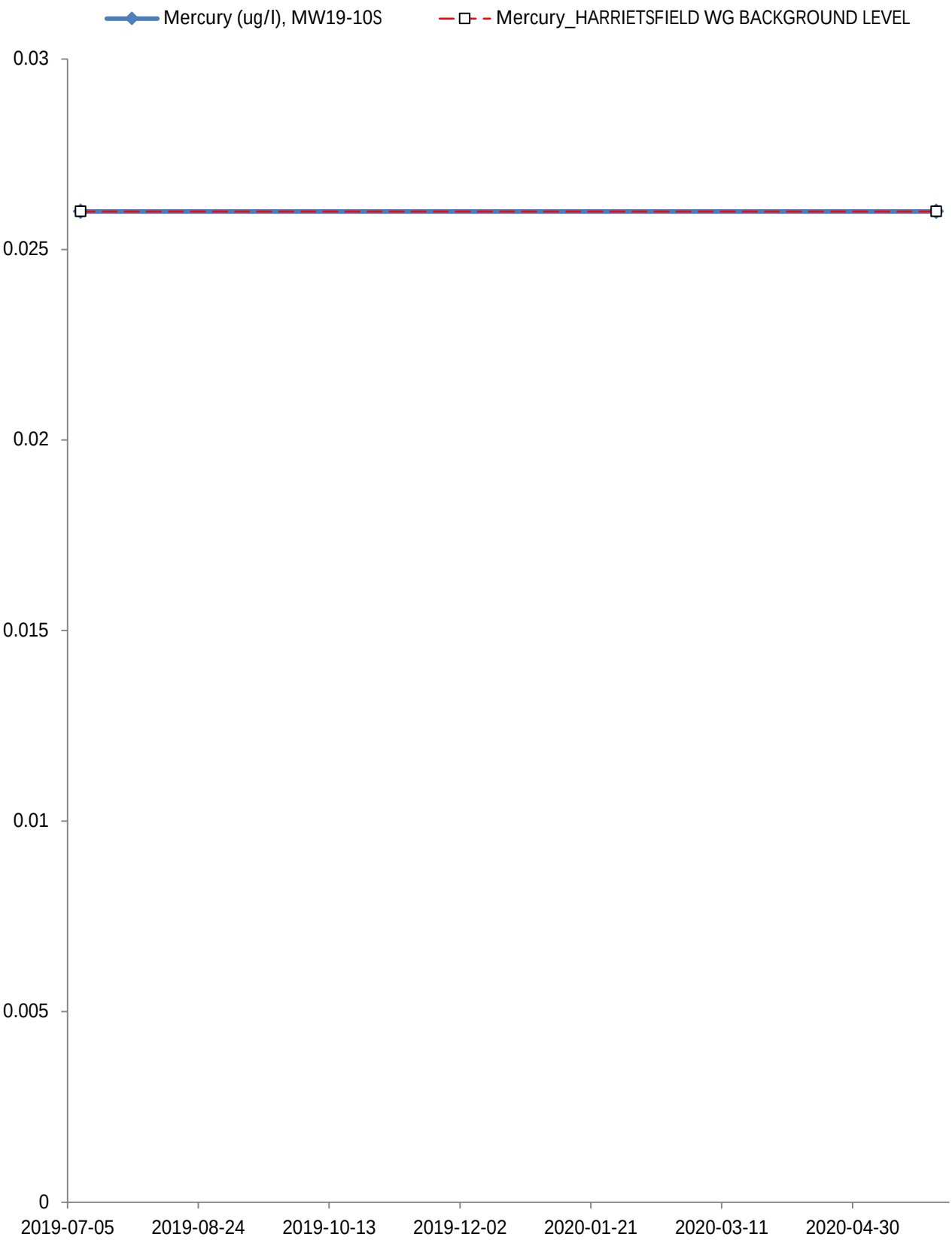
MW19-10S-Magnesium



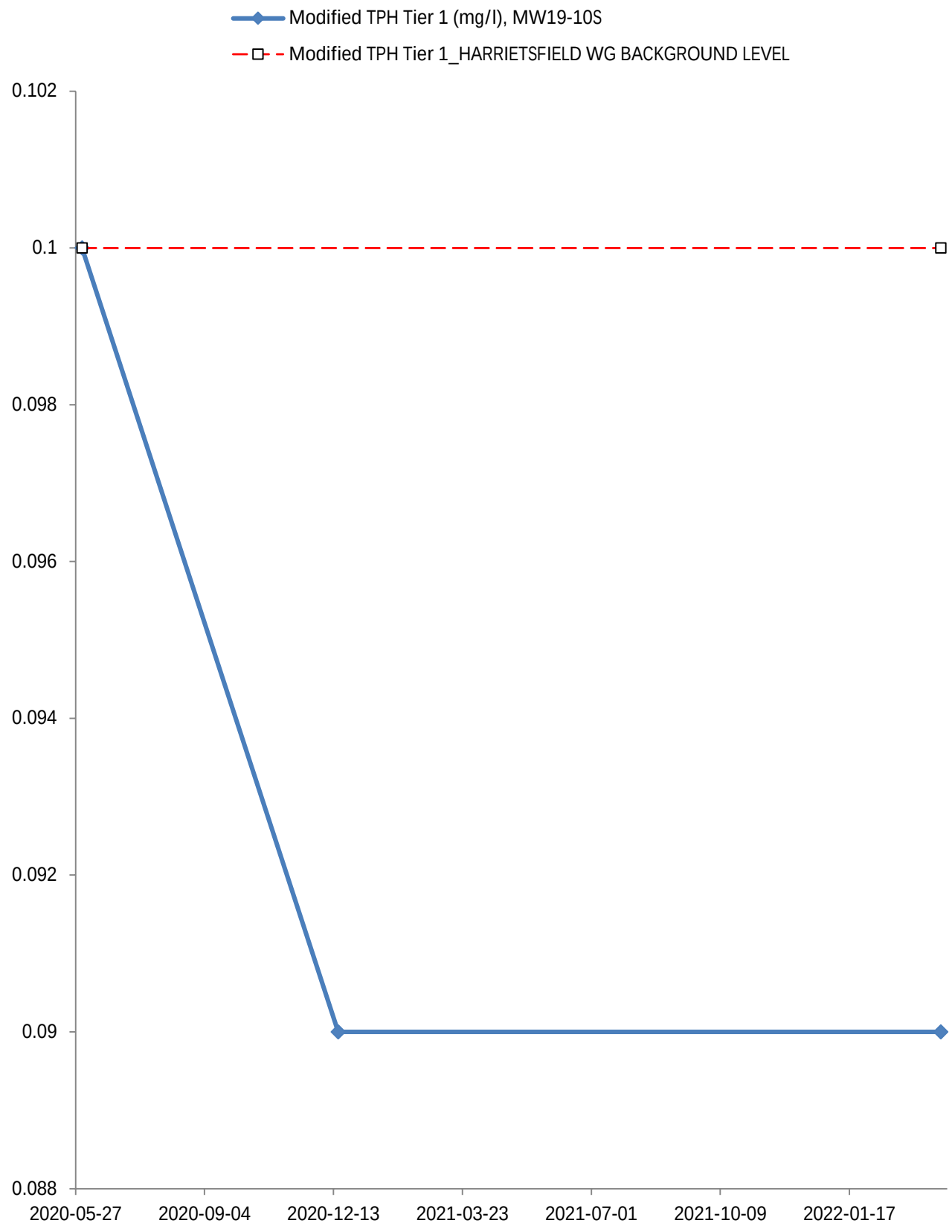
MW19-10S-Manganese



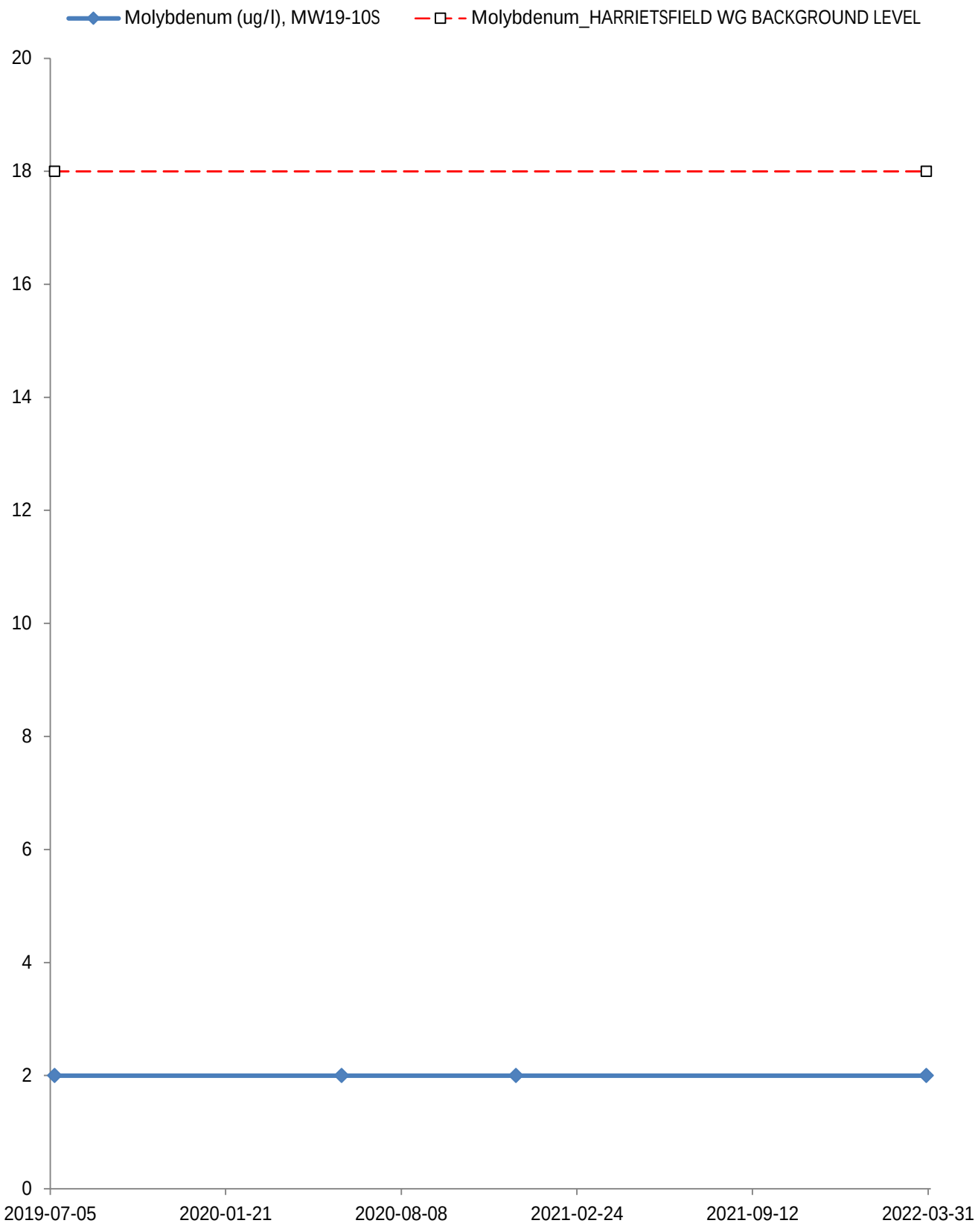
MW19-10S-Mercury



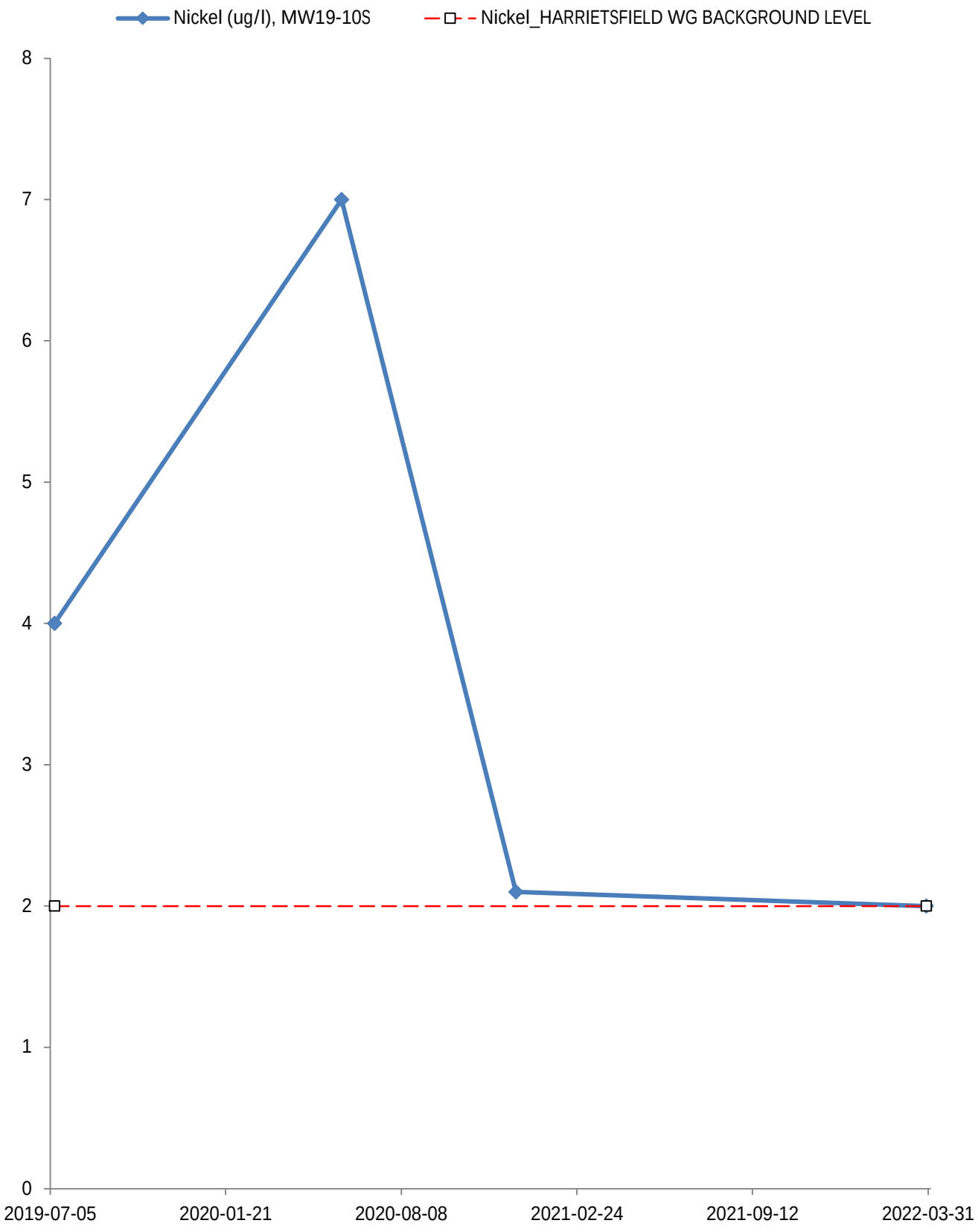
MW19-10S-Modified TPH Tier 1



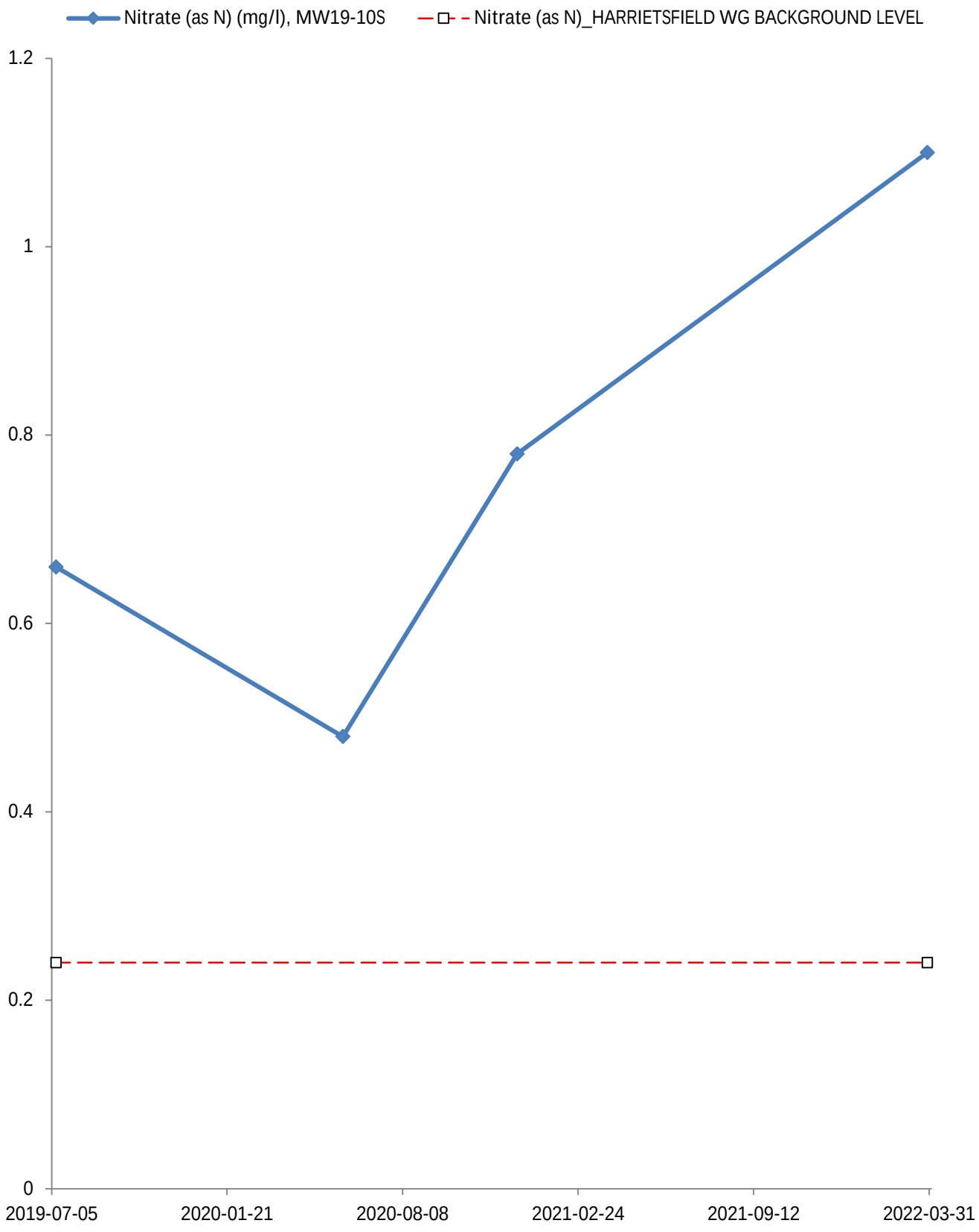
MW19-10S-Molybdenum



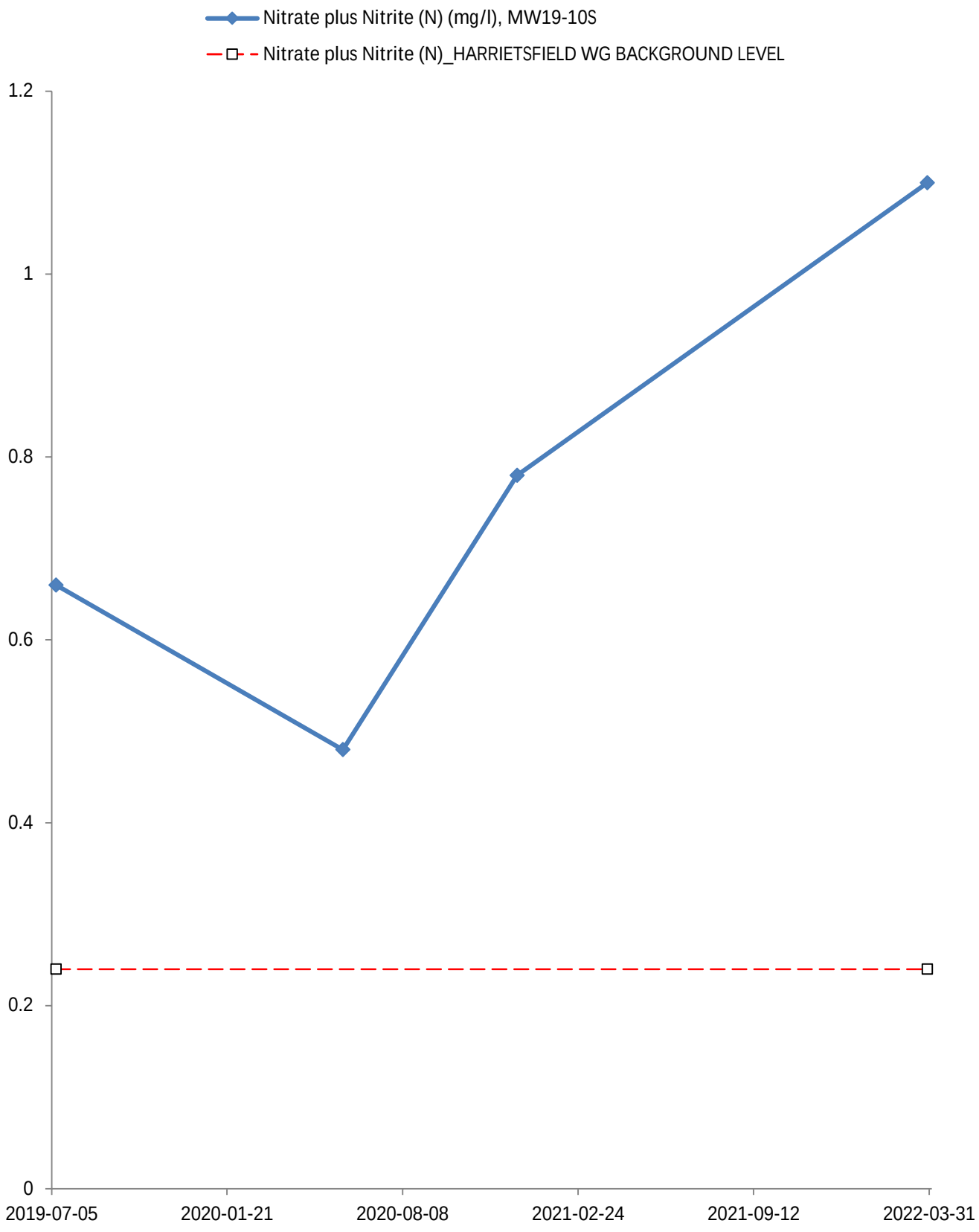
MW19-10S-Nickel



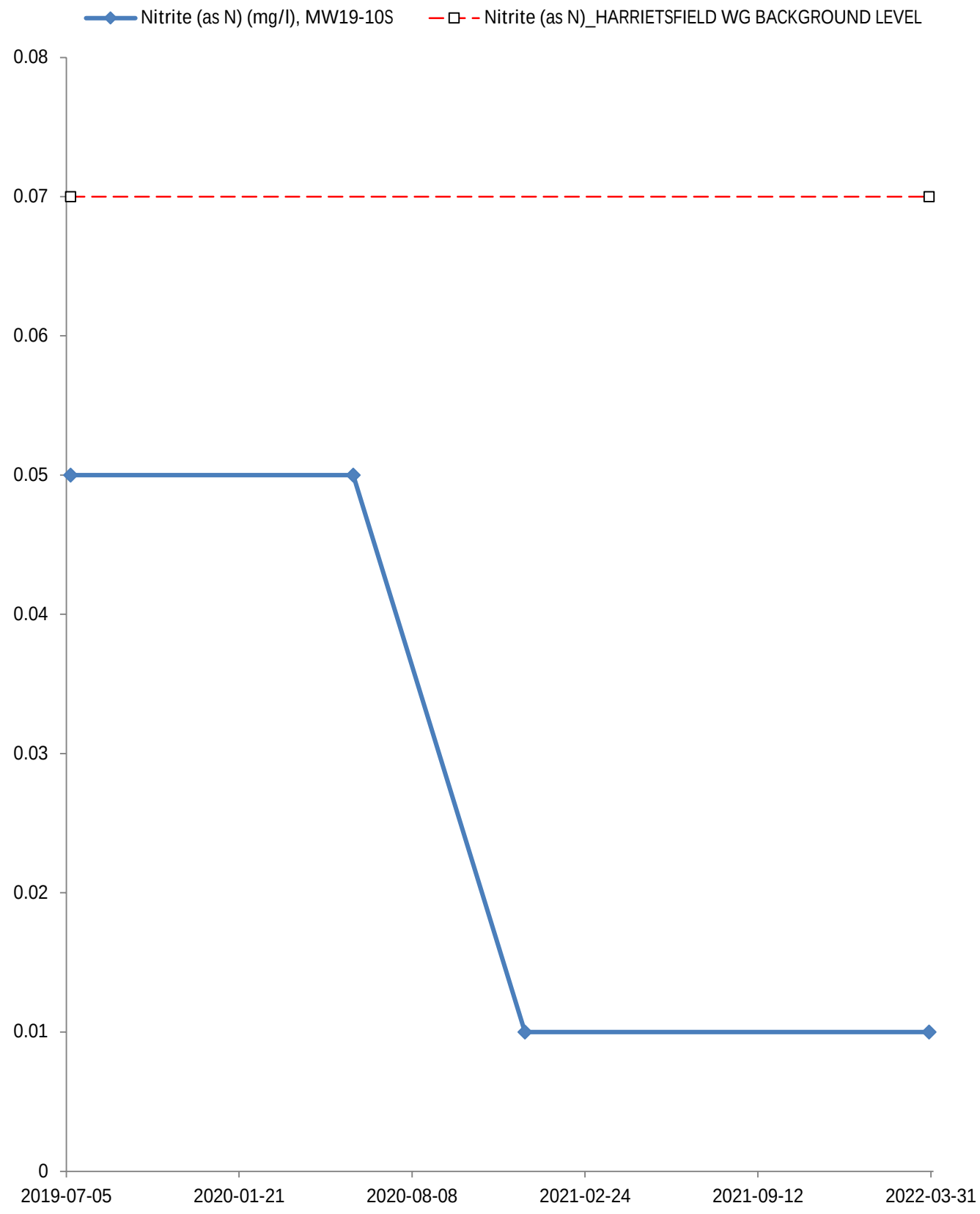
MW19-10S-Nitrate (as N)



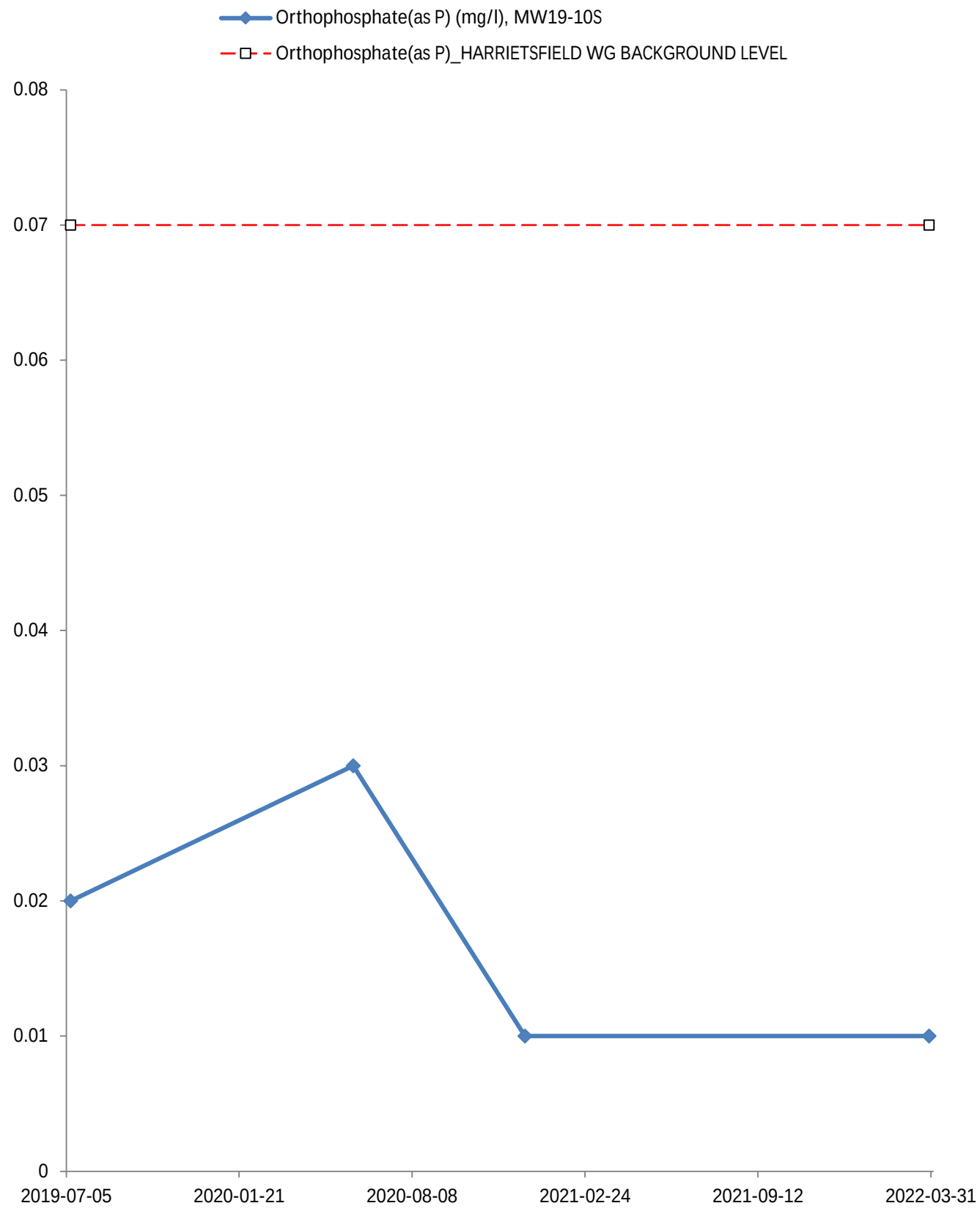
MW19-10S-Nitrate plus Nitrite (N)



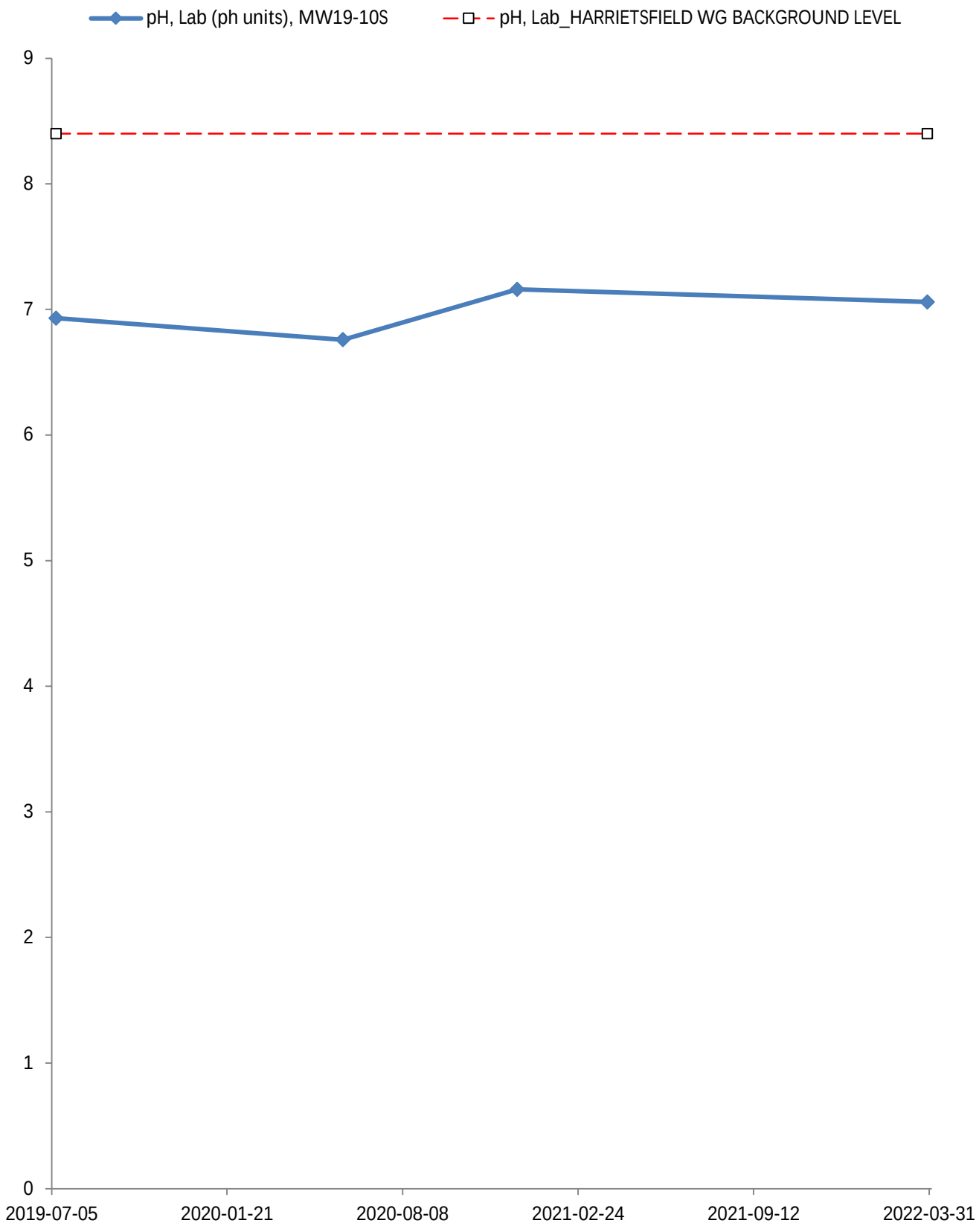
MW19-10S-Nitrite (as N)



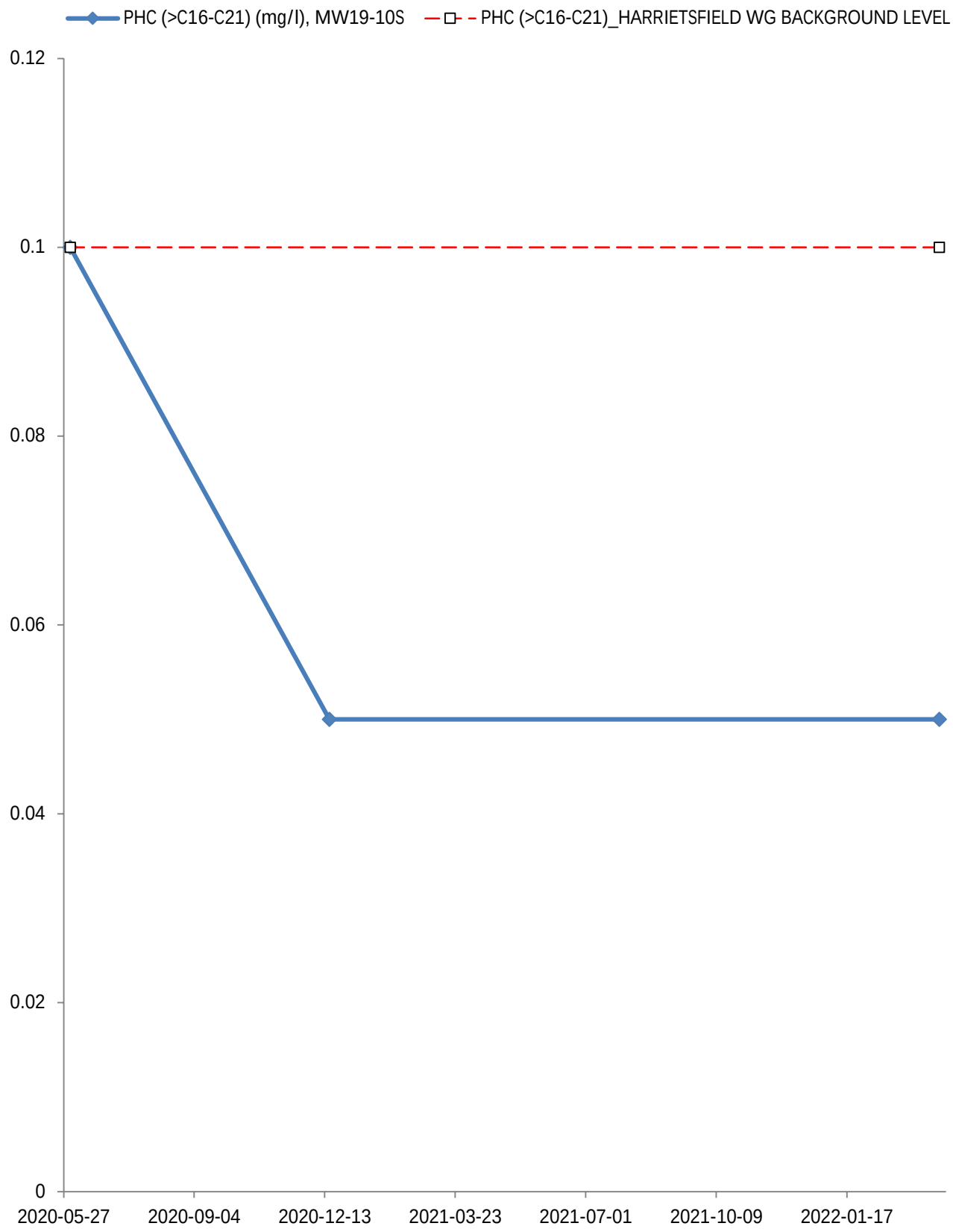
MW19-10S-Orthophosphate(as P)



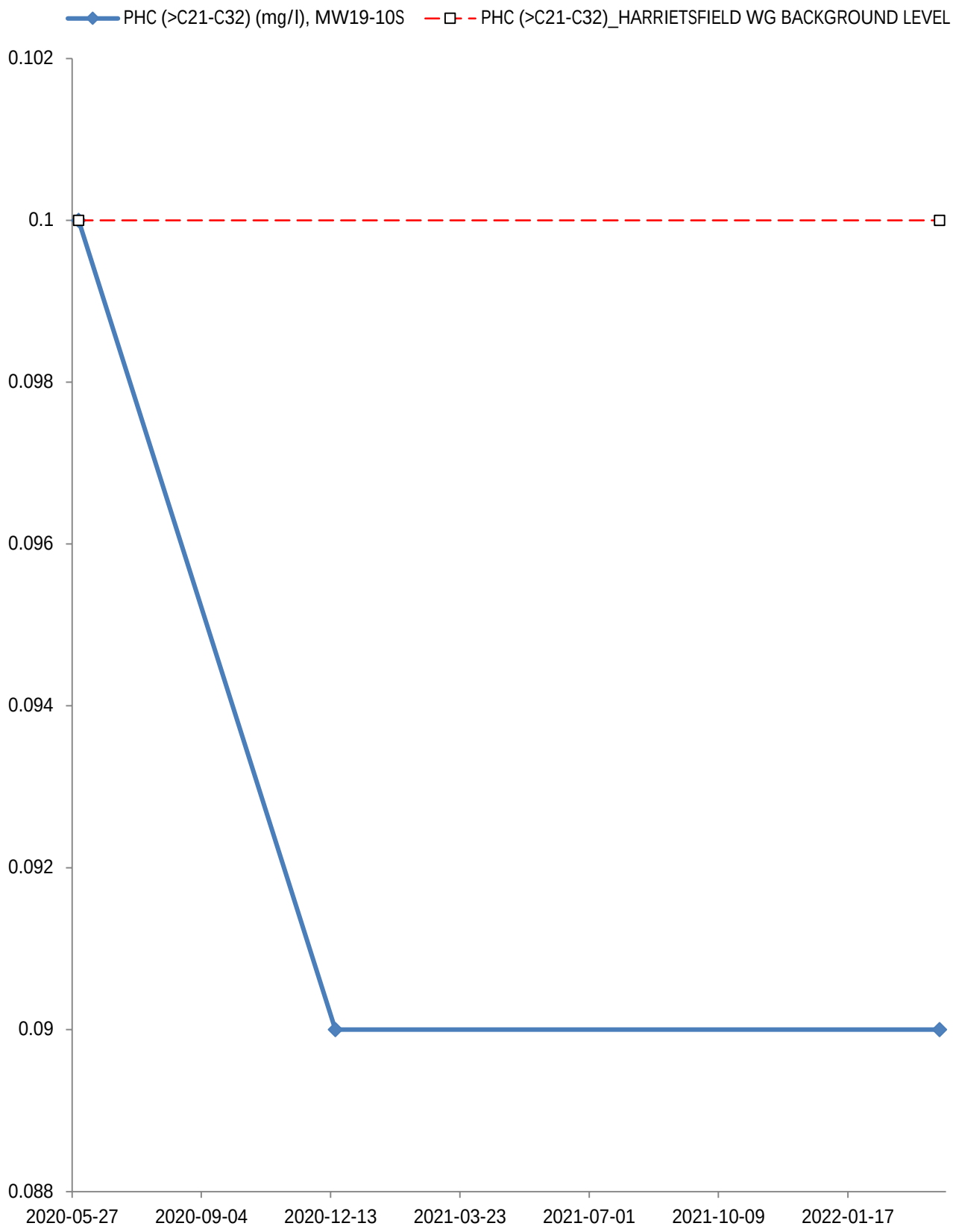
MW19-10S-pH, Lab



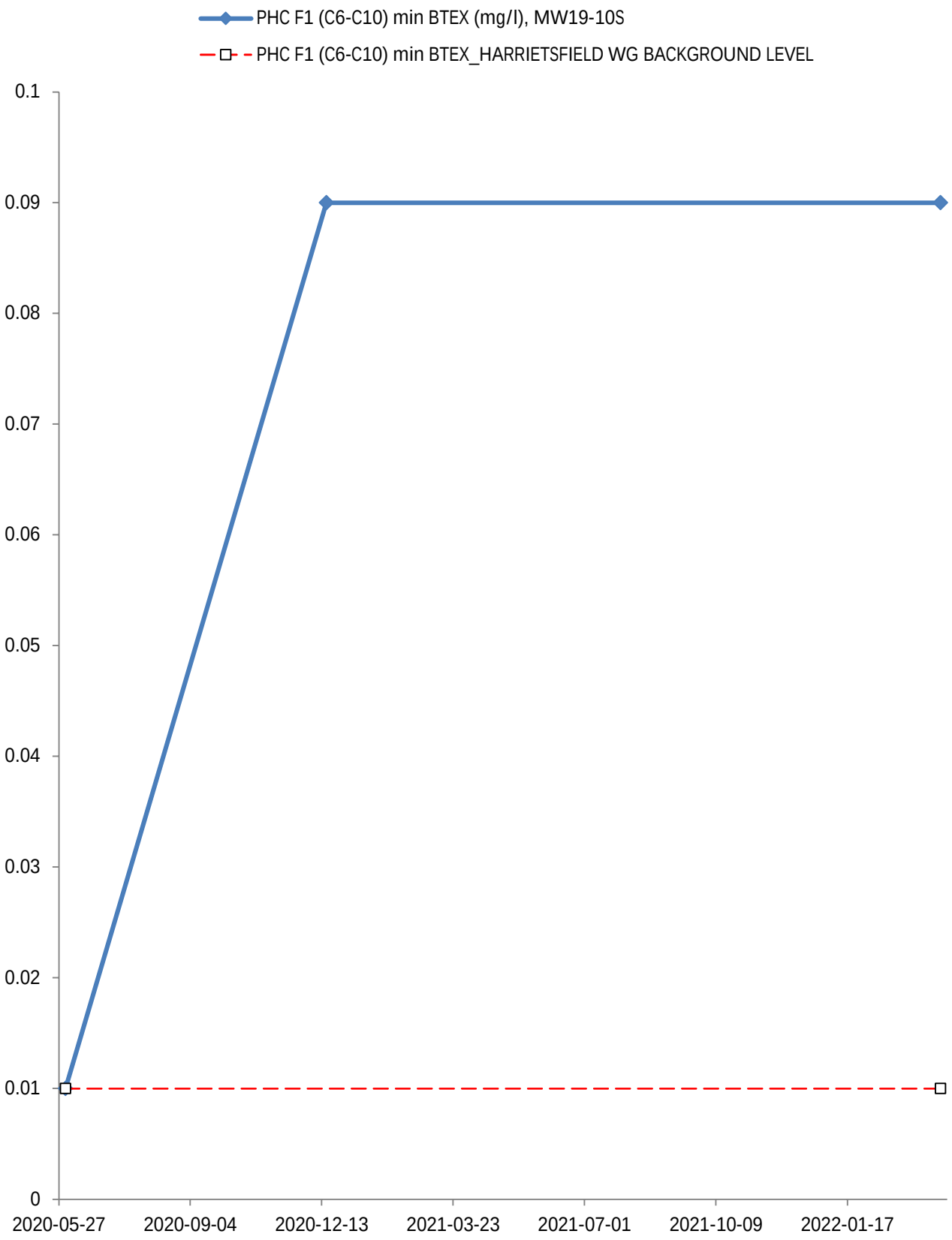
MW19-10S-PHC (>C16-C21)



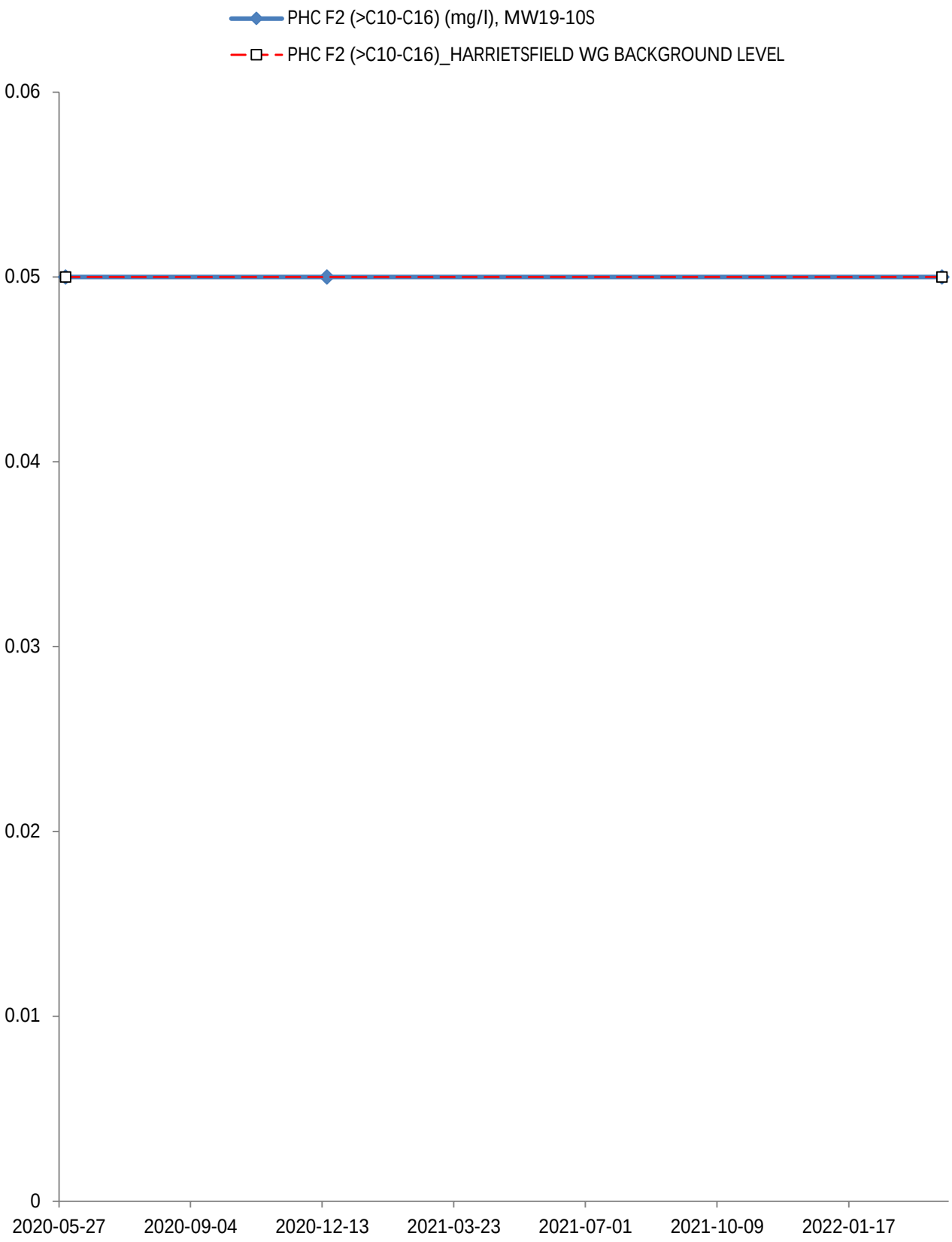
MW19-10S-PHC (>C21-C32)



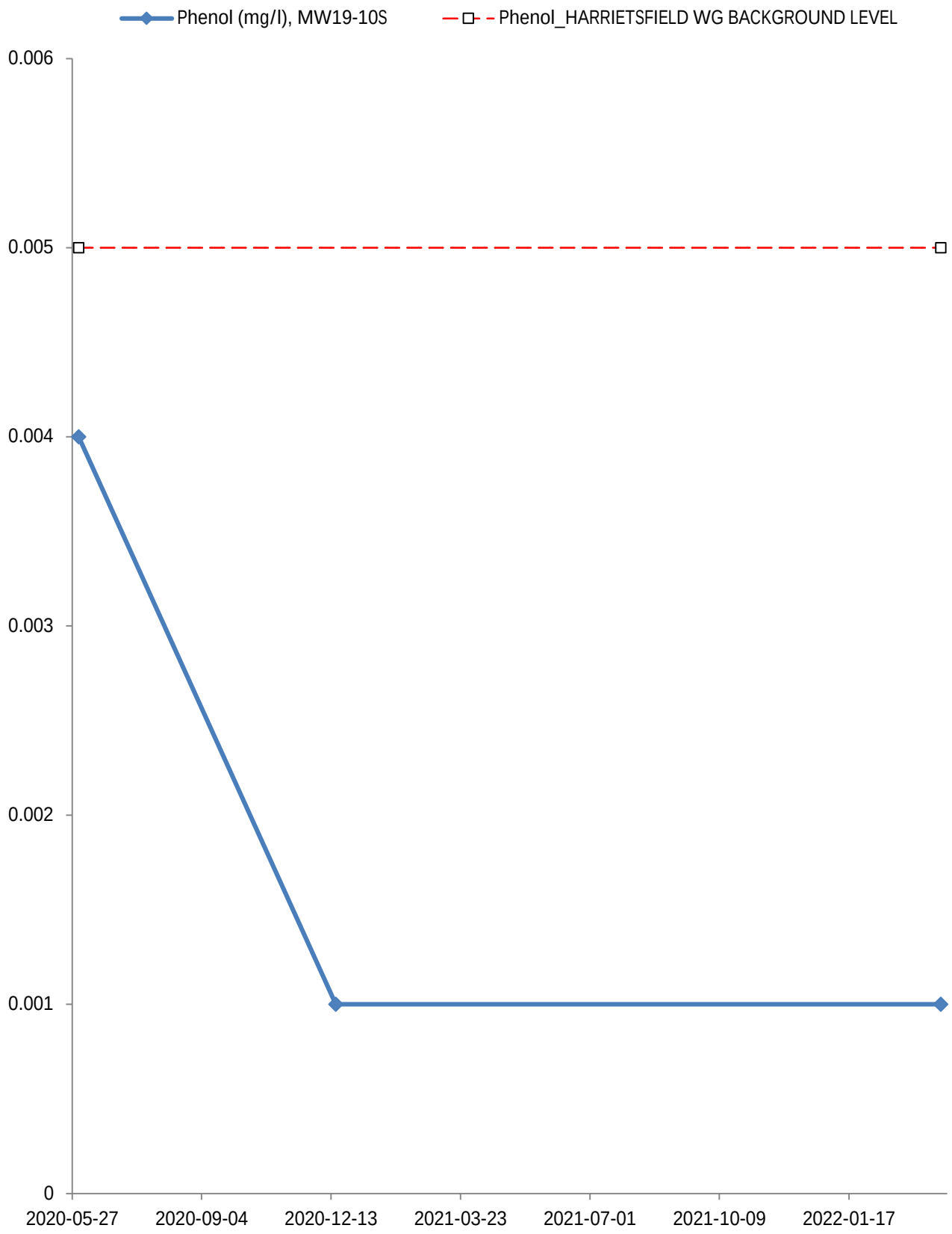
MW19-10S-PHC F1 (C6-C10) min BTEX



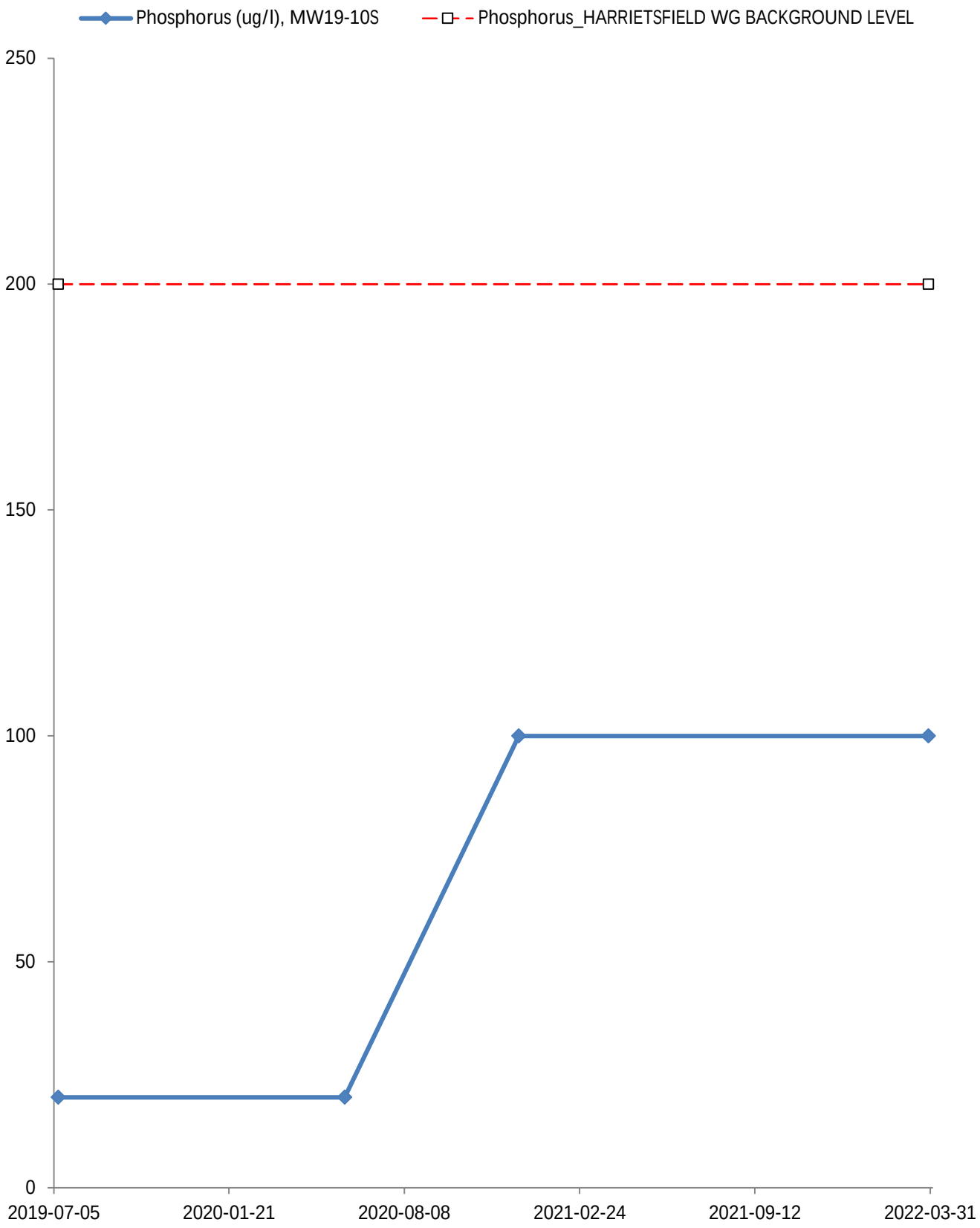
MW19-10S-PHC F2 (>C10-C16)



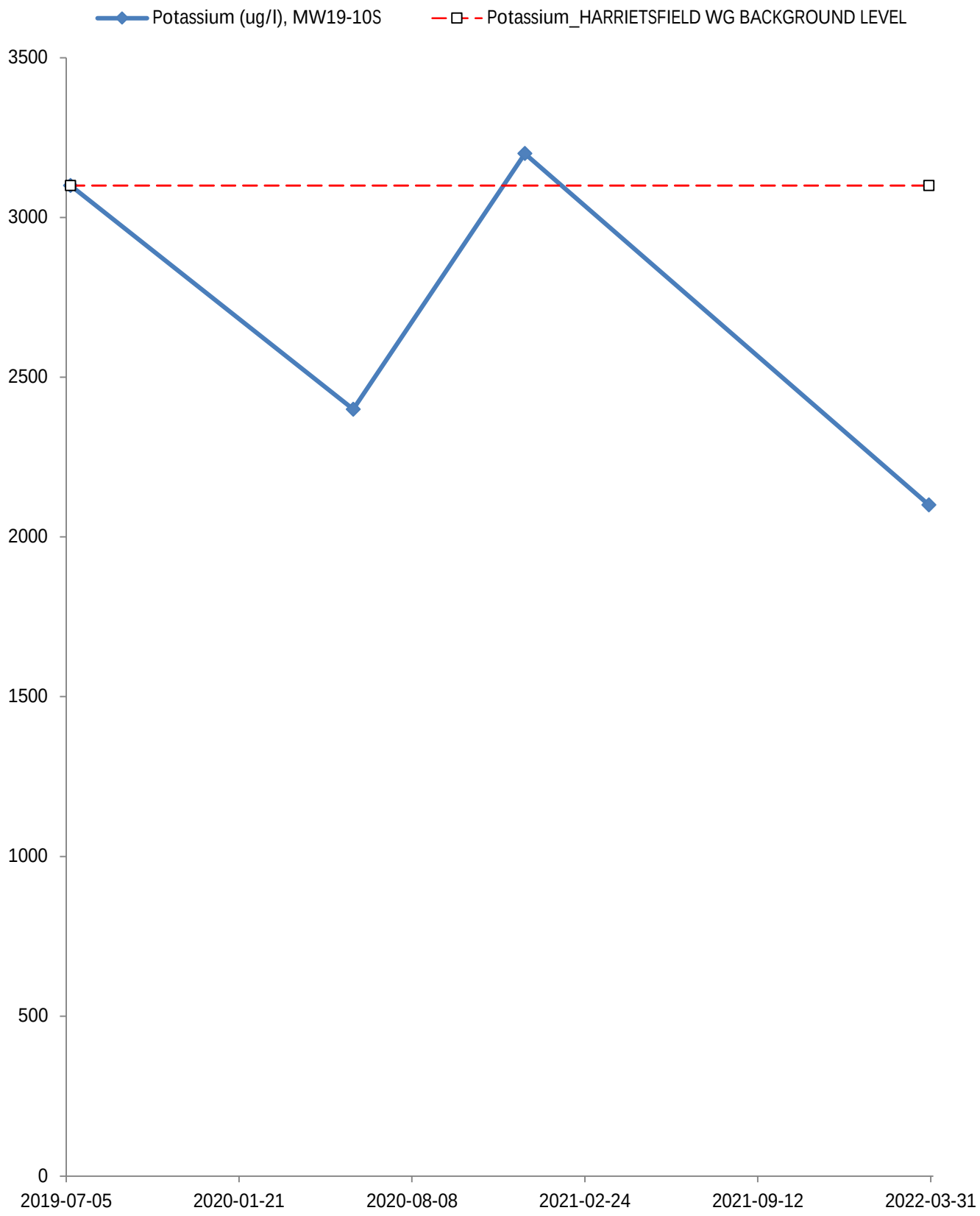
MW19-10S-Phenol



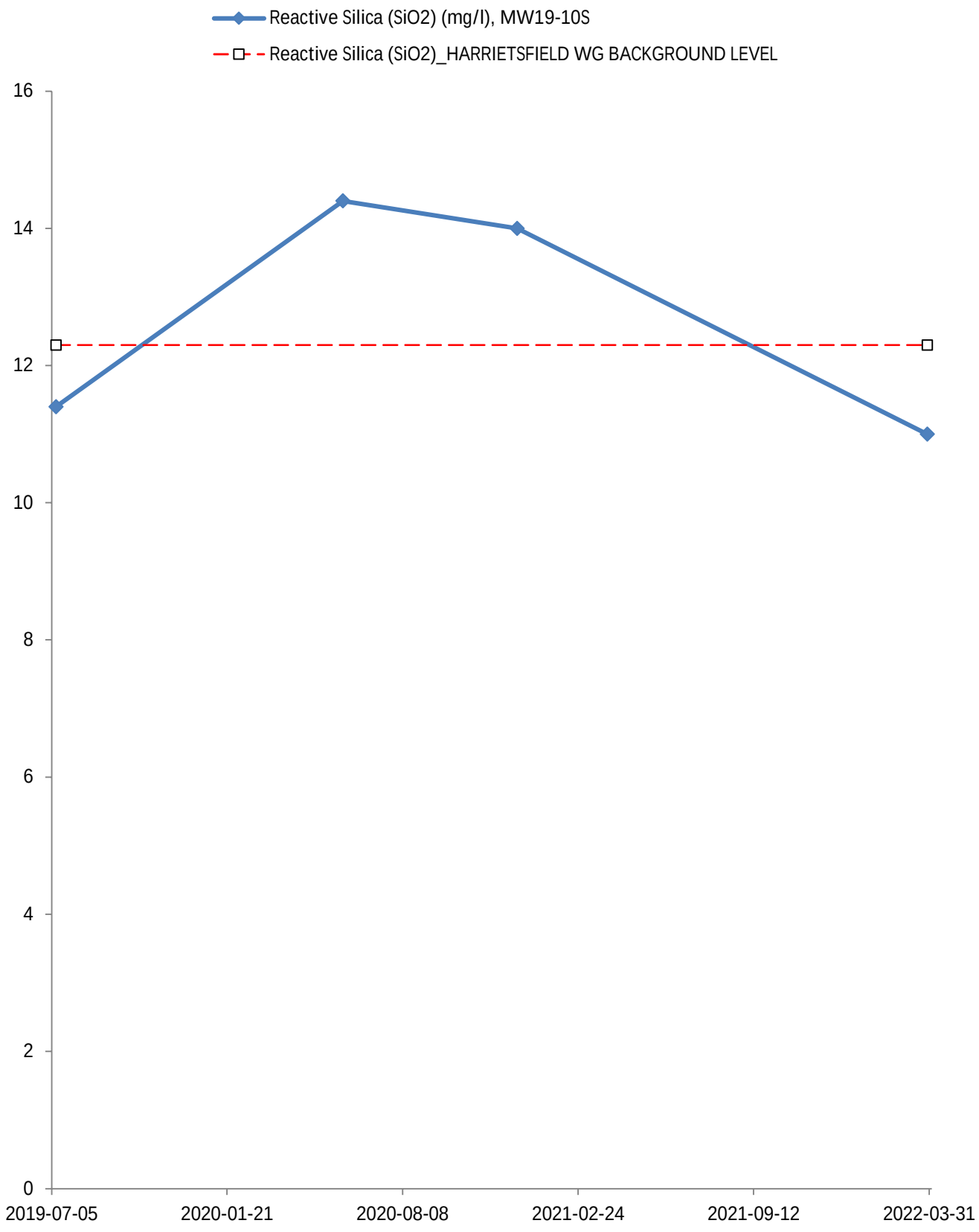
MW19-10S-Phosphorus



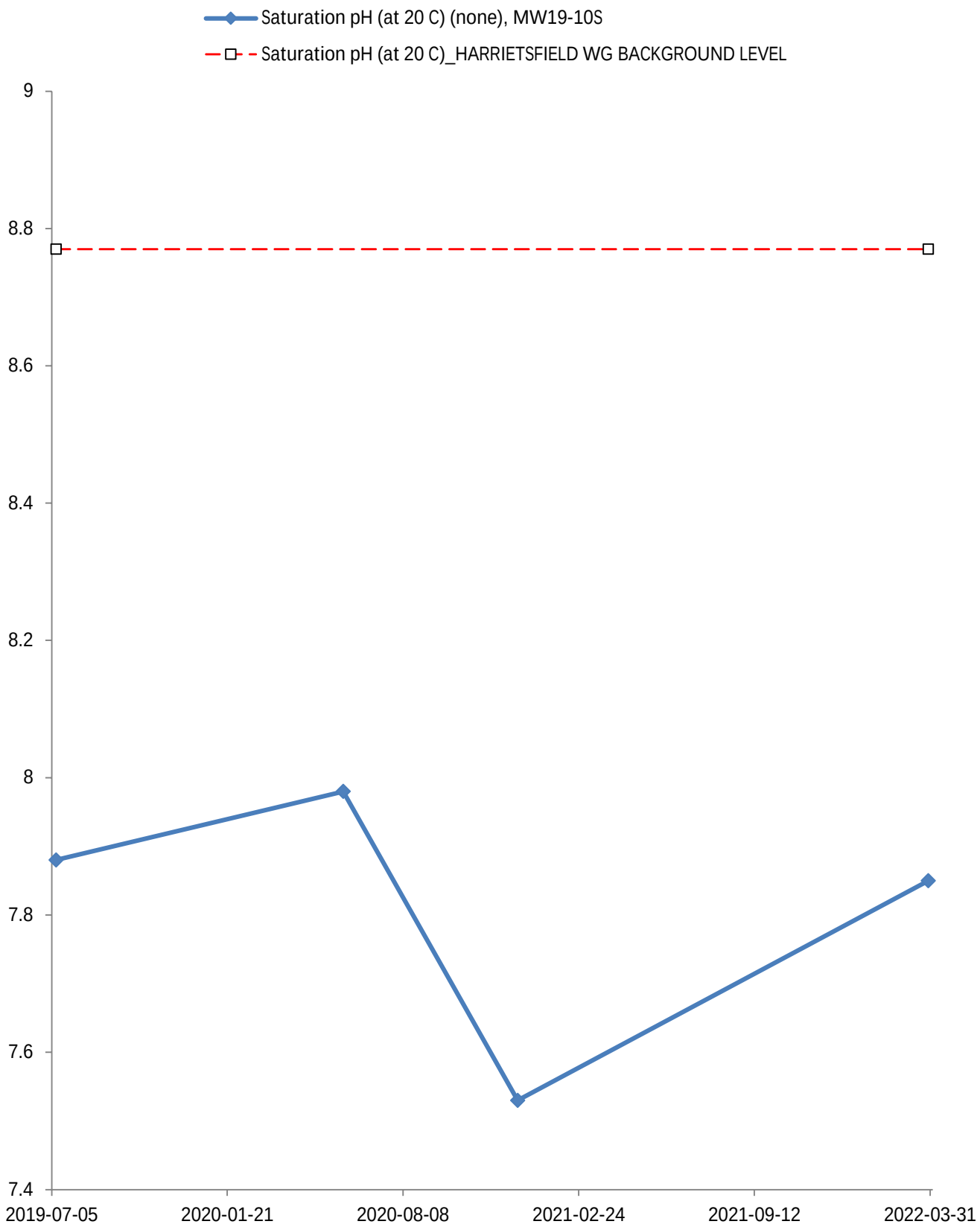
MW19-10S-Potassium



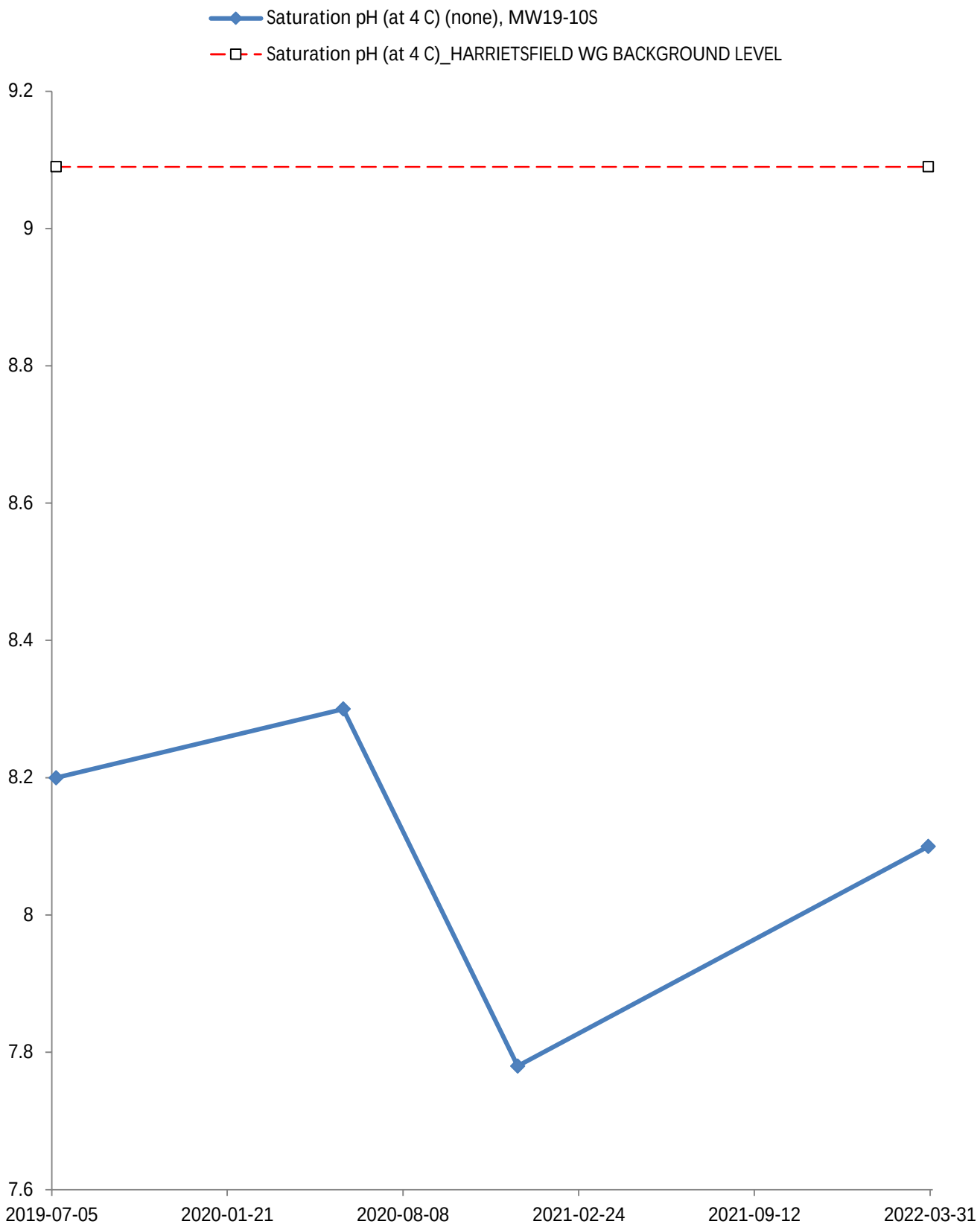
MW19-10S-Reactive Silica (SiO2)



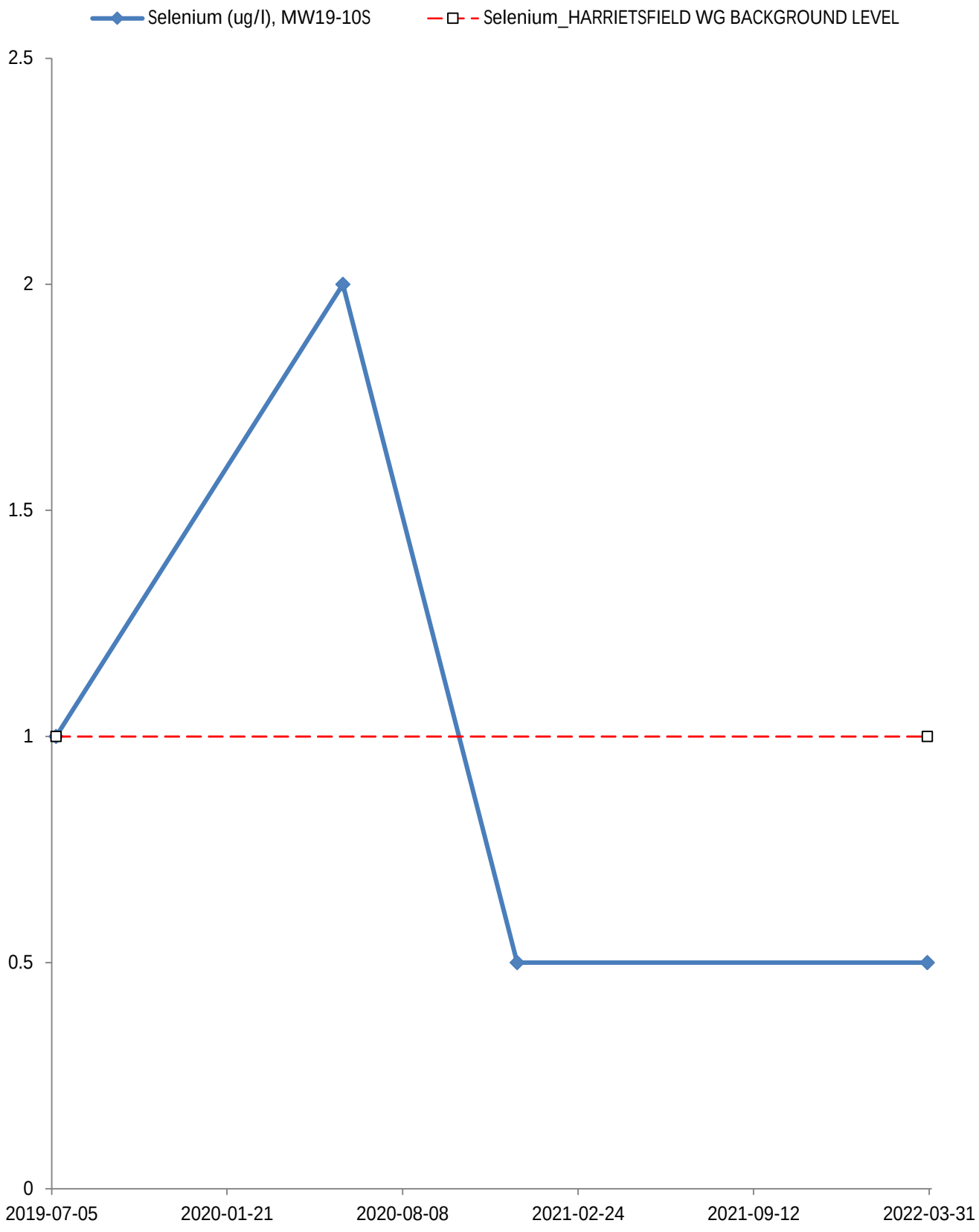
MW19-10S-Saturation pH (at 20 C)



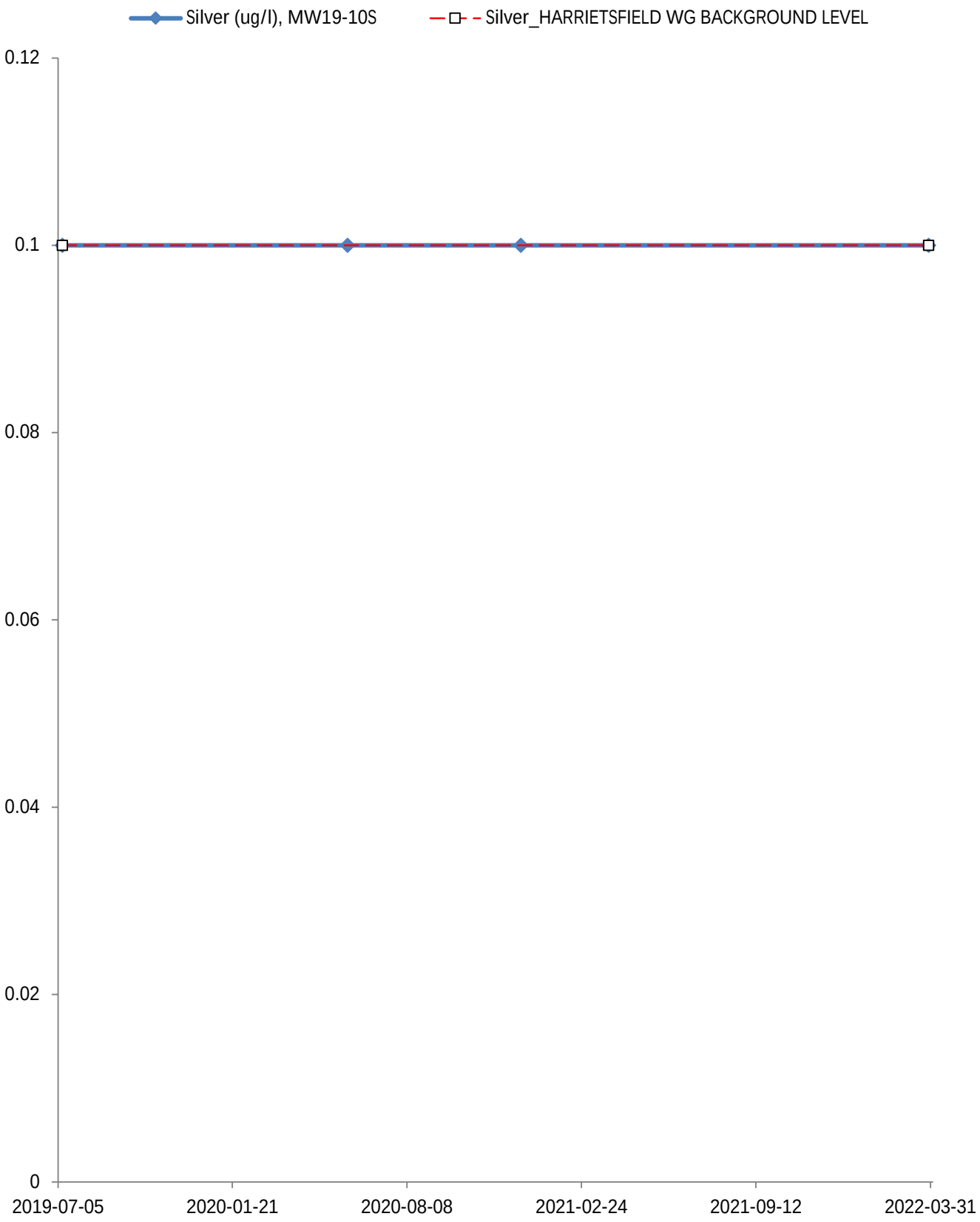
MW19-10S-Saturation pH (at 4 C)



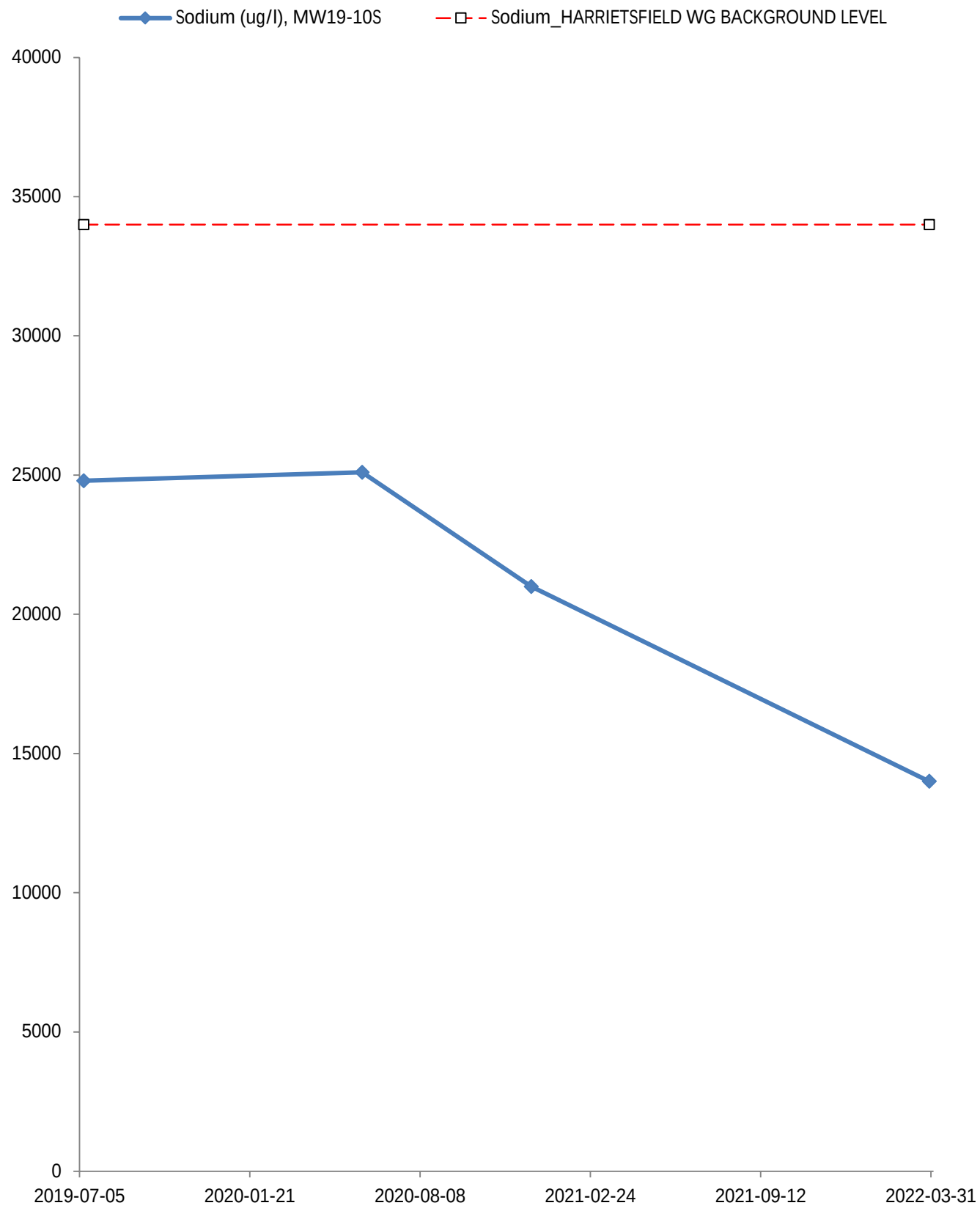
MW19-10S-Selenium



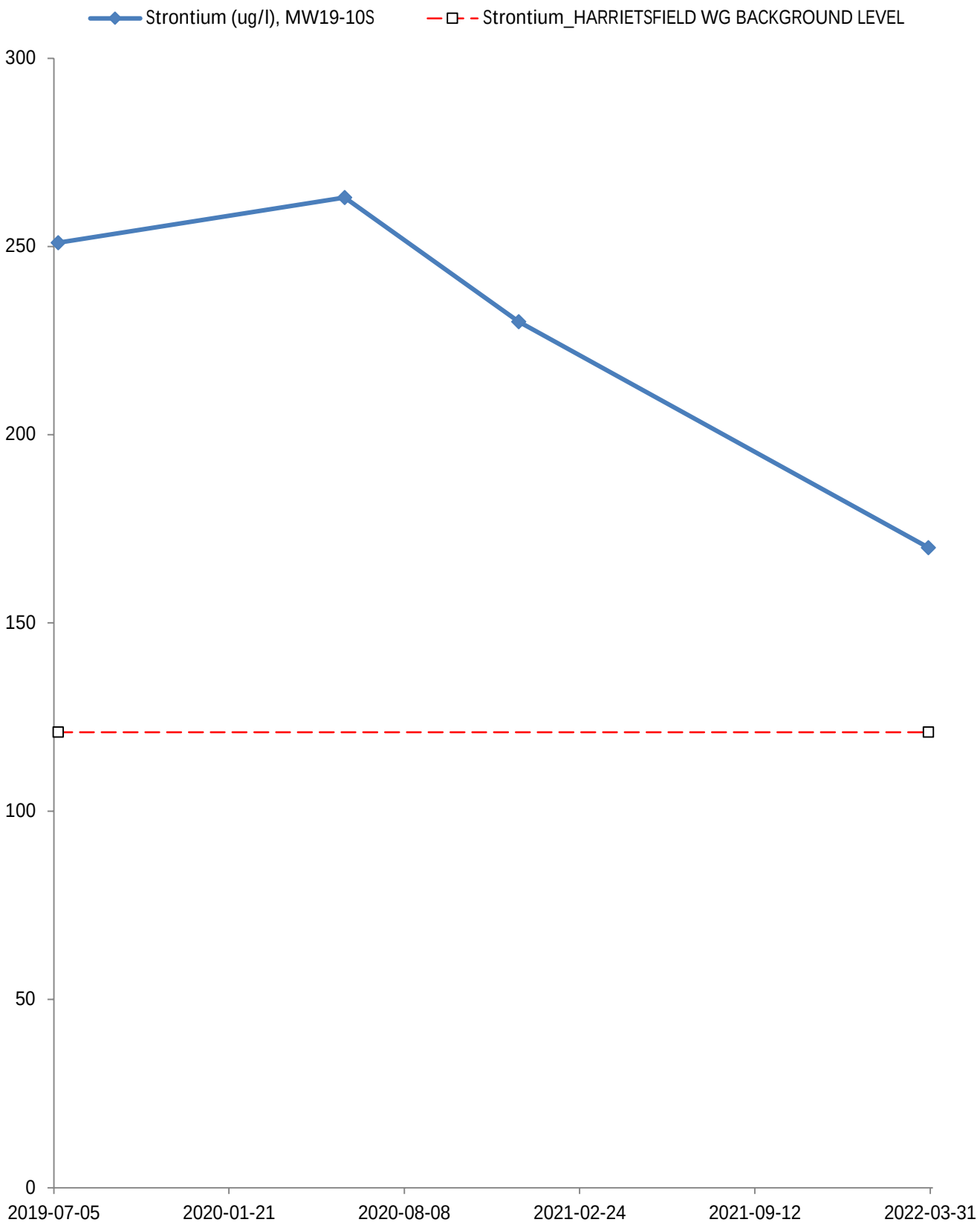
MW19-10S-Silver



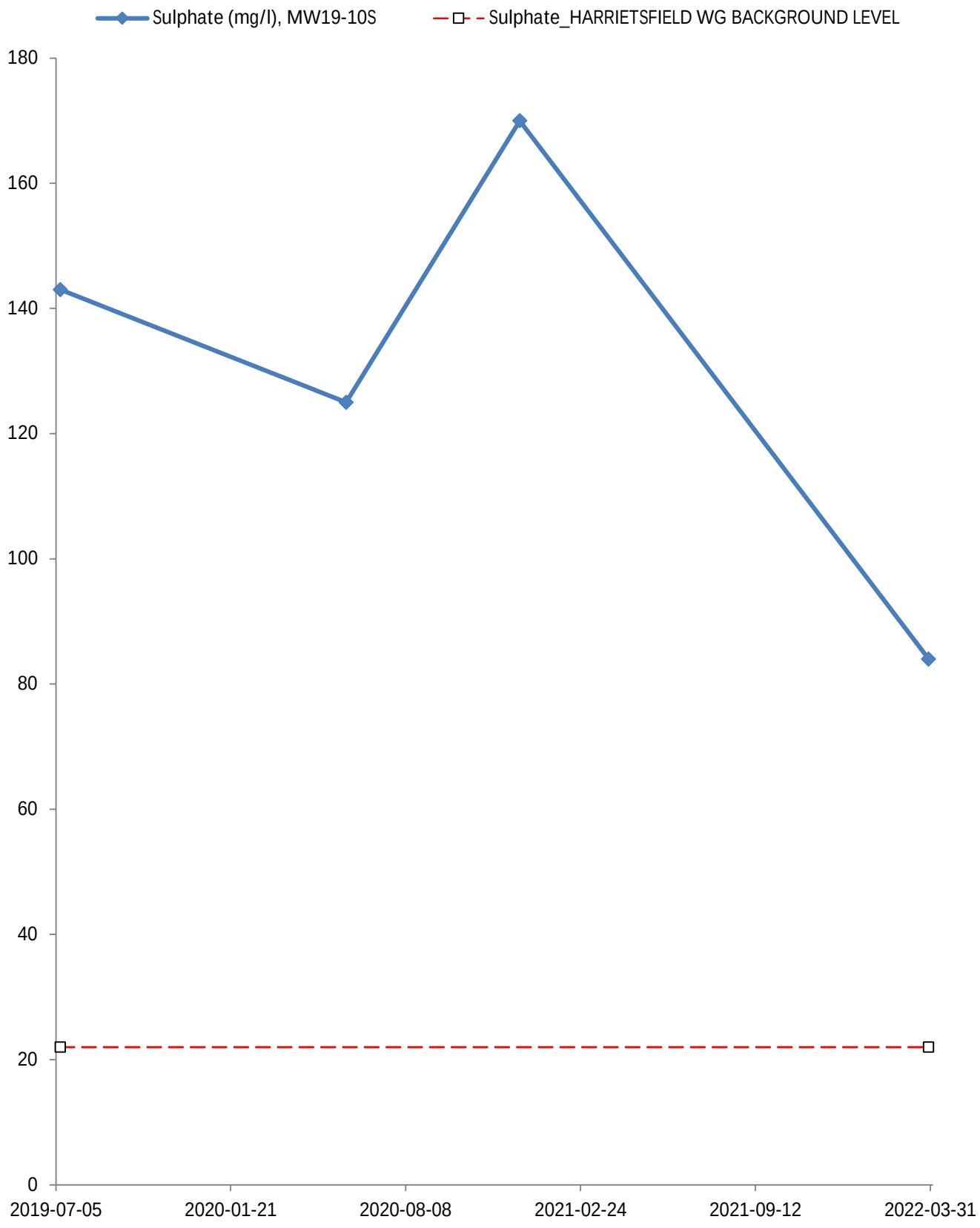
MW19-10S-Sodium



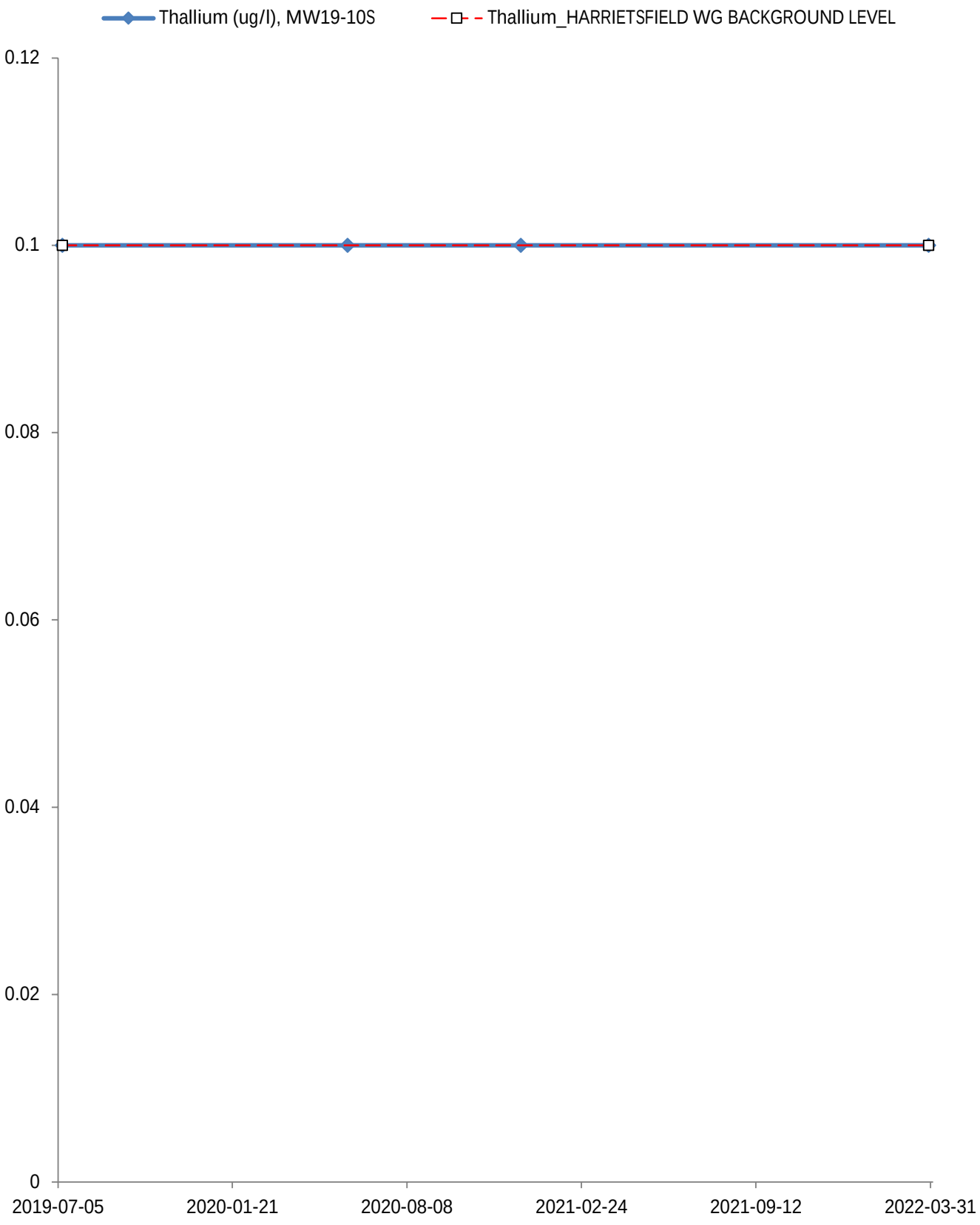
MW19-10S-Strontium



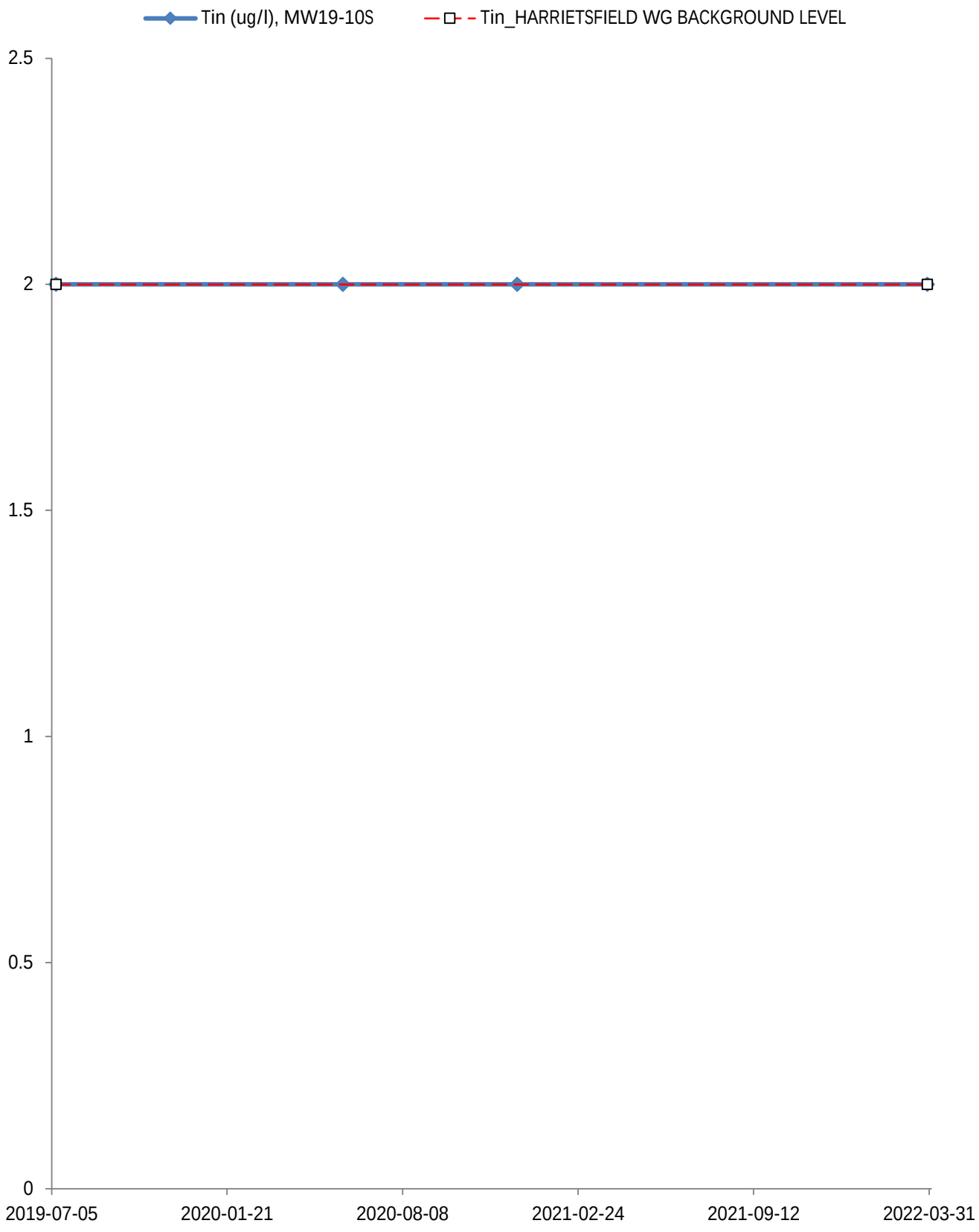
MW19-10S-Sulphate



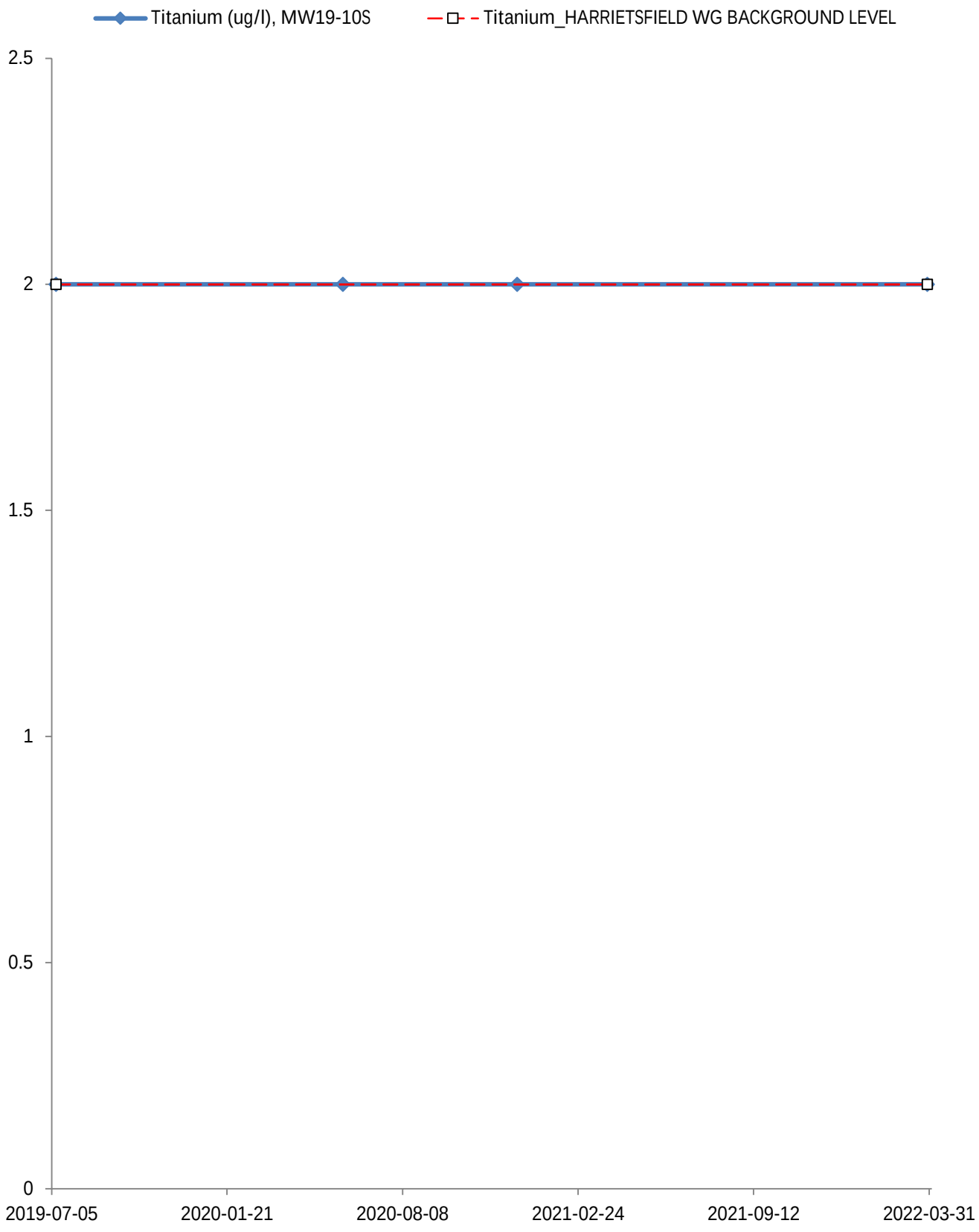
MW19-10S-Thallium



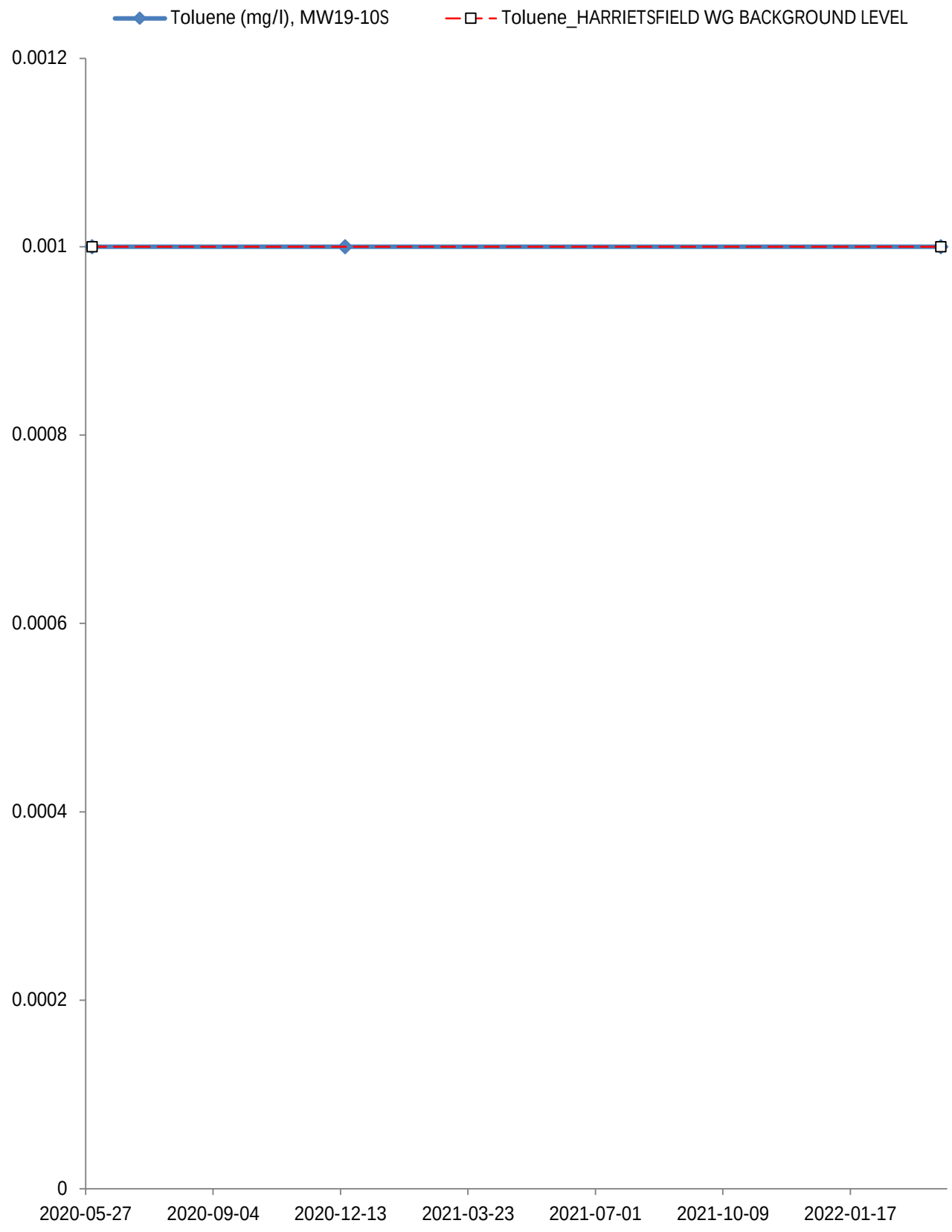
MW19-10S-Tin


Tin (ug/l), MW19-10S
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
2.5
2
1.5
1
0.5
0
2019-07-05
2020-01-21
2020-08-08
2021-02-24
2021-09-12
2022-03-31

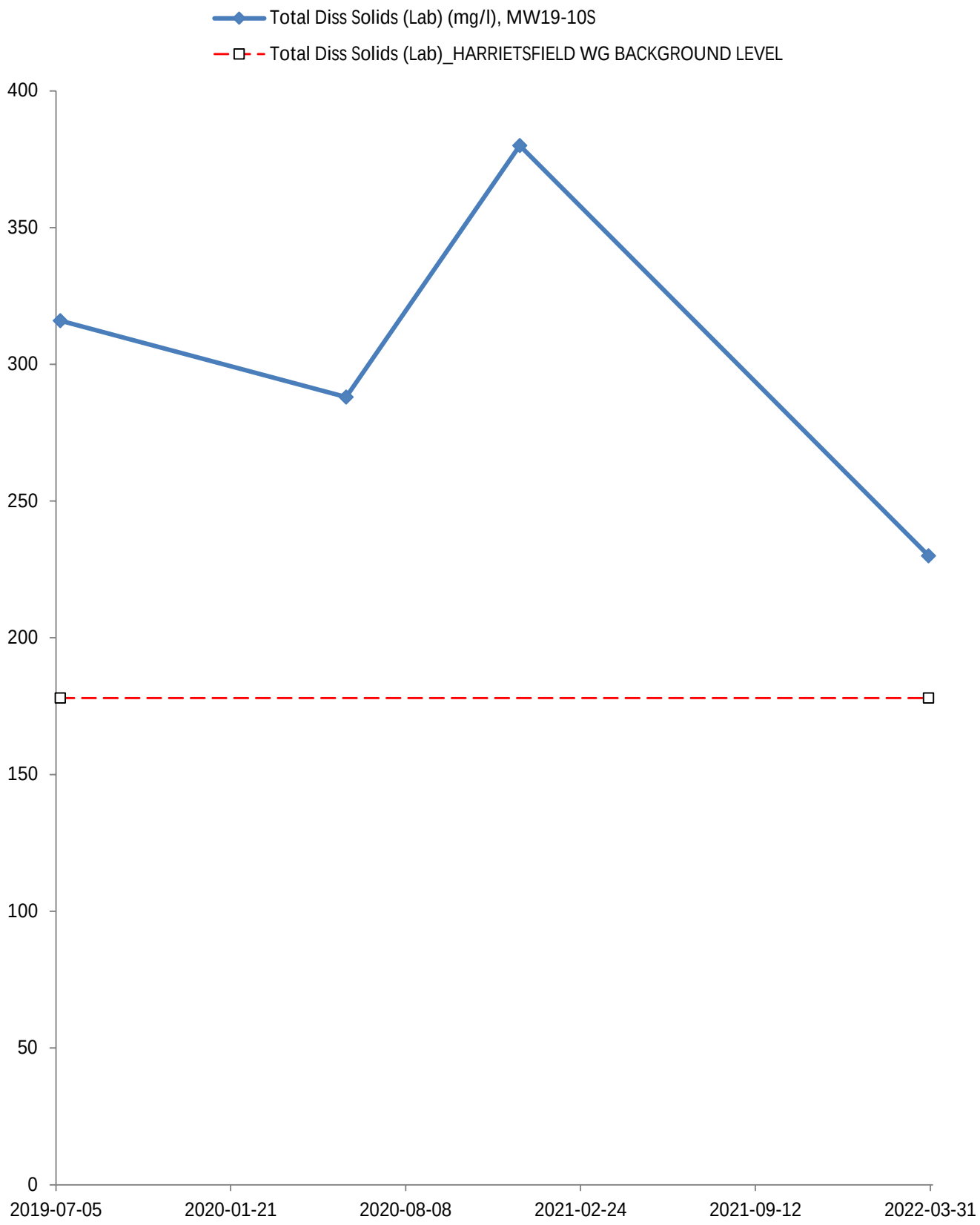
MW19-10S-Titanium



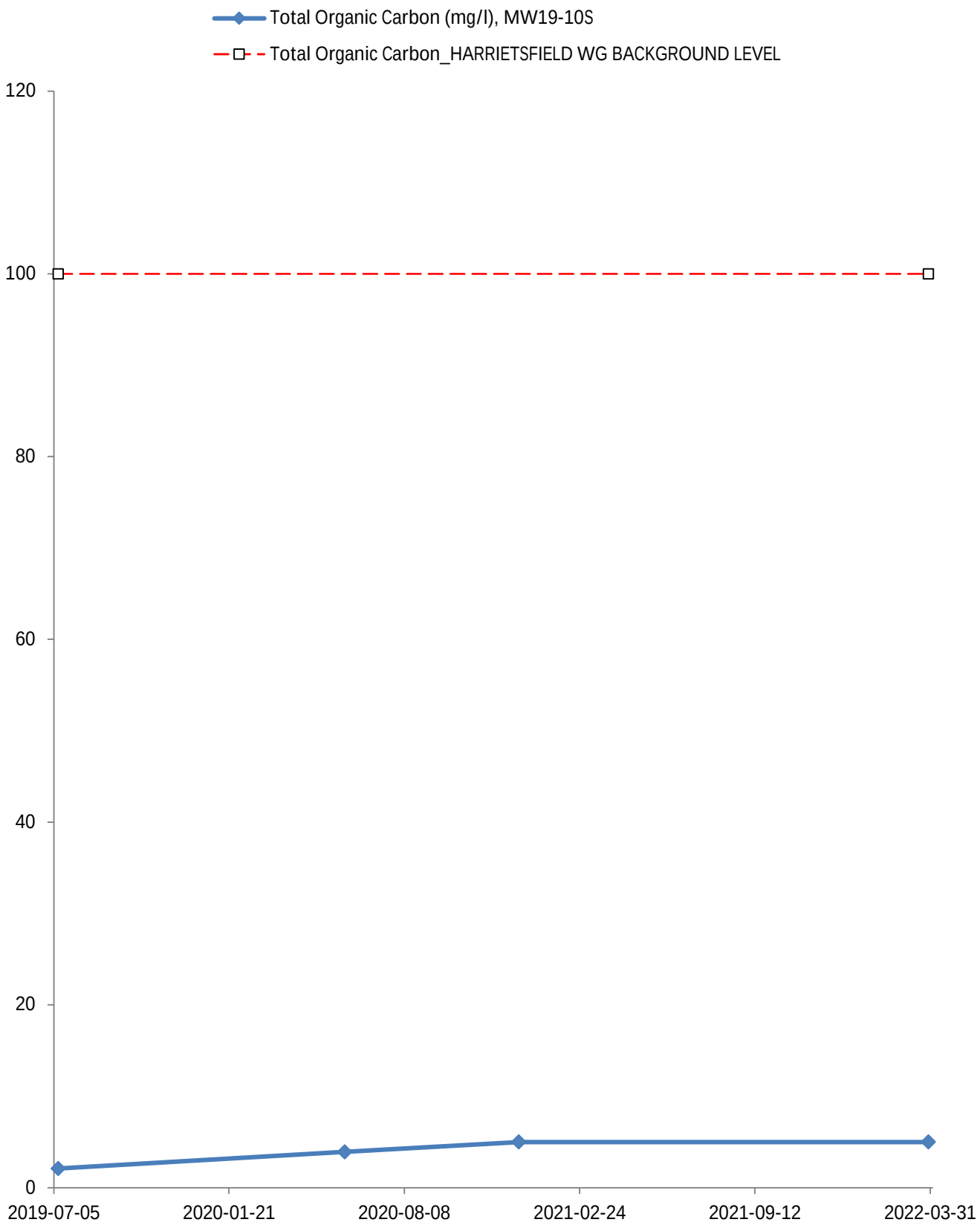
MW19-10S-Toluene



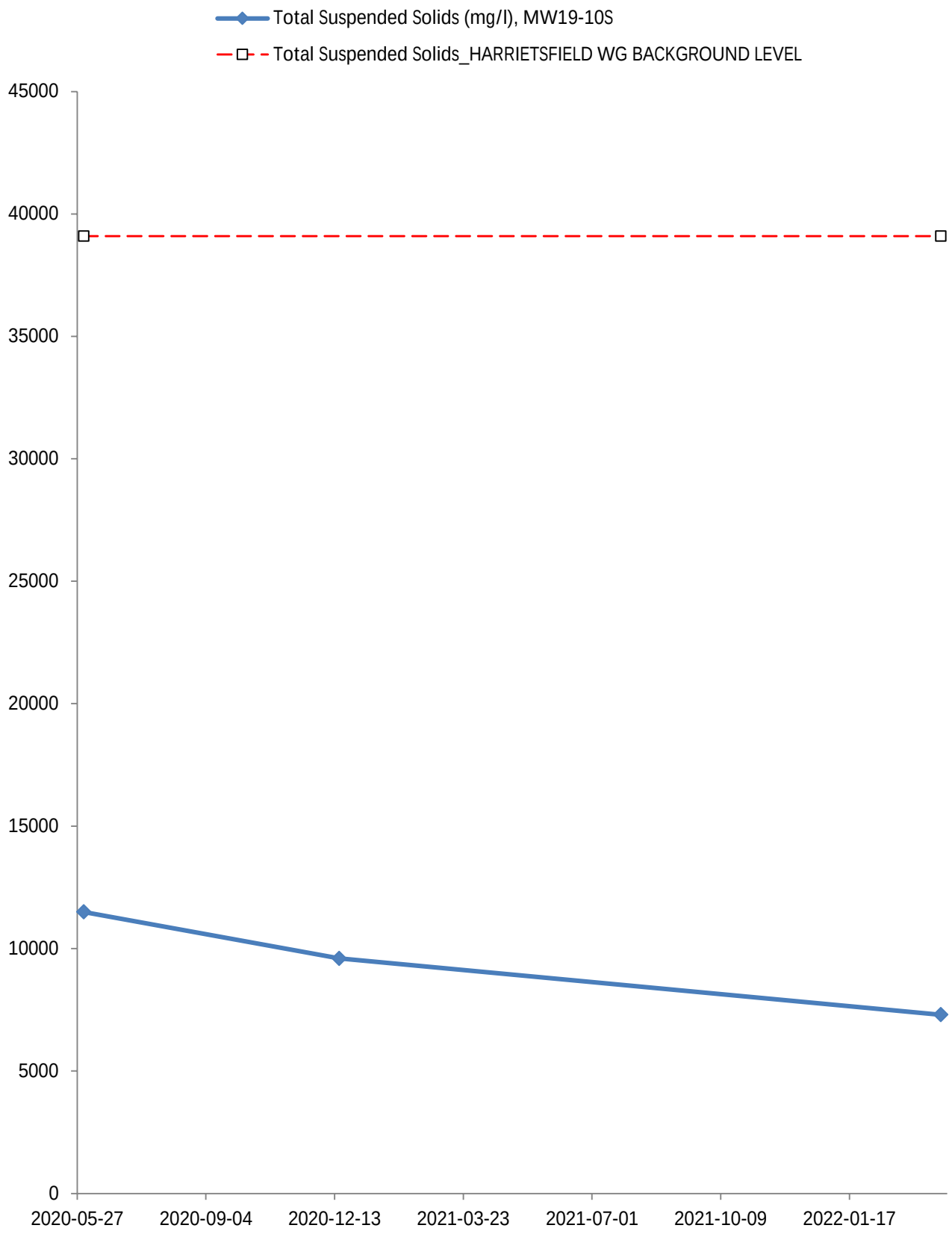
MW19-10S-Total Diss Solids (Lab)



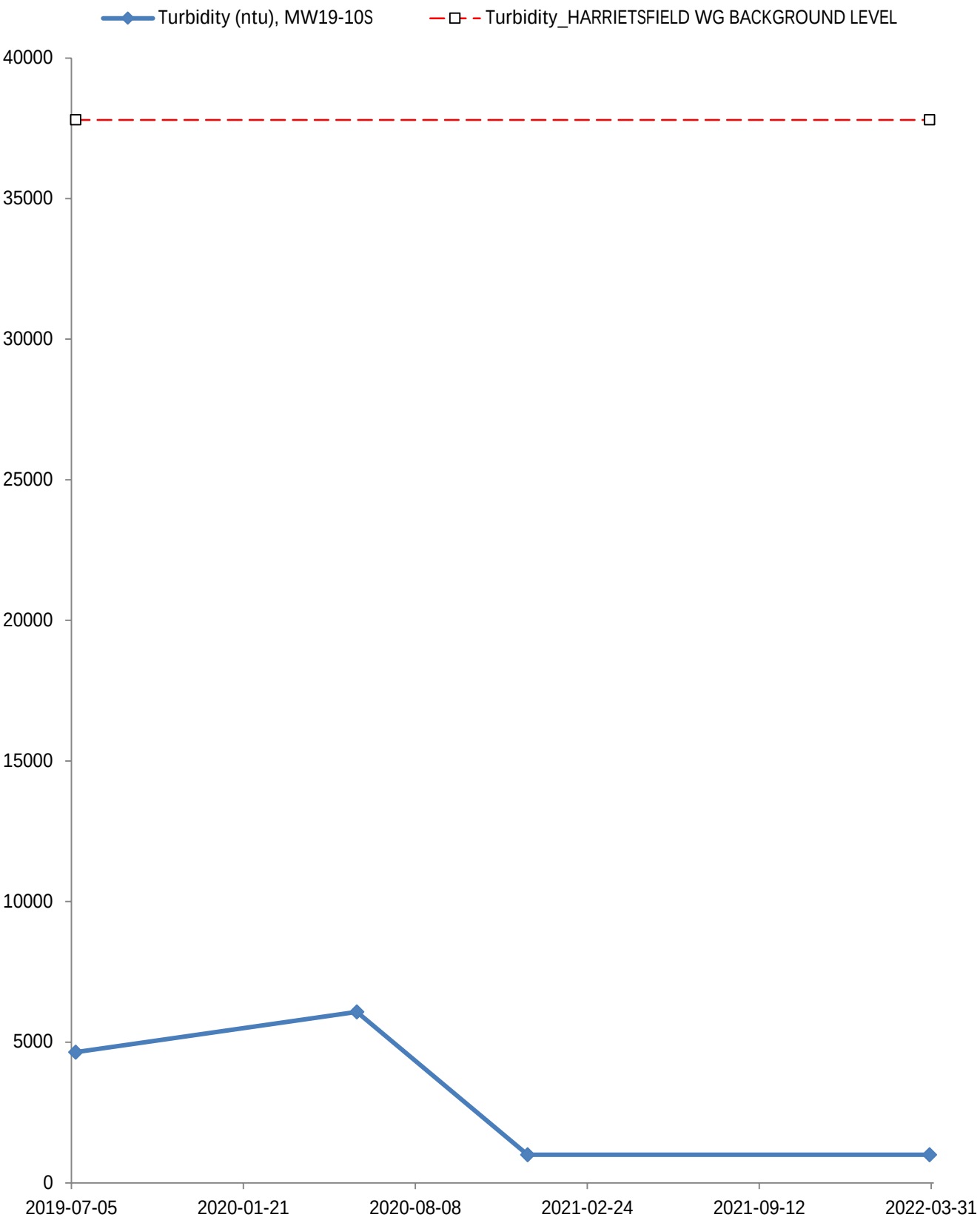
MW19-10S-Total Organic Carbon



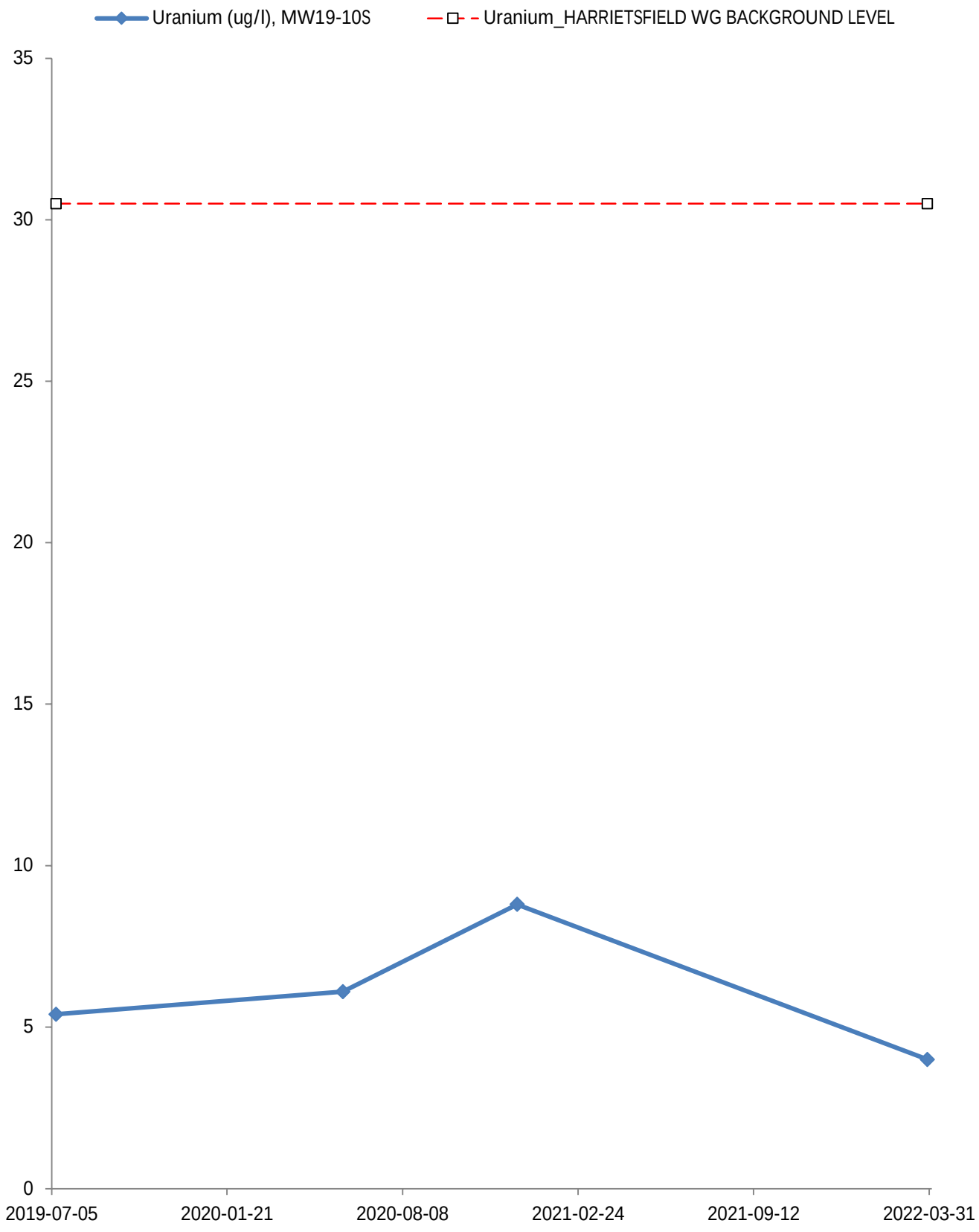
MW19-10S-Total Suspended Solids



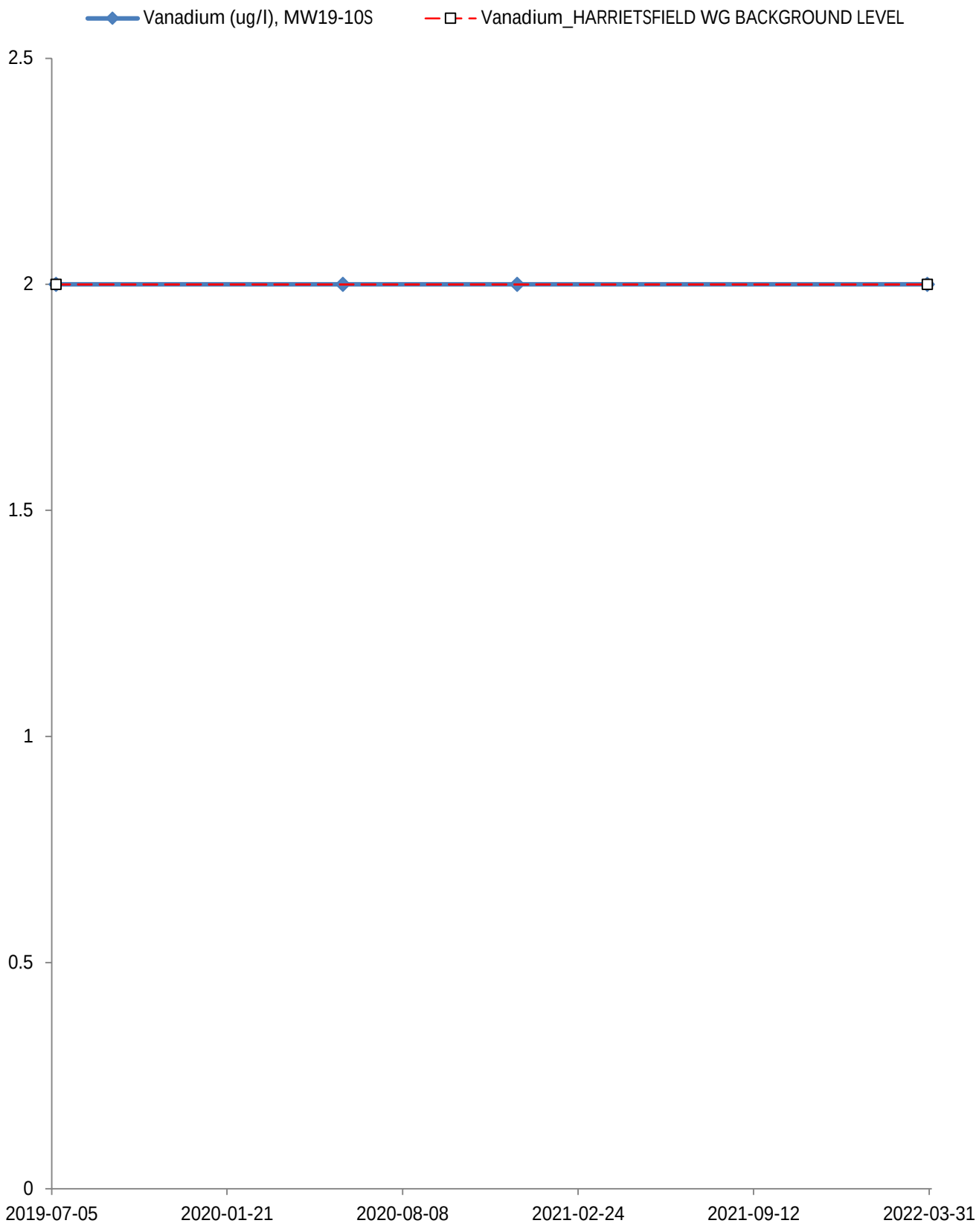
MW19-10S-Turbidity



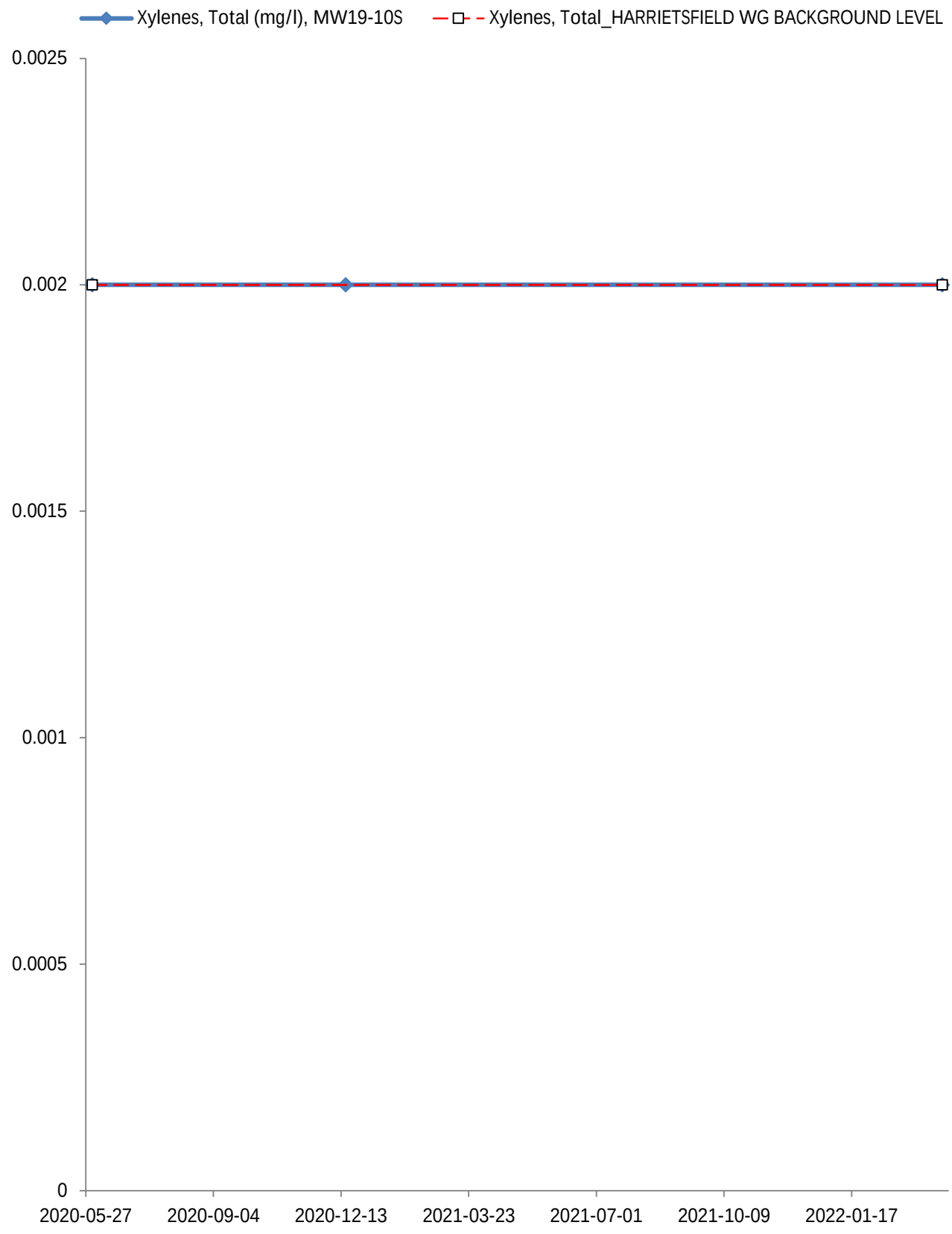
MW19-10S-Uranium



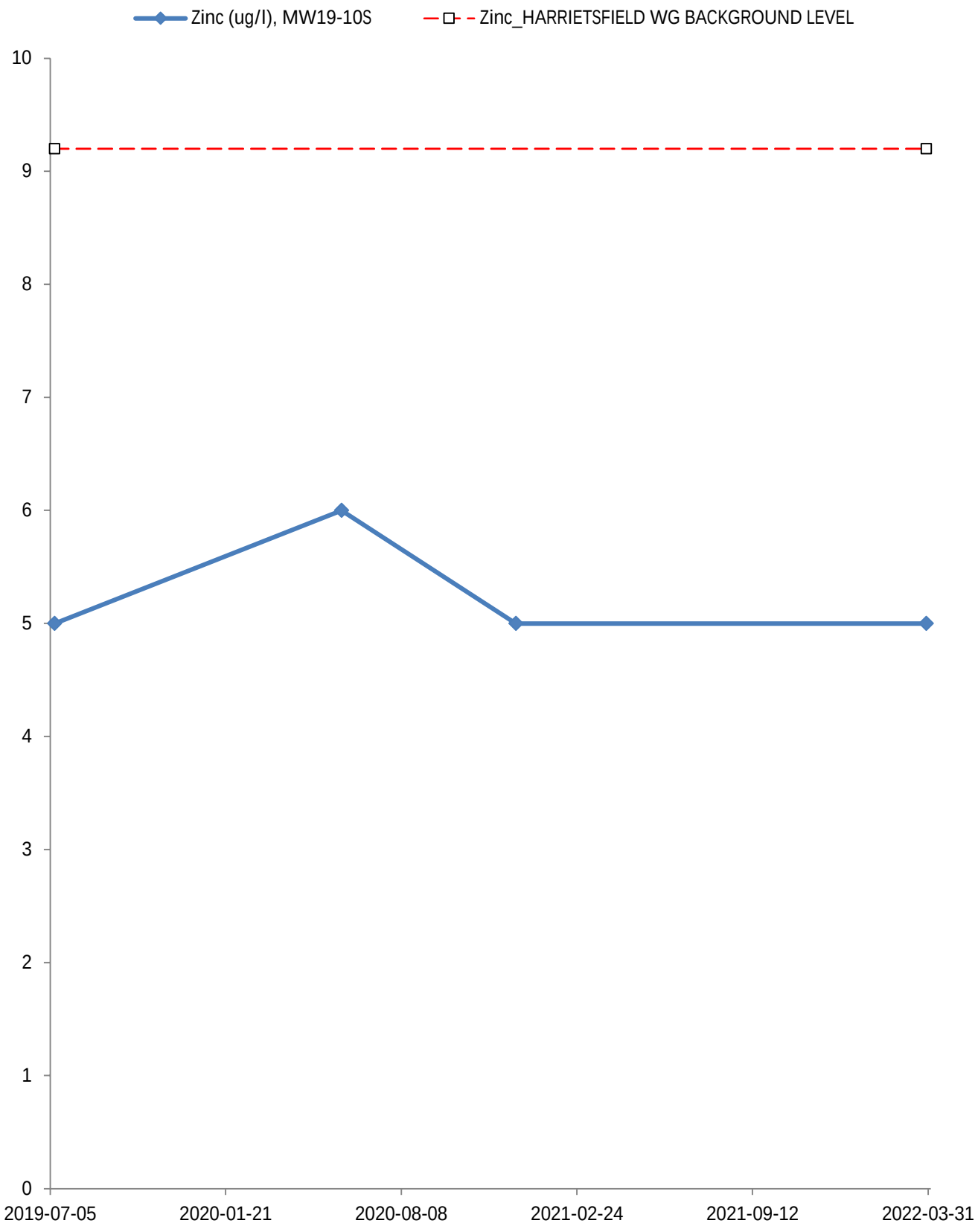
MW19-10S-Vanadium



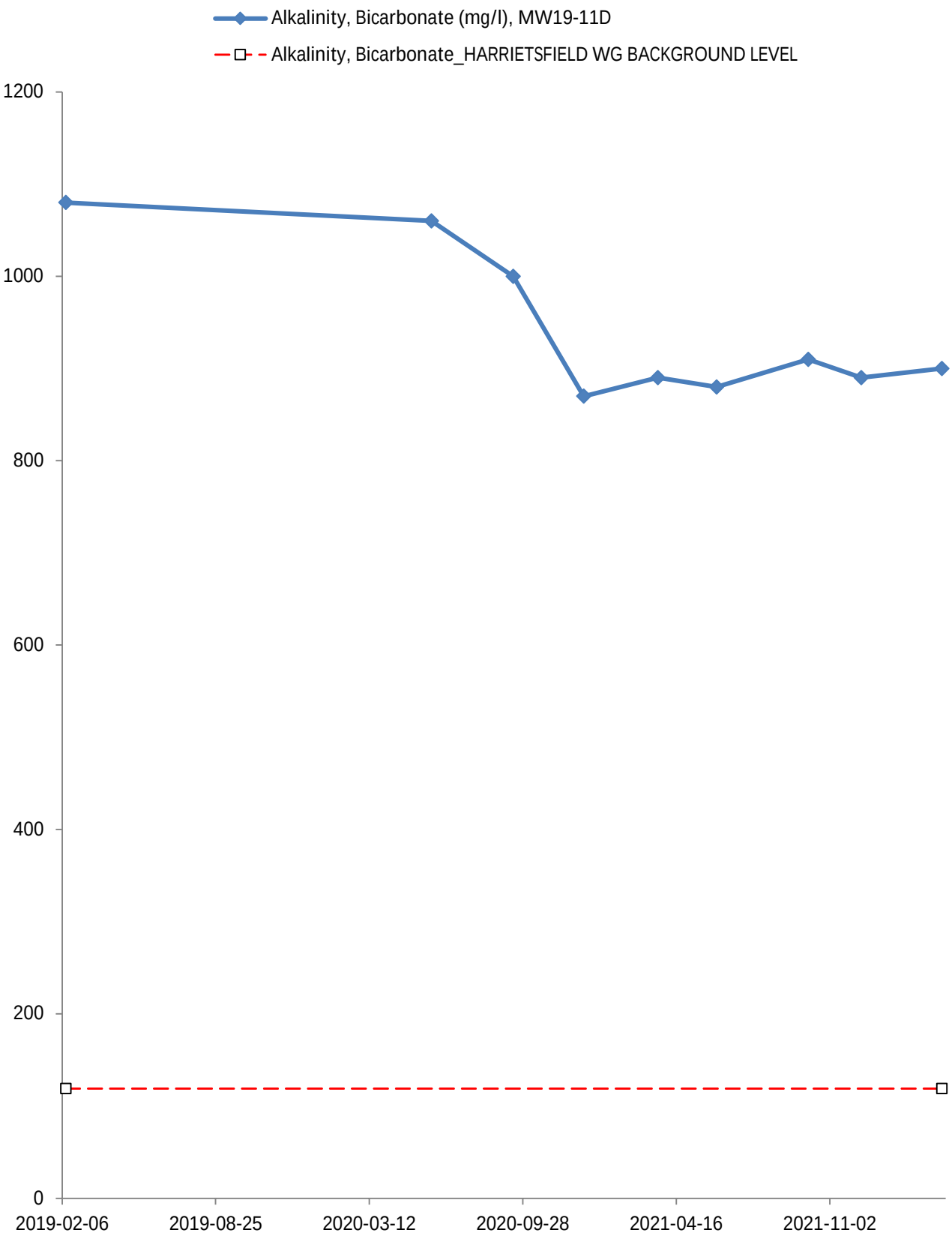
MW19-10S-Xylenes, Total



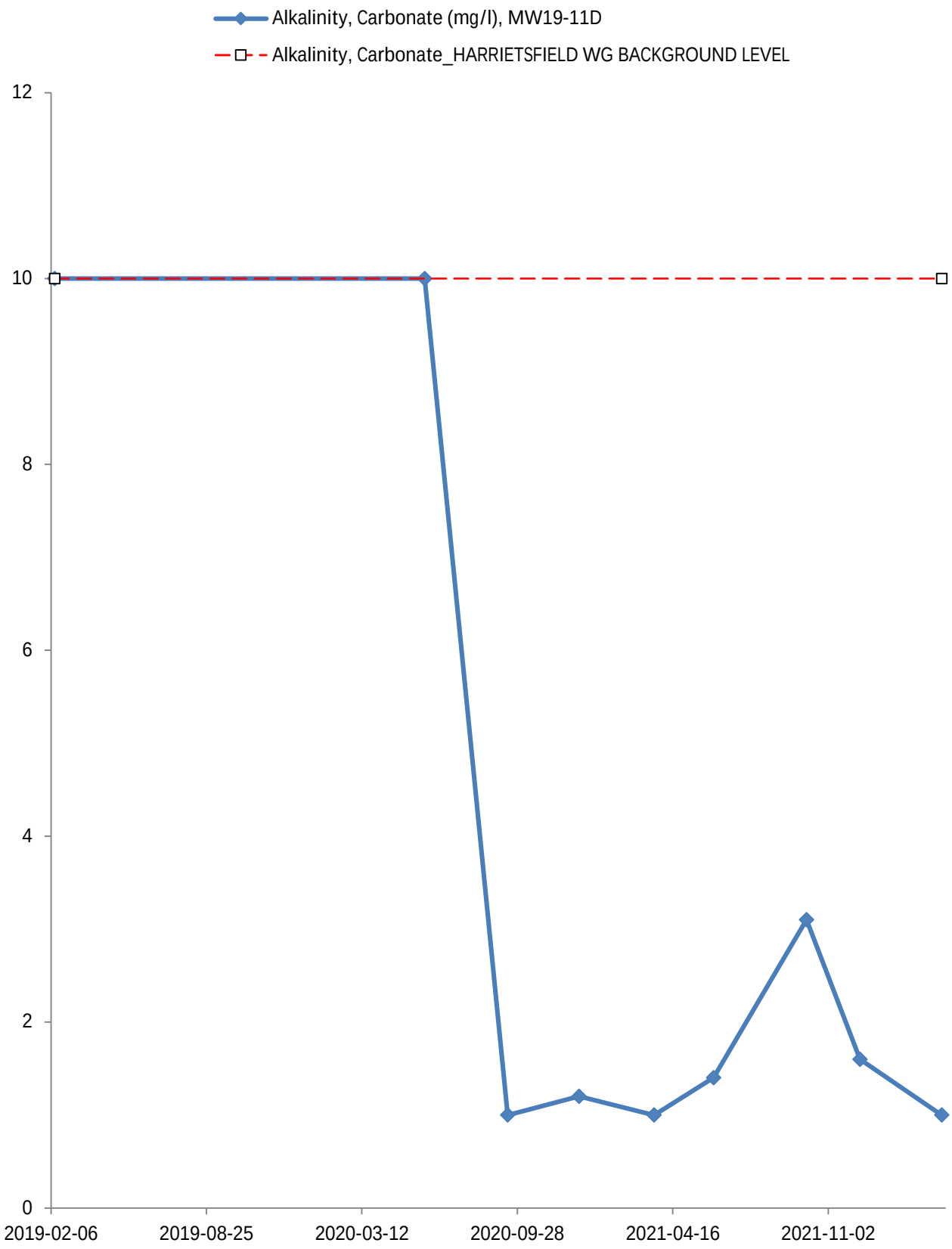
MW19-10S-Zinc



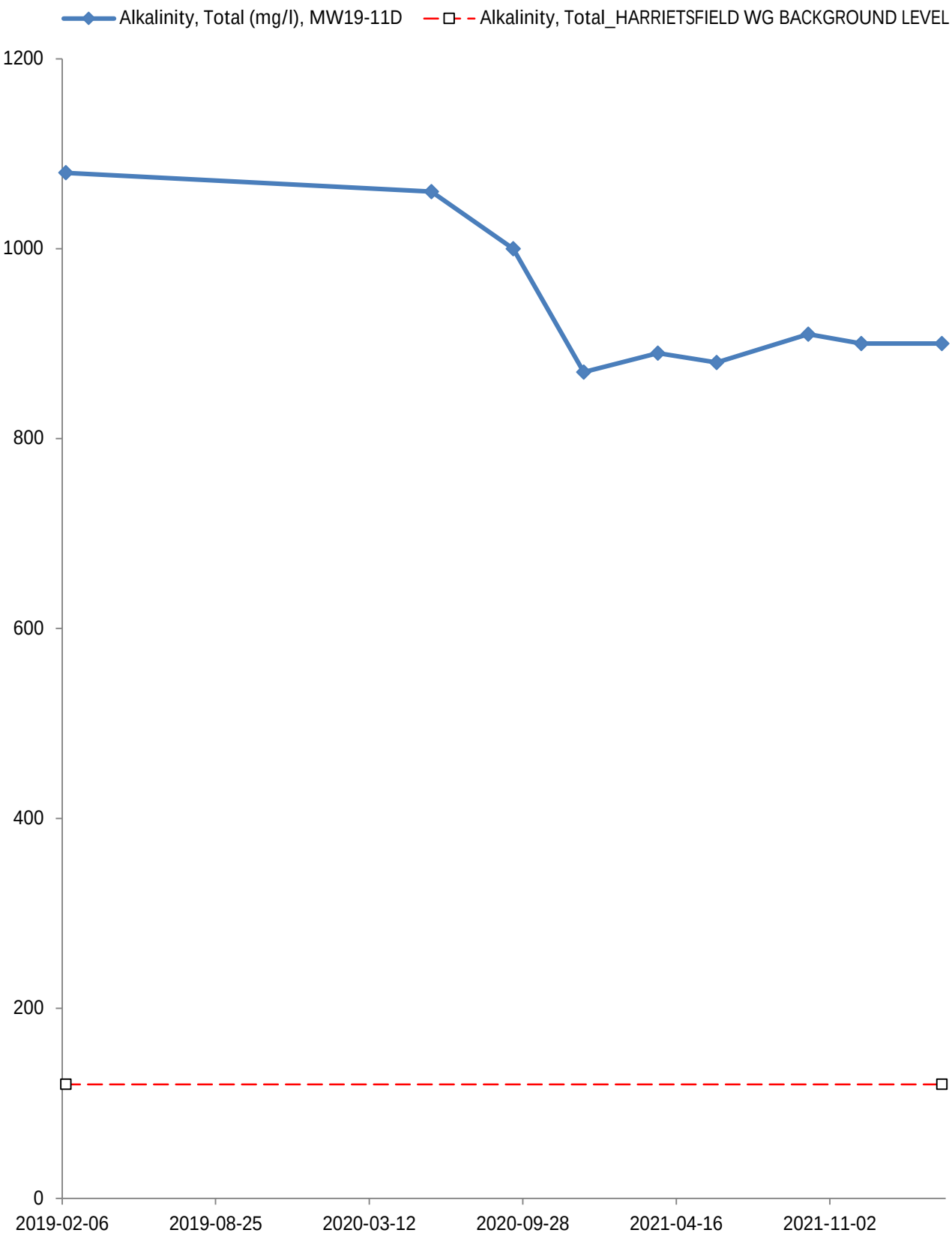
MW19-11D-Alkalinity, Bicarbonate



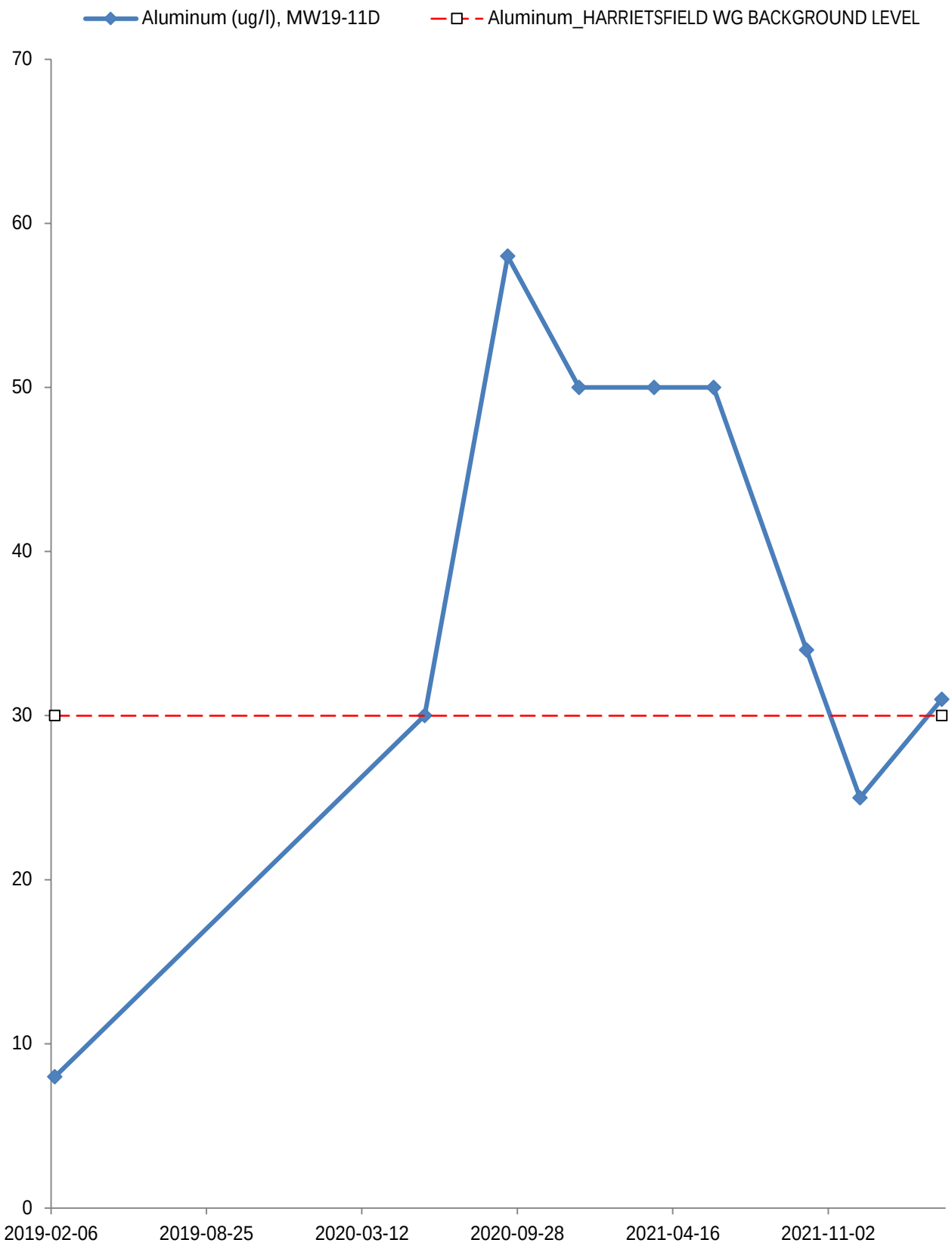
MW19-11D-Alkalinity, Carbonate

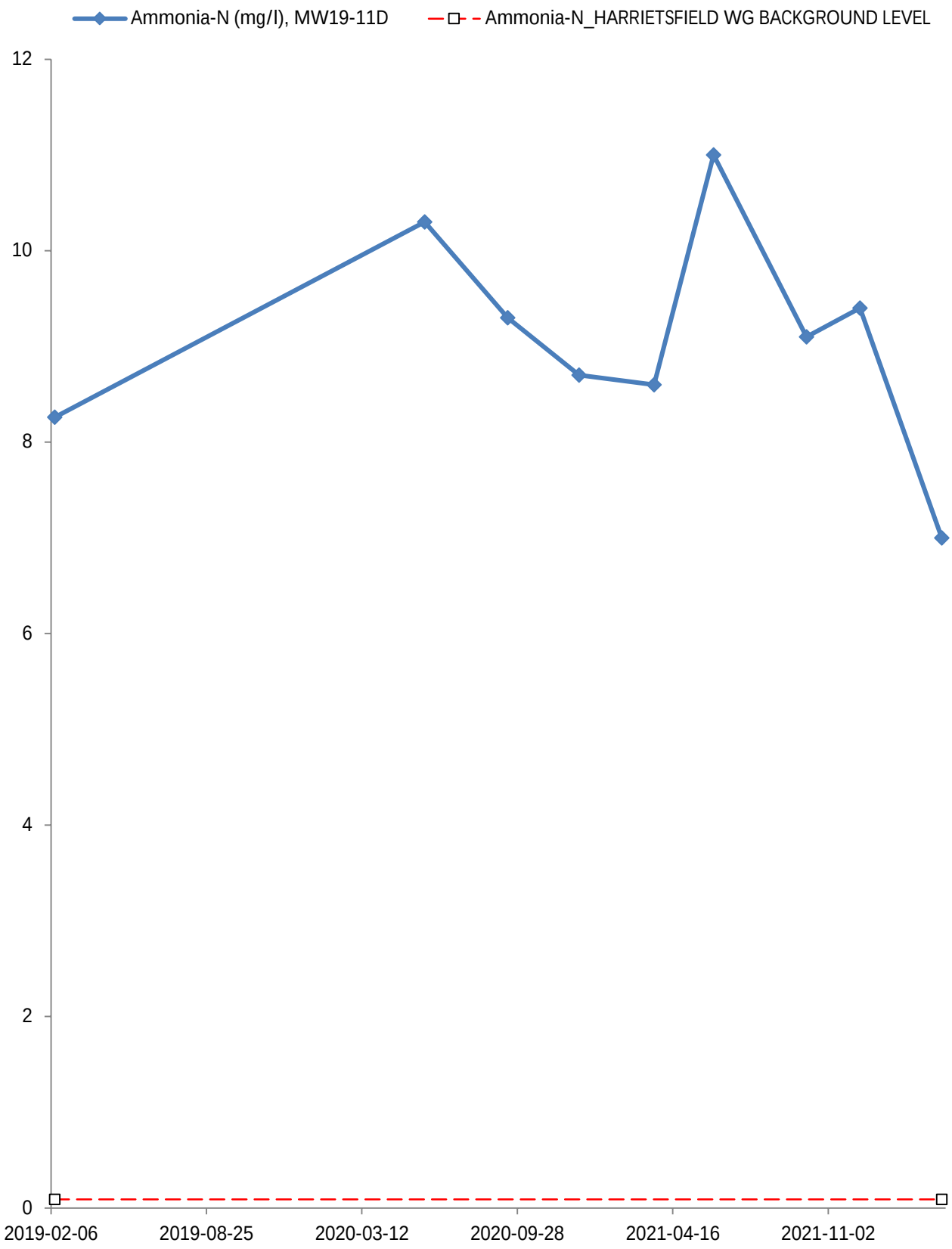


MW19-11D-Alkalinity, Total

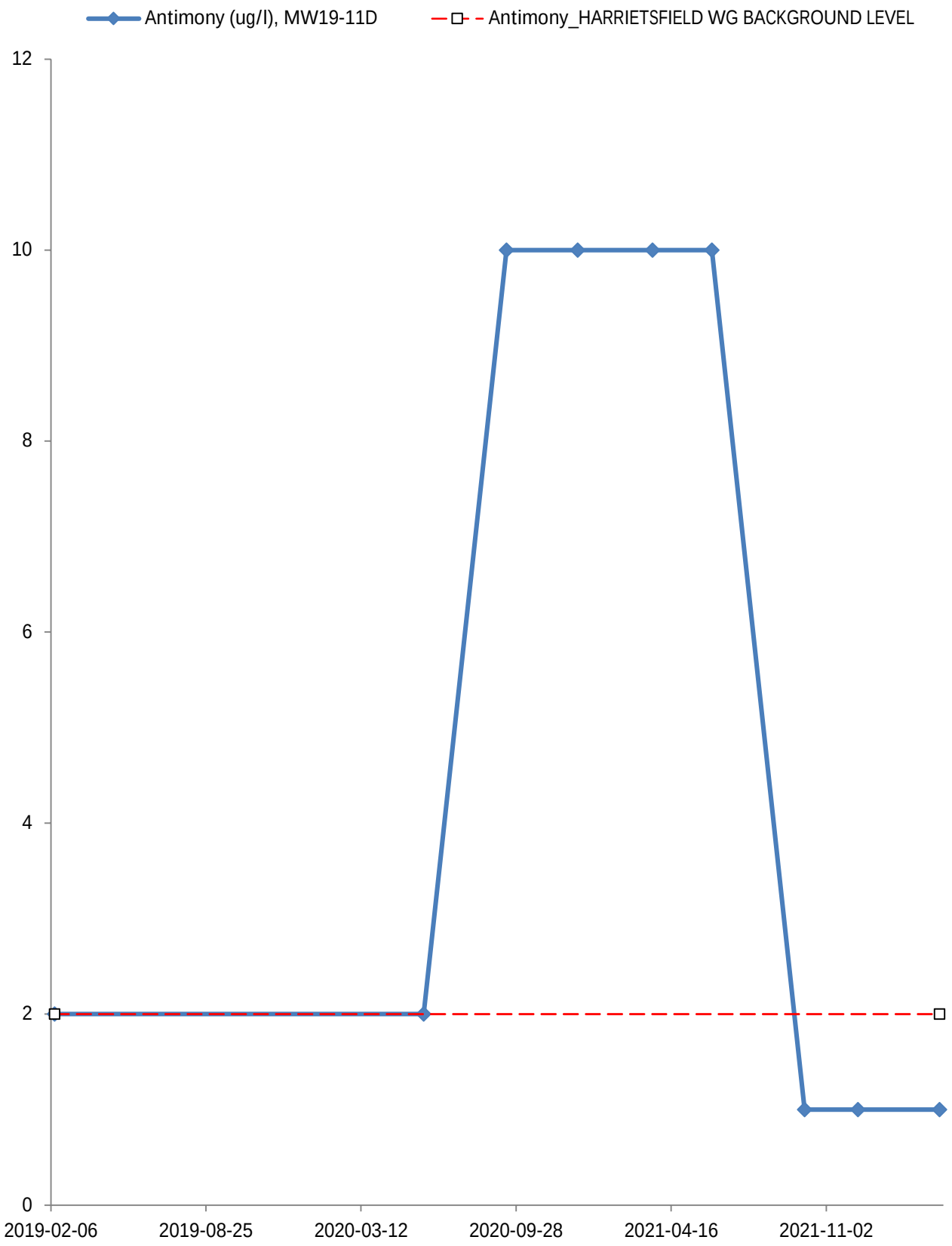


MW19-11D-Aluminum

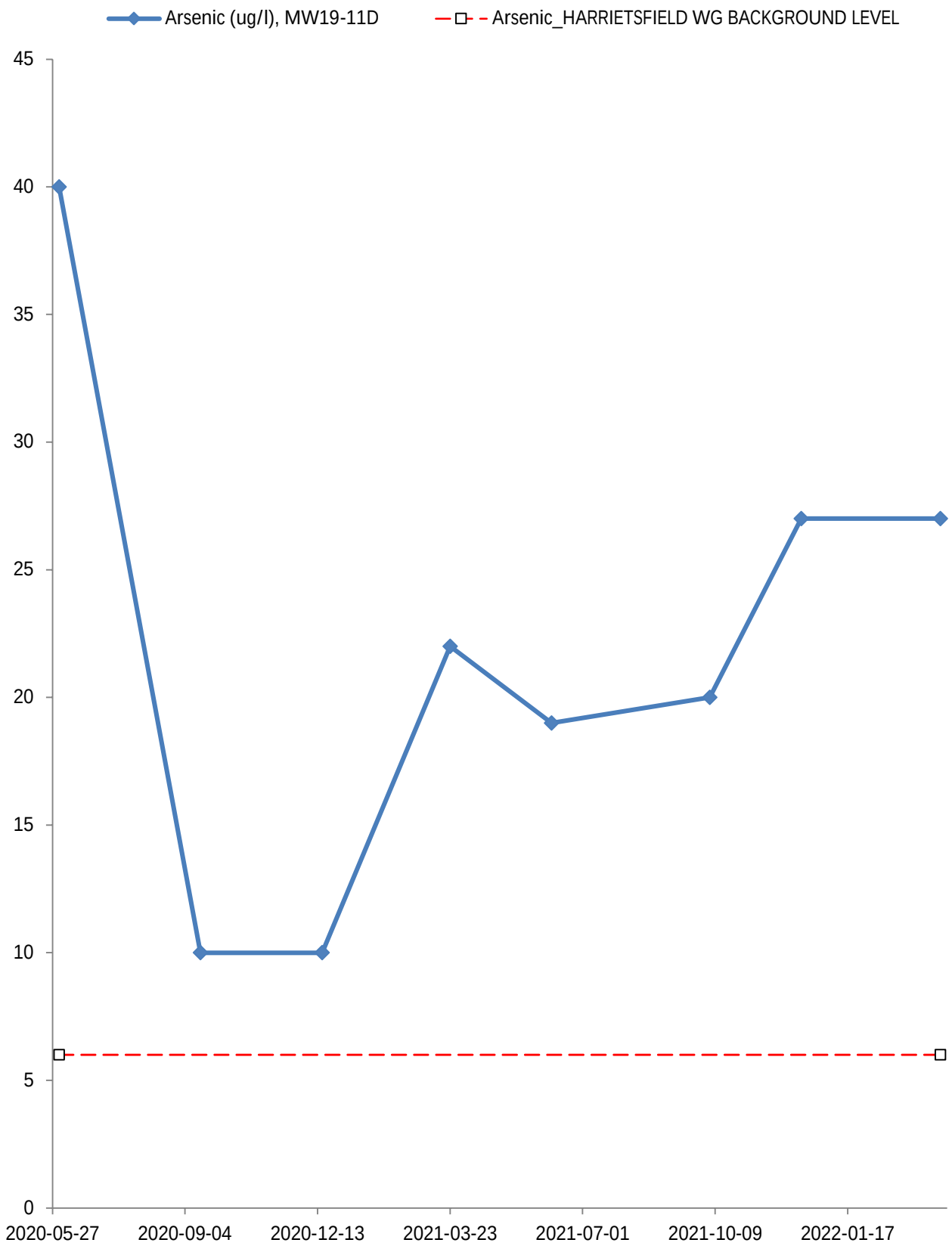



Ammonia-N (mg/l), MW19-11D
Ammonia-N_HARRIETSFIELD WG BACKGROUND LEVEL
12
10
8
6
4
2
0
2019-02-06
2019-08-25
2020-03-12
2020-09-28
2021-04-16
2021-11-02

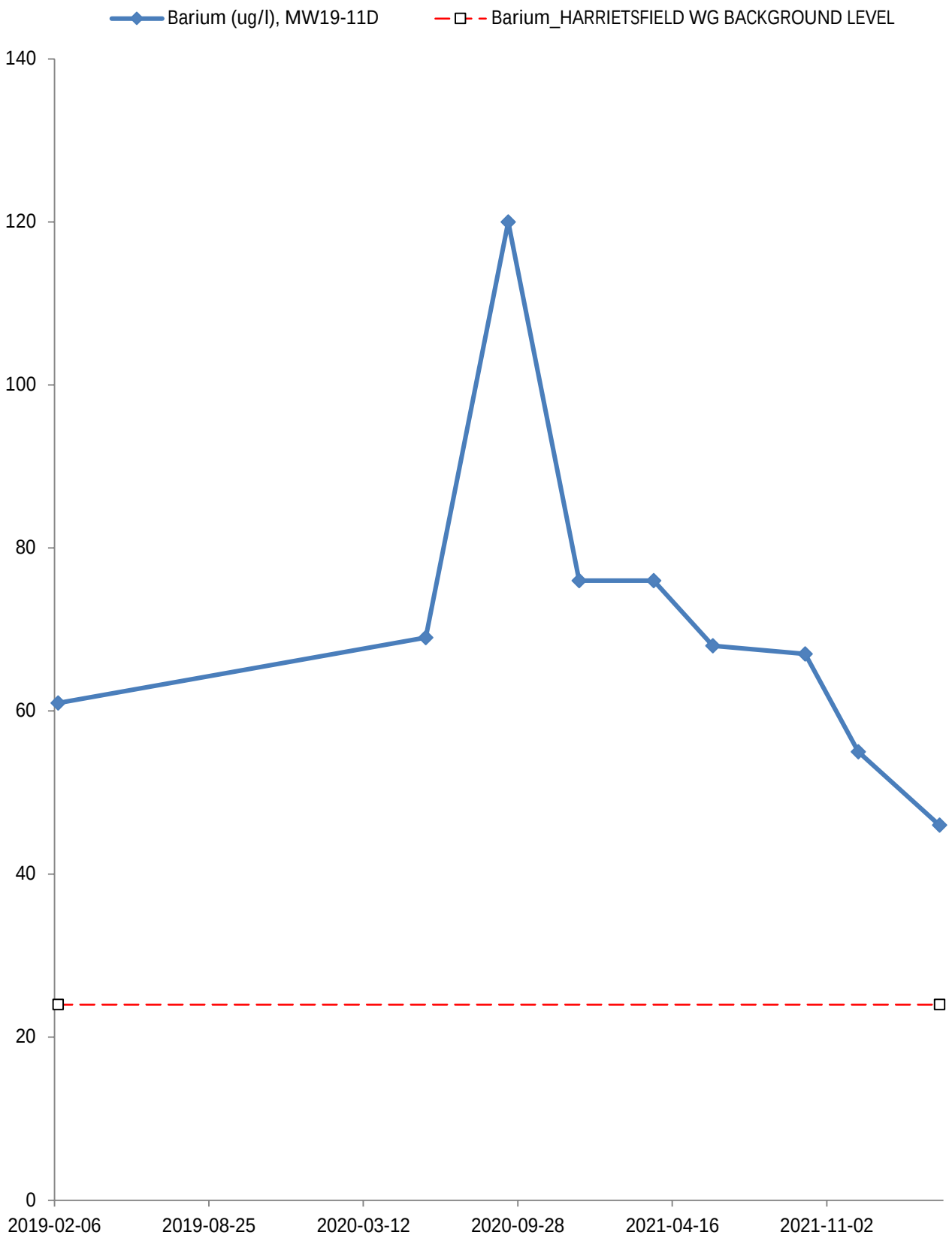
MW19-11D-Antimony



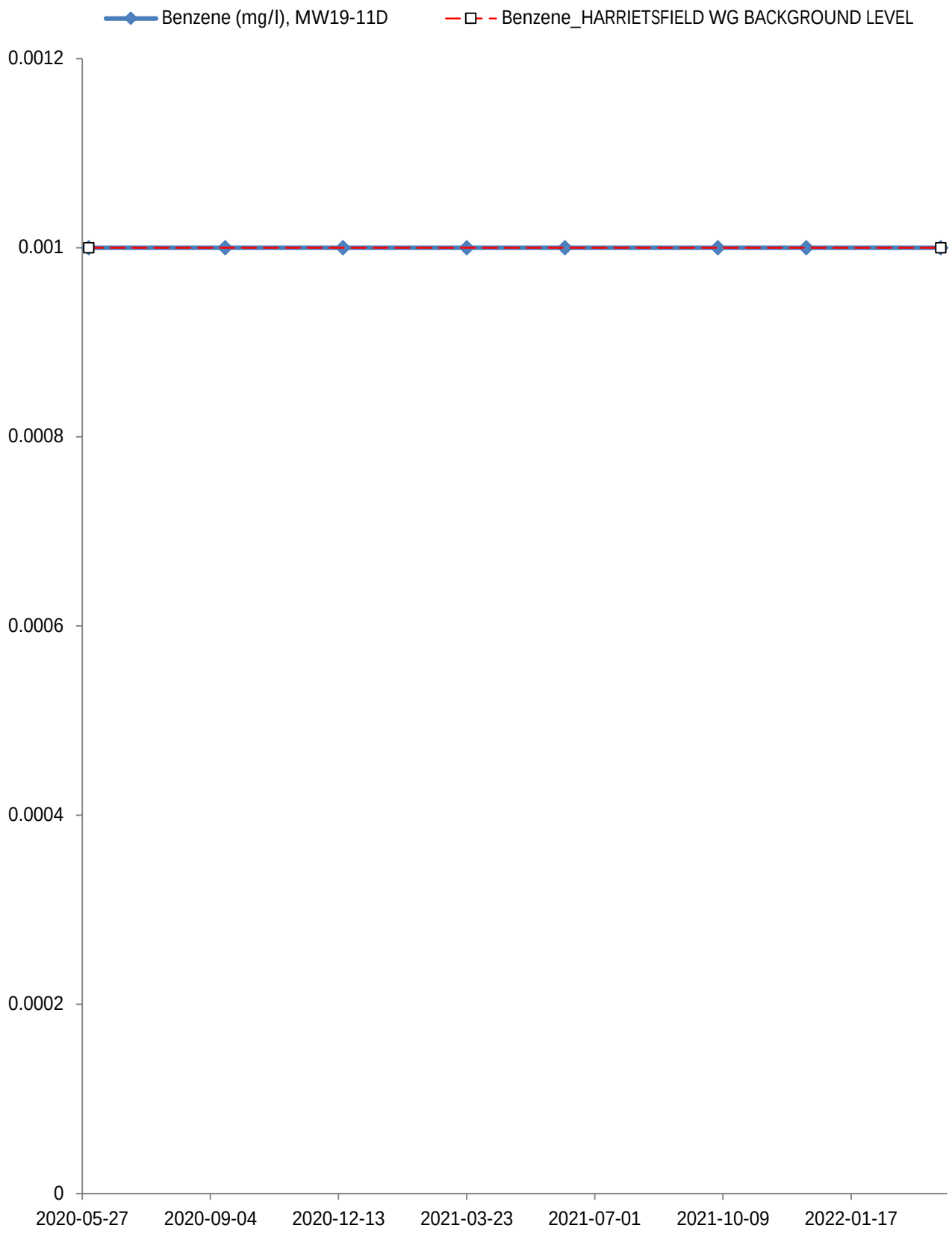
MW19-11D-Arsenic



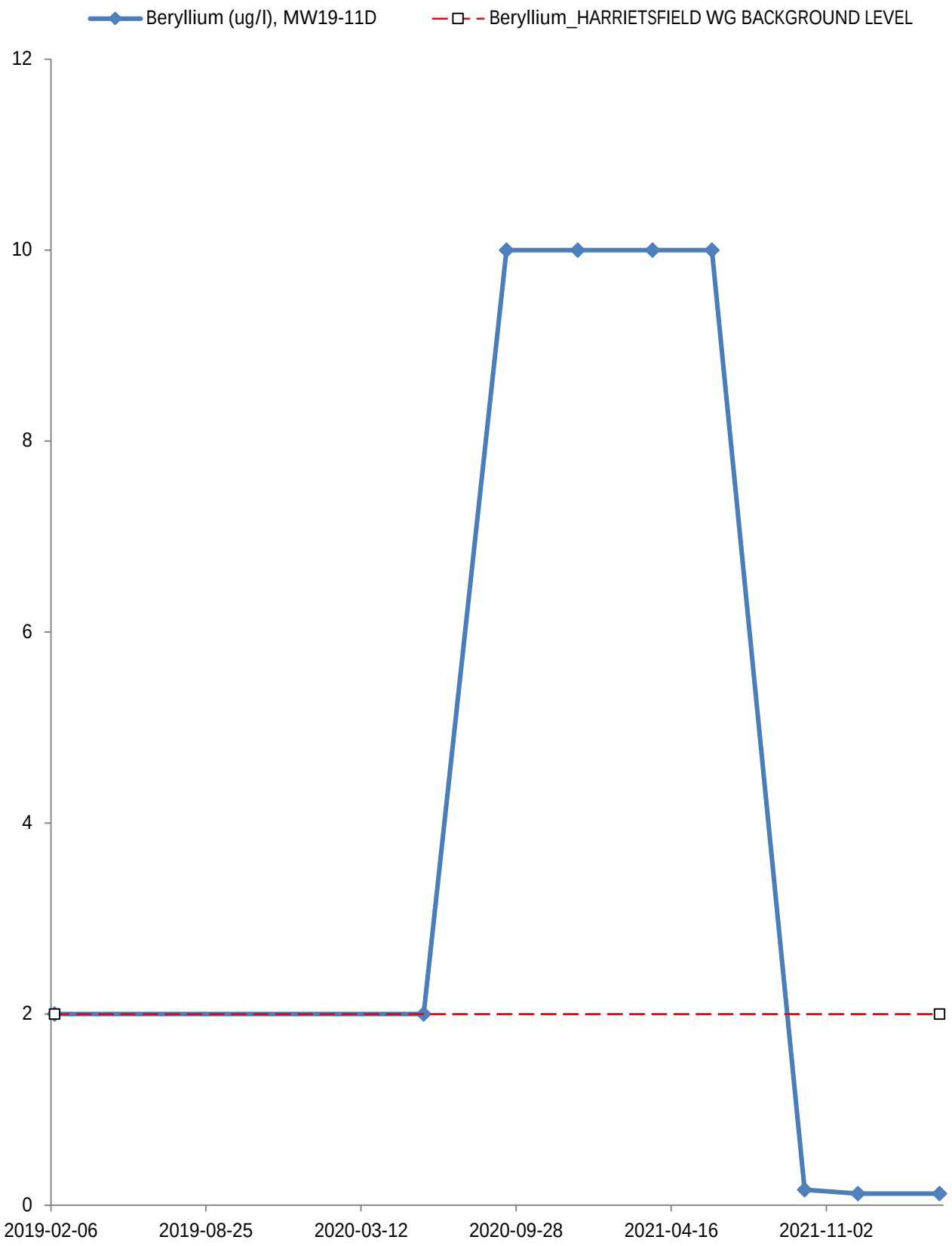
MW19-11D-Barium



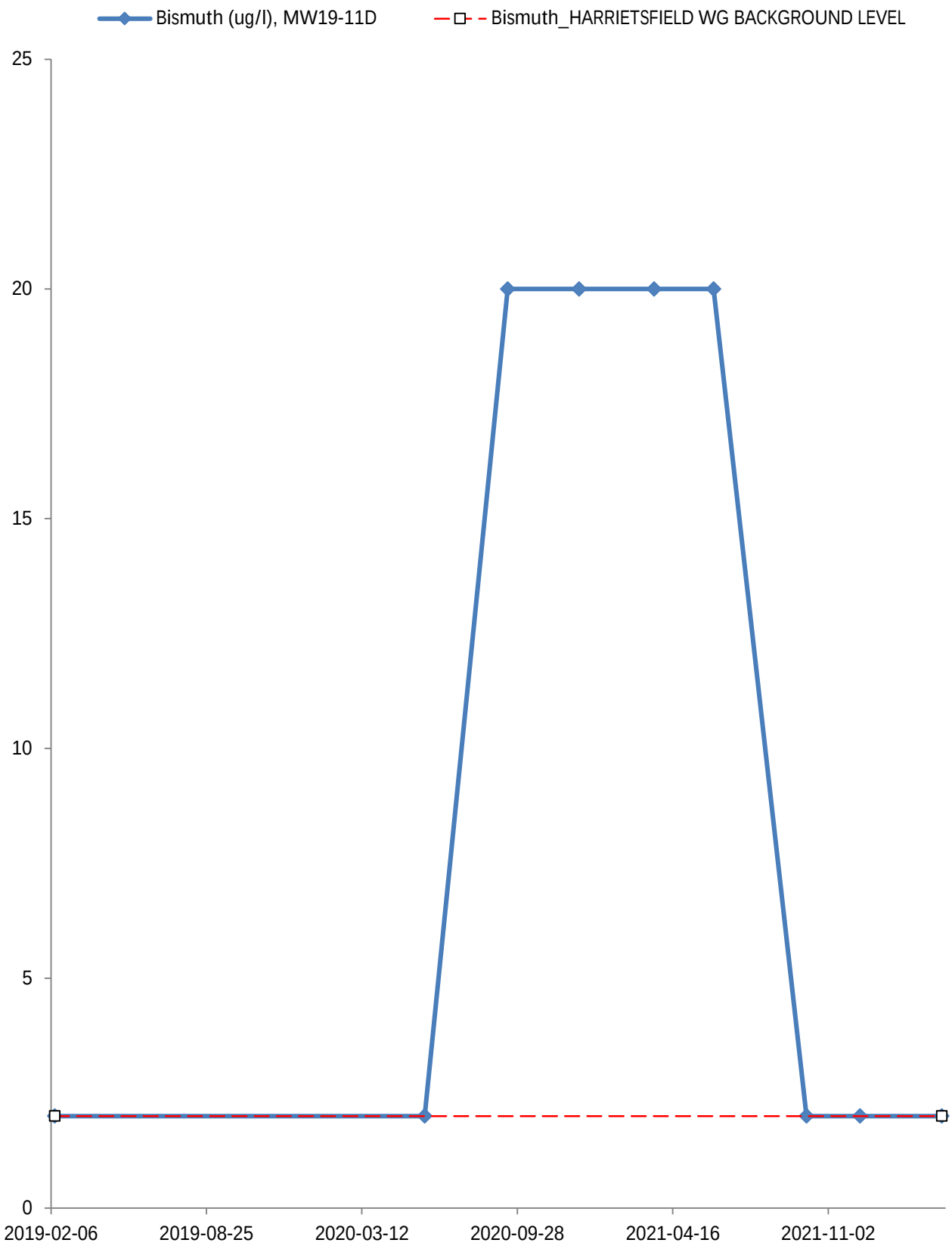
MW19-11D-Benzene



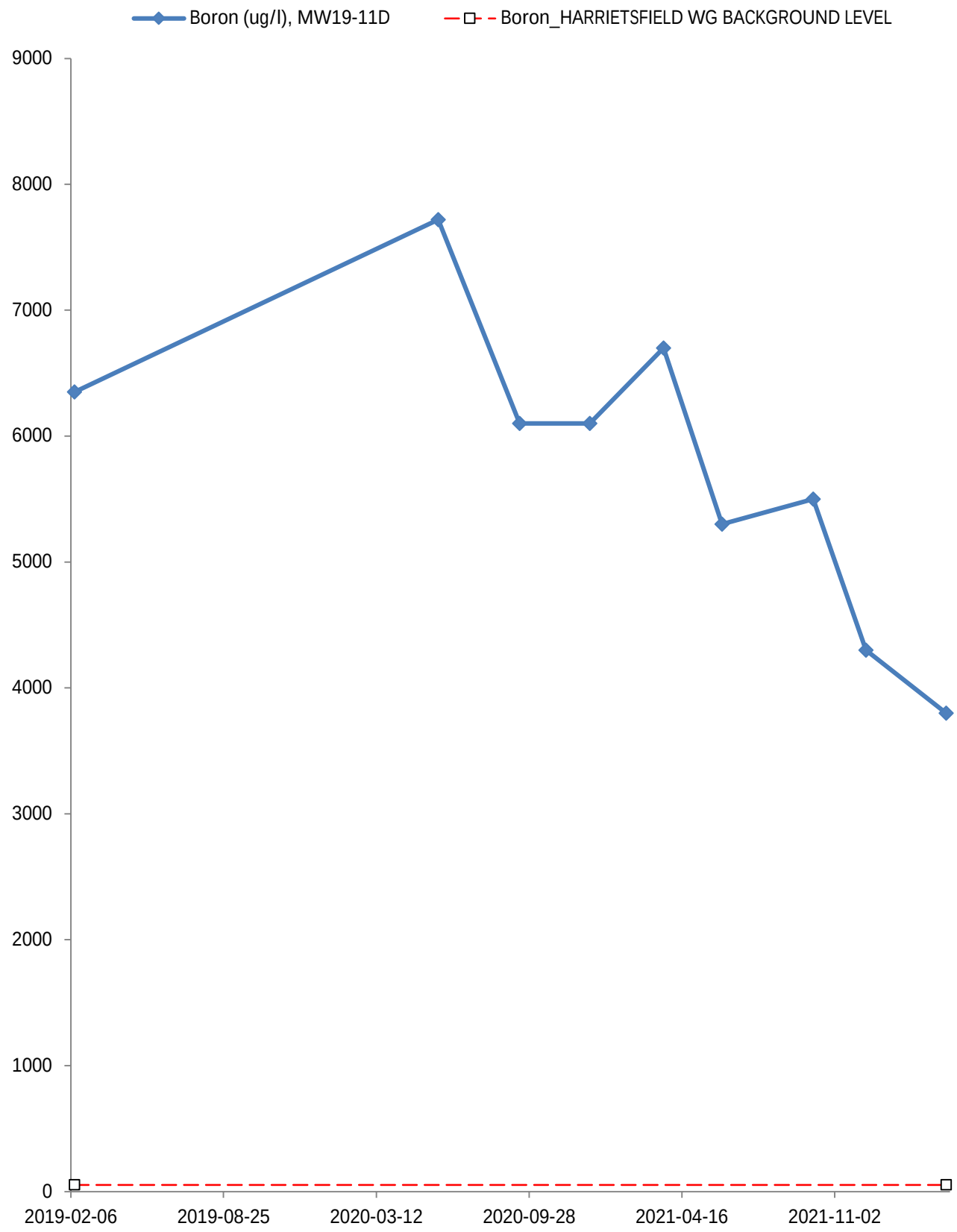
MW19-11D-Beryllium



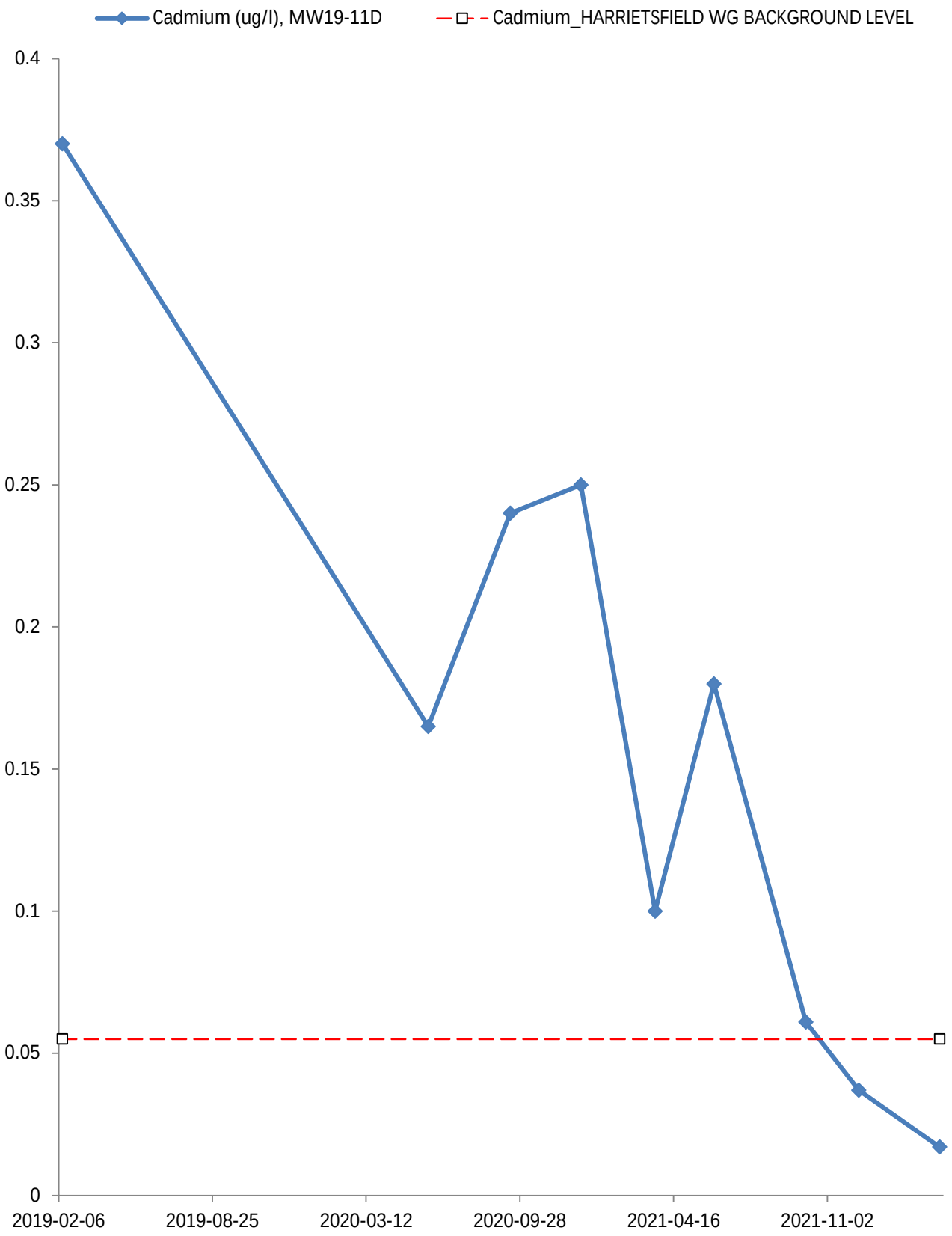
MW19-11D-Bismuth



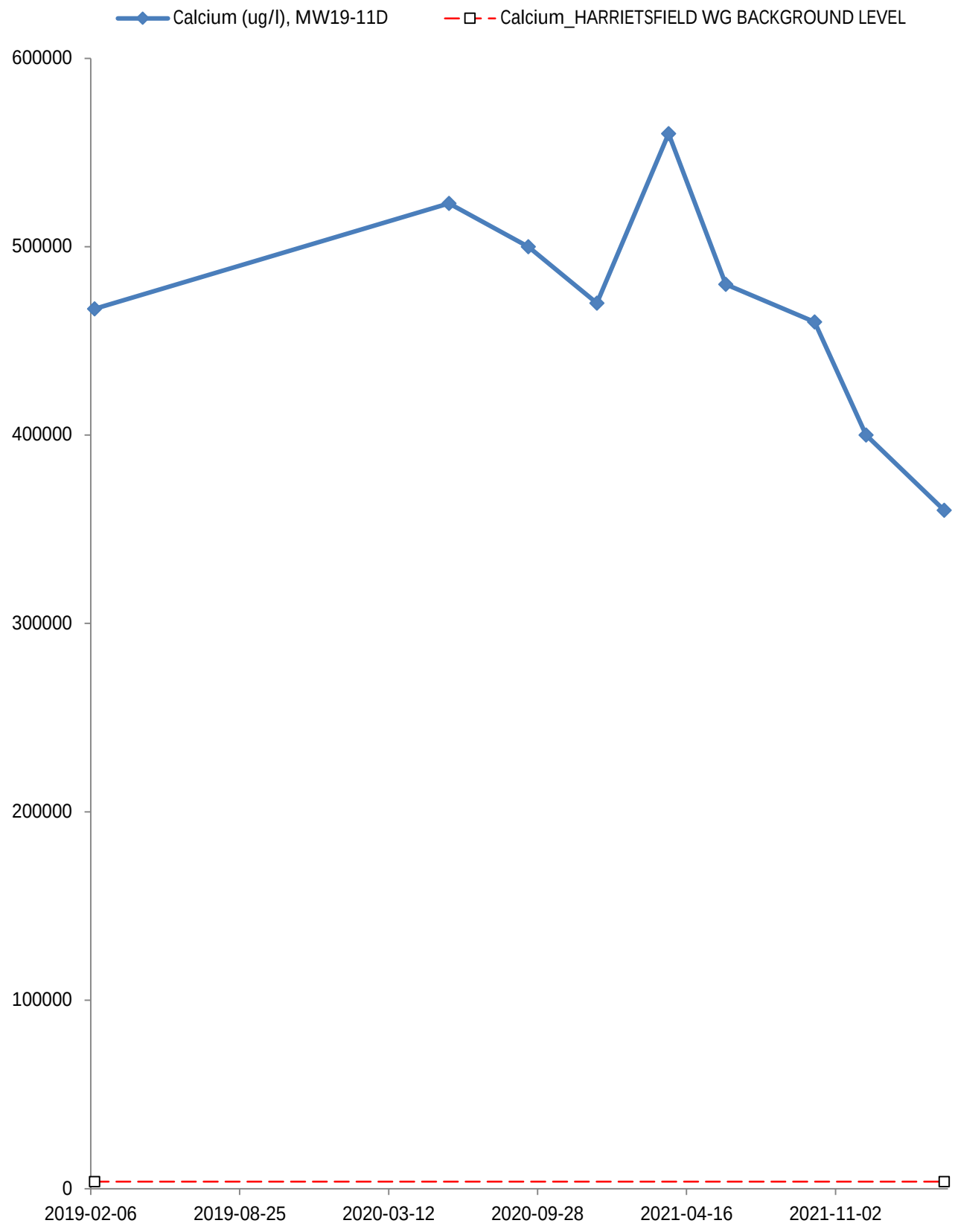
MW19-11D-Boron



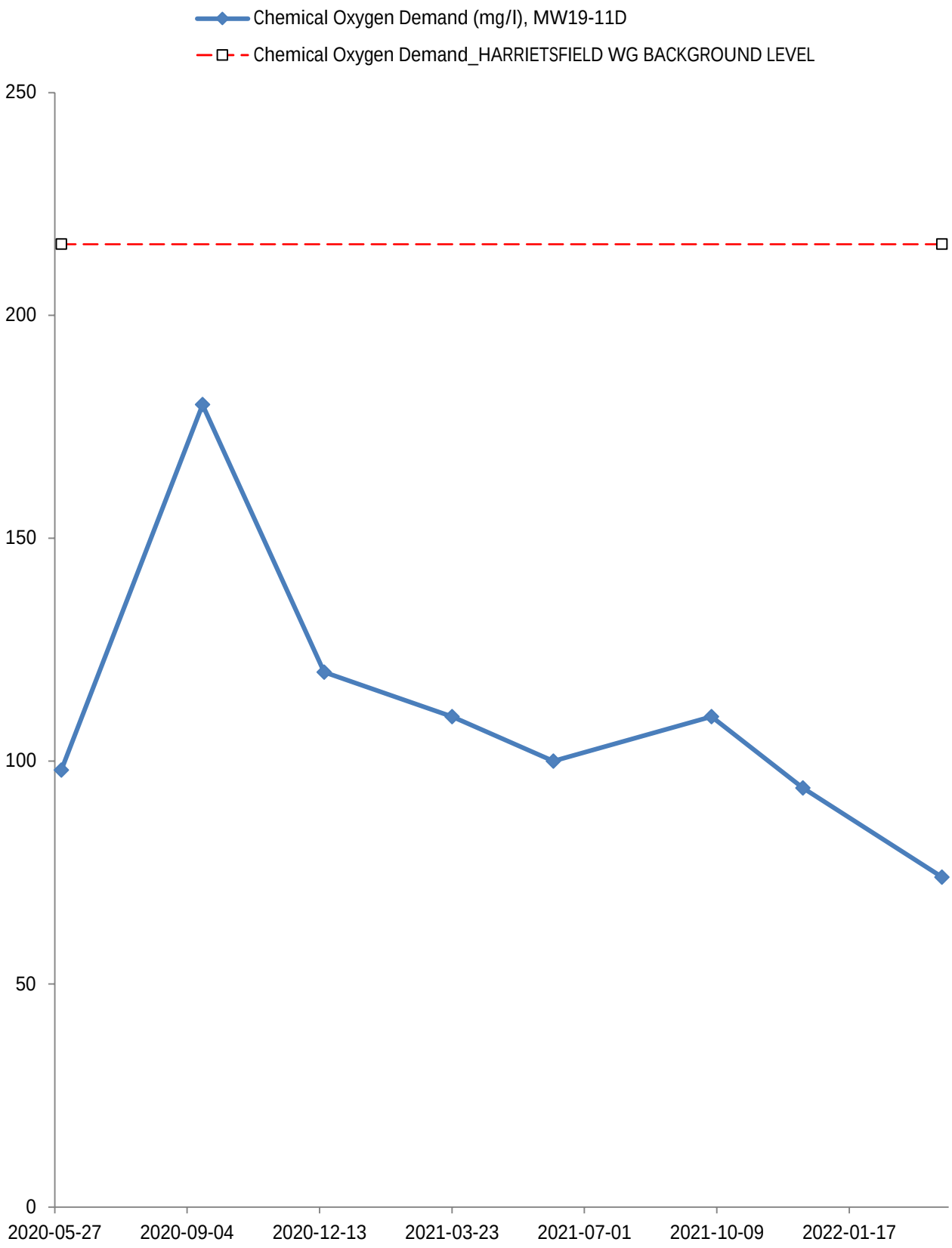
MW19-11D-Cadmium



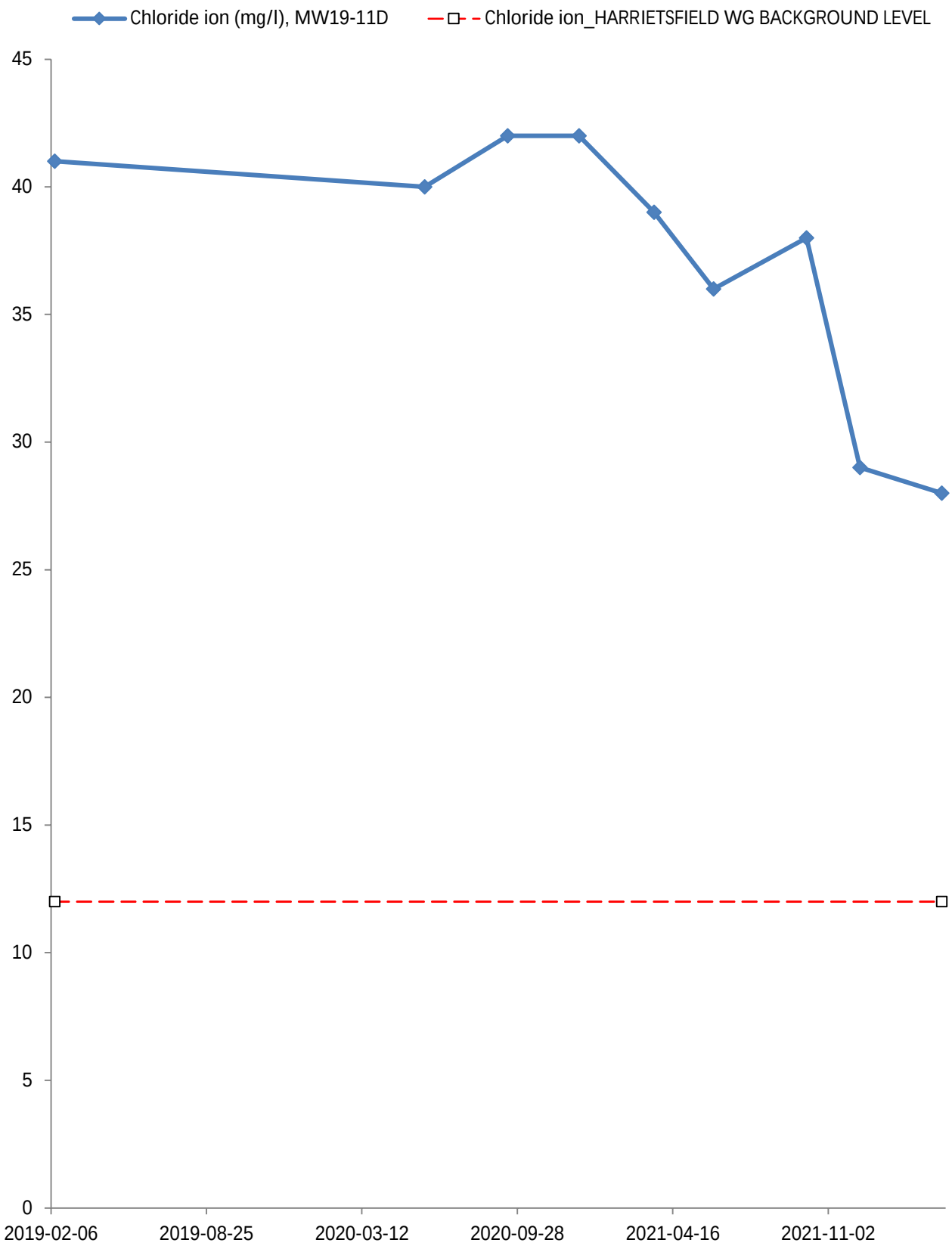
MW19-11D-Calcium



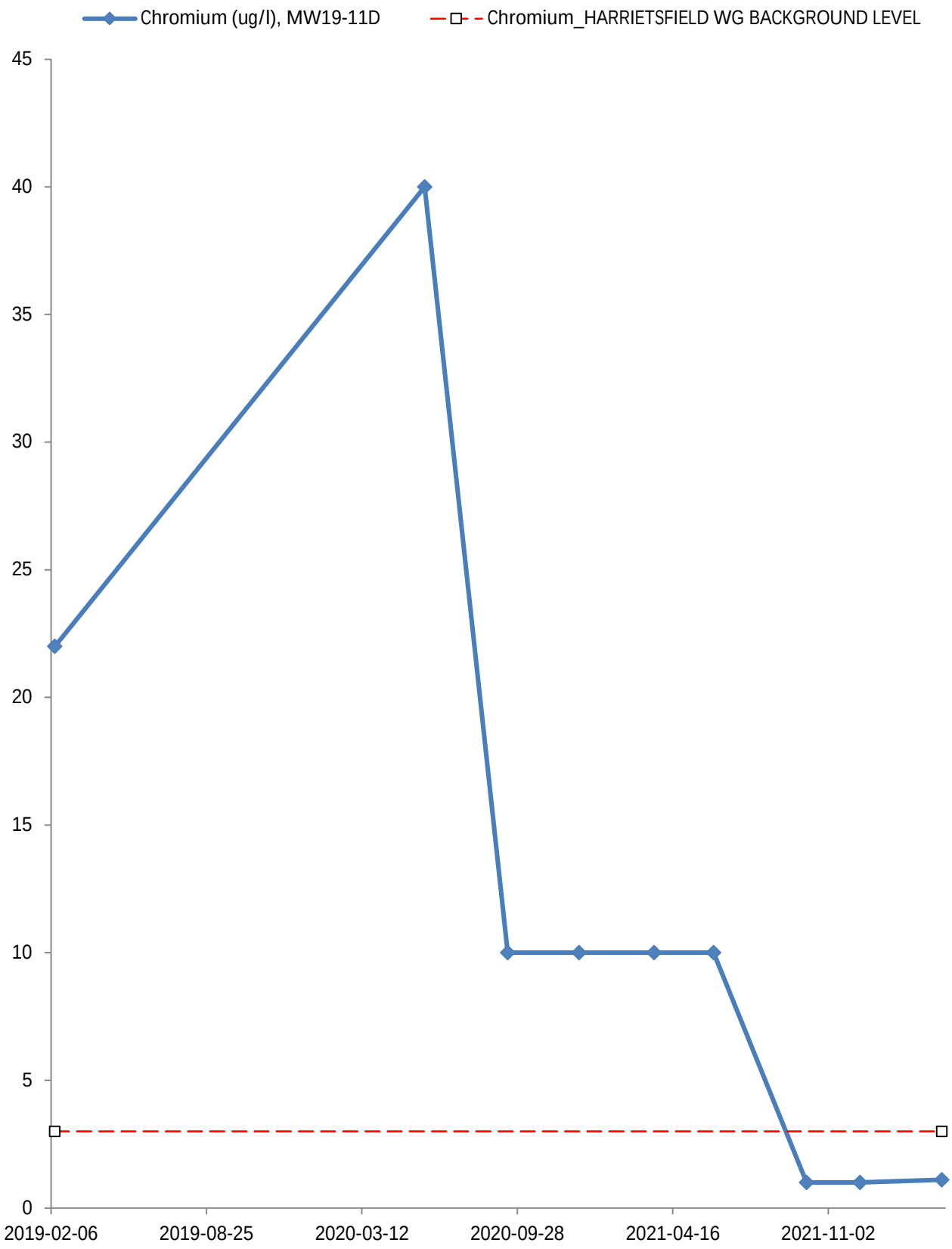
MW19-11D-Chemical Oxygen Demand

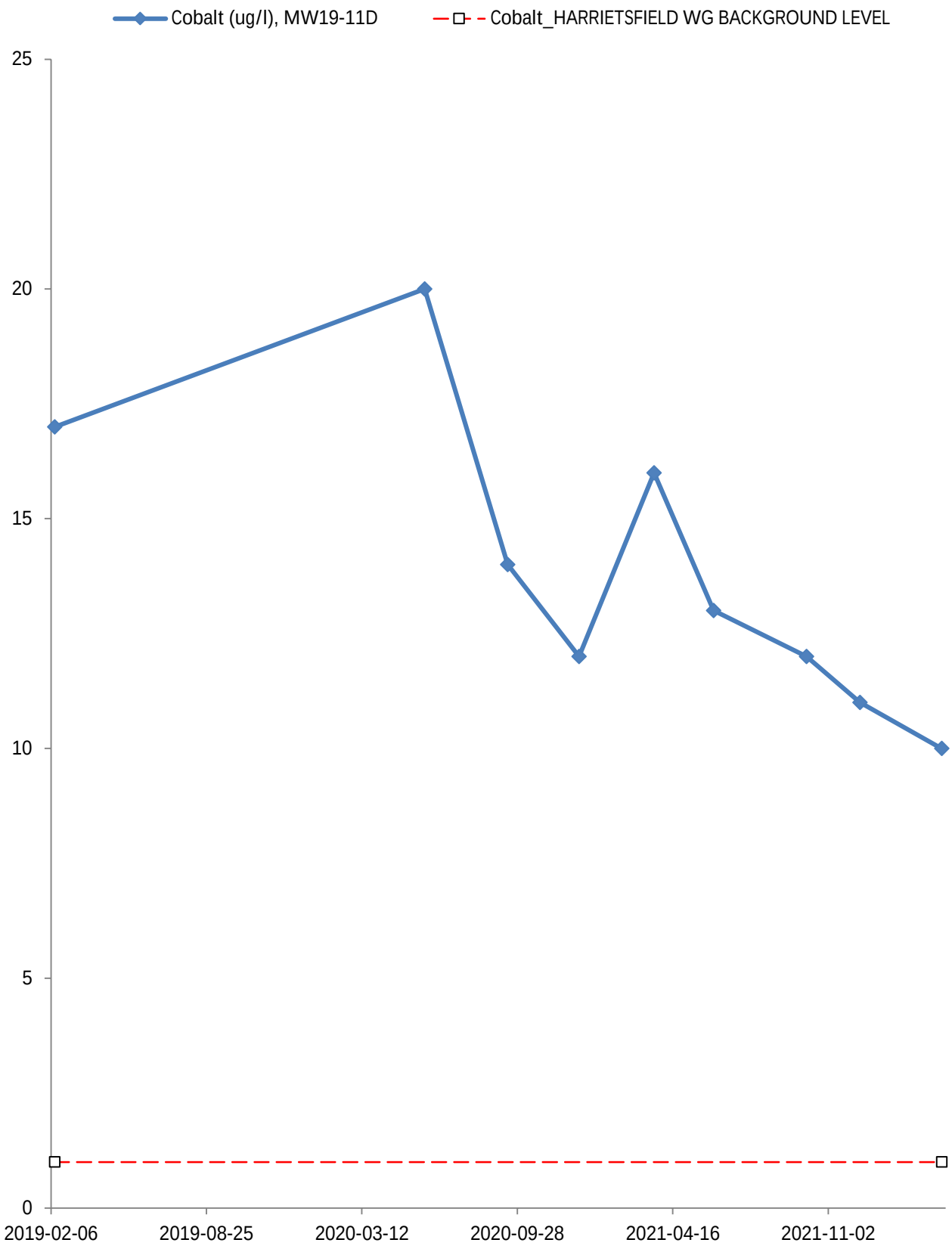


MW19-11D-Chloride ion

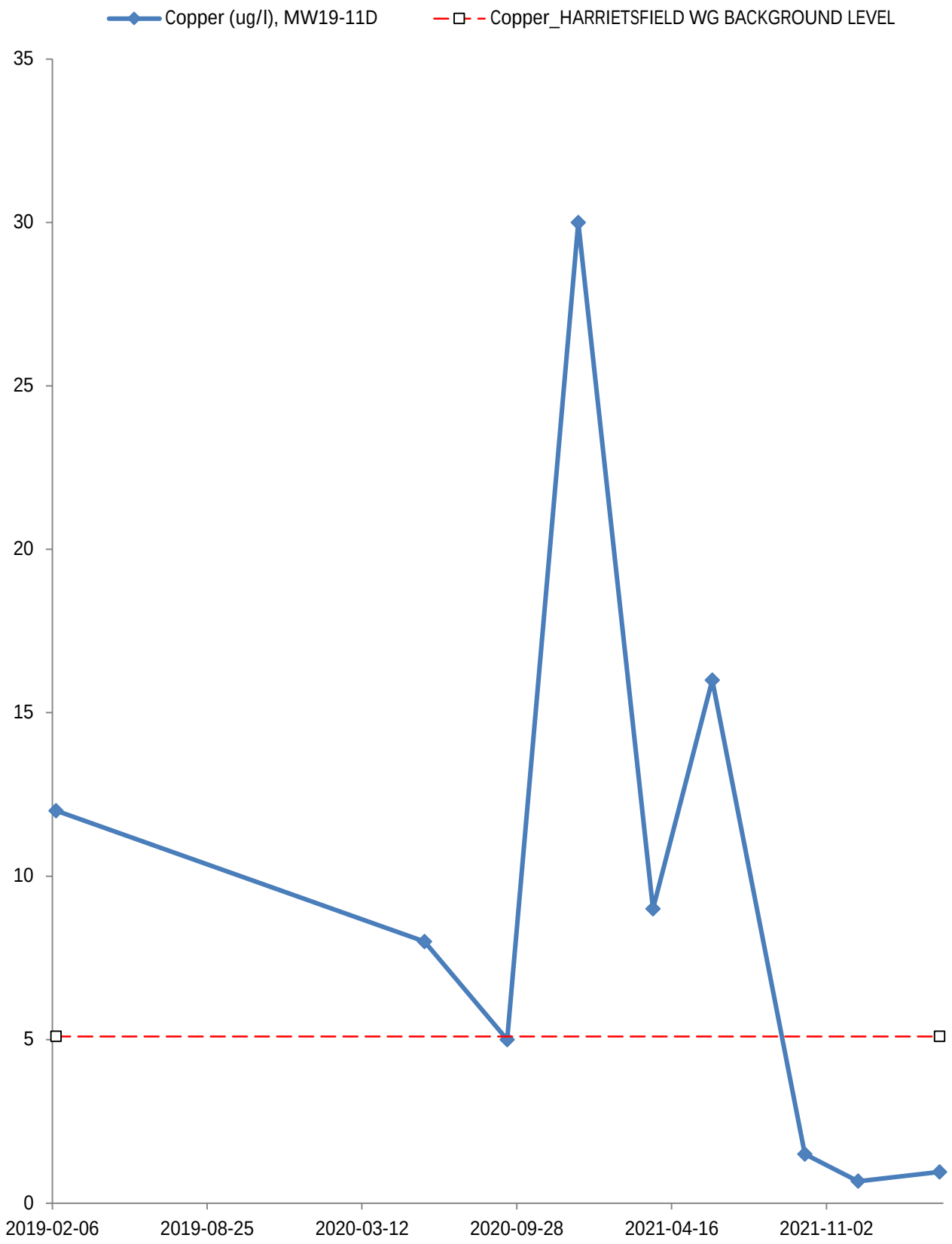


MW19-11D-Chromium

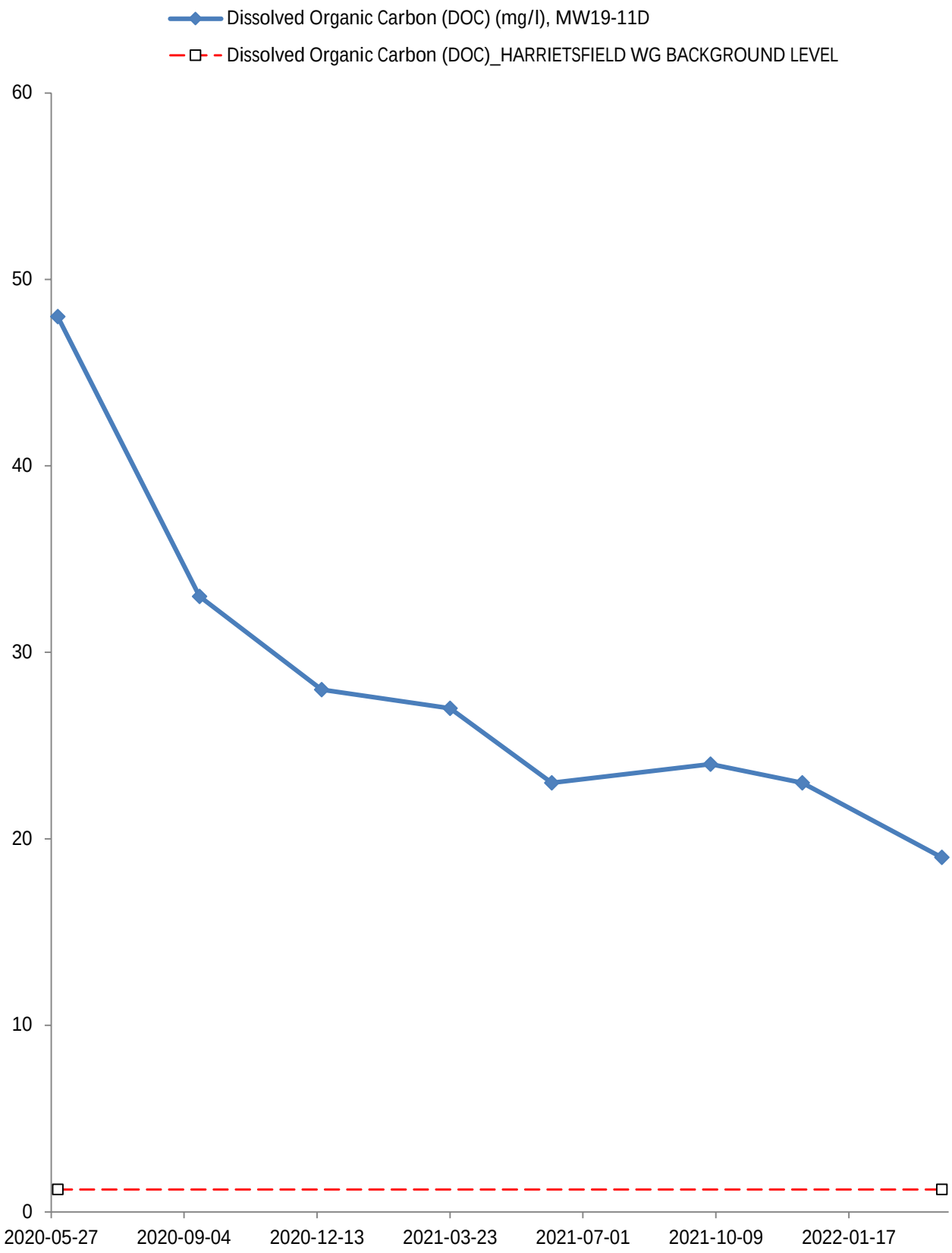



Cobalt (ug/l), MW19-11D
Cobalt_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2019-02-06
2019-08-25
2020-03-12
2020-09-28
2021-04-16
2021-11-02

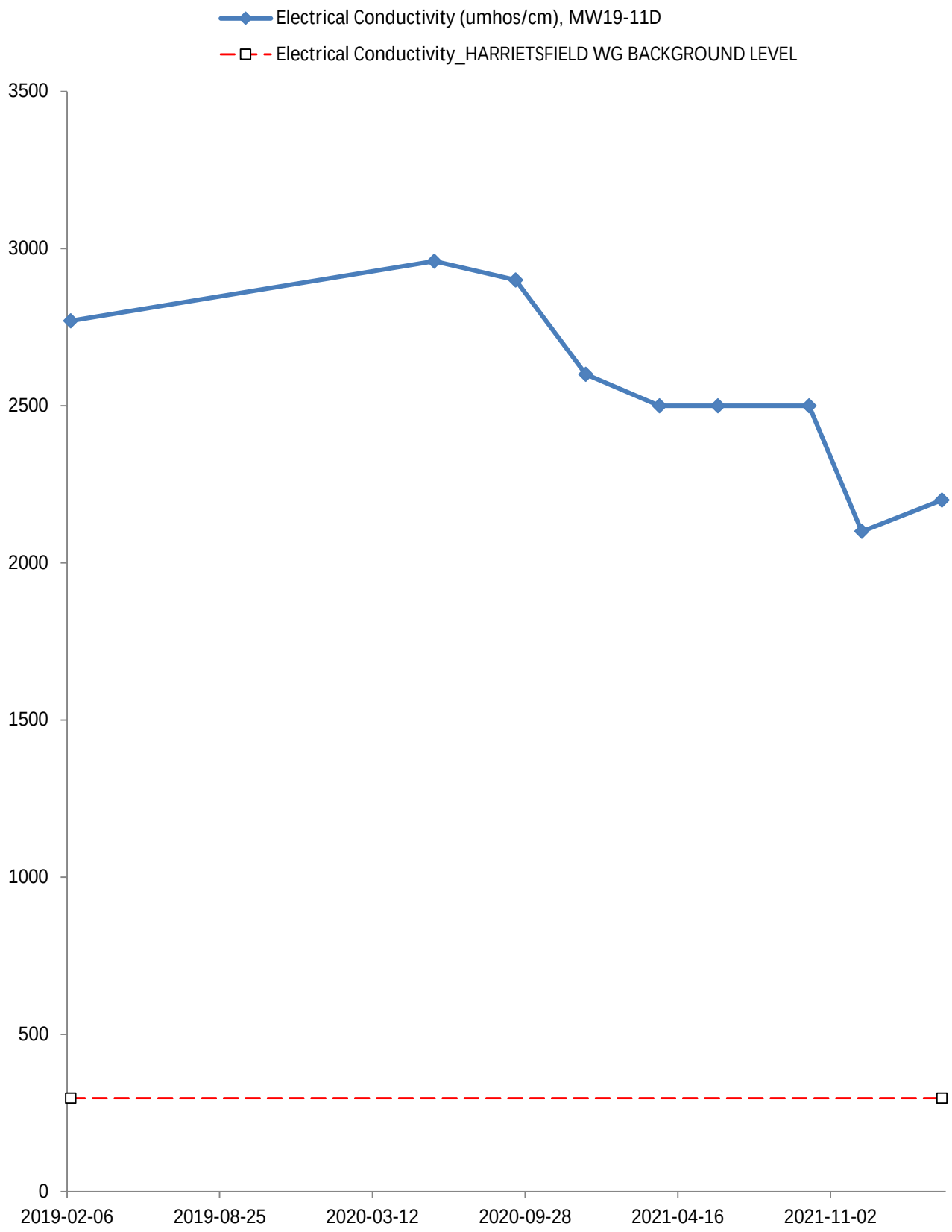
MW19-11D-Copper



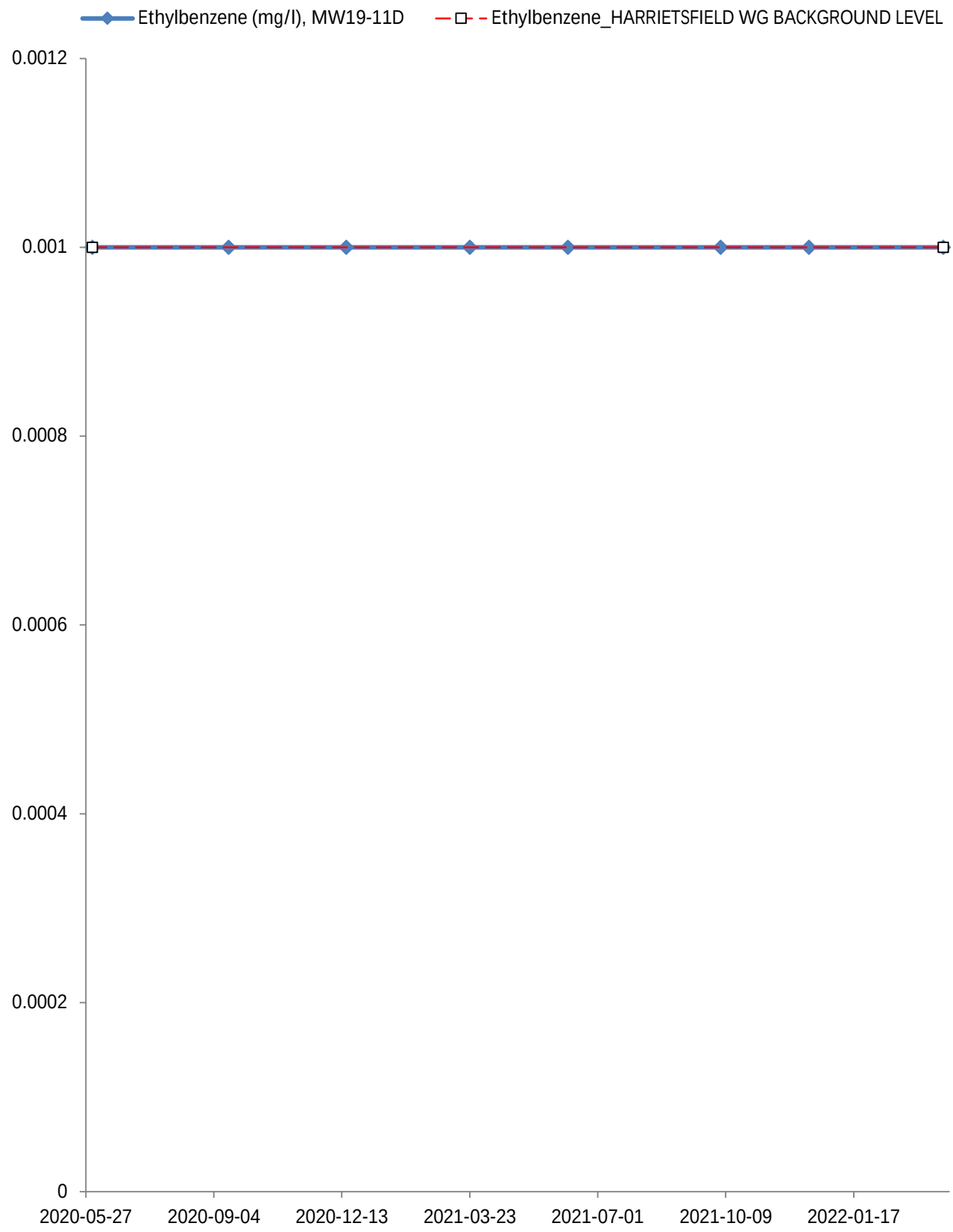
MW19-11D-Dissolved Organic Carbon7



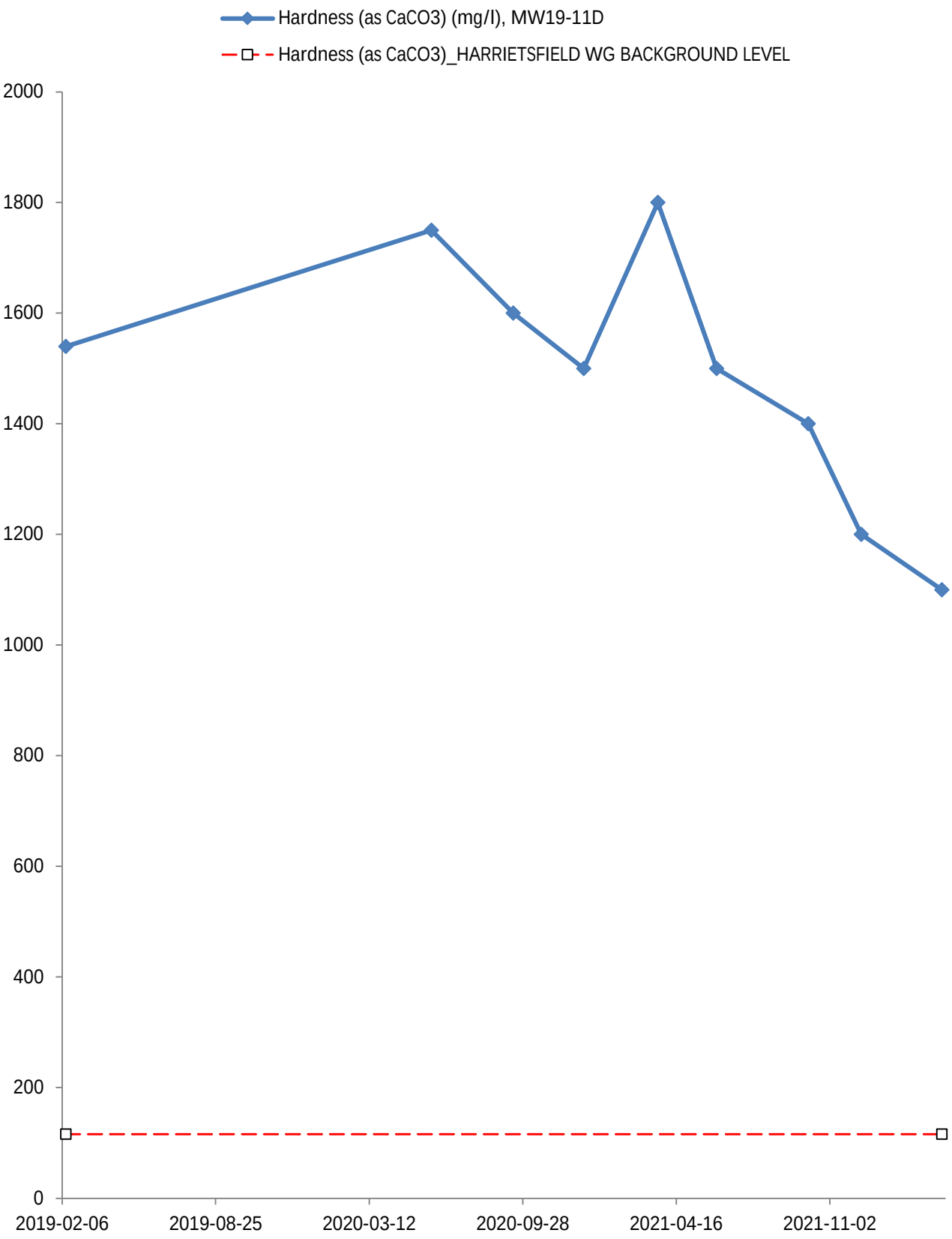
MW19-11D-Electrical Conductivity



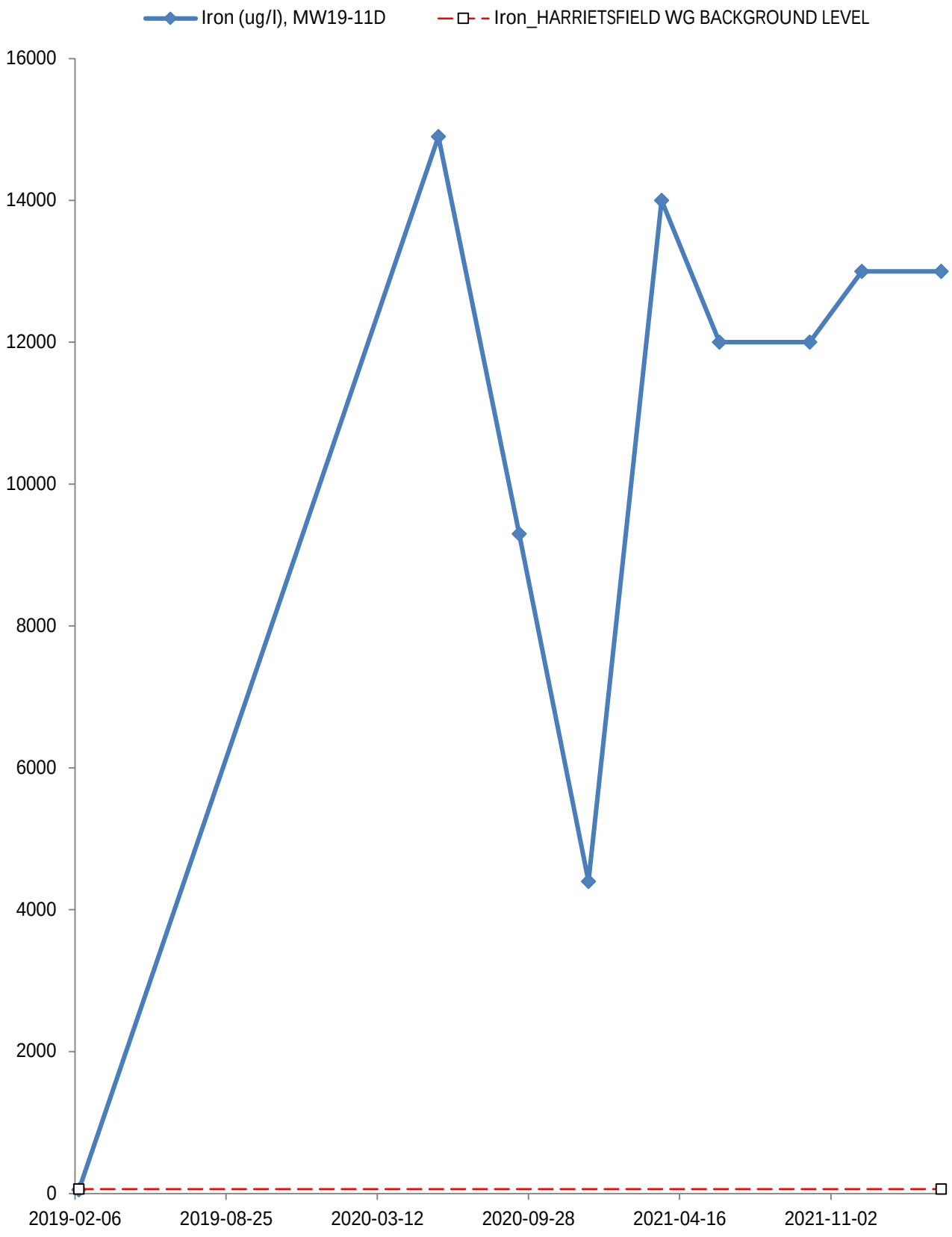
MW19-11D-Ethylbenzene



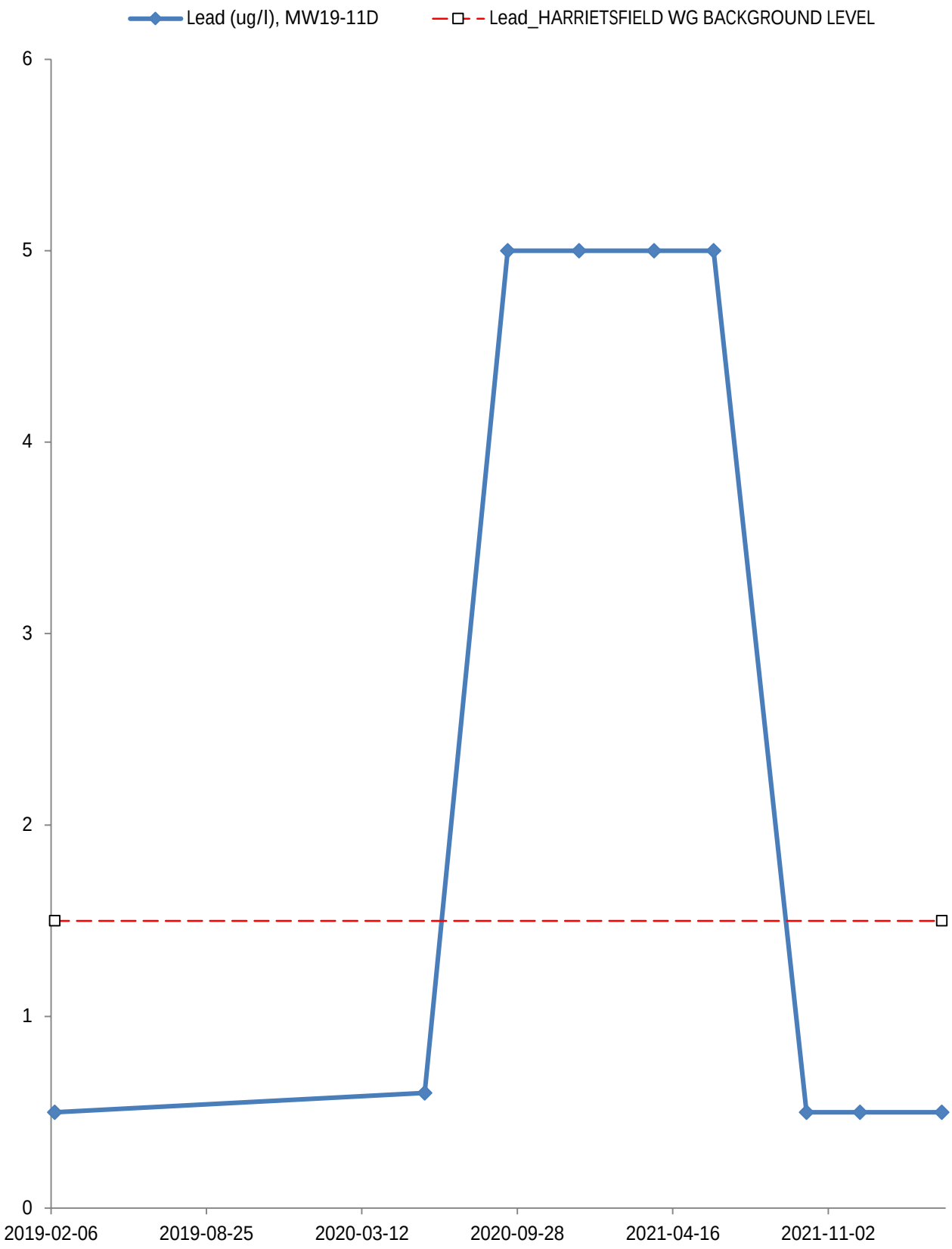
MW19-11D-Hardness (as CaCO3)



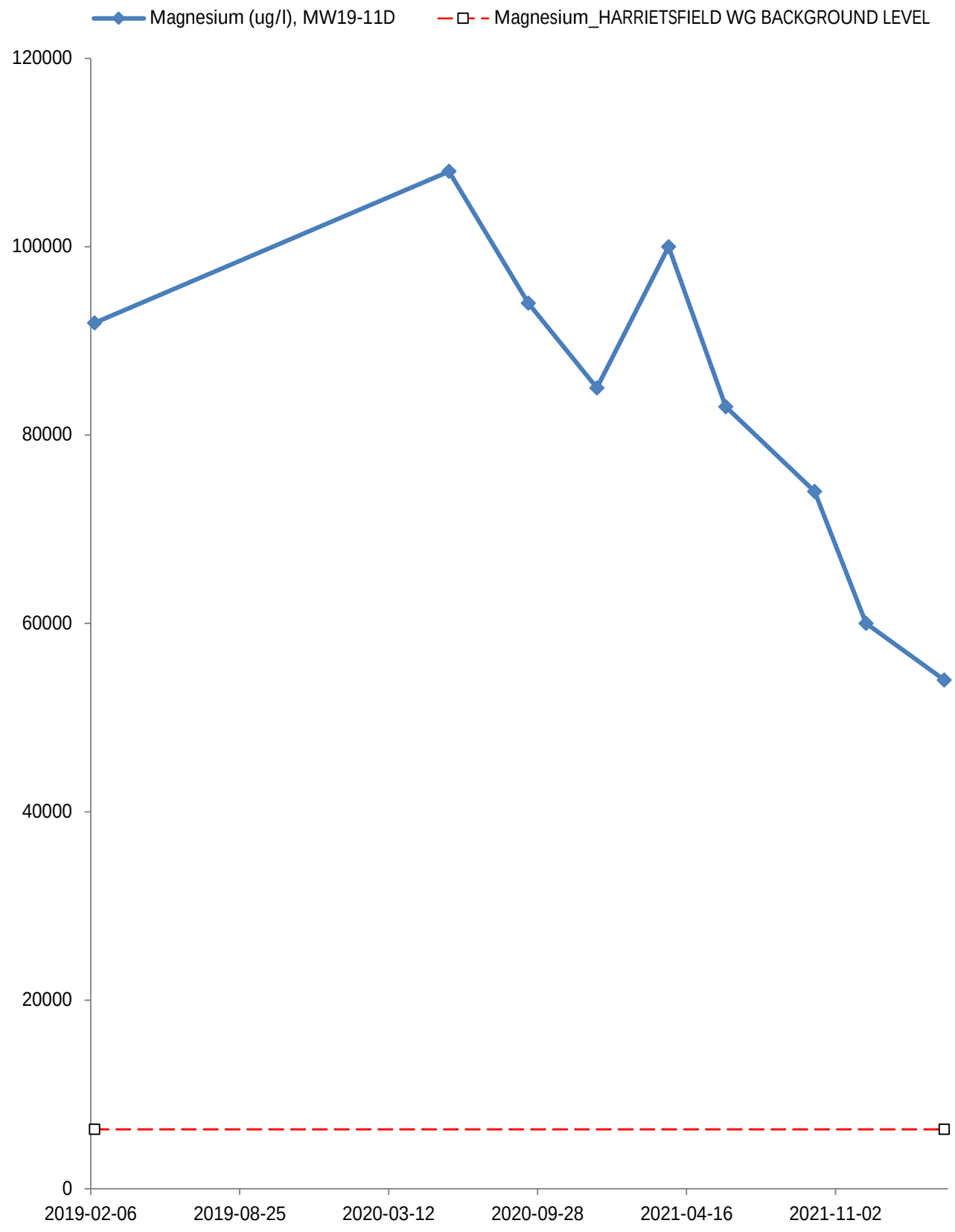
MW19-11D-Iron



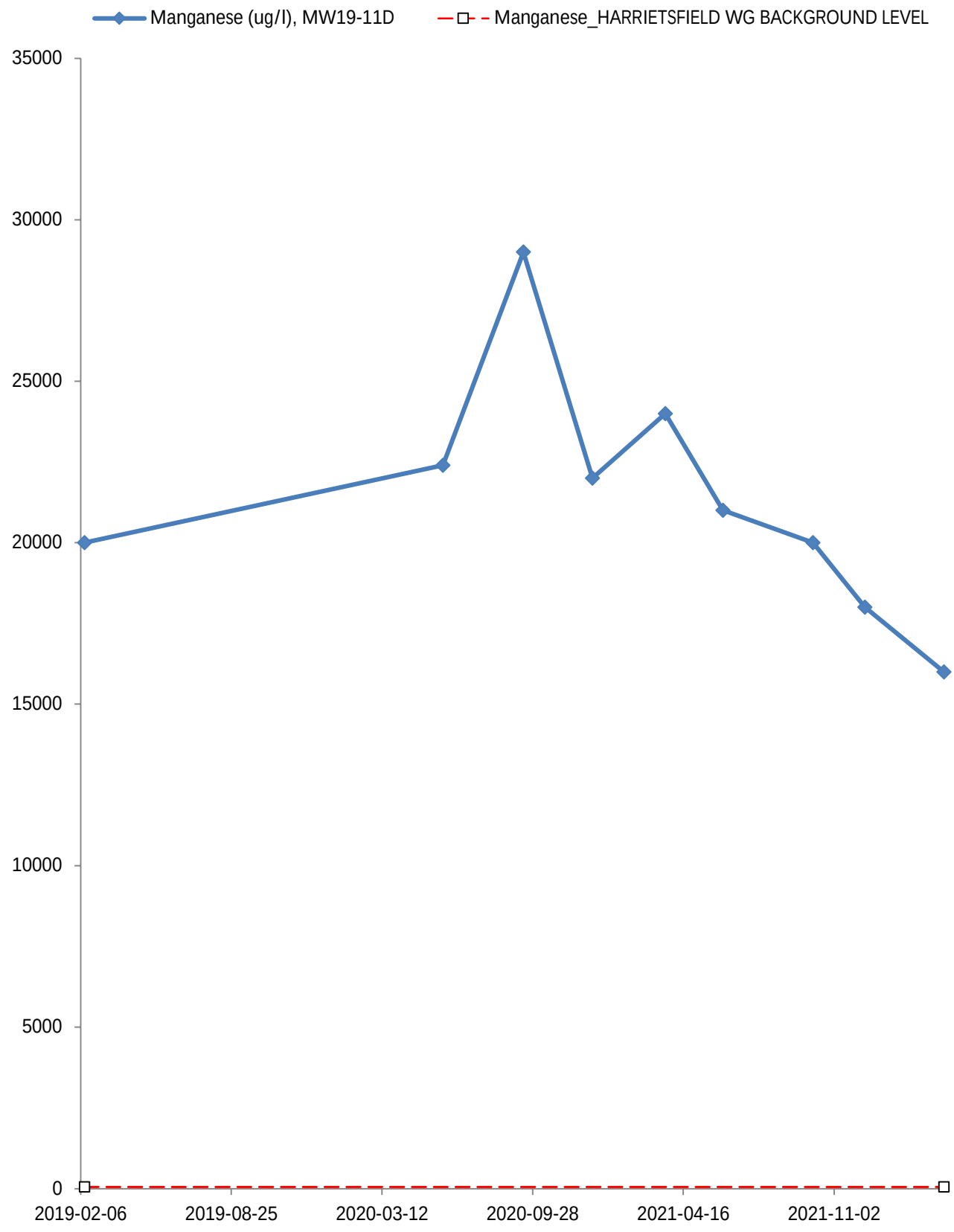
MW19-11D-Lead



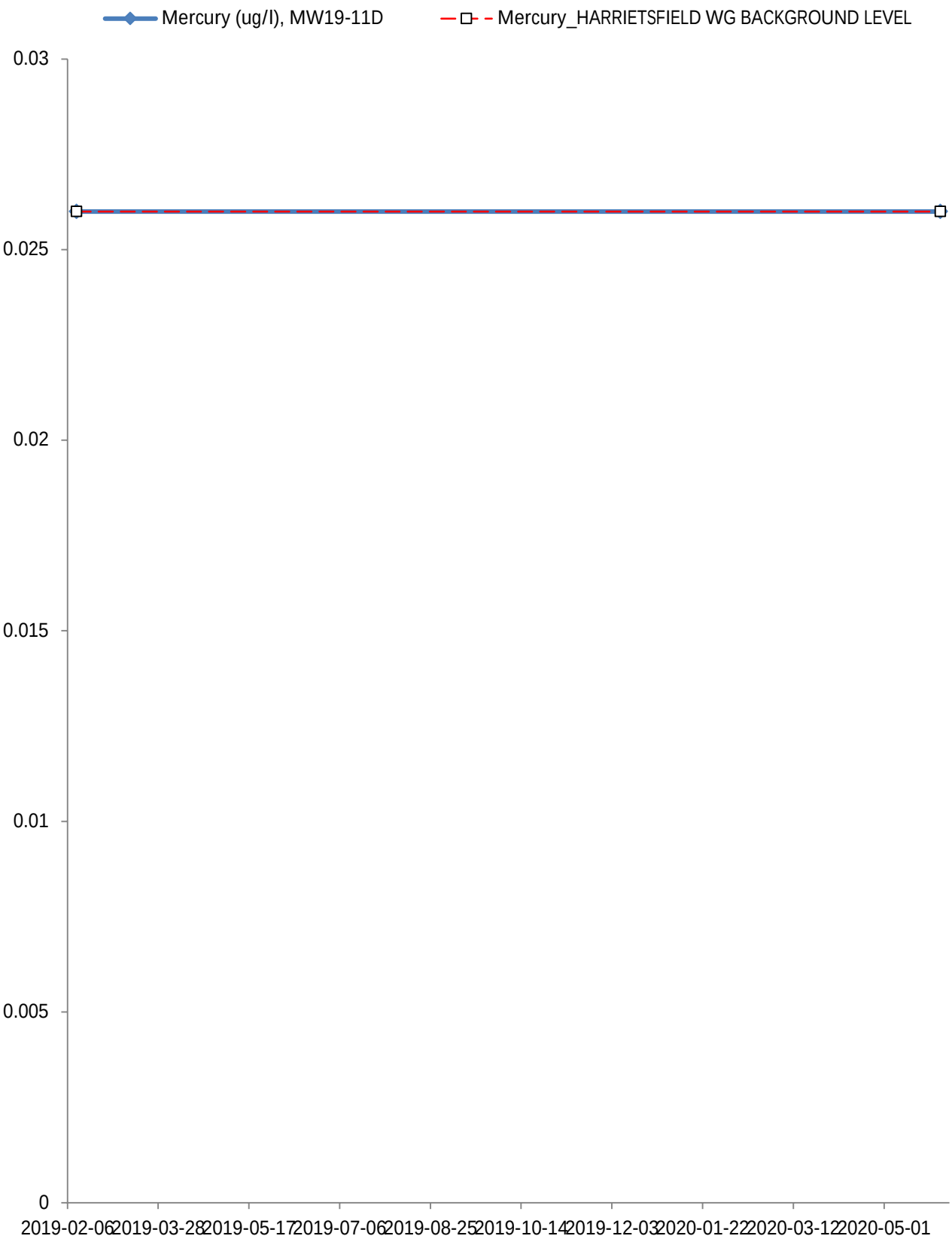
MW19-11D-Magnesium



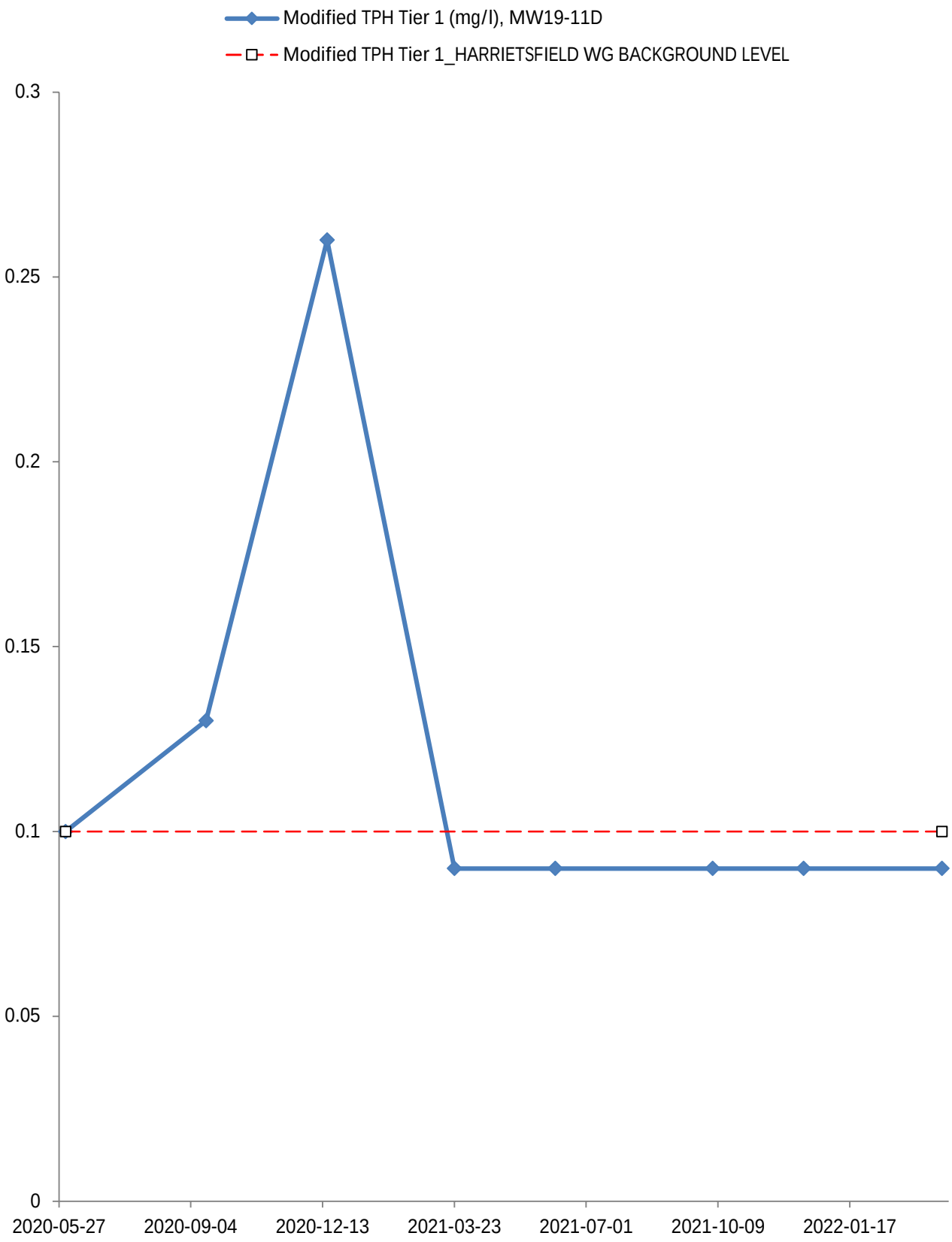
MW19-11D-Manganese



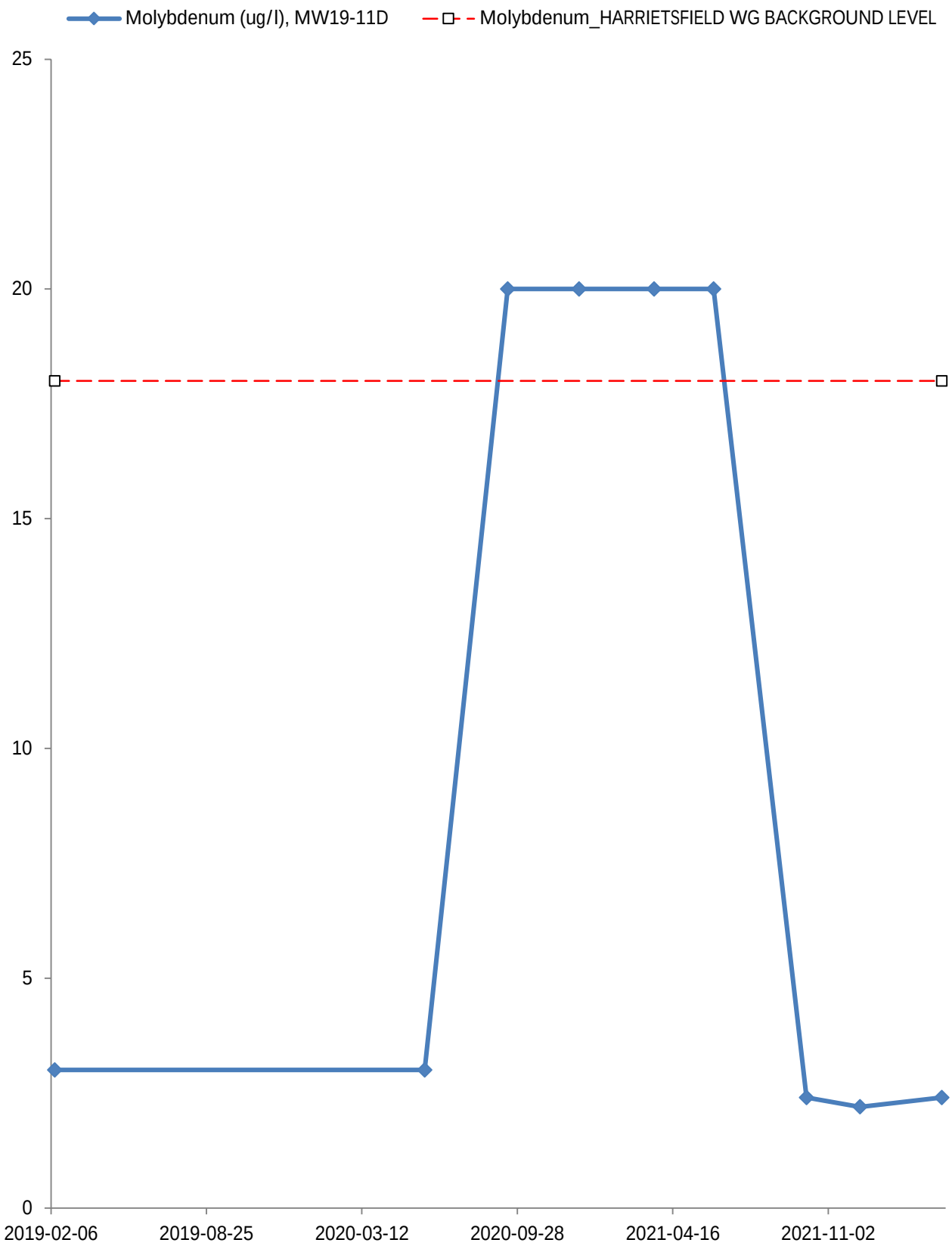
MW19-11D-Mercury



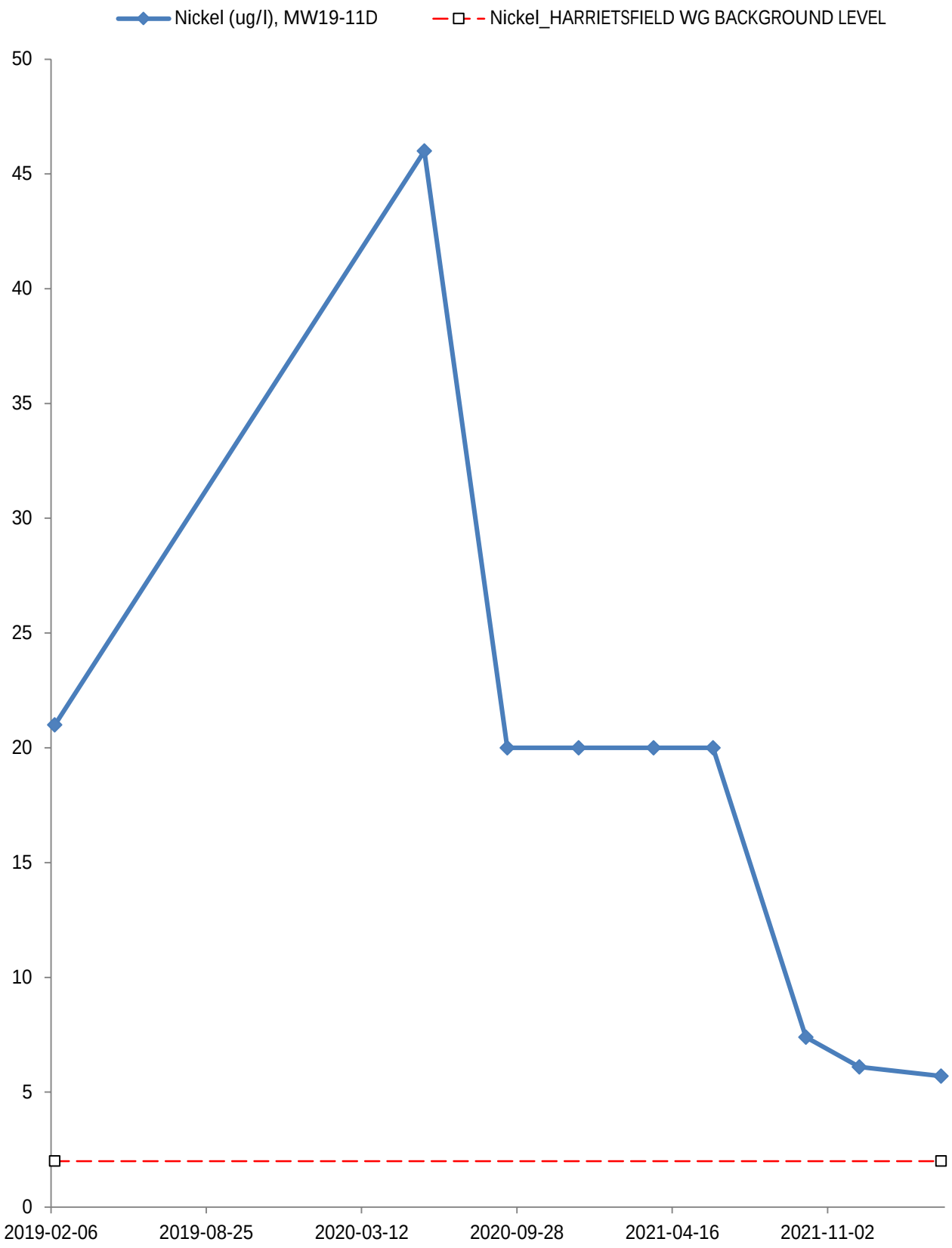
MW19-11D-Modified TPH Tier 1



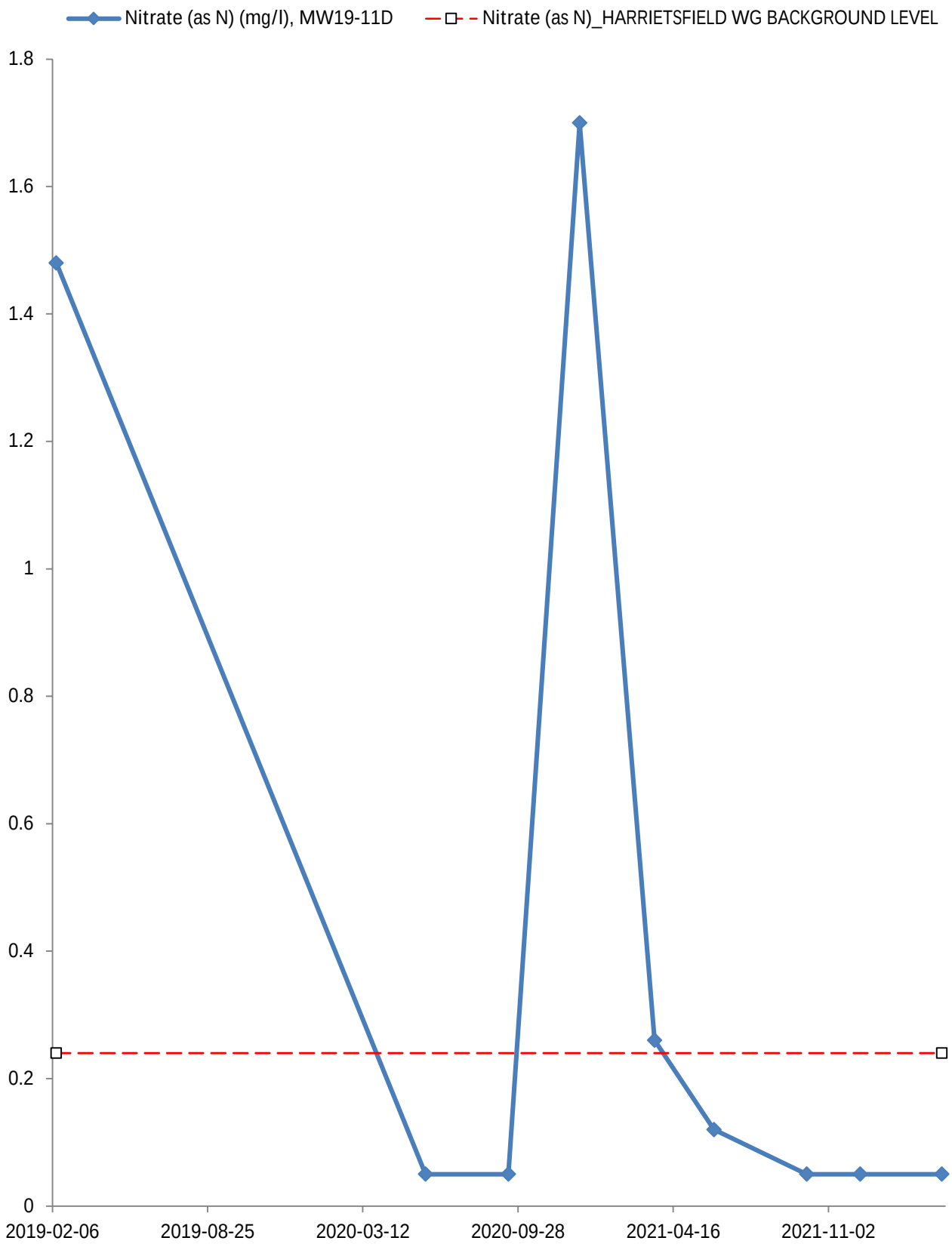
MW19-11D-Molybdenum



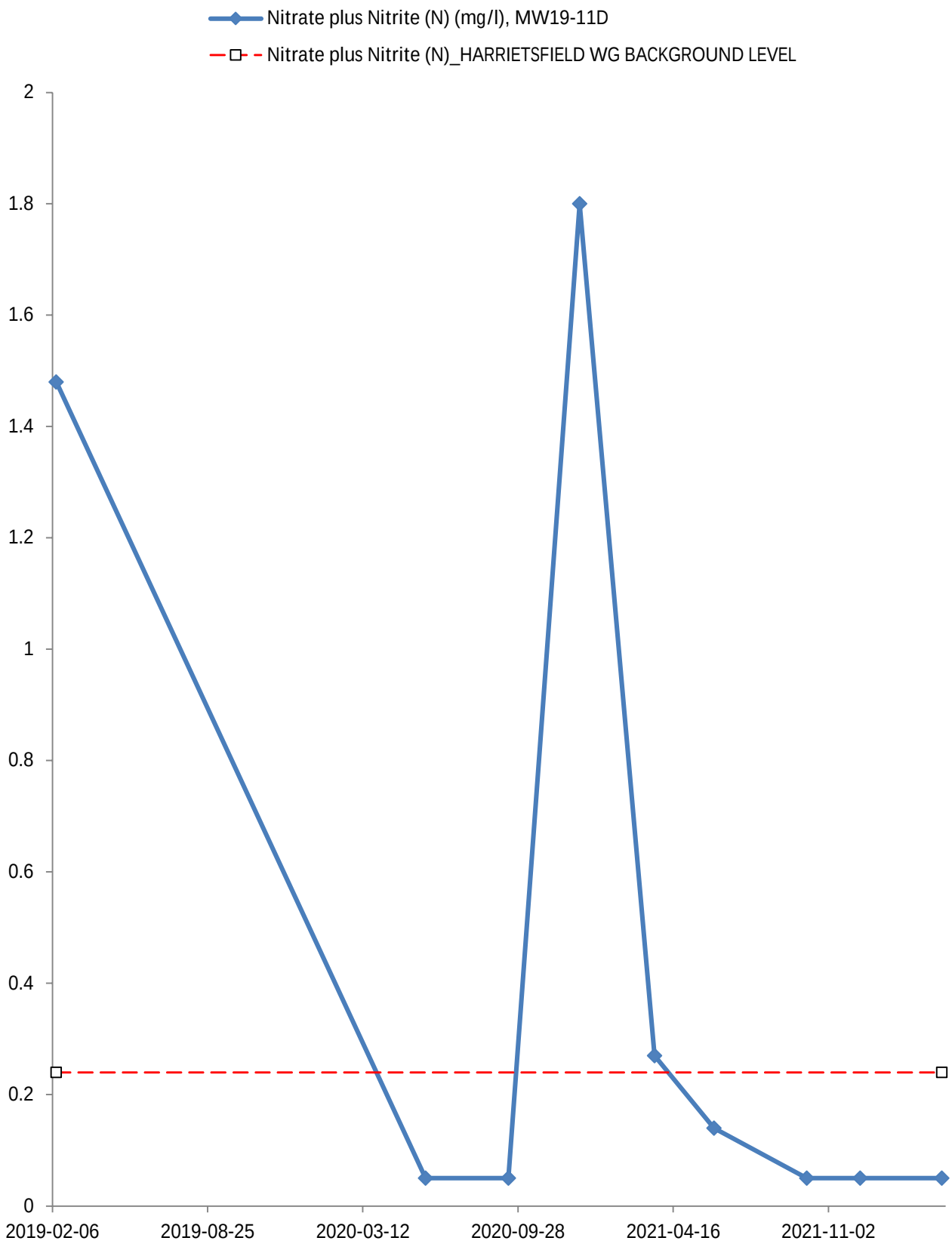
MW19-11D-Nickel



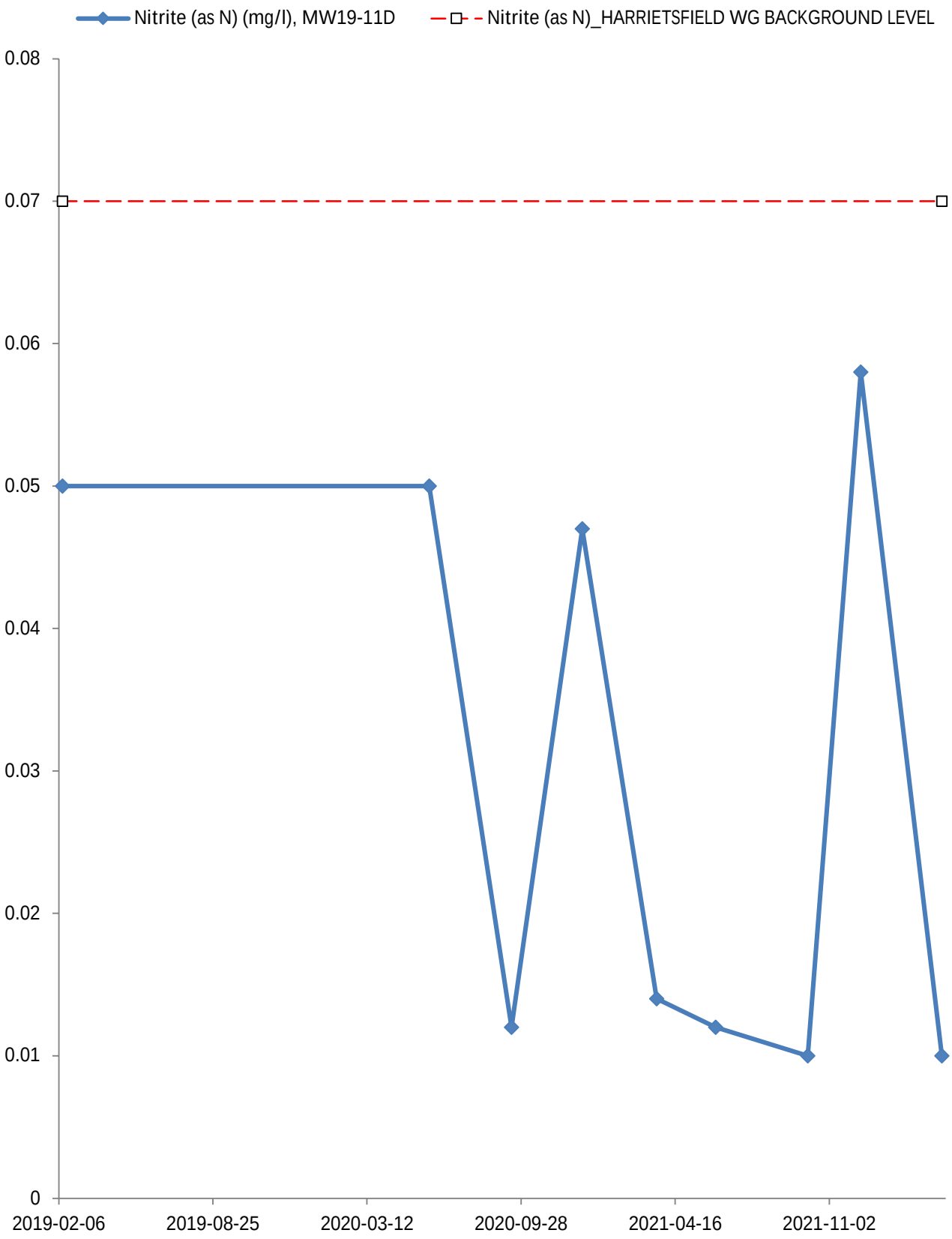
MW19-11D-Nitrate (as N)



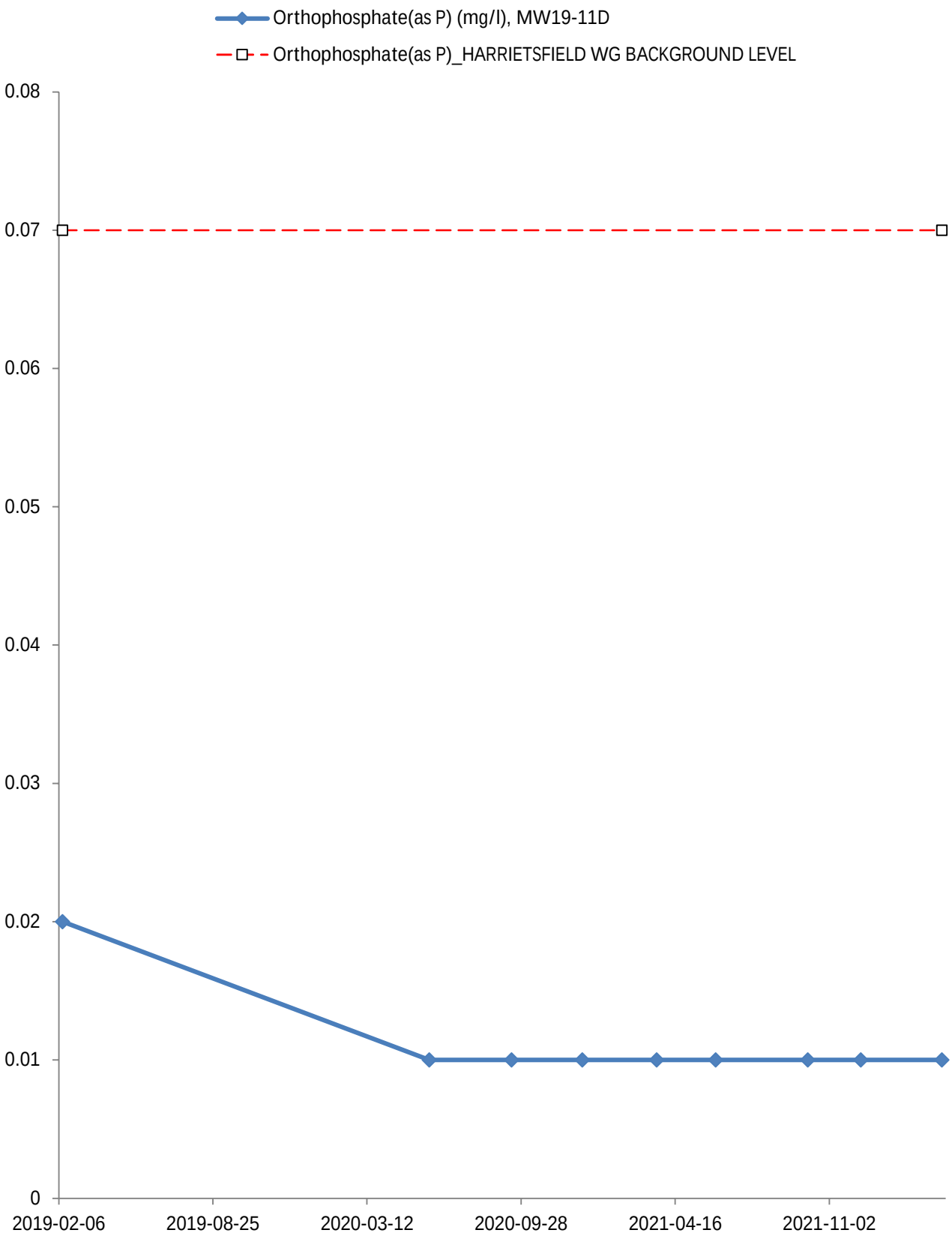
MW19-11D-Nitrate plus Nitrite (N)



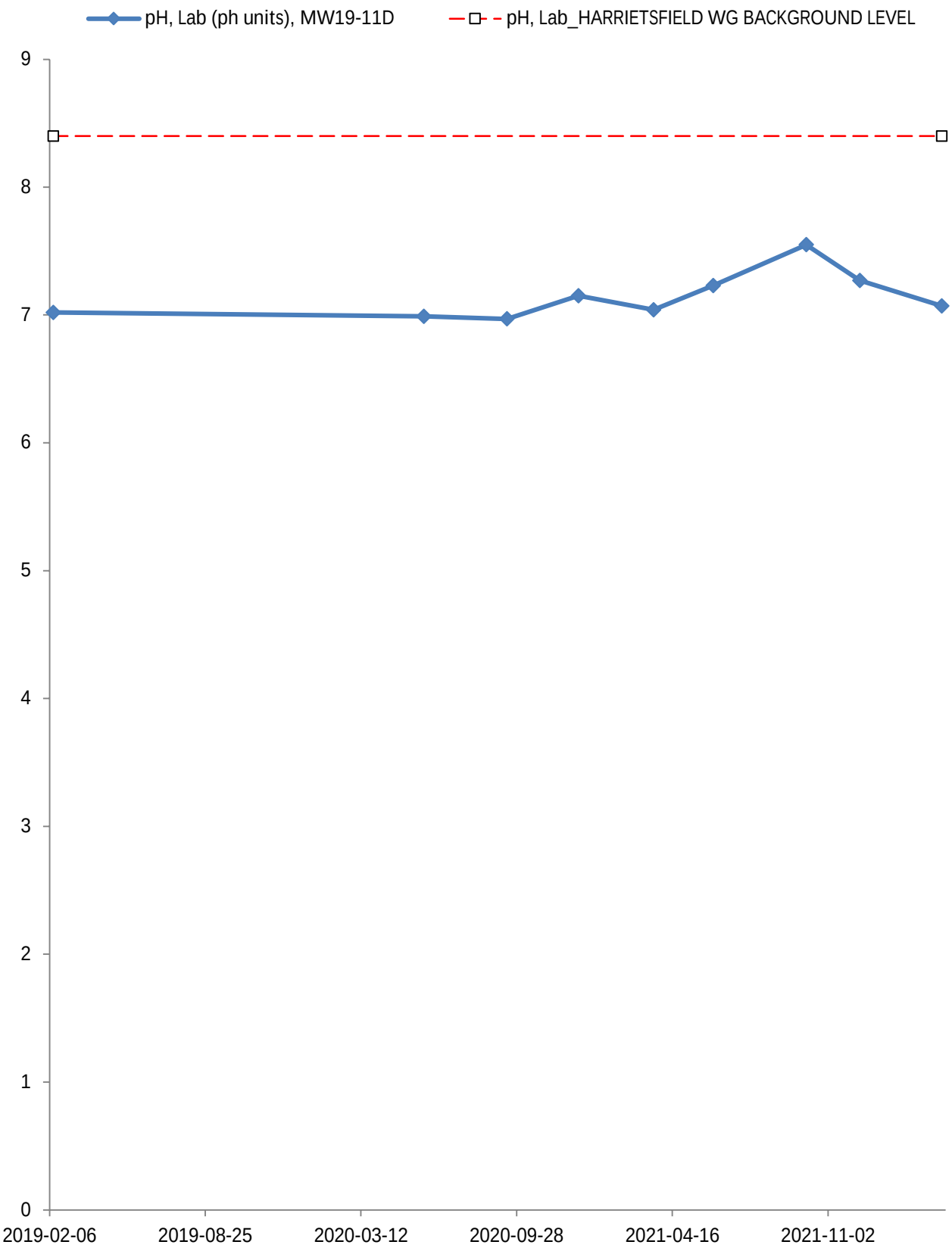
MW19-11D-Nitrite (as N)

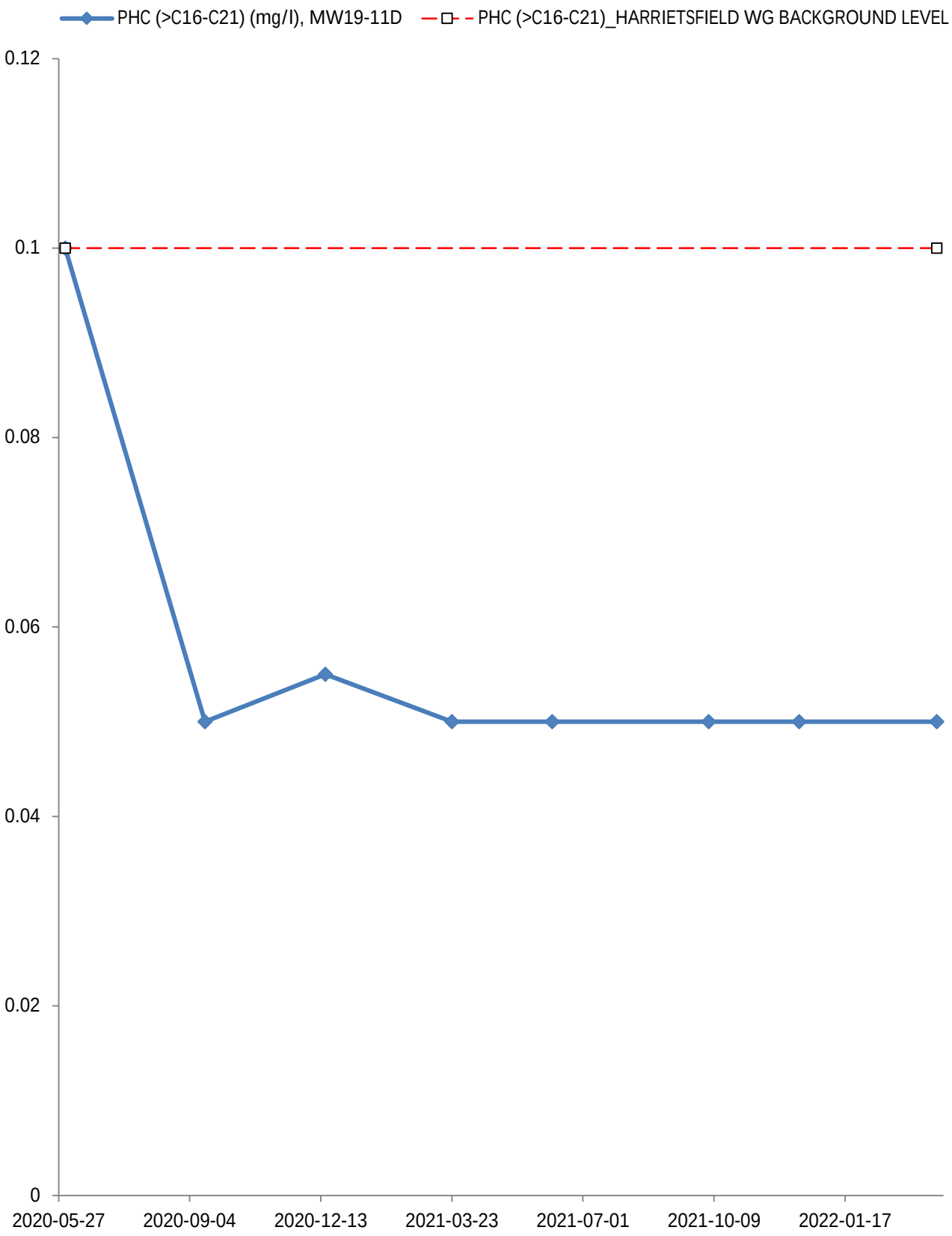


MW19-11D-Orthophosphate(as P)

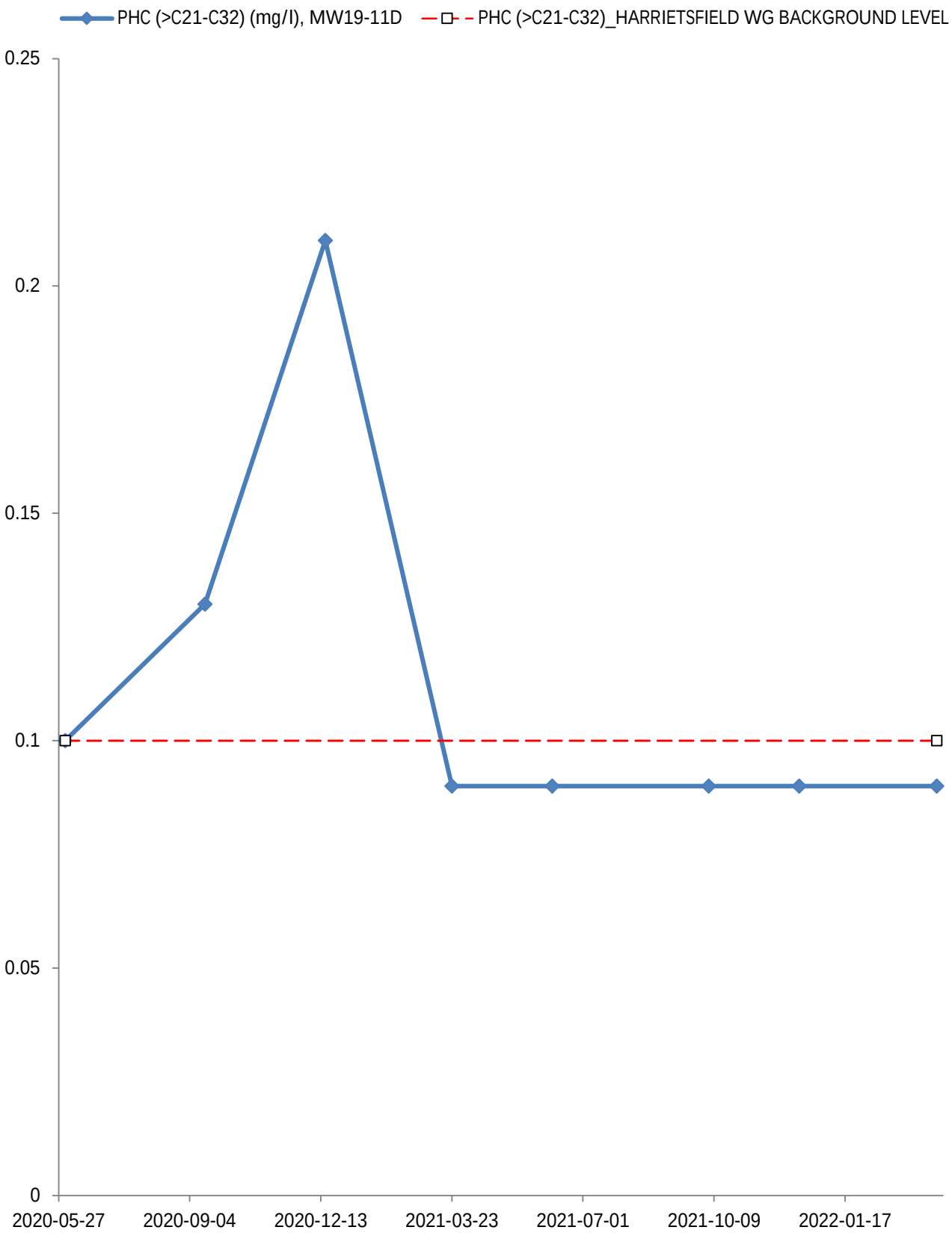


MW19-11D-pH, Lab

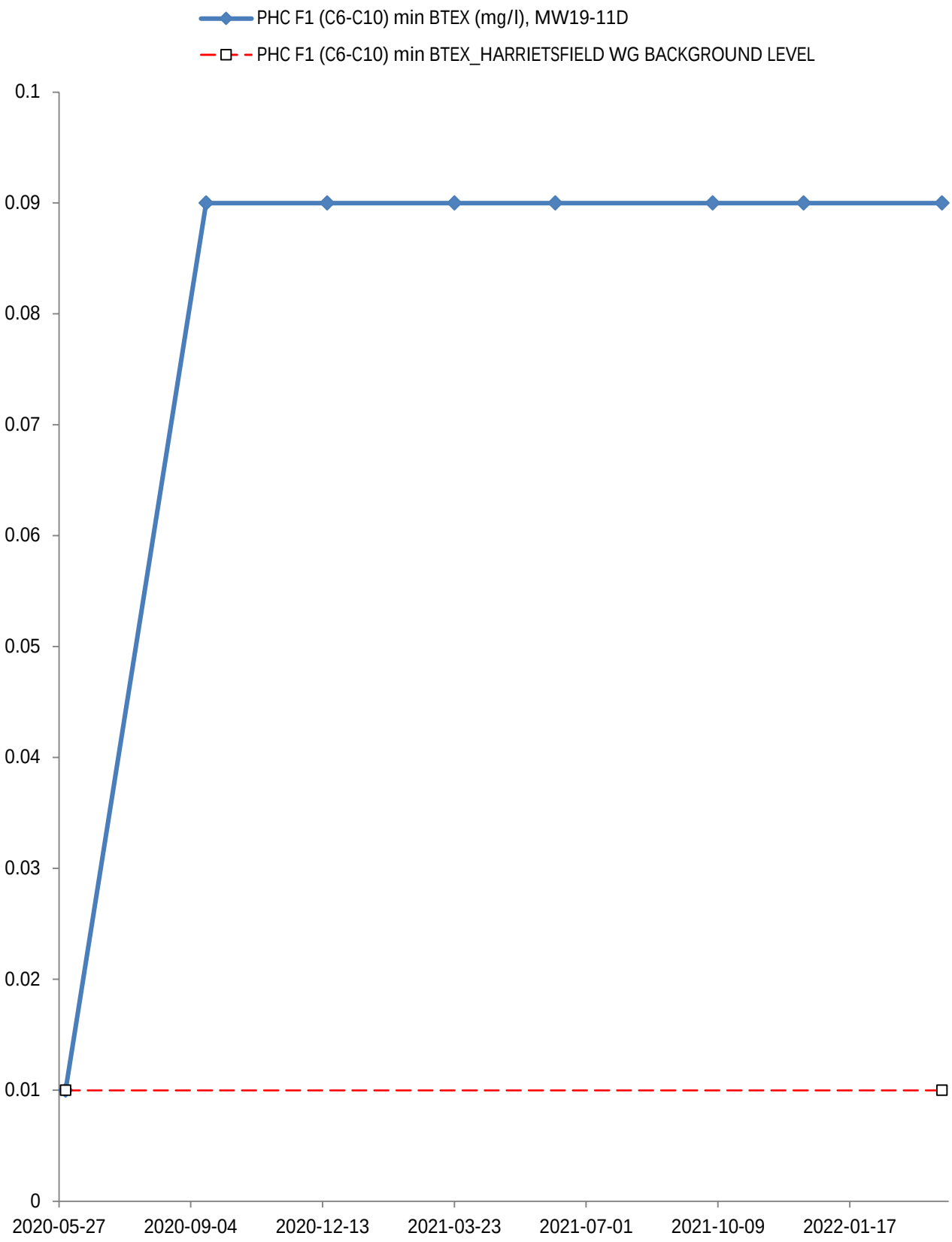



PHC (>C16-C21) (mg/l), MW19-11D
PHC (>C16-C21)_HARRIETSFIELD WG BACKGROUND LEVEL
0.12
0.1
0.08
0.06
0.04
0.02
0
2020-05-27
2020-09-04
2020-12-13
2021-03-23
2021-07-01
2021-10-09
2022-01-17

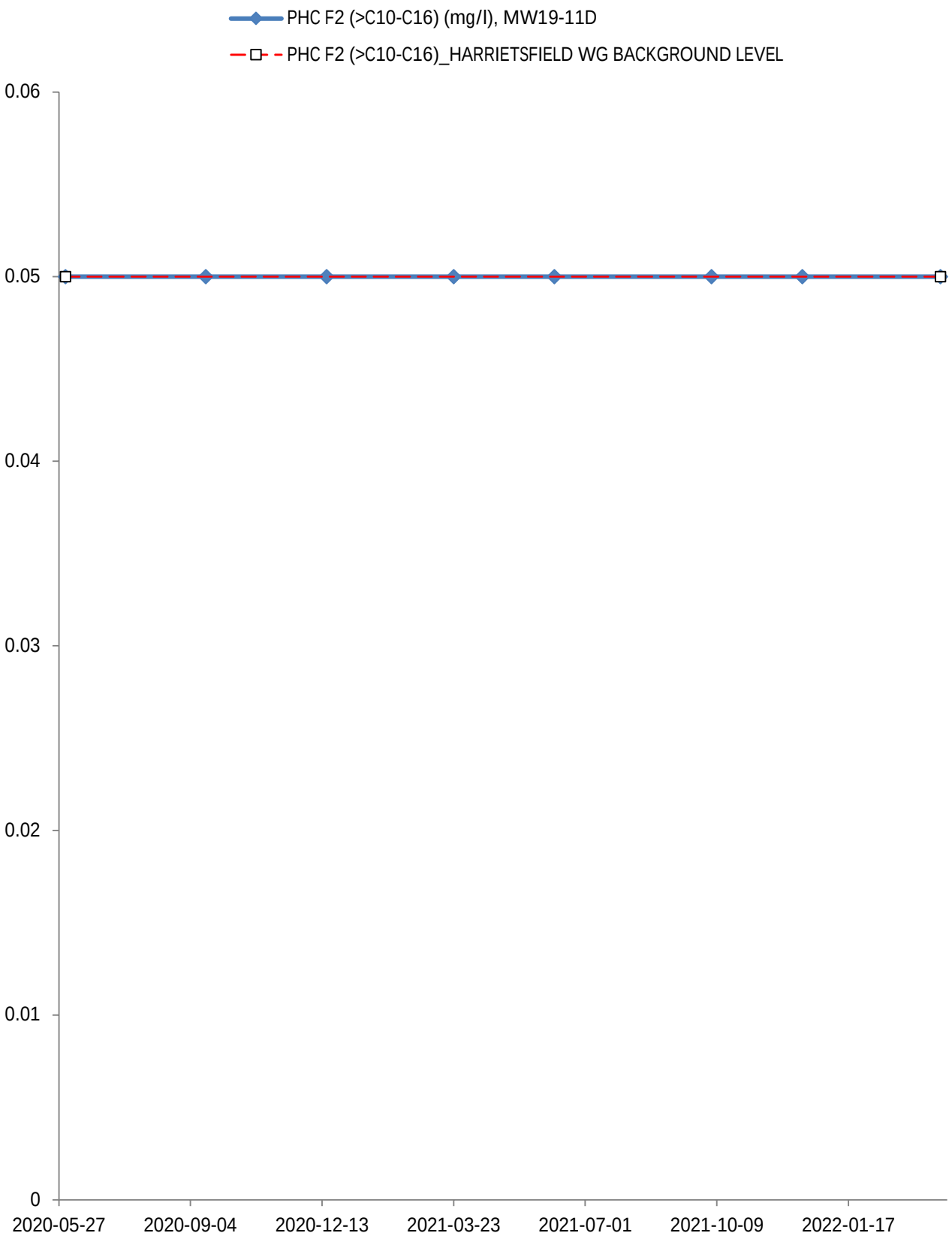
MW19-11D-PHC (>C21-C32)



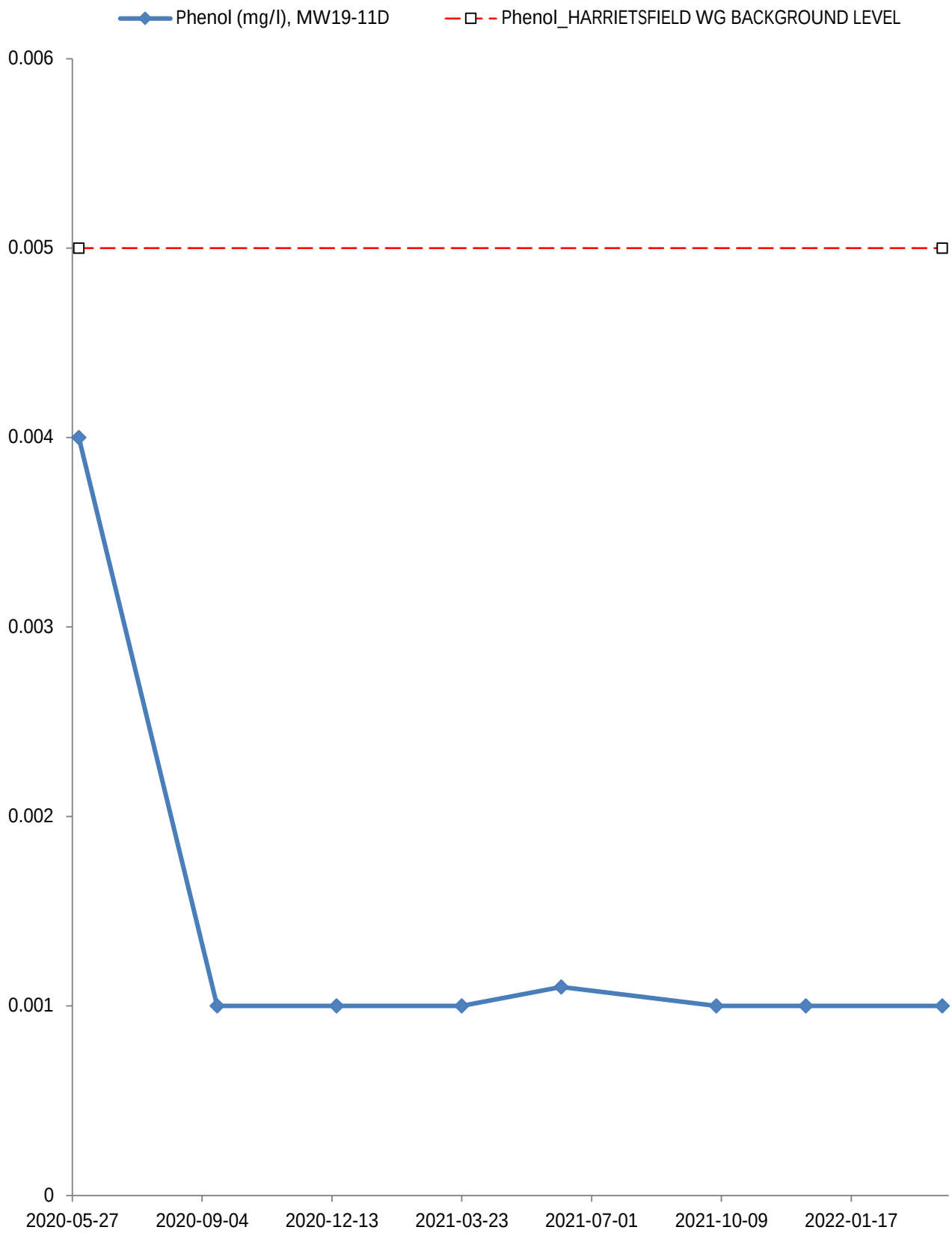
MW19-11D-PHC F1 (C6-C10) min BTEX



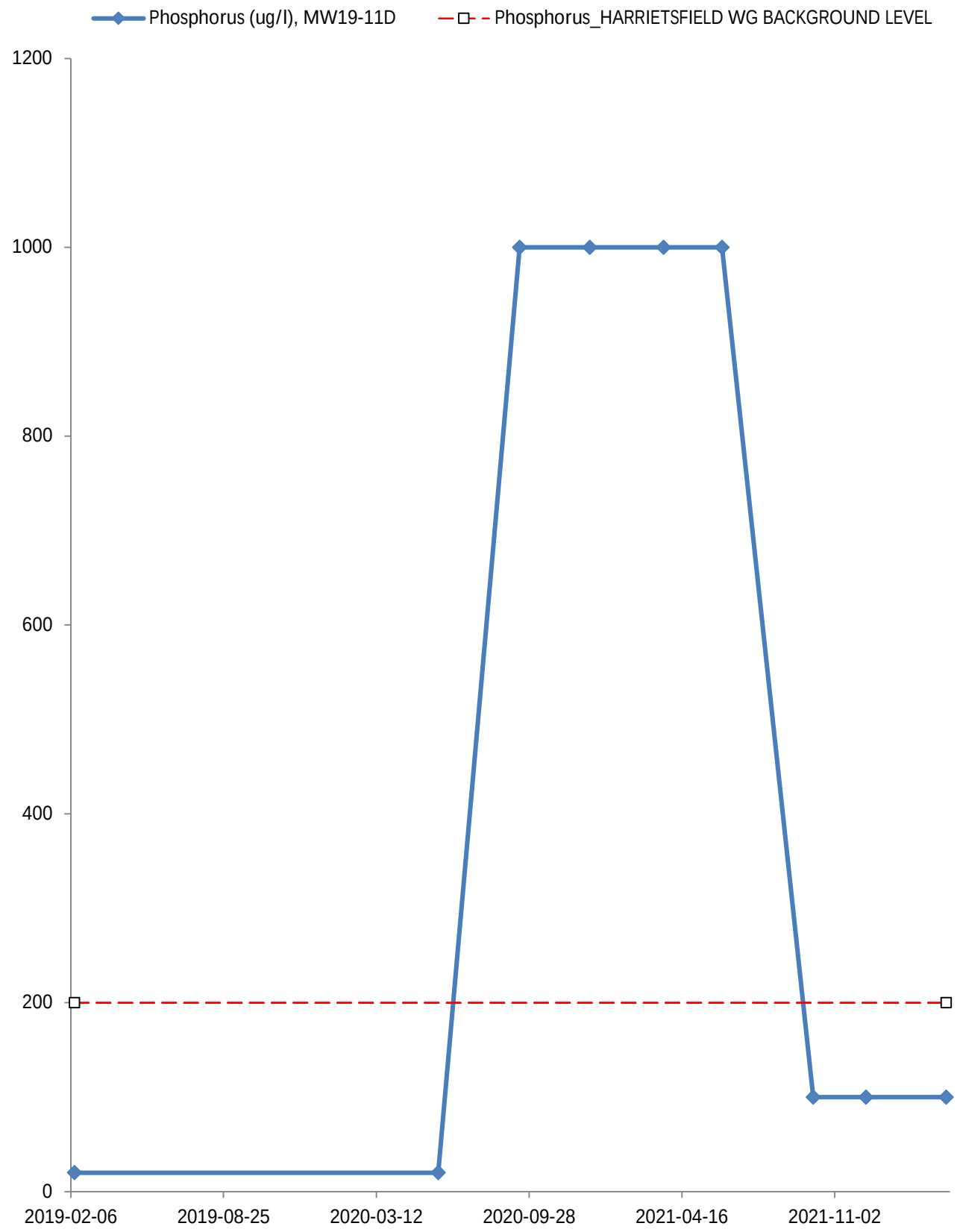
MW19-11D-PHC F2 (>C10-C16)



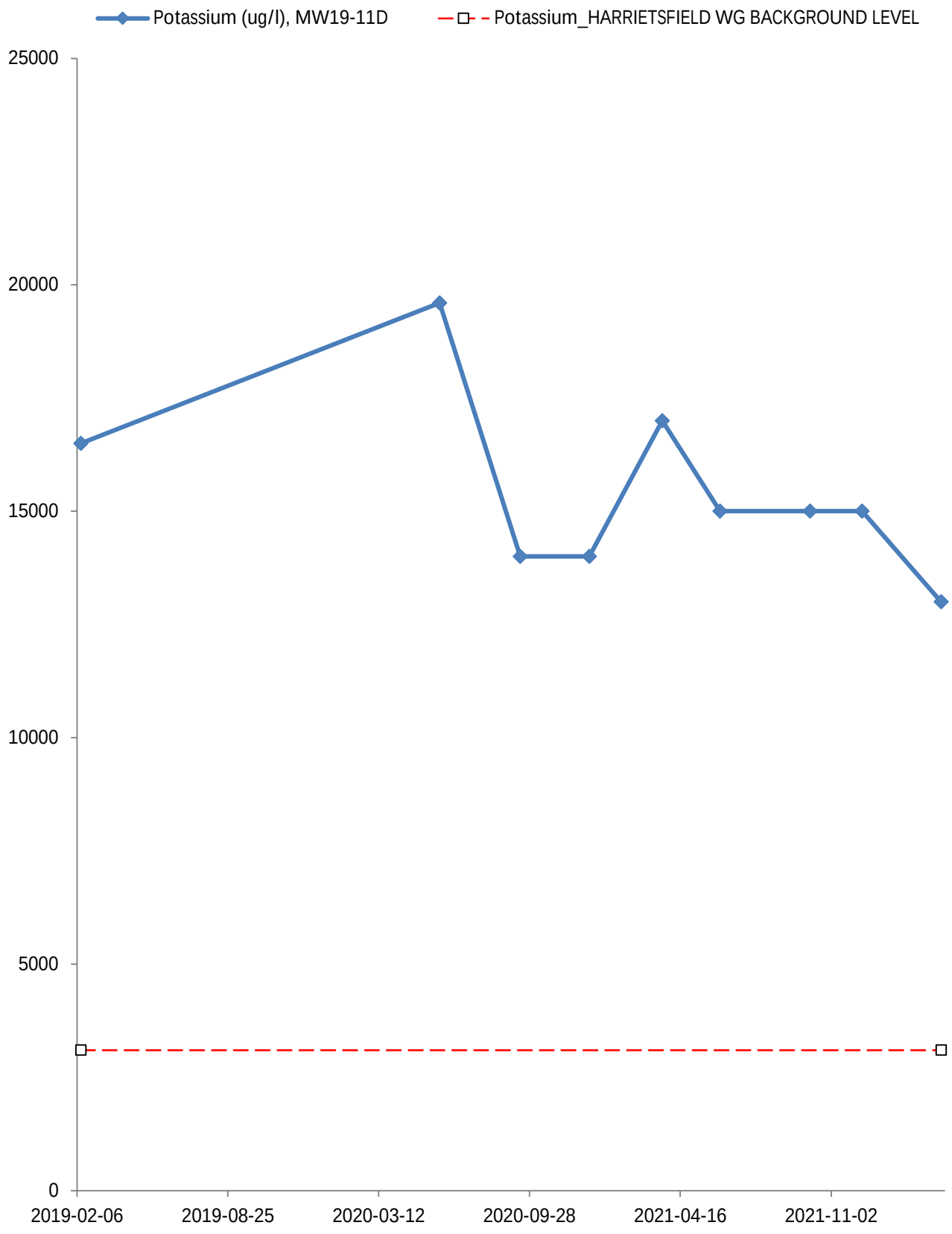
MW19-11D-Phenol

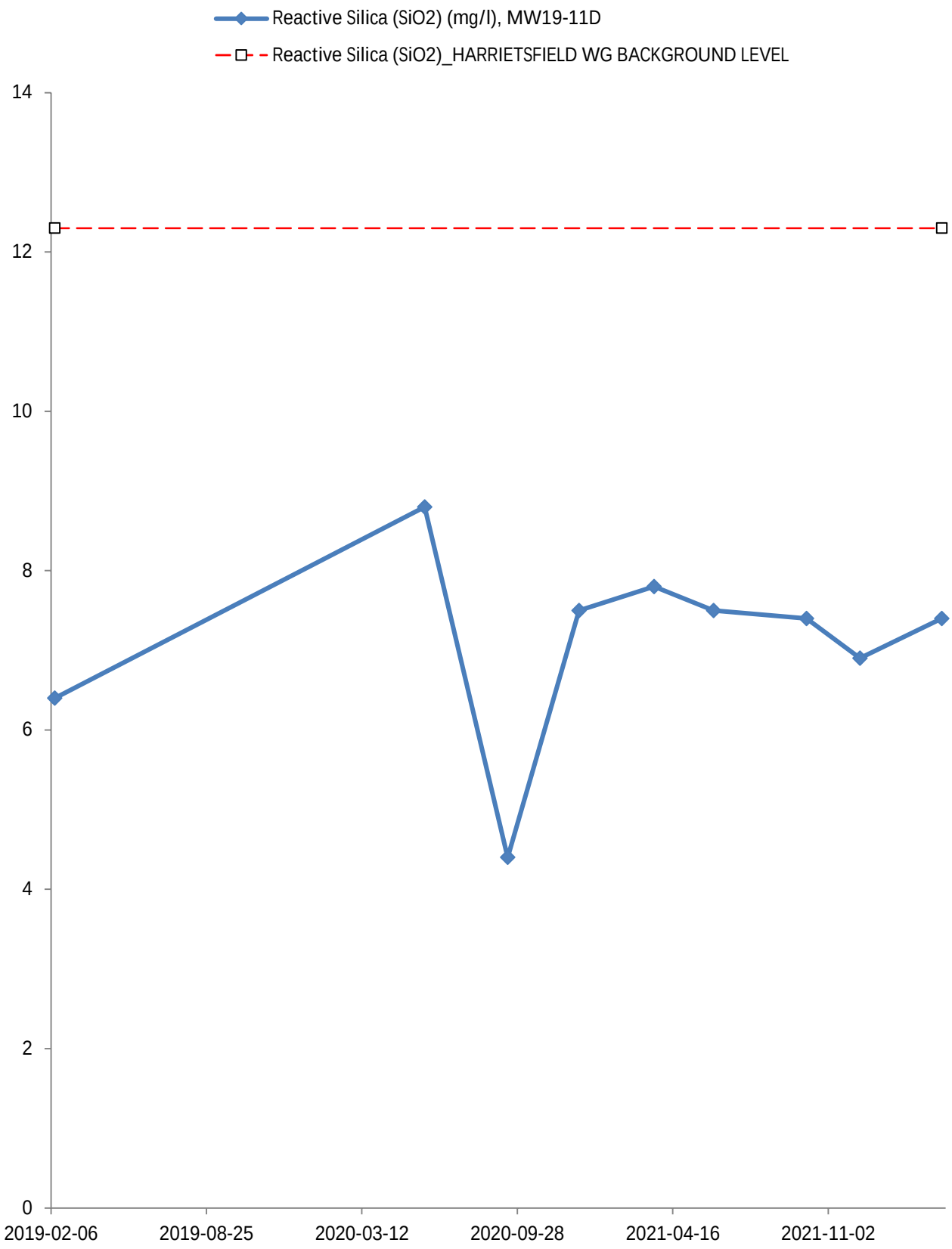


MW19-11D-Phosphorus

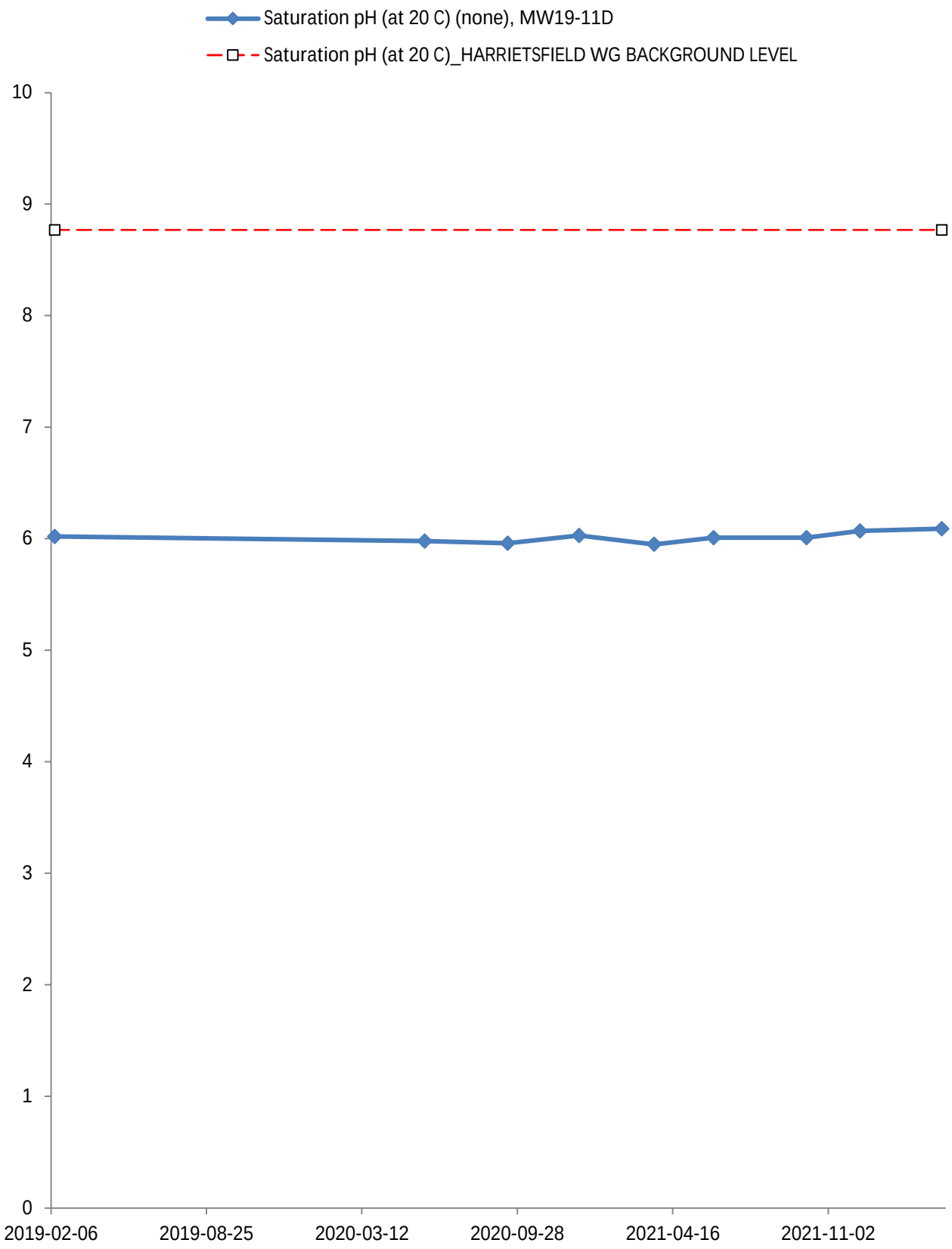


MW19-11D-Potassium

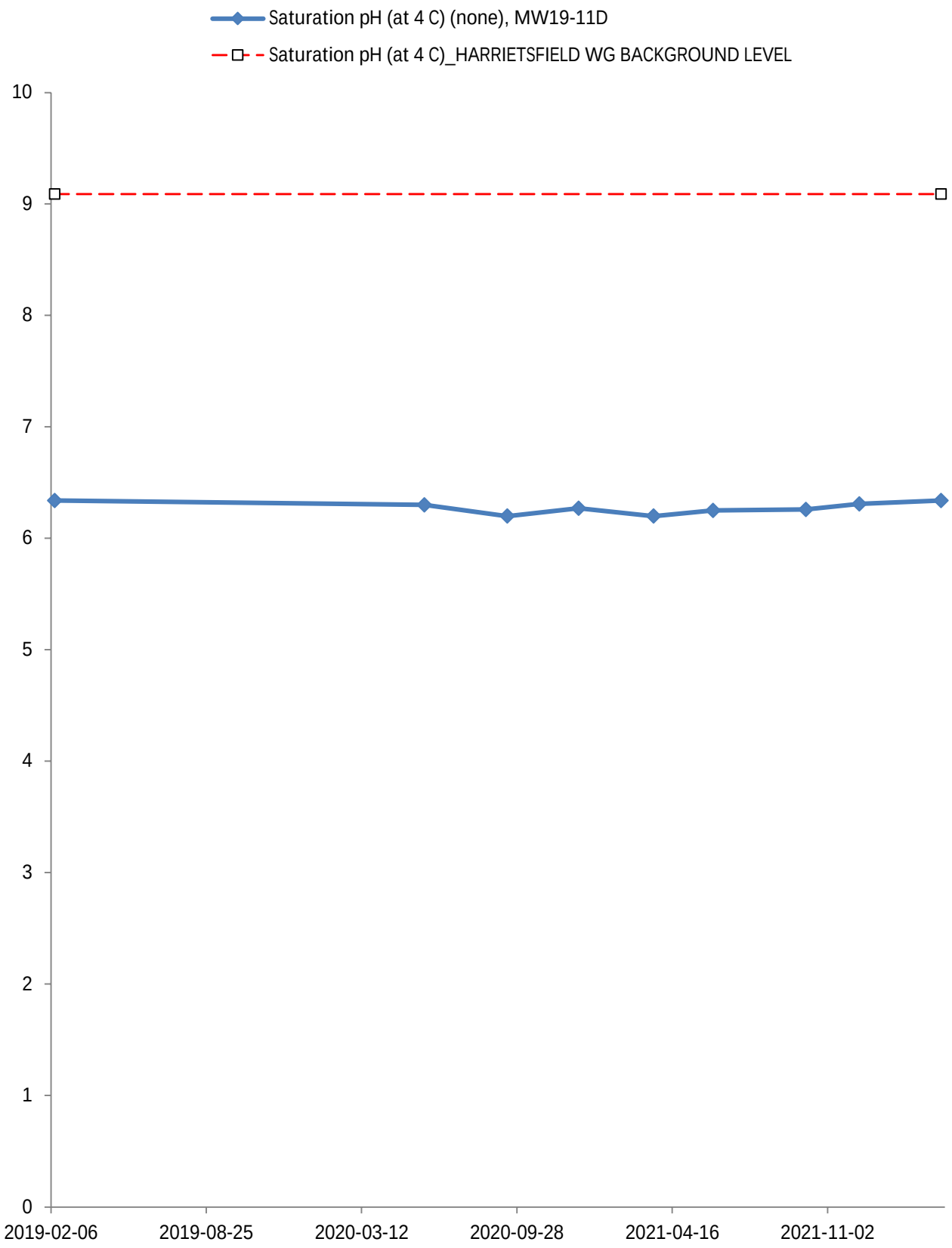



Reactive Silica (SiO2) (mg/l), MW19-11D
Reactive Silica (SiO2)_HARRIETSFIELD WG BACKGROUND LEVEL
14
12
10
8
6
4
2
0
2019-02-06
2019-08-25
2020-03-12
2020-09-28
2021-04-16
2021-11-02

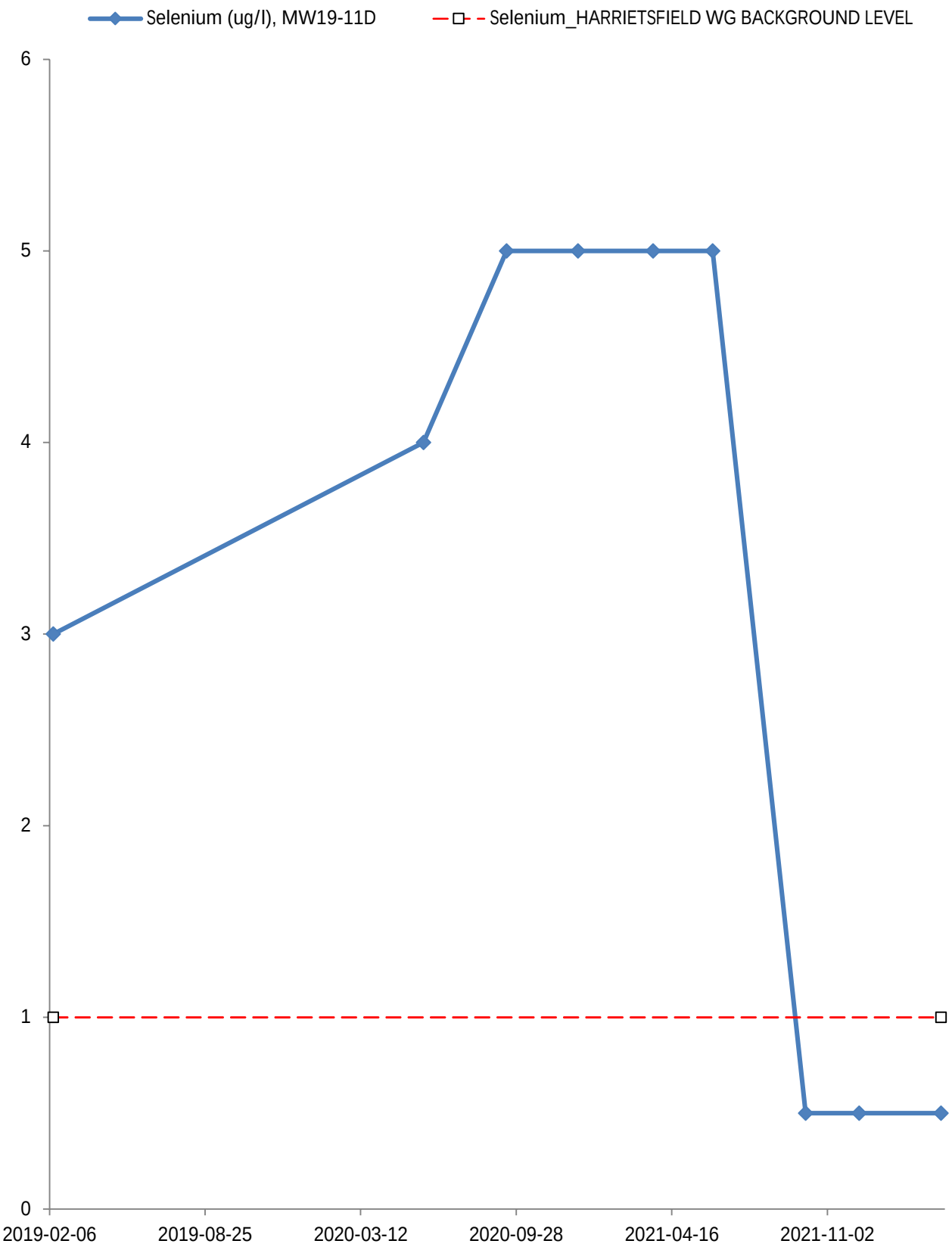
MW19-11D-Saturation pH (at 20 C)



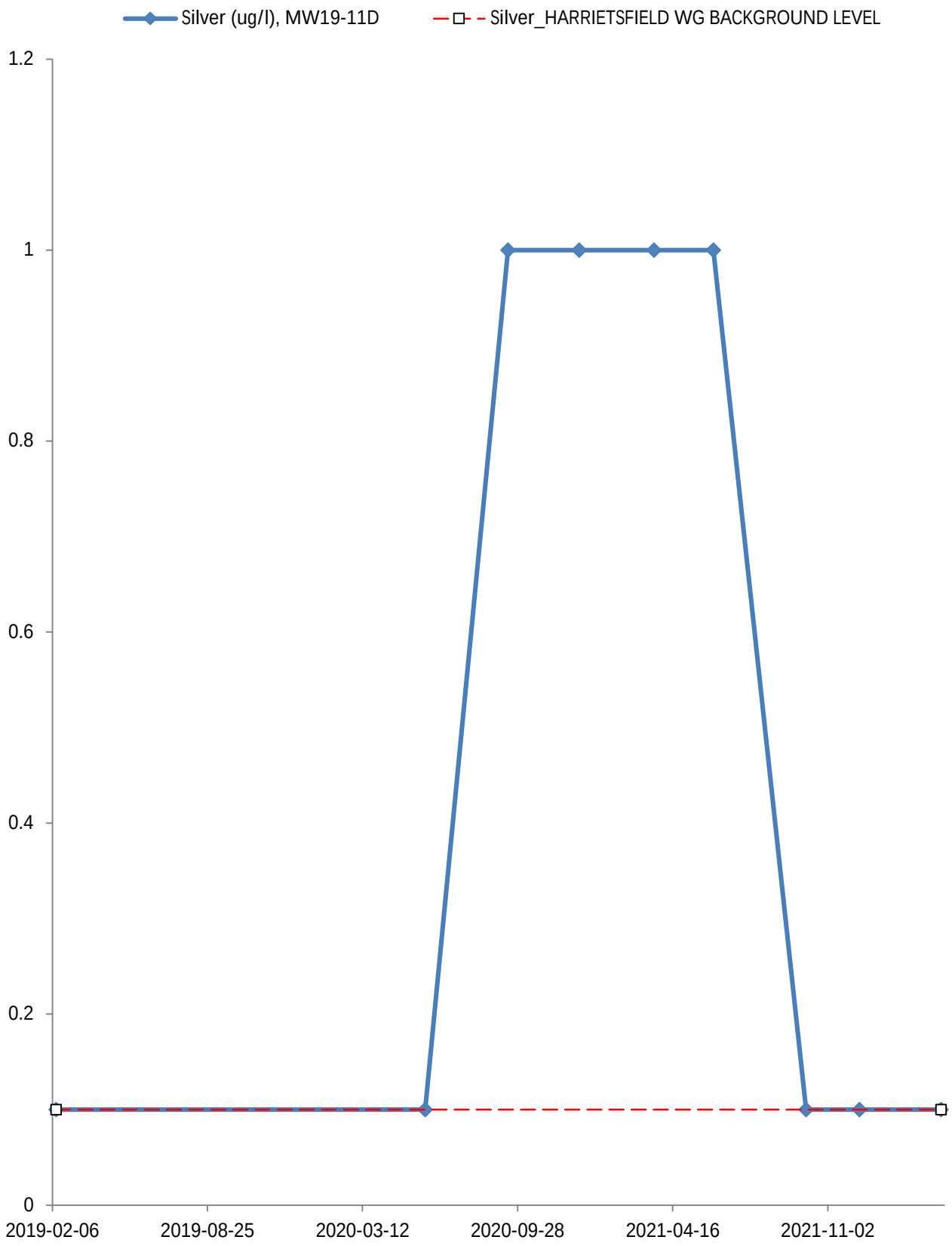
MW19-11D-Saturation pH (at 4 C)



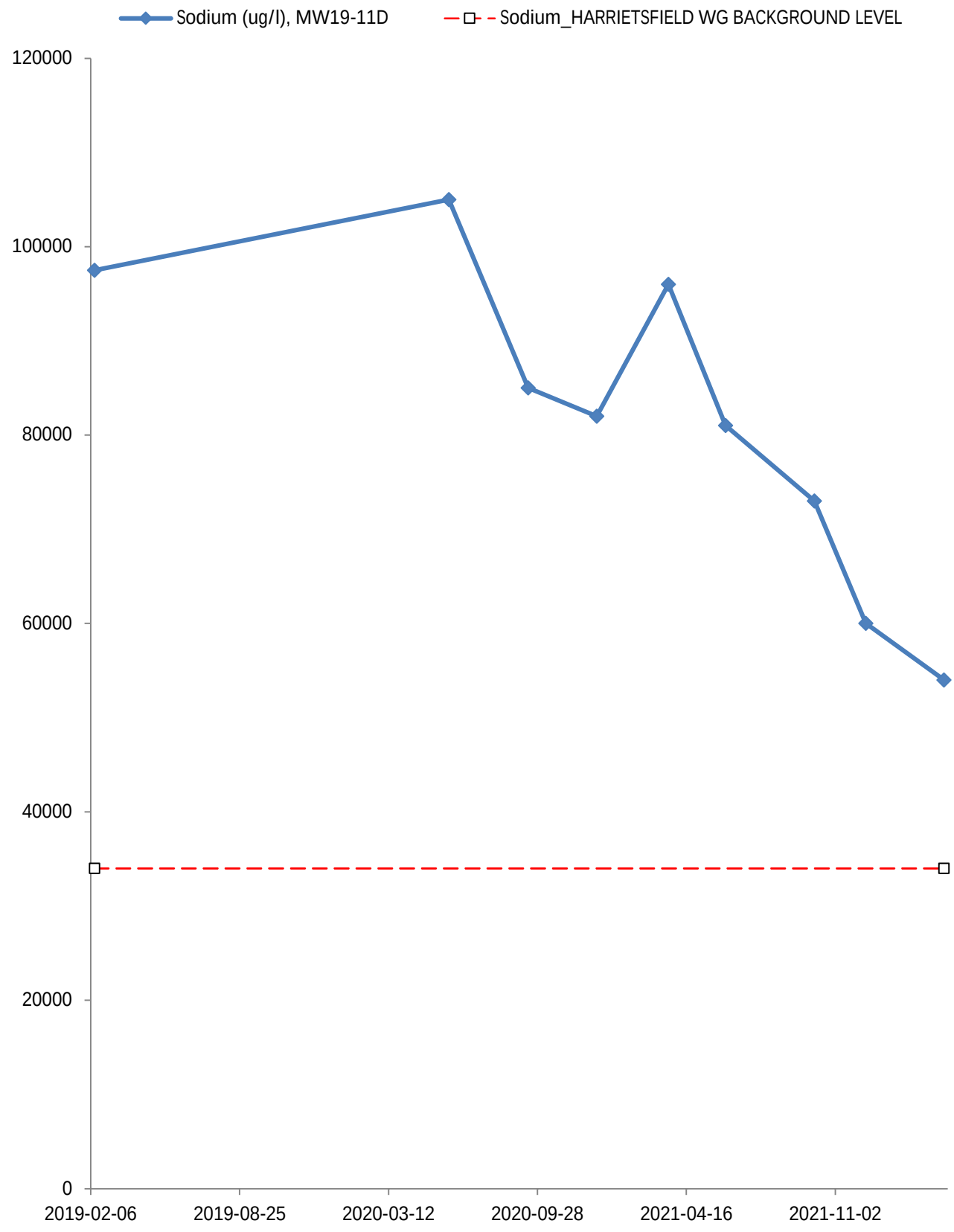
MW19-11D-Selenium



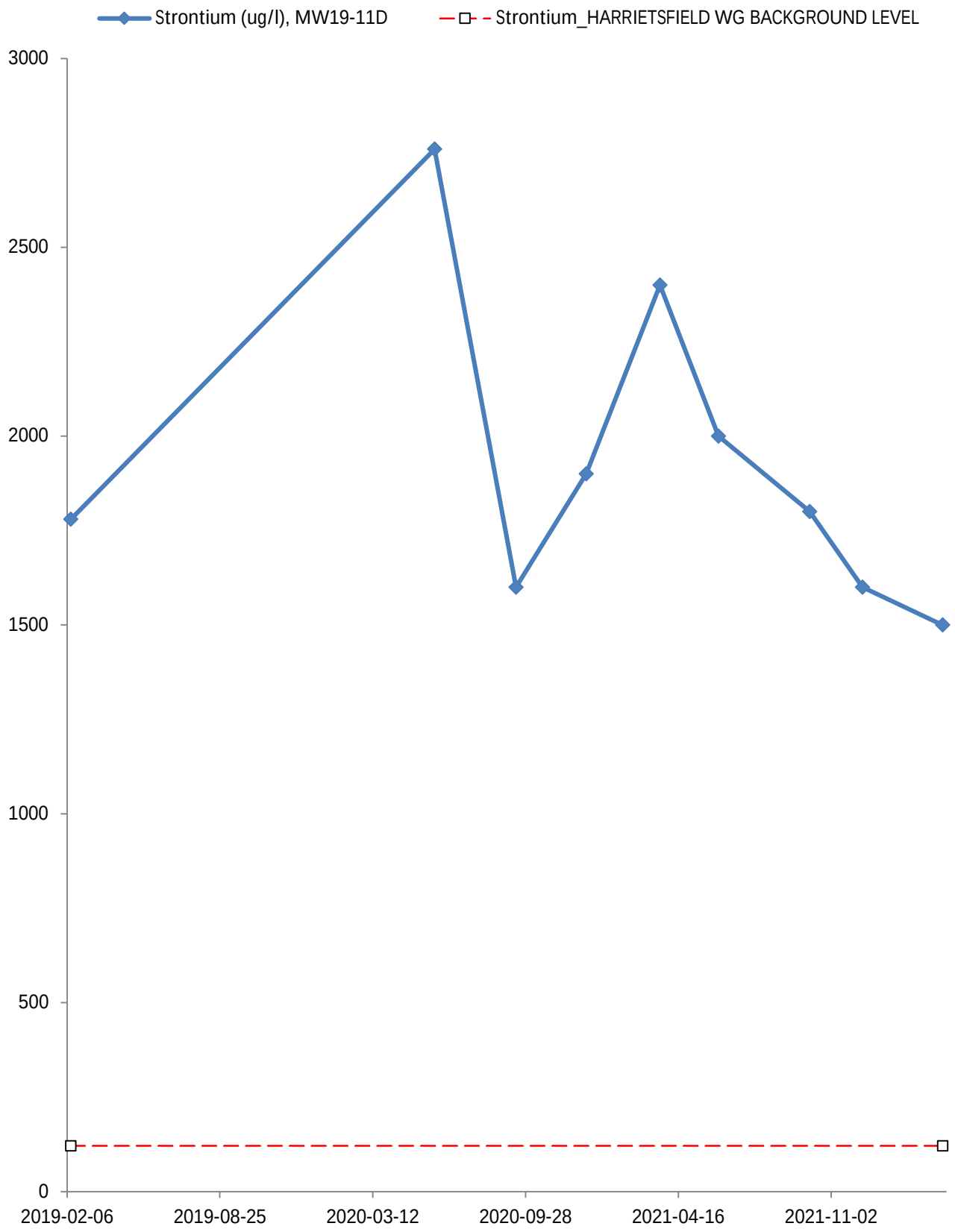
MW19-11D-Silver



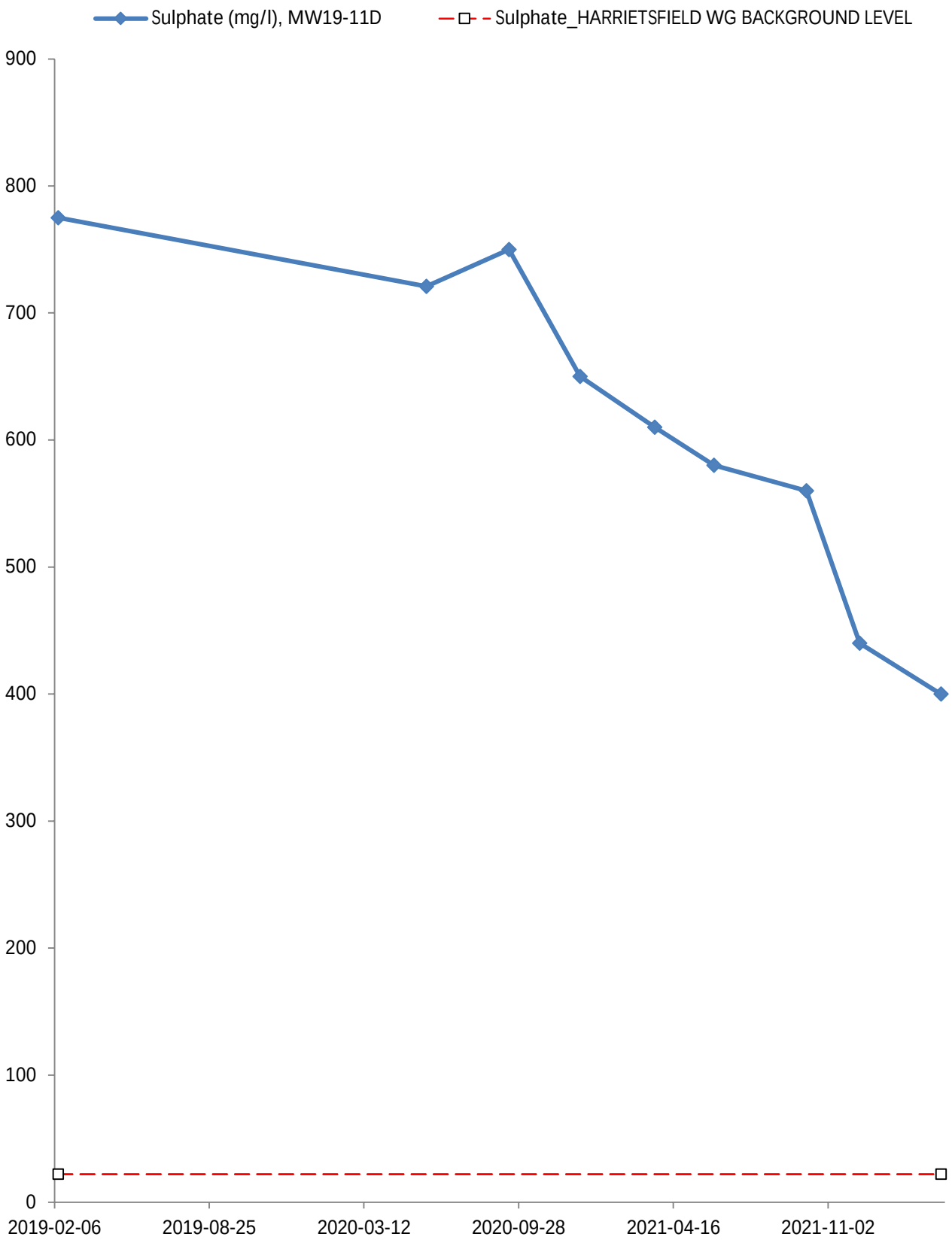
MW19-11D-Sodium



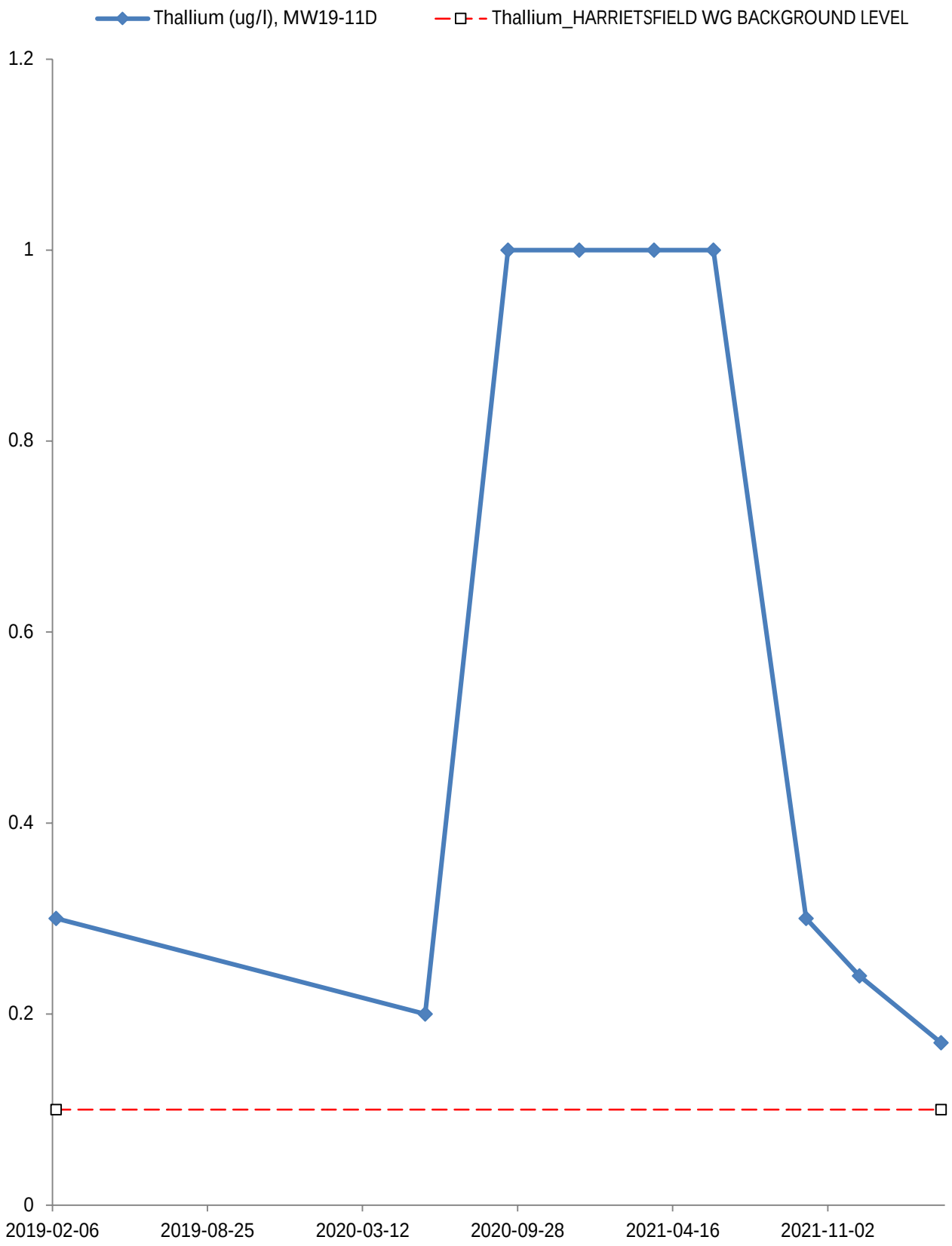
MW19-11D-Strontium



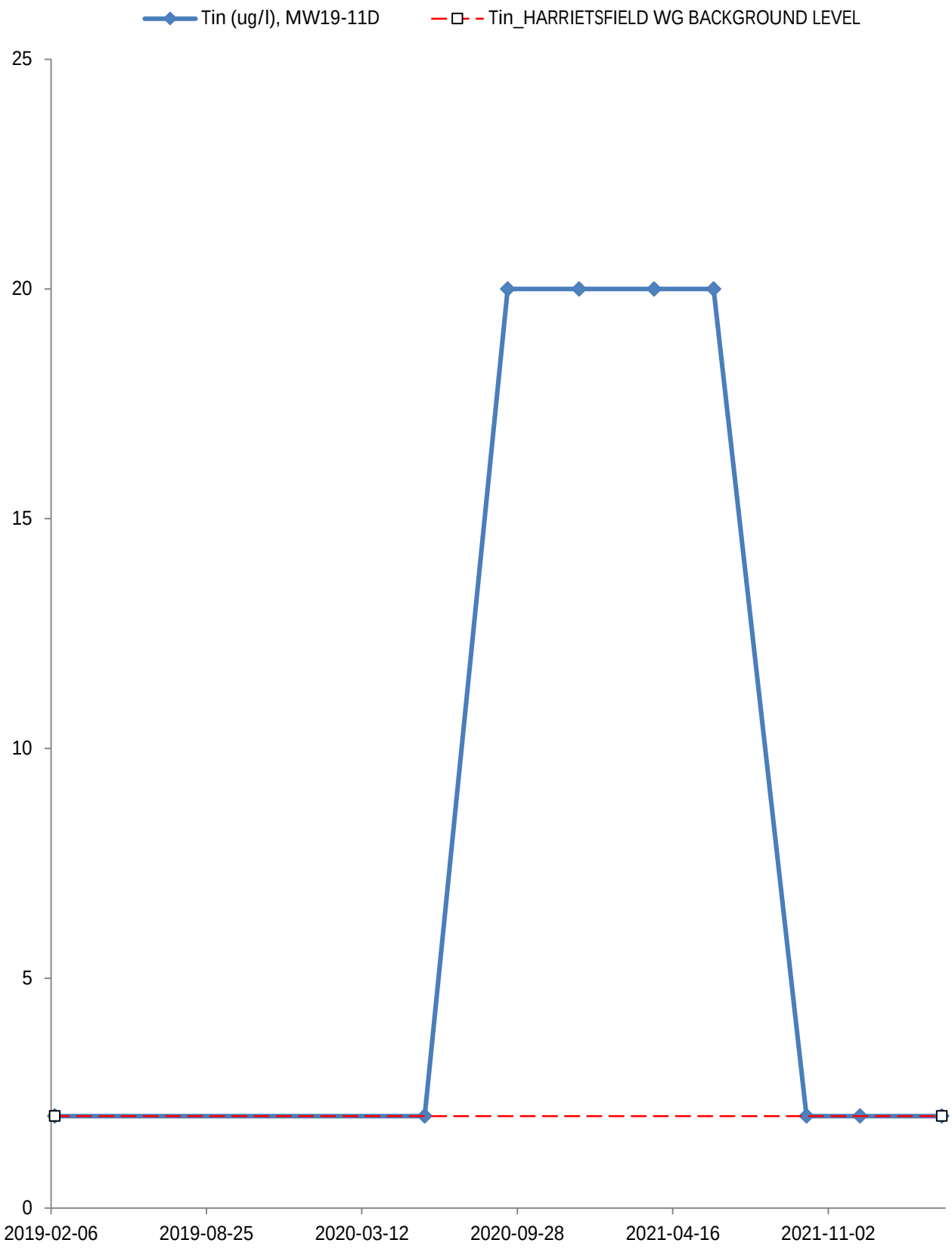
MW19-11D-Sulphate



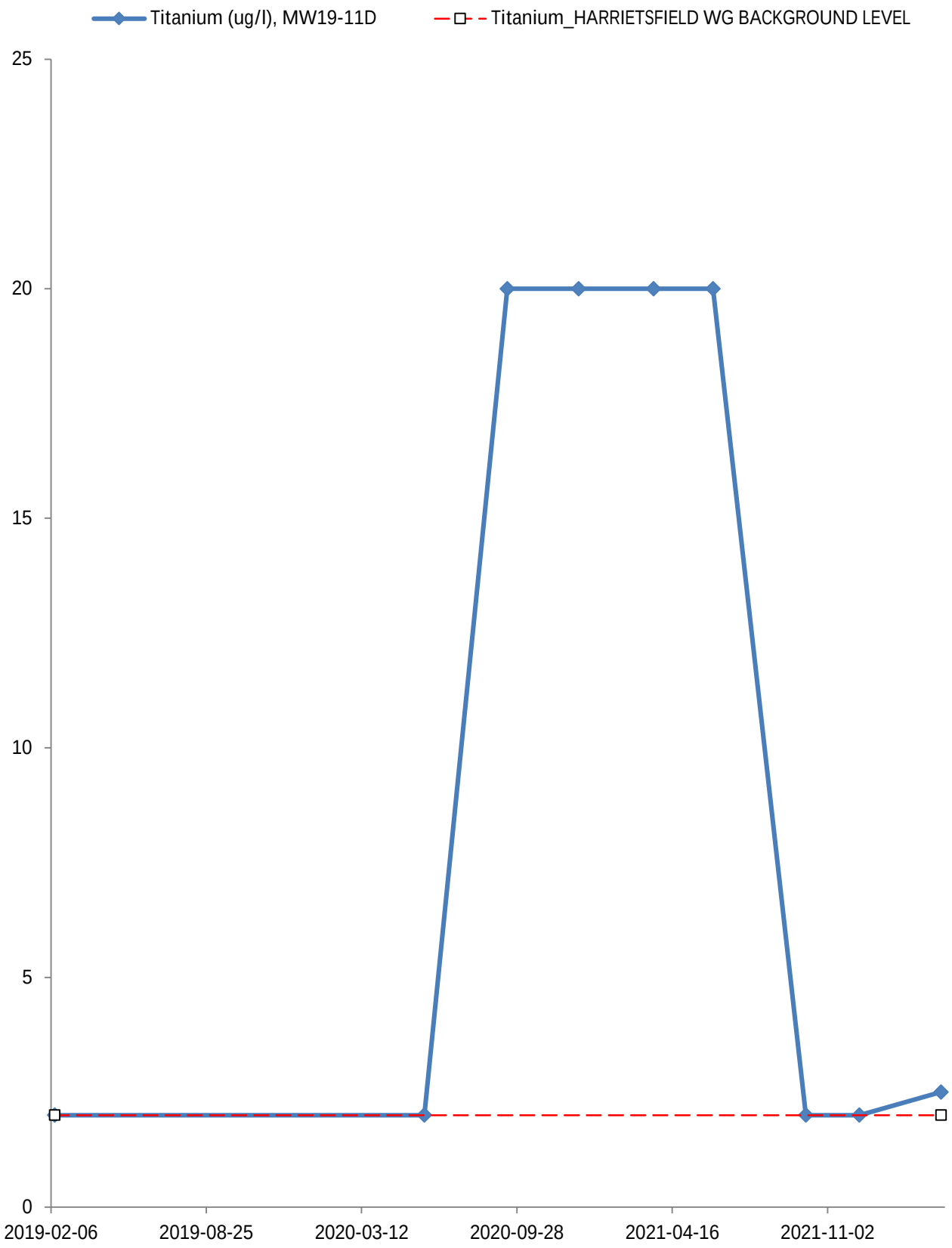
MW19-11D-Thallium



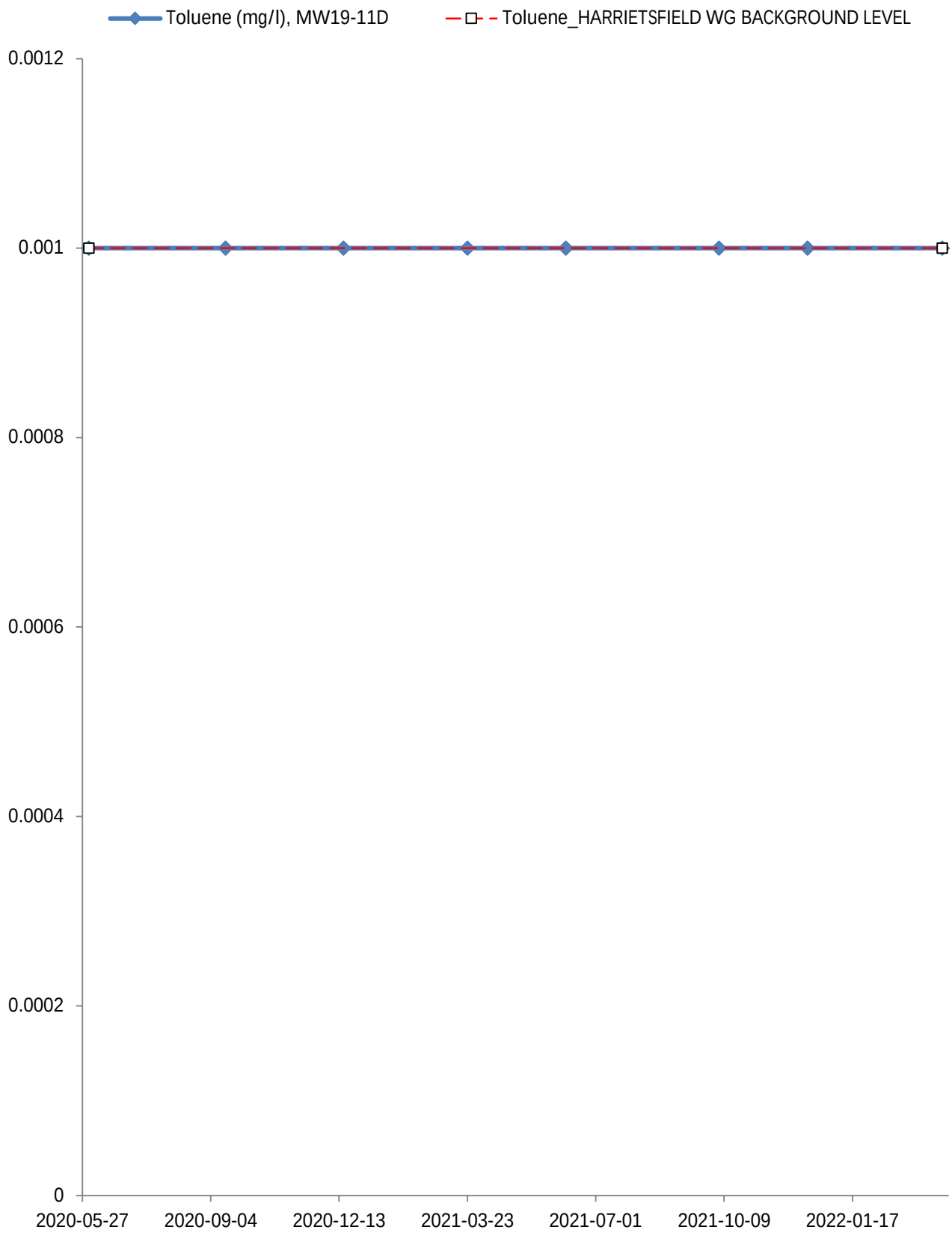
MW19-11D-Tin


Tin (ug/l), MW19-11D
Tin_HARRIETSFIELD WG BACKGROUND LEVEL
25
20
15
10
5
0
2019-02-06
2019-08-25
2020-03-12
2020-09-28
2021-04-16
2021-11-02

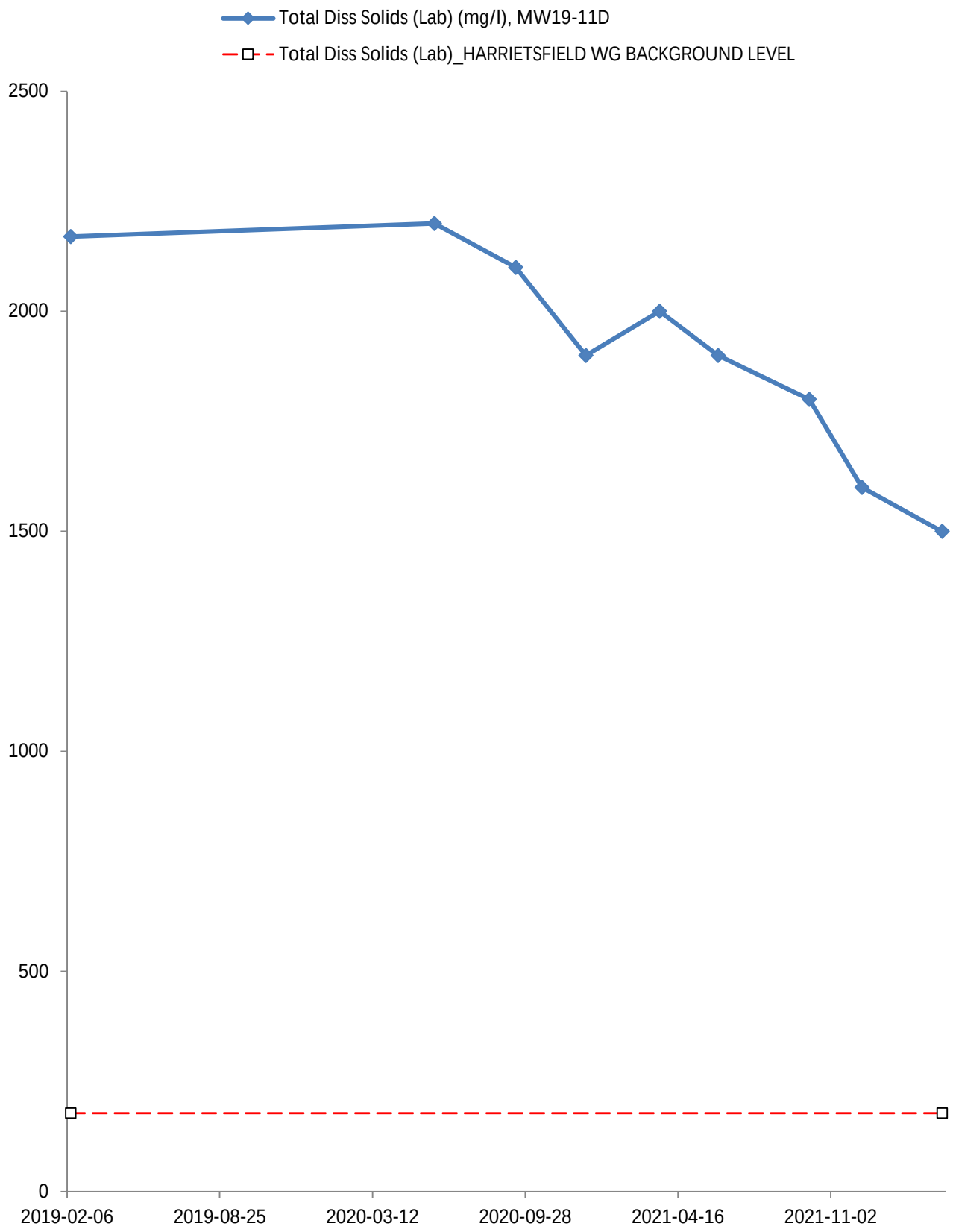
MW19-11D-Titanium



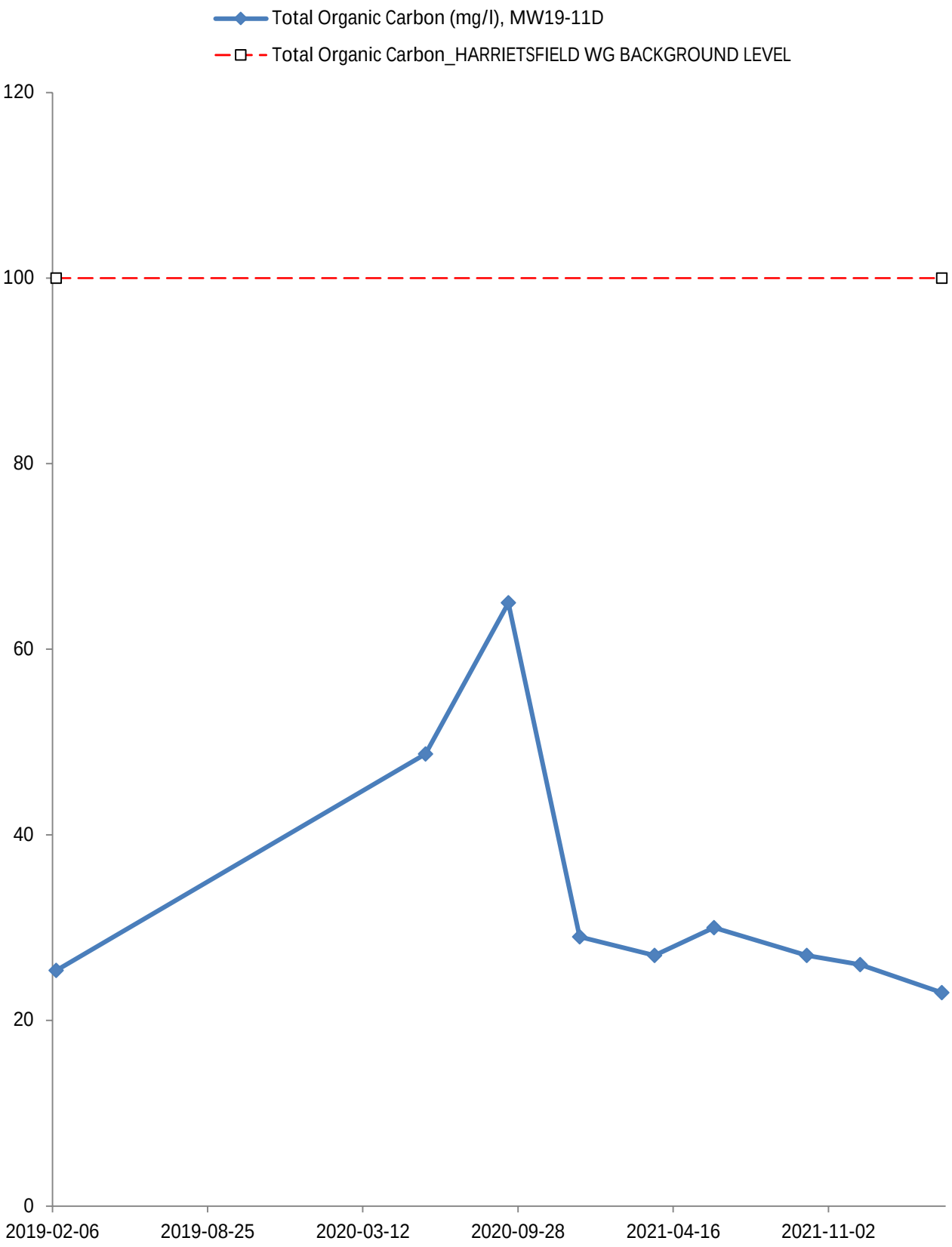
MW19-11D-Toluene



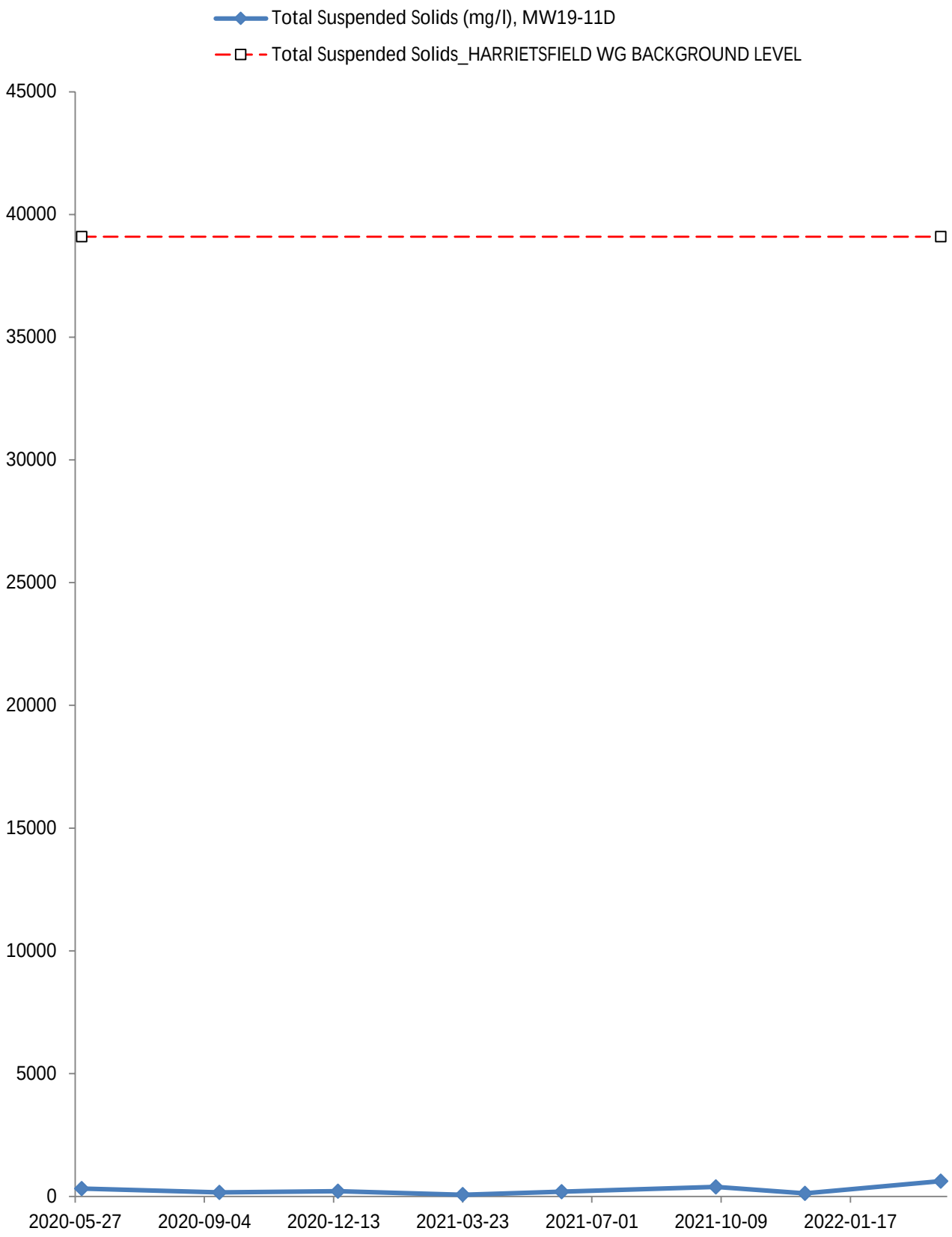
MW19-11D-Total Diss Solids (Lab)



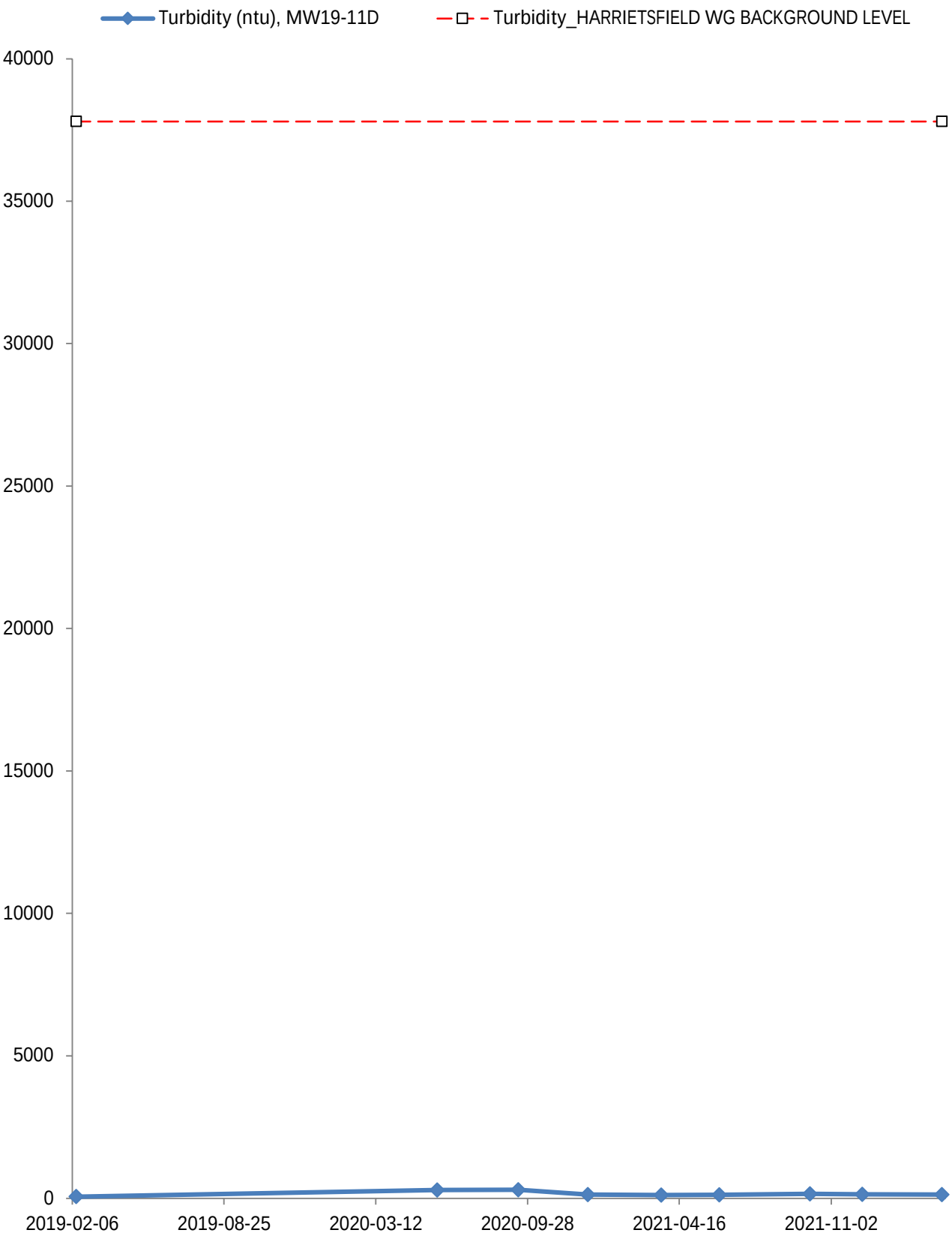
MW19-11D-Total Organic Carbon



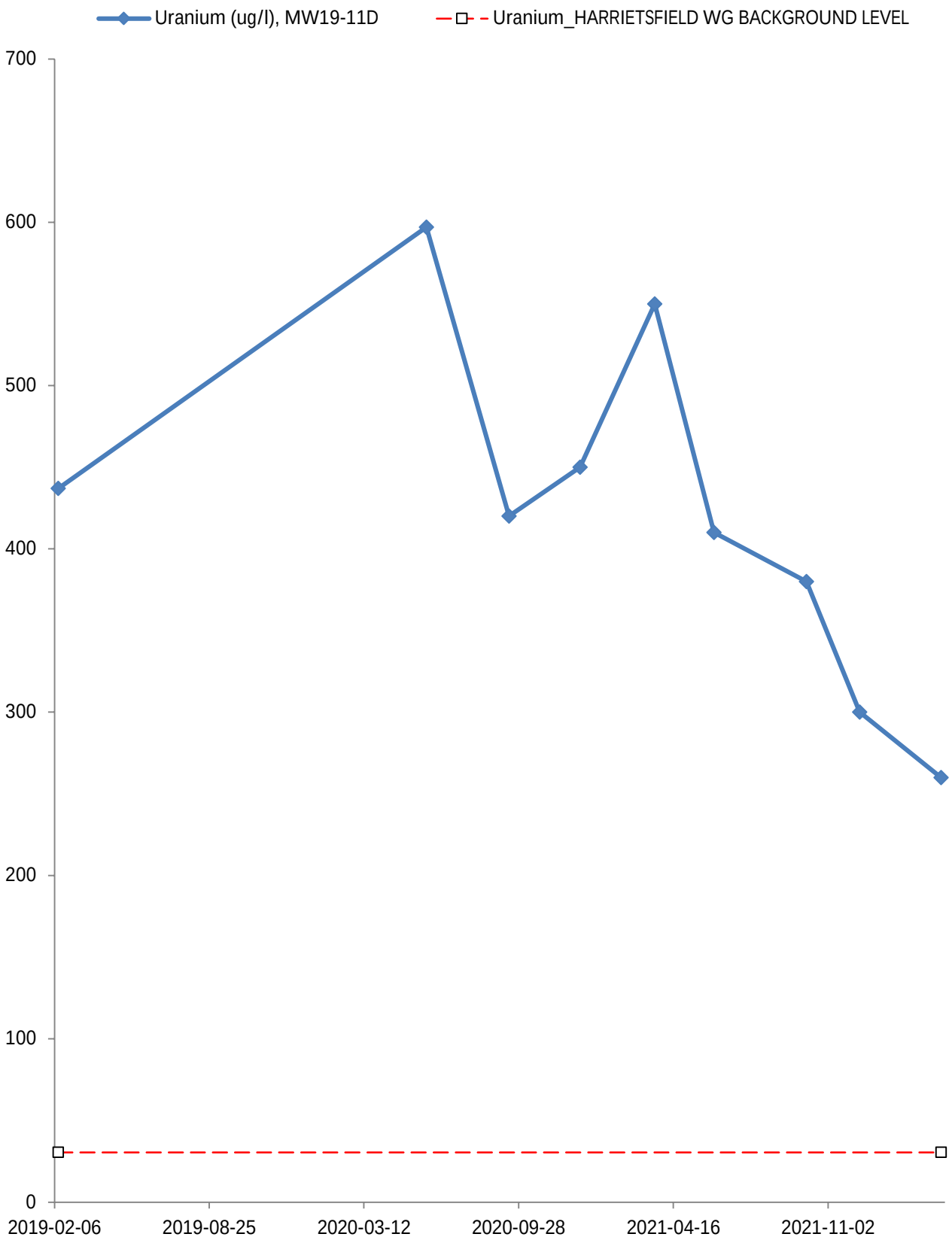
MW19-11D-Total Suspended Solids



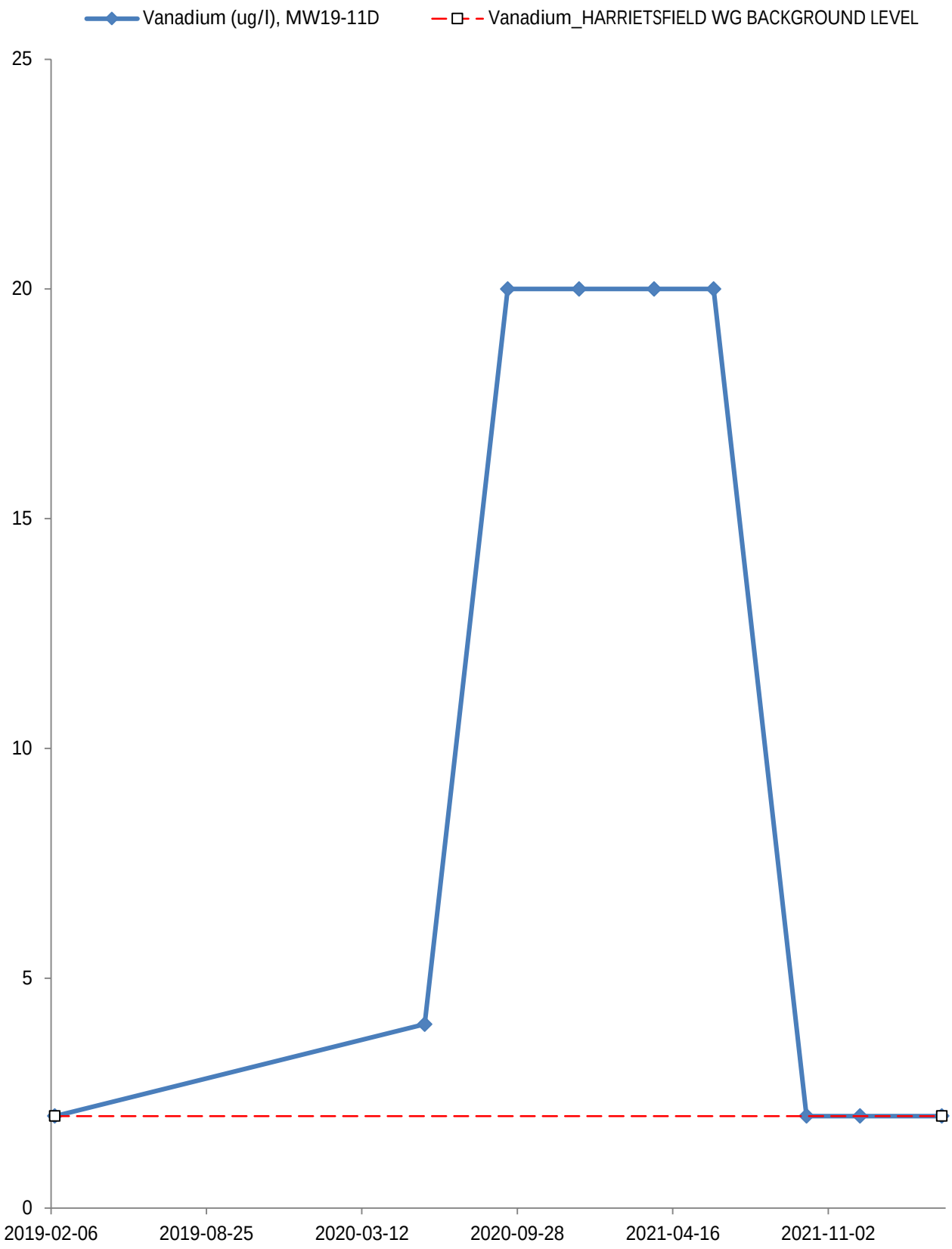
MW19-11D-Turbidity



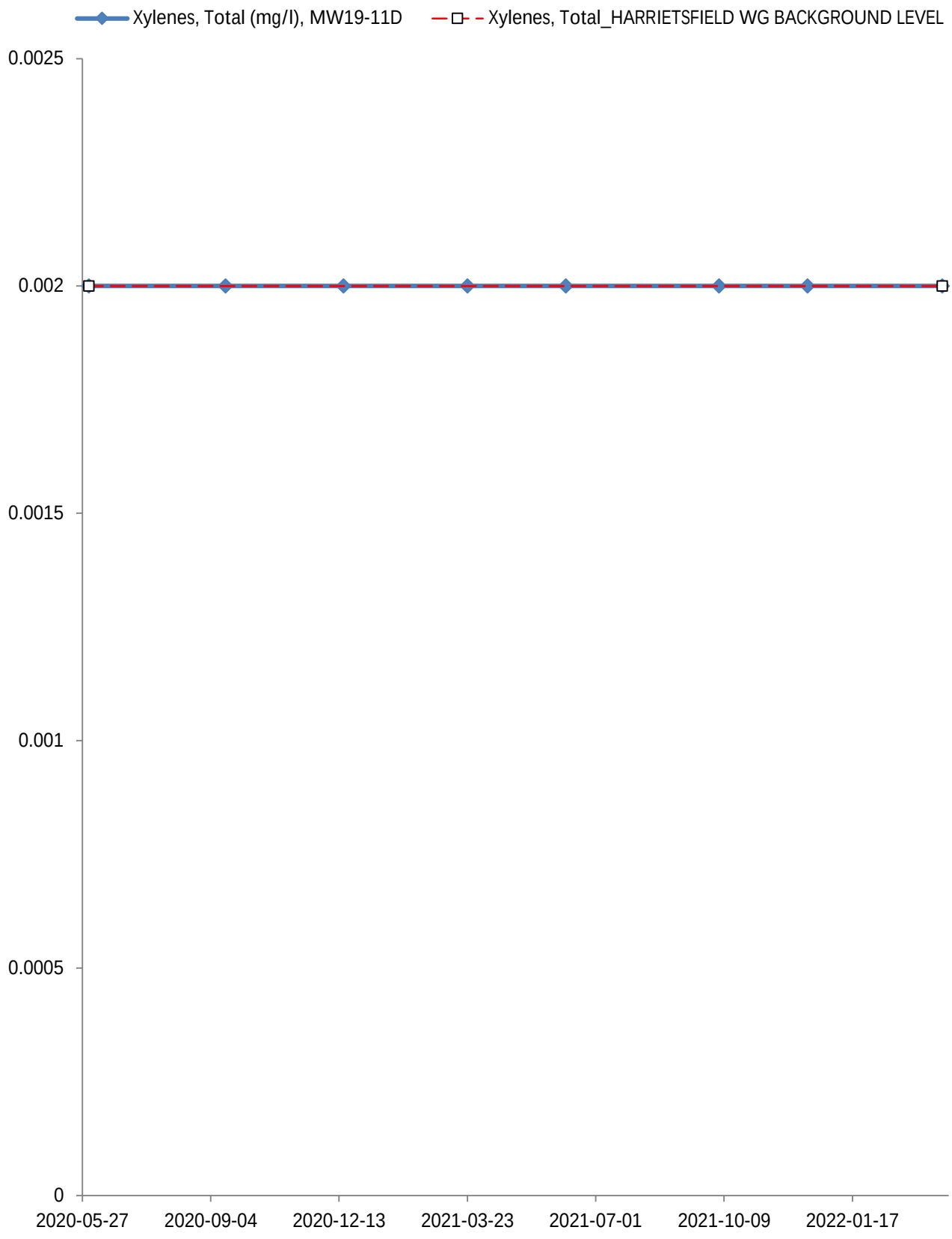
MW19-11D-Uranium



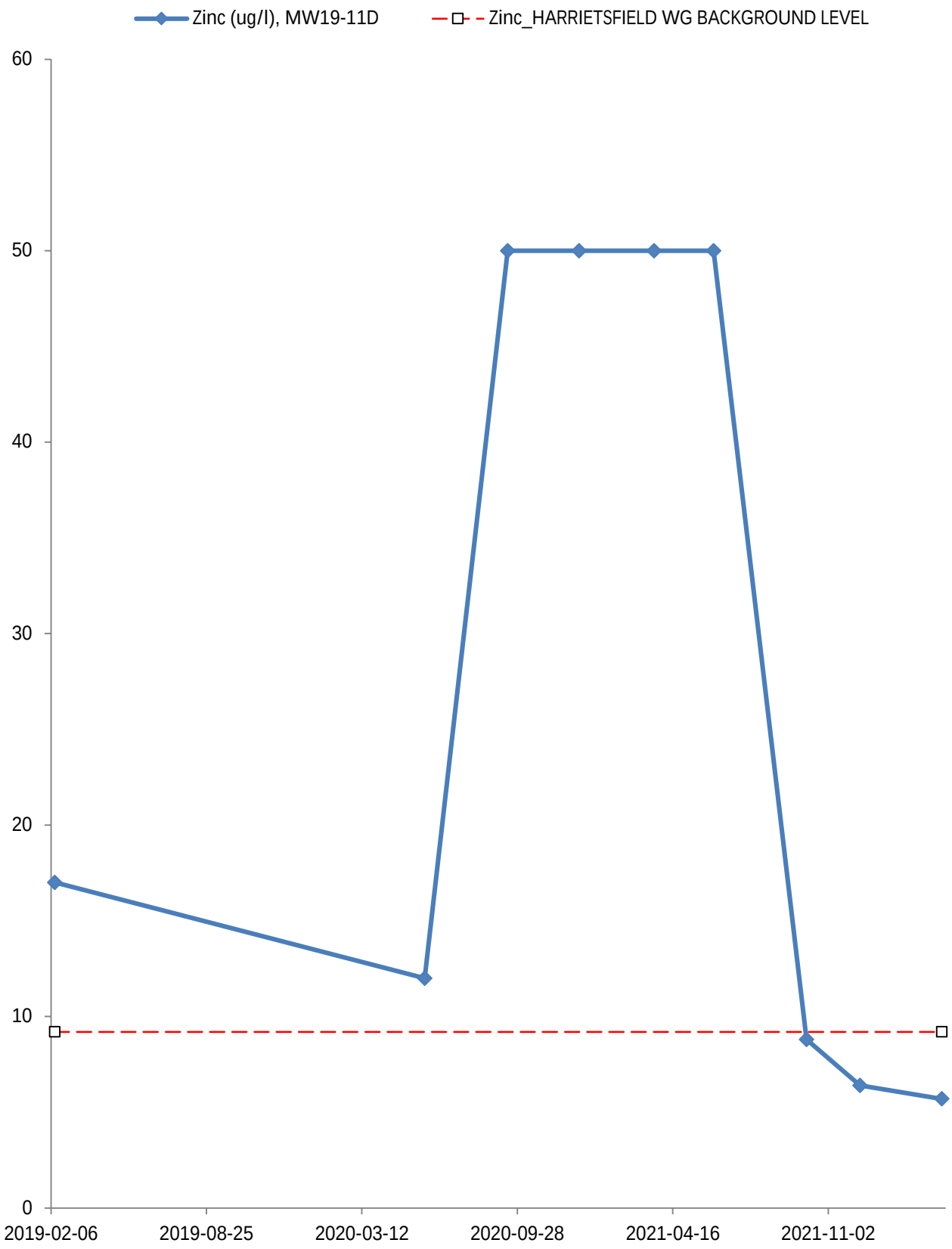
MW19-11D-Vanadium



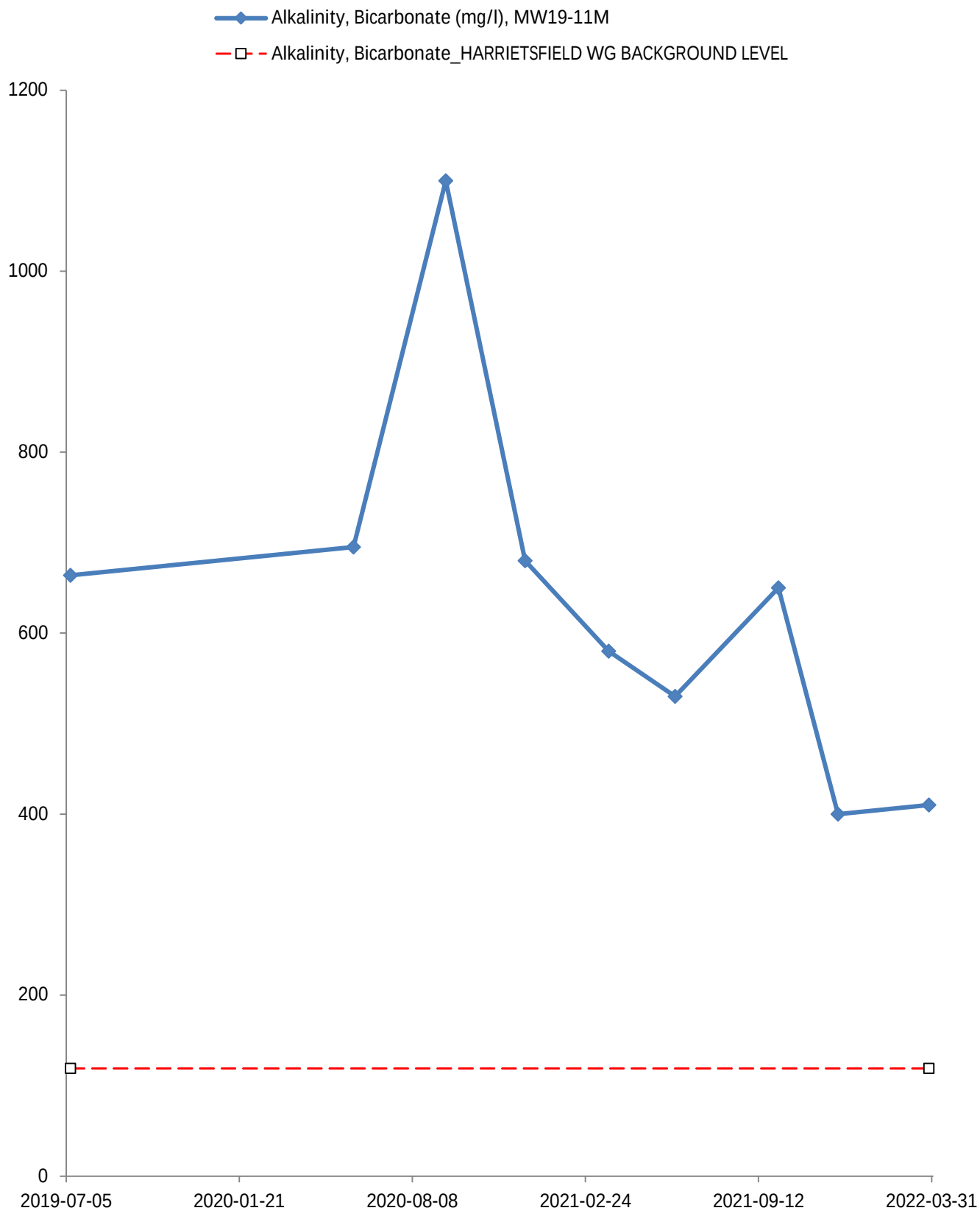
MW19-11D-Xylenes, Total



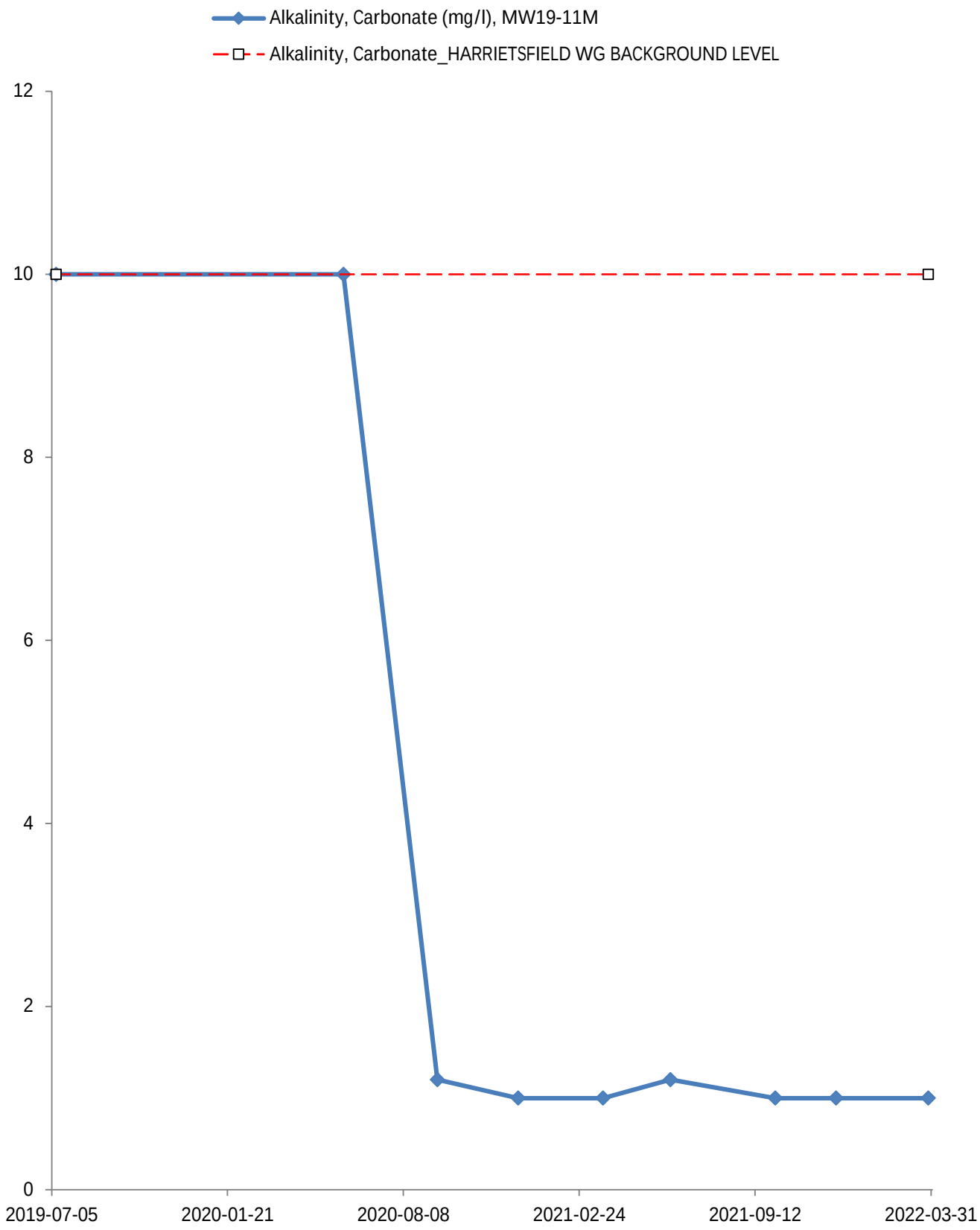
MW19-11D-Zinc



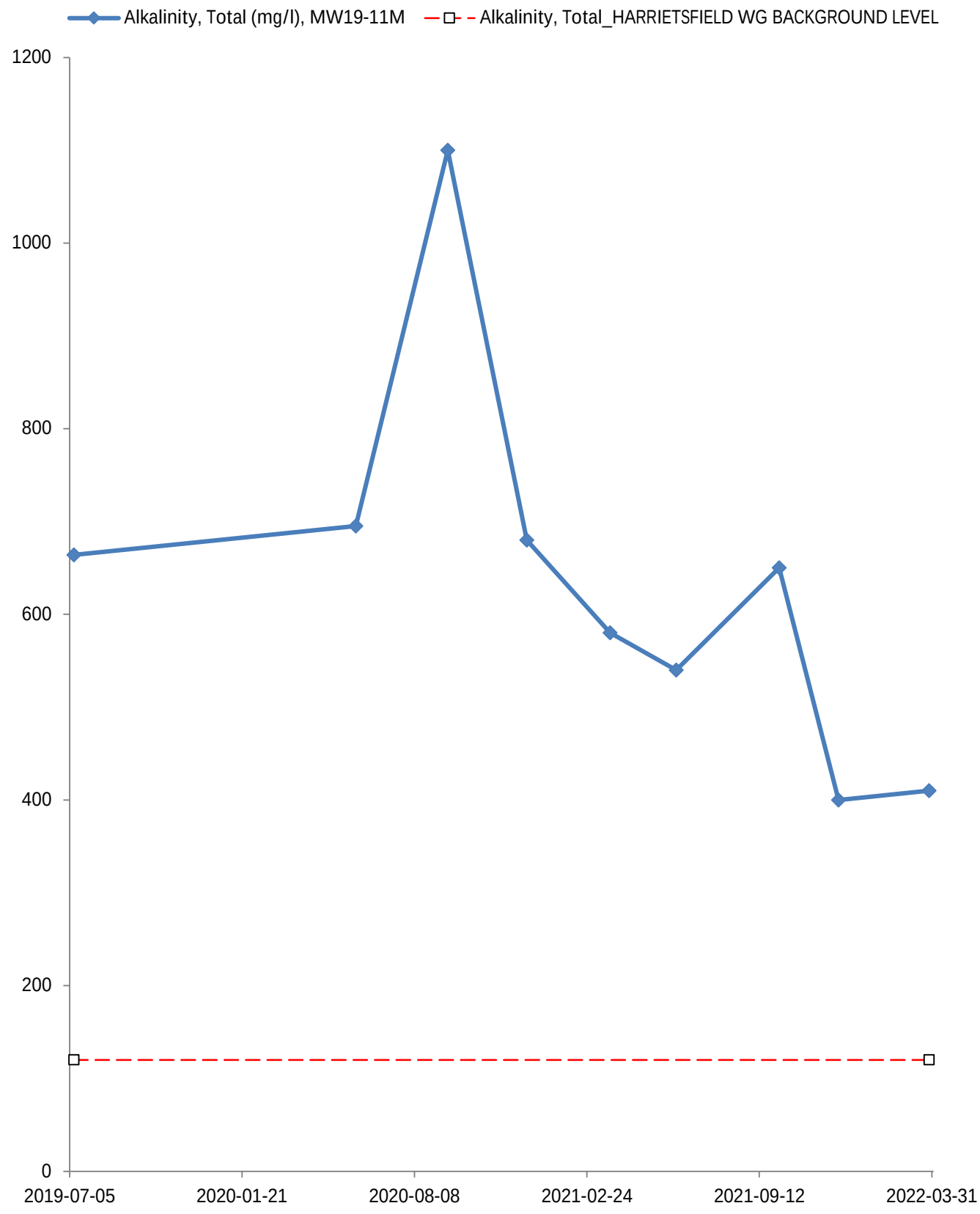
MW19-11M-Alkalinity, Bicarbonate



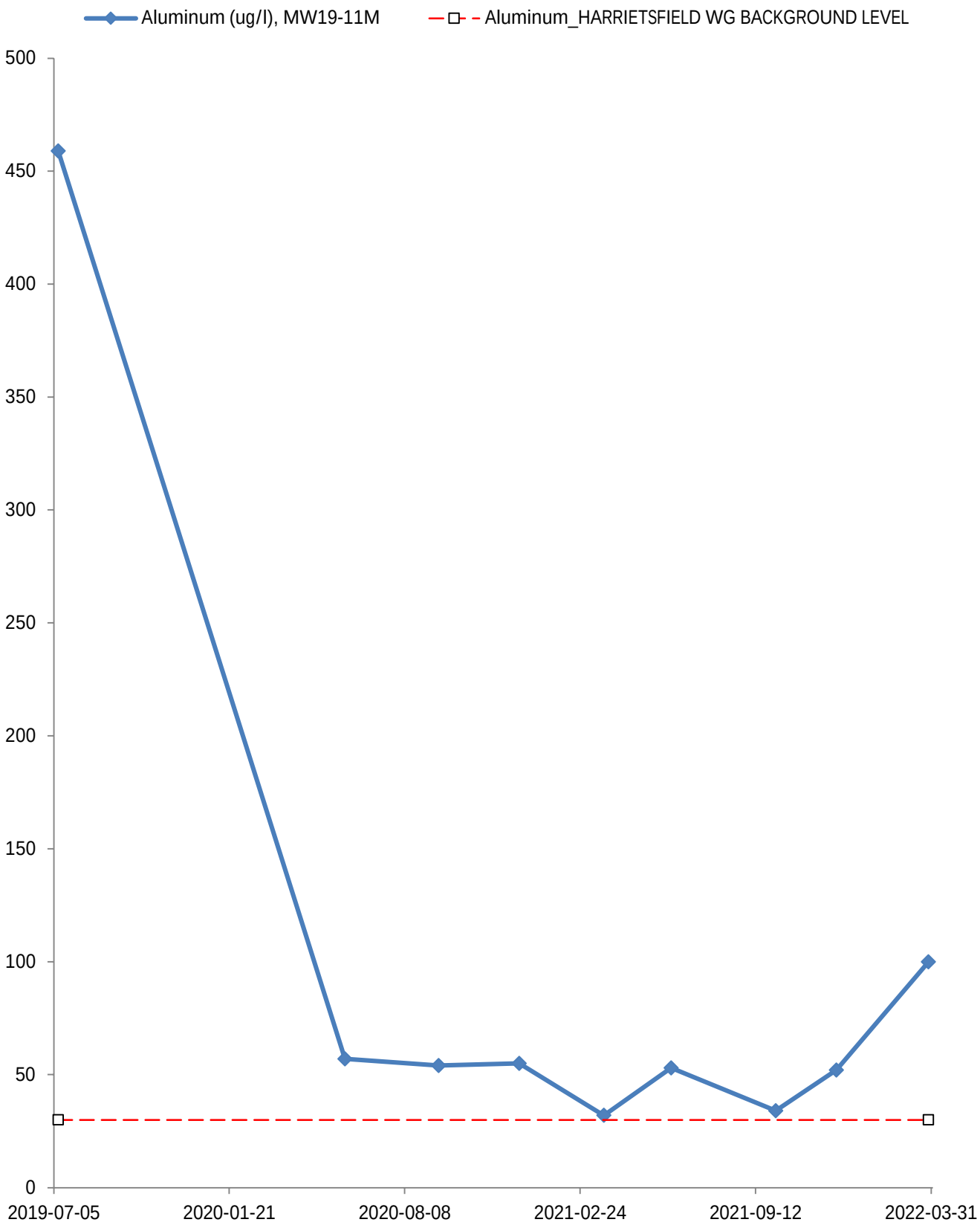
MW19-11M-Alkalinity, Carbonate



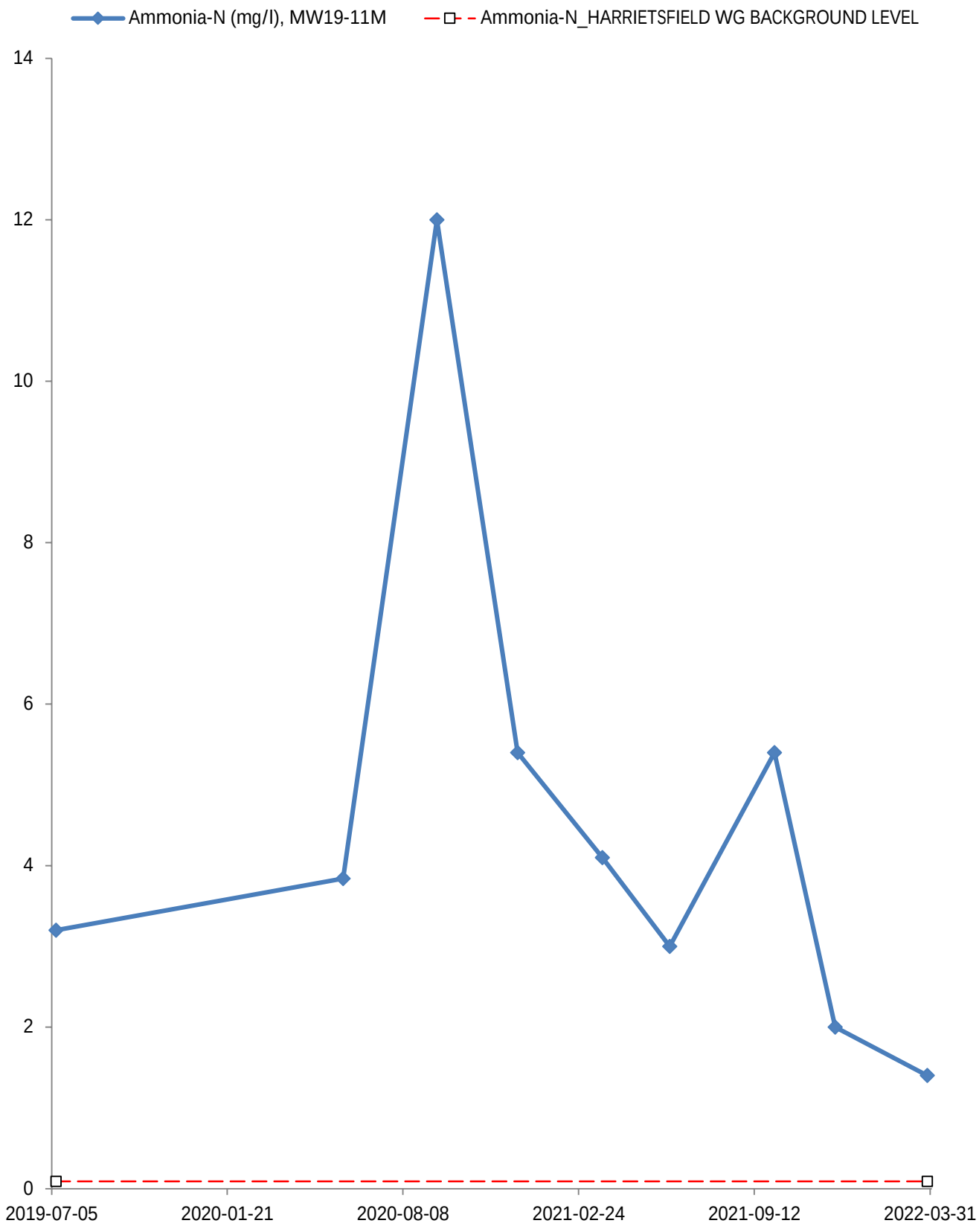
MW19-11M-Alkalinity, Total



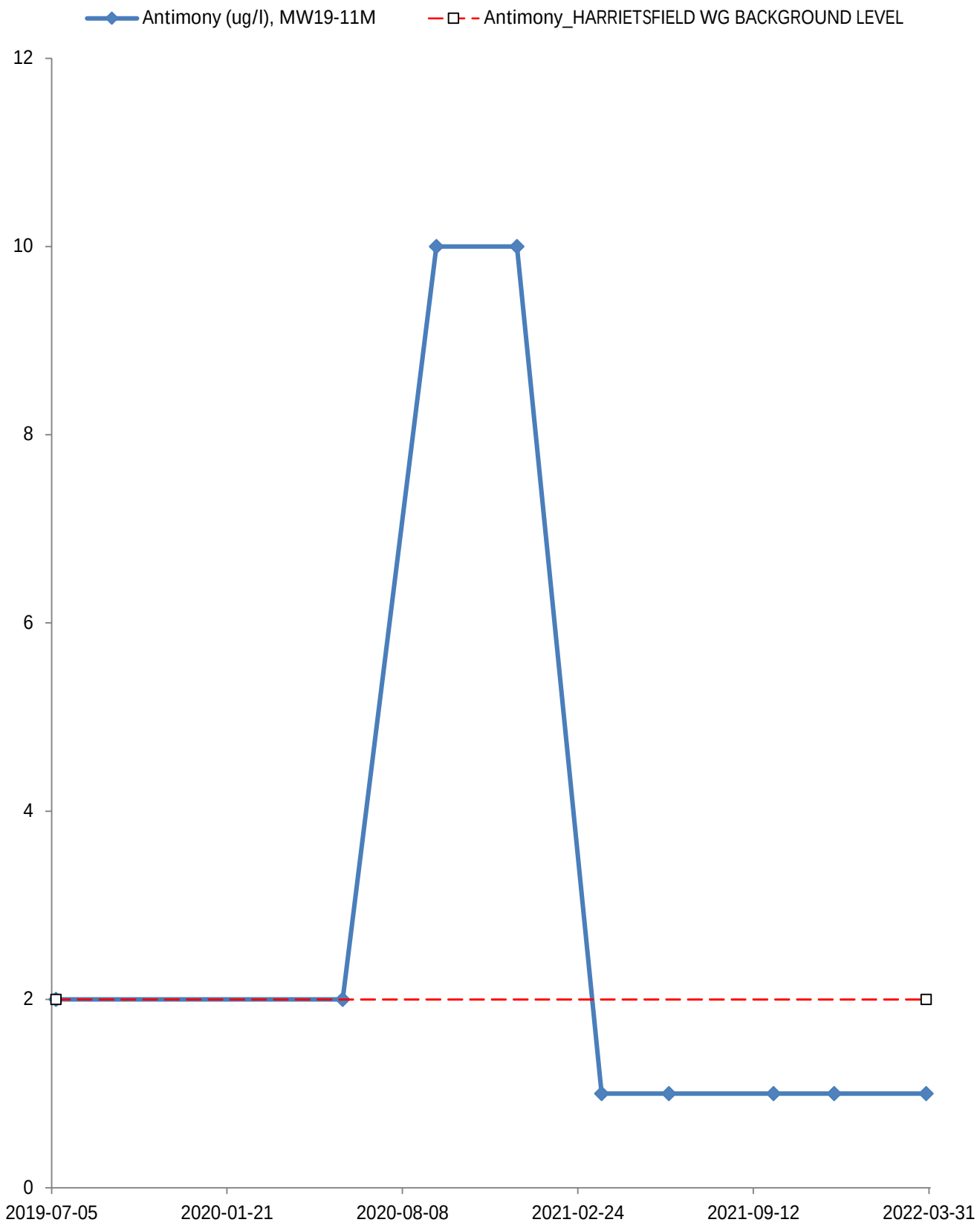
MW19-11M-Aluminum



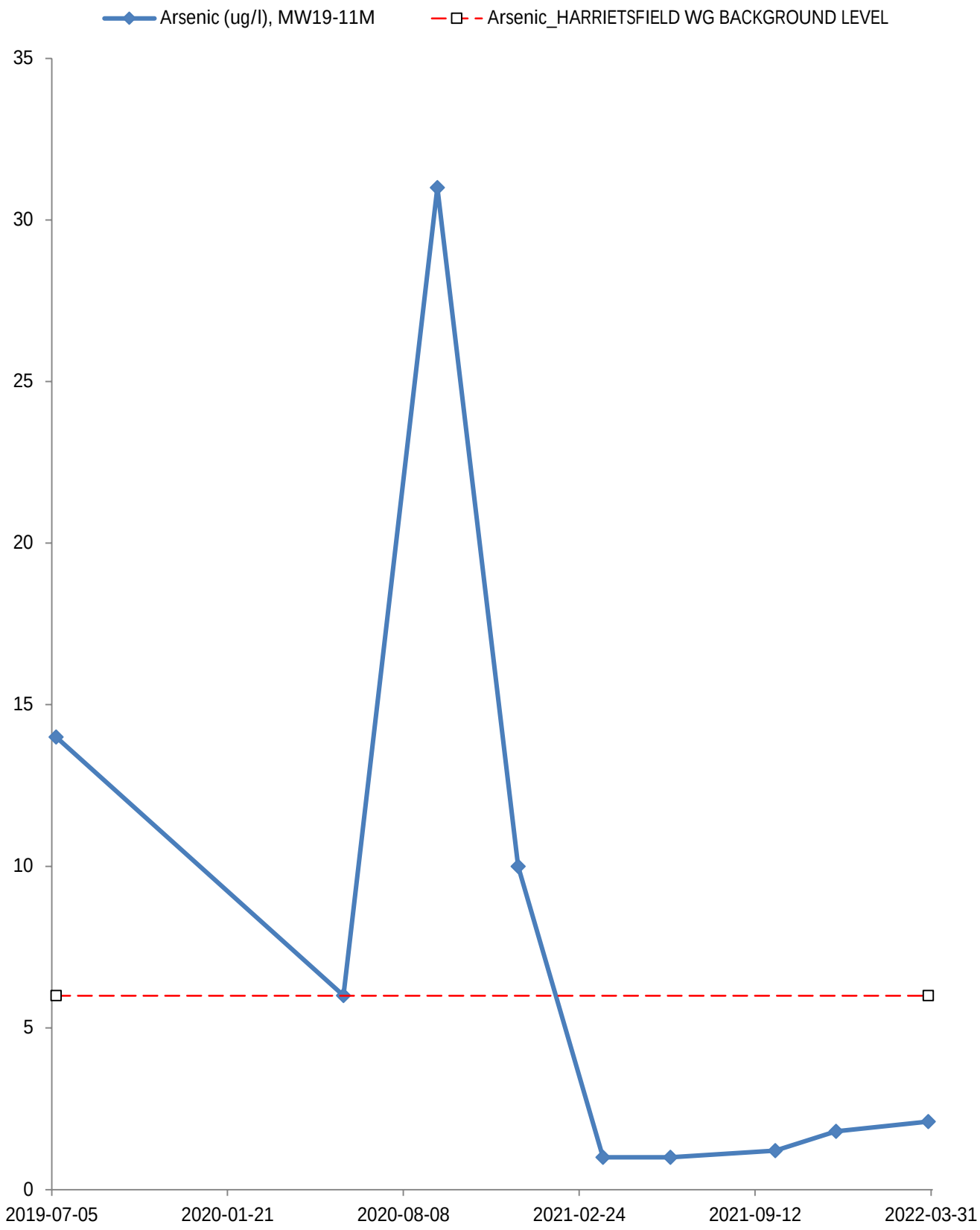
MW19-11M-Ammonia-N



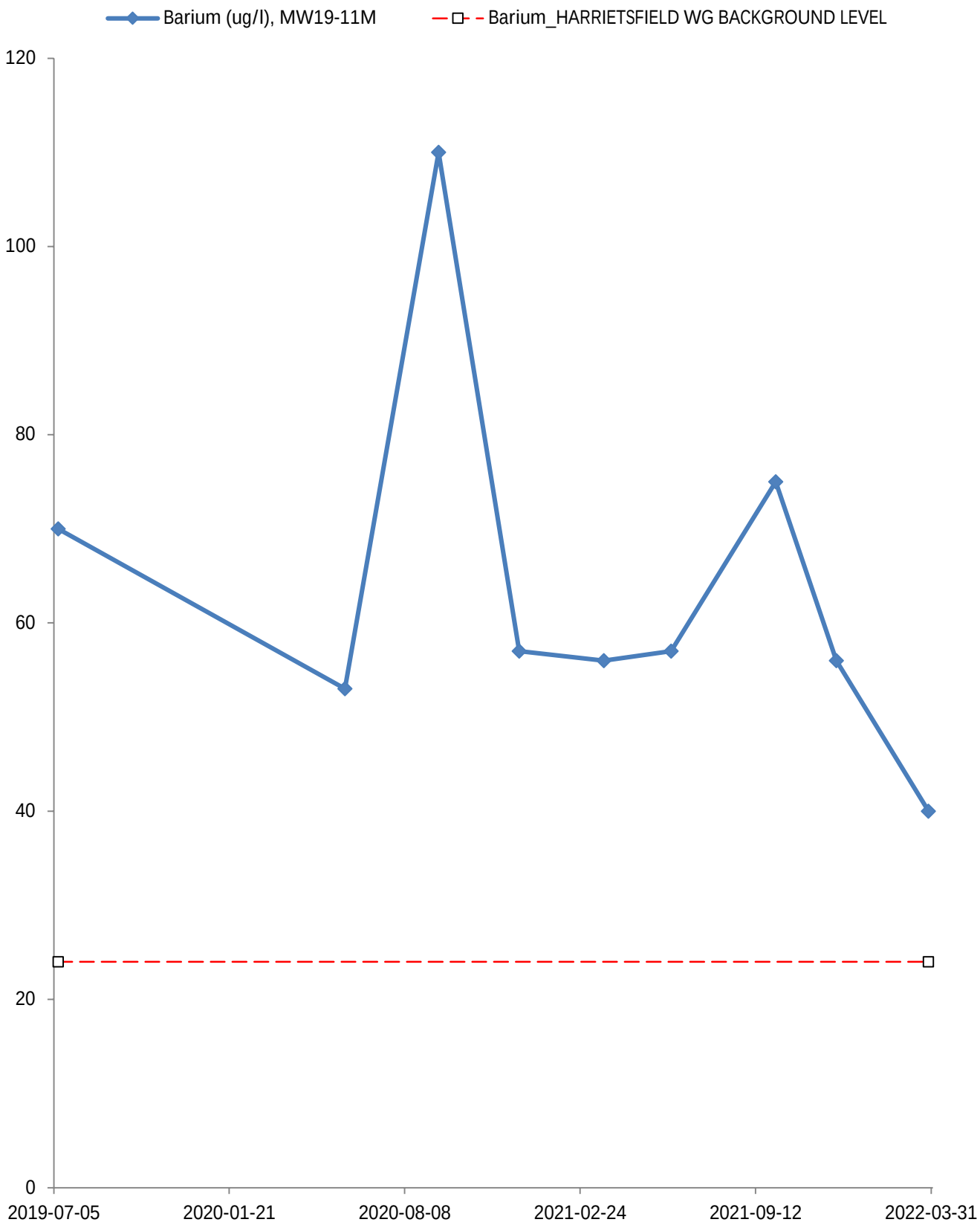
MW19-11M-Antimony



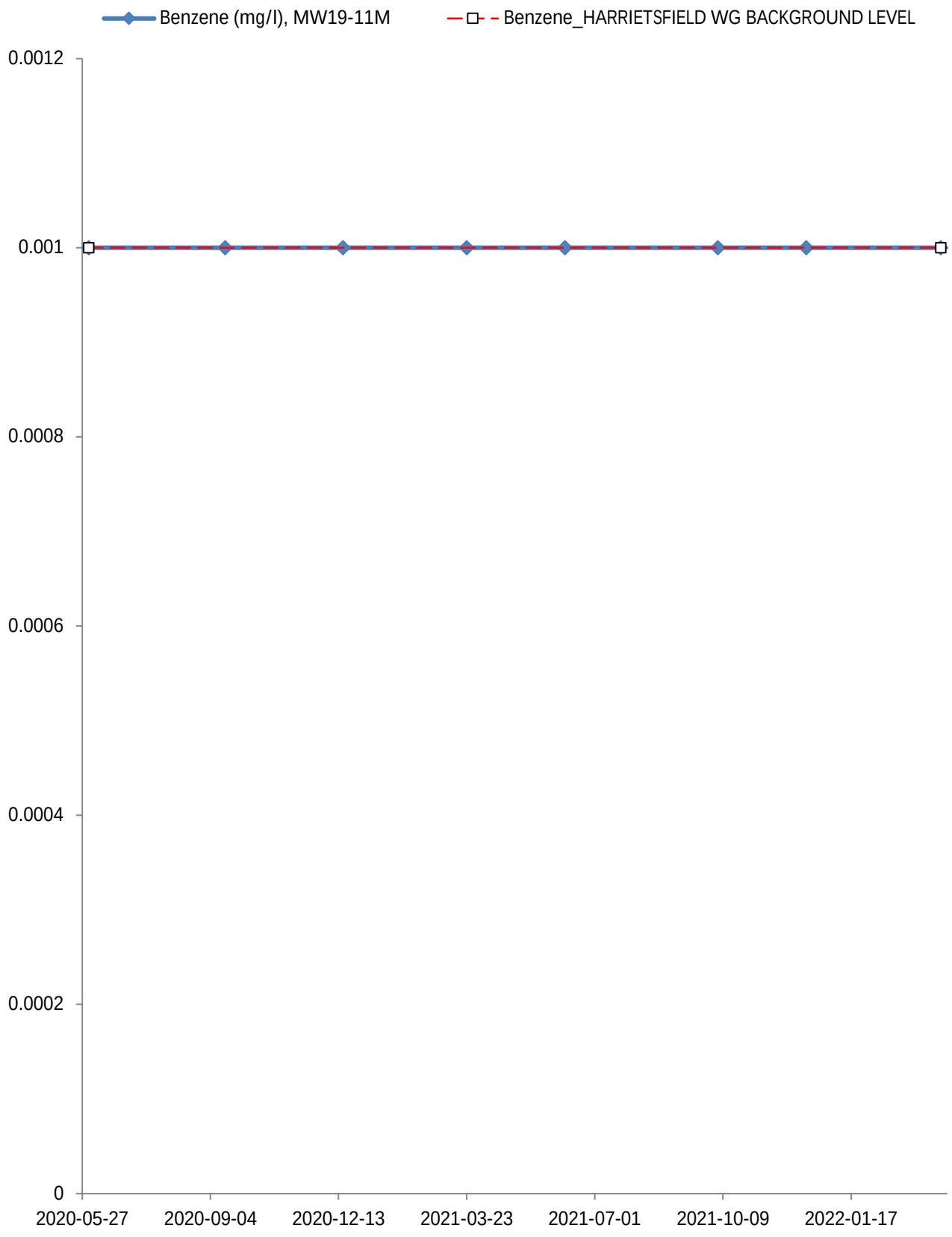
MW19-11M-Arsenic



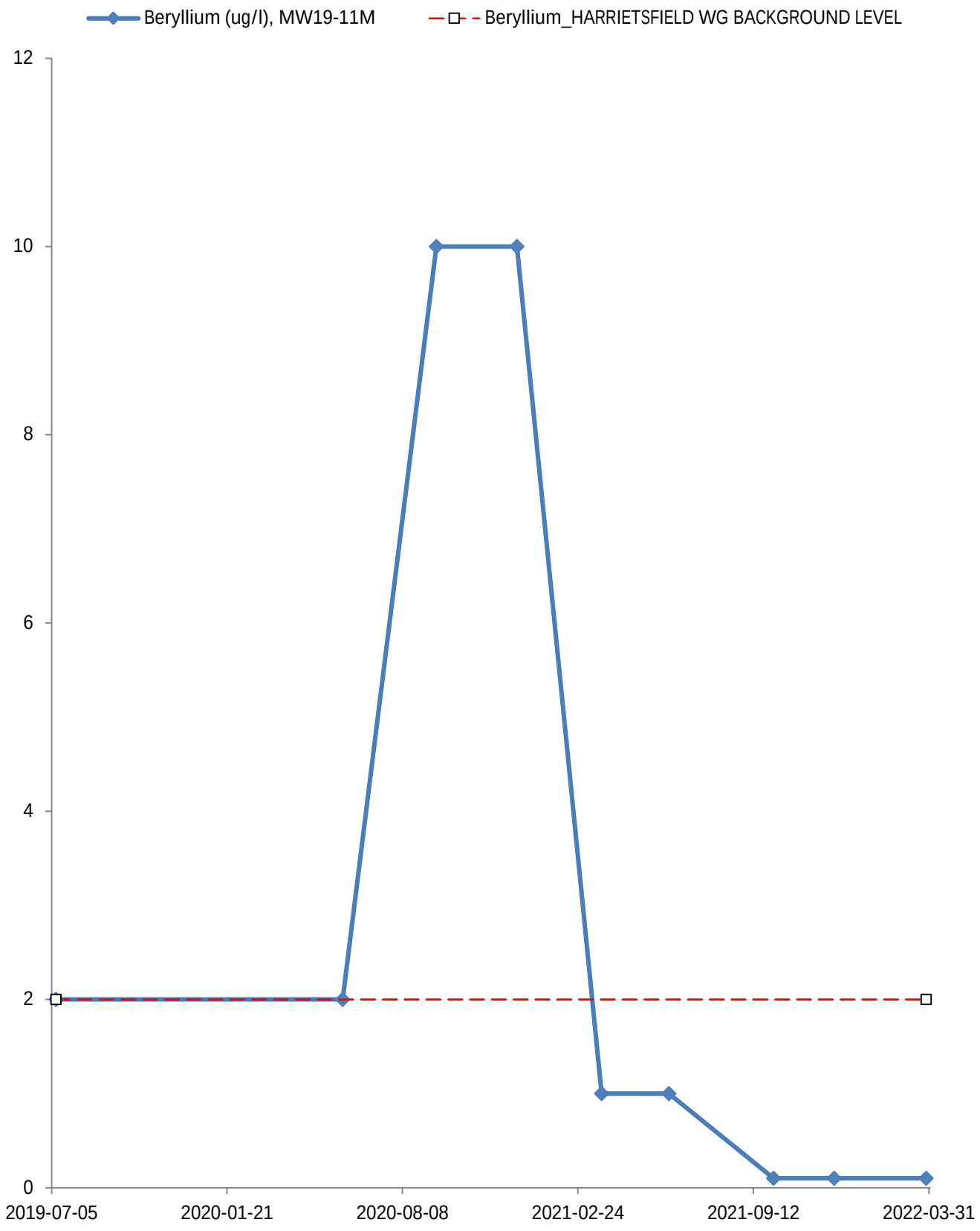
MW19-11M-Barium



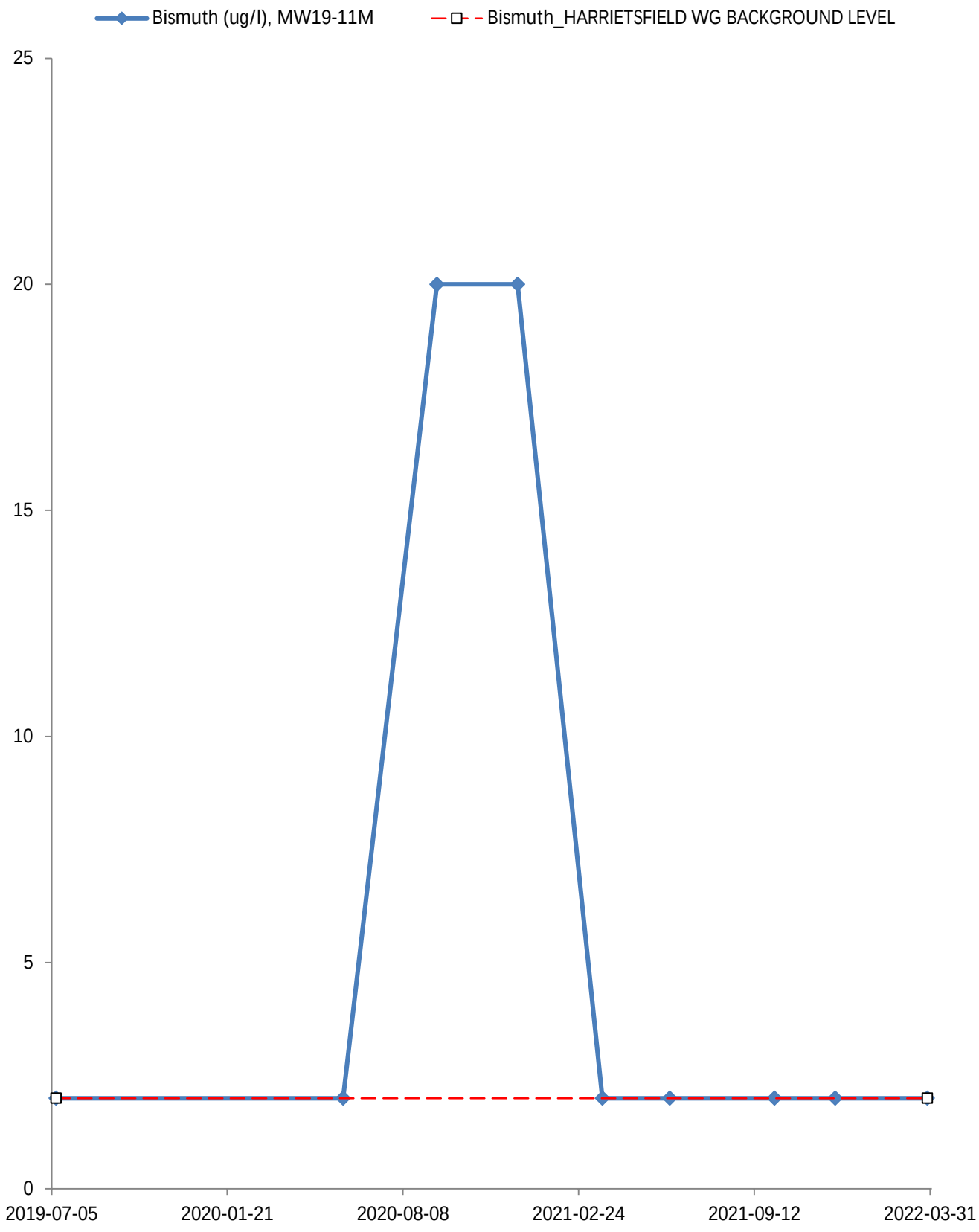
MW19-11M-Benzene



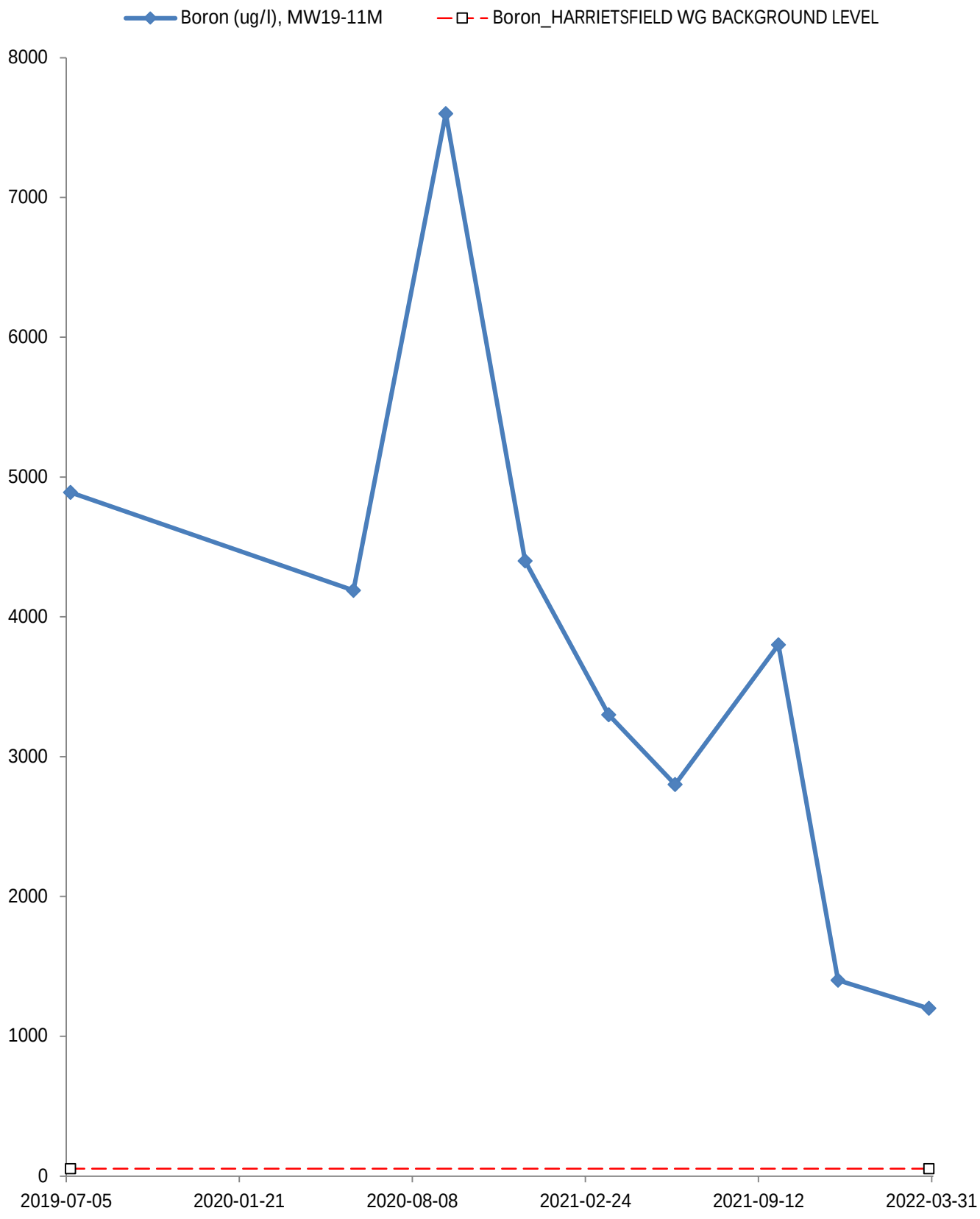
MW19-11M-Beryllium



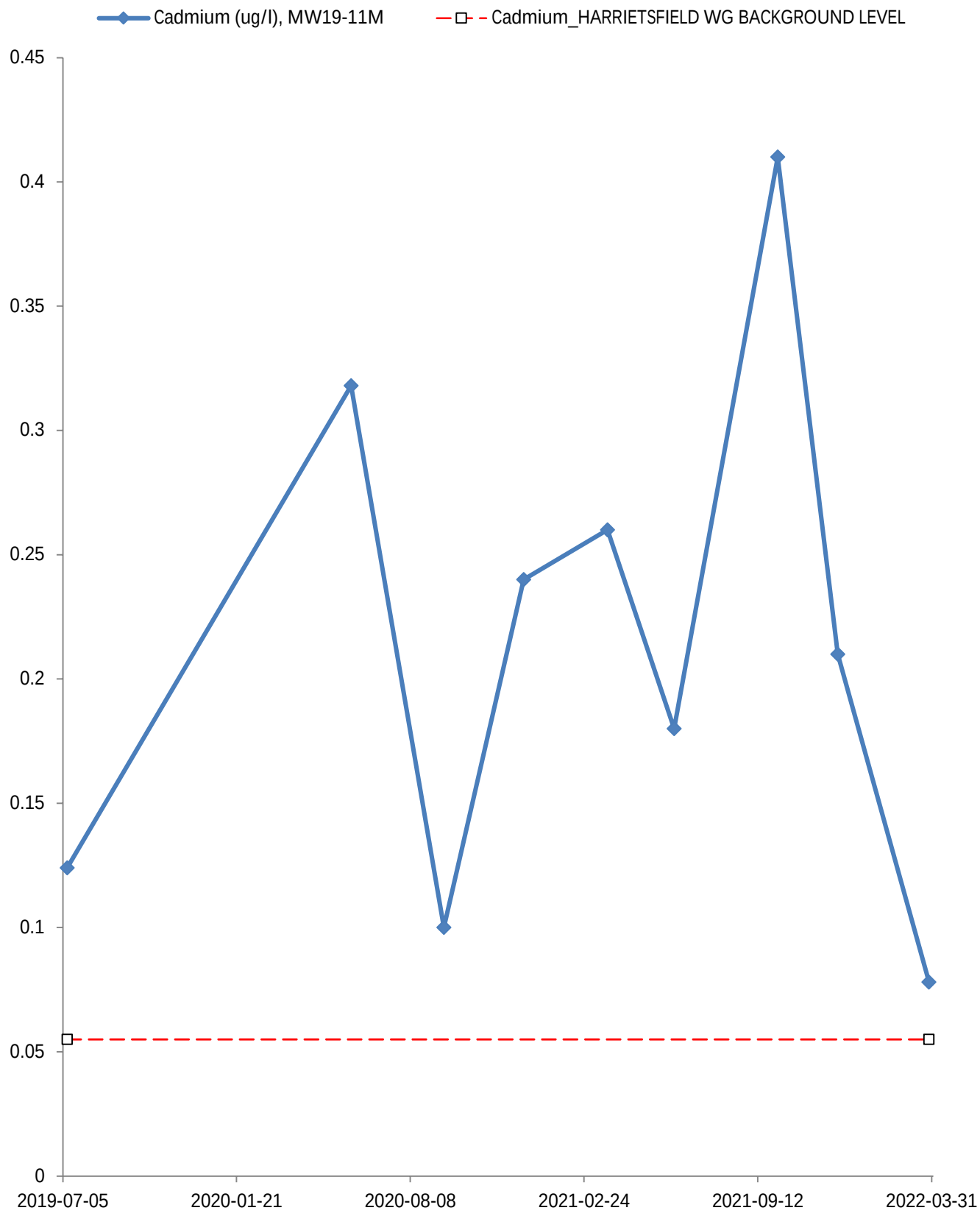
MW19-11M-Bismuth



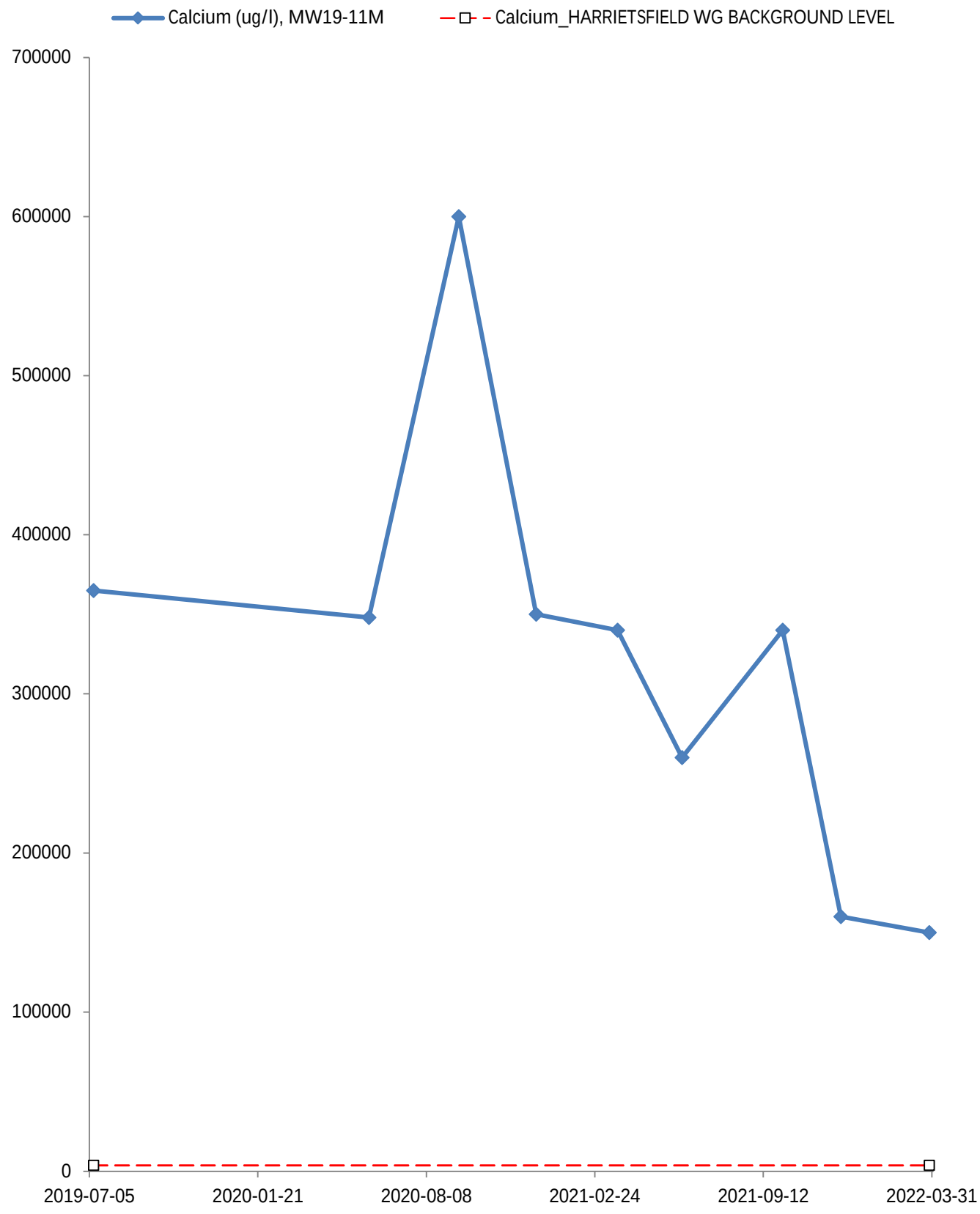
MW19-11M-Boron



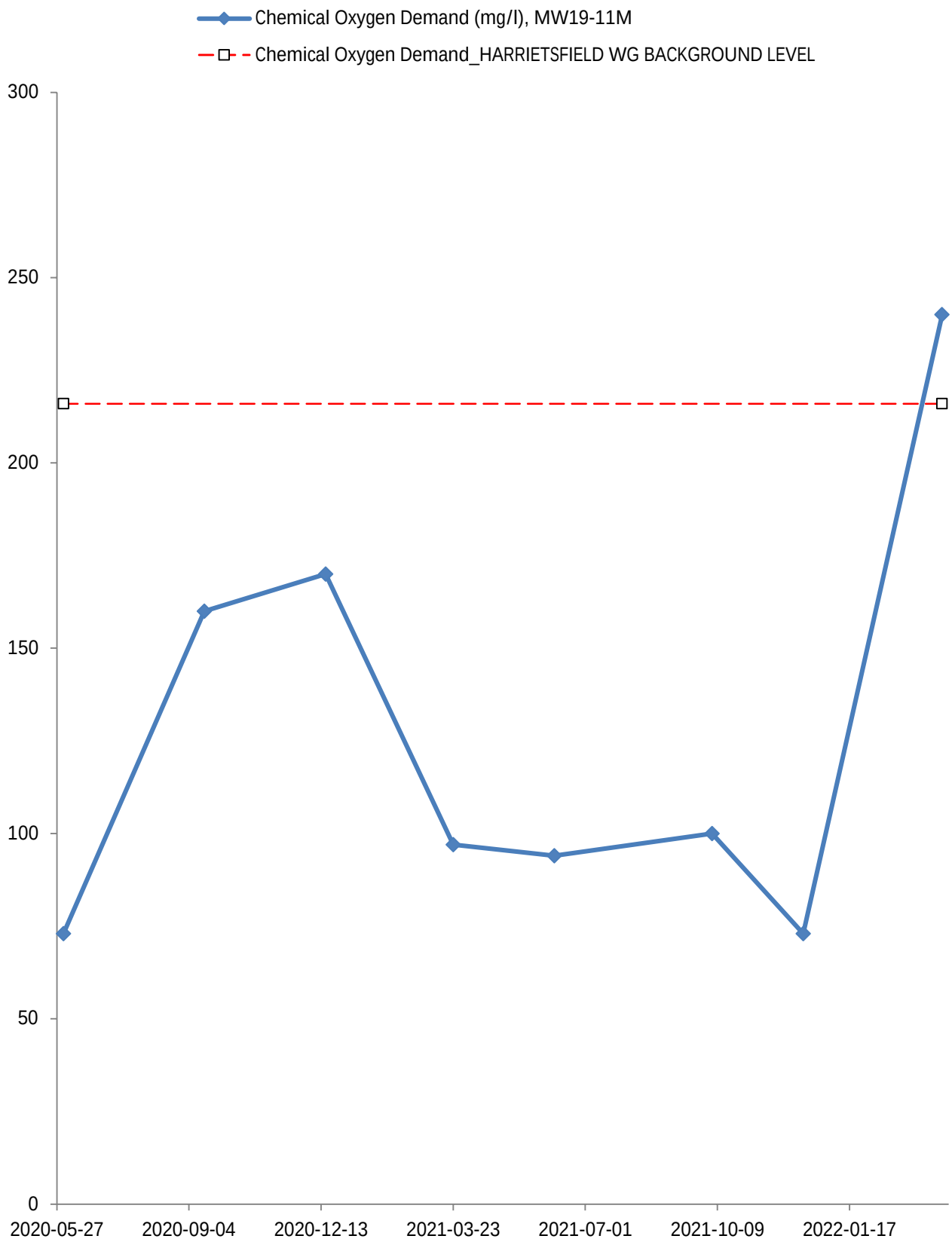
MW19-11M-Cadmium



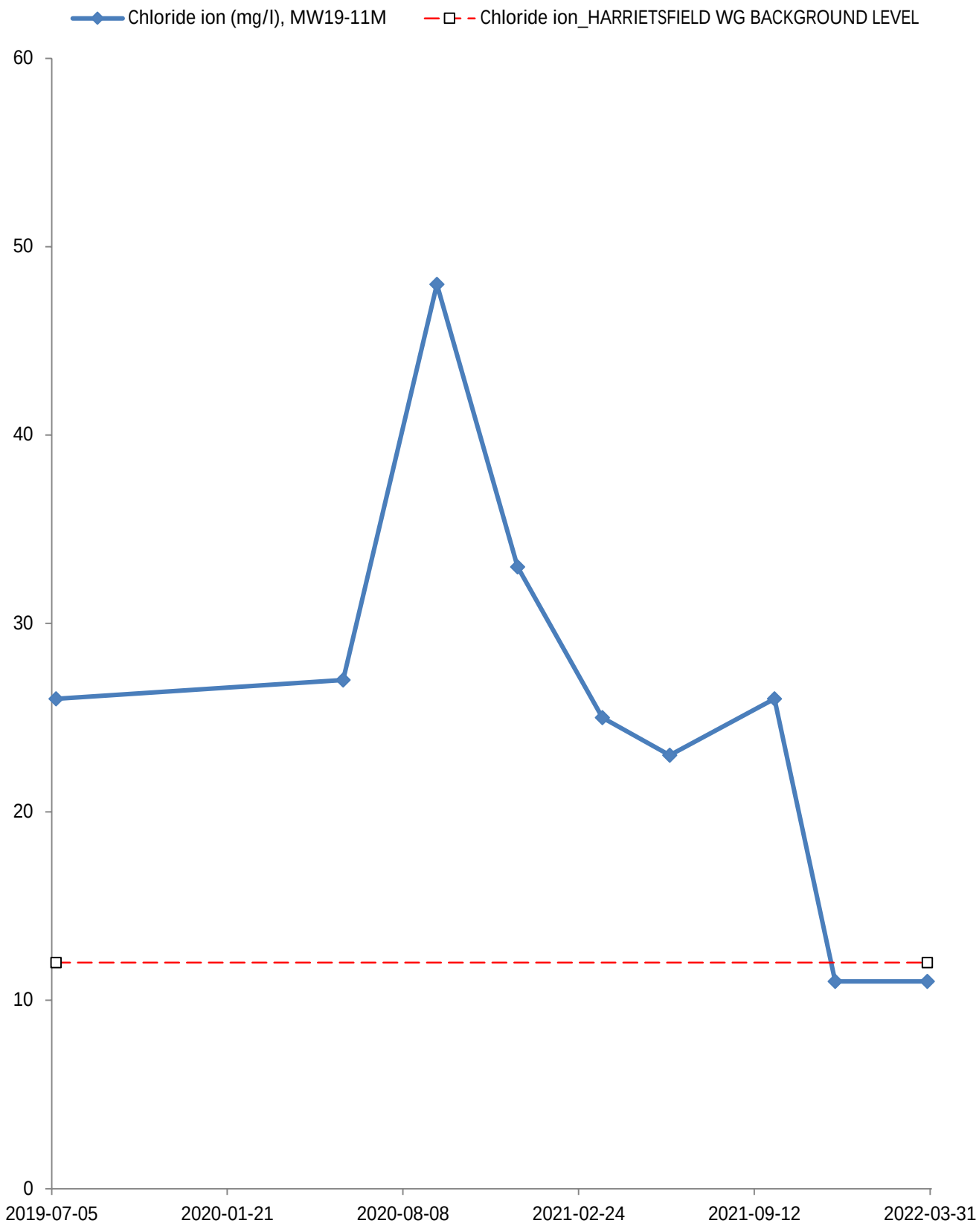
MW19-11M-Calcium



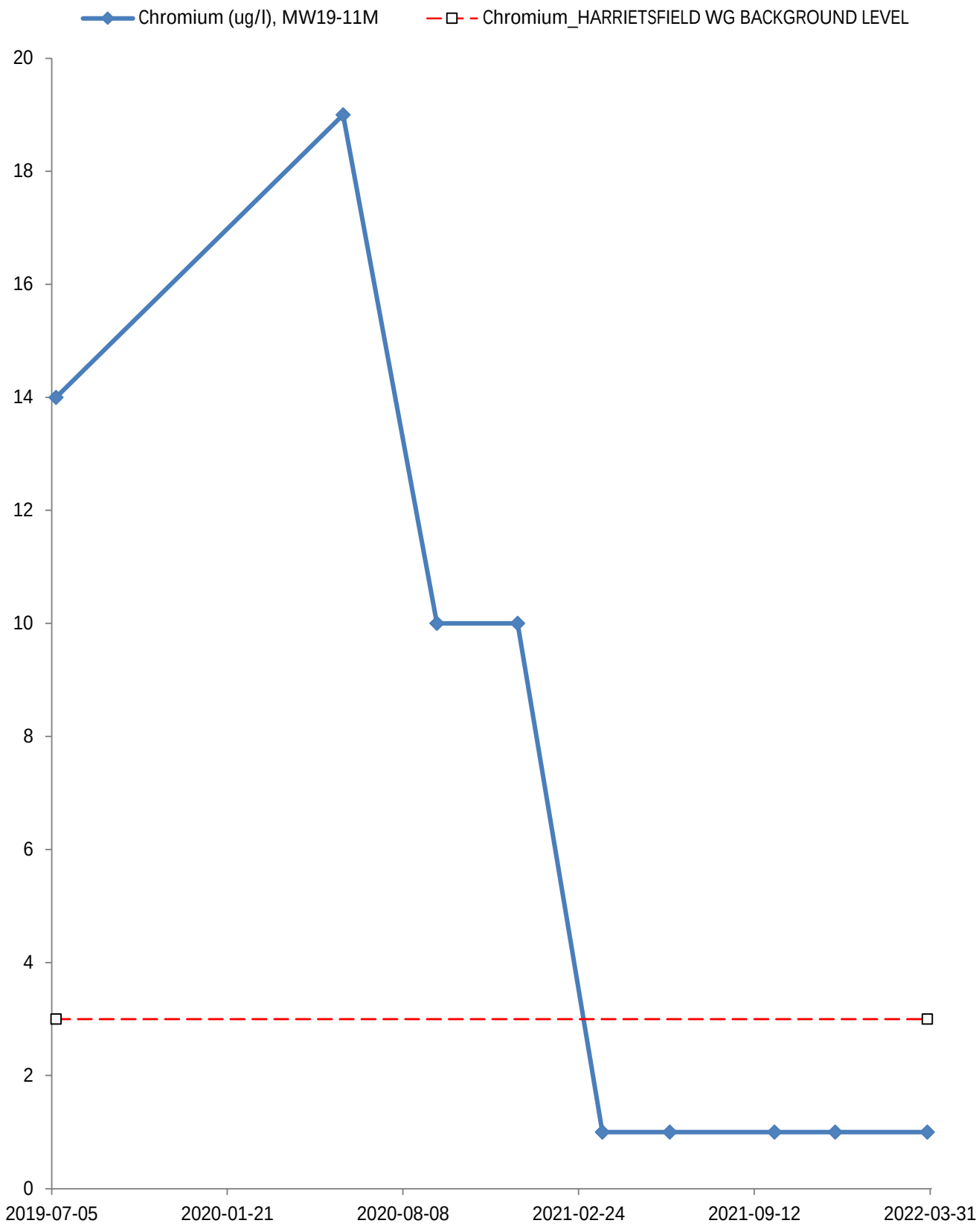
MW19-11M-Chemical Oxygen Demand



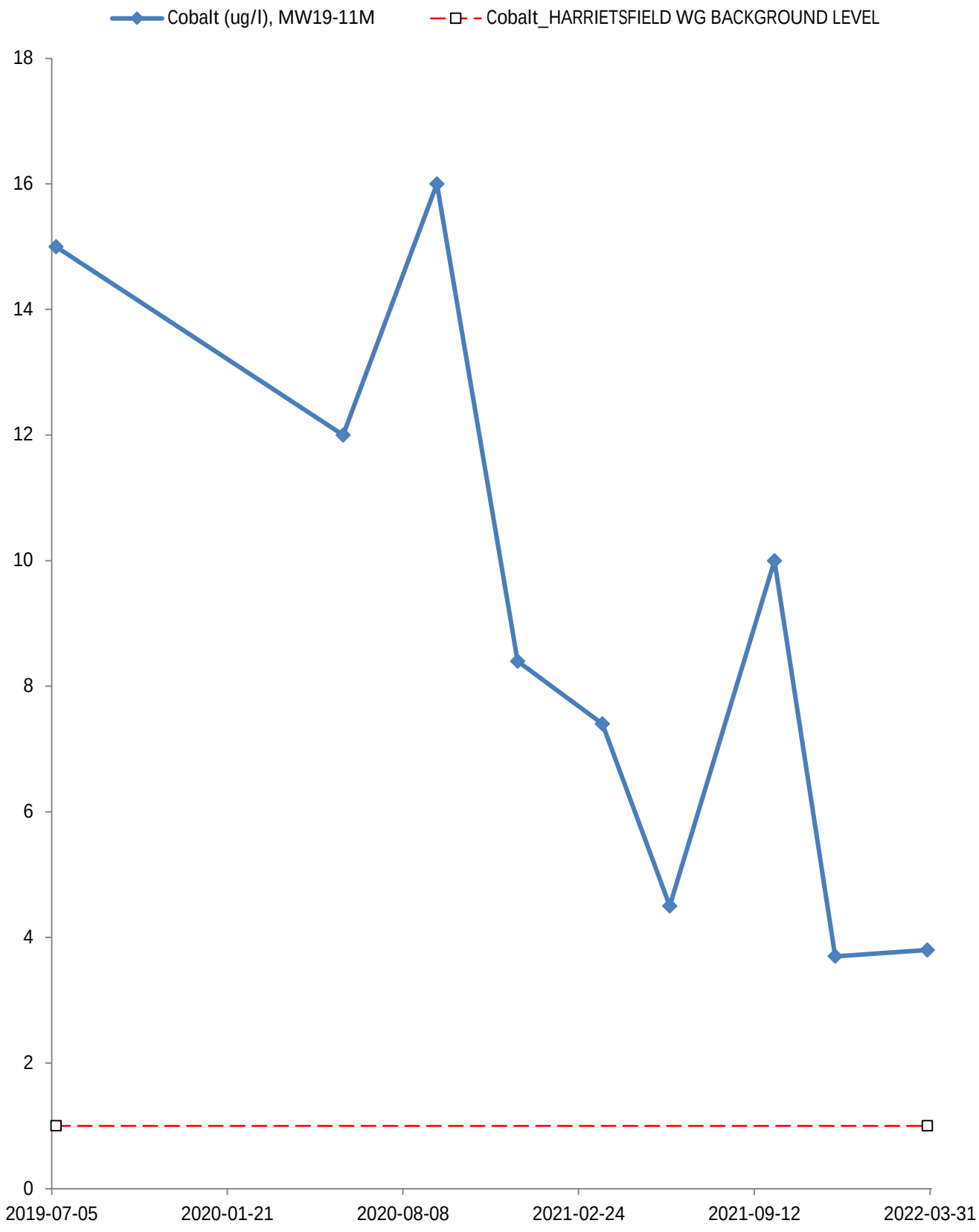
MW19-11M-Chloride ion



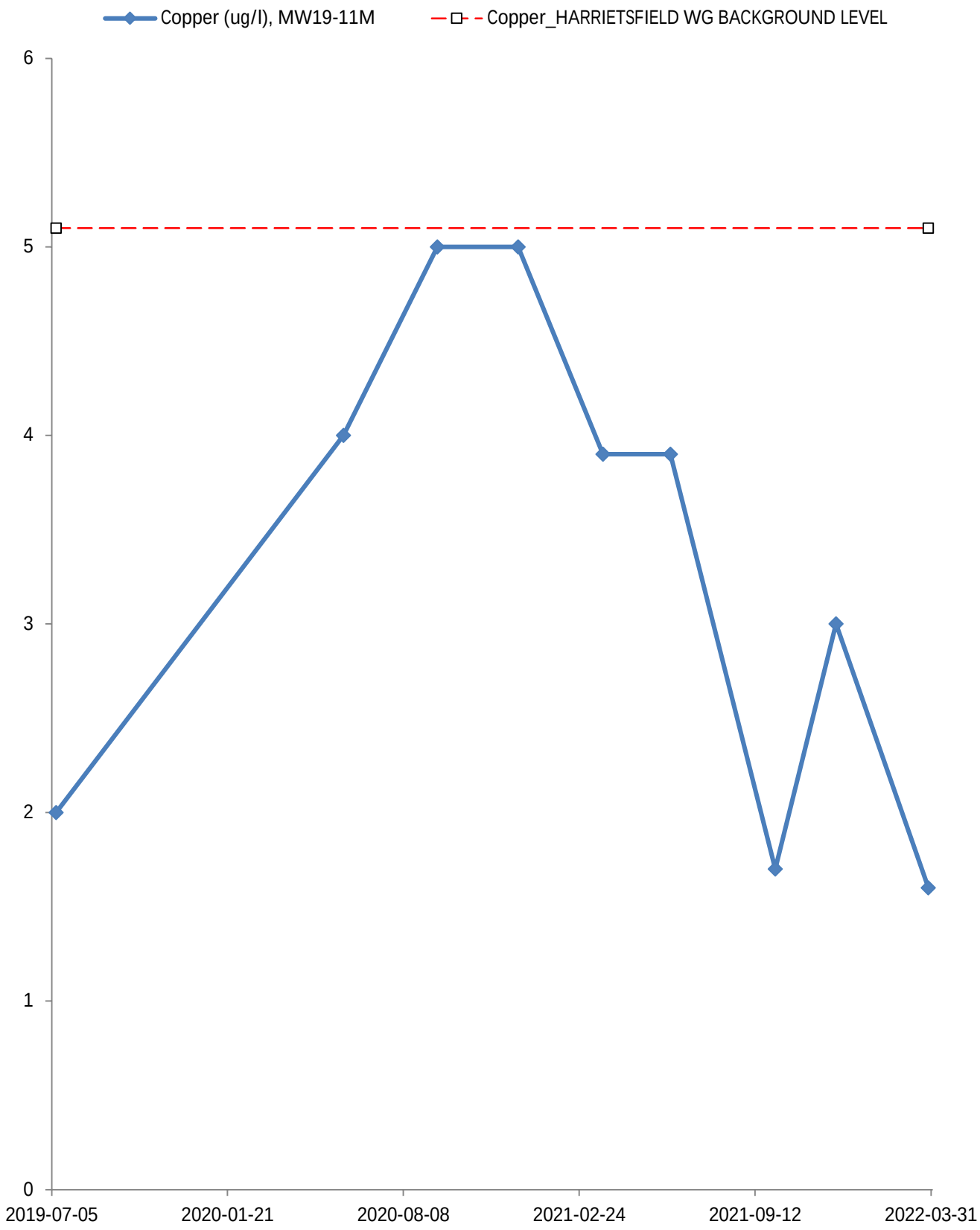
MW19-11M-Chromium



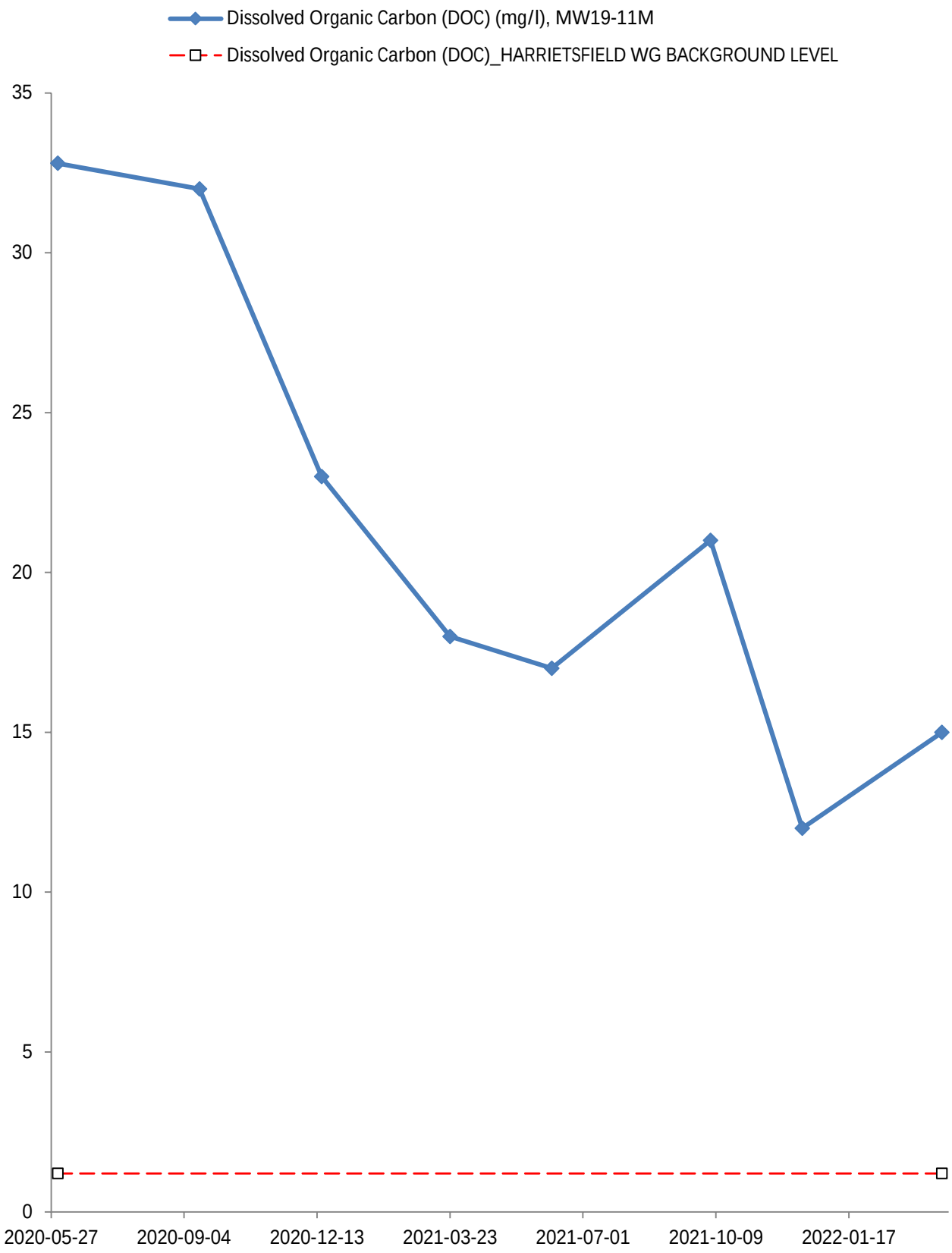
MW19-11M-Cobalt



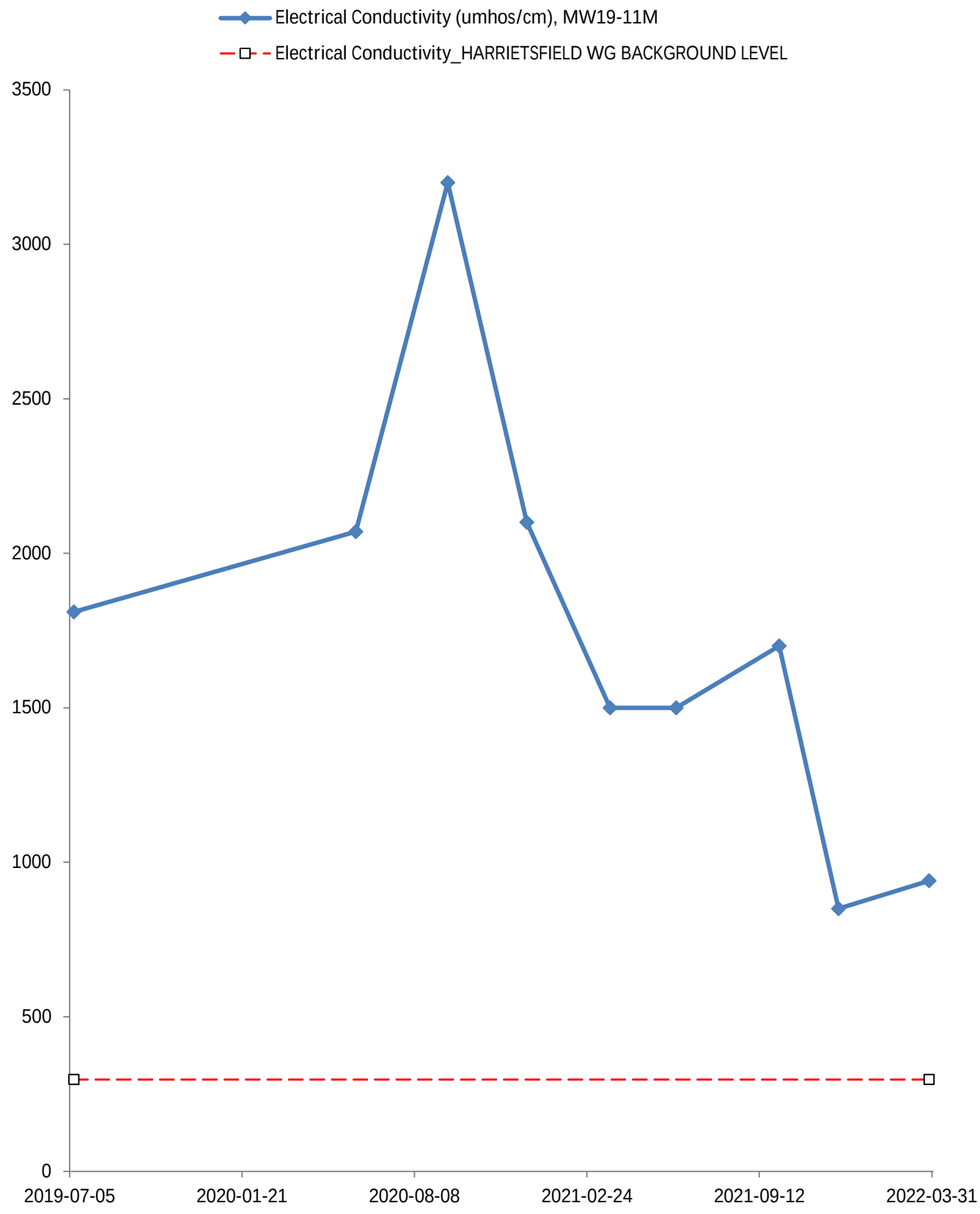
MW19-11M-Copper



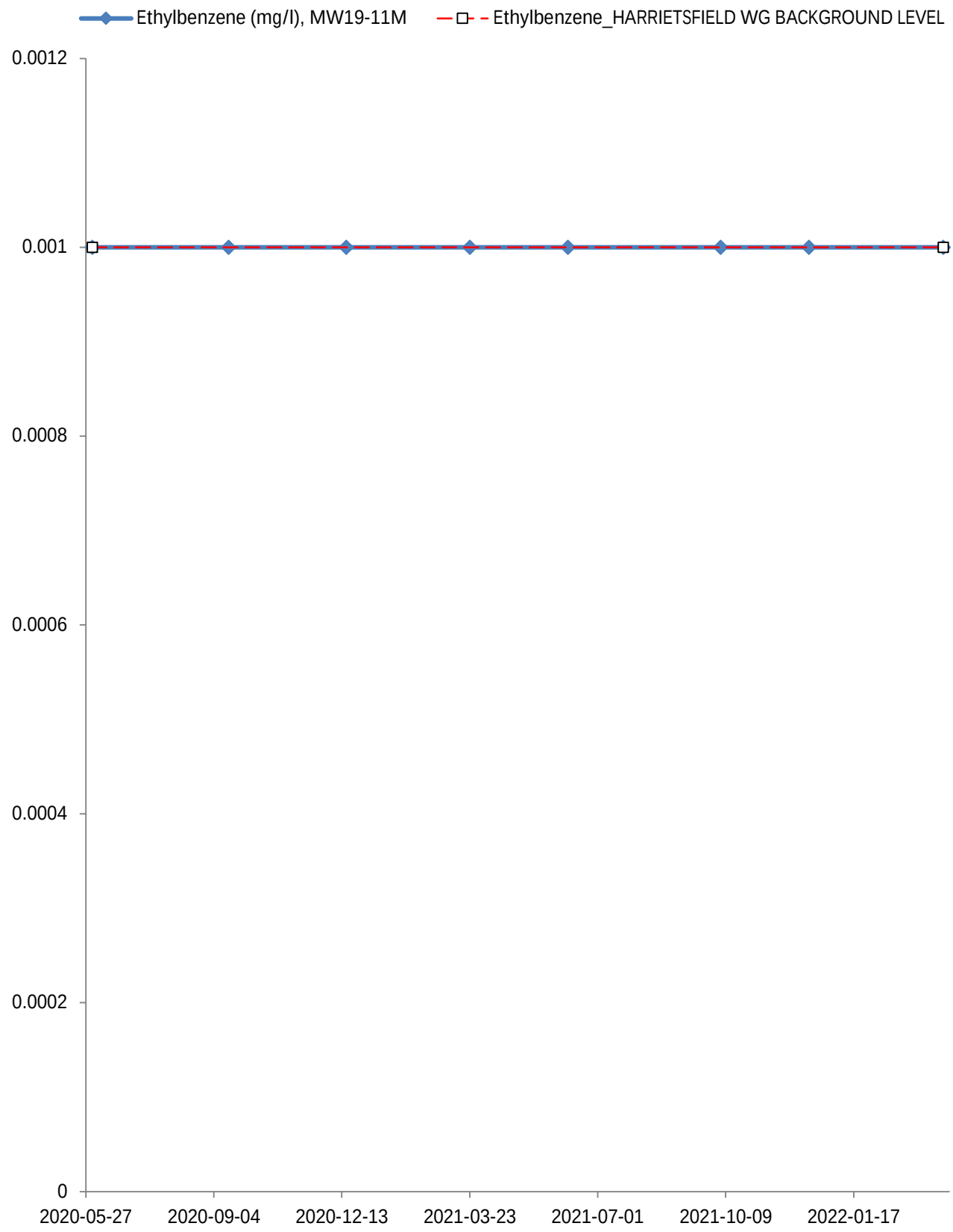
MW19-11M-Dissolved Organic Carbon7



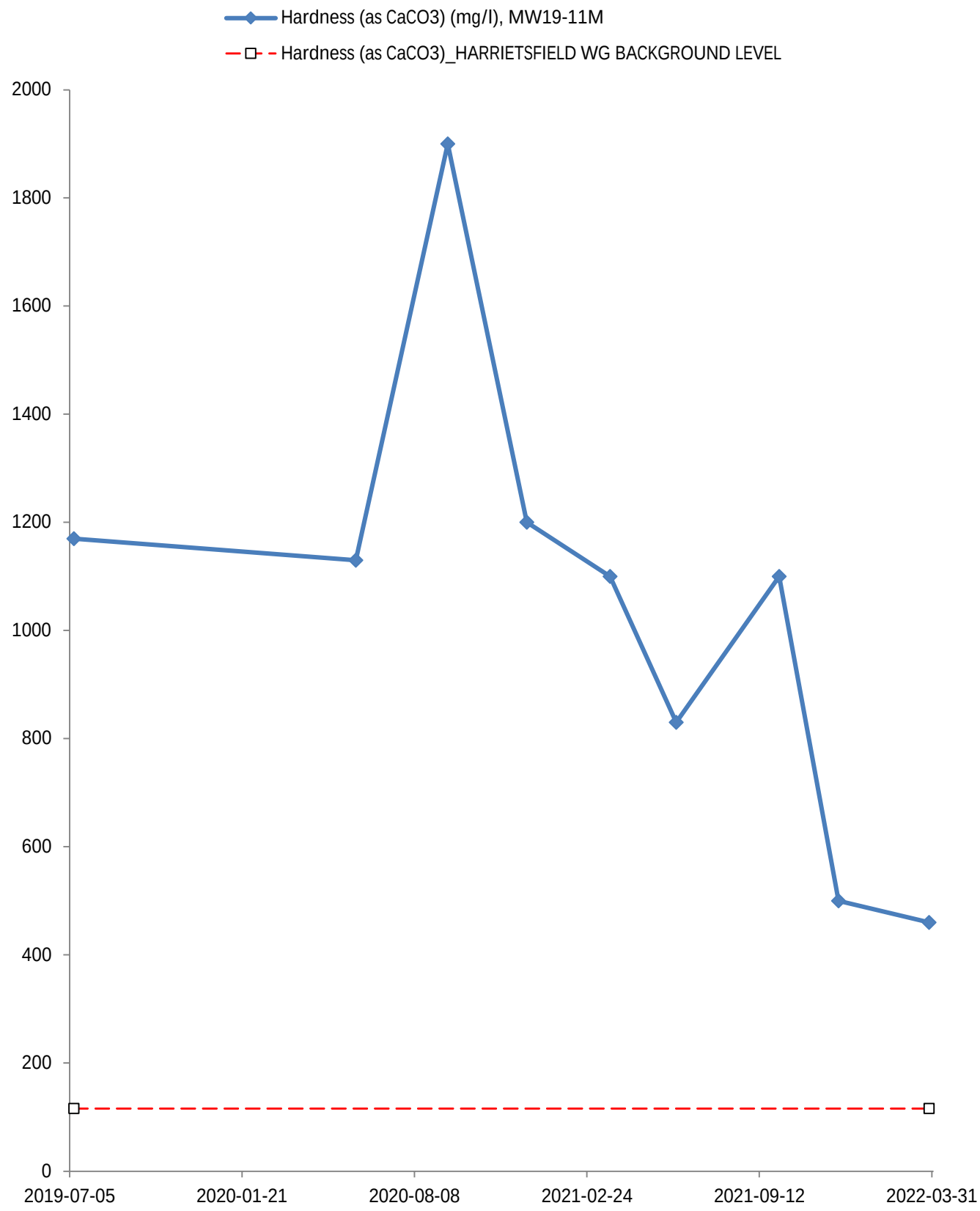
MW19-11M-Electrical Conductivity



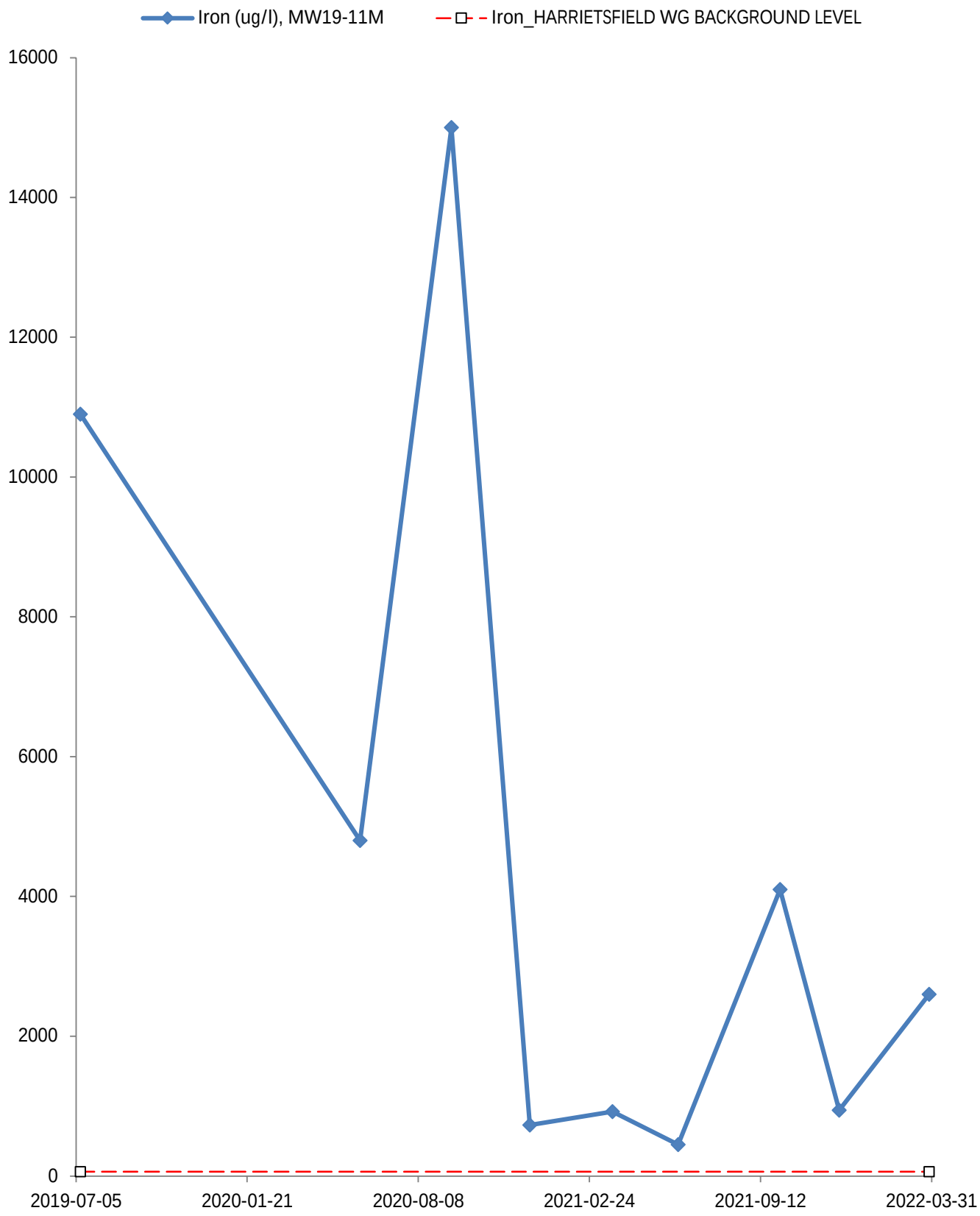
MW19-11M-Ethylbenzene



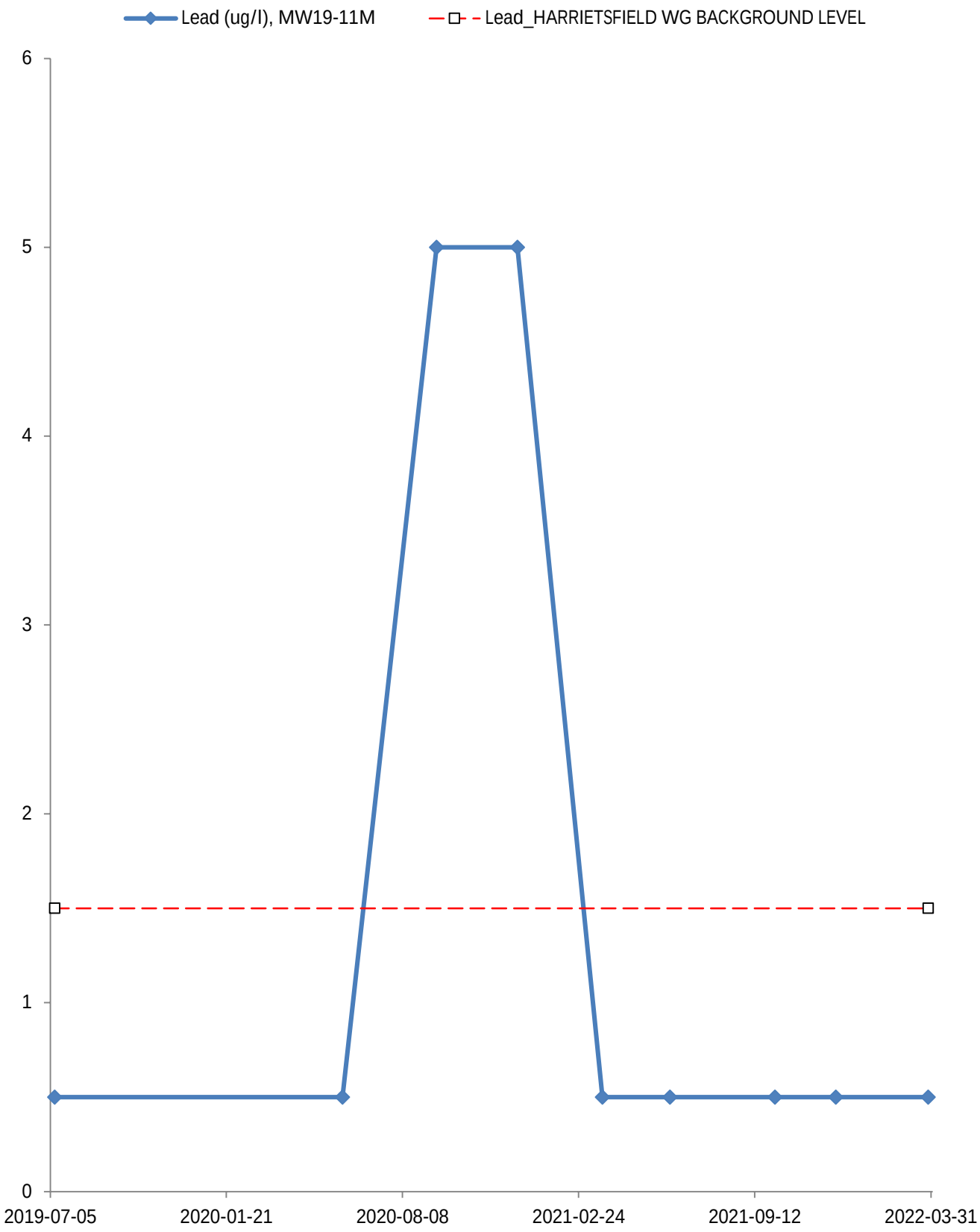
MW19-11M-Hardness (as CaCO3)



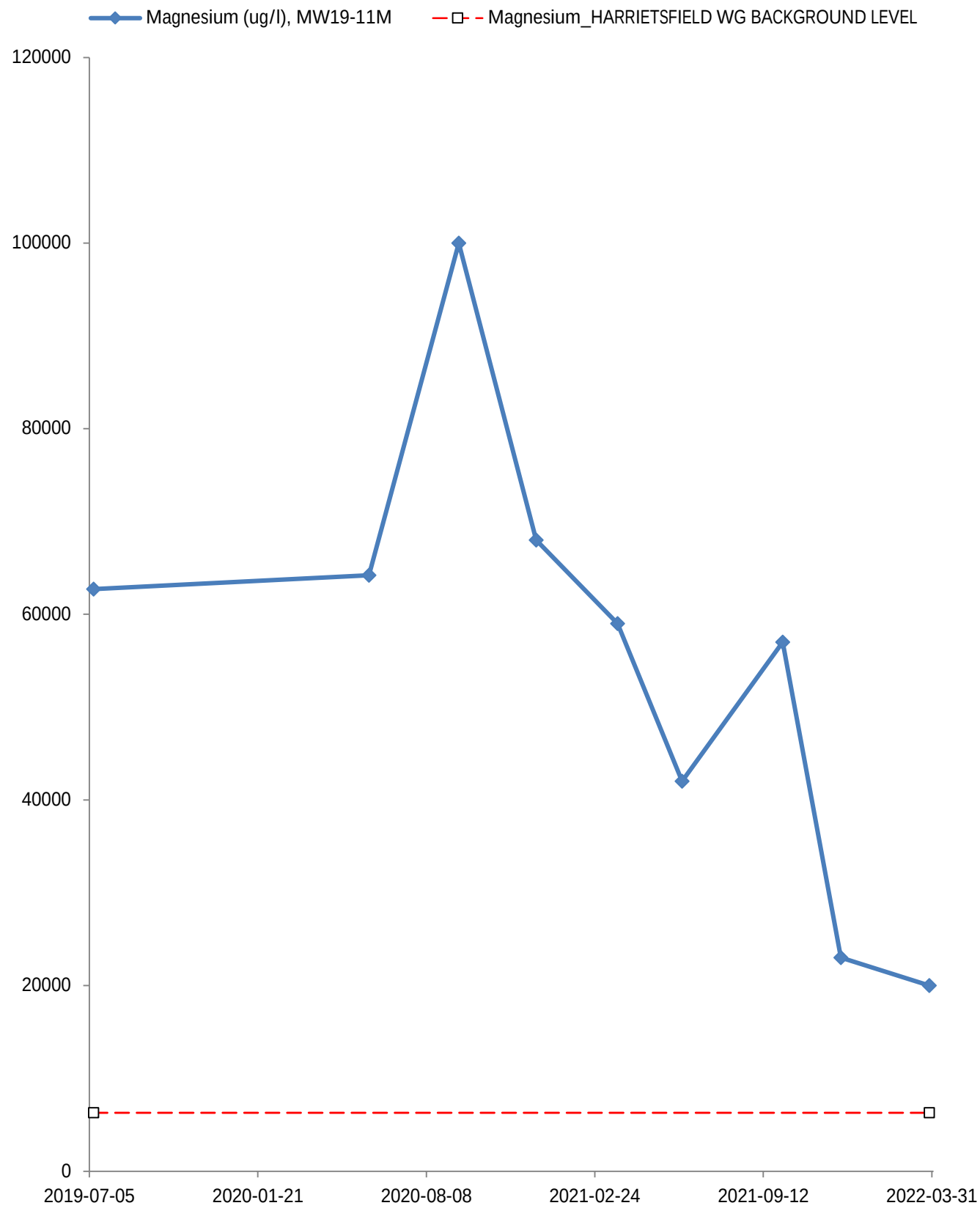
MW19-11M-Iron



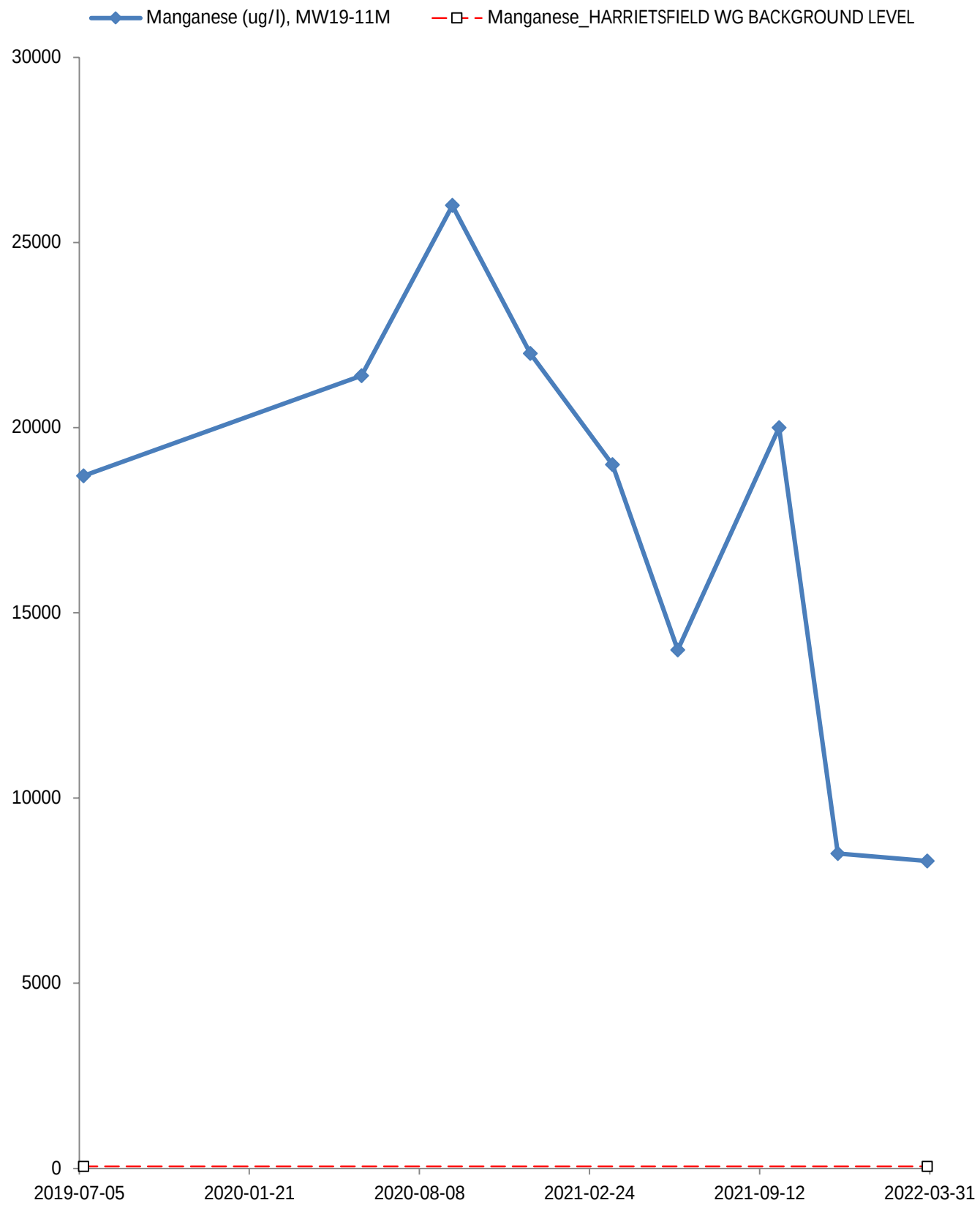
MW19-11M-Lead



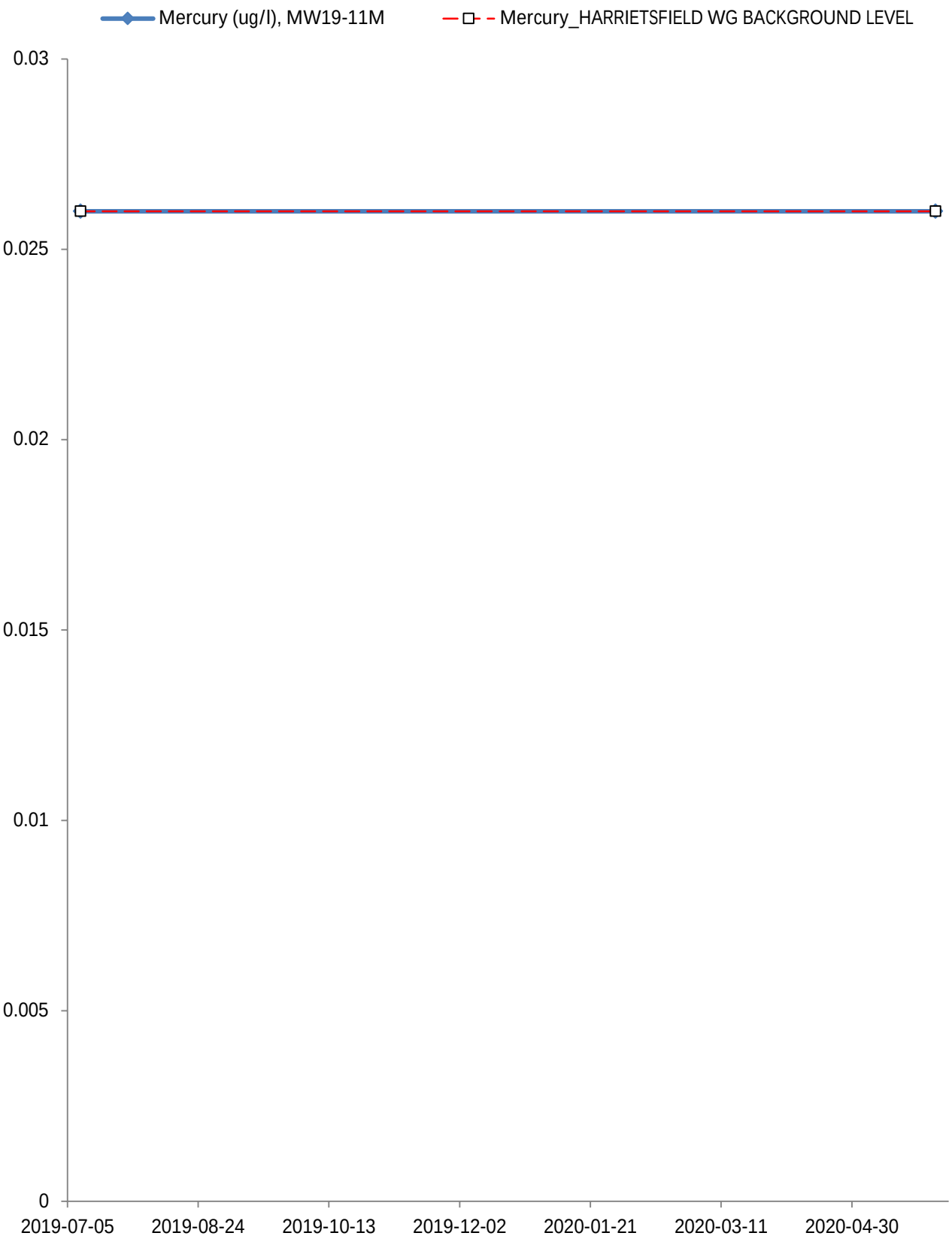
MW19-11M-Magnesium



MW19-11M-Manganese



MW19-11M-Mercury



MW19-11M-Modified TPH Tier 1

