KEY ENVIRONMENTAL INCORPORATED

November 25, 2026

Mr. Austin Tweedy
Environmental Specialist
Division of Environmental Response & Revitalization
Ohio EPA – Southeast District Office
2195 Front Street
Logan, Ohio 43138

Re: Fifth Five-Year Review Report
Howmet - Former WearEver Facility
Chillicothe, Ohio

Dear Mr. Tweedy:

On behalf of Howmet Aerospace Inc., Key Environmental, Inc. is submitting the fifth Five-Year Review Report for the former WearEver facility located in Chillicothe, Ohio.

If you have any questions or desire additional information, please do not hesitate to call me at 412-428-9388.

Best regards,

Key Environmental, Inc.

Eric Lloyd.
Project Manager

cc: Andrew Franze - Howmet

Attachment

FIFTH FIVE-YEAR REVIEW REPORT

HOWMET FORMER WEAREVER SITE
CHILLICOTHE, OHIO

Prepared for:

HOWMET AEROSPACE INC.
Pittsburgh, Pennsylvania

Prepared by

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NOVEMBER 2026

KEY ENVIRONMENTAL INCORPORATED

Non-Confidential Business

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1.0 INTRODUCTION

On behalf of Howmet Aerospace Inc. (Howmet), Key Environmental (KEY) has prepared this report for the fifth Five-Year Review (FYR) of remedial actions at the former WearEver Site (Site) located in Chillicothe, Ohio. Howmet was formerly known as Alcoa Inc. (Alcoa) and more recently known as Arconic Inc.

Remedial Actions at the Site are a requirement of the *Director's Final Findings and Orders for the Site* (1999 DFFO) issued by Ohio EPA on March 22, 1999. As noted in the 1999 DFFO, at Sites where contaminants will remain at levels that will not permit unrestricted use of the Site, a review will be conducted no less frequently than once every five (5) years to confirm that the remedy continues to be protective of human health and the environment. This is known as the "five-year review."

Remediation of the former Site commenced in 2000, when the Containment Area Cap Construction Project was initiated. Four prior FYRs were performed and are summarized below. The fifth FYR was conducted in accordance with the January 2026 Five-Year Review Work Plan (KEY, 2026).

Activities required by the FYR Work Plan included establishing a review team, involving the community, reviewing relevant data and documents, and conducting Site interviews and a Site inspection. The purpose and scope of these activities are summarized in Table 1, and results are described in Sections 3 through 7 below. A summary of the Site's chronology related to Site cleanup history is presented in Table 2.

1.1 SITE DESCRIPTION

The Site is located at 1089 Eastern Avenue in Ross County, Chillicothe, Ohio. It is a 62.5-acre parcel located approximately 0.8 miles southeast of downtown Chillicothe (Figures 1 and 2). Before its development for a manufacturing plant in 1948, the Site was reportedly used for farming, as a fairground, and later as a golf course.

The Site is located on the floodplain of the Scioto River. It is underlain by alluvial deposits of sands and gravels and glacial till to a depth of approximately 130 to 140 feet below the ground surface (ft-bgs). Shale bedrock, believed to be the Ohio Shale, underlies the alluvial and glacial deposits. The unconsolidated deposits above bedrock can be divided into three units. Unsaturated silty sands and gravels are present from the ground surface to a depth of approximately 15 ft-bgs. From 15 to 90 ft-bgs, sands and gravels are prevalent. The water table generally ranges between 20 and 35 ft-bgs. Till composed of silt and sand is encountered at approximately 90 ft-bgs.

The sequences of well-sorted alluvial sands and gravels form a prolific aquifer capable of sustaining well yields in excess of 1,000 gallons per minute (gpm). Regionally, groundwater in the Scioto Valley south of Chillicothe flows parallel with the Scioto River (predominantly south/southeast); however, groundwater flow in the vicinity of the Site is strongly influenced by large industrial extraction wells to the east and west of the Site.

Historically, groundwater beneath the Site flowed northeast into U.S. Paper Mill (USPM) (formerly Pixelle Specialty Solutions LLC Pixelle) Collector Well #18 (Well 18) situated 1,800 feet northwest of the Site along the Scioto River. Well 18 is one of five Industrial Production Wells (Production Wells) operated by USPM within the Scioto River valley. Figures 1 and 2 include the locations of the collector wells relative to the Site location. When in operation, the high-capacity pumping of three collector wells located along the river east of the plant (16, 17, and 18) controls localized groundwater flow direction at the Site area. Under these conditions, flow rates projected by groundwater models indicate that average groundwater travel time from the Site to Well 18 is 1 to 2 years.

1.2 MANUFACTURING HISTORY

Historically, the principal operation at the Site was the manufacture of aluminum cookware. Small household electrical appliances were also manufactured at the plant. Raw materials such as sheet aluminum were received from suppliers, stamped, cleaned, coated, and painted. Finished goods were packaged and shipped offsite. Environmental issues at the Site are related to the historical storage, use, and disposal of chlorinated volatile organic compounds (VOCs) used as degreasers, and the disposal of metals-containing wastewater and sludges from the anodizing and porcelain enameling processes.

Cookware components were cleaned in solvent-containing vapor degreasers from 1948 to 1982, prior to coating. From 1948 to 1968, cookware was coated using a dry aluminum anodizing process. In 1968, the operation was converted from this dry process to a wet porcelain enameling process. The porcelain enameling process was discontinued in September 1985. In 1982, metal cleaning operations were converted to an alkaline soap wash and rinse system.

Alcoa operated the manufacturing plant until September 1982, when WearEver Realty Associates assumed ownership and Wesray Products Corporation began operations. In June 1985, WearEver-Proctor Silex, Inc. assumed operational control of the Site and changed the name of the Site to WearEver-Proctor Silex. Anchor Hocking Corporation assumed operational control of the Site in January 1989 and operated the Site under the name WearEver Aluminum Inc. until operations ceased in late 1990. The parent corporation of Anchor Hocking Corporation was the Newell Company.

WearEver Realty Associates transferred ownership of the Site back to Alcoa in May 1994. The facility was used by a tenant (Mills Pride) for dry storage purposes until January 1996, when the tenant vacated the premises. Since 1996, the facility was primarily empty until 2001, when Alcoa Subassembly Logistics (ASL) began operations in the western portion of the building. Other portions of the building are used for warehousing by ASL.

1.3 SITE CLEANUP HISTORY

Historical manufacturing at the Site created four known waste streams. The industrial wastewater stream contained lead and cadmium, walnut shell dust contained lead, trichloroethylene (TCE) was used in degreasing operations, and ignitable, TCE-containing waste solvent blends were generated. Some of these waste materials were deposited in various areas of the Site. A summary of the Site's chronology related to Site cleanup history is presented in Table 2.

1.3.1 1993 Director's Findings and Orders

On May 6, 1993, the Ohio EPA issued a Director's Findings and Orders (1993 DFO), which required a Remedial Investigation (RI) and Feasibility Study (FS) of the Site. In accordance with the 1993 DFO, Alcoa, along with Wear Ever Realty Associates, Hamilton-Beach Proctor Silex, Inc. and the Newell Company (Anchor Hocking) conducted the RI and FS of the Site. The RI/FS objectives as noted in the 1993 DFO were to:

- Identify the nature and extent of contamination of the Site related to past disposal of industrial and/or other waste which may be hazardous; and,
- Develop and evaluate a program of appropriate remedies applying sound scientific engineering and construction practices, consistent with Federal, state and local laws.

1.3.2 Remedial Investigation Summary

Figure 1 is a location map of the Site, and Figure 2 shows the locations of the monitoring points. Between 1993 and 1996, the RI was performed to identify the nature and extent of Site-related constituents in soil and groundwater. The RI identified 25 Potential Source Areas (PSAs) at the Site. Figure 3 identifies and provides the locations of the PSAs. The results of the RI identified metals-containing surface materials in PSAs 3, 5, 8, 13, and 15, as well as chlorinated solvents in subsurface soil and groundwater in PSAs 1, 8, 9, 11, and 20.

The RI was implemented in two phases during the spring/summer of 1994 (Phase I) and late winter/spring of 1996 (Phase II). The RI consisted of a review of historical data, surface/subsurface soil characterization, groundwater characterization, and determining the fate and transport of Site-related constituents. The findings of the RI are documented in the *Remedial*

Investigation Report, Former WearEver Site, Chillicothe, OH (BB&L, 1996), which was approved by the Ohio EPA on August 7, 1996. In support of the RI, a groundwater flow model was constructed. The model report entitled "*Groundwater Flow Model Evaluation, Alcoa's Former WearEver Facility, Chillicothe, OH*" (ICF Kaiser, 1998) concludes that Mead (now USPM) Collector Wells 17 and 18 control the local groundwater flow and ultimately collect all groundwater from the Site. The following subsections summarize the findings of the RI.

Elevated concentrations of VOCs (primarily chlorinated solvents) were detected in the subsurface at the following VOC source areas:

- The manufacturing building, especially at the former degreasing units and along industrial sewer lines;
- Areas used for solvent storage including the former trichloroethylene (TCE) / Draw Lubricant Tank, Drum Storage Area, and North Loading Dock;
- Pits used for wastewater handling and disposal including the Leach Pit, Flocculent Settling Basin, and Dump Truck Lagoon and Overflow Basin; and,
- Waste disposal areas, including Sludge Disposal Area and the former Tee Pee Incinerator.

VOCs at the above-listed source areas were present in unsaturated soils above the water table (upper 25 ft-bgs) and within the approximately 75-foot-thick sand and gravel aquifer below the Site. As part of the RI, groundwater in the sand and gravel and the underlying till were evaluated with many borings and monitoring wells. Site-related VOCs were not detected in groundwater below the till, and the majority of VOCs occur in the upper half of the aquifer (shallow and intermediate intervals).

Additionally, no free dense non-aqueous phase liquids (DNAPLs) were detected in either soil or water samples collected at depth. However, traces of residual DNAPL were detected at the water table at the time of the RI within the shallow portion of the aquifer north of the manufacturing plant and were considered a potential secondary source of contaminant release to groundwater. The highest soil concentrations of VOCs were detected near the water table or in the upper 15 feet of the aquifer.

Semi-volatile organic compounds (SVOCs) were detected in a few of the soil samples analyzed during the RI. The SVOC detections appear to be primarily from petroleum fuel storage and runoff from asphalt roadways or roofing surfaces. Some SVOCs that were detected in a sludge disposal area appear to have been associated with waste roofing or paving materials.

Metals source areas were associated with on-site disposal of sludges/dusts from buffing/polishing operations and wastewater treatment. The areal extent of sludge disposal was defined by both visual field identification and analytical confirmation. Metals concentrations, elevated above background, were detected in many samples from the Sludge Disposal Areas and in surface soils in the vicinity of former wastewater handling areas. Although there were no indications of buried wastes at the Site, waste piles consisting of sludge and miscellaneous waste disposal (building rubble, construction debris, etc.) reached several feet in thickness, or more in Sludge Disposal Area 4 (PSA #8-4). There were also no significant metals impacts to surface soils (beyond the metals-affected source areas), nor impacts associated with windblown dust. Further information can be found in the RI Report.

1.3.3 Risk Assessment Summary

The analytical data collected during the RI were evaluated in a *Site Human Health Risk Assessment and Remedial Investigation Report, Former WearEver Site* (BB&L; July 1996). Ecological risks were also evaluated, and the RI report concluded that there were no significant risks to ecological or environmental receptors. When compared to the range of acceptable risk for human receptors [a carcinogenic risk within the range of $1x10^{-4}$ to $1x10^{-6}$ increased incremental cancer risk and a Hazard Index (HI) less than 1.0 established by the U.S. Environmental Protection Agency (USEPA)], the following conclusions were reached during the RI with respect to industrial or commercial use of the Site:

- Using a conservative model based on the most elevated lead concentrations at the Site and assumed frequent exposure to surface materials outside the building, the future potential exposure of a female industrial worker of childbearing age to lead in surface materials could result in blood lead levels above an acceptable level in more than five percent of workers exposed.

- Potential exposure to constituents other than lead in surface and subsurface material is associated with cumulative noncarcinogenic Hazard Indices (HIs) of 1.1 and 1.4 for the industrial worker and construction worker, respectively. These HIs slightly exceed the acceptable value of 1.0 set by USEPA. The metals that contribute to the elevated HIs are co-located with lead, and controlling exposure to lead-containing materials will result in controlling exposures to these other metals.

- Potential exposure to VOCs in groundwater could result in unacceptable risks associated with potable uses of groundwater extracted via off-site wells southeast of the Site. However, this would only occur if a large-capacity industrial well were installed near the Site or pumping rates from existing off-site collector wells were significantly modified such that the current groundwater flow patterns change. The elevated risk estimates are

almost entirely due to vinyl chloride (a byproduct of the biodegradation of TCE). In addition, concentrations estimated by the computer model for other VOCs [e.g., cis-1,2-dichloroethylene (cis-1,2-DCE), TCE], while not contributing significantly to estimated risks, could exceed their respective Safe Drinking Water Act Maximum Contaminant Levels (MCLs). However, it should be noted that all nearby residences are now served by a public water supply and are no longer using groundwater as potable water.

1.3.4 Feasibility Study Summary

In accordance with the 1993 DFO, Alcoa, along with WearEver Realty Associates, Hamilton Beach Proctor Silex Inc. and Newell Company, performed an FS for the Site in 1996 under the oversight of Ohio EPA (*Feasibility Study Report for the WearEver Site;* The Marsh Consulting Group and Leo M. Brausch, P.E.; November 1996). The FS objective noted in the Consent Order was to develop and evaluate a program of appropriate remedies applying sound scientific engineering and construction practices, consistent with federal, state, and local laws.

For the affected environmental media (e.g., surface materials, subsurface soils, and groundwater), remedial technologies and process options were screened on the basis of potential effectiveness, implementability, and order-of-magnitude costs. A wide range of remedial technologies and process options were evaluated and screened. The remedial technologies and process options retained from screening were assembled into remedial action alternatives. Those alternatives included no action, institutional control, containment, treatment, and removal. Remedial action alternatives were assembled independently for surface materials, subsurface soils, and groundwater.

In the FS, the remedial action objectives (RAOs) formed the basis for establishing a range of treatment or containment alternatives that were evaluated for Site remediation. The RAOs included the following:

- Prevent direct-contact exposure to elevated levels of lead and other metals in surface material; and,
- Control access to affected groundwater, both on-site and off-site, such that unacceptable exposure does not occur.

The remediation objective for lead in surface material was based on the exposure scenario in which a female worker of childbearing age is exposed to surface material by incidental ingestion and dermal contact. A remediation goal of 2,000 milligrams/kilogram (mg/kg) was calculated for this Site. A remediation goal for cadmium was not considered necessary because cadmium is co-

located with lead, and any remedial actions conducted to address the lead in surface material will resolve the minor risk cadmium poses.

As discussed above, there are several VOCs source areas at the Site. Groundwater is impacted by these source areas through leaching and dispersion of VOCs from subsurface soils into groundwater; the resulting groundwater plume extends beyond the property boundary to Well 18. Consistent with available guidance in the FS Report, Alcoa focused on remedial actions that were technically practicable to control the VOCs source areas. The affected soils in these VOC source areas are located both above and below the water table. Alcoa performed a pilot test for the most promising source control remedial technology (i.e., soil vapor extraction/air sparging). The metals and SVOCs that are present in the surface and shallow subsurface do not leach sufficient concentrations to adversely impact groundwater quality.

No specific numerical goals were presented in the FS Report (Marsh/Brausch, 1996) for subsurface soils potentially affecting groundwater. The ultimate remediation goal for groundwater was to achieve MCLs throughout the affected portions of the aquifer. The remediation goal for subsurface soils potentially affecting groundwater similarly has the ultimate goal of achieving MCLs within the aquifer. The specific RAO for these soils must be driven by the limits of remediation technologies. For subsurface soils containing elevated VOC concentrations, the remedial action will prevent, to the maximum extent practicable, migration of VOCs from soils or sludges that may contribute significantly to groundwater concentrations above MCLs.

The FS Report was approved by Ohio EPA on January 30, 1997. On April 4, 1997, Ohio EPA issued the Preferred Plan for the Site, as described below.

1.3.5 Preferred Remedial Plan

The Preferred Remedial Plan, as identified by Ohio EPA and based upon the FS, includes on-site containment of metals-contaminated material and Air Sparging and Soil Vapor Extraction (AS/SVE) for subsurface soils and groundwater impacted with VOCs. Metals contamination in surface materials was addressed by consolidation and containment of metals-impacted material that exceeded remediation goals developed during the FS. After removing surface materials containing lead above the clean-up level, confirmatory samples were collected to confirm that the remaining material met the lead clean-up level of 2,000 mg/kg.

Ohio EPA's preferred alternative for subsurface soils was the AS/SVE alternative. The performance standards for that alternative, as outlined in Ohio EPA's preferred plan, were as follows:

- To operate an AS/SVE system to the extent that any leaching of residual contaminants to

groundwater does not result in exceeding the MCLs in groundwater; and,

- To operate an AS/SVE system to the limits of this technology's effectiveness.

Ohio EPA's preferred alternative for groundwater was a combination of the Source Area AS/SVE and the Limited Action alternatives. The Limited Action alternatives included provisions for an alternate water supply for any future potable water users potentially affected by the VOCs in groundwater.

1.3.6 1999 Director's Final Findings and Orders

On March 22, 1999, Ohio EPA issued the 1999 DFFO. This document includes the January 1998 Ohio EPA-Issued Decision Document, which describes the history of the Site, summarizes remedial alternatives, and selects a remedy. Also included in the 1999 DFFO is Ohio EPA's Responsiveness Summary, which summarized public comments received on the Preferred Plan and Ohio EPA's responses to the public comments.

The selected remedy in the 1999 DFFO was substantially the same as the remedy described in the Preferred Plan. The contaminated surface soils were to be consolidated and covered with a solid waste cap. The contaminated subsurface soils and groundwater were to be treated with an AS/SVE PRP system within the source areas. Because groundwater contamination was found to have migrated off-Site, the groundwater remedial alternative included on- and off-site monitoring as well as a provision to supply an alternative water source for any future potable water users potentially affected by the VOCs in groundwater. It should be noted that all nearby residences are now served by a public water supply and are no longer using groundwater as potable water.

Groundwater Use Notification Agreements (GWUNAs) were also stipulated for potentially affected nearby landowners to ensure that the potentially responsible parties (PRPs) and Ohio EPA are notified regarding any plans to use the groundwater, any significant modifications to current groundwater uses, or any changes in downgradient property ownership.

1.3.7 Remedial Action Summary

Several remedial actions have been performed following the issuance of the 1999 DFFO and the subsequent first FYR (2005).

AS/SVE

In advance of completing Site-wide remedial design and remedial action activities, Alcoa initiated the design, installation, and operation of the AS/SVE system as an Interim Action (IA) at the Site (see Figure 4). Alcoa elected to conduct the IA to help expedite the re-occupancy of the 400,000

square foot Site building (i.e., the former manufacturing and warehouse building). The IA AS/SVE system operated primarily within the footprint of the former manufacturing and warehouse building from November 1999 to November 2002. On February 20, 2003, Ohio EPA approved shutdown of the IA AS/SVE system based upon achieving shutdown demonstration criteria.

The Phase II AS/SVE system was installed in 2003 to treat PSAs associated with the former Leach Pit, Old Oil Barrel Storage Area, Former Tee Pee Incinerator, Former TCE Product above ground storage tank (AST), Former Sludge Disposal Area, and others that were identified during implementation of the RI (see Figure 5). System prove-out of the Phase II area began in September 2003, and routine operation of the Phase II system commenced in January 2004. Operation of the Phase II AS/SVE system was terminated in October 2006 upon achieving shutdown demonstration criteria.

Sludge Consolidation

The consolidation of surface and shallow subsurface metals contaminated soils and sludge was conducted in 2001. This consolidation resulted in the construction and capping of the Sludge Consolidated Area (SCA) located in the northeast portion of the Site (Figure 2) in the general area of PSA #8-4, Former Sludge Disposal Areas. Ohio EPA approved the Sludge Consolidation Project on October 30, 2001. The SCA area is inspected quarterly, and the vegetative cover on the cap is maintained and cut two to three times per year.

Groundwater Monitoring

In accordance with the 1999 DFFO, groundwater monitoring is conducted on a regular basis to monitor plume extent, migration, and concentration trends. Groundwater monitoring is currently conducted in accordance with the fifth revision of the "Groundwater Monitoring Plan (GMP), Revised for the Alcoa Former WearEver Facility" (Key Environmental, 2012).

Institutional Controls

The 1999 DFFO required deed restrictions to be emplaced on the sludge consolidation landfill, in the former Sludge Disposal Areas, and in the area of the VOC plume. These deed restrictions were recorded with the Ross County Recorder of Deeds on the property deed on July 22, 2004.

The 1999 DFFO also required Alcoa to seek execution of GWUNAs on properties downgradient of the Site. Initially, eight GWUNAs were emplaced with downgradient property owners. The

GWUNAs required the property owners to notify Howmet and the Ohio EPA in the event of a change in the use of groundwater on their properties or a change in ownership of the property.

1.3.8 Prior Five-Year Reviews

Four prior FYRs were performed and are summarized below. FYRs evaluate the protectiveness of the remedy to ensure it is functioning as intended, to ensure exposure assumptions remain valid, and to recommend further action if warranted.

1.3.8.1 First Five-Year Review

The First *"Five-Year Review"* (MFG Inc., September 2005) provided the initial critique of Investigation, Design, and Remedial Action activities conducted at the Site. The FYR did not reveal any significant issues with the performance of the remedial systems on the Site. The physical, cost, and empirical data reviewed all indicated that there were no significant issues, and that the remedial systems at the Site had functioned as intended.

Monitoring of the SCA did not reveal impacts to groundwater, and the cap appeared to be an effective barrier to contact with the metals-containing sludges. The AS/SVE system in the IA Area met its shutdown criteria and was completed in November of 2002. At the time of the FYR, the Phase II AS/SVE system was still operating but was nearing achievement of shutdown criteria. It was observed during the preparation of the FYR that groundwater VOC concentrations near the property boundary had risen but began to fall during the Phase II AS/SVE operation. The plume monitoring network concentrations were relatively unchanged from post-remediation data.

1.3.8.2 Second Five-Year Review

The "*Second Five-Year Review"* (Key Environmental, September 2010) focused on the evaluation of the Phase II AS/SVE System operation and achievement of shutdown criteria as well as groundwater constituent reductions and plume migration. The Phase II AS/SVE system achieved shutdown criteria in October 2006. An estimated 7,500 pounds of VOCs were removed from the subsurface during operation of the Phase II AS/SVE system. Although significant reductions in VOC concentrations were documented in the residual plume areas and beneath the SCA after termination of the AS/SVE activities, groundwater beneath much of the Site still exceeded MCLs. Monitoring of the SCA during the review period did not reveal any impacts to groundwater, and the cap appeared to be an effective barrier to contact with the metal-containing sludges.

The review documented a groundwater flow direction shift toward the southeast due to reduced groundwater pumping at Well 18. This shift caused VOC concentrations at property line wells MW-D-S, MW-D-I, and MW-I-S to increase during 2008; however, concentrations declined to previous levels or stabilized after 2008.

The review recommended enhanced groundwater monitoring along the eastern portion of the Site to identify further migration of the shallow or intermediate constituent plumes and a revision to the GMP. Additionally, the hard-piping for the inactive Phase II AS/SVE system was observed to be in disrepair. The review also recommended dismantling and removal of the above-ground system piping.

1.3.8.3 Third Five-Year Review

The *"Third Five-Year Review"* (Key Environmental, October 2016) focused on monitoring groundwater quality and evaluating the potential of monitored natural attenuation to degrade chlorinated hydrocarbons at the Site. Supplemental activities completed during the FYR included groundwater monitoring of the SCA for Site-related inorganic constituents, natural attenuation groundwater monitoring of selected shallow and intermediate plume areas, and supplemental VOC groundwater monitoring of wells not included in the GMP sampling program to confirm the vertical distribution of VOC constituents within the aquifer. In addition, and at the request of Ohio EPA, groundwater samples were collected from shallow SVE wells 46-S and 48-S to determine the effectiveness of supplemental vegetable oil substrate (e.g., Soy Gold) injection testing that was conducted in the Old Oil Barrel Storage Area P.

Groundwater flow directions in the shallow and intermediate zone were easterly during the first part of this evaluation period (through 2013) and then returned to northeasterly during the remaining period. The easterly groundwater flow direction was due to decreased pumping rates at Well 18 from 2009 to 2013. Well 18 was reportedly refurbished (including new laterals) in 2013, resulting in a resumption of historical pumping rates and a return to northeasterly groundwater flow directions in the intermediate zone. This process of initial reduced pumping rates followed by a resumption of normal pumping rates resulted in short-term transient changes to the plume alignment during this period.

The results from sampling the shallow water-bearing zone during this period demonstrated that a 90% reduction in VOC concentrations has been attained relative to pre-remediation levels. The results from monitoring the intermediate water-bearing zone continued to indicate reductions in concentrations of TCE in the source area. TCE degradation products continued to persist with limited concentration declines in the downgradient and near offsite areas. It is expected that the depletion of TCE in the source area will ultimately result in noticeable declines in degradation products in the downgradient areas.

Supplemental groundwater monitoring for Site-related inorganic constituents of interest at the SCA indicated that there were no exceedances of primary MCLs or designated action levels from any of the groundwater samples collected from that monitoring well network during the 2015 sampling event.

Based upon a review of current and historical groundwater monitoring results, the review recommended several minor modifications to the groundwater monitoring program.

In conjunction with the FYR (Ohio EPA 2016), Alcoa received a letter dated July 13, 2016, requesting that indoor air sampling be conducted in the former WearEver manufacturing building as a follow-up and repeat of the indoor air sampling and risk assessment conducted in 2002 because of the potential for vapor intrusion (VI).

1.3.8.4 Fourth Five-Year Review

The "*Fourth Five-Year Review*" (Key Environmental, December 2021) focused on continued groundwater monitoring data analysis. Based upon the evaluation conducted, no additional measures beyond the current monitoring and maintenance were recommended.

Annual and post-repair indoor air sample data were collected at the Site during the FYR period after the SSDS was established demonstrated that systems were operating effectively. As such, it was recommended that the O&M Plan continue to be implemented.

Overall, the groundwater remedy was still within the predicted time frames for achieving the RAO for onsite and offsite groundwater that were provided in the 1999 DFFO, with the exception of Collector Well 18, where the concentration of vinyl chloride was declining but still remained slightly above the drinking water MCL. It was noted that the water from Well 18 is not used for potable purposes. It was anticipated that as the plume mass decreased and degradation continued, constituent concentrations at Well 18 would also decline and ultimately achieve MCLs.

In comparison to the third FYR, shallow groundwater VOC concentrations increased in some monitoring wells and decreased in others. The total TCE concentration of the shallow zone wells had decreased slightly, and the overall shallow plume appeared stable as its extent did not change substantially. Despite the shift in groundwater flow direction observed during the second to fourth quarters of 2020, the wells monitoring the southeast property boundary showed little to no VOC contamination as of December 2020. However, as an interim measure, it was recommended that these wells be sampled quarterly in 2021 (starting with the first quarter 2021 groundwater monitoring event) to better monitor any potential changes in the groundwater plume.

The reductive dechlorination of the VOC plume in the shallow zone was less than that observed in the intermediate zone, based on the relative abundance of degradation products in the intermediate zone. The TCE concentrations in intermediate groundwater near the Leach Pit (source area) declined substantially, and the parent compound continued to naturally degrade to a mix of cis-1,2-DCE and vinyl chloride as the plume migrated offsite towards Well 18. It was recommended that the current intermediate zone monitoring program be continued.

While the paper plant production wells had significant influence on the hydrodynamic control of the WearEver groundwater VOC plume, the wells were pumped by Pixelle as needed for the operation of their paper plant. Changes or alterations to Pixelle's water supply system to address their operational needs can cause shifts in groundwater flow direction at the WearEver Site. Shifts in groundwater flow direction to the southeast occurred from 2008 to 2013 as described in the 2010 and 2015 FYR reports. It occurred again in the second to fourth quarters of 2020; however, the southeast flow was observed to have shifted back to the east in January 2021.

1.3.9 Vapor Intrusion

Indoor air samples were collected in August 2016, and the results were compared against the action levels recommended in an Ohio EPA guidance document (Ohio EPA, 2016). The guidance included short-term action levels for TCE.

The August 2016 sampling did not detect TCE above the action levels in any area occupied by ASL workers. However, the indoor air sampling did identify concentrations of TCE above action levels in two unoccupied areas of the plant. These two areas consisted of the former Traffic Office and the southeast corner of the plant. The former Traffic Office is a fully enclosed, unoccupied room in the central area of the former plant. The southeast corner of the plant is an unoccupied storage area.

Following the first round of indoor air sampling, interim measures were taken to mitigate the potential for exposure in these two unoccupied areas. First, the door to the former Traffic Office was secured by the plant manager, and the affected portion of the storage area was cordoned off. Employees were notified of the situation and warning signs were installed. Additionally, improvements to ventilation were made to help reduce the accumulation of vapors.

An extensive VI assessment was then conducted from December 2016 to May 2018, during which samples of concrete vapor, subslab gas, and indoor air were collected to identify the source of the vapors and the migration pathway from the source to indoor air.

Based on the results of the VI assessment, Howmet's vapor intrusion mitigation expert completed installation of two sub-slab depressurization systems (SSDS) in October 2018 to address the TCE that was measured above Ohio EPA indoor air guidance levels in 2016 in the former Traffic Office and the open warehouse area in the southeast portion of the building, both of which remain unoccupied. Quarterly indoor air sampling over the next year demonstrated that the SSDS is effective. A report documenting the VI assessment and installation of the SSDS, as well as an Operations & Maintenance (O&M) plan for the SSDS, was submitted to Ohio EPA in October 2019 and was revised in March 2021 to address Ohio EPA comments. SSDS inspection and monitoring continue to help ensure the SSDS is operating effectively.

2.0 PROJECT REVIEW TEAM

The Project Review Team for the fifth FYR was established prior to conducting the formal review and consists of personnel from Ohio EPA, Howmet, and the remedial contractor project manager. The review team included personnel who collectively provide expertise regarding regulatory, administrative, technical, and remedial effectiveness.

Mr. Austin Tweedy, Ohio EPA project manager, provided regulatory and administrative input regarding the project. Mr. Tweedy is familiar with the remedial progress of the Site to date and the requirements contained within both the 1993 DFO and 1999 DFFO for the Site. Assisting Mr. Tweedy was Mr. Kevin O'Hara, Ohio EPA hydrogeologist for the Site, who provided technical input to the project with regard to groundwater monitoring.

Mr. Andrew Franze, remediation manager for Howmet, provided the responsible party's perspective on regulatory, technical, remedial effectiveness, and remedy O&M.

Mr. Eric Lloyd and Mr. James Zubrow, KEY project managers, provided input regarding remedial effectiveness, attainment of cleanup goals, and potential data gaps regarding the Site. Other technical experts were consulted on an as-needed basis to adequately review the protectiveness of the remedy.

3.0 PUBLIC PARTICIPATION

Potentially interested parties were notified through the public participation process. In August 2026, the Ohio EPA provided the community notification for the FYR process in the local newspaper. Appendix A provides a copy of the public notice issued by Ohio EPA. The Chillicothe and Ross County Public Library, located at 140 South Paint Street, Chillicothe, Ohio, is used as a local repository for the results of the FYR, as well as other legal and technical documents related to the Site. A copy of this FYR Report for the Site will be placed in the repository for public viewing.

As part of the community involvement process, interviews were conducted to obtain input regarding current Site conditions or Site concerns. Interviews were specified on the FYR site inspection checklist (Appendix B). Those targeted for interviews included the residents and businesses who have executed a GWUNA, the O&M manager for SCA, the ASL Plant Manager, the Manufacturing Service Manager and acting Environmental Health and Environmental Manager for USPM, and the Howmet Remediation Manager for the facility. Interview records are provided in Appendix C, and a summary is provided below. There were no responses to the Ohio EPA's public notification of the FYR; thus, there were no follow-up interviews with citizens.

3.1 GWUNA ENTITIES

The Model Statement of Work required Alcoa to seek execution of GWUNAs on properties downgradient of the WearEver Site. Holders of these written agreements are located adjacent to or near the Site and agreed to provide notice to Howmet and Ohio EPA should they intend to make significant modifications to current groundwater use or changes in property ownership.

Initially, eight GWUNAs were emplaced with downgradient property owners. Since the last FYR, the paper mill, one of the GWUNA properties, has undergone a transfer of ownership. The GWUNA agreements are not transferable; thus, the paper mill does not have a current GWUNA agreement at this time. Table 3 summarizes the current status for each GWUNA property.

A discussion regarding interviews with the GWUNA holders is provided in the following sections and interview records are provided in Appendix C.

3.1.1 ASL Facility Manager

The ASL manager supervises the light manufacturing at the facility. ASL has provided prior support to O&M activities at the Site. They are familiar with routine Site O&M and site security issues and any problems related to the Site operation. The current ASL Plant Manager was interviewed regarding ongoing O&M activities.

ASL's main operations are warehousing. There are no plans for any major changes in operations. ASL is the sole occupant of the WearEver facility. ASL's Plant Manager hasn't noticed any issues with Site or Site personnel. He stated the only community concern regarding the Site he is aware of is the uncertainty of the continuation of the use of the paper mill's collector wells that influence plume migration.

3.1.2 Howmet Remediation Manager

The current Howmet Remediation Manager was interviewed regarding maintenance of the SCA, groundwater monitoring activities and SSDS O&M. The interview focused on the efficiency of past remedial activities, identification of problems related to Site operations, and any suggested modifications to maintenance and monitoring to ensure that requirements of the 1999 DFFO are fulfilled.

Currently the only issue related to the site is the sale of the Pixelle Paper Company and the operation of the pumping wells is unclear. In response to the sale of the Paper Company, enhanced groundwater monitoring efforts were implemented by Howmet during the third quarter of 2025. Enhanced monitoring will continue into the foreseeable future.

3.1.3 Site Manager of Operations and Maintenance

The current Manager of Operations and Maintenance was interviewed regarding the maintenance of the SCA, inspections of monitoring wells, and groundwater sampling activities. The SCA landfill cap is inspected quarterly and mowed several times per year, and no major changes or issues were encountered since the last FYR. Groundwater sampling activities are completed quarterly, and any issues with wells are reported as they arise. The Site Manager of Operations and Maintenance has not noticed any issues with the Site, Site personnel, or any community concerns regarding the Site.

3.1.4 City of Chillicothe Wastewater Treatment Plant Operator

The City of Chillicothe Wastewater Treatment Plant Operator (WTP Operator) supervises all of the wastewater treatment operations for the City of Chillicothe and is familiar with the Site. The WTP Operator did not recall the GWUNA and was given a brief explanation of the document and informed of the two monitoring wells (MW-OS-1-I and MW-OS-1-D) installed on the Publicly Owned Treatment Works (POTW) property. The WTP Operator only receives sanitary sewer and municipal supply from the City of Chillicothe and has not received industrial waste from the Site in a long time. The WTP Operator inspects the ASL facility twice a year in accordance with the POTW discharge permit. The ASL facility is considered a dry discharger, meaning only sewage and water from occasional floor cleaning is sent to the wastewater treatment plant. The WTP

Operator hasn't noticed any issues with the Site, Site personnel, or any community concerns regarding the Site.

3.1.5 U.S. Paper Mill Environmental Health and Environmental Manager

KEY contacted the USPM Environmental Manager and briefly explained the purpose of the interview. The USPM Environmental Manager was not aware of any long-term plans for the paper facility. They also were not aware of any residents or businesses with issues pertaining to the Site. KEY explained the purpose of a GWUNA to the USPM Environmental Manager, and they expressed that USPM would be open to discussion on entering into a GWUNA with Howmet.

3.1.6 Mrs. Eva Herald

Mrs. Eva Herald declined to answer any questions. During the 2020 Five-Year Review interview, Mrs. Herald had no issues with the Site and didn't know of anyone using groundwater in the vicinity.

3.1.7 Mr. John Adams

Numerous calls were attempted to contact Mr. Adams. All calls were unanswered.

3.1.8 Standard Car (Barber Spring) Truck Company

Standard Car Truck Company declined to answer any questions.

3.1.9 Clary Truck Inc.

KEY contacted Clary Truck Inc. and provided a brief introduction as to the purpose of the call and interview for the fifth FYR. Clary Truck Inc. indicated they have no issues with the site or with the GWUNA that was signed with Alcoa. Clary Truck Inc. informed KEY that they hired an environmental lawyer to investigate risk, and the lawyer deemed that there are no concerns as long as groundwater is not used for consumption.

4.0 DATA AND DOCUMENT REVIEW

The team compiled and reviewed documents pertaining to the remedy at the Site since the last FYR to assess remedial performance at the Site. The documents reviewed were evaluated in terms of applicable regulatory requirements, current constituent toxicity values, implementation of institutional controls, and comparison of monitoring data to attainment objectives. All documents reviewed were obtained from Howmet. Table 4 provides a complete list of documents Reviewed for the Fifth FYR.

To confirm RAOs and performance standards, the following documents were reviewed:

- Model Statement of Work for the RD/RA at WearEver Aluminum, Chillicothe, Ohio (January 11, 1999),
- Director's Final Findings and Orders for the Site (includes Ohio EPA-Issued Decision Document and Ohio EPA's Responsiveness Summary), March 22, 1999,
- GMP Revised March 2012, Key Environmental,
- Current Groundwater Use Notification Agreements,
- Groundwater monitoring reports and progress reports, and,
- SSDS O&M Plan.

In addition to the above, a review of the current exposure assumptions, cleanup levels, and RAOs was undertaken to evaluate the effectiveness of the remedial actions.

The RI and resulting Conceptual Site Model (CSM) were evaluated during the first FYR in 2005. Consistent with the previous FYRs, this review focused on groundwater monitoring data collected since the previous FYR. Data collected during the VI assessment were also part of this review.

4.1 MAINTENANCE AND MONITORING REVIEW

Current maintenance and monitoring activities include quarterly groundwater monitoring, SSDS maintenance and monitoring, and landfill maintenance. Accordingly, maintenance and monitoring records generated since the last Five-Year Review were reviewed to determine if the actions conducted have achieved performance standards and to identify any potential problems with the remedies selected. The records reviewed included quarterly groundwater monitoring reports, quarterly progress reports, landfill inspection reports, and SSDS maintenance information and monitoring results. Table 5 provides a summary of quarterly, semiannual, and annual monitoring from the latest revision of the Groundwater Monitoring Plan (KEY, 2012), including any

modifications made following the Fourth FYR, and Table 6 includes a summary of the historical groundwater VOC sample results for groundwater monitoring activities.

The results of the monitoring and maintenance review are summarized below and focus on groundwater flow direction, plume migration and trends, condition of the SCA cover, and the performance of the SSDS.

4.1.1 Groundwater Flow Direction

Groundwater flow onsite is influenced by USPM's nearby collector wells. Figures 1 and 2 provide locations of the collector wells relative to the site. Collector wells located along the Scioto River east of the plant (Wells 16, 17, and 18) typically control localized groundwater flow direction. Historically, groundwater flow at the site is to the east-northeast toward Wells 17 and 18, which are the closest collector wells to the Site. Flow rates projected by groundwater modeling conducted during preparation of the RI indicate that average groundwater travel time from the Site to Well 18 is on the order of one to two years.

Occasional variations in collector well pumping rates for the wells located along the Scioto River can temporarily modify groundwater flow direction beneath the Site area. For example, the declining production rate of Well 18 beginning in approximately 2008 and persisting until the summer of 2013 led to a more southeasterly groundwater flow direction. However, the rehabilitation of Well 18 (installation of new laterals) that was conducted in 2013 resulted in increased pumping capacity and a more east-northeast flow direction similar to pre-2008. Figure 6 illustrates groundwater flow direction during 1995 (pre-remediation), 2009 (post-remediation Well 18 flow diminished), 2015 (post-remediation Well 18 flow restored), 2020 2021, and 2025.

In the second quarter of 2020, it was observed that the groundwater flow direction had again shifted to the southeast. Pixelle was contacted to determine if they had well maintenance issues or had made changes to their pumping operations. Subsequent data provided by Pixelle showed apparent reduced production from their collector wells prior to the second quarter of 2020. Howmet collected additional groundwater flow data at the Site during the third and fourth quarters of 2020 and the first quarter of 2021 to monitor the situation. As shown in Figure 6, the southeast flow was observed to have shifted back to the east in 2021. Since 2021, the expanded potentiometric surface maps that include paper mill observation wells show that groundwater is captured by the paper mill's Collector Wells 17 or 18. The groundwater flow direction gradually shifts more to the northeast at and beyond the eastern boundary of the Site.

During the Second FYR, groundwater monitoring indicated detections of the shallow plume along the eastern property line at MW-D-S, which is located adjacent to the SCA. This condition may have been exacerbated by the southeasterly flow direction prevalent between 2008 and 2013.

Given the potential for a shift in the groundwater flow direction based on USPM's operation of pumping wells, Howmet enhanced its monitoring scope during the third quarter of 2025 and will continue until groundwater conditions are better understood under USPM's pumping operations.

4.1.2 Plume Migration and Trends

Figure 7 is a map view of the total approximate plume limits on-site and off-site towards production well 18. Figures 8 and 9 provide cross-sectional views of individual and total concentrations of site-related chlorinated ethenes for wells sampled in the shallow and intermediate groundwater zones during the March 2025 annual monitoring event. Appendix D provides plume maps based on a five-year average concentration for constituents, and the plume extent has remained consistent in comparison with previous FYRs.

Except for the select events in 2021, the groundwater plume continued to flow towards Wells 17 and 18 since the last FYR. While some monitoring wells' sample data fluctuated in VOC concentrations, the overall extent of the plume has not changed substantially. The trends in concentrations for the parent chlorinated solvent and degradation products are described in the subsections below for the shallow and intermediate groundwater zones. The individual monitoring well dataset trend charts are provided in Appendix E.

Long-term trends were evaluated by completing Mann-Kendall statistical trend tests in Appendix E and are summarized in Table 7. Table 7 shows results of 73 Mann-Kendall statistical trend tests. A no-trend conclusion was identified for 49 datasets; an increasing-trend conclusion was identified for 7 datasets; and a decreasing-trend conclusion was identified for 16 datasets. Table 7 shows that 35 of the 72 datasets analyzed contained fewer than 50% of detected results (i.e., greater than 50% of results were below detection limits). The 7 datasets for which an increasing trend was identified consisted of datasets that had fewer than 50% detected data; were daughter products (cis-DCE) which indicated evidence of biodegradation; or were in close proximity to a source zone. The greater number of no trend results (49) and decreasing results (16) in comparison to the fewer increasing results (7) indicates that these data primarily indicate a no trend or decreasing trends for the Site.

4.1.2.1 Shallow Zone

The presence of chlorinated constituents in the shallow zone of the aquifer is the result of releases from several different areas of the site. The RI identified PSAs, which are located and identified on Figure 3. Through the course of the RI, many of the PSAs were found to be sources of chlorinated constituents to the shallow zone, including the Old Barrel Storage Area, a former Sludge Disposal Area, former TCE AST, former Tee Pee incinerator, as well as multiple areas inside the former WearEver facility plant. TCE is the predominant constituent of concern (COC)

within the shallow portion of the aquifer. The shallow plume adjacent to the manufacturing building and extending to the east and north is comprised predominantly of TCE, whereas the shallow plume in the Old Oil Barrel Storage Area (MW-GA-S and MW-LP-S) and beneath the northern border of the Sludge Consolidation Area (MW-F-S and MW-C-S) are comprised of a mixture of cis-1,2-DCE, vinyl chloride, and TCE.

Appendix D compares the five-year average concentrations of cis-1,2-DCE from 2021-2025 concentrations in the shallow zone. These degradation products (cis-DCE and vinyl chloride) occur in higher concentrations at MW-F-S, which is downgradient of source zones, and indicate biodegradation along the groundwater flow path. Since 2020, the cis-1,2-DCE concentration has decreased at some wells and increased at others.

The reductive dechlorination of the VOC plume in the shallow zone advances to the production of vinyl chloride. Appendix D depicts the five-year average vinyl chloride concentrations within the shallow zones. As the trend charts in Appendix E show, vinyl chloride concentrations have fluctuated at MW-F-S. During the five-year review period, vinyl chloride concentration has ranged from nondetectable values to 110 ug/l in March 2025. At MW-GA-S, concentrations decreased from an average of 2.2 ug/l over five years to nondetectable in 2025. As of March 2025, only 2 of the 13 shallow locations, MW-F-S and MW-1S, detected vinyl chloride. Vinyl chloride is often degraded into ethene in reducing conditions or carbon dioxide in aerobic conditions; thus, the lack of accumulation of vinyl chloride suggests further biodegradation to a benign constituent.

4.1.2.2 Intermediate Zone

Appendix D depicts five-year average concentrations and the extent of the individual chlorinated ethene constituents in the intermediate zone since the last FYR. The intermediate zone plume extends from the former Leach Pit source area towards monitoring well MW-OS-1-I and ultimately to Well 18. The plume size and shape are generally consistent with previous FYRs. TCE naturally degrades to cis-1,2-DCE and vinyl chloride occurs as it migrates to the northeast in the intermediate zone.

Well MW-LP-I is located adjacent to and directly downgradient of the former Leach Pit, the source area for the intermediate plume. Pre-remediation constituent concentrations in groundwater ranged from 6,366 to 7,693 µg/l from this location. TCE is the primary site-related constituent detected at MW-LP-I. This monitoring location has exhibited a significant decrease in concentration over time, as indicated by statistical trend testing.

Downgradient from the source area, an increasing TCE trend was identified at MW-C-I; however, this trend test result was due to a few recent detections, and continued monitoring is needed to verify if data are representative. Degradation products cis-1,2-DCE and vinyl chloride at MW-C-

I have decreased over time. The change in parent-to-daughter product ratios between source area well MW-LP-I and downgradient well MW-OS-1-I provides further evidence of reductive dichlorination along the groundwater flow path.

4.1.3 SCA Cover

Quarterly inspection of the SCA cap continues to be conducted and is reported in each Quarterly Progress Report. The SCA cap remains in good condition with hearty vegetative cover and no appreciable degradation or erosion is evident. During the third quarter 2025 SCA inspection, damage to the fence around the Site was identified and was subsequently repaired.

4.1.4 SSDS Performance

A report documenting the VI assessment and installation of the SSDS, as well as an O&M plan for the SSDS, was submitted to Ohio EPA in October 2019 and revised in March 2021. SSDS inspection and monitoring include annual and monthly events which are designed to ensure the SSDS is operating effectively.

The annual monitoring is conducted during each winter season, because winter represents the "worst case" potential for vapor intrusion (i.e., the peak of the heating season). The O&M Plan includes details of the annual activities which include inspecting SSDS components and the building structure for damage or changes, recording vacuum readings at the roof-mounted blowers and at the magnehelic pressure gauges for each SSDS, monitoring the pressure field extension provided by each SSDS, and collecting a round of indoor air samples. The annual indoor air analytical data was included with the First Quarter Progress Report to Ohio EPA. During the fourth quarter of 2024, SSDS #2 experienced a failure following a thunderstorm, and Howmet subsequently procured services to install new blowers and repair the system. The first quarter 2025 annual indoor air sampling event was completed in January 2025 and showed that there were no exceedances of the Ohio EPA recommended action level of 8.8 $\mu g/m^3$. Future annual monitoring will continue to be completed in winter, and results will be provided in progress reports.

5.0 APPLICABLE STANDARDS REVIEW

A review of the applicable cleanup standards for Site remediation was conducted to determine that the selected standards remain valid. Specifically, this involved a review of the exposure assumptions and toxicity data related to the cleanup of metals-contaminated surficial soils and materials, a review of RAOs formulated at the time of remedy selection, and a review of current applicable cleanup levels for subsurface soil and groundwater, and recommended action levels for indoor air.

5.1 RAOs

In accordance with the 1993 Order, Alcoa, along with WearEver Realty Associates, Hamilton Beach Proctor Silex Inc. and Newell Company, performed a Feasibility Study (FS) for the Site under the oversight of Ohio EPA. In the FS, the remedial action objectives (RAOs) formed the basis for establishing a range of treatment or containment alternatives that were evaluated for Site remediation. The RAOs included the following:

- Prevent direct-contact exposure to elevated levels of lead and other metals in surface material; and,
- Control access to affected groundwater, both on-site and off-site, such that unacceptable exposure does not occur.

The remedial action objective for groundwater is also to ultimately achieve MCLs as chemical-specific applicable or relevant and appropriate requirements (ARARS).

5.2 CLEANUP LEVELS

A cleanup level of 2,000 mg/kg for concentrations of lead in soil was calculated for this site in the 1996 RI and made part of the surface soils alternative component of the selected remedy in the Decision Document. A cleanup level for cadmium was not needed, because cadmium is co-located with lead and any cleanup conducted to address the lead in surface material would resolve the minor risk cadmium poses.

The United States Environmental Protection Agency (USEPA) currently recommends that a soil lead concentration of 800 mg/kg be used to screen analytical results to assess whether lead is a potential constituent of concern in a non-residential scenario (Industrial). This Regional Screening Level (RSL) is derived using the USEPA Adult Lead Methodology (USEPA, 2003). The Adult Lead Methodology is used to assess potential blood levels in a fetus from its mother. The average lead concentration after the 2001 remediation was 144 mg/kg, which is well below the USEPA

RSL of 800 mg/kg, so no adverse health effects would be expected from typical commercial exposure scenarios of 220-250 days/year over a 25-year period.

The cleanup levels for groundwater are still the federal MCLs, which have not changed since the last FYR.

5.3 INDOOR AIR ACTION LEVELS

There are no indoor air action levels specified in the 1999 DFFO or promulgated by regulation. However, Howmet has worked to attain the Response Action Levels recommended by Ohio EPA in their 2016 vapor intrusion guidance document.

6.0 ON-SITE INSPECTION

A Site inspection was performed on August 19, 2026, by KEY, Ohio EPA, and Howmet as a component of the FYR. The inspection was performed to reveal any issues with the remedial systems in place at the Site. A copy of the completed Five-Year Review Site Inspection Checklist is provided in Appendix B.

7.0 TECHNICAL ASSESSMENT OF SITE CONDITIONS

The FYR will confirm whether the remedy at the Site is protective of human health and the environment. This technical assessment will examine the following three key questions when determining the protectiveness of the remedy:

Question A – Is the remedy functioning as intended by the decision documents?

Question B – Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy selection and during the VI assessment still valid?

Question C – Has any other information come to light that could call into question the protectiveness of the remedy?

7.1 QUESTION A

This section evaluates the performance of the remedial actions since the last FYR.

7.1.1 Sludge Consolidation Area

The selected remedial technology for the metals-containing sludge and debris was excavation and consolidation under an engineered soil cover that eliminates the potential for direct contact with impacted material. At the time of the Preferred Plan, the remedy met the remedial objectives set forth in the FS, and it continues to do so.

The clay cap and vegetative cover prevent direct contact with the materials and retard infiltration. The SCA is inspected quarterly, and any potential problems with the cap (i.e., erosion, burrowing from animals, vegetative growth) are addressed before problems arise. The deed restriction that has been placed on this property prevents future disturbance or liberation of the material.

7.1.2 Groundwater

The subsections below evaluate the performance of the groundwater remedy.

7.1.2.1 Plume

Since completion of the Phase II AS/SVE in 2006, the groundwater remedy has continued with groundwater monitoring to evaluate the effectiveness of the AS/SVE at the source areas and to monitor the plume in accordance with the Decision Document.

The RAO for groundwater is to ultimately achieve MCLs as chemical-specific applicable or relevant and appropriate requirements (ARARS). Appendix A (Decision Document) of the 1999

DFFO projected that source treatment by AS/SVE would result in an approximate 90% reduction in groundwater concentrations of site-related COCs. The RAO of attaining MCLs within the aquifer would then be achieved by natural degradation over time. As cited in the Decision Document and discussed in the FS, the estimated timeframe to achieve MCLs for site-related COCs was projected at 3 years after active treatment for Collector Well 18 area, 47 years after active treatment for near offsite areas (MW-OS-1-I), and 106 years after active treatment for onsite areas.

The recent concentrations indicate that the shallow aquifer had achieved an approximate 90% reduction in VOC concentrations when compared to pre-remediation (prior to 1999) levels. The RAO of achieving MCLs for site-related constituents is projected to occur through post-remediation natural degradation of the aquifer plume. Achieving MCLs in the shallow zone within the projected time frames cited in the Decision Document remains feasible.

The groundwater monitoring is also done to monitor hydrodynamic control of the extent of groundwater contamination as currently exerted by Collector Well 18. As noted in previous FYR reports and as discussed above, occasional variations in collector well pumping rates can temporarily modify groundwater flow direction beneath the Site area. A shift in groundwater flow direction to the southeast occurred from 2008 to 2013 as described in the 2010 and 2015 FYR reports. It occurred again in the second to fourth quarters of 2020; however, the southeast flow was observed to have shifted back to the east in January 2021. Groundwater again shifted in the first quarter of 2021, with a groundwater divide becoming present on the eastern portion of the site; however, flow shifted back the following month. Currently, as an interim measure due to the uncertainty of how USPM intends to utilize the collector wells, Howmet proposed to temporarily enhance its monitoring scope for the foreseeable future; however, it should be noted that while residential water wells to the southeast of the Site were used when the Site remedy was developed, the residences have since been connected to the municipal water supply.

7.1.2.2 GWUNAs

The Clary Farm Trust (Daniel Clary trustee) is the legal owner of 1159 Eastern Avenue and 1177 Eastern Avenue. Previously, Daniel Clary has been contacted and indicated that he is not willing to execute a GWUNA for either of these properties. Thus far, sampling of MW-OW-3 (as stipulated in the former respective GWUNAs) has continued without interruption. In accordance with the OEPA response letter dated February 3, 2016, sampling of the Hammond Well was discontinued unless a southeast shift of groundwater flow direction occurs.

Pixelle was purchased by USPM in October 2025. With the transfer of ownership of the paper mill, a GWUNA will be discussed with USPM. USPM has continued to provide access to

Collector Wells 17 and 18 for monitoring purposes. USPM has also cooperated by providing collector well pumping records annually.

7.1.2.3 Vapor Intrusion

Indoor air sample data collected at the Site during this FYR period after the SSDS was established demonstrate that systems are operating effectively.

The potential for vapor intrusion to offsite receptors is limited to constituent migration within shallow groundwater. A robust monitoring well network is located along the southeastern border of the site, adjacent to residential properties occurring along Eastern Avenue. Routine groundwater monitoring continues to demonstrate that the residential properties occurring along Eastern Avenue are not a present vapor intrusion concern. Groundwater monitoring will continue to identify any change in flow direction or plume migration in advance of potential vapor intrusion exposure to this area.

The shallow groundwater plume in the northeast corner of the facility (north of the SCA) contains site-related VOCS above regulatory levels. This part of the WearEver facility is upgradient of the neighboring industrial facility now owned by Standard Car Truck Company (Barber Spring). Rather than assessing the potential vapor intrusion pathway at the Barber Spring facility using the new methods provided in the 2015 Guidance, Alcoa contacted the owner and requested permission to install a vapor mitigation system at the Barber Spring facility as a conservative measure to address this matter in response to the Third FYR.

7.2 QUESTION B

While some toxicity parameters for constituents of interest changed over the past 20 years, exposure parameters used to evaluate risks in 1999 are still valid. Table 7 statistical analysis of TCE, cis-DCE, and Vinyl Chloride and their trends over time at individual well locations. As shown in Table 7, the majority of the outputs indicate no trend or decreasing trends, with 9% of results of the analysis displaying increasing trends.

Re-assessment of risks associated with potential soil exposures was conducted to be consistent with previous five-year reports, as well as to be as complete as possible regarding USEPA's changing policies and standards over the past 20 years. Remediation was conducted for metals in the surface soils and VOCs in subsurface soils. By completing this comparison using pre-remediation data, we can safely conclude that even under conservative exposure assumptions, risks have remained only slightly above risk benchmark levels.

It should be noted that remediation of site soils has resulted in the consolidation of metals-impacted soils in a consolidation area, and hence the potential for exposure to the metals has been reduced versus that considered in the RI Risk Assessment.

The risk estimate associated with exposure to TCE in soil is below the upper bound of the EPA target risk range of 1E-4, and it's important to note that this reflects pre-remediation conditions.

The potential for groundwater contaminant exposure has been reduced as a result of natural degradation and as a result of the installation of municipal water lines to residences adjacent to the Site.

An assessment of changes in groundwater standards was also completed by comparing current Maximum Contaminant Levels versus those in effect at the time of the RI and the earlier Five-Year Reviews. No MCL changes have occurred for the primary groundwater constituents of interest (i.e., TCE, cis-1,2-DCE, and vinyl chloride).

In addition, the potential exposures via potential vapor intrusion were not addressed in the original risk assessment but have been considered in subsequent reviews. In order to be consistent with previous five-year reviews, potential exposures to TCE vapors are addressed by comparing the measured indoor air concentrations to the updated regional screening levels for TCE. The results of that exercise indicated that the changes in toxicity values have not resulted in risks that exceeded acceptable levels.

In conclusion, under existing conditions and given changed toxicity values, it is evident that risks remain acceptable and, in fact, have likely slightly declined since the completion of the RI Risk Assessment and completion of remedial activities.

7.3 QUESTION C

The Technical Assessment of the information in Sections 3 through 6 suggests the remedy remains protective (see Section 9). If the USPM production wells are permanently shut down in the future, an updated conceptual site model will be constructed based on monitoring data collected during non-pumping conditions. Once groundwater flow is no longer under the influence of the collector wells, and non-pumping conditions have been characterized and assessed, a revised remedial approach that ensures continued protection of human health and the environment, including the health and safety of the nearby residents, will be developed for Ohio EPA evaluation and approval under the DFFOs.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The SCA continues to be effective in reducing the potential for exposure to metals at the Site through encapsulation and isolation. The deed restriction prohibiting excavation of the SCA provides future protection from exposure to metals contaminated material. Based upon the evaluation conducted, no additional measures beyond the current monitoring and maintenance are recommended for the SCA.

Annual and post-repair indoor air sample data collected at the Site during this FYR period after the SSDS was established demonstrate that systems are operating effectively. As such, it is recommended that the O&M Plan continue to be implemented.

Overall, the groundwater remedy is still within the predicted time frames for achieving the RAO for onsite and offsite groundwater that were provided in the 1999 DFFO, with the exception of Collector Well 18, where the concentration of vinyl chloride is declining but still remains slightly above the drinking water MCL. It should be noted that the water from Well 18 is not used for potable purposes. As the plume mass decreases and degradation continues, it is anticipated that constituent concentrations at Well 18 will also decline and ultimately achieve MCLs.

Long-term statistical trend analysis shows that a no trend conclusion was identified for 49 datasets; an increasing trend conclusion was identified for 7 datasets; and a decreasing trend conclusion was identified for 16 datasets (Table 7 and Appendix E). The 7 datasets for which an increasing trend was identified consisted of datasets that had fewer than 50% detected data; were daughter products (cis-DCE), which indicated evidence of biodegradation; or were in close proximity to a source zone. The shallow plume appears stable as its extent has not changed substantially.

The reductive dechlorination of the VOC plume in the shallow zone is less than that observed in the intermediate zone, based on the relative abundance of degradation products in the intermediate zone. The TCE concentrations in intermediate groundwater near the Leach Pit (source area) have declined substantially, and the parent compound continues to naturally degrade to cis-1,2-DCE and vinyl chloride as the plume migrates offsite towards Well 18. It is recommended that the current intermediate zone monitoring program be continued.

GWUNAs were identified in the Limited Action alternative selected in the 1998 Decision Document and enforced by the 1999 DFFO, which states that GWUNAs proposed in the 1996 FS Report will be used to ensure that downgradient landowners will notify the PRPs and Ohio EPA of any plans to use the groundwater or significantly modify current groundwater uses. It is recommended that the current GWUNAs with the City of Chillicothe, Standard Car Truck Company, Eva Herald, and John Adams continue.

Alcoa Inc. executed a GWUNA with the Mead Corporation in 2000 because of the influence Mead's paper plant production wells have on the hydrodynamic control of the WearEver groundwater plume. The Mead GWUNA noted that upon Alcoa's request, Mead would provide access to their wells for monitoring and provide information regarding changes or alterations to their water supply system.

Since the original GWUNA was executed with Mead in 2000, a change in ownership of the paper plant has occurred several times. Glatfelter purchased the plant in 2006. Although a revised GWUNA provided to Glatfelter was never executed, Glatfelter continued to cooperate with Alcoa Inc. (and later Arconic Inc.) by allowing sampling of collector wells and by providing collector well pumping records annually. This cooperation continued after Pixelle Specialty Solutions purchased the paper plant in 2019. Howmet initiated discussions with Pixelle during preparation of the 2015 FYR regarding the transfer and continued implementation of the Mead GWUNA so that information regarding changes or alterations to their water supply system can be provided, but a GWUNA was never established.

Pixelle sold the paper plant to USPM in 2025. It is recommended that Howmet pursue a GWUNA further with USPM, as its implementation allows Howmet and Ohio EPA to better evaluate Site conditions. It should be noted that USPM has provided access for sampling of operating collector wells and provides collector well pumping records annually.

While the paper plant production wells have significant influence on the hydrodynamic control of the WearEver groundwater VOC plume, the wells are pumped by USPM as needed for their operations. Changes or alterations to USPM's water supply system to address their operational needs can cause shifts in groundwater flow direction at the WearEver Site. Shifts in groundwater flow direction to the southeast occurred from 2008 to 2013 as described in the 2010 and 2015 FYR reports. It occurred again in the second to fourth quarters of 2020; however, the southeast flow was observed to have shifted back to the east in January 2021. A groundwater divide was present across the site in the first quarter of 2021, but shifted back to eastern-flowing conditions shortly after.

Although USPM may provide information to Howmet regarding their water supply system, the operation of USPM pumping wells is beyond Howmet's control. As such, Howmet has implemented enhanced monitoring and will update the conceptual site model if USPM decides to reduce or discontinue pumping. An alternative remedy will be implemented in the future, if appropriate, based on continued monitoring and potential receptor exposure pathways.

9.0 PROTECTIVENESS STATEMENT

The five-year review of the remedial actions at the former Howmet WearEver Site in Chillicothe, Ohio has shown that the remediation has been effective in reducing the concentrations of VOCs in soil, groundwater, and indoor air at the Site. The groundwater RAO of achieving MCLs generally remains within the timeframes stipulated in the Decision Document of the 1999 DFFO. Additionally, institutional controls (deed restriction, GWUNAs) add another layer of protection until the groundwater RAO has been achieved. As noted in the last FYR report, residences to the southeast of the Site have been supplied with municipal water; thus, residential wells are no longer used for potable purposes.

The SCA continues to be effective in reducing the potential for exposure to metals, and a review of the post-remedial exposure assumptions and toxicology of the constituents on the Site shows that the remedies continue to be protective of human health and the environment, now and into the foreseeable future. A review of the off-Site exposure assumptions in the risk assessment indicates that the assumptions are still valid and that the remedies continue to be protective of human health and the environment.

10.0 REFERENCES

Howmet Aerospace Inc., Vapor Intrusion Report and SSDS O&M Plan, Former WearEver Site, Chillicothe, Ohio, October 2019 - Revised March 2021

Blasland, Bouck, & Lee, Inc., Remedial Investigation Report, Former WearEver Site, Chillicothe, Ohio, July 1996

Blasland, Bouck, & Lee, Inc., Remedial Investigation Report, Former WearEver Site, Chillicothe, Ohio, July 1996

CEC, Remedial Action Report for the Excavation of Potential Source Areas and Containment Area Cap Construction, Alcoa's Former WearEver Facility, Chillicothe, Ohio, Civil and Environmental Consultants, February 2001

Key Environmental, Inc., Fifth Revision to the Groundwater Monitoring Plan, Alcoa Former WearEver Facility, Chillicothe, Ohio, March 2012

Key Environmental, Inc., Second Five Year Review, Alcoa Former WearEver Facility, Chillicothe, Ohio, September 2010

Key Environmental, Inc., Third Five Year Review, Alcoa Former WearEver Facility, Chillicothe, Ohio, October 2016

Key Environmental, Inc., Indoor Air Sampling and Analysis Report, Alcoa Former WearEver Facility, Chillicothe, Ohio, September 2016

Key Environmental, Inc., Fourth Five Year Review, Alcoa Former WearEver Facility, Chillicothe, Ohio, December, 2021

Key Environmental, Inc., Fifth Five Year Review Work Plan, Howmet Former WearEver Facility, Chillicothe, Ohio, January 2026

ICF Kaiser, Groundwater Flow Model Evaluation, Alcoa's Former WearEver Facility, Chillicothe, Ohio, April 1998

Ohio EPA, Director's Findings and Orders, Ohio Environmental Protection Agency, 1993

Ohio EPA, State of Ohio Model Statement of Work for the Remedial Design and Remedial Action at WearEver Aluminum, Chillicothe, Ohio, January 11, 1999

Ohio EPA, Director's Final Findings and Orders for the Site (Includes Ohio EPA-Issued Decision Document and Ohio EPA's Responsiveness Summary), March 22, 1999

Ohio EPA, Ohio EPA Report Review, Revised Third Five-Year Review Report – March 2016 Comment Letter, July 2016

Ohio EPA, Guidance Document Recommendations Regarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio, August 2016.

The Marsh Consulting Group and Leo M. Brausch, P.E., Feasibility Study Report for the WearEver Site; November 1996

USEPA, Risk Assessment Guidance for Superfund, Human Health Evaluation Manual Part A, Office of Solid Waste and Emergency Response 9285.701A, December 1989

USEPA, Recommendations of the Technical Review Workgroup for Lead and Approach to Assessing Risks Associated with Exposures to Lead in Soil. EPA-540-R-3-001, January 2003

USEPA, USEPA Regional Screening Level (RSL) Summary Table (TR=1E-06, HQ=1.0), November 2020. https://www.epa.gov/risk/regional-screening-levels-rsls.

TABLES

TABLE 1
SUMMARY OF FIVE-YEAR REVIEW MAJOR ACTIVITIES
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

ACTIVITY	PURPOSE	SCOPE
Review of site related documents and reports.	Assess the effectiveness of remedial performance and achievement of RAOs	Review site related Regulatory Documents and Orders. Review RI report and supporting info. Review FS and Preferred Plan. Review Remedial Design Docs. Review Remedial Implementation and Close-Out. Review O&M plans, Ground Water and Indoor Air monitoring.
Research current ARARs	Ensure that Remedial Action is protective of receptors and re-check the validity of exposure assumptions	Review constituent cleanup standards, exposure assumptions and toxicity data. Review potentiometric conditions of the water table aquifer for potential shifting of the plume and increased receptor exposure. Review indoor air concentrations for potential changes in sub-slab conditions and increased receptor exposure.
Public Notification	Include area residents in Five-Year Review	Solicit public comment regarding the site. Seek input from stakeholders regarding remedial effectiveness, future activities. Conduct interviews with stakeholders and interested residents.
Site Inspection	Visual confirmation of the remedy and document conditions of the site in general.	Onsite inspection of Remediation Areas, Monitoring Points, Sludge Consolidation Area (SCA), and Sub-Slab Depressurization System (SSDS). Completion of Site Inspection Checklist.
Technology Evaluation	Answer the following questions: 1) Is remedy functioning as intended? 2) Are exposure assumptions, toxicity data and ARARs still valid? 3) Any other info discovered that questions the protectiveness of the remedy.	Evaluate data collected as part of Five-Year Review. Review ground water constituent concentration trends, Evaluate NA potential of aquifer, Review GMP for current conditions, Evaluate the need for supplemental ground water remedies.

TABLE 2
FORMER WEAREVER SITE CHRONOLOGY
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

EVENT/MILESTONE	AUTHOR	YEAR	DESCRIPTION
Pre-Order Investigations	Various	1980-1991	Multiple ground water soil investigations of Potential Source Areas.
Director's Findings and Order	OEPA	1993	Formally designated a CERCLA site under jurisdiction of OEPA. Required implementation/completion of RI/FS.
Remedial Investigation	BB&L	1996	RI completed in two phases. Identified PSAs, divided into VOCs and metal source areas. Ground water flow modeling conducted.
Risk Assessment	BB&L	1996	Incorporated into RI. Established 2000 mg/kg cleanup level for lead. Identified ground water potential exposure issues.
Feasibility Study	Marsh/Brausch	1996	Recommended onsite consolidated of metals containing media, AS/SVE for subsurface soil/ground water remediation and Institutiona Controls.
Preferred Plan	OEPA	1997	Identified OEPAs preferred remedies for the site and solicited public comment. Endorsed FS recommendations.
Decision Document	OEPA	1998	Presented selected Remedial Actions for the site subsequent to public participation/ comment. Remedy was essentially the same as Preferred Plan.
Director's Final Findings and Orders	OEPA	1999	Formalized Remedial Action selection process. Required RD/RA Work Plan. Included "Model Statement of Work."
RD/RA Work Plan	IT	1999	Described Pre-Design studies. Specified design requirements for remedial measures. Included FSP, QAPP, CQAP, H&S Plan, GMP
Design Documents	IT/MFG	1998-2003	Included design and specifications for Sludge Consolidation Area, IA AS/SVE, Leach Pit Reconfiguration and Phase II AS/SVE.
Interim Action AS/SVE	MFG	1999-2002	OEPA approved shutdown of IA in February 2003 upon achieving shutdown demonstration criteria. Over 20,000 lbs of VOCs removed.
Sludge Consolidation Landfill	CEC	2000	Consolidation of metals containing PSAs in a landfill located in northeast corner of site. Deed restrictions placed on capped area. OEPA approval Oct.2001.
Former Leach Pit Reconfiguration	WQS/MFG	2002	Former leach Pit reconfigured to prevent direct discharge into water table aquifer.
Phase II AS/SVE	MFG	2003-2006	Over 7500 lbs of voices removed. System terminated in October 2006 upon achieving shutdown criteria.
Institutional Controls	ALCOA	1999-2006	GWUNAs negotiated with offsite landowners downgradient/adjacent to plume area. See Table 2 for details.
Phase II AS/SVE Piping Demolition	KEY	2011	Demolition and disposal of the Phase II AS/SVE system piping.
Indoor Air Sampling Report	HOWMET	2016-2019	Indoor Air Assessment, Indoor Air sampling, concrete emission sampling, and sub-slab sampling.
Sub Slab Depressurization Installation	HOWMET	2019	Installation and optimization of Sub slab depressurization system.
Ground Water Monitoring	MFG/KEY	2001-present	Quarterly ground water monitoring/reporting ongoing. Includes residential, offsite monitoring wells, and paper company production wells.

TABLE 3
INSTITUTIONAL CONTROL STATUS – 5 YEAR REVIEW ADJACENT PROPERTY
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OH

Property Owner (Original)	Property Address	Parcel No.	Current Contact	Wells	Institutional Control Provisions Institutional Control	Date	Notice of GW use	Access	Other	Status
Alcoa Subassembly & Logistics (ASL)	1089 Eastern Ave.	241608014000	Lee Allison	Monitoring wells	Use Restriction Agreement w/OEPA	10/21/2004			Industrial commercial use only; no GW use, no well w/o OEPA consent, no landfill excavation	Unlimited
City of Chillicothe (WNTP)	405 Environmental Way	305660047600 & 305652026600	Thos Burnett	OS-1 monitoring well	GWUNA w/Alcoa	3/23/1999	yes	Yes OS-1		10 years auto renew
Hammond, Meredith	1159 Eastern Ave.	241608016000	Dan Clary (Clary Farm Trust)	Residential well	GWUNA w/Alcoa	6/25/1999	yes	yes	Residential Well Sampling	The original agreement was for 11 years with automatic renewal. Property transferred in 2011 to Jesse & Patricia Clary, and then in 2012 to the Clary Farm Trust, Daniel Clary, Trustee. **Mr. Clary was provided with a revised GWUNA on December 20, 2012. He stated an unwillingness to sign the revised GWUNA.**
Clary, Jesse Jr. & Patricia Ann	1177 Eastern Ave.	251608075000	Dan Clary	Residential well & OS3 monitoring well	GWUNA w/Alcoa	12/14/2001	yes	Yes OS-3	Hydrant non potable outdoor use only	Original Agreement was for 12 years with automatic renewal. Property transferred to Clary Farm Trust, Daniel Clary Trustee. **In 2012 Mr. Clary has stated an unwillingness to sign a revised GWUNA.**
U.S. Paper Mill (Formerly Pixelle Specialty Solutions LLC, Formerly Glatfelter, Formerly Mead Corporation, and Formerly Chillicothe Paper, Inc.)	Industrial Well 17 & 18	251608006000 & 241608007000	Kim Lute (USPM)	Industrial wells 17 & 18, piezometers	Previous owner had a GWUNA w/Alcoa	(Previous Owner) 2/15/2000	At Alcoa request	Yes 18 & 17, others	Annual Well Production Records Sampling of Production Wells	Original Agreement was for 13 years with automatic renewal. Chillicothe Paper now owned by Pixelle Specialty Solutions. **A revised GWUNA was submitted to Glatfelter and Mead Corporation. A copy of the original GWUNA with Mead was sent to Pixelle in 4Q 2020, Pixelle had not executed the agreement. Howmet is currently trying to execute a GWUNA with U.S. Paper Mill.**
Herald, Joseph & Eva	1151 Eastern Ave.	241608017000	Eva Herald	Residential well	GWUNA w/ Alcoa	11/9/1998 12/21/12	yes	yes		Property transferred to Eva Herald. Eva Herald executed a revised GWUNA 12/21/2012. New agreement is for 10 years with automatic renewal.
Standard Car Truck Company (Barber Spring)	387 Wetzel Dr.	305660010000	Mickey Korzeniowski	None	GWUNA w/ Alcoa	07/21/2014	yes			10 years auto renew
John Adams	1187 Eastern Ave.	251608005000	John Adams & Gloria Milella (tenant)	OS-2 monitoring well	GWUNA W/ Alcoa	2006	yes	yes	Cistern used as water supply; potable water trucked	10 years auto renew
Jones & Cryde	Farmland east of Route 23	251608070000	None		None, Refused					
ODOT			None	None	OEPA 6/20/2000 GWUNA not needed					
CSX			None	None	OEPA 6/20/2000 GWUNA not needed					

TABLE 4
LIST OF DOCUMENTS REVIEWED FOR THE FIVE-YEAR REVIEW
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TITLE	AUTHOR	MONTH	YEAR
Director's Findings and Orders with Alcoa; WearEver Realty; Hamilton Beach- Proctor Silex; Newell	OEPA	May 6	1993
Draft Remedial investigation Report, Former WearEver Site, Chillicothe, Ohio	Blasland, Bouck & Lee, Inc.	September	1995
Solvent Vapor Extraction/Air Sparging Pilot Test Design Plan	Geraghty & Miller Inc.	December	1995
Solvent Vapor Extraction/Air Sparging Pilot Test Report	Geraghty & Miller Inc.	March	1996
RI Report Approval	OEPA	August 7	1996
Feasibility Study, Former WearEver Site, Chillicothe, OH	Marsh Consulting Group and Leo M. Brausch, P.E.	November	1996
Letter Approval of the Feasibility Study Report and Groundwater Use Notification Agreement Form	OEPA	January 30	1997
Environmental Assessment Report, Alcoa's Former WearEver Facility	ICF Kaiser Engineers, Inc.	November 4	1997
Decision Document for the WearEver Aluminum Site, Chillicothe, Ohio	OEPA	January	1998
Herald GWUNA	Alcoa	January	1999
Directors Final Findings and Orders w/ Decision Document (Jan 1999) and Model Statement of Work for the Remedial Design and Remedial Action (Jan 1999)	OEPA	March 22	1999
Remedial Design/Remedial Action Work Plan, Alcoa's Former WearEver Facility	IT Corp	May 20	1999
McGraw and Hammond GWUNAs	Alcoa	June	1999
Specifications for "Excavation of Potential Source Areas and Containment Area Cap Construction Project" CEAT No.2 Cost Node No. 366R000986	IT Corp	July 14	2000
Construction Quality Assurance Plan for the Containment Area Alcoa's Former WearEver Facility	CEC, Inc	September 5	2000
Remedial Action Report for the Excavation of Potential Source Areas and Containment Area Cap Construction Alcoa's Former WearEver Facility	CEC, Inc.	February	2001
Approval Remedial Action Report for the Excavation of Potential Source Areas and Containment Area Cap Construction, but requesting a post remediation data evaluation and residual risk assessment, if needed	OEPA Letter	March 15	2001
Post-remediation Data Evaluation- Surface Soil Quality	Alcoa Letter	October 1	2001
Agree with Post-remediation Data Evaluation demonstrating soils at acceptable levels for industrial/commercial use	OEPA Letter	October 30	2001

TABLE 4
LIST OF DOCUMENTS REVIEWED FOR THE FIVE-YEAR REVIEW
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TITLE	AUTHOR	MONTH	YEAR
Requesting reduction in groundwater monitoring frequency for the Sludge Consolidation Area from quarterly to once a year	Alcoa Letter	August 19	2002
Accept reduction in groundwater monitoring frequency for the Sludge Consolidation Area from quarterly to once a year	OEPA Letter	September 5	2002
Post-remedial air samples taken from inside facility by MFG	MFG, Inc.	December 11	2002
Remedial Investigation Report	BB&L	July	1996
Feasibility Study	Marsh Consulting Group and Leo M. Brausch, P.E.	November	1996
Director's Final Findings and Orders w/Decision Document (Jan 1998) and Model Statement of Work for the RD/RA (Jan 1999)	March 22	March 22	1999
Remedial Action Report for the Excavation of PSA and Containment Area Cap Construction	CEC	February	2001
Groundwater Monitoring Plan Revised March 2012	KEY	March	2012
Third Year Five Year Review Work Plan	KEY	September	2015
Groundwater Monitoring Report Second Quarter Sampling Event September 2015	KEY	September	2015
Groundwater Monitoring Report Fourth Quarter Sampling Event December 2015	KEY	December	2015
Groundwater Monitoring Report First Quarter Sampling Event March 2016	KEY	March	2016
Groundwater Monitoring Report Second Quarter Sampling Event June 2016	KEY	June	2016
Groundwater Monitoring Report Third Quarter Sampling Event September 2016	KEY	September	2016
Groundwater Monitoring Report Fourth Quarter Sampling Event December 2016	KEY	December	2016
Ohio EPA Report Review Third Five-Year Review Report – September 2015	OEPA Letter	February	2016
Response to Comments – Ohio EPA Report Review Third Five Year Review Report	KEY Letter	March	2016
Ohio EPA Revised Third Five Year Review Report	OEPA	July	2016
Response to Comments – Ohio EPA Report Review Third Five Year Review Report	KEY Letter	August	2016
Ohio EPA Report Approval Revised Third Five-Year Review Report – August 2016	OEPA Letter	September	2016
Groundwater Monitoring Report First Quarter Sampling Event March 2017	KEY	March	2017
Groundwater Monitoring Report Second Quarter Sampling Event June 2017	KEY	June	2017

TABLE 4
LIST OF DOCUMENTS REVIEWED FOR THE FIVE-YEAR REVIEW
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TITLE	AUTHOR	MONTH	YEAR
Groundwater Monitoring Report Third Quarter Sampling Event September 2017	KEY	September	2017
Groundwater Monitoring Report Fourth Quarter Sampling Event November 2017	KEY	November	2017
Groundwater Monitoring Report First Quarter Sampling Event February 2018	KEY	February	2018
Groundwater Monitoring Report Second Quarter Sampling Event June 2018	KEY	June	2018
Groundwater Monitoring Report Third Quarter Sampling Event September 2018	KEY	September	2018
Groundwater Monitoring Report Fourth Quarter 2018 Sampling Event January 2019	KEY	January	2019
Groundwater Monitoring Report First Quarter Sampling Event March 2019	KEY	March	2019
Groundwater Monitoring Report Second Quarter Sampling Event June 2019	KEY	June	2019
Groundwater Monitoring Report Third Quarter Sampling Event September 2019	KEY	September	2019
Vapor Intrusion Report and SSDS O&M Plan	ARCONIC/HOWMET	October	2019
Groundwater Monitoring Report Fourth Quarter Sampling Event December 2019	KEY	December	2019
Groundwater Monitoring Report Second Quarter Sampling Event June 2020	KEY	June	2020
Groundwater Monitoring Report Third Quarter Sampling Event September 2020	KEY	September	2020
2020 Five-Year Review Work Plan	KEY	October	2020
Ohio EPA Work Plan Review Fourth Five Year Review Work Plan	OEPA Letter	November	2020
Groundwater Monitoring Report Fourth Quarter Sampling Event December 2020	KEY	December	2020
Groundwater Monitoring Report First Quarter Sampling Event 2021	KEY	March	2021
Ohio EPA Report Review Fourth Five-Year Review Report – January 2021	OEPA Letter	April	2021
2020 Five-Year Report	KEY	May	2021
Groundwater Monitoring Report Second Quarter Sampling Event 2021	KEY	September	2021
Groundwater Monitoring Report Third Quarter Sampling Event 2021	KEY	October	2021
Ohio EPA Revised Fourth Five Year Review Report	OEPA	November	2021
Groundwater Monitoring Report Fourth Quarter Sampling Event 2021	KEY	December	2021
2020 Five-Year Review Report Revised	KEY	December	2021

TABLE 4
LIST OF DOCUMENTS REVIEWED FOR THE FIVE-YEAR REVIEW
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TITLE	AUTHOR	MONTH	YEAR
Groundwater Monitoring Report First Quarter Sampling Event 2022	KEY	March	2022
Groundwater Monitoring Report Second Quarter Sampling Event 2022	KEY	September	2022
Groundwater Monitoring Report Third Quarter Sampling Event 2022	KEY	October	2022
Groundwater Monitoring Report Fourth Quarter Sampling Event 2022	KEY	December	2022
Groundwater Monitoring Report First Quarter Sampling Event 2023	KEY	March	2023
Groundwater Monitoring Report Second Quarter Sampling Event 2023	KEY	September	2023
Groundwater Monitoring Report Third Quarter Sampling Event 2023	KEY	October	2023
Groundwater Monitoring Report Fourth Quarter Sampling Event 2023	KEY	December	2023
Groundwater Monitoring Report First Quarter Sampling Event 2024	KEY	March	2024
Groundwater Monitoring Report Second Quarter Sampling Event 2024	KEY	September	2024
Groundwater Monitoring Report Third Quarter Sampling Event 2024	KEY	October	2024
Groundwater Monitoring Report Fourth Quarter Sampling Event 2024	KEY	December	2024
Revised Fate and Transport Evaluation 2025	KEY	January	2025
Groundwater Monitoring Report First Quarter Sampling Event 2025	KEY	March	2025
Groundwater Monitoring Report Second Quarter Sampling Event 2025	KEY	September	2025
Groundwater Monitoring Report Third Quarter Sampling Event 2025	KEY	October	2025
Groundwater Monitoring Report Fourth Quarter Sampling Event 2025	KEY	December	2025

TABLE 5
SUMMARY OF QUARTERLY, SEMIANNUAL, AND ANNUAL MONITORING
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

	QUARTERLY			SEMIANNUAL		ANNUAL	
	(MARCH, JUNE, SEPTEMBER, DECEMBER)			IN ADDITION TO QUARTERLY MONITORING (MARCH, SEPTEMBER)		IN ADDITION TO QUARTERLY AND SEMIANNUAL MONITORING (MARCH)	
MONITORING WELL NO.	DOWNLOAD AUTOMATED GROUND WATER LEVELS	GROUND WATER LEVELS FOR FLOW DIRECTION, INTERMEDIATE ZONE	GROUND WATER SAMPLING FOR PLUME LOCATION (VOCS)[1]	GROUND WATER LEVELS FOR FLOW DIRECTION, ALL ZONES	GROUND WATER SAMPLING FOR PLUME LOCATION (VOCS)[1]	OBTAIN FLOW RATES FROM CHILLICOTHE PAPER INDUSTRIAL WELLS[2]	GROUND WATER SAMPLING FOR REMEDIAL SOURCE AREA MONITORING (VOCS)[1]
Up Gradient							
MW-BG-S							
MW-E-S				X			
MW-E-I		X					
MW-E-D				X			
Sludge Pit							
MW-SP-S							
MW-SP-I							
MW-SP-D							
Drum Storage							
MW-DS-S				X			
MW-DS-I		X					X
MW-DS-D							
Draw Tank							
MW-DT-S				X			X
MW-DT-I		X					
MW-DT-D				X			
Leach Pit							
MW-LP-S							
MW-LP-I							X
MW-LP-D							
Building Perimeter							
MW-1S							X
MW-AS2-S							X
MW-AS3-S							X
MW-AS4-S							X
MW-AS5-S							X
MW-BL-S				X			X
MW-BL-I		X					
MW-BL-D				X			
MW-GA-S							X
MW-H-I	X	X			*		
Property Line Perimeter							
MW-2D							
MW-5				X			X
MW-A-I		X					
MW-A-S				X			
MW-B-I		X					X
MW-B-D				X			
MW-C-S				X			X
MW-C-I		X	X				
MW-C-D				X			
MW-F-S				X			X
MW-F-I	X	X					X
MW-F-D				X			
MW-D-S		X	X				
MW-D-I		X					X
MW-D-D		X[3]		X	*		
MW-I-S		X	X				
MW-I-I	X	X					X
MW-G-S		X[3]		X	X		
MW-G-I		X					X
MW-G-D		X[3]		X			
OW-1D							
OW-1R							
Off-Site Wells							
Hammond			**				
MW-0S-1-I		X	X				
MW-0S-1-D				X			
MW-0S-2		X	X				
MW-0S-3		X			X		
Chillicothe Paper Pumping Wells							
Chillicothe Paper 13						X	
Chillicothe Paper 14						X	
Chillicothe Paper 16						X	
Chillicothe Paper 17					X	X	
Chillicothe Paper 18					X	X	

Notes:

[1] VOC analysis by USEPA SW-846 Method 8260B.

[2] Obtained annually from Chillicothe Paper's monthly data summary reports.

[3] Ehanced monitoring at this location has been implimented due to uncertainty with U.S. Paper Mill's long-term plans for use of the paper mill production wells not yet well understood

* Based on the revised 3rd 5-Year Review submitted by KEY and the cooresponding OEPA approval letter on September 7, 2016, sampling is no longer required at wells MW-D-D and MW-H-I.

** Based on the revised 3rd 5-Year Review submitted by KEY and the cooresponding OEPA approval letter on September 7, 2016, sampling is no longer required at the Hammond well, contingent upon ground water flow direction remaining north/northeastward away from the Hammond well.

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-GA-S	7/17/1997	ND		ND		3900		5000		NA		240		70		ND		9210
MW-GA-S	9/25/1997	ND		ND		3200		5900		NA		440		ND		ND		9540
MW-GA-S	9/11/2001	67	U	67	U	2100		43		1900		44		24		67	U	4312
MW-GA-S	12/18/2001	62	U	62	U	2200		58		2300		66	J	62	U	62	U	4624
MW-GA-S	3/6/2002	56	U	56	U	1900		48		1800		67	J	56	U	56	U	3815
MW-GA-S	6/19/2002	67	U	67	U	1700		27	J	1600		47	J	67	U	67	U	3374
MW-GA-S	9/26/2002	62	U	62	U	2100		39		1800		63	J	62	U	62	U	4002
MW-GA-S	1/28/2003	67	U	67	U	1800		41		1300		130	U	67	U	67	U	3141
MW-GA-S	4/9/2003	40	U	40	U	1500		35		1100		80	U	40	U	40	U	2635
MW-GA-S	8/28/2003	56	U	56	U	1500		30		980		110	U	56	U	56	U	2510
MW-GA-S	11/19/2003	50	U	50	U	1200		46		50	U	100	U	50	U	50	U	1246
MW-GA-S	2/15/2005	NA		9.1	U	310		6.9		200		18	U	NA		2.6	J	519.5
MW-GA-S	4/17/2008	3.1	U	2.7	U	520		4.3	J	140		3.1	U	4.7	U	1.9	U	664.3
MW-GA-S	3/19/2009	1.1	U	0.95	U	430		5.6		99		1.1	U	3.8		0.65	U	538.4
MW-GA-S	3/16/2010	1.8	U	1.6	U	300		11		180		1.8	U	3.7	J	1.1	U	494.7
MW-GA-S	3/8/2011	3.4	U	2.9	U	510		8.7		140		3.4	U	5.1	U	2	U	658.7
MW-GA-S	3/8/2012	3.7	U	3.2	U	360		20		240		3.7	U	5.5	U	2.2	U	620
MW-GA-S	1/15/2013	2.8	U	2.4	U	440		2.4	U	92		2.8	U	4.1	U	1.6	U	532
MW-GA-S	3/28/2013	2.8	U	2.4	U	260		24		310		2.8	U	4.1	U	1.6	U	594
MW-GA-S	9/19/2013	1.8	U	1.6	U	210		1.6	U	16		1.8	U	2.7	U	1.1	U	226
MW-GA-S	3/19/2014	2.2	U	1.9	U	330		20		160		2.2	U	3.3	U	1.3	U	510
MW-GA-S	3/9/2015	3.1	U	6.4	U	350		16		170		4.1	U	4	U	3.4	U	536
MW-GA-S	3/16/2016	5.5	U	5.6	U	360		19		170		3.6	U	4.1	U	4.4	U	549
MW-GA-S	3/16/2017	2.3	U	2.7	U	270		11		130		4.5	U	5.3	U	2.8	U	411
MW-GA-S	2/28/2018	3.3	U	3.9	U	310		4.1	U	110		6.4	U	7.6	U	4	U	420
MW-GA-S	3/13/2019	2	U	1.6	U	370		10		99		1.7	U	22	U	1.1	U	479
MW-GA-S	6/15/2020	3.2	U	2.5	U	300		8.4	J	95		2.7	J	35	U	1.7	U	406.1
MW-GA-S	3/22/2021					290				120		2.9	U					
MW-GA-S	3/21/2022					300				140		4.5	U					
MW-GA-S	4/20/2023					6.5				0.46	U	0.45	U					
MW-GA-S	9/5/2023					310				130		0.75	J					
MW-GA-S	3/5/2024					330				140		0.95	J					
MW-GA-S	3/18/2025					370				88		0.55	J					
MW-DS-I	7/17/1997	ND		ND		3.5		ND		NA		ND		ND		ND		3.5
MW-DS-I	9/25/1997	ND		ND		10		ND		NA		ND		ND		ND		10
MW-DS-I	9/11/2001	1	U	1	U	1.1		0.5	U	0.5	U	2	U	1	U	1	U	1.1
MW-DS-I	12/18/2001	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DS-I	3/6/2002	1	U	1	U	0.14	J	0.5	U	0.5	U	2	U	0.48	J	1	U	0.62
MW-DS-I	6/19/2002	1	U	1	U	0.22	J	0.5	U	0.5	U	2	U	1	U	1	U	0.22
MW-DS-I	9/26/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DS-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DS-I	4/9/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DS-I	8/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DS-I	11/19/2003	1	U	1	U	0.36	J	0.5	U	0.5	U	2	U	1	U	1	U	7.36
MW-DS-I	4/17/2008	0.22	U	0.19	U	2		0.19	U	0.3	J	0.22	U	0.33	U	0.13	U	2.3
MW-DS-I	3/18/2009	0.22	U	0.19	U	34		2.1		15		0.22	U	0.33	U	0.13	U	51.1
MW-DS-I	3/16/2010	0.22	U	0.19	U	38		2.3		12		0.22	U	0.33	U	0.13	U	52.3
MW-DS-I	3/8/2011	0.22	U	0.19	U	27		0.97		4.8		0.22	U	0.33	U	0.13	U	32.77
MW-DS-I	3/8/2012	0.28	U	0.24	U	29		1.8		12		0.28	U	0.41	U	0.16	U	42.8
MW-DS-I	3/28/2013	0.22	U	0.19	U	36		2.4		11		0.22	U	0.33	U	0.13	U	49.4
MW-DS-I	3/19/2014	0.22	U	0.19	U	27		1.5		8.6		0.22	U	0.33	U	0.13	U	37.1
MW-DS-I	3/9/2015	0.22	U	0.45	U	29		1.8		7.4		0.29	U	0.28	U	0.24	U	38.2
MW-DS-I	3/16/2016	0.44	U	0.45	U	8.5		2		30		0.29	U	0.33	U	0.35	U	40.5
MW-DS-I	3/16/2017	0.23	U	0.27	U	0.33	U	1		17		0.45	U	0.53	U	0.28	U	18
MW-DS-I	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	12		0.45	U	0.53	U	0.28	U	12
MW-DS-I	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	1.6		0.2	U	2.6	U	0.13	U	1.6
MW-DS-I	6/15/2020	0.24	U	0.19	U	1.4		0.36	J	14		0.2	U	2.6	U	0.13	U	15.76
MW-DS-I	3/22/2021					17				2.8		0.2	U					
MW-DS-I	3/21/2022					15				1.7		0.45	U					
MW-DS-I	3/21/2023					12				6.4		0.45	U					
MW-DS-I	3/5/2024					18				5.8		0.45	U					
MW-DS-I	3/18/2025					15				4.7		0.45	U					

TABLE 6
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FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-AS2-S	7/17/1997	ND		ND		490		1400		NA		35		21		ND		1946
MW-AS2-S	9/25/1997	ND		ND		500		1500		NA		99		ND		270		2369
MW-AS2-S	9/11/2001	33	U	33	U	250		35		680		67	U	33	U	33	U	965
MW-AS2-S	12/18/2001	25	U	25	U	300		46		850		50	U	25	U	25	U	1196
MW-AS2-S	3/6/2002	20	U	20	U	250		41		650		40	U	20	U	20	U	941
MW-AS2-S	6/19/2002	20	U	20	U	200		33		610		3.3	J	20	U	20	U	846.3
MW-AS2-S	9/26/2002	20	U	20	U	210		36		610		40	U	20	U	20	U	856
MW-AS2-S	1/28/2003	33	U	33	U	300		43		750		67	U	33	U	33	U	1093
MW-AS2-S	4/9/2003	20	U	20	U	300		35		590		40	U	20	U	20	U	925
MW-AS2-S	8/28/2003	17	U	17	U	240		25		360		33	U	17	U	17	U	625
MW-AS2-S	11/19/2003	12	U	12	U	280		28		370		25	U	12	U	12	U	678
MW-AS2-S	4/17/2008	0.73	U	0.63	U	120		4.2		75		0.73	U	1.8	U	0.43	U	199.2
MW-AS2-S	3/19/2009	0.73	U	0.63	U	260		10		140		0.78	J	1.1	U	0.43	U	410.78
MW-AS2-S	3/16/2010	2.2	U	1.9	U	400		11		200		8.7	J	5.2	J	1.3	U	624.9
MW-AS2-S	3/8/2011	2.8	U	2.4	U	480		9.5		180		2.8	U	4.1	U	1.6	U	669.5
MW-AS2-S	3/8/2012	4.4	U	3.8	U	550		3.8	U	170		4.4	U	6.6	U	2.6	U	720
MW-AS2-S	3/28/2013	4.4	U	3.8	U	560		3.8	U	140		4.4	U	6.6	U	2.6	U	700
MW-AS2-S	3/19/2014	4.4	U	3.8	U	570		3.8	U	160		4.4	U	6.6	U	2.6	U	730
MW-AS2-S	3/9/2015	1.8	U	3.6	U	210		2.1	U	10		2.3	U	2.2	U	1.9	U	220
MW-AS2-S	3/16/2016	4.4	U	4.5	U	290		3	U	75		2.9	U	3.3	U	3.5	U	365
MW-AS2-S	3/16/2017	1.5	U	1.8	U	220		7.4		55		3	U	3.5	U	1.9	U	282.4
MW-AS2-S	2/28/2018	1.5	U	1.8	U	130		6.7		39		3	U	3.5	U	1.9	U	175.7
MW-AS2-S	3/13/2019	0.24	U	0.19	U	86		1.5		7.5		0.2	U	2.6	U	0.13	U	95
MW-AS2-S	6/15/2020	0.4	U	0.32	U	53		0.57	J	3.8		0.33	U	4.4	U	0.22	U	57.37
MW-AS2-S	3/22/2021					140				43		1	U					
MW-AS2-S	3/21/2022					150				59		1.1	U					
MW-AS2-S	3/21/2023					180				130		1.1	U					
MW-AS2-S	3/5/2024					150				110		0.9	U					
MW-AS2-S	3/18/2025					130				79		0.45	U					
MW-1S	9/26/2002	6.7	U	6.7	U	210		3.3	U	44		10	J	6.7	U	6.7	U	264
MW-1S	1/28/2003	10	U	10	U	260		5	U	47		20	U	10	U	10	U	307
MW-1S	4/9/2003	8.3	U	8.3	U	250		4.2	U	43		17	U	8.3	U	8.3	U	293
MW-1S	8/28/2003	10	U	10	U	220		5	U	32		20	U	10	U	10	U	252
MW-1S	11/19/2003	10	U	10	U	310		2.8	J	36		20	U	3.5	J	10	U	352.3
MW-1S	4/17/2008	0.55	U	0.48	U	95		0.78	J	29		0.68	J	0.84	U	0.32	U	125.46
MW-1S	6/8/2008	ND		ND		0.35		0.19	J	0.17		0.22	J	ND		ND		0.93
MW-1S	3/19/2009	0.22	U	0.19	U	97		0.63		26		4.9		0.33	U	0.14	J	128.67
MW-1S	3/15/2010	0.31	U	0.45	J	38		1.1		15		6		0.74	J	0.19	U	61.29
MW-1S	3/8/2011	0.88	U	0.76	U	33		3.5		120		27		1.3	U	0.52	U	183.5
MW-1S	3/28/2013	0.22	U	0.19	U	0.17	U	0.19	U	4.7		3.7		0.33	U	0.13	U	8.4
MW-1S	3/19/2014	0.22	U	0.19	U	3		0.19	U	8		2.4		0.33	U	0.13	U	13.4
MW-1S	3/9/2015	0.22	U	0.45	U	3.2		0.26	U	5.7		0.29	U	0.28	U	0.24	U	8.9
MW-1S	3/16/2016	0.44	U	0.45	U	8.6		1.5		40		3.6		0.33	U	0.35	U	53.7
MW-1S	3/16/2017	0.58	U	0.68	U	27		2.7		64		1.1	U	1.3	U	0.7	U	93.7
MW-1S	2/28/2018	0.77	U	0.9	U	1.1	U	0.97	U	75		4.5		1.8	U	0.93	U	79.5
MW-1S	3/13/2019	0.24	U	0.26	J	65		1.6		32		1.2		2.6	U	0.13	U	100.06
MW-1S	6/15/2020	0.4	U	0.35	J	60		0.8	J	38		0.33	U	4.4	U	0.22	U	99.15
MW-1S	3/22/2021					44				32		0.33	U					
MW-1S	3/21/2022					36				34		2						
MW-1S	3/21/2023					1.5				39		5.8						
MW-1S	3/5/2024					0.58				13		1.8						
MW-1S	3/18/2025					2.3	J			9.2		3						
MW-DT-S	7/17/1997	1300		ND		8800		ND		NA		ND		ND		ND		10100
MW-DT-S	9/25/1997	250		ND		2700		250		ND		ND		ND		ND		3200
MW-DT-S	9/11/2001	23		22	U	730		11	U	49		44	U	22	U	22	U	802
MW-DT-S	12/18/2001	10	J	25	U	580		12	U	55		50	U	25	U	25	U	645
MW-DT-S	3/6/2002	5.7	J	14	U	440		7.1	U	40		29	U	14	U	14	U	485.7
MW-DT-S	6/19/2002	11	J	13	U	520		6.7	U	38		27	U	13	U	13	U	569
MW-DT-S	9/26/2002	15	U	15	U	440		7.7	U	51		31	U	15	U	15	U	491

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HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-DT-S	1/28/2003	13	U	13	U	340		6.7	U	50		27	U	13	U	13	U	390
MW-DT-S	4/9/2003	7.2	J	17	U	470		8.3	U	48		33	U	17	U	17	U	525.2
MW-DT-S	8/28/2003	33	J	40	U	970		20	U	45		80	U	40	U	40	U	1048
MW-DT-S	11/19/2003	21	J	17	U	700		17	U	30		67	U	17	U	17	U	751
MW-DT-S	4/17/2008	19	J	4.8	U	920		4.8	U	17		5.5	U	16	J	3.2	U	972
MW-DT-S	3/18/2009	23	J	6.3	U	1000		6.3	U	11	J	7.3	U	11	U	4.3	U	1034
MW-DT-S	3/16/2010	14	J	3.8	U	770		3.8	U	35		6.2	J	9.6	J	2.6	U	834.8
MW-DT-S	3/8/2011	4.4	U	3.8	U	650		3.8	U	51		4.4	U	6.6	U	2.6	U	701
MW-DT-S	3/8/2012	11	U	9.5	U	1300		9.5	U	8.5	U	11	U	17	U	6.5	U	1300
MW-DT-S	3/28/2013	4.4	U	3.8	U	560		3.8	U	57		4.4	U	6.6	U	2.6	U	617
MW-DT-S	3/19/2014	8.8	U	7.6	U	1200		7.6	U	6.8	U	8.8	U	13	U	5.2	U	1200
MW-DT-S	3/9/2015	3.1	U	6.4	U	410		3.7	U	28		4.1	U	4	U	3.4	U	438
MW-DT-S	3/16/2016	15	U	15	U	1100		10	U	8.7	U	9.7	U	11	U	12	U	1100
MW-DT-S	3/16/2017	4.6	U	5.4	U	470		5.8	U	6	U	9	U	11	U	5.6	U	470
MW-DT-S	2/28/2018	15	U	18	U	1300		19	U	20	U	30	U	35	U	19	U	1300
MW-DT-S	3/13/2019	19	J	4.8	U	1100		4.8	U	4.7	J	5	U	66	U	3.3	U	1123.7
MW-DT-S	6/15/2020	11	J	4.8	U	620		4.8	U	9.3	J	5	U	66	U	3.3	U	640.3
MW-DT-S	3/22/2021					770				4	U	5	U					
MW-DT-S	3/21/2022					570				6.2	J	5.6	U					
MW-DT-S	3/21/2023					610				4.6	U	4.5	U					
MW-DT-S	3/5/2024					1100				4.6	U	4.5	U					
MW-DT-S	3/18/2025					890				4.6	U	4.5	U					
MW-DT-I	7/17/1997	ND		ND		2.8		ND		NA		ND		ND		ND		2.8
MW-DT-I	9/25/1997	ND		ND		18		ND		NA		ND		ND		ND		18
MW-DT-I	9/11/2001	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	12/18/2001	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	3/6/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	0.88	J	1	U	0.88
MW-DT-I	6/19/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	9/26/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	4/9/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	8/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-DT-I	11/19/2003	1	U	1	U	0.34	J	0.5	U	0.5	U	2	U	1	U	1	U	0.34
MW-AS3-S	7/17/1997	ND		ND		1300		89		NA		ND		14		ND		1403
MW-AS3-S	9/25/1997	ND		ND		1900		42		NA		ND		ND		ND		1942
MW-AS3-S	9/11/2001	59		67	U	2300		33	U	170		130	U	67	U	67	U	2529
MW-AS3-S	12/18/2001	79		62	U	2500		11	J	190		120	U	62	U	62	U	2780
MW-AS3-S	3/6/2002	76	J	56	U	2300		28	U	150		110	U	56	U	56	U	2526
MW-AS3-S	6/19/2002	65	J	100	U	2200		50	U	140		200	U	100	U	100	U	2405
MW-AS3-S	9/26/2002	64	J	71	U	2100		36	U	130		140	U	71	U	71	U	2294
MW-AS3-S	1/28/2003	57	J	67	U	2000		33	U	120		130	U	67	U	67	U	2177
MW-AS3-S	4/9/2003	52		50	U	1600		25	U	120		100	U	50	U	50	U	1772
MW-AS3-S	8/28/2003	62		50	U	1900		25	U	100		100	U	50	U	50	U	2062
MW-AS3-S	11/19/2003	59	J	67	U	1600		33	U	70		130	U	67	U	67	U	1729
MW-AS3-S	4/17/2008	3.6	J	2.7	U	520		2.7	U	35		3.1	U	9.6	J	1.9	U	568.2
MW-AS3-S	3/19/2009	7.7		1.3	U	530		7.1		64		1.5	U	4.8	J	0.87	U	613.6
MW-AS3-S	3/16/2010	48	J	9.5	U	1800		9.5	U	30		11	U	27	J	6.5	U	1905
MW-AS3-S	3/7/2011	23	J	11	U	1200		11	U	48		12	U	18	U	7.2	U	1271
MW-AS3-S	3/8/2012	11	U	9.5	U	1200		9.5	U	8.5	U	11	U	17	U	6.5	U	1200
MW-AS3-S	3/28/2013	11	U	9.5	U	1400		9.5	U	50		11	U	17	U	6.5	U	1450
MW-AS3-S	3/19/2014	3.7	U	3.2	U	480		3.2	U	92		3.7	U	5.5	U	2.2	U	572
MW-AS3-S	3/9/2015	4.4	U	9	U	540		5.2	U	39		5.8	U	5.6	U	4.8	U	579
MW-AS3-S	3/16/2016	8	U	8.2	U	590		5.5	U	31		5.3	U	6	U	6.4	U	621
MW-AS3-S	3/16/2017	12	U	14	U	1300		15	U	15	U	23	U	27	U	14	U	1300
MW-AS3-S	2/28/2018	23	U	27	U	1500		29	U	30	U	45	U	53	U	28	U	1500
MW-AS3-S	3/13/2019	2.2	J	1.6	U	360		1.8	J	11		1.7	U	22	U	1.1	U	375
MW-AS3-S	6/15/2020	6	U	4.8	U	570		4.8	U	19	J	5	U	66	U	3.3	U	589
MW-AS3-S	3/22/2021					930				27		5	U					
MW-AS3-S	3/21/2022					710				17		5.6	U					
MW-AS3-S	3/21/2023					720				18		4.5	U					

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-AS3-S	3/5/2024					560				22		4.5	U					
MW-AS3-S	3/18/2025					650				22		2.3	U					
MW-AS4-S	7/17/1997	ND		ND		1900		91		NA		ND		40		ND		2031
MW-AS4-S	9/25/1997	ND		ND		2200		77		NA		ND		ND		ND		2277
MW-AS4-S	9/11/2001	50	U	50	U	1800		25	U	65		100	U	50	U	50	U	1865
MW-AS4-S	12/18/2001	50	U	50	U	1900		25	U	78		100	U	50	U	50	U	1978
MW-AS4-S	3/6/2002	50	U	50	U	1700		25	U	78		100	U	50	U	50	U	1778
MW-AS4-S	6/19/2002	50	U	50	U	1500		25	U	50		100	U	50	U	50	U	1550
MW-AS4-S	9/26/2002	50	U	50	U	1900		25	U	51		100	U	50	U	50	U	1951
MW-AS4-S	1/28/2003	67	U	67	U	1800		33	U	77		130	U	67	U	67	U	1877
MW-AS4-S	4/9/2003	62	U	62	U	1700		31	U	71		120	U	62	U	62	U	1771
MW-AS4-S	8/27/2003	50	U	50	U	1800		25	U	73		100	U	50	U	50	U	1873
MW-AS4-S	11/19/2003	67	U	67	U	1500		33	U	40		130	U	67	U	67	U	1540
MW-AS4-S	4/17/2008	1.1	U	0.95	U	190		0.95	U	2.3	J	1.1	U	2.4	U	0.65	U	192.3
MW-AS4-S	3/18/2009	8.8	U	7.6	U	1200		7.6	U	6.8	U	8.8	U	13	U	5.2	U	1200
MW-AS4-S	3/15/2010	7.3	U	6.3	U	1200		6.3	U	7.4	J	7.3	U	11	U	4.3	U	1207.4
MW-AS4-S	3/7/2011	14	U	12	U	1300		12	U	11	U	14	U	21	U	8.1	U	1300
MW-AS4-S	3/8/2012	7.3	U	6.3	U	1200		6.3	U	5.7	U	7.3	U	11	U	4.3	U	1200
MW-AS4-S	3/27/2013	11	U	9.5	U	1200		9.5	U	8.5	U	11	U	17	U	6.5	U	1200
MW-AS4-S	3/19/2014	8.8	U	7.6	U	990		7.6	U	6.8	U	8.8	U	13	U	5.2	U	990
MW-AS4-S	3/9/2015	7.3	U	15	U	800		8.7	U	6.7	U	9.7	U	9.3	U	8	U	800
MW-AS4-S	3/16/2016	15	U	15	U	1100		10	U	8.7	U	9.7	U	11	U	12	U	1100
MW-AS4-S	3/16/2017	9.2	U	11	U	1100		12	U	12	U	18	U	21	U	11	U	1100
MW-AS4-S	2/28/2018	12	U	14	U	980		15	U	15	U	23	U	66		14	U	1046
MW-AS4-S	3/13/2019	0.24	U	0.19	U	85		0.19	U	4		0.2	U	2.6	U	0.13	U	89
MW-AS4-S	6/15/2020	4.8	U	3.8	U	450		3.8	U	16	J	4	U	52	U	2.6	U	466
MW-AS4-S	3/22/2021					760				12	J	8	U					
MW-AS4-S	3/21/2022					540				23	J	11	U					
MW-AS4-S	3/21/2023					720				14	J	11	U					
MW-AS4-S	3/5/2024					520				13		0.9	U					
MW-AS4-S	3/18/2025					620				13		2.3	U					
MW-BL-S	7/17/1997	ND		ND		3700		270		NA		ND		ND		ND		3970
MW-BL-S	9/25/1997	ND		ND		3200		240		NA		ND		ND		ND		3440
MW-BL-S	9/11/2001	62	U	62	U	2300		31	U	150		120	U	22		62	U	2472
MW-BL-S	12/18/2001	62	U	62	U	2400		31	U	240		120	U	62	U	62	U	2640
MW-BL-S	3/6/2002	62	U	62	U	2200		31	U	190		120	U	62	U	62	U	2390
MW-BL-S	6/19/2002	100	U	100	U	2400		50	U	190		200	U	100	U	100	U	2590
MW-BL-S	9/26/2002	62	U	62	U	2200		31	U	150		120	U	62	U	62	U	2350
MW-BL-S	1/28/2003	77	U	77	U	1800		38	U	110		150	U	77	U	77	U	1910
MW-BL-S	4/9/2003	62	U	62	U	2100		31	U	130		120	U	62	U	62	U	2230
MW-BL-S	8/27/2003	50	U	50	U	1800		25	U	49		100	U	50	U	50	U	1849
MW-BL-S	11/19/2003	40	U	40	U	1600		20	U	30		80	U	40	U	40	U	1630
MW-BL-S	4/17/2008	6.3	U	5.4	U	740		5.4	U	4.9	U	6.3	U	9.4	U	3.7	U	740
MW-BL-S	3/18/2009	5.5	U	4.8	U	760		4.8	U	4.2	U	5.5	U	8.2	U	3.2	U	760
MW-BL-S	3/15/2010	5.5	U	4.8	U	890		4.8	U	4.2	U	5.5	U	8.2	U	3.2	U	890
MW-BL-S	3/7/2011	4.4	U	3.8	U	810		3.8	U	3.4	U	4.4	U	6.6	U	2.6	U	810
MW-BL-S	3/8/2012	3.7	U	3.2	U	570		3.2	U	2.8	U	3.7	U	5.5	U	2.2	U	570
MW-BL-S	3/27/2013	4	U	3.5	U	480		3.5	U	3.1	U	4	U	6	U	2.4	U	480
MW-BL-S	3/19/2014	3.7	U	3.2	U	570		3.2	U	2.8	U	3.7	U	5.5	U	2.2	U	570
MW-BL-S	3/9/2015	2	U	4.1	U	230		2.4	U	1.8	U	2.6	U	2.5	U	2.2	U	230
MW-BL-S	3/16/2016	6.8	U	6.9	U	480		4.6	U	4	U	4.5	U	5.1	U	5.4	U	480
MW-BL-S	3/16/2017	3.3	U	3.9	U	440		4.1	U	27		6.4	U	7.6	U	4	U	467
MW-BL-S	2/28/2018	5.8	U	6.8	U	500		7.3	U	44		11	U	13	U	7	U	544
MW-BL-S	3/13/2019	2	U	1.6	U	370		1.6	J	49		1.7	U	22	U	1.1	U	420.6
MW-BL-S	6/16/2020	2.4	U	1.9	U	250		1.9	U	16		2	U	26	U	1.3	U	266
MW-BL-S	3/22/2021					360				30		2	U					
MW-BL-S	3/21/2022					340				14		2.8	U					
MW-BL-S	3/21/2023					300				11		2.3	U					
MW-BL-S	3/5/2024					230				6.3		0.45	U					
MW-BL-S	3/18/2025					290				6.4		0.45	U					

TABLE 6
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HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-BL-I	7/17/1997	ND		ND		15		ND		ND		ND		ND		ND		15
MW-BL-I	9/25/1997	ND		ND		13		ND		ND		ND		ND		ND		13
MW-BL-I	9/11/2001	1	U	1	U	1.3		0.5	U	0.5		2	U	1	U	1	U	1.8
MW-BL-I	12/18/2001	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-BL-I	3/6/2002	1	U	1	U	0.18	J	0.5	U	0.5	U	2	U	0.85	J	1	U	1.03
MW-BL-I	6/19/2002	1	U	1	U	0.15	J	0.5	U	0.5	U	2	U	1	U	1	U	0.15
MW-BL-I	9/26/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-BL-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-BL-I	4/9/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-BL-I	8/27/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-BL-I	11/19/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-AS5-S	7/17/1997	ND		ND		150		2.6		NA		ND		ND		ND		152.6
MW-AS5-S	9/25/1997	ND		ND		2300		84		NA		ND		ND		ND		2384
MW-AS5-S	9/11/2001	40	U	40	U	1500		20	U	20	U	80	U	14		40	U	1514
MW-AS5-S	12/18/2001	38	U	38	U	1500		19	U	19	U	77	U	38	U	38	U	1500
MW-AS5-S	3/6/2002	40	U	40	U	1400		20	U	20	U	80	U	40	U	40	U	1400
MW-AS5-S	6/19/2002	50	U	50	U	1100		25	U	25	U	100	U	50	U	50	U	1100
MW-AS5-S	9/26/2002	40	U	40	U	1400		20	U	20	U	80	U	40	U	40	U	1400
MW-AS5-S	1/28/2003	50	U	50	U	1300		25	U	25	U	100	U	50	U	50	U	1300
MW-AS5-S	4/9/2003	33	U	33	U	1100		17	U	17	U	67	U	33	U	33	U	1100
MW-AS5-S	8/27/2003	25	U	25	U	780		12	U	12	U	50	U	25	U	25	U	780
MW-AS5-S	11/19/2003	40	U	40	U	960		20	U	20	U	80	U	40	U	40	U	960
MW-AS5-S	4/17/2008	4.4	U	3.8	U	710		3.8	U	3.4	U	4.4	U	13	J	2.6	U	723
MW-AS5-S	3/18/2009	5.5	U	4.8	U	760		4.8	U	15		5.5	U	8.2	U	3.2	U	775
MW-AS5-S	3/16/2010	4.4	U	3.8	U	710		3.8	U	32		4.4	U	9.8	J	2.6	U	751.8
MW-AS5-S	3/7/2011	8.8	U	7.6	U	890		7.6	U	15	J	8.8	U	13	U	5.2	U	905
MW-AS5-S	3/8/2012	5.5	U	4.8	U	710		4.8	U	4.3	U	5.5	U	8.3	U	3.3	U	710
MW-AS5-S	3/27/2013	5.5	U	4.8	U	690		4.8	U	4.3	U	5.5	U	8.3	U	3.3	U	690
MW-AS5-S	3/19/2014	5.5	U	4.8	U	760		4.8	U	28		5.5	U	8.3	U	3.3	U	788
MW-AS5-S	3/9/2015	6.3	U	13	U	670		7.4	U	5.7	U	8.3	U	8	U	6.9	U	670
MW-AS5-S	3/16/2016	7.3	U	7.5	U	540		5	U	4.3	U	4.8	U	5.5	U	5.8	U	540
MW-AS5-S	2/28/2018	4.6	U	5.4	U	350		5.8	U	6	U	9	U	24		5.6	U	374
MW-AS5-S	3/13/2019	2.4	U	1.9	U	430		1.9	U	2.3	J	2	U	26	U	1.3	U	432.3
MW-AS5-S	6/15/2020	1.9	U	1.5	U	220		1.5	U	12		1.6	U	21	U	1	U	232
MW-AS5-S	3/22/2021					340				7.5	J	3.3	U					
MW-AS5-S	3/21/2022					450				19		4.5	U					
MW-AS5-S	3/21/2023					360				11		4.5	U					
MW-AS5-S	3/5/2024					5.3				0.46	U	0.45	U					
MW-AS5-S	3/18/2025					36				1		0.45	U					
MW-H-I	6/12/1995	ND		ND		ND		ND		ND		ND		ND		ND		0
MW-H-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-H-I	8/27/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-H-I	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1.6	U	1	U	0
MW-H-I	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-H-I	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-H-I	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-H-I	3/22/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-H-I	9/13/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-H-I	3/28/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-H-I	9/25/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-H-I	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	9/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/18/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/16/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/7/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

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HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-H-I	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-H-I	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-H-I	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-H-I	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-5	1/29/2003	17	U	17	U	550		8.3	U	260		33	U	17	U	17	U	810
MW-5	4/9/2003	17	U	17	U	540		8.3	U	230		33	U	17	U	17	U	770
MW-5	8/26/2003	20	U	20	U	420		10	U	180		40	U	20	U	20	U	600
MW-5	11/19/2003	17	U	17	U	540	B	10	U	210		40	U	20	U	20	U	750
MW-5	3/1/2004	17	U	17	U	520		5.4	J	230		33	U	7.6	J	17	U	763
MW-5	4/27/2004	15	U	15	U	460		5.5	J	180		33	U	4.7	J	15	U	650.2
MW-5	8/3/2004	20	U	20	U	610		6.1	J	220		40	U	20	U	20	U	836.1
MW-5	10/19/2004	17	U	17	U	550		4.7	J	190		33	U	19	B	17	U	763.7
MW-5	2/15/2005	NA		20	U	480		4.3	J	160		40	U	NA		20	U	644.3
MW-5	4/17/2008	3.7	U	3.2	U	670		5.7	J	240		3.7	U	6.2	J	2.2	U	921.9
MW-5	3/19/2009	3.7	U	3.2	U	580		7.7	J	420		3.7	U	5.5	U	2.2	U	1007.7
MW-5	3/17/2010	2.4	U	2.1	U	300		6.3		370		2.4	U	3.9	J	1.4	U	680.2
MW-5	3/7/2011	2.8	U	2.4	U	300		6.3		430		2.8	U	4.1	U	1.6	U	736.3
MW-5	3/8/2012	3.7	U	3.2	U	490		3.2	U	310		3.7	U	5.5	U	2.2	U	800
MW-5	3/27/2013	0.73	U	0.63	U	57		0.63	U	80		0.73	U	1.1	U	0.43	U	137
MW-5	3/19/2014	1.1	U	0.95	U	40		0.95	U	160		1.1	U	1.7	U	0.65	U	200
MW-5	3/9/2015	0.22	U	0.45	U	21		0.26	U	8.5		0.29	U	0.28	U	0.24	U	29.5
MW-5	3/16/2016	0.44	U	0.45	U	38		0.3	U	13		0.29	U	0.33	U	0.35	U	51
MW-5	3/16/2017	0.23	U	0.27	U	18		0.29	U	6.7		0.45	U	0.53	U	0.28	U	24.7
MW-5	2/28/2018	4.6	U	5.4	U	400		5.8	U	120		9	U	20		5.6	U	540
MW-5	3/13/2019	1.6	U	1.3	U	330		2.1	J	120		1.3	U	17	U	0.87	U	452.1
MW-5	6/15/2020	2.4	U	1.9	U	230		1.9	U	25		2	U	26	U	1.3	U	255
MW-5	3/22/2021					180				52		2	U					
MW-5	3/21/2022					270				84		2.3	U					
MW-5	3/21/2023					260				61		2.3	U					
MW-5	3/5/2024					250				98		0.45	U					
MW-5	3/18/2025					250				61		0.45	U					
MW-B-I	1/29/2003	12	U	12	U	32		9.4		320		25	U	12	U	12	U	361.4
MW-B-I	4/9/2003	10	U	10	U	45		8.6		300		20	U	10	U	10	U	353.6
MW-B-I	8/26/2003	10	U	10	U	73		7.7		250		20	U	10	U	10	U	330.7
MW-B-I	11/19/2003	10	U	10	U	72	B	7.7		240		20	U	10	U	10	U	319.7
MW-B-I	3/1/2004	6.7	U	6.7	U	88		6.1		230		13	U	5.1	J	6.7	U	329.2
MW-B-I	4/27/2004	8	U	8	U	99		7.2		230		13	U	8	U	8	U	336.2
MW-B-I	8/3/2004	9.1	U	9.1	U	120		9.6		300		18	U	9.1	U	9.1	U	429.6
MW-B-I	10/19/2004	8.3	U	8.3	U	71		7.8		250		17	U	9.4	B	8.3	U	338.2
MW-B-I	2/15/2005	NA		8	U	180		9.6		310		16	U	NA		1.9	J	501.5
MW-B-I	4/18/2008	0.73	U	1.2	J	55		4.1		99		0.93	J	1.1	U	0.43	U	160.23
MW-B-I	3/19/2009	0.37	U	0.83	J	27		3.9		92		0.93	J	0.55	U	0.22	U	124.66
MW-B-I	3/15/2010	0.88	U	1	J	16		4.6		130		0.9	J	1.3	U	0.52	U	152.5
MW-B-I	3/8/2011	0.73	U	0.9	J	20		3.9		110		0.83	J	1.1	U	0.43	U	135.63
MW-B-I	3/8/2012	1.1	U	0.95	U	16		0.95	U	120		1.1	U	1.7	U	0.65	U	136
MW-B-I	3/28/2013	1.1	U	0.95	U	34		0.95	U	100		1.1	U	1.7	U	0.65	U	134
MW-B-I	3/19/2014	1.1	U	0.95	U	45		0.95	U	150		1.1	U	1.7	U	0.65	U	195
MW-B-I	3/9/2015	0.73	U	1.5	U	34		0.87	U	91		0.97	U	0.93	U	0.8	U	125
MW-B-I	3/16/2016	0.88	U	0.9	U	38		3.4		71		0.58	U	0.66	U	0.7	U	112.4
MW-B-I	3/16/2017	0.58	U	0.68	U	49		0.73	U	55		1.1	U	1.3	U	0.7	U	104
MW-B-I	2/28/2018	1.5	U	1.8	U	110		1.9	U	26		3	U	9.6		1.9	U	145.6
MW-B-I	3/13/2019	0.48	U	0.48	J	93		1.8	J	66		0.41	J	5.2	U	0.26	U	161.69
MW-B-I	6/15/2020	0.48	U	0.38	U	79		0.94	J	51		0.5	J	5.2	U	0.26	U	131.44
MW-B-I	3/22/2021					110				28		0.8	U					
MW-B-I	3/21/2022					61				36		1.1	U					
MW-B-I	3/21/2023					41				33		1.1	U					
MW-B-I	3/5/2024					65				40		0.45	U					

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-B-I	3/18/2025					58				34		0.45	U					
MW-C-S	1/29/2003	12	U	12	U	400		6.6		220		22	J	12	U	12	U	648.6
MW-C-S	4/9/2003	12	U	12	U	410		8.2		270		14	J	12	U	12	U	702.2
MW-C-S	8/26/2003	8.3	U	8.3	U	220		6.7		120		3.4	J	8.3	U	8.3	U	350.1
MW-C-S	11/19/2003	10	U	10	U	220	B	5.8		110		4.2	J	10	U	10	U	340
MW-C-S	3/1/2004	2.5	U	2.5	U	78		1.3		32		0.77	J	3		2.5	U	115.07
MW-C-S	4/27/2004	5.7	U	5.7	U	160		3.8		100		2.7	J	5.7		5.7	U	272.2
MW-C-S	8/3/2004	4	U	4	U	130		3.1		79		2.9	J	4	U	4	U	215
MW-C-S	10/19/2004	10	U	10	U	250		8		170		20	U	7.5	J	10	U	435.5
MW-C-S	2/15/2005	NA		4	U	130		3.7		98		8.0	U	NA		0.9	J	232.6
MW-C-S	4/17/2008	0.44	U	0.38	U	46		1.2		19		0.44	U	0.66	U	0.26	U	66.2
MW-C-S	3/19/2009	0.73	U	0.63	U	140		14		150		0.73	U	3.2	J	0.43	U	307.2
MW-C-S	3/15/2010	3.1	U	2.7	U	550		15		260		3.1	U	4.7	U	1.9	U	825
MW-C-S	3/8/2011	2.4	U	2.1	U	370		16		250		2.4	U	3.7	U	1.4	U	636
MW-C-S	3/8/2012	0.28	U	0.24	U	32		0.24	U	1.7		0.28	U	0.41	U	0.16	U	33.7
MW-C-S	3/28/2013	2.2	U	1.9	U	290		16		160		2.2	U	3.3	U	1.3	U	466
MW-C-S	3/19/2014	0.31	U	0.27	U	53		0.27	U	4.3		0.31	U	0.47	U	0.19	U	57.3
MW-C-S	3/9/2015	0.37	U	0.75	U	42		4.3		5.3		0.48	U	0.47	U	0.4	U	51.6
MW-C-S	3/16/2016	2.2	U	2.3	U	84		20		150		1.5	U	1.7	U	1.8	U	254
MW-C-S	3/16/2017	1.2	U	1.4	U	170		17		170		2.3	U	2.7	U	1.4	U	357
MW-C-S	2/28/2018	1.2	U	1.4	U	120		11		82		2.3	U	2.7	U	1.4	U	213
MW-C-S	3/13/2019	0.48	U	0.38	U	91		0.64	J	3.9		0.4	U	5.2	U	0.26	U	95.54
MW-C-S	6/15/2020	0.48	U	0.38	U	74		0.38	U	1.6	J	0.4	U	5.2	U	0.26	U	75.6
MW-C-S	3/22/2021					87				6		0.8	U					
MW-C-S	3/21/2022					61				3.6		1.1	U					
MW-C-S	3/21/2023					52				1.4	J	1.1	U					
MW-C-S	3/5/2024					48				27		0.45	U					
MW-C-S	3/18/2025					83				11		0.45	U					
MW-C-I	1/29/2003	100	U	100	U	100	U	50	U	2900		61	J	100	U	100	U	2961
MW-C-I	4/9/2003	100	U	100	U	100	U	50	U	2800		41	J	100	U	100	U	2841
MW-C-I	8/26/2003	100	U	100	U	100	U	50	U	2500		43	J	100	U	100	U	2543
MW-C-I	11/19/2003	83	U	83	U	83	U	42	U	2200		47	J	83	U	83	U	2247
MW-C-I	3/1/2004	83	U	83	U	83	U	42	U	3100		70	J	83	U	83	U	3170
MW-C-I	4/27/2004	100	U	100	U	100	U	50	U	2800		49	J	100	U	100	U	2849
MW-C-I	8/3/2004	120	U	120	U	250	U	120	U	3200		59	J	62	U	120	U	3259
MW-C-I	10/19/2004	120	U	120	U	120	U	62	U	3400		31	J	150	B	120	U	3581
MW-C-I	2/15/2005	NA		91	U	91	U	18	J	2700		37	J	NA		91	U	2755
MW-C-I	4/17/2008	22	U	24	J	17	U	19	U	3200		160	J	44	J	13	U	3428
MW-C-I	3/19/2009	11	U	31	J	8.5	U	13	J	2900		260		49	J	6.5	U	3253
MW-C-I	3/18/2010	22	U	53	J	17	U	22	J	2900		270		33	U	13	U	3245
MW-C-I	3/8/2011	24	U	39	J	19	U	21	U	3200		230		37	U	14	U	3469
MW-C-I	3/8/2012	28	U	24	U	21	U	24	U	2800		310		41	U	16	U	3110
MW-C-I	6/27/2012	18	U	16	U	14	U	16	U	3300		400		86		11	U	3786
MW-C-I	9/4/2012	24	U	21	U	19	U	21	U	3100		400		37	U	14	U	3500
MW-C-I	11/29/2012	37	U	32	U	28	U	32	U	2900		310		55	U	22	U	3210
MW-C-I	3/28/2013	28	U	24	U	21	U	24	U	2700		450		41	U	16	U	3150
MW-C-I	6/19/2013	22	U	19	U	17	U	19	U	2800		400		33	U	13	U	3200
MW-C-I	9/18/2013	22	U	19	U	17	U	19	U	2800		520		33	U	13	U	3320
MW-C-I	12/18/2013	28	U	24	U	21	U	24	U	3200		430		41	U	16	U	3630
MW-C-I	3/19/2014	28	U	24	U	21	U	24	U	3200		420		41	U	16	U	3620
MW-C-I	6/26/2014	28	U	24	U	21	U	24	U	3300		360		41	U	16	U	3660
MW-C-I	9/29/2014	44	U	90	U	30	U	52	U	3100		310		56	U	48	U	3410
MW-C-I	12/8/2014	18	U	37	U	12	U	22	U	3300		210		23	U	20	U	3510
MW-C-I	3/9/2015	22	U	45	U	15	U	26	U	2900		180		28	U	24	U	3080
MW-C-I	5/18/2015	44	U	45	U	22	U	30	U	3100		210		33	U	35	U	3310
MW-C-I	9/9/2015	44	U	45	U	22	U	30	U	3000		200		33	U	35	U	3200
MW-C-I	12/21/2015	73	U	75	U	37	U	50	U	3300		270		55	U	58	U	3570
MW-C-I	3/16/2016	44	U	45	U	22	U	30	U	2800		230		33	U	35	U	3030
MW-C-I	6/21/2016	44	U	45	U	22	U	30	U	3300		270		33	U	35	U	3570
MW-C-I	9/14/2016	55	U	56	U	28	U	38	U	3000		210		41	U	44	U	3210

TABLE 6
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FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-C-I	12/21/2016	38	U	45	U	55	U	48	U	2800		75	U	88	U	47	U	2800
MW-C-I	3/16/2017	33	U	39	U	47	U	41	U	2800		210		76	U	40	U	3010
MW-C-I	6/8/2017	23	U	27	U	33	U	29	U	2600		220		53	U	28	U	2820
MW-C-I	9/26/2017	14	U	77		21	U	18	U	3000		230		33	U	18	U	3307
MW-C-I	11/15/2017	23	U	130		33	U	29	U	3300		190		53	U	28	U	3620
MW-C-I	2/28/2018	46	U	54	U	66	U	58	U	3200		90	U	110	U	56	U	3200
MW-C-I	6/14/2018	24	U	110		10	U	19	U	3000		200		260	U	13	U	3310
MW-C-I	9/20/2018	24	U	19	U	10	U	19	U	2900		190		260	U	13	U	3090
MW-C-I	1/3/2019	48	U	66	J	20	U	38	U	2800		260		520	U	26	U	3126
MW-C-I	3/13/2019	16	U	43	J	6.7	U	13	U	2400		230		170	U	8.7	U	2673
MW-C-I	6/17/2019	24	U	19	U	10	U	19	U	2400		140		260	U	13	U	2540
MW-C-I	9/18/2019	60	U	140	J	25	U	48	U	2700		230	J	660	U	33	U	3070
MW-C-I	12/16/2019	24	U	110		10	U	20	J	3100		180		260	U	13	U	3410
MW-C-I	6/15/2020	24	U	65	J	10	U	19	U	2300		250		260	U	13	U	2615
MW-C-I	9/14/2020	24	U	130		10	U	22	J	2800		180		260	U	13	U	3132
MW-C-I	12/17/2020	24	U	75	J	10	U	19	U	2900		220		260	U	13	U	3195
MW-C-I	3/22/2021					18	J			2700		180						
MW-C-I	6/7/2021					44	U			2500		230						
MW-C-I	9/20/2021					44	U			2400		290						
MW-C-I	12/13/2021					3.4	U			1900		100						
MW-C-I	3/21/2022					22	U			2300		340						
MW-C-I	6/9/2022					22	U			2700		210						
MW-C-I	9/7/2022					22	U			2300		250						
MW-C-I	12/19/2022					8.6	UJ			2400		180	J					
MW-C-I	3/21/2023					22	U			2100		140						
MW-C-I	6/9/2023					22	U			2400		230						
MW-C-I	9/5/2023					22	U			2200		180						
MW-C-I	12/19/2023					5.5	UJ			2400		190	J*					
MW-C-I	3/5/2024					2.2	U			2200		300						
MW-C-I	6/10/2024					4.4	U			2400		270						
MW-C-I	9/17/2024					44	U			2600		220						
MW-C-I	12/16/2024					4.4	UJ			2800		230	J					
MW-C-I	3/18/2025					21				2200		200						
MW-C-I	5/5/2025					12				2500		190						
MW-C-I	8/26/2025					5.5	U			2900		290						
MW-C-I	12/15/2025					120				2500		190						
MW-D-S	1/29/2003	1	U	1	U	7.6		0.5	U	2.1		2	U	1	U	1	U	9.7
MW-D-S	4/9/2003	1	U	1	U	20		0.5	U	1.9		2	U	1	U	1	U	21.9
MW-D-S	8/26/2003	1	U	1	U	27		0.5	U	1.5		2	U	10	U	1	U	28.5
MW-D-S	11/19/2003	1	U	1	U	20	B	0.5	U	1.6		2	U	1	U	1	U	21.6
MW-D-S	3/1/2004	1	U	1	U	37		0.5	U	1.1		2	U	1	U	1	U	38.1
MW-D-S	4/27/2004	1	U	1	U	32		0.5	U	1.5		2	U	1	U	1	U	33.5
MW-D-S	8/2/2004	1	U	1	U	1	U	0.5	U	1.7		2	U	0.77	J	1	U	2.47
MW-D-S	10/19/2004	1	U	1	U	27		0.27	J	1.9		2	U	1	U	1	U	29.17
MW-D-S	2/15/2005	2	U	2	U	62		1	U	0.93		2	U	2	U	2	U	62.93
MW-D-S	9/13/2006	ND		1	U	4.9		0.30	J	2.5		2	U	1	U	ND		7.7
MW-D-S	3/28/2007	ND		ND		12.0		0.29	J	2.4		2	U	1	U	ND		14.69
MW-D-S	9/25/2007	ND		ND		59		1	U	3.0		4	U	2	U	ND		62
MW-D-S	4/17/2008	0.73	U	0.63	U	99		0.63	U	0.57	U	0.73	U	1.1	U	0.43	U	99
MW-D-S	6/30/2008	0.22	U	0.19	U	22		0.54		3.9		0.22	U	0.33	U	0.13	U	26.44
MW-D-S	9/17/2008	0.22	U	0.19	U	22		0.53		4.8		0.22	U	0.33	U	0.13	U	27.33
MW-D-S	12/15/2008	1.5	U	1.3	U	260		1.3	U	1.8	J	1.5	U	2.2	U	0.87	U	261.8
MW-D-S	3/19/2009	0.22	U	0.19	U	98		0.46	J	4.1		0.22	U	0.33	U	0.13	U	102.56
MW-D-S	5/19/2009	0.22	U	0.19	U	32		0.65		5.4		0.22	U	0.33	U	0.13	U	38.05
MW-D-S	8/27/2009	0.22	U	0.19	U	52		0.56		5.1		0.22	U	0.33	U	0.13	U	57.66
MW-D-S	12/1/2009	0.22	U	0.19	U	42		0.51		4.9		0.22	U	0.33	U	0.13	U	47.41
MW-D-S	3/15/2010	0.44	U	0.38	U	81		0.38	U	3.6		0.44	U	0.66	U	0.26	U	84.6
MW-D-S	6/3/2010	0.22	U	0.19	U	27		0.89		6.7		0.22	U	0.33	U	0.13	U	34.59
MW-D-S	9/27/2010	0.31	U	0.27	U	41		0.62	J	7.2		0.31	U	0.47	U	0.19	U	48.82
MW-D-S	3/7/2011	0.73	U	0.63	U	130		0.63	U	5.5		0.73	U	1.1	U	0.43	U	135.5
MW-D-S	9/8/2011	0.22	U	0.19	U	31		0.19	U	6.6		0.22	U	0.33	U	0.13	U	37.6

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HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-D-S	12/14/2011	0.22	U	0.19	U	21		0.19	U	6.7		0.22	U	0.33	U	0.13	U	27.7
MW-D-S	3/8/2012	0.22	U	0.19	U	30		0.19	U	7.3		0.22	U	0.33	U	0.13	U	37.3
MW-D-S	6/27/2012	0.22	U	0.19	U	26		0.19	U	7.8		0.22	U	0.33	U	0.13	U	33.8
MW-D-S	9/4/2012	1.3	U	1.1	U	150		1.1	U	0.97	U	1.3	U	1.9	U	0.74	U	150
MW-D-S	11/29/2012	1.1	U	0.95	U	130		0.95	U	5.1		1.1	U	1.7	U	0.65	U	135.1
MW-D-S	3/27/2013	0.31	U	0.27	U	41		0.27	U	8.3		0.31	U	0.47	U	0.19	U	49.3
MW-D-S	6/19/2013	0.22	U	0.19	U	27		1.2		12		0.22	U	0.33	U	0.13	U	40.2
MW-D-S	9/18/2013	0.55	U	0.48	U	74		0.48	U	7.5		0.55	U	0.83	U	0.33	U	81.5
MW-D-S	12/18/2013	3.1	U	2.7	U	410		2.7	U	2.4	U	3.1	U	4.7	U	1.9	U	410
MW-D-S	3/19/2014	0.22	U	0.19	U	37		0.19	U	11		0.22	U	0.33	U	0.13	U	48
MW-D-S	6/26/2014	0.22	U	0.19	U	15		1.2		13		0.22	U	0.33	U	0.13	U	29.2
MW-D-S	9/29/2014	1.5	U	3	U	250		1.7	U	1.3	U	1.9	U	1.9	U	1.6	U	250
MW-D-S	12/8/2014	2.9	U	6	U	380		3.5	U	2.7	U	3.9	U	3.7	U	3.2	U	380
MW-D-S	3/9/2015	3.1	U	6.4	U	370		3.7	U	2.9	U	4.1	U	4	U	3.4	U	370
MW-D-S	5/18/2015	0.44	U	0.45	U	35		1.7		18		0.29	U	0.33	U	0.35	U	54.7
MW-D-S	9/9/2015	0.63	U	0.64	U	41		1.5		14		0.41	U	0.47	U	0.5	U	56.5
MW-D-S	12/21/2015	4	U	4.1	U	230		2.7	U	2.4	U	2.6	U	3	U	3.2	U	230
MW-D-S	3/16/2016	1.1	U	1.1	U	76		0.75	U	12		0.73	U	0.83	U	0.88	U	88
MW-D-S	6/21/2016	0.44	U	0.45	U	64		1.3		13		0.29	U	0.33	U	0.35	U	78.3
MW-D-S	9/14/2016	4.4	U	4.5	U	310		3	U	2.6	U	2.9	U	3.3	U	3.5	U	310
MW-D-S	12/21/2016	4.6	U	5.4	U	410		5.8	U	6	U	9	U	11	U	5.6	U	410
MW-D-S	3/16/2017	0.42	U	0.49	U	56		0.53	U	10		0.82	U	0.96	U	0.51	U	66
MW-D-S	6/8/2017	0.23	U	0.27	U	28		1.2		10		0.45	U	0.53	U	0.28	U	39.2
MW-D-S	9/26/2017	0.23	U	0.27	U	33		0.29	U	11		0.45	U	0.53	U	0.28	U	44
MW-D-S	11/15/2017	0.33	U	0.39	U	35		0.41	U	9.7		0.64	U	0.76	U	0.4	U	44.7
MW-D-S	2/28/2018	1.8	U	2.2	U	170		2.3	U	2.4	U	3.6	U	11		2.2	U	181
MW-D-S	6/14/2018	0.34	U	0.27	U	57		0.27	U	8.5	B	0.29	U	3.7	U	0.19	U	65.5
MW-D-S	9/20/2018	0.24	U	0.19	U	290		0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	290
MW-D-S	1/3/2019	0.4	U	0.32	U	31		0.75	J	7.6		0.33	U	4.4	U	0.22	U	39.35
MW-D-S	3/13/2019	1.2	U	0.95	U	220		0.95	U	0.89	J	1	U	13	U	0.65	U	220.89
MW-D-S	6/17/2019	0.24	U	0.19	U	32		1.1		7.2		0.2	U	2.6	U	0.13	U	40.3
MW-D-S	9/18/2019	0.24	U	0.19	U	17		0.75	J	6.4		0.2	U	2.6	U	0.13	U	24.15
MW-D-S	12/16/2019	0.24	U	0.25	J	31		0.65	J	5		0.43	J	2.6	U	0.13	U	37.33
MW-D-S	6/15/2020	2.4	U	1.9	U	220		1.9	U	1.6	U	2	U	26	U	1.3	U	220
MW-D-S	9/14/2020	0.24	U	0.19	U	34		0.6	J	5.4		0.2	U	2.6	U	0.13	U	40
MW-D-S	12/17/2020	0.24	U	0.19	U	23		0.94	J	7.9		0.2	U	2.6	U	0.13	U	31.84
MW-D-S	3/22/2021					110				3.6	J	2	U					
MW-D-S	6/7/2021					110				5.5	J	4.5	U					
MW-D-S	9/20/2021					32				8.1		0.9	U					
MW-D-S	12/13/2021					12				3.5	J	2	U					
MW-D-S	3/21/2022					150				3.9	J	2.3	U					
MW-D-S	6/9/2022					19				11		0.45	U					
MW-D-S	9/6/2022					270				1.6		0.45	U					
MW-D-S	12/19/2022					52				11		2	U					
MW-D-S	3/21/2023					57				8.6		2.3	U					
MW-D-S	6/9/2023					17				14		2.3	U					
MW-D-S	9/5/2023					54				13		0.45	U					
MW-D-S	12/19/2023					100				14		2.3	U					
MW-D-S	3/5/2024					190				9		0.45	U					
MW-D-S	6/10/2024					54				11		0.45	U					
MW-D-S	9/17/2024					41				8.6		0.45	U					
MW-D-S	12/16/2024					610				0.72	J	0.45	U					
MW-D-S	3/18/2025					76				13		0.45	U					
MW-D-S	5/5/2025					100	J			15		0.45	U					
MW-D-S	8/26/2025					390				3.7	J	2.3	U					
MW-D-S	12/15/2025					290				2		0.45	U					
MW-I-S	6/13/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-I-S	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-S	8/26/2003	NA		NA		0.88	J	0.5	U	0.5	U	2	U	1	U	NA		0.88
MW-I-S	11/18/2003	NA		NA		0.75	J	0.5	U	0.5	U	2	U	1	U	NA		0.75
MW-I-S	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	2.3	U	1	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-I-S	4/27/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-S	8/2/2004	1	U	1	U	1.7		0.5	U	0.5	U	2	U	1	U	1	U	1.7
MW-I-S	10/19/2004	1	U	1	U	1.3		0.5	U	0.5	U	2	U	1	U	1	U	1.3
MW-I-S	2/16/2005	1	U	1	U	1		0.5	U	0.5	U	2	U	1	U	1	U	1
MW-I-S	6/15/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-S	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-S	12/16/2005	1	U	1	U	0.29	J	0.5	U	0.5	U	2	U	1	U	1	U	0.29
MW-I-S	3/22/2006	1	U	1	U	2.6		0.5	U	0.5	U	2	U	1	U	1	U	2.6
MW-I-S	6/15/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-S	9/13/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-S	12/18/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-S	3/28/2007	ND		ND		2.9		0.5	U	0.5	U	2	U	1	U	ND		2.9
MW-I-S	6/5/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-S	9/25/2007	ND		ND		9.2		0.5	U	0.5	U	2	U	1	U	ND		9.2
MW-I-S	12/6/2007	ND		1	U	8.7		0.5	U	0.5	U	2	U	1	U	ND		8.7
MW-I-S	4/18/2008	0.22	U	0.19	U	1.8		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	1.8
MW-I-S	6/30/2008	0.22	U	0.19	U	0.35	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.35
MW-I-S	9/17/2008	0.22	U	0.19	U	7.6		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	7.6
MW-I-S	12/15/2008	0.22	U	0.19	U	12		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	12
MW-I-S	3/18/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	5/19/2009	0.22	U	0.19	U	9.2		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	9.2
MW-I-S	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	3/7/2011	0.22	U	0.19	U	2.9		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	2.9
MW-I-S	6/15/2011	0.22	U	0.19	U	3.1		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	3.1
MW-I-S	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	6/27/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	11/29/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	6/19/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	12/18/2013	0.22	U	0.19	U	1.5		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	1.5
MW-I-S	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	6/26/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-S	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-S	12/8/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-S	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-S	5/18/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-S	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-S	12/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-S	3/16/2016	2.9	U	3	U	1.5	U	2	U	1.7	U	1.9	U	2.2	U	2.3	U	0
MW-I-S	6/21/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-S	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-S	12/21/2016	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	6/8/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	11/15/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-S	6/14/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-I-S	9/20/2018	0.24	U	0.19	U	2.4		0.19	U	1.5		0.2	U	2.6	U	0.13	U	3.9
MW-I-S	1/3/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-I-S	3/13/2019	0.24	U	0.19	U	0.46	JB	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0.46
MW-I-S	6/17/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-I-S	9/18/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	J	0.2	U	2.6	U	0.13	U	0.16

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-I-S	12/16/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.17	J	0.2	U	2.6	U	0.13	U	0.17
MW-I-S	6/15/2020	0.24	U	0.19	U	6.5		0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	6.5
MW-I-S	9/14/2020	0.24	U	0.19	U	0.66	J	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0.66
MW-I-S	12/17/2020	0.24	U	0.19	U	0.45	J	0.19	U	0.27	J	0.2	U	2.6	U	0.13	U	0.72
MW-I-S	3/22/2021					3.4				0.32	U	0.4	U					
MW-I-S	6/7/2021					2.1				0.92	U	0.9	U					
MW-I-S	9/20/2021					0.88	U			0.92	U	0.9	U					
MW-I-S	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-I-S	3/21/2022					4.9				0.46	U	0.45	U					
MW-I-S	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-I-S	9/6/2022					0.44	U			0.46	U	0.45	U					
MW-I-S	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-I-S	3/21/2023					1.4				0.46	U	0.45	U					
MW-I-S	6/9/2023					1.2				0.46	U	0.45	U					
MW-I-S	9/5/2023					0.66	J			0.46	U	0.45	U					
MW-I-S	12/19/2023					0.44	U			0.46	U	0.45	U					
MW-I-S	3/5/2024					1.1				0.46	U	0.45	U					
MW-I-S	6/10/2024					5.8				0.46	U	0.45	U					
MW-I-S	9/17/2024					0.65	J			0.46	U	0.45	U					
MW-I-S	12/16/2024					1.6				0.46	U	0.55	J					
MW-I-S	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-I-S	5/5/2025					2.3				0.46	U	0.45	U					
MW-I-S	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-I-S	12/15/2025					5.8				0.46	U	0.45	U					
MW-I-I	6/9/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-I-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1.0	U	0
MW-I-I	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-I-I	11/18/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-I-I	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	2	UJ	1	U	0
MW-I-I	4/27/2004	1	U	1	U	0.91	J	0.5	U	0.5	U	2	U	1	U	1	U	0.91
MW-I-I	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	10/19/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	6/15/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	12/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	3/22/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-I-I	6/15/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	9/13/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	12/18/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	3/28/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	6/5/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	9/27/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	12/6/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-I-I	4/18/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	12/15/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/18/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/7/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-I-I	6/27/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	11/29/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	6/19/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	12/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	6/26/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-I-I	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-I	12/8/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-I	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-I-I	5/18/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	9/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	12/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	3/16/2016	2.9	U	3	U	1.5	U	2	U	1.7	U	1.9	U	2.2	U	2.3	U	0
MW-I-I	6/21/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-I-I	12/21/2016	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-I	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-I	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-I-I	3/13/2019	0.24	U	0.19	U	0.39	JB	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0.39
MW-I-I	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-I-I	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-I-I	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-I-I	9/20/2021					0.88	U			0.92	U	0.9	U					
MW-I-I	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-I-I	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-I-I	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-I-I	9/6/2022					0.44	U			0.46	U	0.45	U					
MW-I-I	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-I-I	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-I-I	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-I-I	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-I-I	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-I-I	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-I-I	12/15/2025					0.44	U			0.46	U	0.45	U					
MW-G-S	6/12/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-G-S	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-G-S	11/18/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-G-S	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1.3	U	1	U	0
MW-G-S	4/27/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	10/19/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	6/15/2005	1	U	1	U	1	U	1	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	9/16/2005	1	U	1	U	1	U	1	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	12/16/2005	1	U	1	U	1	U	1	U	0.5	U	2	U	1	U	1	U	0
MW-G-S	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	12/15/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/28/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-G-S	3/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	3/28/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-S	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-G-S	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-G-S	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-S	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-S	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-S	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-G-S	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-G-S	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-G-S	9/20/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-S	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-S	9/18/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-S	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-S	9/14/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-S	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-G-S	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-G-S	9/20/2021					0.88	U			0.92	U	0.9	U					
MW-G-S	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-G-S	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-G-S	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-G-S	9/7/2022					0.44	U			0.46	U	0.45	U					
MW-G-S	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-G-S	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-G-S	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-G-S	9/5/2023					0.44	U			0.46	U	0.45	U					
MW-G-S	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-G-S	9/17/2024					0.44	U			0.46	U	0.45	U					
MW-G-S	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-G-S	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-G-S	12/18/2025					0.44				0.46	U	0.45	U					
MW-G-I	6/12/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-G-I	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-G-I	11/18/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-G-I	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	3.4	U	1	U	0
MW-G-I	4/27/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	10/19/2004	1	U	1	U	1	U	0.5	U	0.5	U	2.0	U	1	U	1	U	0
MW-G-I	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	6/15/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	12/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	3/22/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-G-I	9/14/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-G-I	3/29/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-G-I	9/27/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-G-I	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	12/15/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-G-I	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/28/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/28/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-G-I	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-G-I	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-G-I	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-I	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-I	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-I	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-G-I	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-G-I	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-G-I	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	J	0.2	U	2.6	U	0.13	U	0.16
MW-G-I	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-G-I	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-G-I	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-G-I	9/20/2021					0.88	U			0.92	U	0.9	U					
MW-G-I	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-G-I	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-G-I	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-G-I	9/7/2022					0.44	U			0.46	U	0.45	U					
MW-G-I	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-G-I	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-G-I	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-G-I	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-G-I	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-G-I	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-G-I	12/18/2025					0.44	U			0.46	U	0.45	U					
MW-OS1-I	6/26/2001	ND		ND		ND		9		1900		320		ND		ND		2229
MW-OS1-I	9/12/2001	NA		NA		NA		11		1800		380		NA		NA		2191
MW-OS1-I	12/13/2001	NA		NA		NA		NA		1800		260		NA		NA		2060
MW-OS1-I	3/5/2002	NA		NA		NA		10	J	1900		270		NA		NA		2180
MW-OS1-I	6/18/2002	NA		NA		NA		9.5		1800		280		NA		NA		2089.5
MW-OS1-I	9/25/2002	NA		NA		NA		ND		1800		280		NA		NA		2080
MW-OS1-I	1/28/2003	67	U	67	U	67	U	33	U	2000		330		67	U	67	U	2330
MW-OS1-I	8/26/2003	NA		NA		77	U	38	U	2200		220		77	U	NA		2420
MW-OS1-I	11/18/2003	NA		NA		77	U	38	U	2200		360		77	U	NA		2560
MW-OS1-I	3/2/2004	67	U	67	U	67	U	33	U	2300		260		67	U	67	U	2560
MW-OS1-I	4/27/2004	71	U	71	U	71	U	36	U	2200		370		71	U	71	U	2570
MW-OS1-I	8/2/2004	77	U	77	U	77	U	38	U	2100		300		140		77	U	2540
MW-OS1-I	10/19/2004	100	U	100	U	100	U	100	U	2300		340		100	U	100	U	2640
MW-OS1-I	2/16/2005	56	U	56	U	56	U	9.3	J	2200		360		56	U	56	U	2569.3
MW-OS1-I	6/16/2005	71	U	13	J	71	U	36	U	2500		290		120	U	71	U	2790
MW-OS1-I	9/6/2005	100	U	100	U	100	U	50	U	2600		230		68	J	100	U	2898
MW-OS1-I	12/16/2005	10	U	3.3	J	10	U	3.7	J	837		92		10	U	10	U	935
MW-OS1-I	3/23/2006	25	U	25	U	25	U	12	U	860		150		25		25	U	1035
MW-OS1-I	6/15/2006	ND		77	U	77	U	38	U	2000		480		77	U	ND		2480
MW-OS1-I	9/14/2006	ND		50	U	50	U	25	U	1100		340		23	U	ND		1440
MW-OS1-I	12/18/2006	ND		33	U	33	U	33	U	993		407		33	U	ND		1400
MW-OS1-I	3/29/2007	ND		ND		56	U	28	U	1700		450		56	U	ND		2150
MW-OS1-I	6/5/2007	ND		1	U	1	U	9.9	J	730		450		67	B	ND		1256.9

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-OS1-I	9/25/2007	ND		77	U	77	U	38	U	2000		710		77	U	ND		2710
MW-OS1-I	12/6/2007	ND		100	U	100	U	50	U	2800		850		100	U	ND		3650
MW-OS1-I	4/17/2008	8.8	U	24	J	6.8	U	8.3	J	2300		710		13	U	5.2	U	3042.3
MW-OS1-I	6/30/2008	18	U	16	J	14	U	16	U	2500		920		27	U	11	U	3436
MW-OS1-I	9/17/2008	5.5	U	4.9	J	4.2	U	4.8	U	760		66		8.2	U	3.2	U	830.9
MW-OS1-I	12/16/2008	12	U	11	U	9.4	U	11	U	1500		420		18	U	7.2	U	1920
MW-OS1-I	3/18/2009	22	U	25	J	17	U	19	U	2400		610		33	U	13	U	3035
MW-OS1-I	5/19/2009	22	U	27	J	17	U	19	U	2700		740		33	U	13	U	3467
MW-OS1-I	8/27/2009	18	U	43	J	14	U	30		2500		700		27	U	21	J	3294
MW-OS1-I	12/1/2009	4.4	U	7.6	J	3.4	U	4	J	1400		140		6.9	J	2.6	U	1558.5
MW-OS1-I	3/17/2010	11	U	9.5	U	8.5	U	9.5	U	1700		940		19	J	6.5	U	2659
MW-OS1-I	6/3/2010	11	U	9.5	U	8.5	U	9.5	U	1500		620		16	U	6.5	U	2120
MW-OS1-I	9/27/2010	8.8	U	7.6	J	6.8	U	7.6	U	1100		300		13	U	5.2	U	1407.6
MW-OS1-I	11/29/2010	5.5	U	4.8	U	4.2	U	4.8	U	630		58		8.2	U	3.2	U	688
MW-OS1-I	3/7/2011	18	U	51	J	33	J	16	U	2700		670		27	U	11	U	3454
MW-OS1-I	9/8/2011	5.5	U	4.8	U	4.3	U	4.8	U	560		5.5	U	8.3	U	3.3	U	560
MW-OS1-I	6/15/2011	16	U	14	U	12	U	14	U	2000		670		24	U	9.3	U	2670
MW-OS1-I	12/14/2011	28	U	24	U	21	U	24	U	2500		560		41	U	16	U	3060
MW-OS1-I	3/8/2012	22	U	19	U	17	U	19	U	2300		730		33	U	13	U	3030
MW-OS1-I	6/27/2012	14	U	12	U	11	U	12	U	2200		680		68		8.1	U	2948
MW-OS1-I	9/4/2012	6.3	U	5.4	U	4.9	U	5.4	U	870		540		9.4	U	3.7	U	1410
MW-OS1-I	11/29/2012	18	U	16	U	14	U	16	U	1300		1200		27	U	11	U	2500
MW-OS1-I	3/27/2013	22	U	19	U	17	U	19	U	1800		1100		33	U	13	U	2900
MW-OS1-I	6/19/2013	15	U	13	U	11	U	13	U	540		1300		22	U	8.7	U	1840
MW-OS1-I	9/18/2013	15	U	13	U	11	U	13	U	1800		460		22	U	8.7	U	2260
MW-OS1-I	12/18/2013	5.5	U	4.8	U	4.3	U	4.8	U	690		5.5	U	8.3	U	3.3	U	690
MW-OS1-I	3/19/2014	18	U	16	U	14	U	16	U	2400		440		27	U	11	U	2840
MW-OS1-I	6/26/2014	11	U	9.5	U	8.5	U	9.5	U	1500		310		17	U	6.5	U	1810
MW-OS1-I	9/29/2014	1.3	U	2.6	U	0.86	U	1.5	U	160		1.7	U	1.6	U	1.4	U	160
MW-OS1-I	12/8/2014	16	U	32	U	11	U	19	U	2200		380		20	U	17	U	2580
MW-OS1-I	3/9/2015	15	U	30	U	10	U	17	U	1900		310		19	U	16	U	2210
MW-OS1-I	5/18/2015	29	U	30	U	15	U	20	U	2000		640		22	U	23	U	2640
MW-OS1-I	9/9/2015	15	U	15	U	7.3	U	10	U	850		9.7	U	11	U	12	U	850
MW-OS1-I	12/21/2015	13	U	13	U	6.3	U	8.6	U	720		8.3	U	9.4	U	10	U	720
MW-OS1-I	3/16/2016	29	U	30	U	15	U	20	U	1900		560		22	U	23	U	2460
MW-OS1-I	6/21/2016	22	U	23	U	11	U	15	U	1500		600		17	U	18	U	2100
MW-OS1-I	9/14/2016	29	U	30	U	15	U	20	U	1600		360		22	U	23	U	1960
MW-OS1-I	12/21/2016	5.8	U	6.8	U	8.3	U	7.3	U	610		99		13	U	7	U	709
MW-OS1-I	3/16/2017	23	U	27	U	33	U	29	U	1900		330		53	U	28	U	2230
MW-OS1-I	6/8/2017	9.2	U	11	U	13	U	12	U	960		250		21	U	11	U	1210
MW-OS1-I	9/26/2017	7.7	U	35		11	U	9.7	U	1500		390		18	U	9.3	U	1925
MW-OS1-I	11/15/2017	23	U	27	U	33	U	29	U	2100		390		53	U	28	U	2490
MW-OS1-I	2/28/2018	23	U	27	U	33	U	29	U	1700		320		53	U	28	U	2020
MW-OS1-I	6/14/2018	12	U	51		5	U	9.5	U	1700		410		130	U	6.5	U	2161
MW-OS1-I	9/20/2018	12	U	9.5	U	5	U	9.5	U	550		10	U	130	U	6.5	U	550
MW-OS1-I	1/3/2019	16	U	15	J	6.7	U	13	U	900		65	J	170	U	8.7	U	980
MW-OS1-I	3/13/2019	8	U	36		24	J	6.3	J	1600		170		87	U	4.3	U	1836.3
MW-OS1-I	6/17/2019	12	U	9.5	U	5	U	9.5	U	1100		190		130	U	6.5	U	1290
MW-OS1-I	9/18/2019	12	U	43	J	18	J	9.5	U	1500		330		130	U	6.5	U	1891
MW-OS1-I	12/16/2019	9.6	U	11	J	4.5	J	7.6	U	570		8	U	100	U	5.2	U	585.5
MW-OS1-I	6/16/2020	6	U	6.1	J	5.4	J	4.8	U	480		5	U	66	U	3.3	U	491.5
MW-OS1-I	9/14/2020	4.8	U	6.8	J	3.9	J	3.8	U	510		4.0	U	52	U	2.6	U	520.7
MW-OS1-I	1/12/2021	6	U	14	J	2.5	U	4.8	U	800		98		66	U	3.3	U	816.5
MW-OS1-I	1/12/2021					11				1300		180						
MW-OS1-I	3/22/2021					4.7	J			690		76						
MW-OS1-I	6/7/2021					22	U			1300		250						
MW-OS1-I	9/20/2021					11	U			650		11	U					
MW-OS1-I	12/13/2021					3.4	U			490		15						
MW-OS1-I	3/21/2022					18	U			1700		360						
MW-OS1-I	6/9/2022					18	U			1400		160						
MW-OS1-I	6/9/2022					2.2				1700		210						
MW-OS1-I	9/7/2022					4.4	U			450		7.4	J					

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FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-OS1-I	12/19/2022					2.2				420	J	6.1						
MW-OS1-I	12/19/2022					3.4	UJ			380		13	J					
MW-OS1-I	3/21/2023					28	J			740		21	J					
MW-OS1-I	3/21/2023					36				1400		150						
MW-OS1-I	6/9/2023					44	U			1600		220						
MW-OS1-I	9/5/2023					6.1	J			940		4.5	U					
MW-OS1-I	12/19/2023					6				780	E	14	J					
MW-OS1-I	12/19/2023					6.8	J*			950		23	J*					
MW-OS1-I	3/5/2024					3.5	J			2100		340						
MW-OS1-I	6/10/2024					13				1500		180						
MW-OS1-I	6/10/2024					14				1500		210						
MW-OS1-I	9/17/2024					1.8	U			80		3.1	J					
MW-OS1-I	12/16/2024					3.9				420	J	0.62	J					
MW-OS1-I	12/16/2024					3.5	U			200	J	3.6	U					
MW-OS1-I	3/18/2025					1.6	J			260		2.4						
MW-OS1-I	5/5/2025					40				1700		200						
MW-OS1-I	5/5/2025					39				1800		210						
MW-OS1-I	8/26/2025					21				620		14						
MW-OS1-I	8/26/2025					24				610		14						
MW-OS1-I	12/15/2025					7.1	J			580		28						
MW-OS1-I	12/15/2025					4.9	J			630		37						
MW-OS1-D	6/26/2001	1	U	1	U	1	U	0.5	U	0.76		2	U	1	U	1	U	0.76
MW-OS1-D	9/12/2001	NA		NA		NA		NA		0.55		NA		NA		NA		0.55
MW-OS1-D	3/5/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	6/18/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-OS1-D	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1.3	U	1	U	0
MW-OS1-D	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS1-D	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	9.2		2.2		0.33	U	0.13	U	11.4
MW-OS1-D	3/10/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-2	6/15/2006	ND		1	U	0.30	J	0.5	U	0.5	U	2	U	1	U	ND		0.3
MW-OS-2	12/18/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-OS-2	3/29/2007	ND		ND		1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-OS-2	6/5/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-OS-2	9/25/2007	ND		0.26	J	1	U	0.5	U	0.5	U	2	U	1	U	ND		0.26
MW-OS-2	12/6/2007	ND		0.36	J	1	U	0.5	U	0.5	U	2	U	1.5	U	ND		0.36
MW-OS-2	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	9/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	12/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/16/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	6/3/2010	0.22	U	0.19	U	0.43	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.43
MW-OS-2	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/7/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	6/27/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	11/29/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-OS-2	6/19/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	12/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	6/26/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-2	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-2	12/8/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-2	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-2	5/18/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	12/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	6/21/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-2	12/21/2016	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-2	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-2	6/8/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-2	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-2	11/15/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	8.5		0.28	U	8.5
MW-OS-2	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-2	6/14/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	9/20/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	1/3/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	6/17/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	9/18/2019	0.48	U	0.38	U	0.2	U	0.38	U	0.32	U	0.4	U	5.2	U	0.26	U	0
MW-OS-2	12/16/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	9/14/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	12/17/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-2	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-OS-2	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-OS-2	9/20/2021					0.44	U			0.46	U	0.45	U					
MW-OS-2	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-OS-2	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-OS-2	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-OS-2	9/7/2022					0.44	U			0.46	U	0.45	U					
MW-OS-2	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-OS-2	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-OS-2	6/9/2023					0.88	U			0.92	U	0.9	U					
MW-OS-2	9/5/2023					0.44	U			0.46	U	0.45	U					
MW-OS-2	1/3/2024					0.44	U			0.46	U	0.45	U					
MW-OS-2	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-OS-2	6/10/2024					0.44	U			0.46	U	0.45	U					
MW-OS-2	9/17/2024					0.44	U			0.46	U	0.45	U					
MW-OS-2	12/16/2024					0.44	U			0.46	U	0.45	U					
MW-OS-2	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-OS-2	5/5/2025					0.44	U			0.46	U	0.45	U					
MW-OS-2	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-OS-2	12/15/2025					0.44	U			0.46		0.45	U					
MW-OS-3	12/13/2001	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	3/5/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	6/18/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	9/25/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-OS-3	11/18/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-OS-3	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1.2	U	1	U	0
MW-OS-3	4/27/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	8/2/2004	1	U	1	U	1	U	0.5	U	1.6		2	U	1	U	1	U	1.6
MW-OS-3	10/19/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-OS-3	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	6/15/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	12/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	3/23/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	9/14/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-OS-3	3/29/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-OS-3	9/25/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-OS-3	4/17/2008	0.22	U	0.19	U	0.19	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.19
MW-OS-3	9/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/7/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-OS-3	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-3	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-OS-3	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-3	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-OS-3	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-3	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-3	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-OS-3	9/20/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	9/18/2019	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	9/14/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	12/17/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
MW-OS-3	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-OS-3	3/22/2021					0.1	U			0.16	U	0.2	U					
MW-OS-3	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-OS-3	6/7/2021					0.44	U			0.89	U	0.45	U					
MW-OS-3	9/20/2021					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/20/2021					0.44	U			0.46	U	0.45	U					
MW-OS-3	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-OS-3	12/13/2021					0.69	U			0.71	U	0.41	U					
MW-OS-3	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-OS-3	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/7/2022					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/7/2022					0.44	U			0.46	U	0.45	U					
MW-OS-3	12/19/2022					0.69	U			0.71	U	0.41	U					
MW-OS-3	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-OS-3	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-OS-3	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/5/2023					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/5/2023					0.44	U			0.46	U	0.45	U					
MW-OS-3	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-OS-3	3/5/2024					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/17/2024					0.44	U			0.46	U	0.45	U					
MW-OS-3	9/17/2024					0.44	U			0.46	U	0.45	U					
MW-OS-3	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-OS-3	3/18/2025					0.44	U			0.46	U	0.45	U					
MW-OS-3	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-OS-3	12/15/2025					0.44	U			0.46	U	0.45	U					

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
HAMMOND	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	12/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/16/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/27/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	11/29/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/28/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/19/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	12/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	6/26/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
HAMMOND	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
HAMMOND	12/8/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
HAMMOND	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
HAMMOND	5/18/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
HAMMOND	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
HAMMOND	12/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
PAPER 17	2/7/1995	NA		NA		NA		NA		0.5	U	0.5	U	NA		NA		0
PAPER 17	5/31/1995	NA		NA		NA		NA		0.5	U	0.5	U	NA		NA		0
PAPER 17	9/26/2002	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	1/28/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	8/27/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	8/3/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	0.74	J	1	U	0.74
PAPER 17	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	9/8/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	3/22/2006	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
PAPER 17	9/14/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
PAPER 17	3/29/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
PAPER 17	9/25/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
PAPER 17	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	2.3		0.92	J	0.33	U	0.13	U	3.22
PAPER 17	3/16/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	3/28/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 17	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
PAPER 17	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
PAPER 17	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
PAPER 17	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
PAPER 17	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
PAPER 17	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
PAPER 17	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
PAPER 17	9/20/2018	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
PAPER 17	3/13/2019	0.24	U	0.19	U	0.19	JB	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0.19
PAPER 17	6/16/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
PAPER 17	9/14/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.16	U	0.2	U	2.6	U	0.13	U	0
PAPER 17	3/23/2021					0.1	U			0.16	U	0.2	U					
PAPER 17	9/20/2021					0.44	U			0.46	U	0.45	U					
PAPER 17	3/21/2022					0.44	U			0.46	U	0.45	U					
PAPER 17	9/6/2022					0.44	U			0.46	U	0.45	U					
PAPER 17	3/20/2023					0.44	U			0.46	U	0.45	U					
PAPER 17	9/5/2023					0.44	U			0.46	U	0.45	U					
PAPER 17	6/10/2024					0.44	U			0.46	U	0.45	U					
PAPER 17	9/17/2024					0.44	U			0.46	U	0.45	U					
PAPER 17	3/19/2025					0.44	U			0.46	U	0.45	U					
PAPER 17	8/26/2025					0.44	U			0.46	U	0.45	U					
PAPER 18	2/7/1995	NA		NA		NA		NA		17		12		NA		NA		29
PAPER 18	5/31/1995	NA		NA		NA		NA		49		0.5	U	NA		NA		49
PAPER 18	8/1/1995	NA		NA		NA		NA		10.5		4.9		NA		NA		15.4
PAPER 18	9/26/2002	1	U	1	U	1	U	0.5	U	4.0		0.77	J	1	U	1	U	4.77
PAPER 18	8/3/2004	1	U	1	U	1	U	0.5	U	2.9		1.4	J	0.65	J	1	U	4.95
PAPER 18	2/16/2005	1	U	1	U	1	U	0.16		5		2.4		1	U	1	U	7.56
PAPER 18	9/8/2005	1	U	1	U	1	U	0.18	J	5.1		2.1		1	U	1	U	7.38
PAPER 18	9/14/2006	ND		1	U	1	U	0.5	U	5.2		2.7		6.2	U	ND		7.9
PAPER 18	3/29/2007	ND		ND		1	U	0.5	U	6.2		2.5	J	1	U	ND		8.7
PAPER 18	9/25/2007	ND		1	U	1	U	0.5	U	1.7		0.62	J	1	U	ND		2.32
PAPER 18	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	3.6		1.8	J	0.33	U	0.13	U	5.4
PAPER 18	9/16/2008	0.22	U	0.19	U	0.17	U	0.19	U	2.2		0.76	J	0.33	U	0.13	U	2.96
PAPER 18	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	3.4		1.1	J	0.33	U	0.13	U	4.5
PAPER 18	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 18	3/16/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 18	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	1.9		0.83	J	0.33	U	0.13	U	2.73
PAPER 18	3/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	2.2		0.73	J	0.33	U	0.13	U	2.93
PAPER 18	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	1.5		0.22	U	0.33	U	0.13	U	1.5
PAPER 18	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
PAPER 18	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	4.5		2.8		0.33	U	0.13	U	7.3
PAPER 18	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	9.3		4.7		0.33	U	0.13	U	14
PAPER 18	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	7.7		5.3		0.33	U	0.13	U	13
PAPER 18	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	6.1		5		0.28	U	0.24	U	11.1
PAPER 18	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	6		5		0.28	U	0.24	U	11
PAPER 18	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	4.6		4.8		0.33	U	0.35	U	9.4
PAPER 18	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	5.8		7.2		0.33	U	0.35	U	13
PAPER 18	9/14/2016	0.88	U	0.9	U	0.44	U	0.6	U	15		4.1		0.66	U	0.7	U	19.1
PAPER 18	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	3.7		5.1		0.53	U	0.28	U	8.8
PAPER 18	9/26/2017	0.23	U	0.27	U	0.33	U	0.29	U	2.5		2.5		0.53	U	0.28	U	5
PAPER 18	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	4.3		4		0.53	U	0.28	U	8.3
PAPER 18	9/20/2018	0.24	U	0.19	U	0.1	U	0.19	U	5.3		5.7		2.6	U	0.13	U	11
PAPER 18	3/13/2019	0.24	U	0.19	U	0.1	U	0.19	U	6		5.6		2.6	U	0.13	U	11.6
PAPER 18	9/18/2019	0.24	U	0.19	U	0.15	J	0.24	J	3.7		3.8		2.6	U	0.13	U	7.89
PAPER 18	6/16/2020	0.24	U	0.19	U	0.1	U	0.19	U	4.1		3		2.6	U	0.13	U	7.1
PAPER 18	9/14/2020	0.24	U	0.19	U	0.1	U	0.19	U	3.7		2.4		2.6	U	0.13	U	6.1
PAPER 19	3/23/2021					0.1	U			4.6		4.6						
PAPER 20	9/20/2021					0.44	U			0.61	J	0.45	U					
PAPER 21	3/21/2022					0.44	U			5.6		3.9						
PAPER 22	12/19/2022					0.69	U			4.1		3.4						
PAPER 23	3/20/2023					0.44	U			10		6						
PAPER 24	9/5/2023					0.44	U			4		3.4						
PAPER 25	9/17/2024					0.44	U			4.3		4.8						
PAPER 26	3/19/2025					0.44	U			5.7		5						

TABLE 6
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FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-A-I	6/15/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-A-I	1/29/2003	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-A-I	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1.8	U	1	U	0
MW-A-I	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-B-D	3/18/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-C-D	3/18/2010	0.22	U	0.19	U	0.34	J	0.19	U	0.6		0.44	J	0.33	U	0.13	U	1.38
MW-C-D	3/10/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	3	B	0.24	U	3
MW-D-D	6/9/1995	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	0
MW-D-D	1/29/2003	1	U	1	U	1.0	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-D-D	8/26/2003	NA		NA		1	U	0.5	U	0.5	U	2	U	1	U	NA		0
MW-D-D	3/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	2.4	U	1	U	0
MW-D-D	8/2/2004	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-D-D	2/16/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-D-D	9/6/2005	1	U	1	U	1	U	0.5	U	0.5	U	2	U	1	U	1	U	0
MW-D-D	3/22/2006	1	U	1	U	0.67	J	0.5	U	0.5	U	2	U	1	U	1	U	0.67
MW-D-D	9/13/2006	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-D-D	3/29/2007	ND		1	U	1	U	0.5	U	0.5	U	2	U	1	U	ND		0
MW-D-D	9/25/2007	ND		ND		3.3		0.5	U	0.5	U	2	U	1	U	ND		3.3
MW-D-D	4/17/2008	0.22	U	0.19	U	0.38	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.38
MW-D-D	9/17/2008	0.22	U	0.19	U	1.4		0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	1.4
MW-D-D	5/19/2009	0.22	U	0.19	U	0.44	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.44
MW-D-D	8/27/2009	0.22	U	0.19	U	0.82	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.82
MW-D-D	3/18/2010	0.22	U	0.19	U	0.65	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.65
MW-D-D	9/27/2010	0.22	U	0.19	U	0.61	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.61
MW-D-D	3/7/2011	0.22	U	0.19	U	0.8	J	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0.8
MW-D-D	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-D	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-D-D	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-D-D	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	1/29/2003	1	U	1	U	1	U	0.5	U	1.2		2	U	1	U	1	U	1.2
MW-D-I	4/9/2003	1	U	1	U	1	U	0.5	U	1		2	U	1	U	1	U	1
MW-D-I	8/26/2003	1	U	1	U	1	U	0.5	U	0.84		2	U	10	U	1	U	0.84
MW-D-I	11/19/2003	1	U	1	U	0.45	J	0.5	U	0.88		2	U	1	U	0.27	J	1.6
MW-D-I	3/1/2004	1	U	1	U	1	U	0.5	U	1.2		2	U	1	U	1	U	1.2
MW-D-I	4/27/2004	1	U	1	U	1	U	0.5	U	0.8		2	U	1	U	1	U	0.8
MW-D-I	8/2/2004	1	U	1	U	2	U	1	U	0.8		2	U	2.5		1	U	3.3
MW-D-I	10/19/2004	1	U	1	U	1	U	0.5	U	0.58		2	U	1	U	1	U	0.58
MW-D-I	2/16/2005	1	U	1	U	1	U	0.5	U	1	U	2	U	1	U	1	U	0
MW-D-I	6/15/2006	ND		1	U	1	U	0.5	U	0.46	J	2	U	1	U	ND		0.46
MW-D-I	9/13/2006	ND		1	U	1	U	0.5	U	0.25	J	2	U	1	U	ND		0.25
MW-D-I	12/18/2006	ND		1	U	1	U	0.5	U	0.27	J	2	U	1	U	ND		0.27
MW-D-I	3/29/2007	ND		ND		1	U	0.5	U	0.58	J	2	U	1	U	ND		0.58
MW-D-I	6/5/2007	ND		1	U	1	U	0.5	U	0.35	J	2	U	1	U	ND		0.35
MW-D-I	9/25/2007	ND		ND		1	U	0.5	U	0.24	J	2	U	1	U	ND		0.24
MW-D-I	12/6/2007	ND		1	U	1	U	0.5	U	0.27	J	2.0	U	1.0	U	ND		0.27
MW-D-I	4/17/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.26	J	0.22	U	0.33	U	0.13	U	0.26
MW-D-I	6/30/2008	0.22	U	0.19	U	0.17	U	0.19	U	0.27	J	0.22	U	0.33	U	0.13	U	0.27
MW-D-I	12/15/2008	0.31	U	0.27	U	39		2.2		16		0.31	U	0.47	U	0.19	U	57.2
MW-D-I	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.22	J	0.22	U	0.33	U	0.13	U	0.22
MW-D-I	5/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.57		0.22	U	0.33	U	0.13	U	0.57
MW-D-I	8/27/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.27	J	0.22	U	0.33	U	0.13	U	0.27
MW-D-I	12/1/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.28	J	0.22	U	0.33	U	0.13	U	0.28
MW-D-I	3/18/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.74		0.22	U	0.33	U	0.13	U	0.74

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-D-I	6/3/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.4	J	0.22	U	0.33	U	0.13	U	0.4
MW-D-I	9/27/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.23	J	0.22	U	0.33	U	0.13	U	0.23
MW-D-I	11/29/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	3/7/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.29	J	0.22	U	0.33	U	0.13	U	0.29
MW-D-I	6/15/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	9/8/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	12/14/2011	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	3/8/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	6/27/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	9/4/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	11/29/2012	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	3/27/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	6/19/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	9/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	12/18/2013	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	6/26/2014	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-D-I	9/29/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-D-I	12/8/2014	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-D-I	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-D-I	5/18/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	9/9/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	12/21/2015	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	6/21/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	9/14/2016	0.44	U	0.45	U	0.22	U	0.3	U	0.26	U	0.29	U	0.33	U	0.35	U	0
MW-D-I	12/21/2016	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-D-I	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-D-I	2/28/2018	0.23	U	0.27	U	0.33	U	0.29	U	0.3	U	0.45	U	0.53	U	0.28	U	0
MW-D-I	3/13/2019	0.24	U	0.19	U	0.13	JB	0.19	U	0.52	J	0.2	U	2.6	U	0.13	U	0.65
MW-D-I	6/15/2020	0.24	U	0.19	U	0.1	U	0.19	U	0.88	J	0.2	U	2.6	U	0.13	U	0.88
MW-D-I	3/22/2021					0.1	U			0.62	J	0.2	U					
MW-D-I	6/7/2021					0.44	U			0.46	U	0.45	U					
MW-D-I	9/20/2021					0.88	U			0.92	U	0.9	U					
MW-D-I	12/13/2021					3.4	U			3.5	U	2	U					
MW-D-I	3/21/2022					0.44	U			0.46	U	0.45	U					
MW-D-I	6/9/2022					0.44	U			0.46	U	0.45	U					
MW-D-I	9/6/2022					0.46	J			0.46	U	0.45	U					
MW-D-I	12/19/2022					3.4	U			3.5	U	2	U					
MW-D-I	3/21/2023					0.44	U			0.46	U	0.45	U					
MW-D-I	6/9/2023					0.44	U			0.46	U	0.45	U					
MW-D-I	3/5/2024					0.44	U			0.66	J	0.45	U					
MW-D-I	3/18/2025					0.44	U			1.1		0.45	U					
MW-D-I	8/26/2025					0.44	U			0.46	U	0.45	U					
MW-D-I	12/15/2025					0.44	U			1.5		0.45	U					
MW-DS-S	7/17/1997	ND		ND		6800		1800		NA		ND		110		120		8830
MW-DS-S	9/25/1997	ND		ND		3300		660		NA		ND		120		ND		4080
MW-DS-S	9/11/2001	5.9	U	5.9	U	170		5.9	U	7.3		12	U	5.9	U	5.9	U	177.25
MW-DS-S	12/18/2001	5.6	U	5.6	U	140		2.8	U	8.8		11	U	5.6	U	5.6	U	148.8
MW-DS-S	3/6/2002	5	U	5	U	140		2.5	U	7.7		10	U	5	U	5	U	147.7
MW-DS-S	6/19/2002	5	U	5	U	160		2.5	U	8		10	U	5	U	5	U	168
MW-DS-S	9/26/2002	4	U	4	U	140		2	U	8.2		8	U	4	U	4	U	148.2
MW-DS-S	1/28/2003	4	U	4	U	110		2	U	5.1		8	U	4	U	4	U	115.1
MW-DS-S	4/9/2003	5	U	5	U	130		2.5	U	8		10	U	5	U	5	U	138
MW-DS-S	8/28/2003	8	U	8	U	190		4	U	7.3		16	U	8	U	8	U	197.3
MW-DS-S	11/19/2003	8	U	8	U	280		4	U	4		16	U	8	U	8	U	284
MW-DS-S	3/19/2009	0.22	U	0.19	U	98		0.46	J	4.1		0.22	U	0.33	U	0.13	U	102.56
MW-E-I	3/19/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-E-S	3/19/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-F-D	3/18/2010	0.22	U	0.19	U	0.53	J	0.19	U	0.58		0.22	U	0.33	U	0.13	U	1.11
MW-F-D	3/10/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-F-I	1/29/2003	1	U	1	U	1	U	0.59		18		3.4		1	U	1	U	21.99
MW-F-I	4/9/2003	1	U	1	U	1	U	0.37	J	19		5.6		1	U	1	U	24.97
MW-F-I	8/26/2003	1	U	1	U	1	U	0.69		20		3.4		1	U	1	U	24.09
MW-F-I	11/19/2003	1	U	1	U	1	U	1.2		12		1.7	J	1	U	1	U	14.9
MW-F-I	3/1/2004	1	U	1	U	1	U	1.7		14		6.5		3.7		1	U	25.9
MW-F-I	4/27/2004	1	U	1	U	1	U	1.6		13		3.8		1	U	1	U	18.4
MW-F-I	8/3/2004	1	U	1	U	1	U	1.2		9.6		0.62	J	1	U	1	U	11.42
MW-F-I	10/19/2004	1	U	1	U	1	U	1.3		9.2		0.21	J	1	U	1	U	10.71
MW-F-I	2/15/2005	NA		1	U	1	U	1.5		11		0.86	J	NA		1	U	13.36
MW-F-I	4/17/2008	0.22	U	0.19	U	0.17	U	1.3		9		0.41	J	0.33	U	0.13	U	10.71
MW-F-I	3/19/2009	0.22	U	0.19	U	0.17	U	0.68		5.7		2.7		0.33	U	0.13	U	9.08
MW-F-I	3/18/2010	0.22	U	0.19	U	0.29	J	2.5		19		1.7		0.33	U	0.13	U	23.49
MW-F-I	3/7/2011	0.22	U	0.19	U	0.17	U	0.99		8		0.48	J	0.33	U	0.13	U	9.47
MW-F-I	3/8/2012	0.22	U	0.19	U	0.17	U	1.1		11		0.22	U	0.33	U	0.13	U	12.1
MW-F-I	3/27/2013	0.22	U	0.19	U	0.17	U	1.6		20		0.22	U	0.33	U	0.13	U	21.6
MW-F-I	3/19/2014	0.22	U	0.19	U	0.17	U	0.19	U	3.8		0.22	U	0.33	U	0.13	U	3.8
MW-F-I	3/9/2015	0.22	U	0.45	U	0.15	U	0.26	U	10		0.29	U	0.28	U	0.24	U	10
MW-F-I	3/16/2016	0.44	U	0.45	U	0.22	U	0.3	U	5.2		0.29	U	0.33	U	0.35	U	5.2
MW-F-I	3/16/2017	0.23	U	0.27	U	0.33	U	0.29	U	6.8		0.45	U	0.53	U	0.28	U	6.8
MW-F-I	2/28/2018	0.23	U	0.27	U	1.8		2.8		26		0.45	U	0.53	U	0.28	U	30.6
MW-F-I	3/13/2019	0.24	U	0.19	U	0.26	JB	5.4		47		0.47	J	2.6	U	0.13	U	53.13
MW-F-I	6/15/2020	0.4	U	0.32	U	0.17	U	2.8		38		1.5	J	4.4	U	0.22	U	42.3
MW-F-I	3/22/2021					0.28	J			46		0.33	U					
MW-F-I	3/21/2022					0.44	U			25		0.45	U					
MW-F-I	3/21/2023					10				25		1.9						
MW-F-I	3/5/2024					0.44	U			37		0.45	U					
MW-F-I	3/18/2025					0.44	U			38		0.65	J					
MW-F-S	1/29/2003	100	U	100	U	3100		50	U	920		200	U	100	U	100	U	4020
MW-F-S	4/9/2003	100	U	100	U	2800		50	U	490		200	U	100	U	100	U	3290
MW-F-S	8/26/2003	100	U	100	U	3500		50	U	490		200	U	100	U	100	U	3990
MW-F-S	11/19/2003	100	U	100	U	2900	B	50	U	350		200	U	100	U	100	U	3250
MW-F-S	3/1/2004	67	U	67	U	2100		33	U	210		130	U	67	U	37	U	2310
MW-F-S	4/27/2004	67	U	67	U	2300		31	U	220		120	U	77	U	77	U	2520
MW-F-S	8/3/2004	67	U	67	U	1800		33	U	190		130	U	67	U	67	U	1990
MW-F-S	10/19/2004	67	U	67	U	2100		33	U	230		130	U	53	J	67	U	2383
MW-F-S	2/15/2005	NA		50	U	1400		25	U	110		100	U	NA		50	U	1510
MW-F-S	4/17/2008	2.8	U	2.4	U	380		3.3	J	80		2.8	U	4.1	U	1.6	U	463.3
MW-F-S	3/19/2009	0.88	U	0.76	U	86		0.76	U	14		0.88	U	1.3	U	0.52	U	100
MW-F-S	3/15/2010	6.3	U	5.4	U	1100		9.4	J	220		6.3	U	9.4	U	3.7	U	1329.4
MW-F-S	3/7/2011	6.3	U	5.4	U	770		15		290		53	J	9.4	U	3.7	U	1128
MW-F-S	3/8/2012	4.4	U	3.8	U	560		3.8	U	320		81		6.6	U	2.6	U	961
MW-F-S	3/27/2013	5.5	U	4.8	U	730		4.8	U	220		5.5	U	8.3	U	3.3	U	950
MW-F-S	3/19/2014	3.7	U	3.2	U	390		21		570		110		5.5	U	2.2	U	1091
MW-F-S	3/9/2015	7.3	U	15	U	380		8.7	U	710		60		9.3	U	8	U	1150
MW-F-S	3/16/2016	11	U	11	U	520		26		670		7.3	U	8.3	U	8.8	U	1216
MW-F-S	3/16/2017	5.8	U	6.8	U	650		7.3	U	550		11	U	13	U	7	U	1200
MW-F-S	2/28/2018	9.2	U	11	U	950		12	U	520		18	U	49		11	U	1519
MW-F-S	3/13/2019	4.8	U	4.4	J	950		12	J	530		12	J	52	U	2.6	U	1508.4
MW-F-S	6/15/2020	9.6	U	7.6	U	800		11	J	490		8	U	100	U	5.2	U	1301
MW-F-S	3/22/2021					760				520		72						
MW-F-S	3/21/2022					660				360		20	J					
MW-F-S	3/21/2023					330				260		47						
MW-F-S	3/5/2024					220				220		68						
MW-F-S	3/18/2025					440				440		110						
MW-G-D	3/17/2010	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0

TABLE 6
HISTORICAL GROUND WATER VOC SAMPLE RESULTS
FORMER WEAREVER SITE GROUNDWATER MONITORING NETWORK
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

WELL ID	DATE	1,1,1-TCA		1,1-DCE		TCE		t1,2-DCE		c1,2-DCE		VC		MC		BENZENE		TVOC
MW-LP-D	3/10/2015	0.22	U	0.45	U	0.15	U	0.26	U	0.2	U	0.29	U	0.28	U	0.24	U	0
MW-LP-I	4/17/2008	18	U	16	U	3400		16	U	40	J	18	U	53	J	11	U	3493
MW-LP-I	3/19/2009	0.22	U	0.19	U	0.17	U	0.19	U	0.17	U	0.22	U	0.33	U	0.13	U	0
MW-LP-I	3/16/2010	28	U	24	U	3400		24	U	28	J	28	U	42	J	16	U	3470
MW-LP-I	3/8/2011	31	U	27	U	4100		27	U	32	J	31	U	47	U	19	U	4132
MW-LP-I	3/8/2012	18	U	16	U	2200		16	U	14	U	18	U	27	U	11	U	2200
MW-LP-I	3/28/2013	8.8	U	7.6	U	1100		7.6	U	6.8	U	8.8	U	13	U	5.2	U	1100
MW-LP-I	3/19/2014	18	U	16	U	2500		16	U	86		18	U	27	U	11	U	2586
MW-LP-I	3/9/2015	16	U	32	U	1700		19	U	14	U	21	U	20	U	17	U	1700
MW-LP-I	3/16/2016	34	U	35	U	2100		23	U	20	U	22	U	25	U	27	U	2100
MW-LP-I	3/16/2017	12	U	14	U	1700		15	U	15	U	23	U	27	U	14	U	1700
MW-LP-I	2/28/2018	23	U	27	U	1700		29	U	30	U	45	U	53	U	28	U	1700
MW-LP-I	3/13/2019	2	U	1.6	U	410		1.6	U	110		1.7	U	22	U	1.1	U	520
MW-LP-I	6/15/2020	12	U	9.5	U	1300		9.5	U	64		10	U	130	U	6.5	U	1364
MW-LP-I	3/22/2021					1800				38	J	10	U					
MW-LP-I	3/21/2022					1200				49		11	U					
MW-LP-I	3/21/2023					1000				61		11	U					
MW-LP-I	3/5/2024					890				44		0.9	U					
MW-LP-I	3/18/2025					830				48		4.5						
MW-LP-S	3/10/2015	0.28	U	0.56	U	49		0.33	U	46		2.3		0.35	U	0.3	U	97.3

Notes:

All concentrations in ug/l

ND - constituent not detected; detection limit not specified

NA - not available

U - constituent not detected at reported concentration

J - estimated result

B - constituent detected in method blank

TABLE 7
TREND TEST RESULTS SUMMARY
HOWMET AEROSPACE INC., FORMER WEAREVER FACILITY
CHILLIOTHE, OHIO

Well	Parameter	MCL (ug/l)	Sample Size (n)	Detects	Non-Detects	% Non-Detects	Mean (Detects and Non-Detects)	Standard Deviation (Detects and Non-Detects)	M-K Test Value (S)	M-K Test p-value	Mann-Kendall Trend Test (95% Confidence Level)
MW-1S	TCE	5	17	13	4	23.5294	3.919	6.287	-24	0.17	NO TREND
	cis-DCE	70	17	17	0	0	34.39	29.48	3	0.467	NO TREND
	VC	2	17	13	4	23.5294	3.919	6.287	16	0.267	NO TREND
MW-5	TCE	5	20	20	0	0	278.7	188.5	-64	0.0204	DECREASING
	cis-DCE	70	20	20	0	0	152	135.9	-73	0.00965	DECREASING
	VC	2	20	0	20	100	0.01	0	0	N/A	NO TREND
MW-AS2-S	TCE	5	18	18	0	0	259.9	174	-49	0.0343	DECREASING
	cis-DCE	70	18	18	0	0	93.13	62.56	-49	0.0343	DECREASING
	VC	2	18	2	16	88.8889	0.536	2.046	7	0.337	NO TREND
MW-AS3-S	TCE	5	18	18	0	0	864.4	424.9	-4	0.455	NO TREND
	cis-DCE	70	18	15	3	16.6667	29.17	23.58	-43	0.0552	NO TREND
	VC	2	18	0	18	100	0.01	0	0	N/A	NO TREND
MW-AS4-S	TCE	5	19	18	1	5.26316	811.8	367.9	-76	0.00415	DECREASING
	cis-DCE	70	19	9	10	52.6316	5.516	7.307	67	0.00602	INCREASING
	VC	2	19	0	19	100	0.01	0	0	N/A	NO TREND
MW-AS5-S	TCE	5	17	17	0	0	507.7	262	-96	4.27E-05	DECREASING
	cis-DCE	70	17	10	7	41.1765	8.404	10.45	-4	0.449	NO TREND
	VC	2	17	0	17	100	0.01	0	0	N/A	NO TREND
MW-B-I	TCE	5	18	18	0	0	52.83	29.39	70	0.00441	INCREASING
	cis-DCE	70	18	18	0	0	74	38.73	-93	2.46E-04	DECREASING
	VC	2	18	6	12	66.6667	0.257	0.381	38	0.0462	NO TREND
MW-BL-S	TCE	5	18	18	0	0	478.3	207.7	-104	4.62E-05	DECREASING
	cis-DCE	70	18	9	9	50	11.32	15.93	57	0.0114	INCREASING
	VC	2	18	0	18	100	0.01	0	0	N/A	NO TREND
MW-C-I	TCE	5	62	59	3	4.83871	3.065	15.6	336	1.01E-04	INCREASING
	cis-DCE	70	62	62	0	0	2789	359.9	-870	5.56E-08	DECREASING
	VC	2	62	60	2	3.22581	242.3	93.15	-345	0.018	DECREASING
MW-C-S	TCE	5	19	19	0	0	143.3	140.8	-47	0.0538	NO TREND
	cis-DCE	70	19	19	0	0	80.36	95.27	-62	0.0164	DECREASING
	VC	2	19	0	19	100	0.01	0	0	N/A	NO TREND
MW-D-I	TCE	5	53	3	50	94.3396	0.756	5.355	11	0.424	NO TREND
	cis-DCE	70	53	17	36	67.9245	0.475	2.197	-179	0.0492	DECREASING
	VC	2	53	0	53	100	0.01	0	0	N/A	NO TREND
MW-DS-I	TCE	5	18	15	3	16.6667	17.16	13.33	-34	0.055	NO TREND
	cis-DCE	70	18	18	0	0	8	7.17	-30	0.135	NO TREND
	VC	2	18	0	18	100	0.01	0	0	N/A	NO TREND
MW-D-S	TCE	5	70	69	1	1.42857	115.4	126.9	300	0.0647	NO TREND
	cis-DCE	70	70	57	13	18.5714	6.252	4.738	474	0.00803	INCREASING
	VC	2	70	1	69	98.5714	0.016	0.05	43	0.149	NO TREND
MW-DT-S	TCE	5	18	18	0	0	852.5	287.8	-12	0.338	NO TREND
	cis-DCE	70	18	9	9	50	12.18	18.38	-53	0.0173	DECREASING
	VC	2	18	1	17	94.4444	0.354	1.459	-15	0.0886	NO TREND
MW-F-I	TCE	5	18	5	13	72.2222	0.71	2.347	19	0.192	NO TREND
	cis-DCE	70	18	18	0	0	21.14	14.78	69	0.00495	INCREASING
	VC	2	18	8	10	55.5556	0.551	0.827	28	0.129	NO TREND
MW-F-S	TCE	5	17	17	0	0	605.6	276.1	-17	0.255	NO TREND
	cis-DCE	70	17	17	0	0	406.1	187.3	4	0.451	NO TREND
	VC	2	17	9	8	47.0588	34.12	41.18	-33	0.0809	NO TREND
MW-GA-S	TCE	5	21	21	0	0	329.8	106.9	-51	0.0649	NO TREND
	cis-DCE	70	21	20	1	4.7619	131.9	66.4	-53	0.0572	NO TREND
	VC	2	21	4	17	80.9524	0.244	0.625	2	0.482	NO TREND
MW-G-I	TCE	5	52	0	52	100	0.01	0	0	N/A	NO TREND
	cis-DCE	70	52	1	51	98.0769	0.01	0.021	25	0.212	NO TREND
	VC	2	52	0	52	100	0.01	0	0	N/A	NO TREND
MW-G-S	TCE	5	53	0	53	100	0.01	0	0	N/A	NO TREND
	cis-DCE	70	53	0	53	100	0.01	0	0	N/A	NO TREND
	VC	2	53	0	53	100	0.01	0	0	N/A	NO TREND
MW-I-I	TCE	5	55	1	54	98.1818	0.0172	0.0522	26	0.207	NO TREND
	cis-DCE	70	55	0	55	100	0.01	0	0	N/A	NO TREND
	VC	2	55	0	55	100	0.01	0	0	N/A	No TREND
MW-I-S	TCE	5	71	25	46	64.7887	1.079	2.318	229	0.0819	NO TREND
	cis-DCE	70	71	4	67	94.3662	0.0399	0.183	98	0.107	NO TREND
	VC	2	71	1	70	98.5915	0.0176	0.0641	-20	0.321	NO TREND
MW-LP-I	TCE	5	18	17	1	5.55556	1741	1079	-73	0.00311	DECREASING
	cis-DCE	70	18	11	7	38.8889	33.34	33.26	38	0.0738	NO TREND
	VC	2	18	0	18	100	0.01	0	0	N/A	NO TREND
MW-OS1-I	TCE	5	110	27	83	75.4545	3.346	8.456	1929	1.99E-11	INCREASING
	cis-DCE	70	110	110	0	0	1289	697.7	-1872	6.54E-07	DECREASING
	VC	2	110	94	16	14.5455	309.2	305.1	-2385	3.44E-10	DECREASING

TABLE 7
TREND TEST RESULTS SUMMARY
HOWMET AEROSPACE INC., FORMER WEAREVER FACILITY
CHILLIOTHE, OHIO

MW-OS2	TCE	5	78	0	78	100	0.01	0	0	N/A	NO TREND
	cis-DCE	70	78	0	78	100	0.01	0	0	N/A	NO TREND
	VC	2	78	0	78	100	0.01	0	0	N/A	NO TREND
MW-OS-3	TCE	5	56	1	55	98.2143	0.0132	0.0241	-55	0.0474	DECREASING
	cis-DCE	70	56	1	55	98.2143	0.0257	0.118	13	0.355	NO TREND
	VC	2	56	0	56	100	0.01	0	0	N/A	NO TREND
PAPER 17	TCE	5	32	0	32	100	0.0158	0.0323	8	0.348	NO TREND
	cis-DCE	70	32	1	31	96.875	0.0816	0.405	-27	0.0796	NO TREND
	VC	2	32	1	31	96.875	0.01	0	0	N/A	NO TREND
PAPER 18	TCE	5	32	1	31	96.875	0.0142	0.0244	10	0.318	NO TREND
	cis-DCE	70	32	29	3	9.375	4.444	3.039	109	0.0469	INCREASING
	VC	2	32	27	5	15.625	3.32	2.09	134	0.0194	INCREASING

Notes

Increasing trends indicated by yellow highlight

Decreasing trends indicated by green highlight

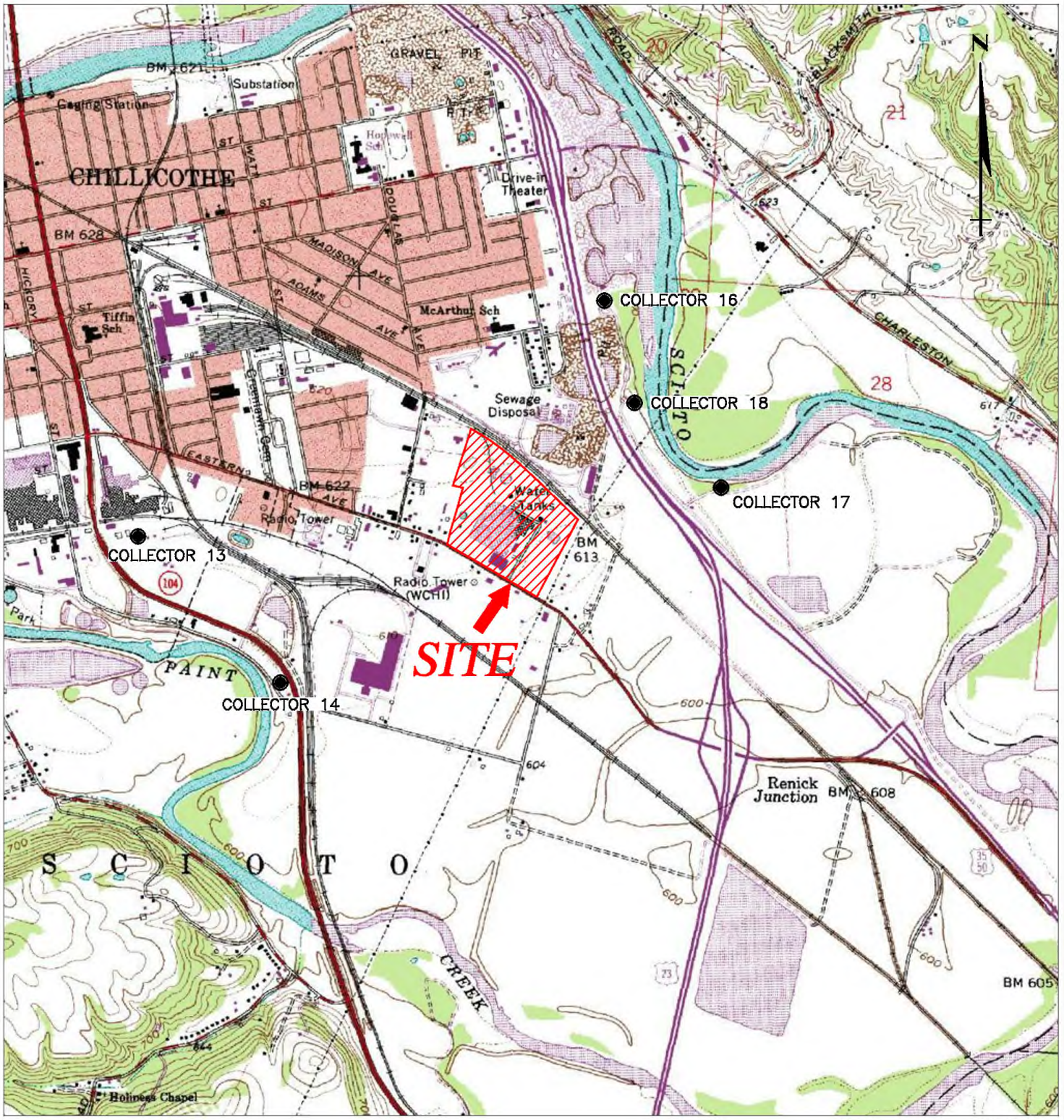
Datasets with greater than 50% nondetects indicated by gray highlight

TCE = trichloroethene; cis-DCE = cis-1,2-dichloroethene; VC = vinyl chloride

MCL = maximum contaminant level

M-K = Mann Kendal Statistical Trend Test

FIGURES



N

OHIO

QUADRANGLE LOCATION

LEGEND

PAPER COMPANY COLLECTOR WELL

DRWN: SCC	DATE: 12/10/20
CHKD: TDS	DATE: 12/10/20
APPD: JSZ	DATE:
SCALE: AS SHOWN	

KEY ENVIRONMENTAL INCORPORATED

REFERENCES: USGS NORTH AMERICAN DATUM 1983 / UTM ZONE 17N: CHILLICOTHE, OH, UNITED STATES 7/1/1992

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OH

SITE TOPOGRAPHIC LOCATION

PROJECT NO: 20-084
FIGURE 1

y:\docs-weareverv\5th year reviews\2020 5 year reviews\Figure 1 site topographic location.dwg Last Saved By: Scanner 12/15/2020 7:08 AM Plotted By: Shelly Conner 12/15/2020 7:08 AM Scale: 1:1



N

LEGEND

- RESIDENTIAL MONITORING WELL
- ALCOA WEAREVER FACILITY MONITORING WELL
- INDUSTRIAL WATER SUPPLY WELL
- QUARTERLY SAMPLING LOCATION
- SEMIANNUAL SAMPLING LOCATION
- RESIDUAL SOURCE AREA (ANNUAL) SAMPLING LOCATION

0 600 1200
FEET

NOTE:
BASEMAP AND WELL LOCATIONS ADAPTED FROM DWG NO. 894030-B2, IT CORPORATION, 6/27/00.

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE, INC.

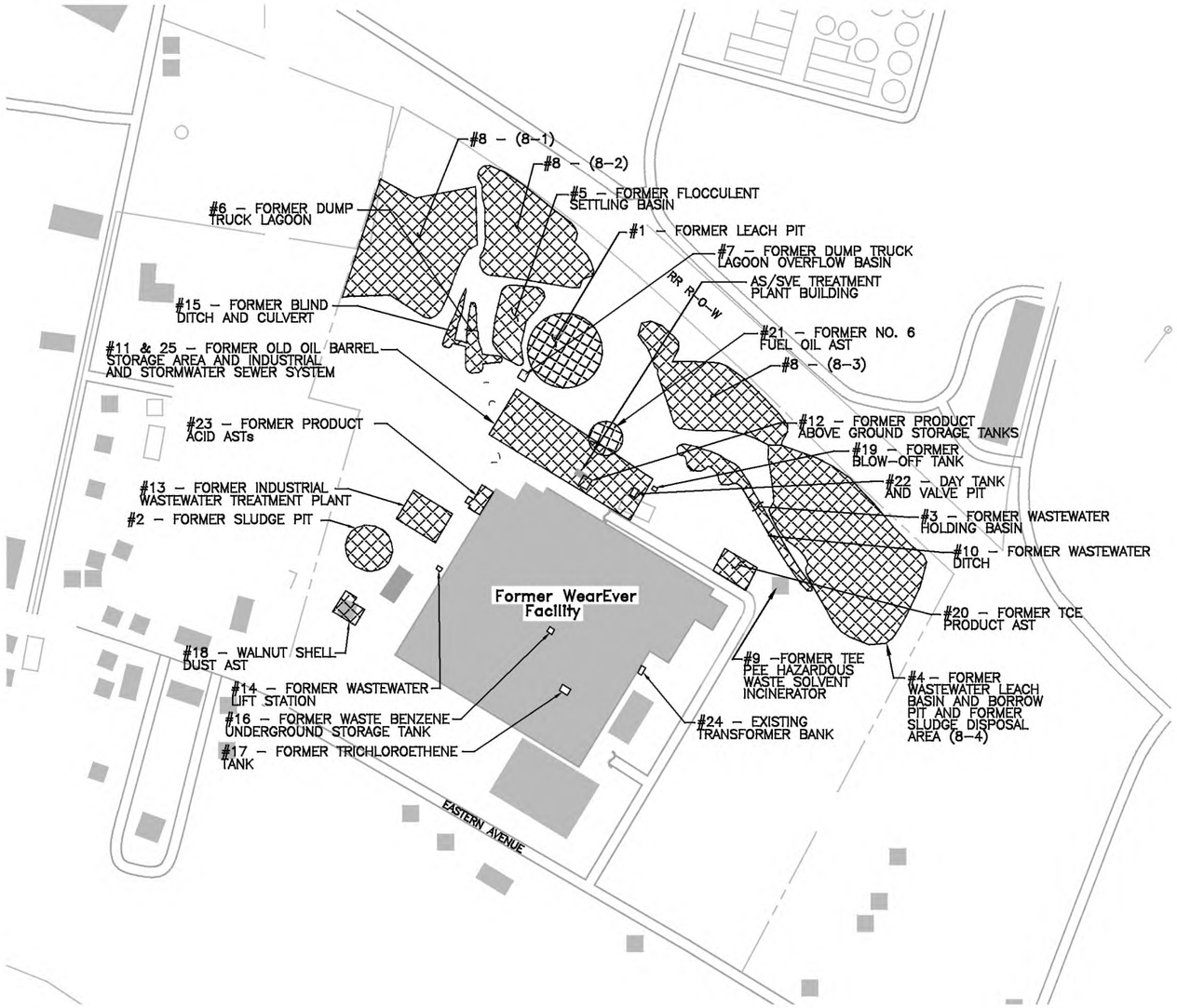
DRWN: SCC	DATE: 12/31/20	KEY ENVIRONMENTAL INCORPORATED
CHKD: TDS	DATE: 12/31/20	
APPD: JSZ	DATE:	
SCALE: AS SHOWN		

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

LOCATION OF ONSITE AND OFFSITE MONITORING POINTS

PROJECT NO: 20-084
FIGURE 2

J:\Howmet-Wearever\5th year review\2020 5 year review\Figure 2 onsite and offsite monitoring locations.dwg Last Saved By: Scomer 1/11/2021 2:10 PM Plotted By: Shelly Comer 1/11/2021 2:12 PM Scale: 1:1



N

LEGEND

POTENTIAL AREAS OF CONCERN (VOC CONSTITUENTS)

POTENTIAL SOURCE AREAS

PSA No. 1, Former Leach Pit
PSA No. 2, Former Sludge Pit
PSA No. 3, Former Wastewater Holdign Basin
PSA No. 4, Former Wastewater Leach Basin and Borrow Pit
PSA No. 5, Former Flocculent Setting Basin
PSA No. 6, Former Dump Truck Lagoon
PSA No. 7, Former Dump Truck Lagoon Overflow Basin
PSA No. 8, Former Sludge Disposal Areas (SDAs) 8-1, 8-2, 8-3, and 8-4
PSA No. 9, Former Tee Pee Hazardous Waste Solvent Incinerator
PSA No. 10, Former Wastewater Ditch
PSA No. 11 Former Old Oil barrel Storage Area
PSA No. 12, Former Product Above-Ground Strage Tanks
PSA No. 13, Former Industrial Wastewater Treatement Plant
PSA No. 14, Former Wastewater Lift Station
PSA No. 15, Former Blind Ditch and Culvert
PSA No. 16, Former Waste Benzene Underground Storage Tank
PSA No. 17, Former Trichloroethene Tank
PSA No. 18, Walnut Shell Dust AST
PSA No. 19, Former Blow-Off Tank
PSA No. 20, Former TCE Product AST
PSA No. 21, Existing No. 6 Fuel Oil AST
PSA No. 22, Day Tank and Valve Pit
PSA No. 23, Former Product Acid ASTs
PSA No. 24, Existing Transformer Bank
PSA No. 25, Industrial and Stormwater Sewer Systems

0 400 800 FEET

NOTE:
BASEMAP ADAPTED FROM DWG NO. 894030–B2, IT CORPORATION, 6/27/00.

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

ALCOA INC.

DRWN: SCC	DATE: 06/13/15
CHKD: JGK	DATE: 06/13/15
APPD:	DATE:
SCALE: AS SHOWN	

KEY ENVIRONMENTAL INCORPORATED

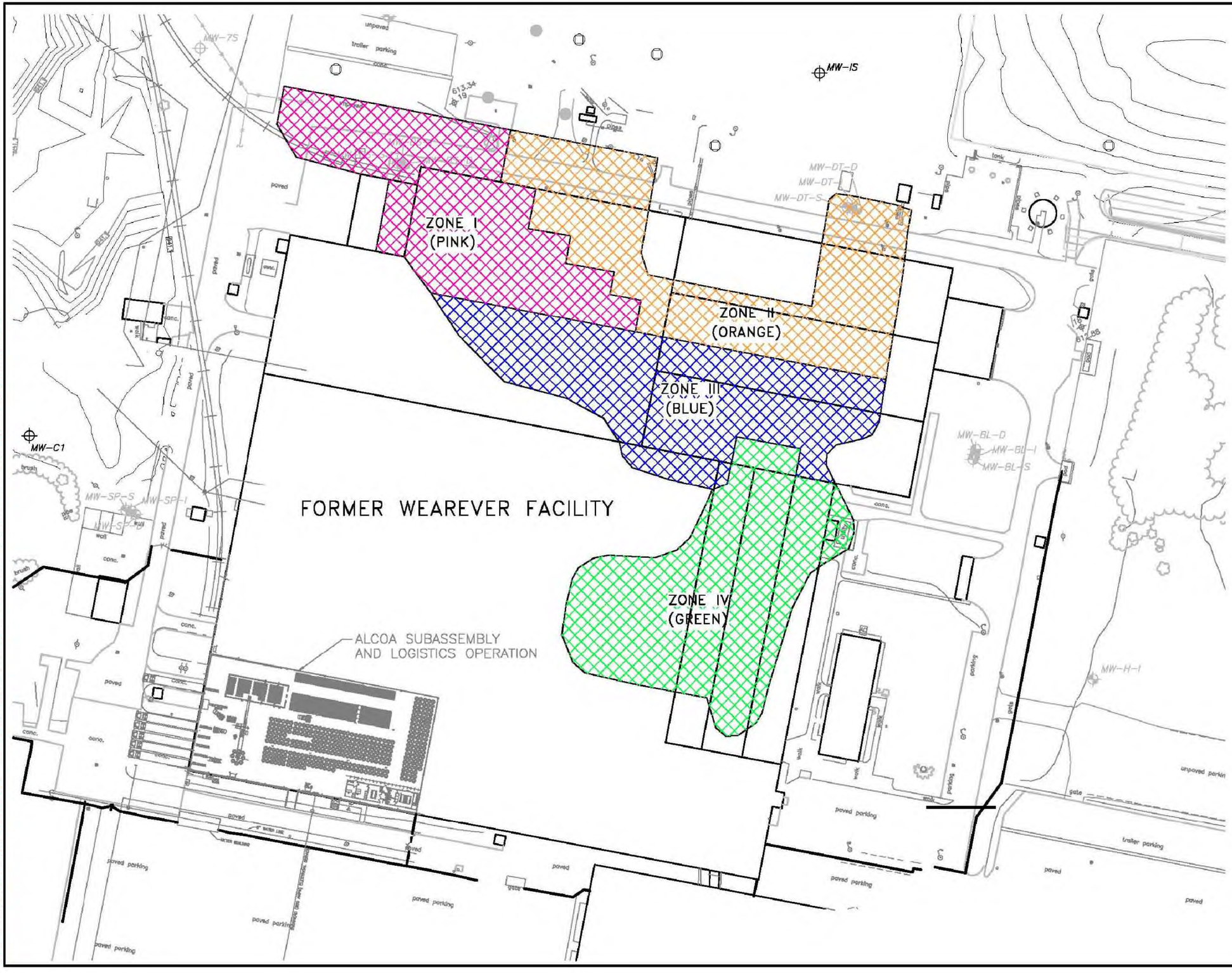
ALCOA FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

SITE PLAN DEPICTING POTENTIAL SOURCE AREAS

PROJECT NO: 15–041
FIGURE 3

y:\alcoa-wearever\5th year review\2015 5 year review\figure 3.dwg Last Saved By: Scomer 8/13/2015 4:03 PM Plotted By: Shelly Comer 8/14/2015 8:33 AM Scale: 1:1

y:\alcoa-wearever\5th year review\2020 5 year review\figure 4 location of interim action aa-ave area.dwg Last Saved By: Sloomer 12/15/2020 8:48 AM Plotted By: Shelly Conner 12/16/2020 7:03 AM Scale: 1:1



HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

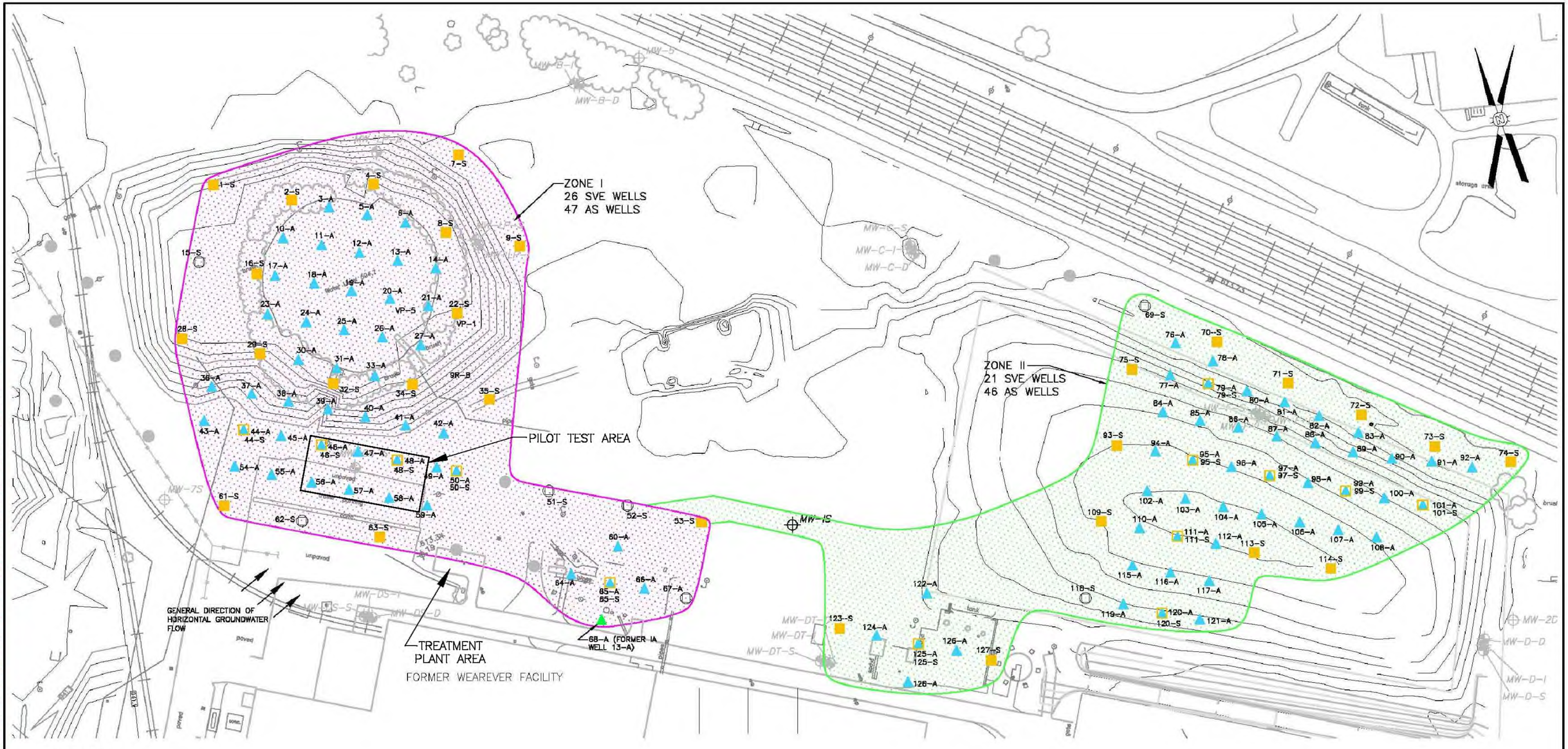
FIGURE 4

LOCATION OF INTERIM ACTION AS/SVE AREA

PROJECT: 120370	DATE: OCTOBER 2005
REV:	BY: WPZ CHECKED: REC

MFG, Inc.
consulting scientists and engineers

p:\pdocs-wwrenwe\jth your review\2020 5 year review\figure 5 location of phase II sve-ave crossing Last Saved By: Seamer 12/15/2020 8:57 AM Plotted By: Shelly Comer 12/15/2020 7:01 AM Scales 1:1



LEGEND:

- PHASE II AS WELL LOCATION
- PHASE II SVE WELL LOCATION
- PHASE II AS AND SVE WELL LOCATION
- PHASE II SVE WELL LOCATION (NOT INCORPORATED INTO SVE NETWORK)
- ADDITIONAL PHASE II SVE WELL LOCATION (MAY BE INCORPORATED INTO SVE NETWORK IF CONDITIONS WARRANT)
- INTERIM ACTION AS WELL TO BE INCORPORATED IN PHASE II WELL NETWORK
- ZONE I
- ZONE II

SCALE

100 0 100 FEET

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

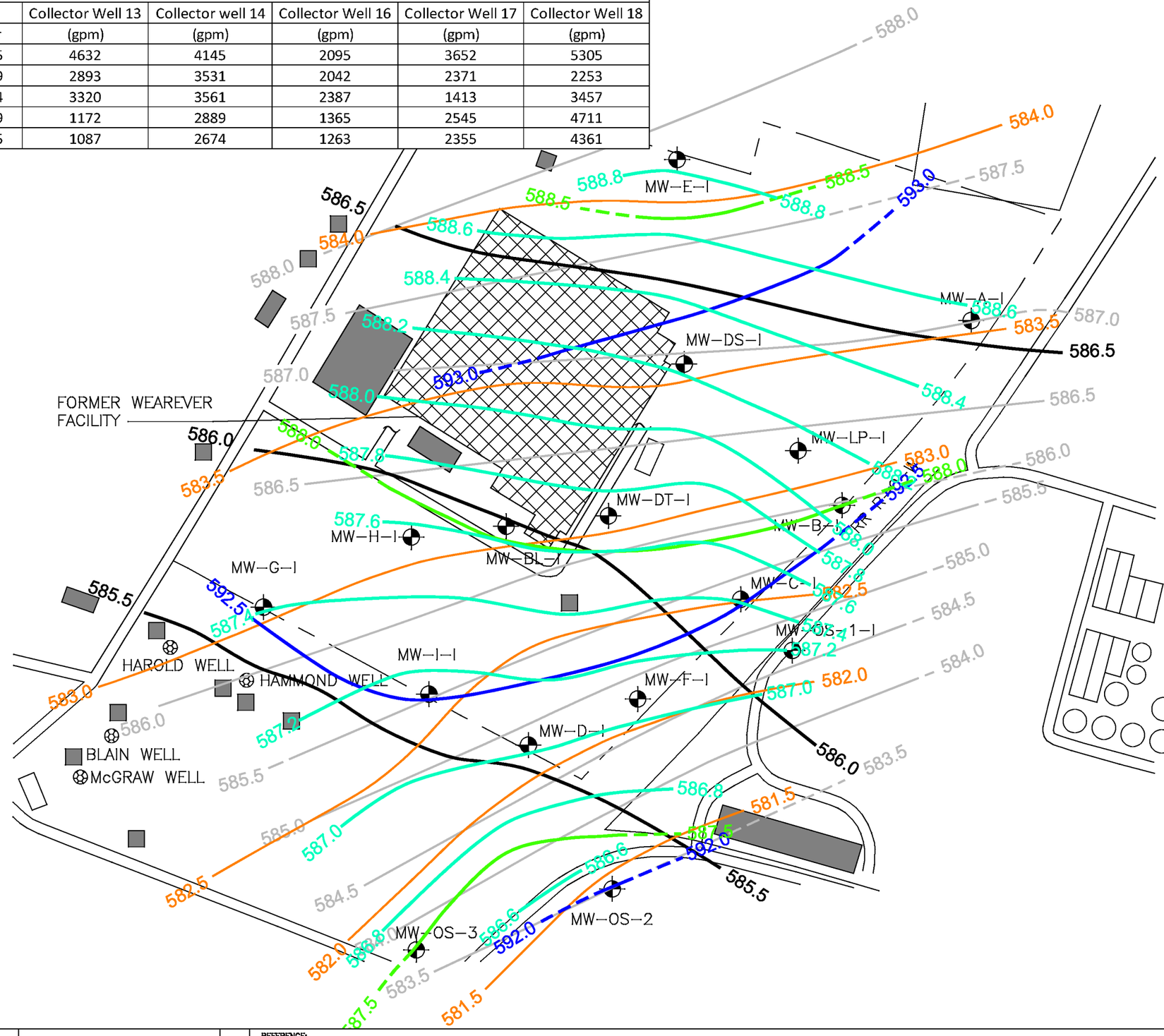
FIGURE 5

LOCATION OF PHASE II AS/SVE AREA

PROJECT: 120370	DATE: OCTOBER 2005	
REV:	BY: WPZ	CHECKED: HB

MFG, Inc.
consulting scientists and engineers

Collector Well Pumping Rates (Yearly Average)					
	Collector Well 13	Collector well 14	Collector Well 16	Collector Well 17	Collector Well 18
Year	(gpm)	(gpm)	(gpm)	(gpm)	(gpm)
1995	4632	4145	2095	3652	5305
2009	2893	3531	2042	2371	2253
2014	3320	3561	2387	1413	3457
2019	1172	2889	1365	2545	4711
2025	1087	2674	1263	2355	4361



N

LEGEND

- 586.5 — GROUNDWATER ELEVATION CONTOUR
- HOWMET WEAREVER FACILITY MONITORING WELL
- RESIDENTIAL WELL
- 584.0 — MAY 1995 GROUNDWATER ELEVATION CONTOUR
- 586.5 — DEC. 2009 GROUNDWATER ELEVATION CONTOUR
- 582.0 — MARCH 2015 GROUNDWATER ELEVATION CONTOUR
- 592.0 — JUNE 2020 GROUNDWATER ELEVATION CONTOUR
- 588.0 — JANUARY 2021 GROUNDWATER ELEVATION CONTOUR
- 588.0 — DECEMBER 2025 GROUNDWATER ELEVATION CONTOUR

NOTE:
MW–OS–1–I NOT USED FOR CONTOURING PURPOSES FOR JUNE 2020 AND JANUARY 2021. TOC ELEVATION FOR MW–OS–1–I IS UNCERTAIN AND REQUIRES FURTHER INVESTIGATION.

0 300 600 FEET

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/28/26	KEY ENVIRONMENTAL INCORPORATED	
CHKD: ECL	DATE: 09/28/26		
APPD: ECL	DATE: 09/28/26		
SCALE:	AS SHOWN		

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

PIEZOMETRIC SURFACE OF INTERMEDIATE AQUIFER ZONE OVER TIME

PROJECT NO: 20–084
FIGURE 6

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

J:\clocc-wearever\5th year review\2025 5 year review\figure 6 piezometer surface of intermediate aquifer.dwg Last Saved By: SCorner 9/28/2026 3:22 PM Plotted By: Shelly Corner 9/28/2026 3:47 PM Scale: 1:1



N

LEGEND

- SITE BOUNDARY
- APPROXIMATE PARCEL BOUNDARIES
- APPROXIMATE PLUME LIMITS (DASHED WHERE INFERRED)

0 400 800 FEET

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/28/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: ECL	DATE: 09/28/26	
APPD: ECL	DATE: 09/28/26	
SCALE: AS SHOWN		

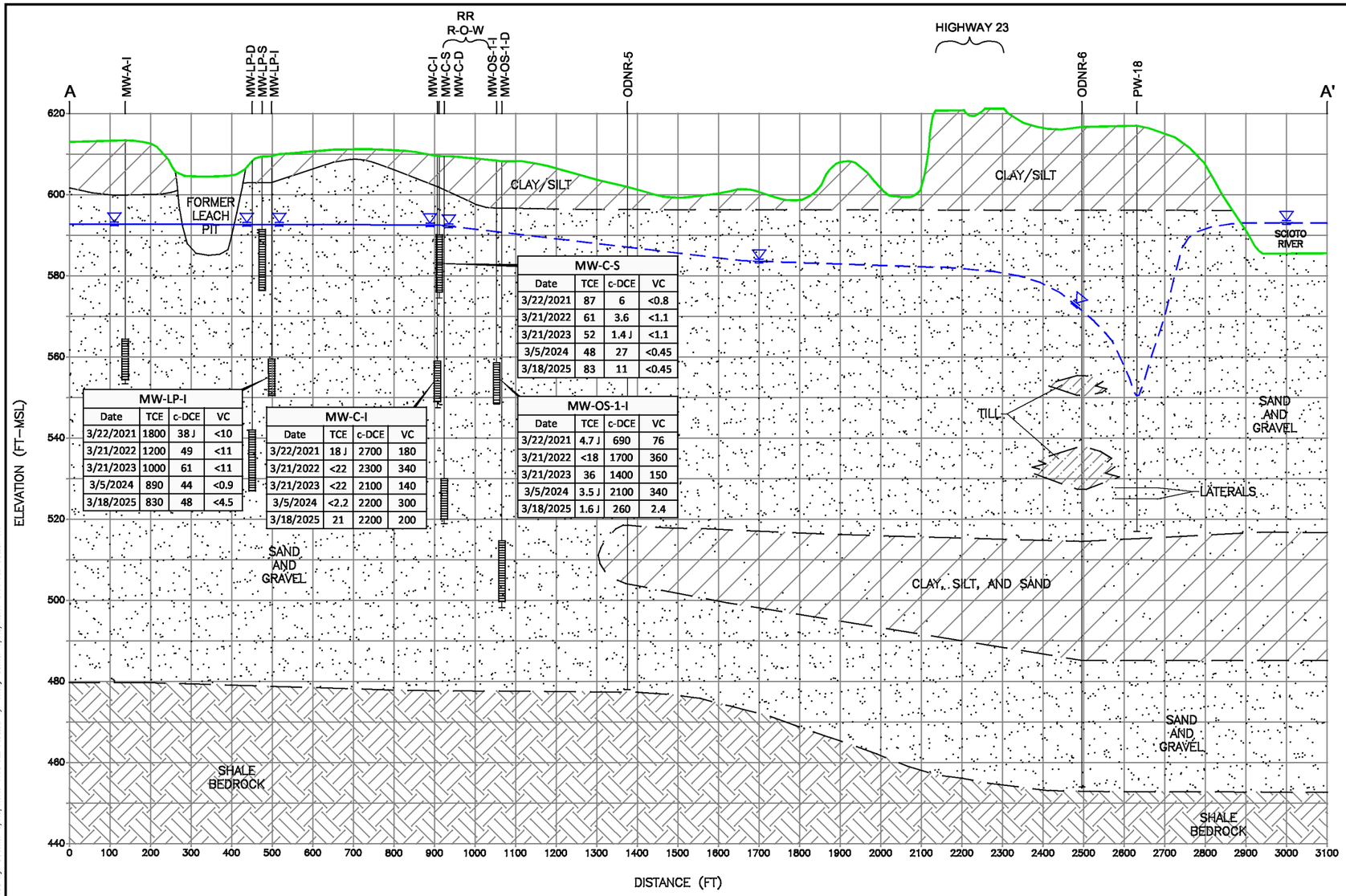
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TOTAL VOLATILE ORGANIC COMPOUNDS APPROXIMATE PLUME LIMITS

PROJECT NO: 25-110

FIGURE 7

y:\cdocs-wearever\5th year review\2026 5 year review\figure 7 plume map.dwg Last Saved By: SCorner 9/28/2026 2:40 PM Plotted By: Shelly Corner 9/28/2026 3:19 PM Scale: 1:1



MW-LP-I			
Date	TCE	c-DCE	VC
3/22/2021	1800	38 J	<10
3/21/2022	1200	49	<11
3/21/2023	1000	61	<11
3/5/2024	890	44	<0.9
3/18/2025	830	48	<4.5

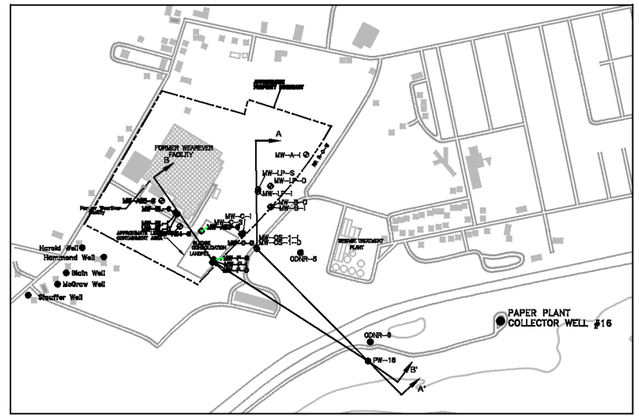
MW-C-I			
Date	TCE	c-DCE	VC
3/22/2021	18 J	2700	180
3/21/2022	<22	2300	340
3/21/2023	<22	2100	140
3/5/2024	<2.2	2200	300
3/18/2025	21	2200	200

MW-C-S			
Date	TCE	c-DCE	VC
3/22/2021	87	6	<0.8
3/21/2022	61	3.6	<1.1
3/21/2023	52	1.4 J	<1.1
3/5/2024	48	27	<0.45
3/18/2025	83	11	<0.45

MW-OS-1-I			
Date	TCE	c-DCE	VC
3/22/2021	4.7 J	690	76
3/21/2022	<18	1700	360
3/21/2023	36	1400	150
3/5/2024	3.5 J	2100	340
3/18/2025	1.6 J	260	2.4

V: 0 25 50 FEET

H: 0 300 600 FEET



CROSS SECTION LOCATION MAP

0 1500 3000 FEET

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- RESIDENTIAL MONITORING WELL
- HOWMET WEAREVER FACILITY MONITORING WELL
- CHILLICOTHE PAPER COLLECTION WELL
- GROUND SURFACE
- GROUNDWATER ELEVATION DASHED WHERE INFERRED
- CLAY/SILT
- SAND AND GRAVEL
- TILL
- CLAY, SILT, AND SAND
- SHALE BEDROCK

NOTE:

MW-A-I PROJECTED FROM APPROXIMATELY 520 FT TO THE NORTH.
MW-C-S, MW-C-I, AND MW-C-D PROJECTED FROM APPROXIMATELY 170 FT TO THE SOUTH.
ODNR-5 PROJECTED FROM APPROXIMATELY 310 FT TO THE NORTHWEST.
ODNR-6 PROJECTED FROM APPROXIMATELY 260 FT TO THE NORTHWEST.
ALL PROJECTIONS ARE PERPENDICULAR TO THE CROSS SECTION TRANSECT.

NOTE:
BASEMAP AND WELL LOCATIONS ADAPTED FROM DWG NO. 894030-B2, IT CORPORATION, 6/27/00.

REV #	DATE	DESCRIPTION	APPD

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

DRWN: ERM	DATE: 05/21/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: ECL	DATE: 09/28/26	
APPD: ECL	DATE: 09/28/26	
SCALE: AS SHOWN		

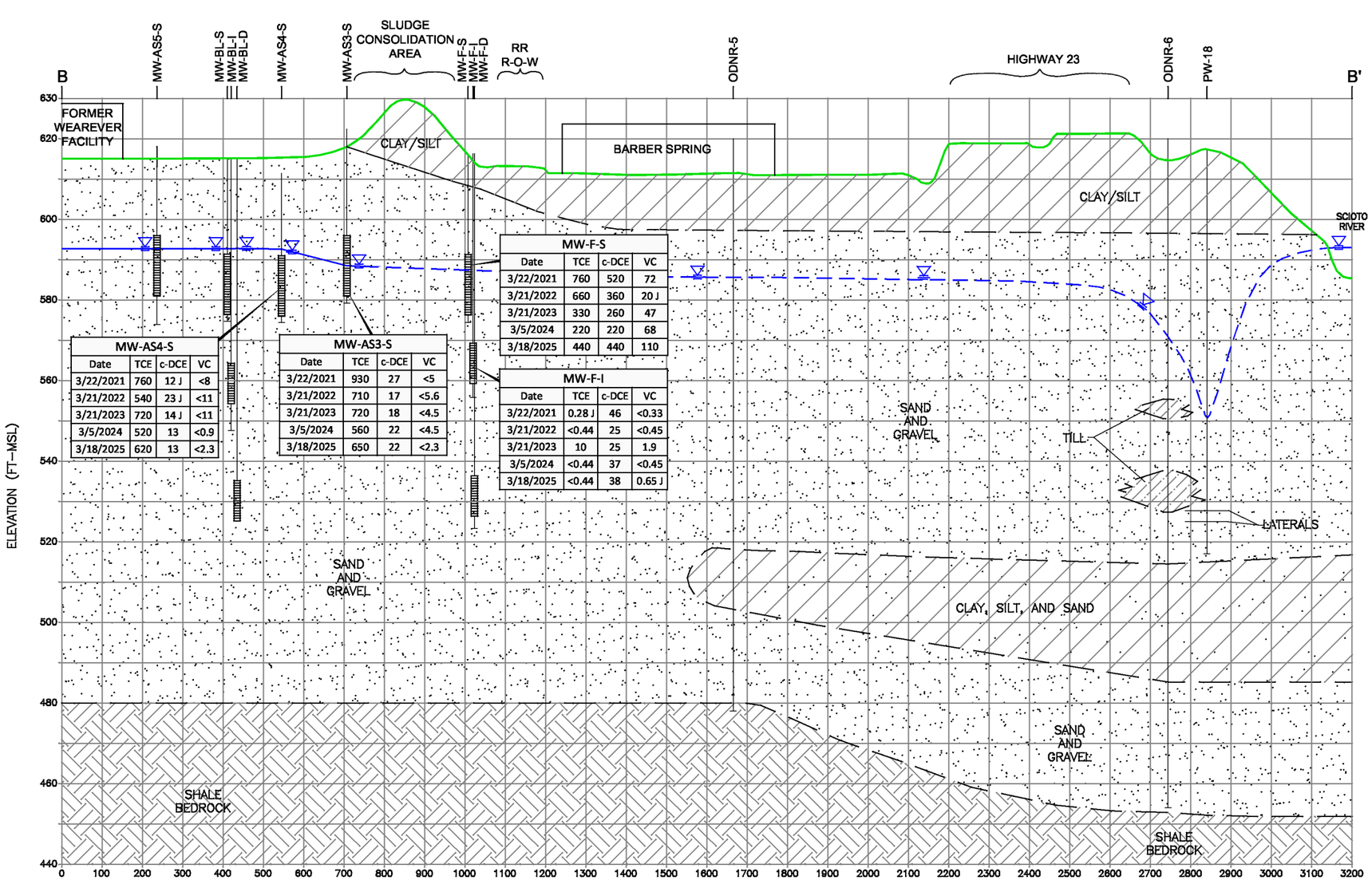
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

CROSS SECTION A-A'

PROJECT NO: 25-110

FIGURE 8

y:\alcoa-wearever\5th year review\2025 5 year review\figure 8-9 cross sections.dwg Last Saved By: SCorner 9/29/2026 8:10 AM Plotted By: Shelly Corner 9/29/2026 8:11 AM Scale: 1:1



MW-AS4-S

Date	TCE	c-DCE	VC
3/22/2021	760	12 J	<8
3/21/2022	540	23 J	<11
3/21/2023	720	14 J	<11
3/5/2024	520	13	<0.9
3/18/2025	620	13	<2.3

MW-AS3-S

Date	TCE	c-DCE	VC
3/22/2021	930	27	<5
3/21/2022	710	17	<5.6
3/21/2023	720	18	<4.5
3/5/2024	560	22	<4.5
3/18/2025	650	22	<2.3

MW-F-S

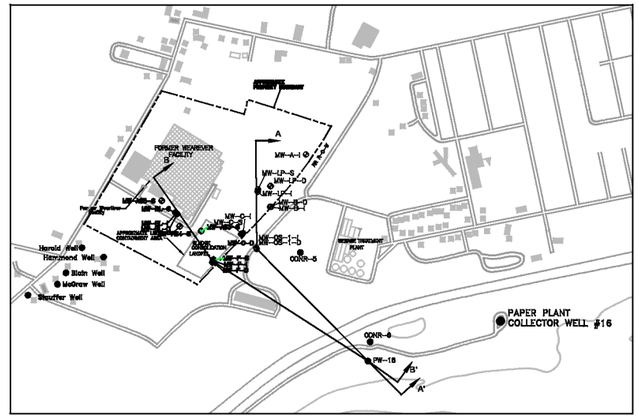
Date	TCE	c-DCE	VC
3/22/2021	760	520	72
3/21/2022	660	360	20 J
3/21/2023	330	260	47
3/5/2024	220	220	68
3/18/2025	440	440	110

MW-F-I

Date	TCE	c-DCE	VC
3/22/2021	0.28 J	46	<0.33
3/21/2022	<0.44	25	<0.45
3/21/2023	10	25	1.9
3/5/2024	<0.44	37	<0.45
3/18/2025	<0.44	38	0.65 J

V: 0 25 50 FEET

H: 0 300 600 FEET



CROSS SECTION LOCATION MAP

0 1500 3000 FEET

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- RESIDENTIAL MONITORING WELL
- HOWMET WEAREVER FACILITY MONITORING WELL
- CHILLICOTHE PAPER COLLECTION WELL
- GROUND SURFACE
- GROUNDWATER ELEVATION DASHED WHERE INFERRED
- CLAY/SILT
- SAND AND GRAVEL
- TILL
- CLAY, SILT, AND SAND
- SHALE BEDROCK

NOTE:

MW-AS5-S AND MW-AS4-S PROJECTED FROM APPROXIMATELY 60 FT TO THE SOUTHEAST.
MW-A3S-S PROJECTED FROM APPROXIMATELY 90 FT TO THE NORTHWEST.
ODNR-5 PROJECTED FROM APPROXIMATELY 580 FT TO THE NORTHWEST.
ODNR-6 PROJECTED FROM APPROXIMATELY 260 FT TO THE NORTHWEST.
ALL PROJECTIONS ARE PERPENDICULAR TO THE CROSS SECTION TRANSECT.

NOTE:
BASEMAP AND WELL LOCATIONS ADAPTED FROM DWG NO. 894030-B2, IT CORPORATION, 6/27/00.

REV #	DATE	DESCRIPTION	APPD

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

DRWN: ERM	DATE: 05/21/26
CHKD: ECL	DATE: 09/28/26
APPD: ECL	DATE: 09/28/26
SCALE:	AS SHOWN

KEY ENVIRONMENTAL INCORPORATED

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

CROSS SECTION B-B'

PROJECT NO: 25-110

FIGURE 9

y:\dcoq-wearever\5th year review\2025 5 year review\Figure 8-9 cross sections.dwg Last Saved By: SComer 9/29/2026 6:10 AM Plotted By: Shelly Comer 9/29/2026 6:11 AM Scale: 1:1

APPENDIX A

PUBLIC NOTICE OF FIVE YEAR REVIEW PROCESS

Ross County

PUBLIC NOTICE

Ohio EPA Assessing Cleanup in Chillicothe

The Ohio Environmental Protection Agency (Ohio EPA) and Howmet Aerospace Inc. (Howmet), formerly known as Alcoa Inc. (Alcoa), are reviewing the effectiveness of the cleanup at the former WearEver facility located at 1089 Eastern Avenue, Chillicothe, Ross County. A five-year review of remedial actions is required at sites where cleanup activities are ongoing. The review, to be completed by December 2026, will determine if cleanup activities remain protective of human health and the environment.

Manufacturing at the site was carried out by various entities from 1948 until operations ceased in the late 1990s, during which time the site produced aluminum cookware and other products. Operations resumed in 2001. Past manufacturing at the site created four known waste streams. Past manufacturing generated waste containing chlorinated solvents (such as trichloroethylene (TCE)) and heavy metals (such as lead, cadmium, and others). Some of these materials contaminated the soil and groundwater beneath the property.

Investigations of the site began in the 1980s. In 1993, the Ohio EPA issued the Director's Final Findings and Orders (DFFO), requiring a Remedial Investigation (RI) and Feasibility Study (FS) for the site. In accordance with the 1993 DFFO, Alcoa, along with WearEver Realty Associates, Hamilton-Beach Proctor Silex, Inc., and the Newell Company (Anchor Hocking), conducted the RI/FS for the site. In 1999, Ohio EPA issued the DFFO requiring remediation of the site. Ohio EPA's selected remedy was documented in the 1998 Decision Document.

In 2001, contaminated soil and sludge were consolidated and capped with impervious materials to prevent direct exposure and leaching. Air sparging/soil vapor extraction (AS/SVE) systems operated from 1999 to 2006 to treat solvent-impacted areas. The systems are no longer in use, following a determination by Howmet and the Ohio EPA that the remedial systems had reached the limits of their effectiveness. Indoor air tests conducted in 2016 detected indoor air TCE concentrations in two unoccupied areas on the WearEver property. Howmet installed sub-slab venting systems in 2018 to prevent vapors from entering those buildings. Deed restrictions for the Howmet/WearEver property prevent the potable use of on-site groundwater. Groundwater (on- and off-property) continues to be monitored quarterly.

For more information and/or to submit a public comment regarding the site, email the site coordinator, Austin Tweedy, at Austin.Tweedy@epa.ohio.gov.

APPENDIX B

FIVE-YEAR REVIEW SITE INSPECTION CHECKLIST

Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INFORMATION	
Site name: Former Weaver Site	**Date of inspection:** 8/19/26
Location and Region: Chillicothe, OH	**EPA ID:**
Agency, office, or company leading the five-year review: Key Environmental, Inc.	**Weather/temperature:** 70°, sunny

Remedy Includes: (Check all that apply)

- ☒ Landfill cover/containment
- ☒ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Other _____
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls

Attachments: ☐ Inspection team roster attached ☐ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager** Interviews to be conducted September 2026 _____
   Name Title Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

2. **O&M staff** Interviews to be conducted September 2026 _____
   Name Title Date
   Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____
   Problems, suggestions; ☐ Report attached _____

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____
_____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____
_____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____
_____

Agency _____
Contact _____ _____ _____ _____
Name Title Date Phone no.
Problems; suggestions; ☐ Report attached _____
_____

4. **Other interviews** (optional) ☐ Report attached.

Interviews to be conducted September 2026

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**
   - ☒ O&M manual — ☒ Readily available — ☒ Up to date — ☐ N/A
   - ☒ As-built drawings — ☒ Readily available — ☐ Up to date — ☒ N/A
   - ☒ Maintenance logs — ☒ Readily available — ☒ Up to date — ☐ N/A

   Remarks: AS/SVE System shutdown since 2006. GMP/Inspection forms are available.

2. **Site-Specific Health and Safety Plan** — ☒ Readily available — ☒ Up to date — ☐ N/A
   - ☐ Contingency plan/emergency response plan — ☐ Readily available — ☐ Up to date — ☐ N/A

   Remarks: Most recent HASP - 7/25/14

3. **O&M and OSHA Training Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks:

4. **Permits and Service Agreements**
   - ☐ Air discharge permit — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☐ Effluent discharge — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☐ Waste disposal, POTW — ☐ Readily available — ☐ Up to date — ☐ N/A
   - ☐ Other permits _____ — ☐ Readily available — ☐ Up to date — ☐ N/A

   Remarks: Facility not required to maintain any permits. No longer use for POTW for discharge.

5. **Gas Generation Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks:

6. **Settlement Monument Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks:

7. **Groundwater Monitoring Records** — ☒ Readily available — ☐ Up to date — ☐ N/A

   Remarks: Kept at Key Environmental, Inc., Pittsburgh, PA office

8. **Leachate Extraction Records** — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks:

9. **Discharge Compliance Records**
   - ☐ Air — ☐ Readily available — ☐ Up to date — ☒ N/A
   - ☐ Water (effluent) — ☐ Readily available — ☐ Up to date — ☒ N/A

   Remarks:

10. **Daily Access/Security Logs** — ☒ Readily available — ☐ Up to date — ☐ N/A

    Remarks: Access sign in at ASL entrance

IV. O&M COSTS

1. **O&M Organization**
   - ☐ State in-house
   - ☐ PRP in-house
   - ☐ Federal Facility in-house
   - ☐ Other
   - ☐ Contractor for State
   - ☒ Contractor for PRP
   - ☐ Contractor for Federal Facility

2. **O&M Cost Records**
   - ☐ Readily available ☐ Up to date
   - ☐ Funding mechanism/agreement in place
   - Original O&M cost estimate _____ ☐ Breakdown attached

   Total annual cost by year for review period if available

From 01/01/21 (Date) To 12/31/21 (Date)	51,370 (Total cost)	☐ Breakdown attached
From 01/01/22 (Date) To 12/31/22 (Date)	65,765 (Total cost)	☐ Breakdown attached
From 01/01/23 (Date) To 12/31/23 (Date)	64,926 (Total cost)	☐ Breakdown attached
From 01/01/24 (Date) To 12/31/24 (Date)	63,720 (Total cost)	☐ Breakdown attached
From 01/01/25 (Date) To 12/31/25 (Date)	58,965 (Total cost)	☐ Breakdown attached

3. **Unanticipated or Unusually High O&M Costs During Review Period**
   Describe costs and reasons: None

V. ACCESS AND INSTITUTIONAL CONTROLS ☐ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☐ N/A
   Remarks Landfill fencing acceptable - no visible damage; gates locked

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A
   Remarks

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A
Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) Self report, County tax records, drive by
Frequency _____
Responsible party/agency Alcoa, Consultant
Contact _____ _____ _____ _____
Name Title Date Phone no.

Reporting is up-to-date ☒ Yes ☐ No ☐ N/A
Reports are verified by the lead agency ☒ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A
Violations have been reported ☐ Yes ☒ No ☐ N/A
Other problems or suggestions: ☐ Report attached
Commercial/Industrial use only, Groundwater use prohibited - no digging in L.F.
Groundwater use notification agreements executed with adjacent landowners.

2. **Adequacy** ☐ ICs are adequate ☐ ICs are inadequate ☐ N/A
Remarks _____

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident
Remarks _____

2. **Land use changes on site** ☒ N/A
Remarks _____

3. **Land use changes off site** ☒ N/A
Remarks _____

VI. GENERAL SITE CONDITIONS

A. Roads ☒ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☒ Roads adequate ☐ N/A
Remarks _____

B. Other Site Conditions

Remarks None

VII. LANDFILL COVERS ☒ Applicable ☐ N/A

A. Landfill Surface

1. **Settlement** (Low spots) ☐ Location shown on site map ☒ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Cracks** ☐ Location shown on site map ☒ Cracking not evident
   Lengths_____ Widths_____ Depths_____
   Remarks_____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Holes** ☐ Location shown on site map ☒ Holes not evident
   Areal extent_____ Depth_____
   Remarks_____

5. **Vegetative Cover** ☐ Grass ☐ Cover properly established ☒ No signs of stress
   ☐ Trees/Shrubs (indicate size and locations on a diagram)
   Remarks_____

6. **Alternative Cover (armored rock, concrete, etc.)** ☒ N/A
   Remarks_____

7. **Bulges** ☐ Location shown on site map ☒ Bulges not evident
   Areal extent_____ Height_____
   Remarks_____

8. **Wet Areas/Water Damage** ☐ Wet areas/water damage not evident
- ☐ Wet areas ☐ Location shown on site map Areal extent_____
- ☐ Ponding ☐ Location shown on site map Areal extent_____
- ☐ Seeps ☐ Location shown on site map Areal extent_____
- ☐ Soft subgrade ☐ Location shown on site map Areal extent_____

Remarks None

9. **Slope Instability** ☐ Slides ☐ Location shown on site map ☒ No evidence of slope instability
Areal extent_____
Remarks_____

B. Benches ☒ Applicable ☐ N/A
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)

1. **Flows Bypass Bench** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

2. **Bench Breached** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

3. **Bench Overtopped** ☐ Location shown on site map ☒ N/A or okay
Remarks_____

C. Letdown Channels ☒ Applicable ☐ N/A
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)

1. **Settlement** ☐ Location shown on site map ☒ No evidence of settlement
Areal extent_____ Depth_____
Remarks_____

2. **Material Degradation** ☐ Location shown on site map ☐ No evidence of degradation
Material type_____ Areal extent_____
Remarks No geosynthetics used in LF construction

3. **Erosion** ☐ Location shown on site map ☒ No evidence of erosion
Areal extent_____ Depth_____
Remarks_____

4. **Undercutting** ☐ Location shown on site map ☒ No evidence of undercutting
Areal extent_____ Depth_____
Remarks_____

5. **Obstructions** Type_____ ☒ No obstructions
☐ Location shown on site map Areal extent_____
Size_____
Remarks_____

6. **Excessive Vegetative Growth** Type_____
☒ No evidence of excessive growth
☐ Vegetation in channels does not obstruct flow
☐ Location shown on site map Areal extent_____
Remarks_____

D. Cover Penetrations ☐ Applicable ☐ N/A

1. **Gas Vents** ☐ Active ☐ Passive
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance
☐ N/A
Remarks AS/SVE points installed though clay cap

2. **Gas Monitoring Probes**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A
Remarks_____

3. **Monitoring Wells** (within surface area of landfill)
☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☐ N/A
Remarks_____

4. **Leachate Extraction Wells**
☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition
☐ Evidence of leakage at penetration ☐ Needs Maintenance ☒ N/A
Remarks_____

5. **Settlement Monuments** ☐ Located ☐ Routinely surveyed ☒ N/A
Remarks_____

E. Gas Collection and Treatment ☐ Applicable ☒ N/A

1. **Gas Treatment Facilities**
   ☐ Flaring ☐ Thermal destruction ☐ Collection for reuse
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____

2. **Gas Collection Wells, Manifolds and Piping**
   ☐ Good condition ☐ Needs Maintenance
   Remarks_____

3. **Gas Monitoring Facilities** (*e.g.*, gas monitoring of adjacent homes or buildings)
   ☐ Good condition ☐ Needs Maintenance ☒ N/A
   Remarks_____

F. Cover Drainage Layer ☐ Applicable ☒ N/A

1. **Outlet Pipes Inspected** ☐ Functioning ☐ N/A
   Remarks_____

2. **Outlet Rock Inspected** ☐ Functioning ☐ N/A
   Remarks_____

G. Detention/Sedimentation Ponds ☐ Applicable ☒ N/A

1. **Siltation** Areal extent_____ Depth_____ ☐ N/A
   ☐ Siltation not evident
   Remarks_____

2. **Erosion** Areal extent_____ Depth_____
   ☐ Erosion not evident
   Remarks_____

3. **Outlet Works** ☐ Functioning ☐ N/A
   Remarks_____

4. **Dam** ☐ Functioning ☐ N/A
   Remarks_____

H. Retaining Walls ☐ Applicable ☒ N/A

1. **Deformations** ☐ Location shown on site map ☐ Deformation not evident
   Horizontal displacement_____ Vertical displacement_____
   Rotational displacement_____
   Remarks_____

2. **Degradation** ☐ Location shown on site map ☐ Degradation not evident
   Remarks_____

I. Perimeter Ditches/Off-Site Discharge ☒ Applicable ☐ N/A

1. **Siltation** ☐ Location shown on site map ☒ Siltation not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Vegetative Growth** ☐ Location shown on site map ☐ N/A
   ☒ Vegetation does not impede flow
   Areal extent_____ Type_____
   Remarks_____

3. **Erosion** ☐ Location shown on site map ☒ Erosion not evident
   Areal extent_____ Depth_____
   Remarks_____

4. **Discharge Structure** ☒ Functioning ☐ N/A
   Remarks_____

VIII. VERTICAL BARRIER WALLS ☐ Applicable ☒ N/A

1. **Settlement** ☐ Location shown on site map ☐ Settlement not evident
   Areal extent_____ Depth_____
   Remarks_____

2. **Performance Monitoring** Type of monitoring_____
   ☐ Performance not monitored
   Frequency_____ ☐ Evidence of breaching
   Head differential_____
   Remarks_____

IX. GROUNDWATER/SURFACE WATER REMEDIES ☒ Applicable ☐ N/A

A. Groundwater Extraction Wells, Pumps, and Pipelines ☒ Applicable ☐ N/A

1. **Pumps, Wellhead Plumbing, and Electrical**
   ☐ Good condition ☐ All required wells properly operating ☐ Needs Maintenance ☒ N/A
   Remarks AS/SVE system shut down & piping removed

2. **Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   ☐ Good condition ☐ Needs Maintenance
   Remarks System shut down

3. **Spare Parts and Equipment**
   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided
   Remarks System shut down

B. Surface Water Collection Structures, Pumps, and Pipelines ☒ Applicable ☐ N/A

1. **Collection Structures, Pumps, and Electrical**
   ☐ Good condition ☐ Needs Maintenance
   Remarks No pumps - gravity flow to basin

2. **Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances**
   ☐ Good condition ☐ Needs Maintenance
   Remarks N/A

3. **Spare Parts and Equipment**
   ☐ Readily available ☐ Good condition ☐ Requires upgrade ☐ Needs to be provided
   Remarks N/A

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (Check components that apply)
   - ☐ Metals removal ☐ Oil/water separation ☐ Bioremediation
   - ☐ Air stripping ☐ Carbon adsorbers
   - ☐ Filters_____
   - ☐ Additive (*e.g.*, chelation agent, flocculent)_____
   - ☐ Others_____
   - ☐ Good condition ☐ Needs Maintenance
   - ☐ Sampling ports properly marked and functional
   - ☐ Sampling/maintenance log displayed and up to date
   - ☐ Equipment properly identified
   - ☐ Quantity of groundwater treated annually_____
   - ☐ Quantity of surface water treated annually_____
   - Remarks_____

2. **Electrical Enclosures and Panels** (properly rated and functional)
   - ☐ N/A ☐ Good condition ☐ Needs Maintenance
   - Remarks Not in use

3. **Tanks, Vaults, Storage Vessels**
   - ☐ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance
   - Remarks N/A

4. **Discharge Structure and Appurtenances**
   - ☐ N/A ☐ Good condition ☐ Needs Maintenance
   - Remarks N/A

5. **Treatment Building(s)**
   - ☐ N/A ☐ Good condition (esp. roof and doorways) ☐ Needs repair
   - ☐ Chemicals and equipment properly stored
   - Remarks used for storage only

6. **Monitoring Wells** (pump and treatment remedy)
   - ☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
   - ☐ All required wells located ☐ Needs Maintenance ☐ N/A
   - Remarks Wells in good condition

D. Monitoring Data

1. Monitoring Data
   - ☒ Is routinely submitted on time ☒ Is of acceptable quality

2. Monitoring data suggests:
   - ☐ Groundwater plume is effectively contained ☒ Contaminant concentrations are declining

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☒ Properly secured/locked ☒ Functioning ☒ Routinely sampled ☒ Good condition
☐ All required wells located ☐ Needs Maintenance ☐ N/A
Remarks

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Current activities involve landfill maintenance + plume monitoring.

B. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Groundwater monitoring indicates potential offsite migration along the northeast property line (shallow). Offsite migration within the Intermediate Zone along the northern property line has been documented.

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

Offsite migration

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

N/A

APPENDIX C

FIVE-YEAR REVIEW INTERVIEW QUESTIONS

Five-Year Review Interview Questions

Howmet Remediation Manager - Andrew Franze

- What are your current duties at the site?
  I am the Howmet Remediation Manager for the location. My responsibility is to ensure that the requirements of the DFFO are fulfilled.

- Do you know of any issues related to the site at this time?
  The Paper Company (Pixelle) was sold last year, and the future operation of the Paper Company pumping wells is unclear. In response to the sale of the Paper Company, enhanced groundwater monitoring efforts were implemented by Howmet during the third quarter of 2025. Enhanced monitoring will continue into the foreseeable future.

- Do you know of any community concerns regarding the site?
  No, not at this time.

O&M Manager – Eric Lloyd

- What are your current duties related to the site?
  I manage operations and maintenance at the WearEver site. This primarily consists of activities related to groundwater, landfill maintenance/inspection, landfill mowing, inspections of monitoring wells, and groundwater sampling.

- Do you know of any issues related to the site at this time?
  The Paper Company is now under new ownership, and the future operation of the Paper Company's collection wells is not well understood. Enhanced monitoring was implemented in response to this and will continue into the foreseeable future.

- Do you know of any community concerns regarding the site?
  None at this time

US Paper Mill – Kim Lute

- What is US Paper's long-term plan for the paper facility?
  The future use of the paper facility is unknown at this time.

- Does US Paper have any issues with the WearEver Site, or are you aware of any issues that residents or businesses have with the site?
  No.

- Would US Paper be willing to work with Howmet to execute a Groundwater Use Notification Agreement?
  We would be open to discussion of entering into a GWUNA with Howmet.

Five-Year Review Interview Questions

Clary Trucking - Dan Clary

- Do you have any issues with the WearEver Site?
  No – Cleary is hooked up to the local water supply and does not use the groundwater.

- Do you have any concerns related to the Groundwater Use Notification Agreement you signed with Alcoa?
  No, but I am aware there are concerns expressed in the local newspaper. Cleary had an environmental lawyer look into risks and deemed that we have no concerns as long as we do not drink the groundwater.

City of Chillicothe WWTP –Dale Gobal

- Do you have any concerns related to the Groundwater Use Notification Agreement that the city signed with Alcoa?
  No.

- What is the source of water at the plant?
  City Distribution Wells.

- Do you have any issues with the WearEver Site?
  No.

Howmet Plant Manager – Lee Allision

- Do you have any concerns related to the Groundwater Use Notification Agreement you signed with Alcoa in December 2004?
  No concerns.

- What are your duties at the plant?
  Warehouse manager. My Environmental responsibilities are limited to Stormwater Sampling. Corporate Environmental handles all other EPA-related tasks.

- What are current and future plans for the Site?
  Current and future plans are to operate the warehouse as a receiving and distribution facility.

- Are there any other tenants in the building?
  No other tenants, only Howmet.

- How much of the Warehouse building is typically occupied?
  100% of the building is occupied by Howmet.

Five-Year Review Interview Questions

- Do you have any issues with the site or site personnel?
  No issues with the site or personnel.

- Do you know of any community concerns regarding the site?
  The only community issues that I am aware of are regarding the continued pumping of the paper mill wells that hold the plume in place.

Standard Car Truck Company (Barber Spring/WabTec)

Standard Car Truck Company declined to be interviewed.

John Adams

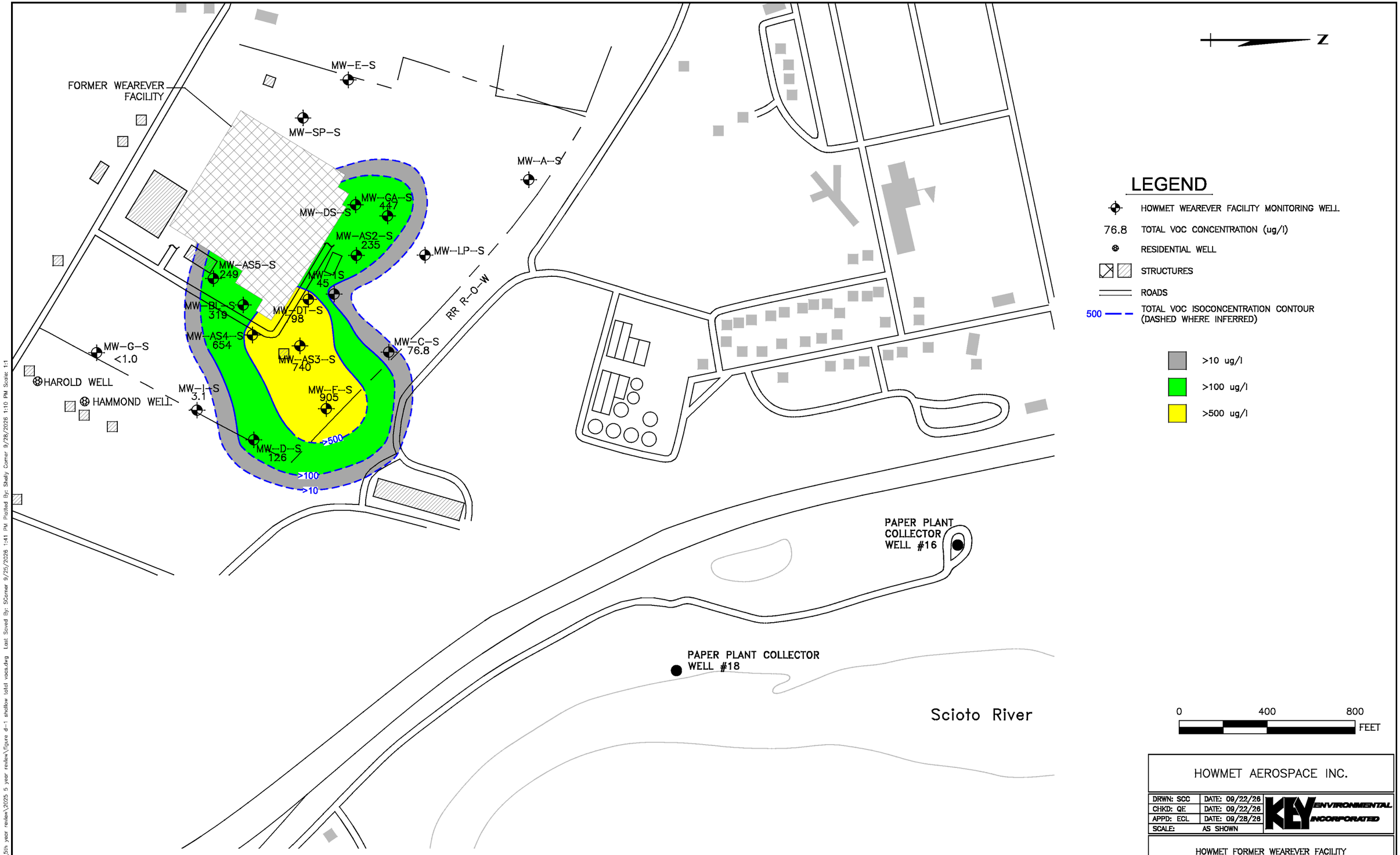
Several attempts were made to contact Mr. Adams, but he did not respond.

Eva Herald

Ms. Harold declined to answer questions.

APPENDIX D

VOLATILE ORGANIC COMPOUNDS CONCENTRATION 5 YEAR AVERAGES



REV #	DATE	DESCRIPTION	APPD
3			
2			
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REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/22/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE:	AS SHOWN	

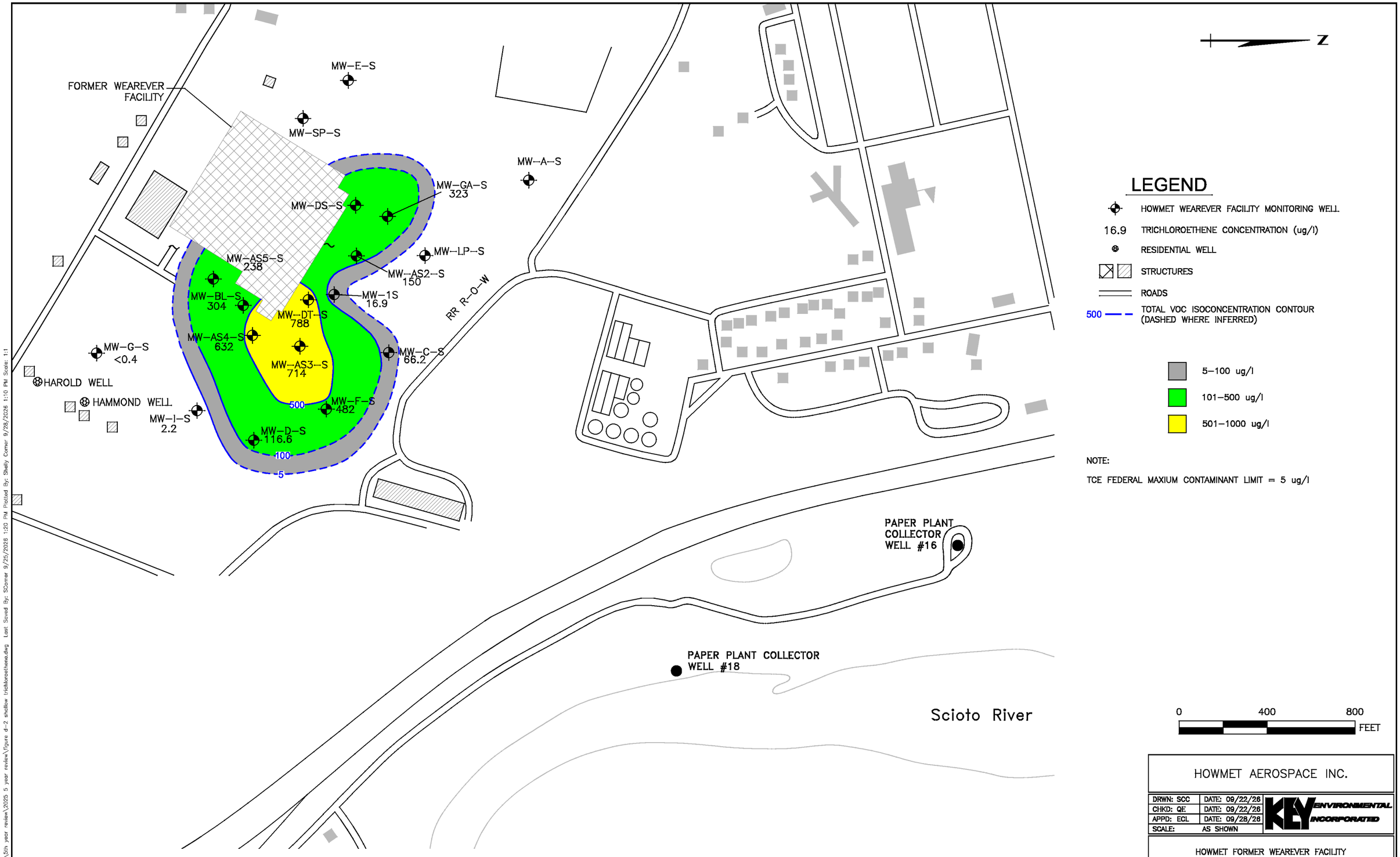
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TOTAL VOLATILE ORGANIC COMPOUNDS CONCENTRATION –SHALLOW ZONE (2020–2025)

PROJECT NO: 25–110

FIGURE D–1

y:\dcca–wearever\5th year review\2025 5 year review\figure d–1 shallow total vocs.dwg Last Saved By: SCorner 9/25/2026 1:41 PM Plotted By: Shelly Corner 9/28/2026 1:10 PM Scale: 1:1



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REFERENCE:

ISSUE DATE:

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DRWN: SCC	DATE: 09/22/26	KEY ENVIRONMENTAL INCORPORATED
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APPD: ECL	DATE: 09/28/26	
SCALE:	AS SHOWN	

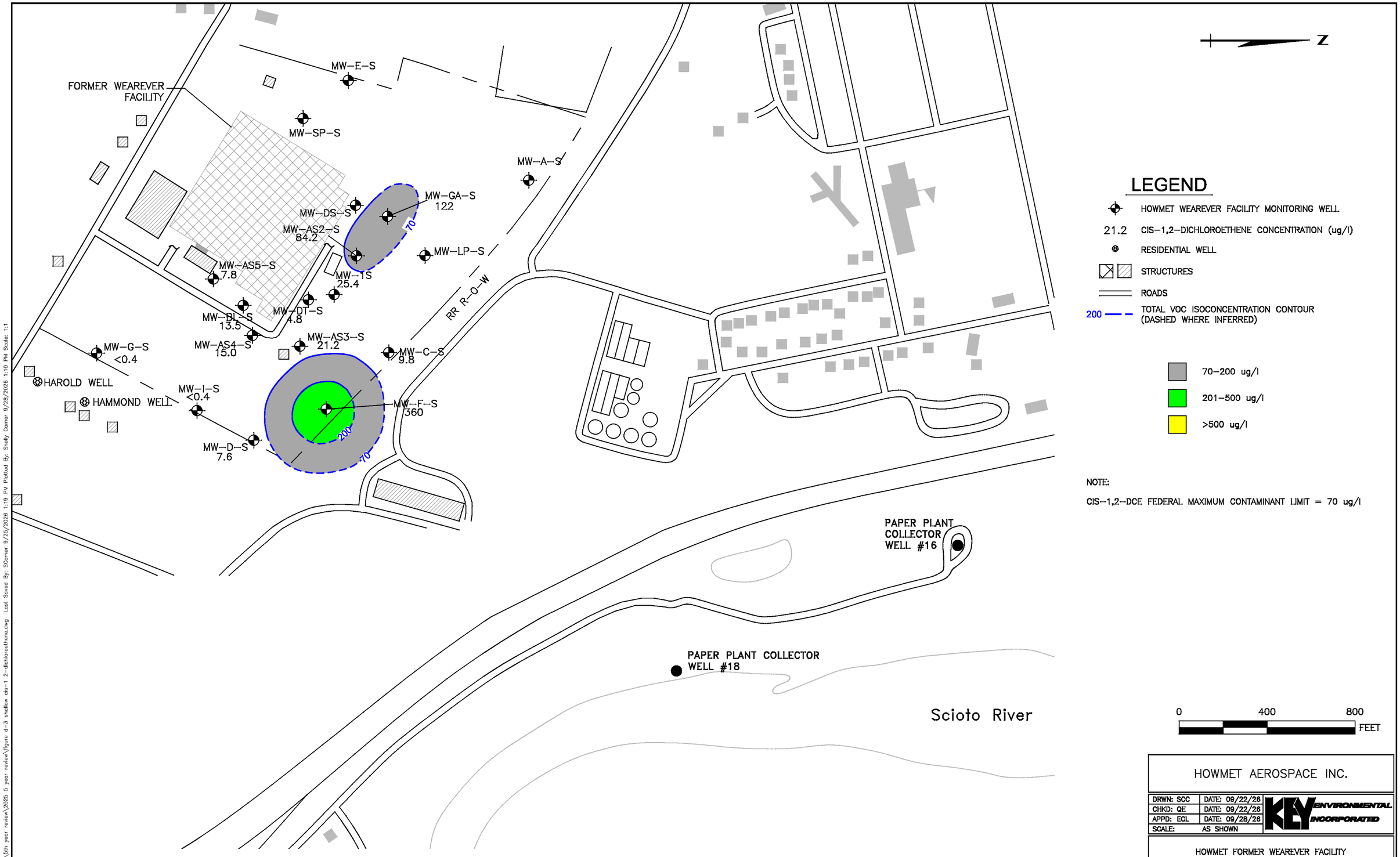
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TRICHLOROETHENE CONCENTRATION -SHALLOW ZONE (2020-2025)

PROJECT NO: 25-110

FIGURE D-2

y:\alcoa-wearever\5th year review\2025 5 year review\figure d-2 shallow trichloroethene.dwg Last Saved By: SCorner 9/25/2026 1:20 PM Plotted By: Shelly Corner 9/28/2026 1:10 PM Scale: 1:1



LEGEND

- HOWMET WEAREVER FACILITY MONITORING WELL
- 21.2 CIS-1,2-DICHLOROETHENE CONCENTRATION (ug/l)
- RESIDENTIAL WELL
- STRUCTURES
- ROADS
- 200 TOTAL VOC ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

- 70-200 ug/l
- 201-500 ug/l
- >500 ug/l

NOTE:

CIS-1,2-DCE FEDERAL MAXIMUM CONTAMINANT LIMIT = 70 ug/l

REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/22/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE: AS SHOWN		

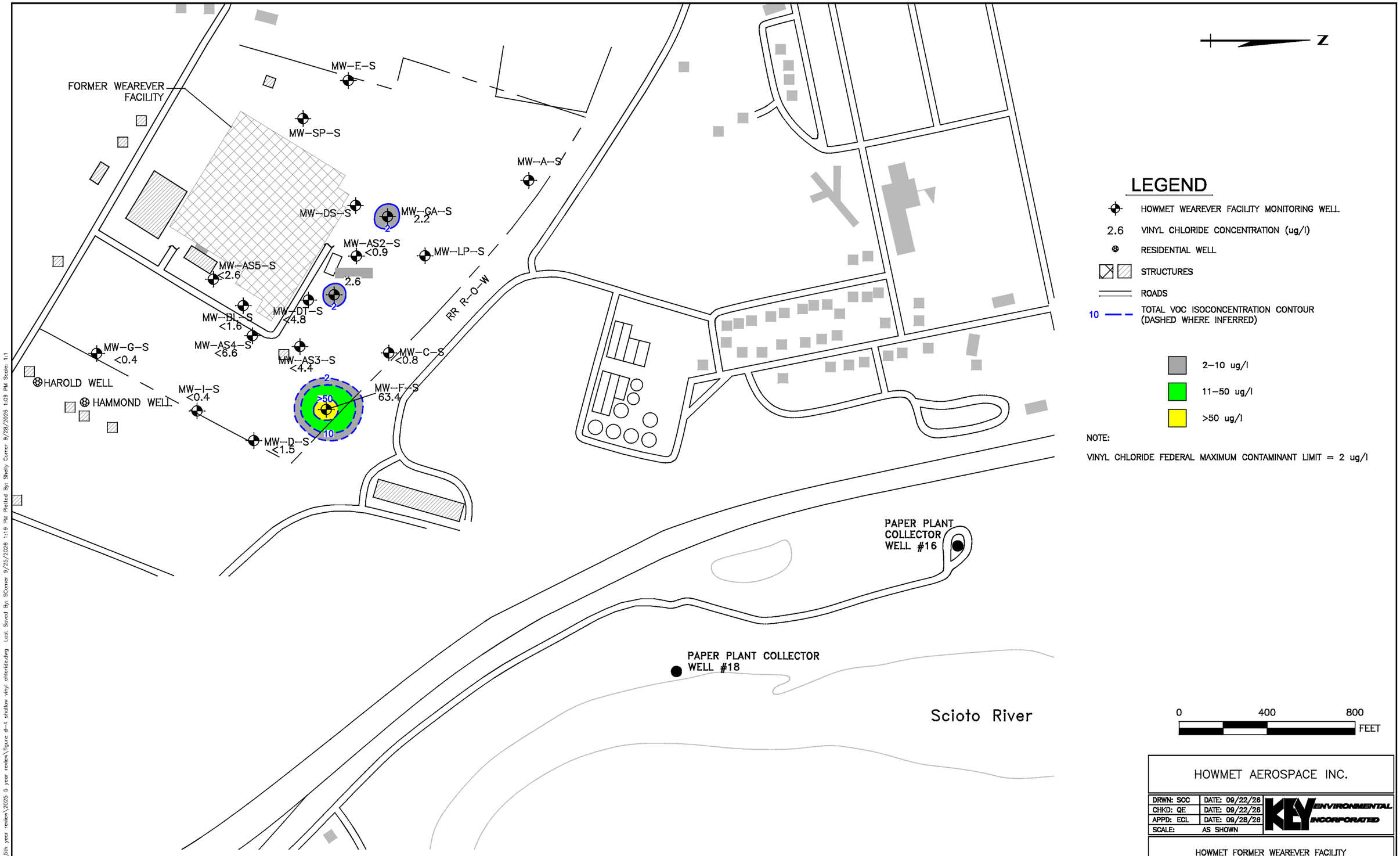
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

CIS-1,2-DICHLOROETHENE CONCENTRATION -SHALLOW ZONE (2020-2025)

PROJECT NO: 25-110

FIGURE D-3

y:\dlcoa-wearever\5th year review\2025 5 year review\Figure d-3 shallow cis-1 2-dichloroethene.dwg Last Saved By: SCorner 9/25/2026 1:19 PM Plotted By: Shelly Corner 9/28/2026 1:10 PM Scale: 1:1



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REFERENCE:

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CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE: AS SHOWN		

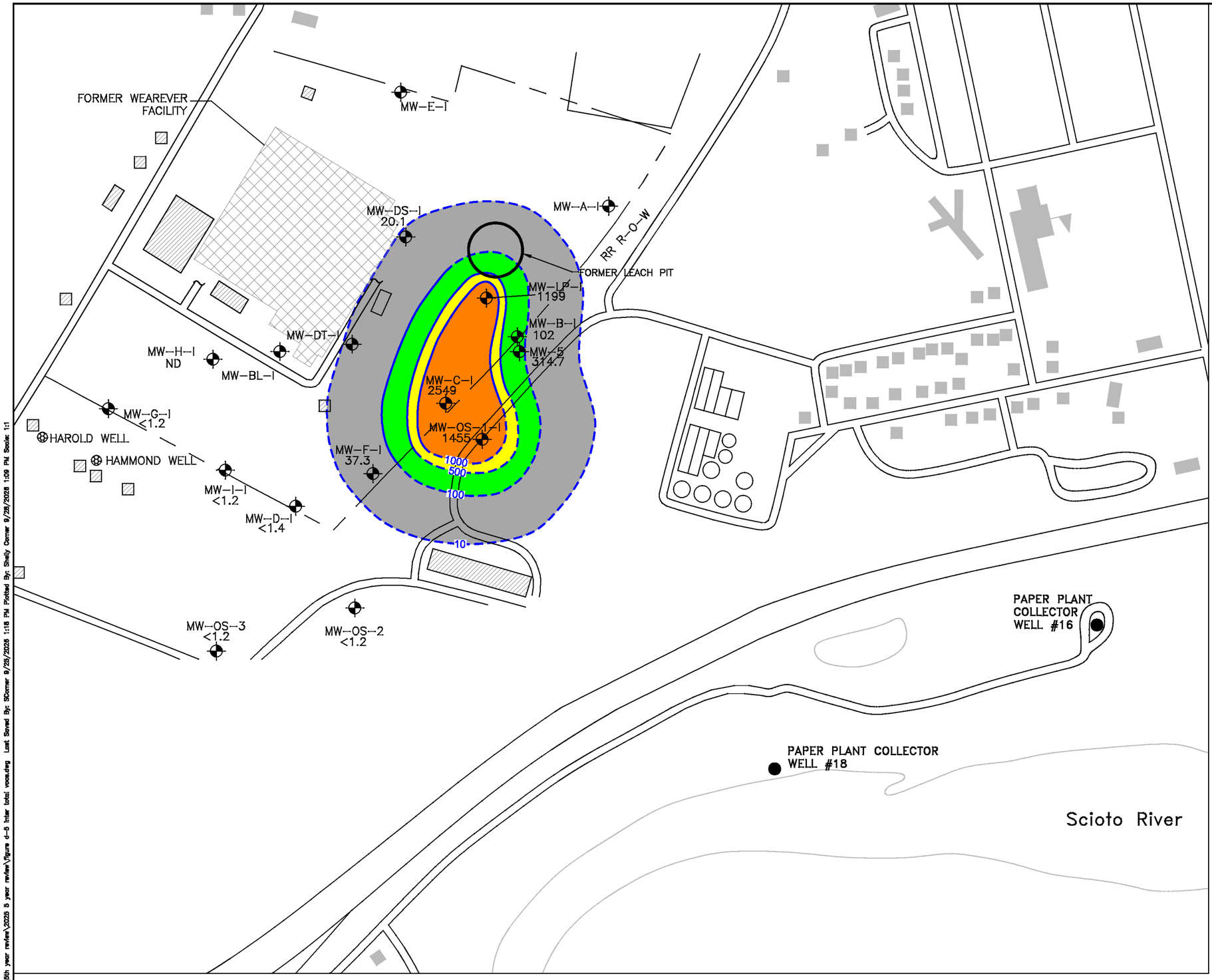
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

VINYL CHLORIDE CONCENTRATION
--SHALLOW ZONE
(2020–2025)

PROJECT NO: 25-110

FIGURE D-4

y:\ulcca--wearever\5th year review\2025 5 year review\Figure d-4 shallow vinyl chloride.dwg Last Saved By: SCorner 9/25/2026 1:19 PM Plotted By: Shelly Corner 9/28/2026 1:09 PM Scale: 1:1



N

LEGEND

- HOWMET WEAREVER FACILITY MONITORING WELL
- 102 TOTAL VOC CONCENTRATION (ug/l)
- RESIDENTIAL WELL
- STRUCTURES
- ROADS
- 500 TOTAL VOC ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

- >10 ug/l
- >100 ug/l
- >500 ug/l
- > 1000 ug/l

0 400 800 FEET

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/22/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE: AS SHOWN		

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TOTAL VOLATILE ORGANIC COMPOUNDS CONCENTRATION --INTERMEDIATE ZONE (2020--2025)

PROJECT NO: 25--110

FIGURE D--5

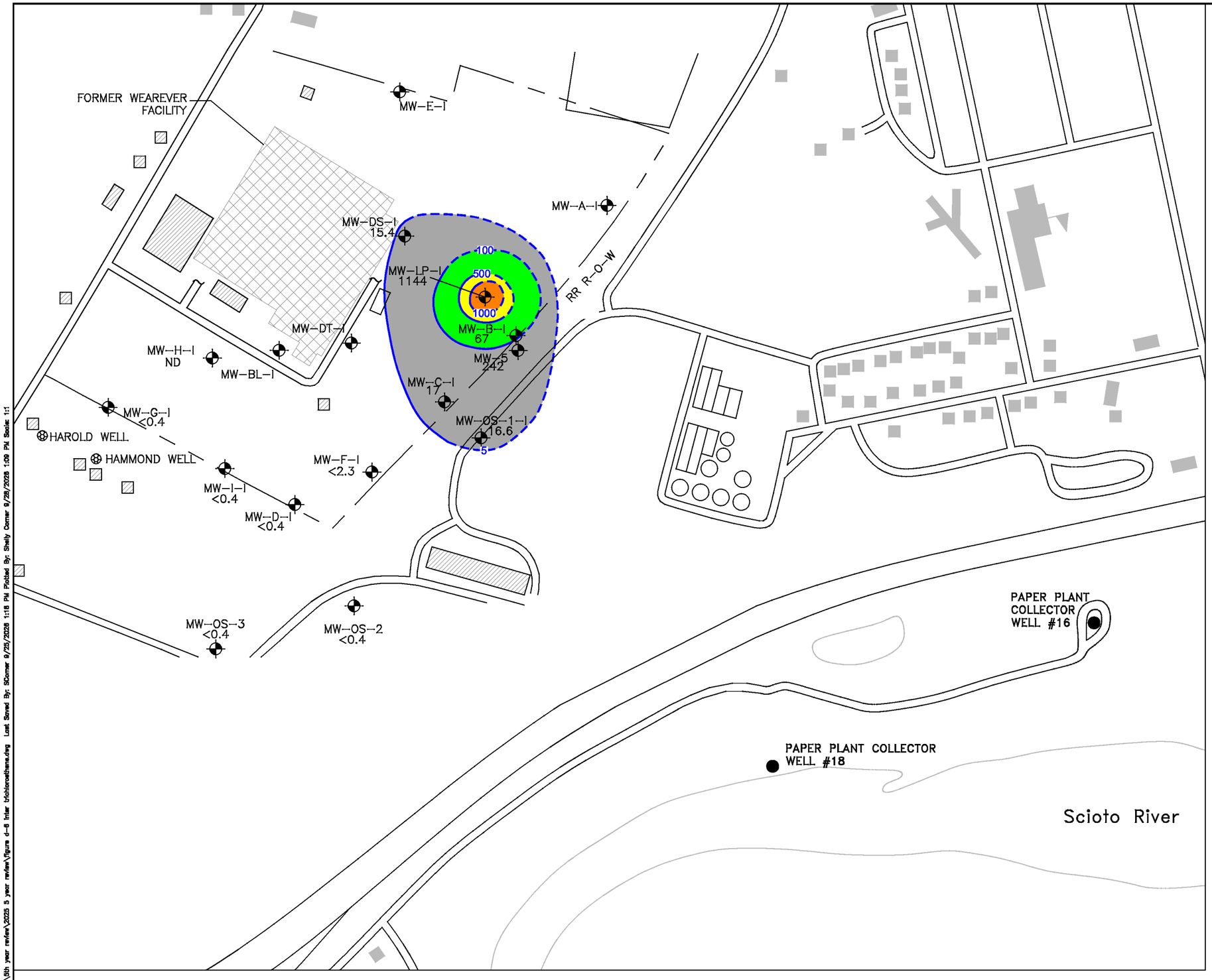
REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

y:\docs--wearever\5th year review\2025 5 year review\figure d--5 inter tchl voca.dwg Last Saved By: SCorner 9/25/2026 1:16 PM Plotted By: Shelly Corner 9/29/2026 1:09 PM Scale: 1:1



N

LEGEND

- HOWMET WEAREVER FACILITY MONITORING WELL
- 242 TRICHLOROETHENE CONCENTRATION (ug/l)
- RESIDENTIAL WELL
- STRUCTURES
- ROADS
- 500 TOTAL VOC ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

- 5–100 ug/l
- 101–500 ug/l
- 501–1000 ug/l
- > 1000 ug/l

NOTE:

TCE FEDERAL MAXIUM CONTAMINANT LIMIT = 5 ug/l

0 400 800 FEET

HOWMET AEROSPACE INC.

DRWN: SCC	DATE: 09/22/26	KEY ENVIRONMENTAL INCORPORATED
CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE:	AS SHOWN	

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

TRICHLOROETHENE CONCENTRATION --INTERMEDIATE ZONE (2020--2025)

PROJECT NO: 25--110

FIGURE D--6

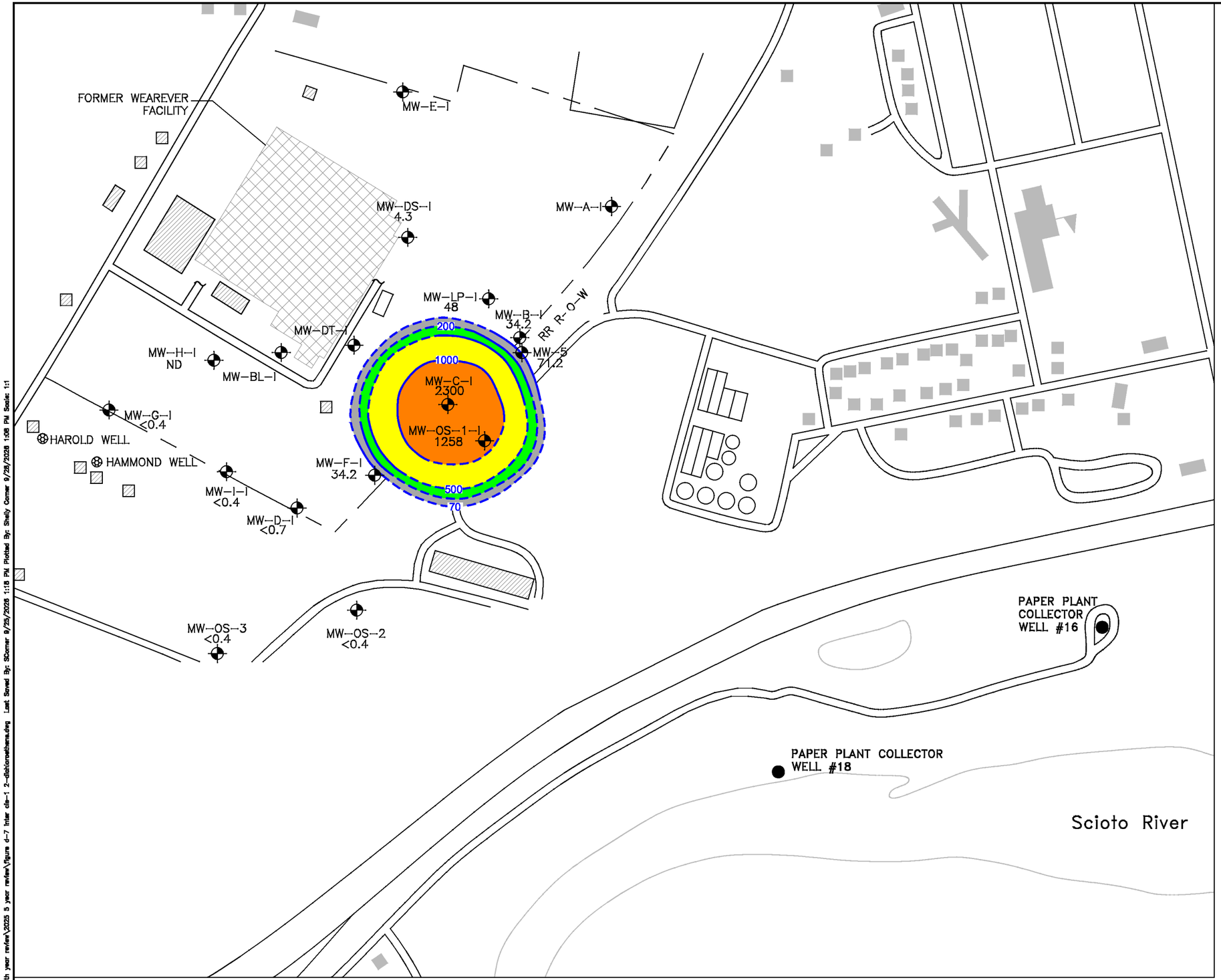
REV #	DATE	DESCRIPTION	APPD
3			
2			
1			

REFERENCE:

ISSUE DATE:

KEY ENVIRONMENTAL, INC.
200 THIRD AVENUE
CARNEGIE, PA 15106

y:\cloco--wearever\5th year review\2025 5 year review\figure d--6 inter trichloroethene.dwg Last Saved By: SCorner 9/29/2026 1:18 PM Plotted By: Shelly Corner 9/29/2026 1:09 PM Scale: 1:1



N

LEGEND

- HOWMET WEAREVER FACILITY MONITORING WELL
- 71.2 CIS-1,2-DICHLOROETHENE CONCENTRATION (ug/l)
- RESIDENTIAL WELL
- STRUCTURES
- ROADS
- 500 TOTAL VOC ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

- 70-200 ug/l
- 201-500 ug/l
- 501-1000 ug/l
- > 1000 ug/l

NOTE:

CIS-1,2-DCE FEDERAL MAXIMUM CONTAMINANT LIMIT = 70 ug/l

0 400 800 FEET

REV #	DATE	DESCRIPTION	APPD
3			
2			
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REFERENCE:

ISSUE DATE:

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200 THIRD AVENUE
CARNEGIE, PA 15106

HOWMET AEROSPACE INC.

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CHKD: QE	DATE: 09/22/26	
APPD: ECL	DATE: 09/28/26	
SCALE:	AS SHOWN	

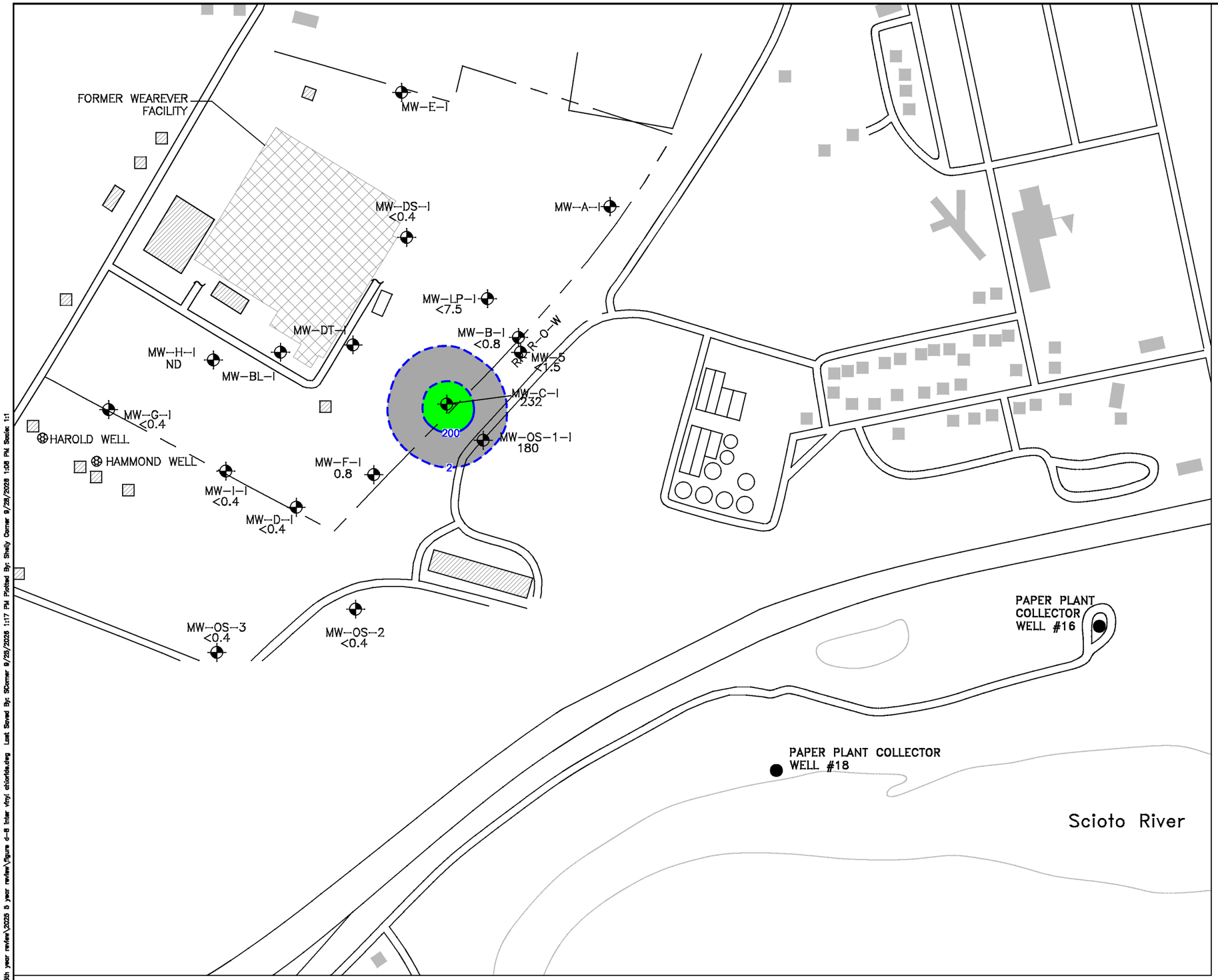
HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

CIS-1,2-DICHLOROETHENE CONCENTRATION
--INTERMEDIATE ZONE (2020--2025)

PROJECT NO: 25--110

FIGURE D-7

y:\alcoa--wearever\5th year review\2025 5 year review\figure d-7 inter cis-1 2-dichloroethene.dwg Last Saved By: SCorner 9/25/2026 1:18 PM Plotted By: Shelly Corner 9/29/2026 1:08 PM Scale: 1:1



N

LEGEND

- HOWMET WEAREVER FACILITY MONITORING WELL
- 180 VINYL CHLORIDE CONCENTRATION (ug/l)
- RESIDENTIAL WELL
- STRUCTURES
- ROADS
- 200 TOTAL VOC ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)

- 2-200 ug/l
- >200 ug/l

NOTE:

VINYL CHLORIDE FEDERAL MAXIMUM CONTAMINANT LIMIT = 2 ug/l

0 400 800 FEET

REV #	DATE	DESCRIPTION	APPD
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3			

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APPD: ECL	DATE: 09/28/26	
SCALE:	AS SHOWN	

HOWMET FORMER WEAREVER FACILITY
CHILLICOTHE, OHIO

VINYL CHLORIDE CONCENTRATION
--INTERMEDIATE ZONE (2020--2025)

PROJECT NO: 25--110

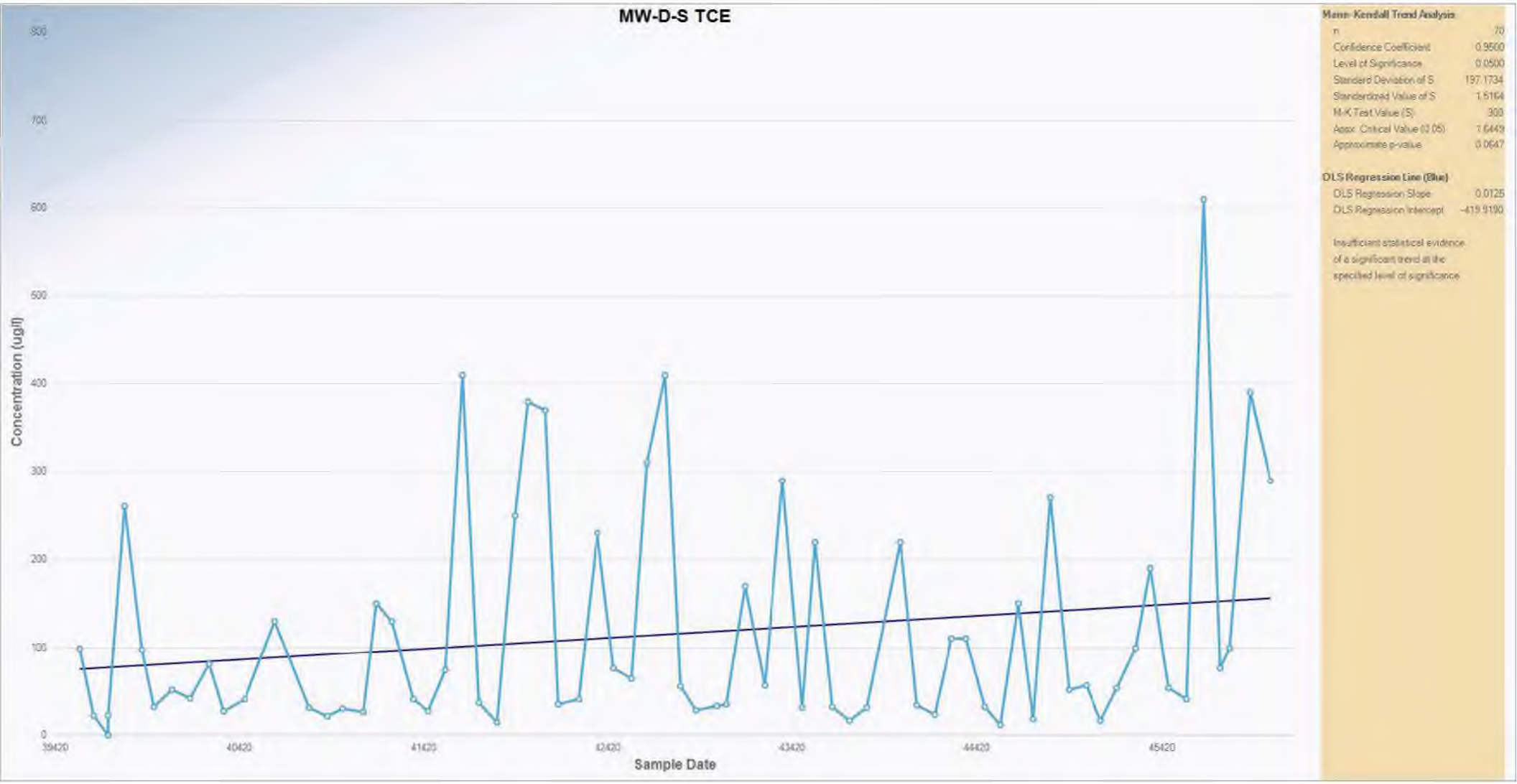
FIGURE D--8

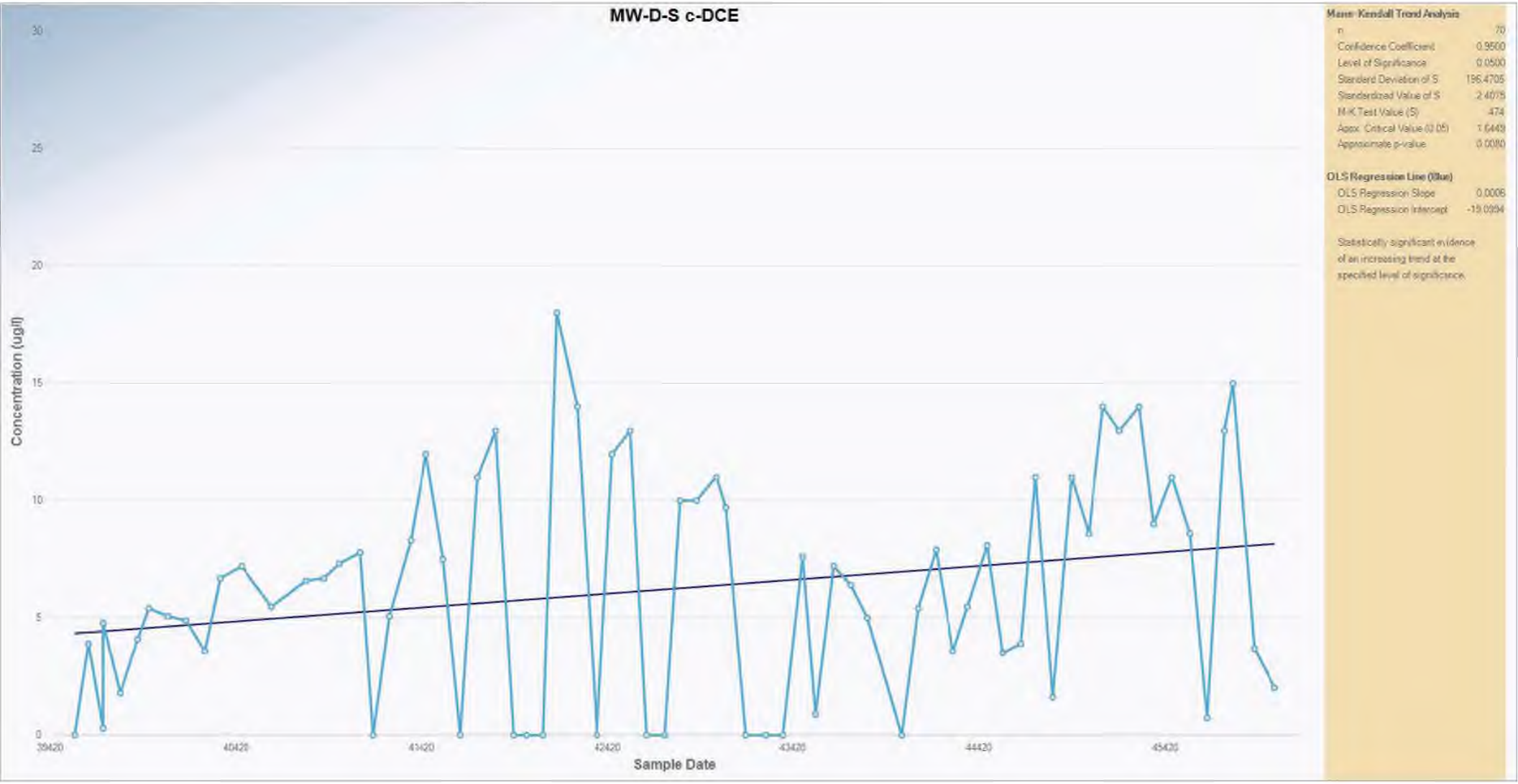
J:\Howmet--Wearever\5th year review\2025 5 year review\Figure d--8 Inter Vinyl chloride.dwg Last Saved By: SCorner 9/25/2026 1:17 PM Plotted By: Shelly Corner 9/28/2026 1:08 PM Scale: 1:1

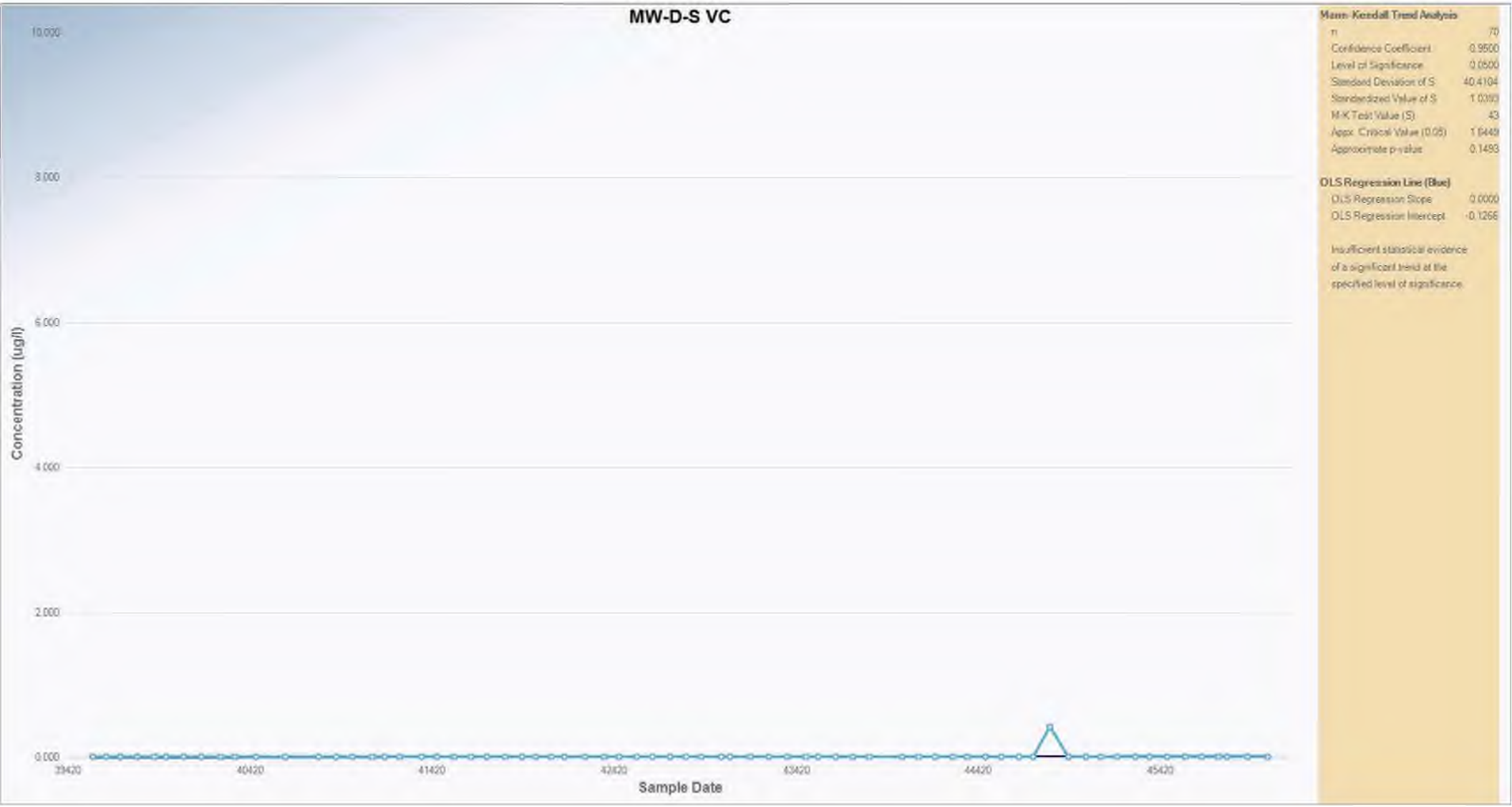
APPENDIX E

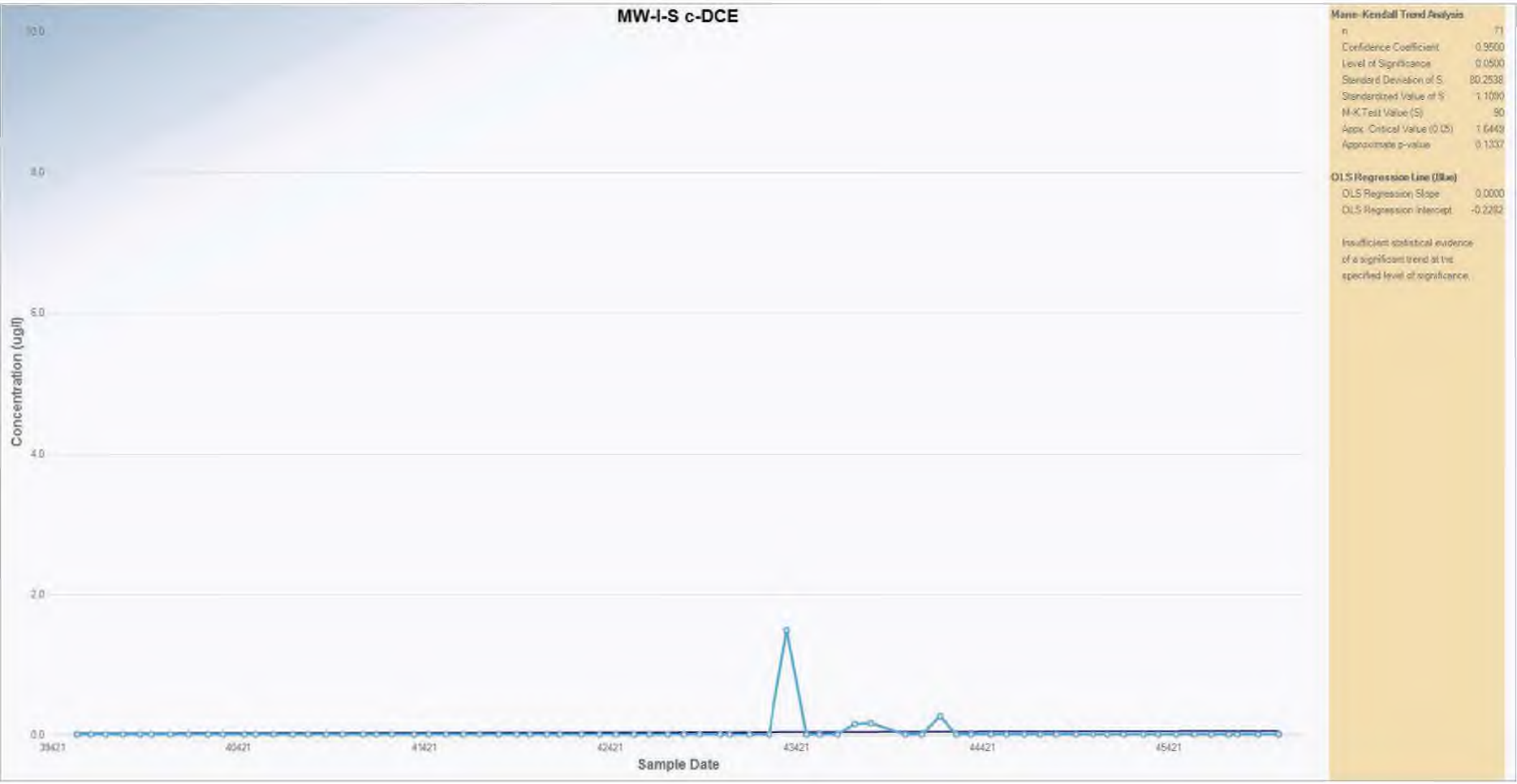
MONITORING WELL SAMPLE RESULTS – TIME VS. CONCENTRATION GRAPHS

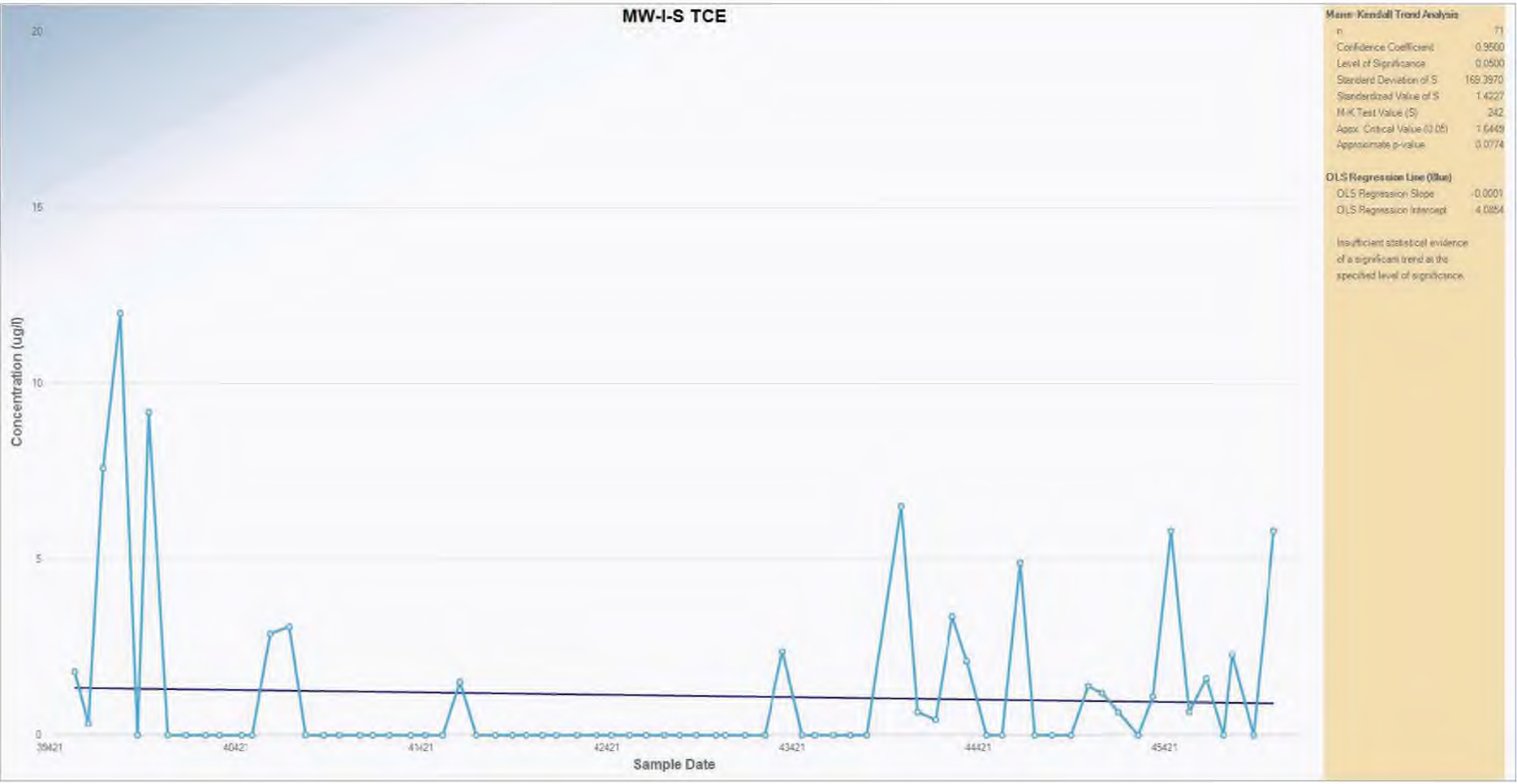
QUARTERLY GRAPHS

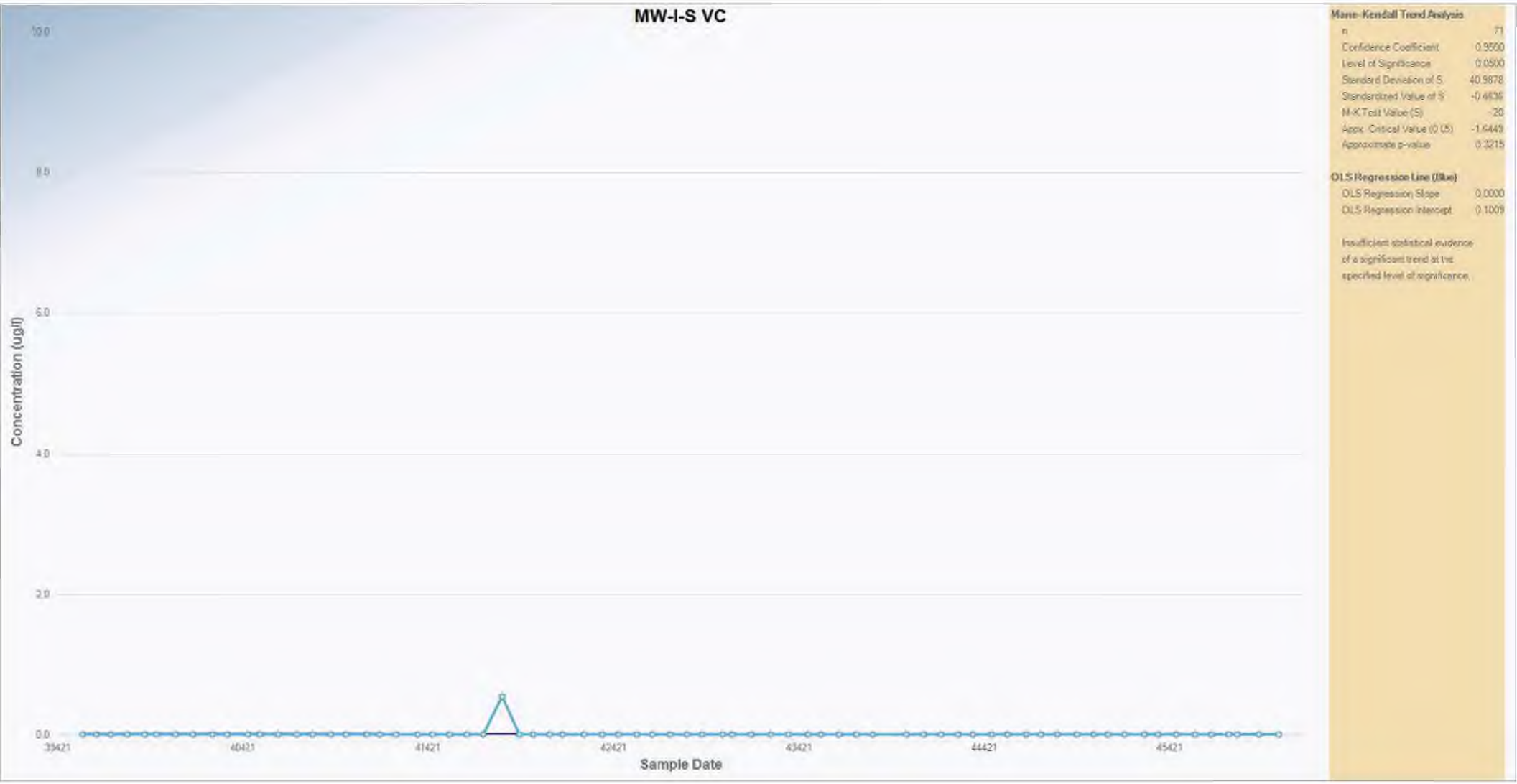

MW-D-S TCE
Concentration (ug/l)
800
700
600
500
400
300
200
100
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 70
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 197.1734
Standardized Value of S 1.5164
M-K Test Value (S) 303
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0647
OLS Regression Line (Blue)
OLS Regression Slope 0.0125
OLS Regression Intercept -419.9190
Insufficient statistical evidence of a significant trend at the specified level of significance


MW-D-S c-DCE
Concentration (ug/l)
30
25
20
15
10
5
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 70
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 196.4705
Standardized Value of S 2.4075
M-K Test Value (S) 474
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0080
OLS Regression Line (Blue)
OLS Regression Slope 0.0006
OLS Regression Intercept -19.0994
Statistically significant evidence of an increasing trend at the specified level of significance.

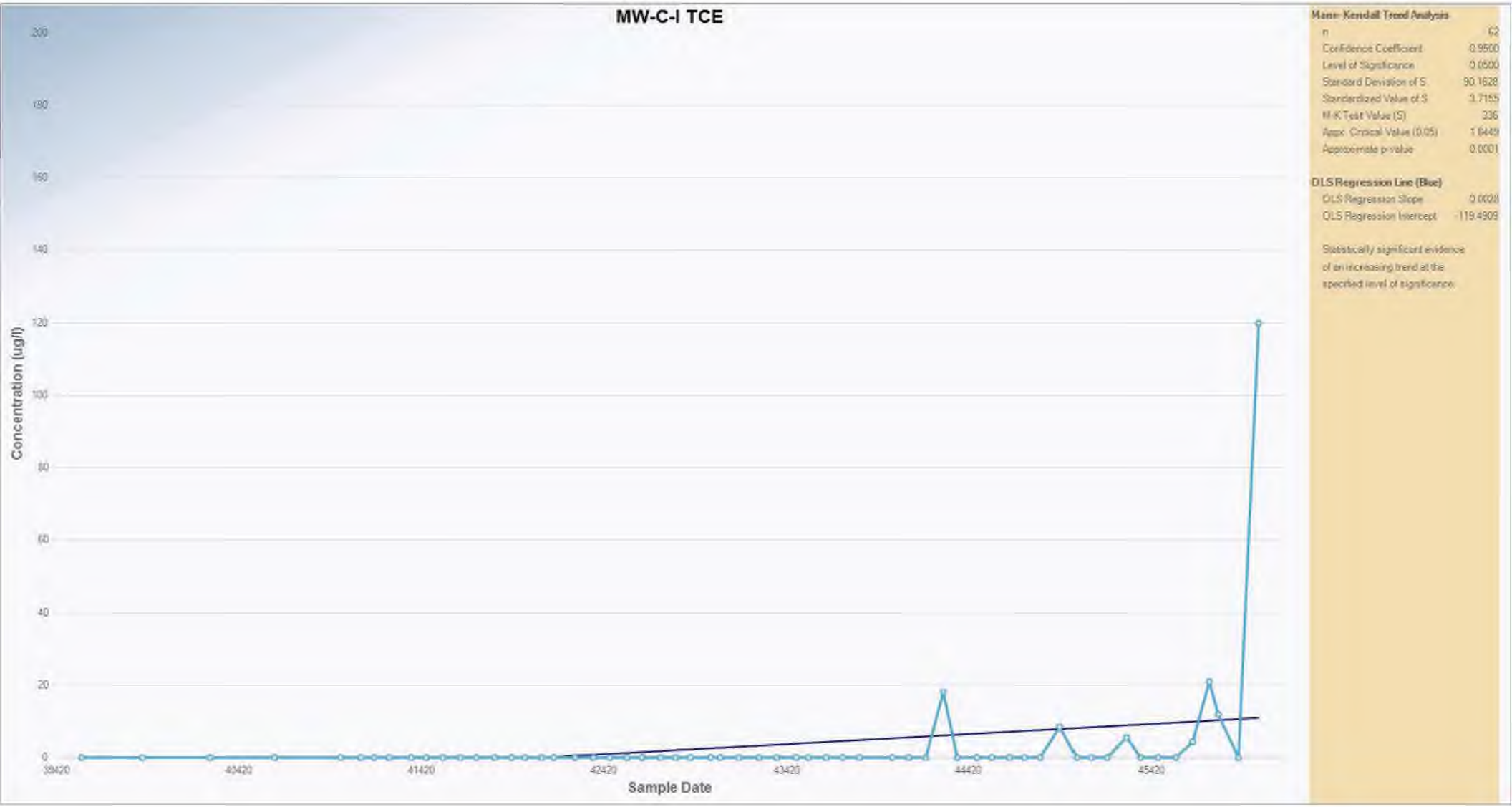

MW-D-S VC
10.000
8.000
6.000
4.000
2.000
0.000
Concentration (ug/l)
39420
40420
41420
42820
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 70
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 40.4104
Standardized Value of S 1.0393
M-K Test Value (S) 43
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.1493
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.1266
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

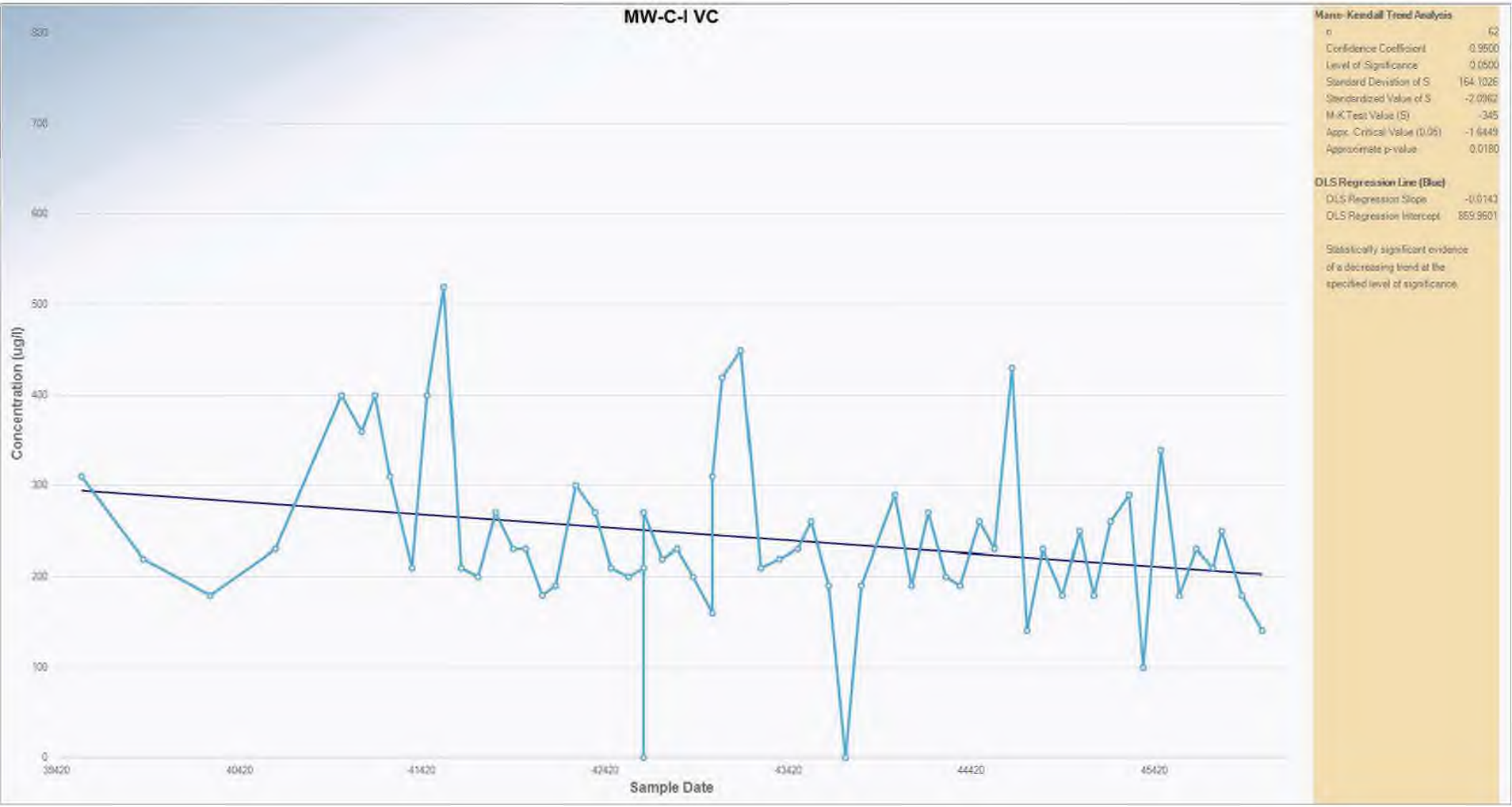

MW-I-S c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 71
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 80.2538
Standardized Value of S 1.1090
M-K Test Value (S) 90
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.1337
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.2282
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

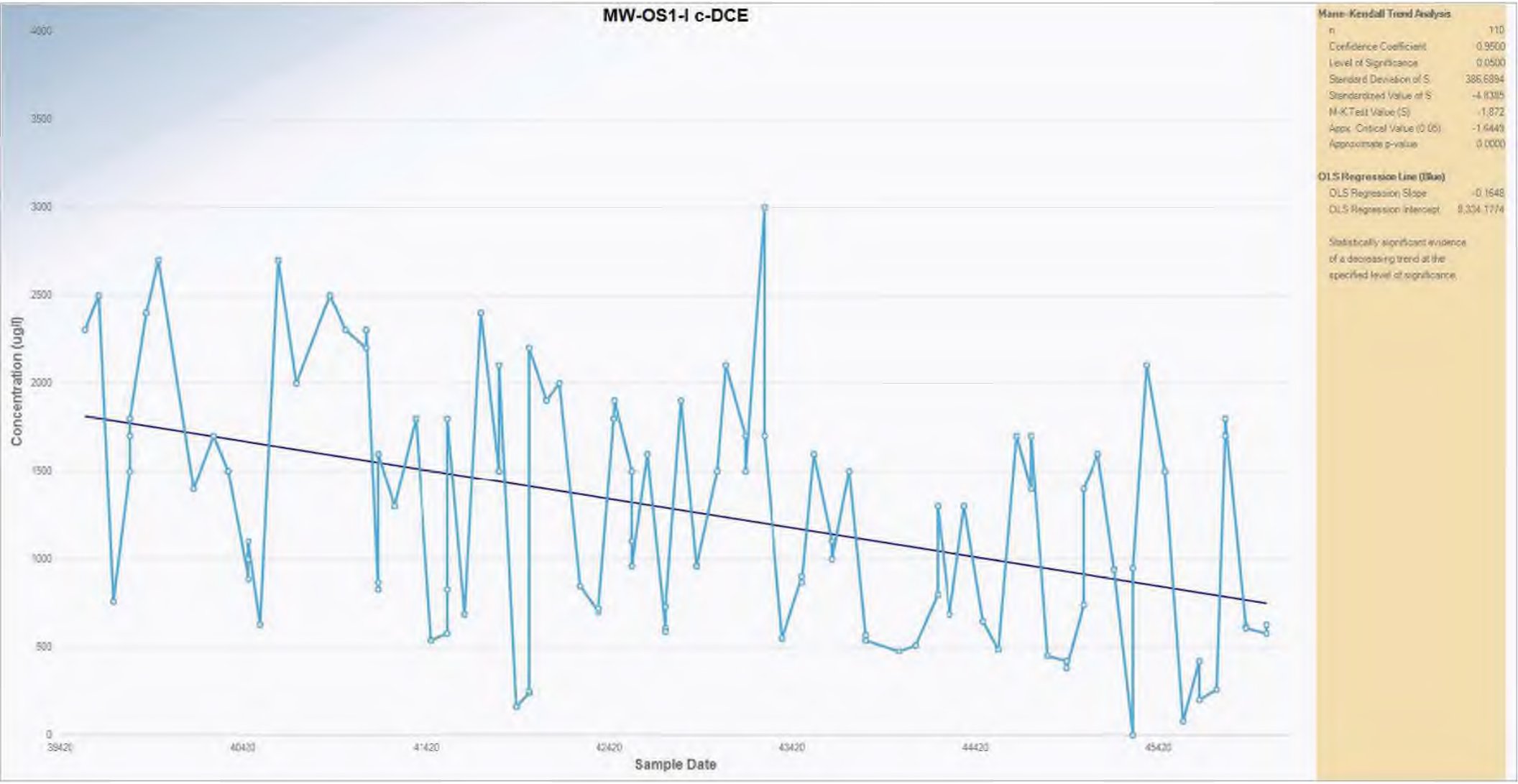

MW-I-S TCE
Concentration (ug/l)
20
15
10
5
0
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 71
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 169.3970
Standardized Value of S 1.4227
M-K Test Value (S) 242
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0774
OLS Regression Line (Blue)
OLS Regression Slope -0.0001
OLS Regression Intercept 4.0854
Insufficient statistical evidence of a significant trend at the specified level of significance.

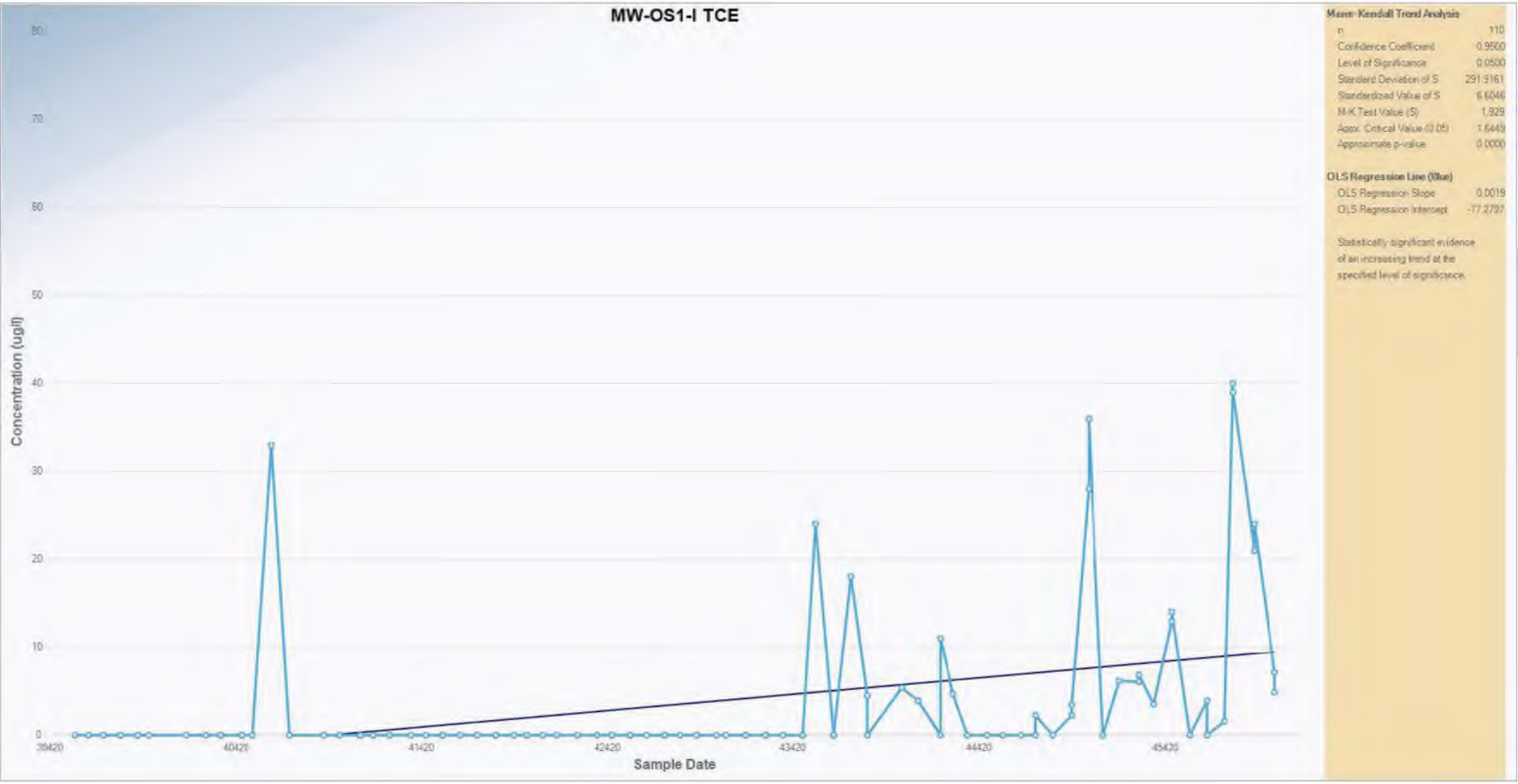

MW-I-S VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 71
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 40.9878
Standardized Value of S -0.4636
M-K Test Value (S) -20
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.3215
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.1009
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

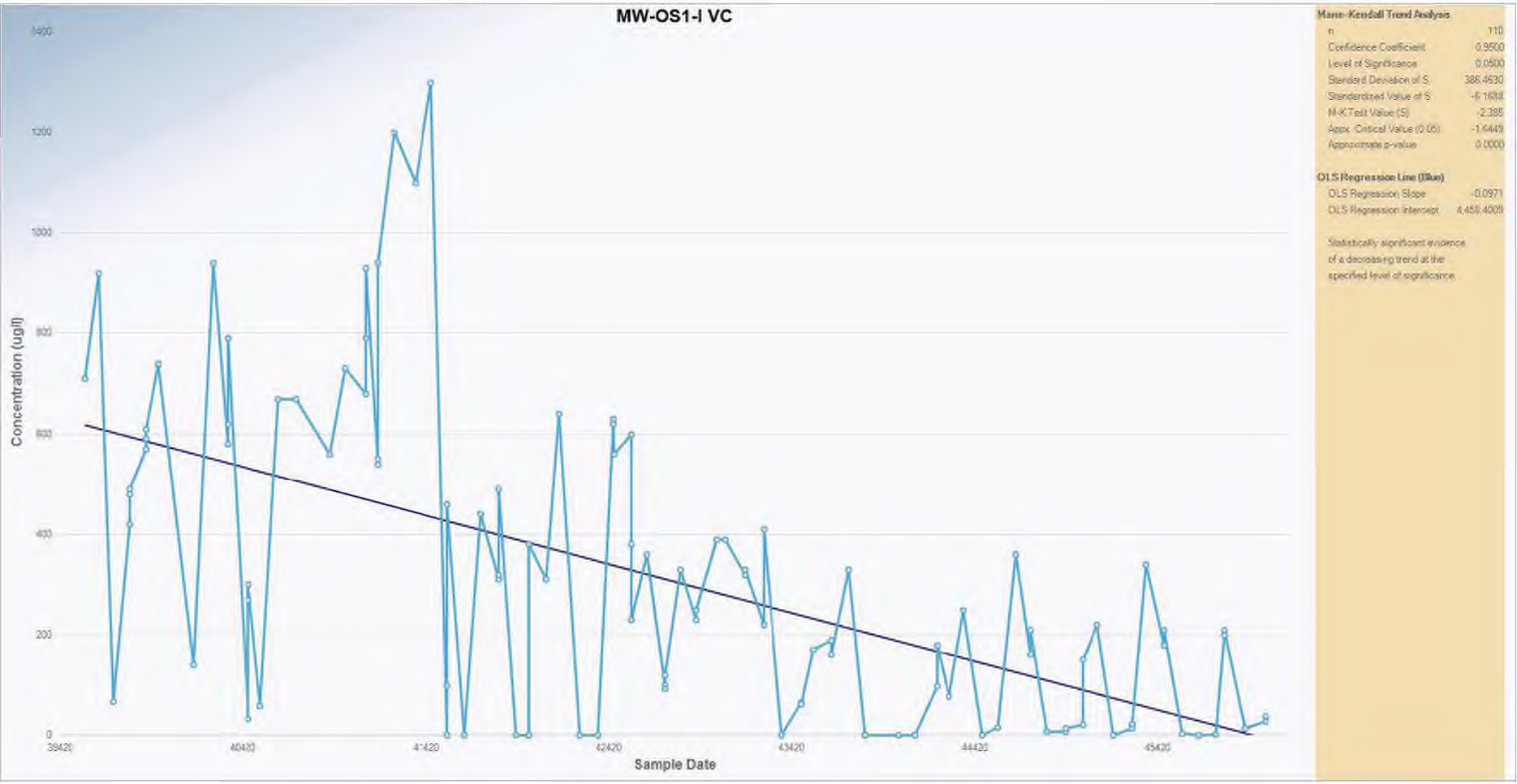

MW-C-I c-DCE
Concentration (ug/l)
4000
3500
3000
2500
2000
1500
1000
500
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 62
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 163.7335
Standardized Value of S -5.3074
M-K Test Value (S) -870
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope -0.1454
OLS Regression Intercept 9,073.2696
Statistically significant evidence of a decreasing trend at the specified level of significance.


MW-C-I TCE
Concentration (ug/l)
200
180
160
140
120
100
80
60
40
20
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 62
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 90.1628
Standardized Value of S 3.7155
M-K Test Value (S) 336
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0001
OLS Regression Line (Blue)
OLS Regression Slope 0.0028
OLS Regression Intercept -119.4909
Statistically significant evidence of an increasing trend at the specified level of significance

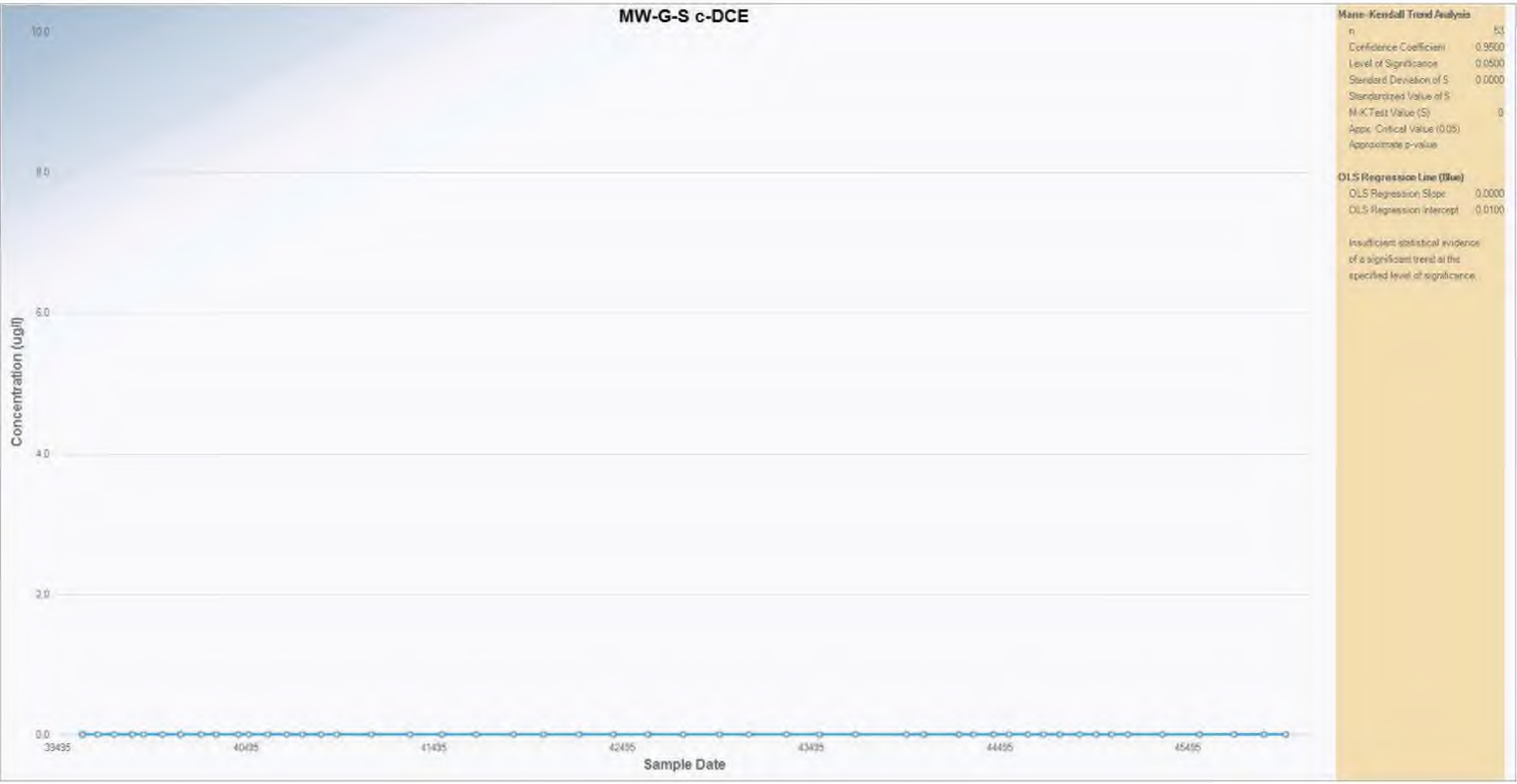

MW-C-I VC
Concentration (ug/l)
800
700
600
500
400
300
200
100
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 62
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 164.1026
Standardized Value of S -2.0962
M-K Test Value (S) -345
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0180
OLS Regression Line (Blue)
OLS Regression Slope -0.0143
OLS Regression Intercept 859.9601
Statistically significant evidence of a decreasing trend at the specified level of significance

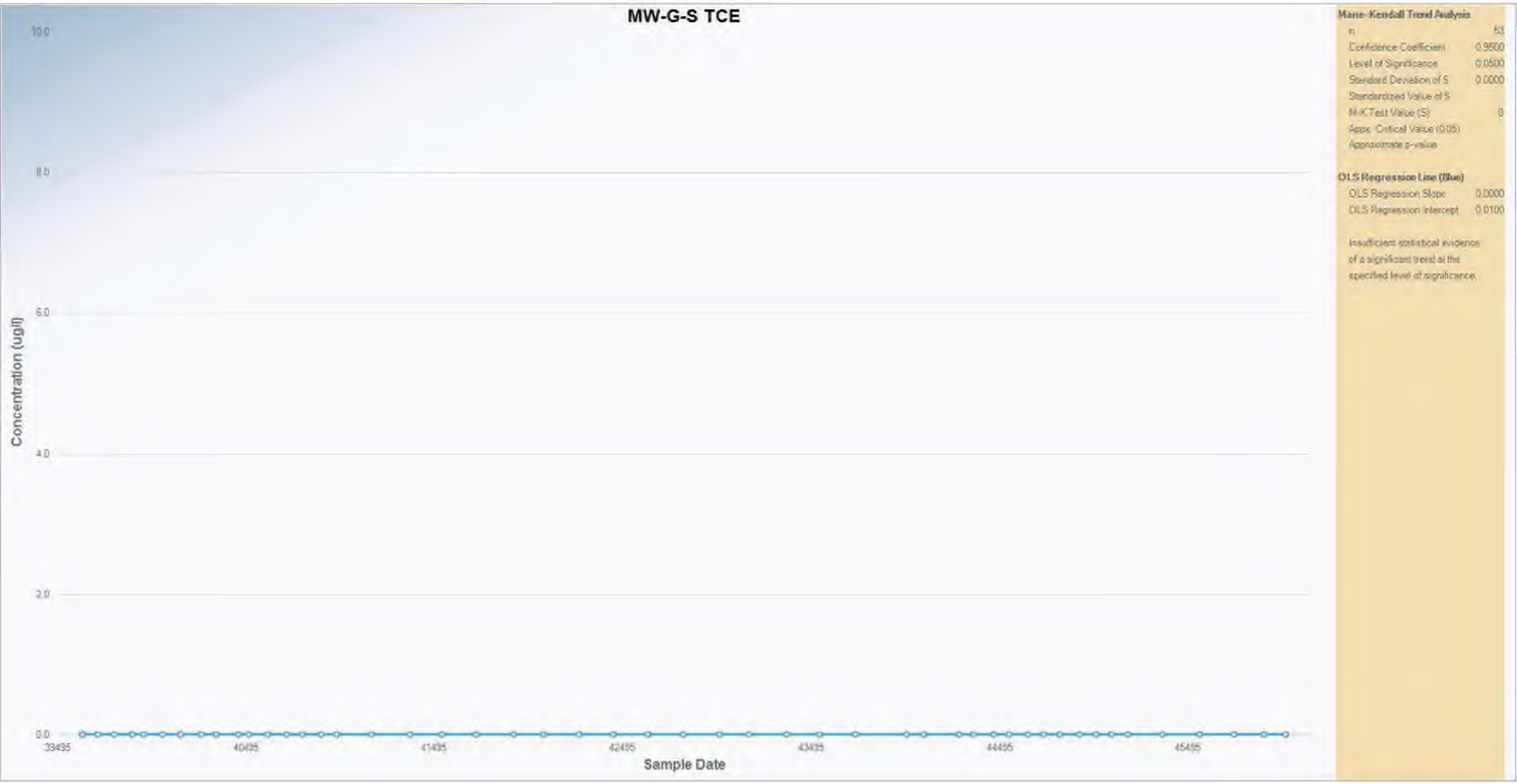

MW-OS1-I c-DCE
Concentration (ug/l)
4000
3500
3000
2500
2000
1500
1000
500
0
38420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 110
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 386.6894
Standardized Value of S -4.8395
M-K Test Value (S) -1,872
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope -0.1648
OLS Regression Intercept 8,334.1774
Statistically significant evidence of a decreasing trend at the specified level of significance.

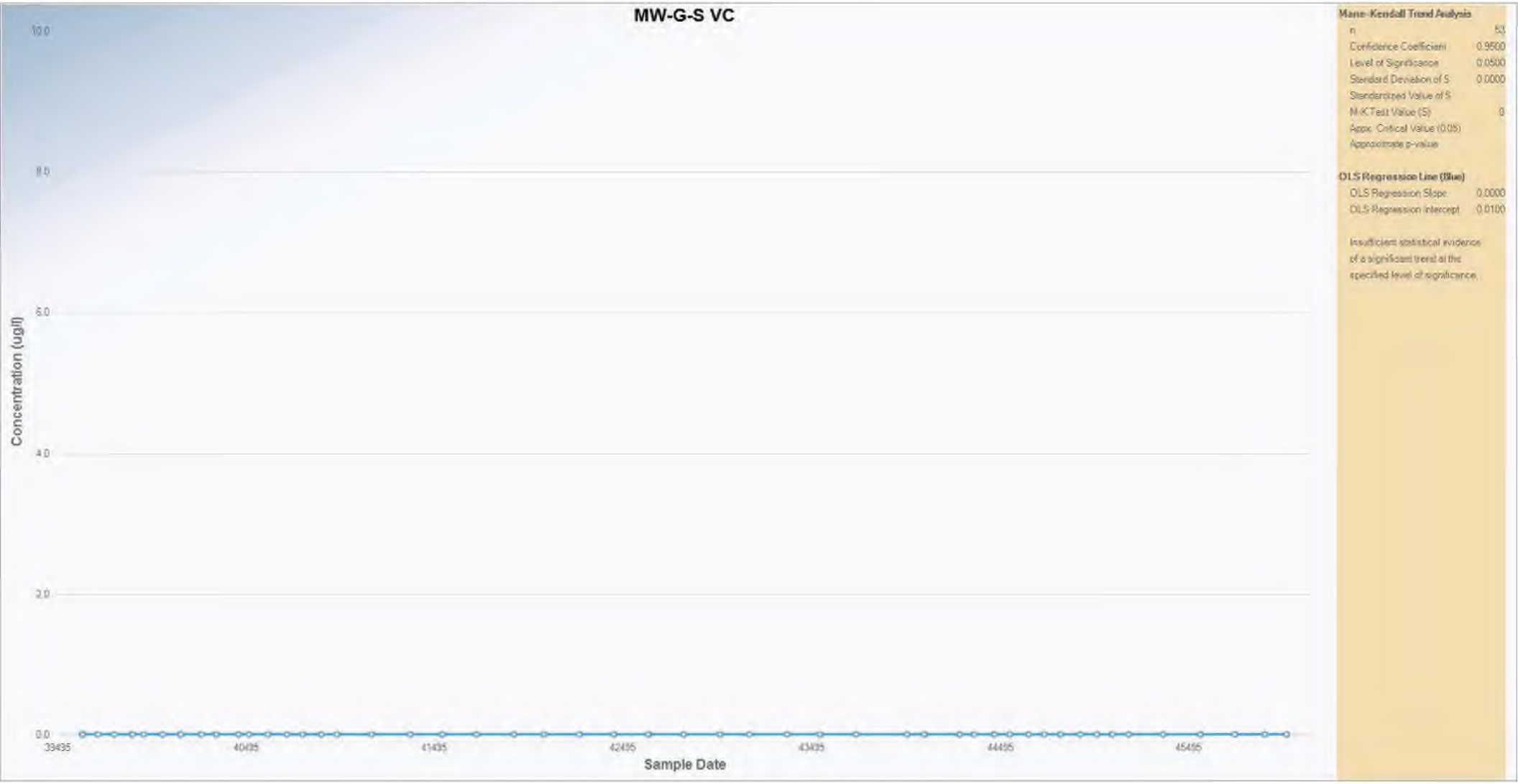

MW-OS1-I TCE
Concentration (ug/l)
80
70
60
50
40
30
20
10
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 110
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 291.9161
Standardized Value of S 6.6046
M-K Test Value (S) 1,929
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope 0.0019
OLS Regression Intercept -77.2797
Statistically significant evidence of an increasing trend at the specified level of significance.

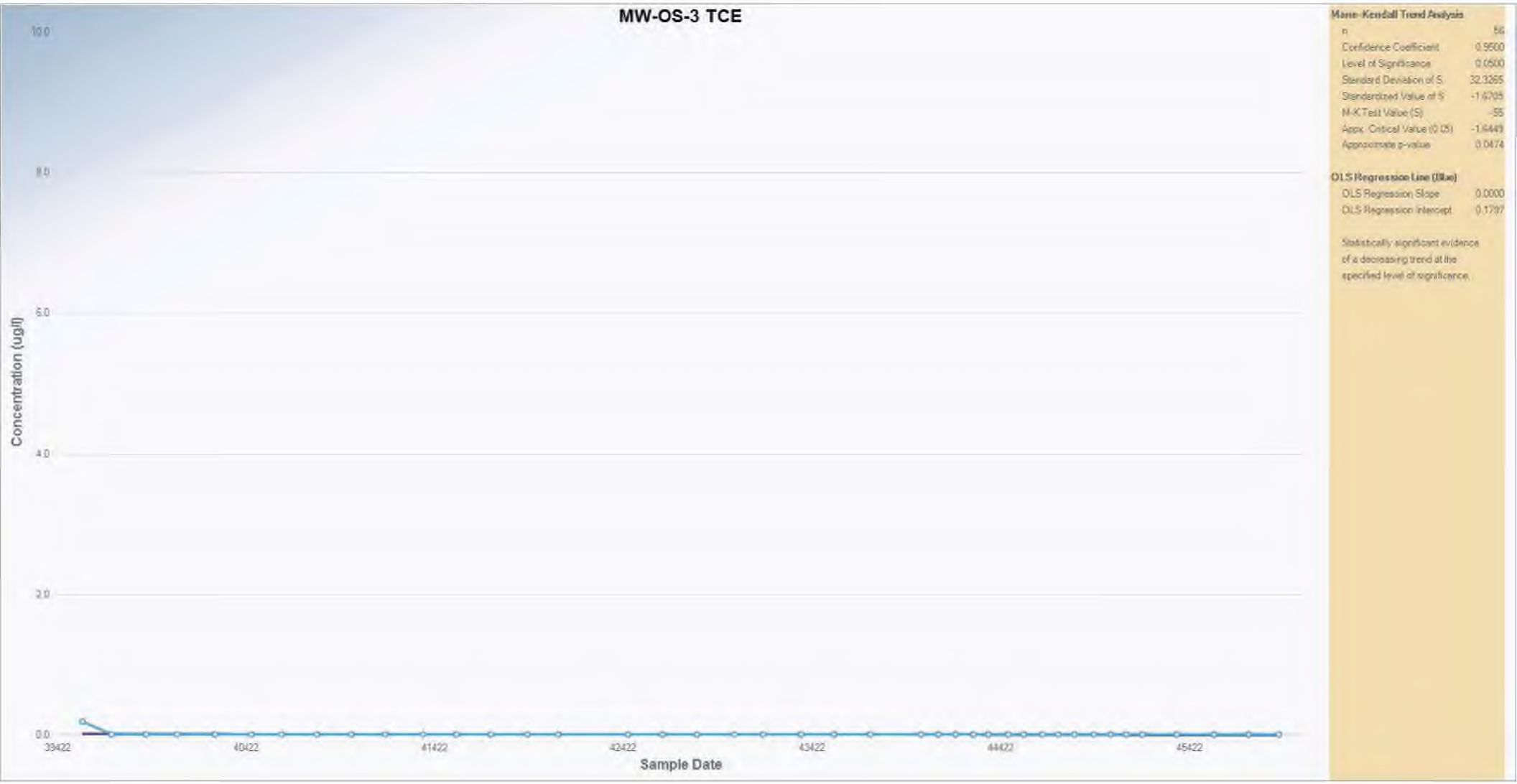

MW-OS1-I VC
Concentration (ug/l)
1400
1200
1000
800
600
400
200
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 110
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 386.4630
Standardized Value of S -6.1618
M-K Test Value (S) -2.385
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope -0.0971
OLS Regression Intercept 4,450.4009
Statistically significant evidence of a decreasing trend at the specified level of significance.

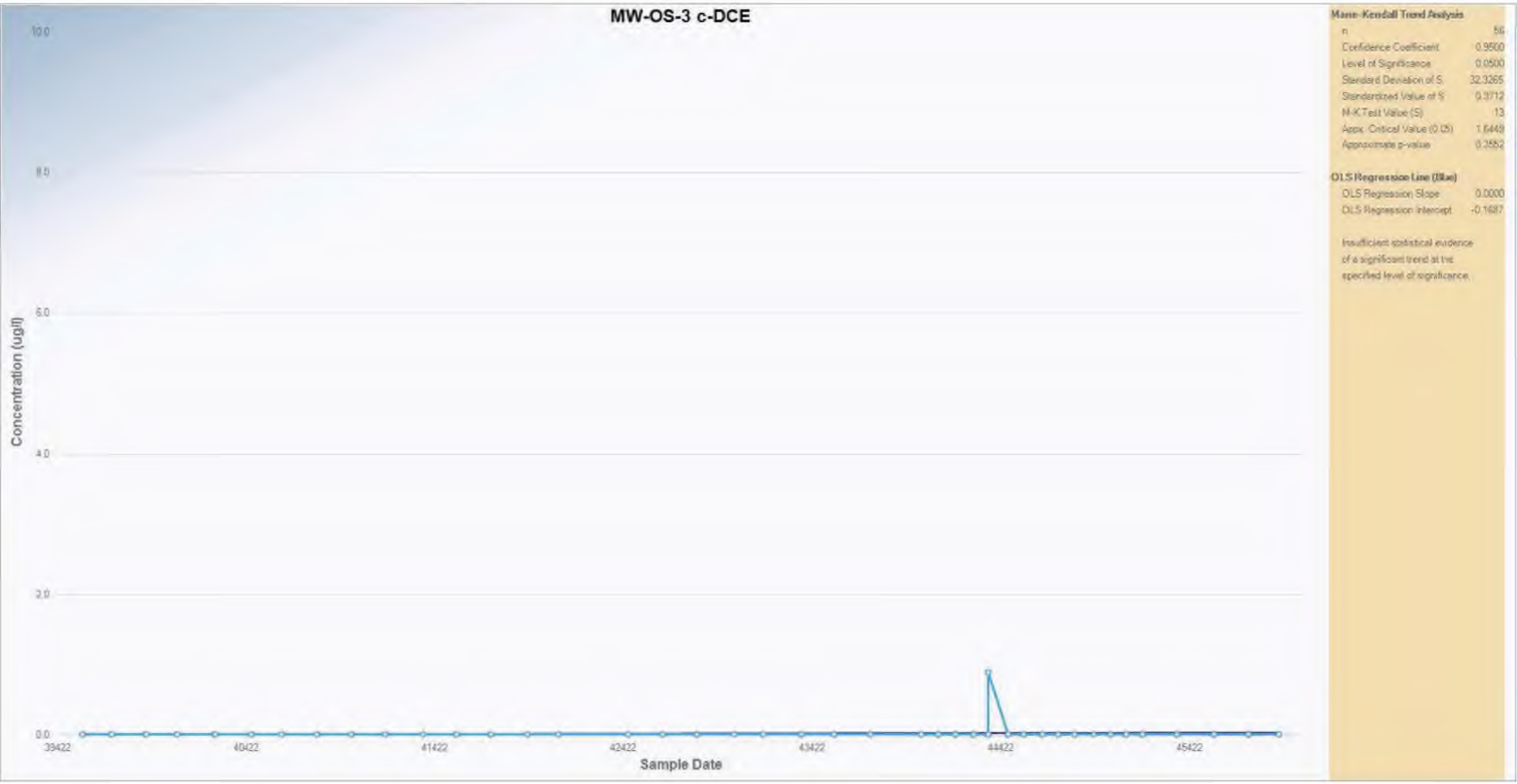
SEMI-ANNUAL GRAPHS

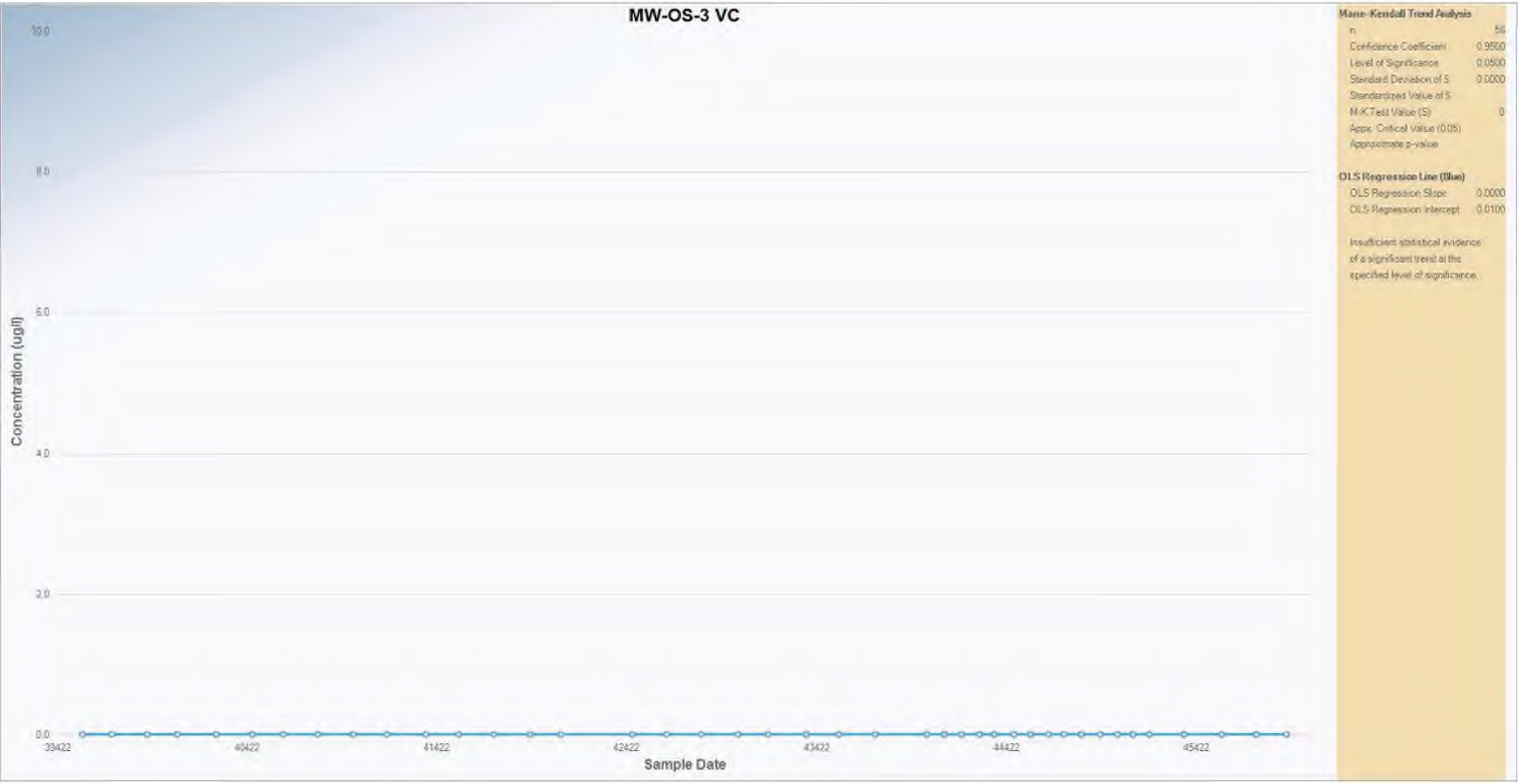

MW-G-S c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39495
40495
41495
42495
43495
44495
45495
Sample Date
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

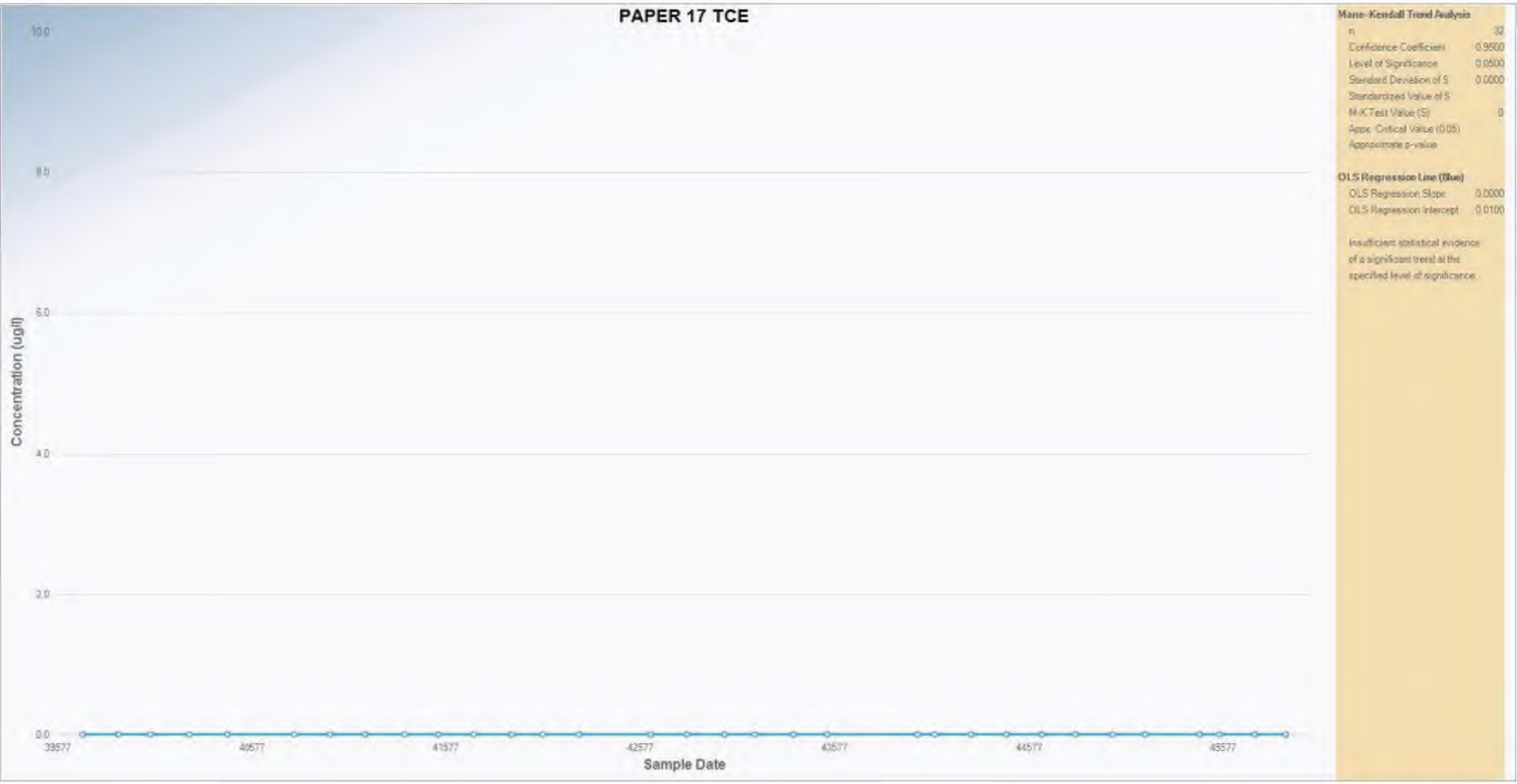

MW-G-S TCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39495
40495
41495
42495
43495
44495
45495
Sample Date
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

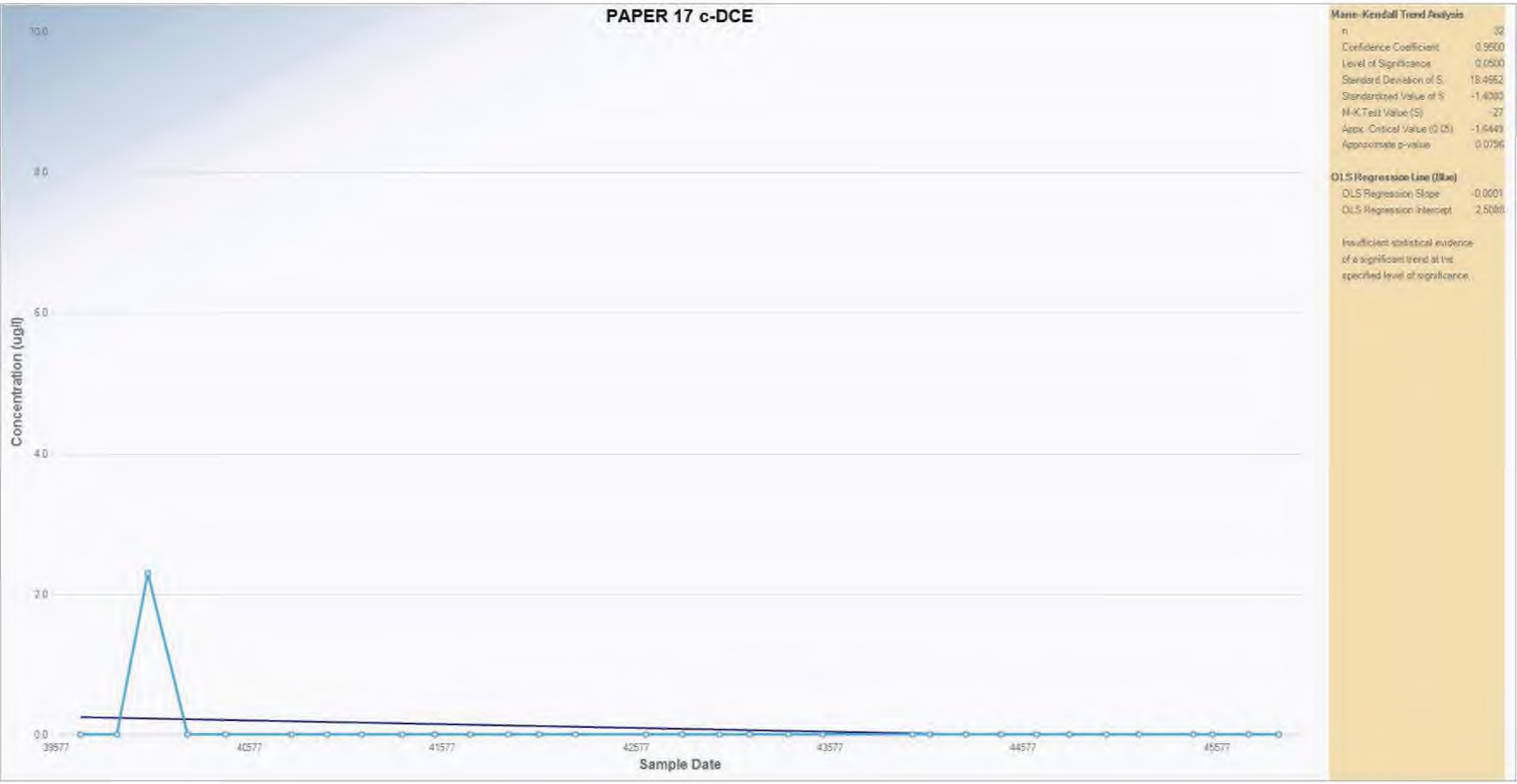

MW-G-S VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39495
40495
41495
42495
43495
44495
45495
Sample Date
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

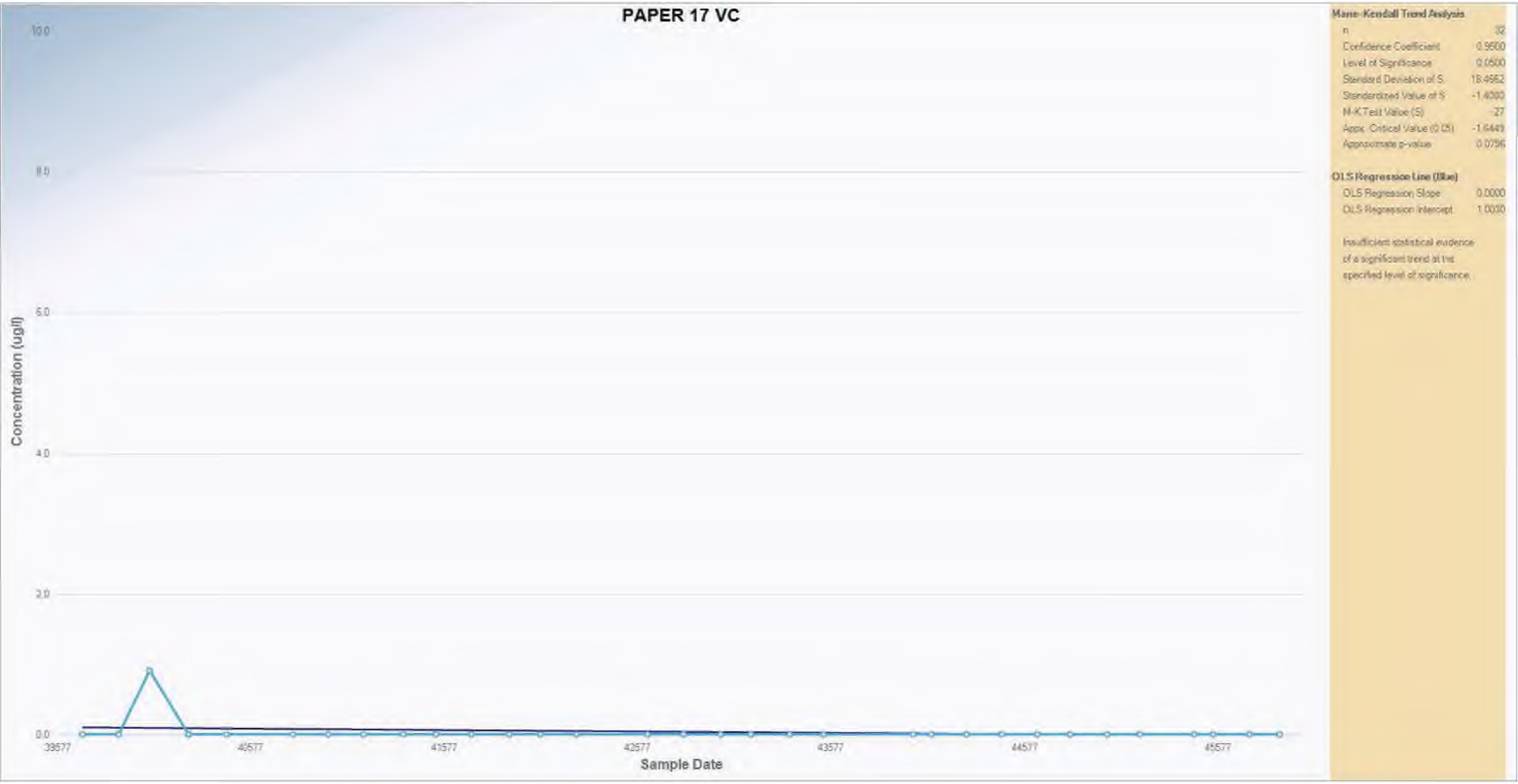

MW-OS-3 TCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39422
40422
41422
42422
43422
44422
45422
Sample Date
Mann-Kendall Trend Analysis
n 56
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 32.3265
Standardized Value of S -1.6705
M-K Test Value (S) -55
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0474
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.1797
Statistically significant evidence of a decreasing trend at the specified level of significance.

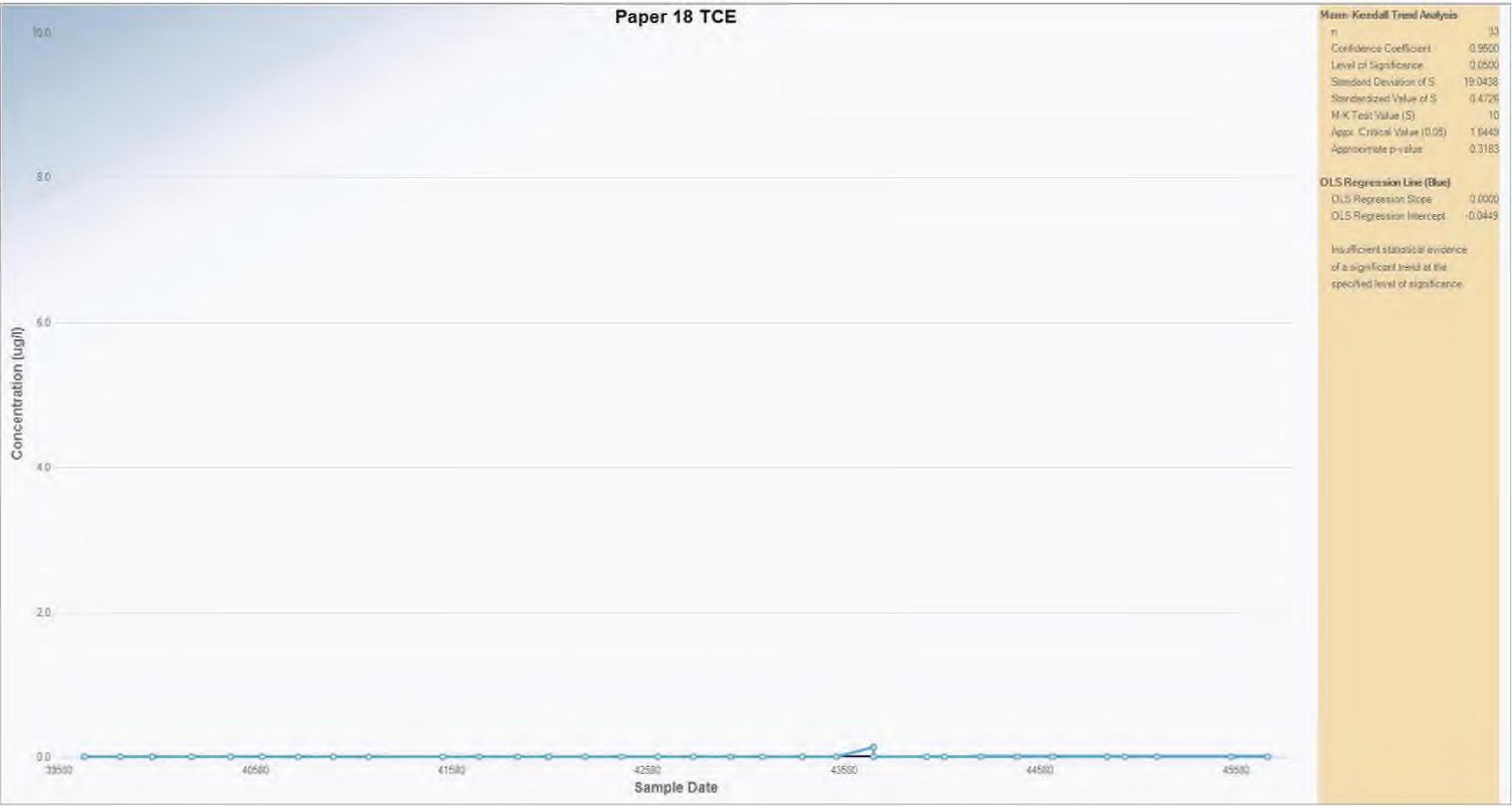

MW-OS-3 c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39422
40422
41422
42422
43422
44422
45422
Sample Date
Mann-Kendall Trend Analysis
n 56
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 32.3265
Standardized Value of S 0.3712
M-K Test Value (S) 13
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.3552
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.1697
Insufficient statistical evidence of a significant trend at the specified level of significance.

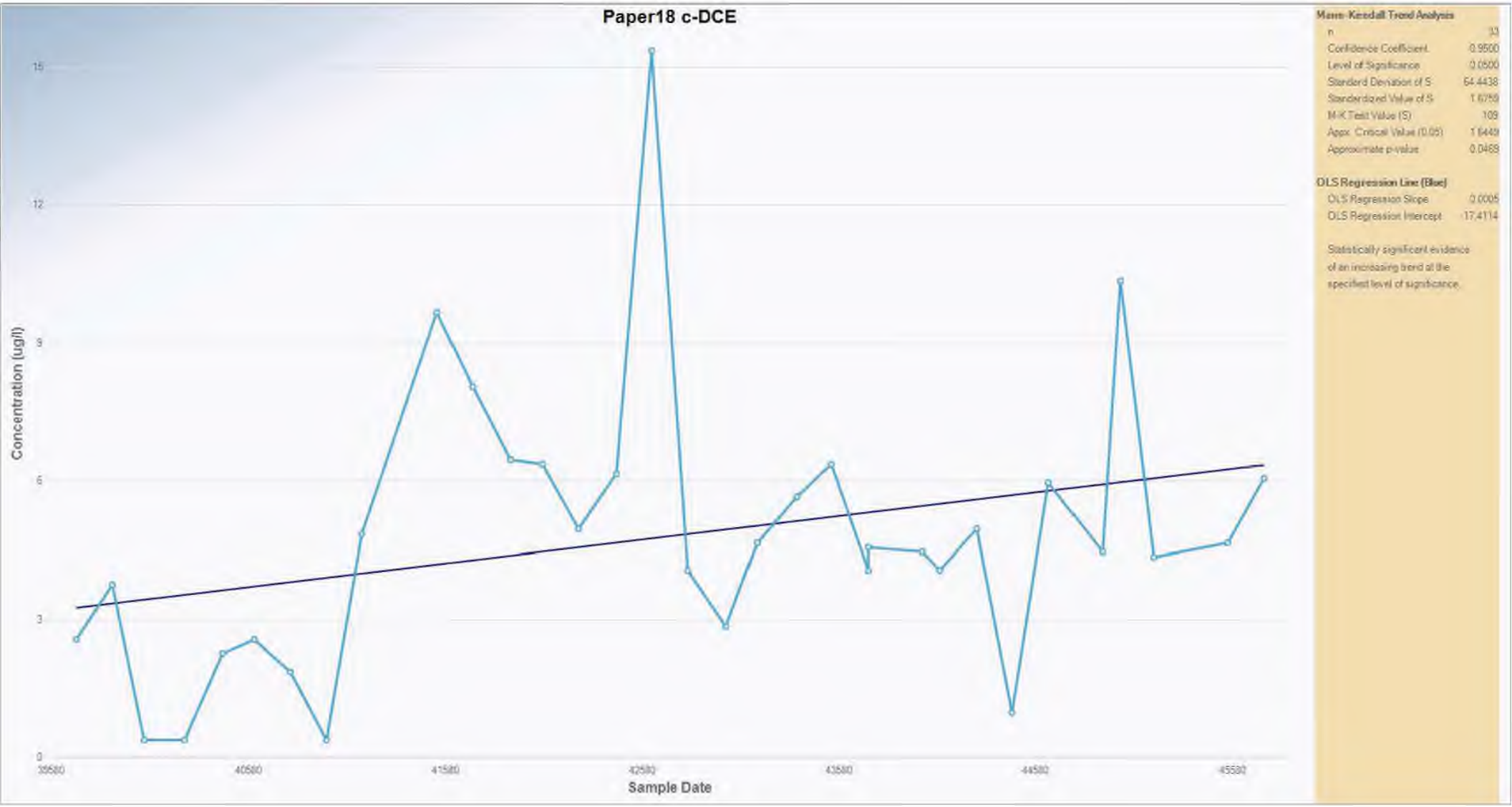

MW-OS-3 VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39422
40422
41422
42422
43422
44422
45422
Sample Date
Mann-Kendall Trend Analysis
n 55
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

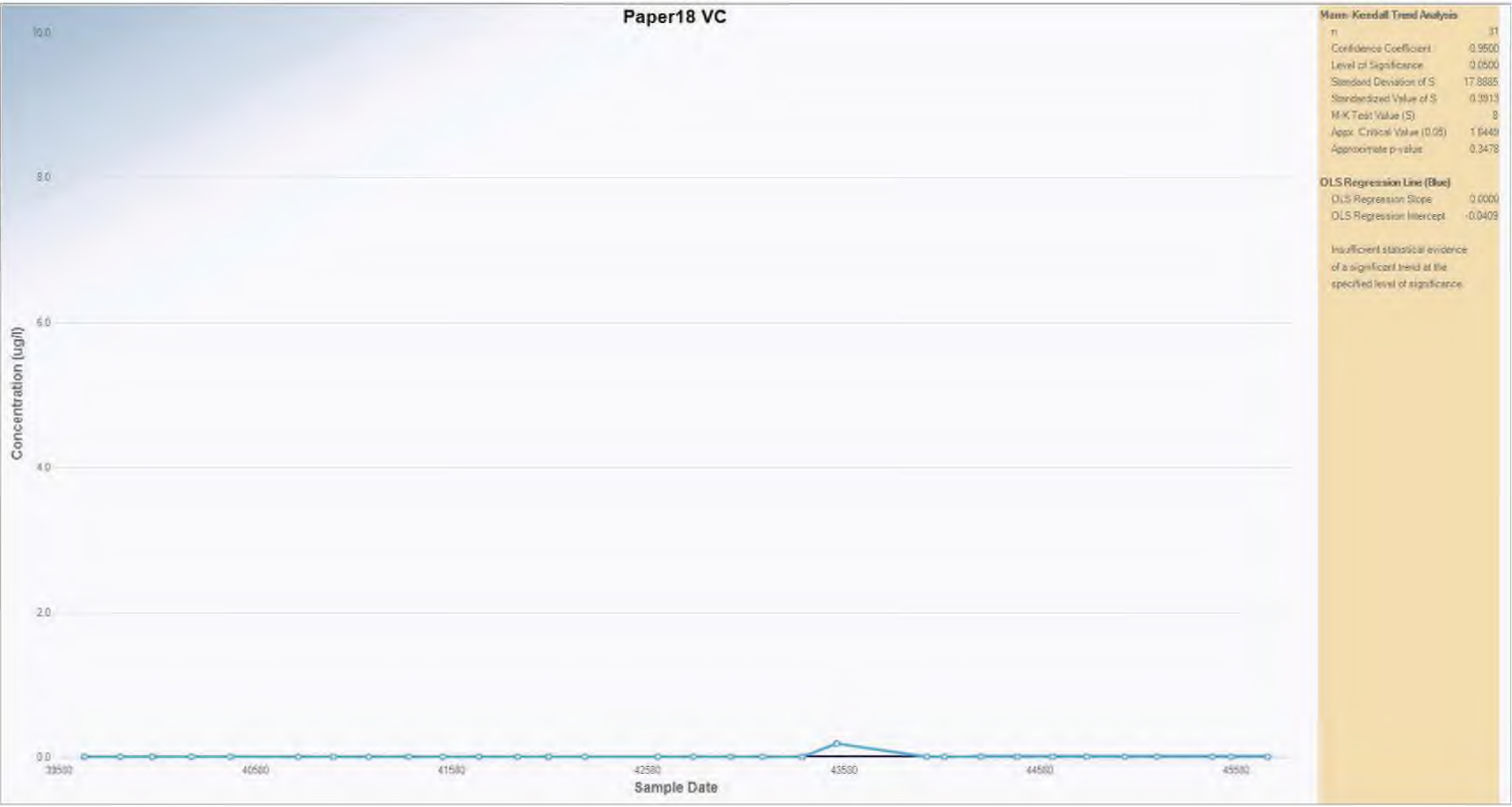

PAPER 17 TCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39577
40577
41577
42577
43577
44577
45577
Sample Date
Mann-Kendall Trend Analysis
n 32
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.


PAPER 17 c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39577
40577
41577
42577
43577
44577
45577
Sample Date
Mann-Kendall Trend Analysis
n 32
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 18.4952
Standardized Value of S -1.4092
M-K Test Value (S) -27
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0796
OLS Regression Line (Blue)
OLS Regression Slope -0.0001
OLS Regression Intercept 2.5088
Insufficient statistical evidence of a significant trend at the specified level of significance.


PAPER 17 VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39577
40577
41577
42577
43577
44577
45577
Sample Date
Mann-Kendall Trend Analysis
n 32
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 18.4952
Standardized Value of S -1.4092
M-K Test Value (S) -27
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.0796
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 1.0030
Insufficient statistical evidence of a significant trend at the specified level of significance.


Paper 18 TCE
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39580
40580
41580
42580
43580
44580
45580
Sample Date
Mann-Kendall Trend Analysis
n 33
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 19.0438
Standardized Value of S 0.4726
M-K Test Value (S) 10
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.3183
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.0449
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


Paper18 c-DCE
Concentration (ug/l)
Sample Date
0
3
6
9
12
15
39580
40580
41580
42580
43580
44580
45580
Mann-Kendall Trend Analysis
n 33
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 64.4438
Standardized Value of S 1.6759
M-K Test Value (S) 109
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.0469
OLS Regression Line (Blue)
OLS Regression Slope 0.0005
OLS Regression Intercept -17.4114
Statistically significant evidence of an increasing trend at the specified level of significance.


Paper18 VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39580
40580
41580
42580
43580
44580
45580
Sample Date
Mann-Kendall Trend Analysis
n 31
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 17.8885
Standardized Value of S 0.3913
M-K Test Value (S) 8
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.3478
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.0409
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

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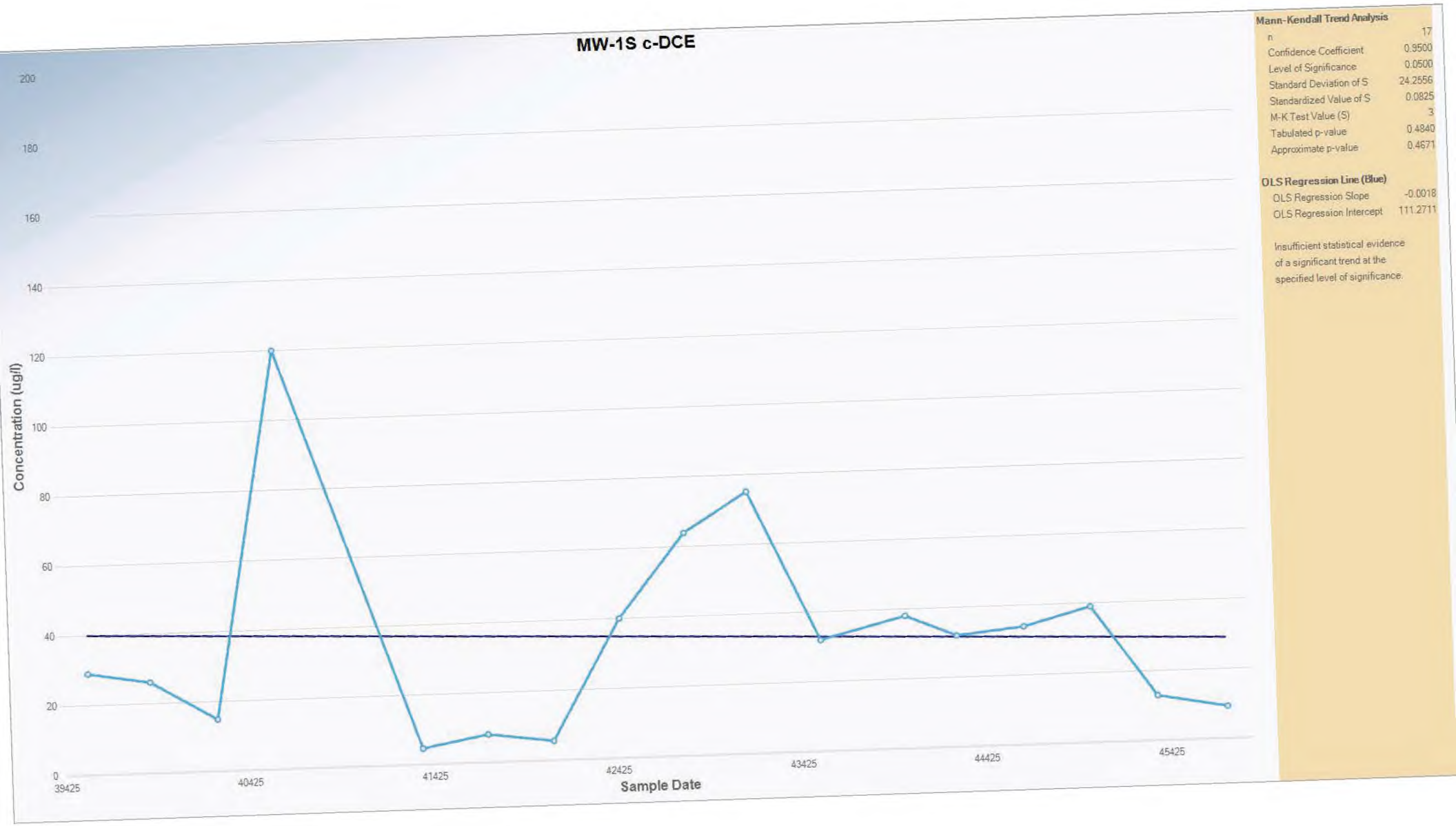
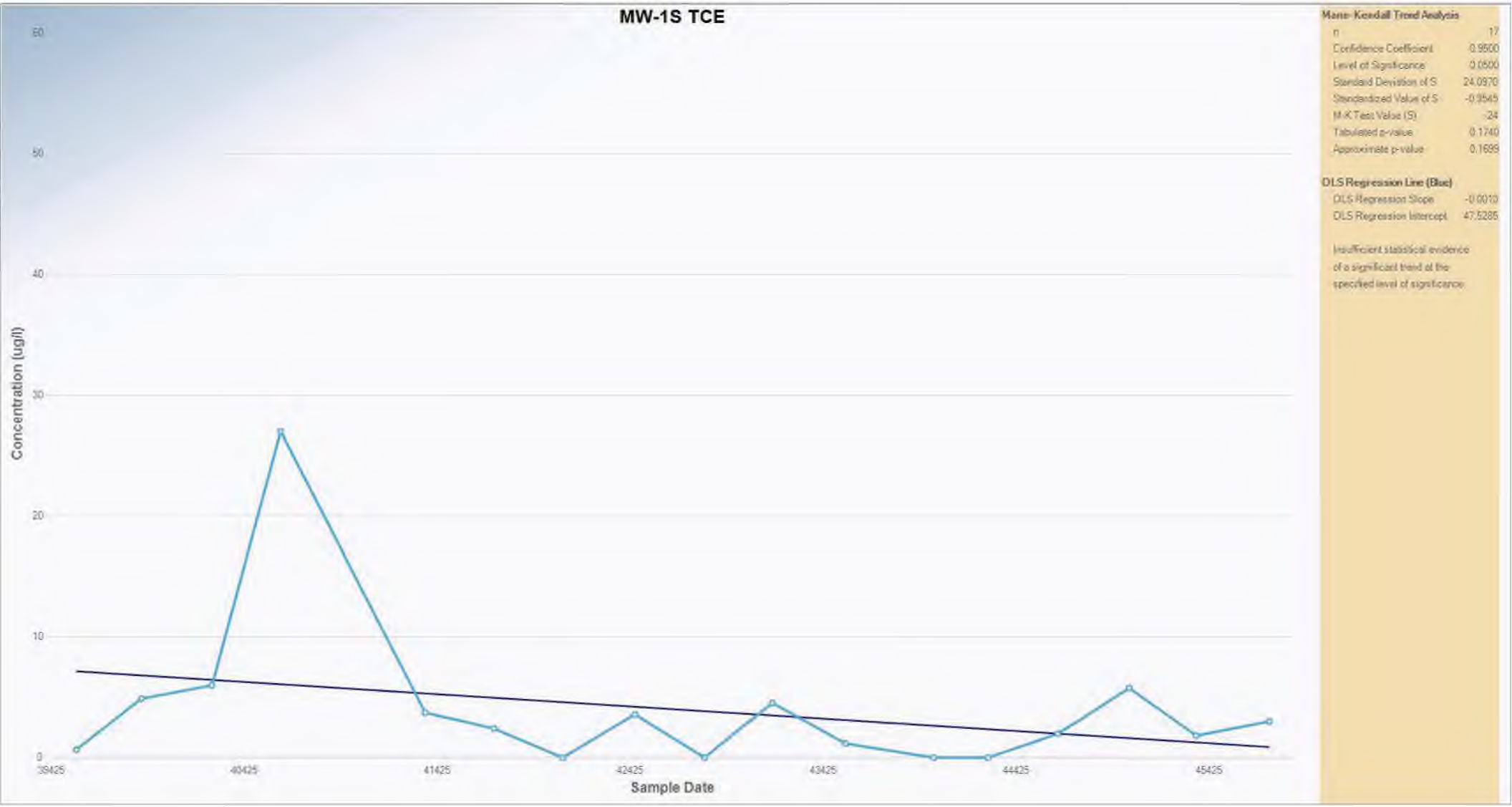
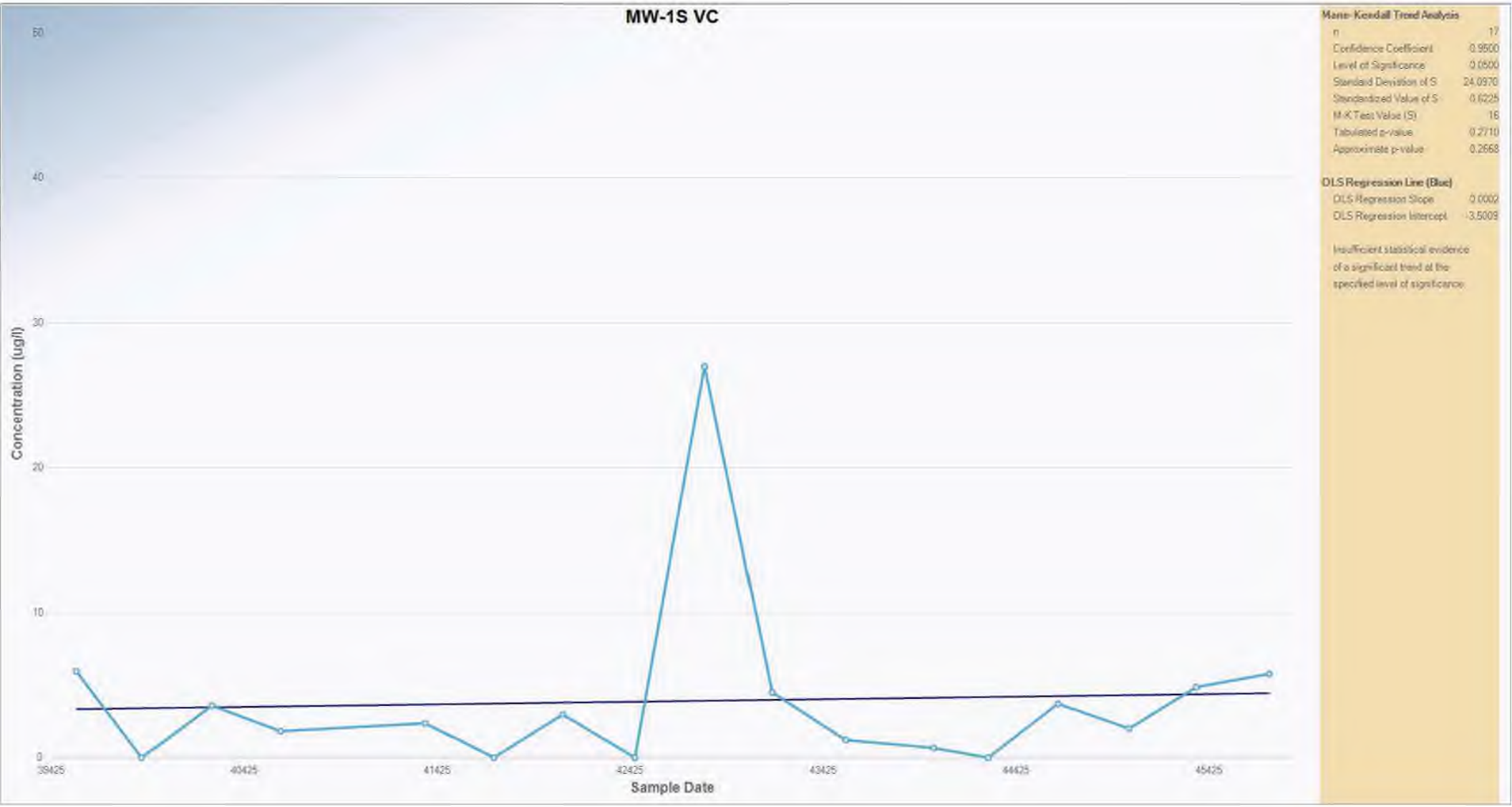
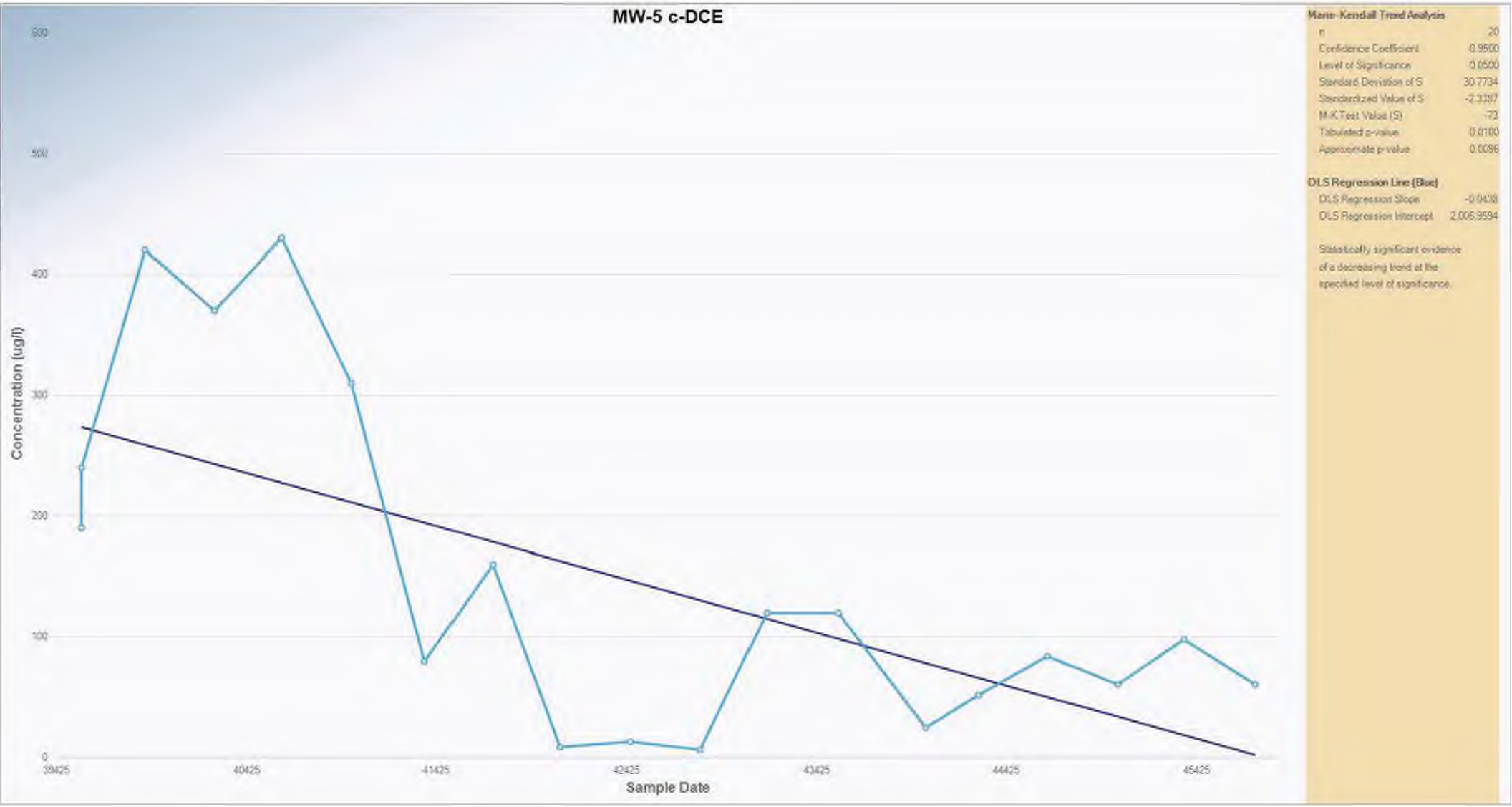
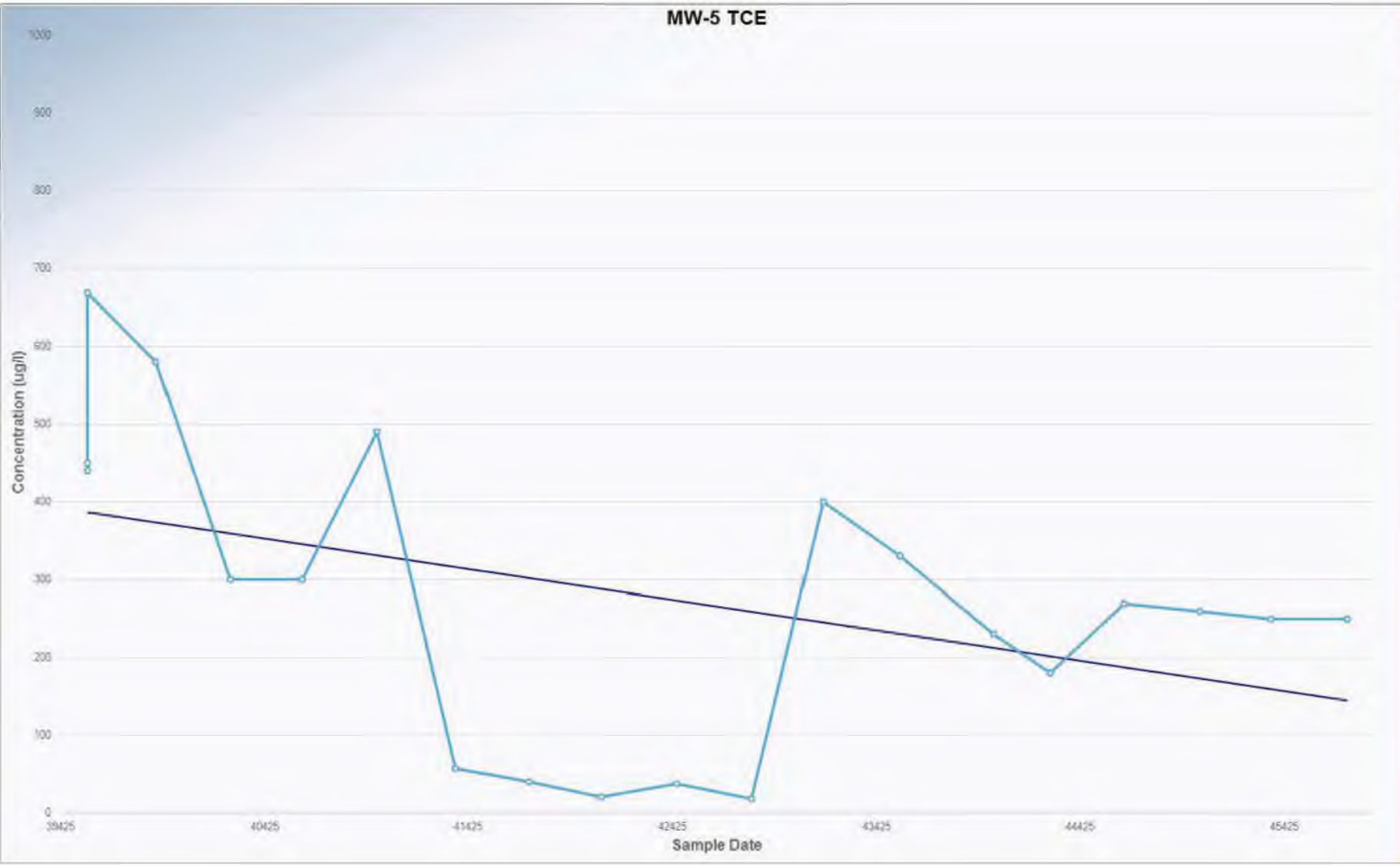

MW-1S c-DCE
Concentration (ug/l)
200
180
160
140
120
100
80
60
40
20
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.2556
Standardized Value of S 0.0825
M-K Test Value (S) 3
Tabulated p-value 0.4840
Approximate p-value 0.4671
OLS Regression Line (Blue)
OLS Regression Slope -0.0018
OLS Regression Intercept 111.2711
Insufficient statistical evidence of a significant trend at the specified level of significance.


MW-1S TCE
Concentration (ug/l)
60
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.0970
Standardized Value of S -0.9545
M-K Test Value (S) -24
Tabulated p-value 0.1740
Approximate p-value 0.1699
OLS Regression Line (Blue)
OLS Regression Slope -0.0010
OLS Regression Intercept 47.5285
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-1S VC
Concentration (ug/l)
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.0970
Standardized Value of S 0.6225
M-K Test Value (S) 16
Tabulated p-value 0.2710
Approximate p-value 0.2668
OLS Regression Line (Blue)
OLS Regression Slope 0.0002
OLS Regression Intercept -3.5009
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-5 c-DCE
Concentration (ug/l)
500
400
300
200
100
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 20
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 30.7734
Standardized Value of S -2.3317
M-K Test Value (S) -73
Tabulated p-value 0.0100
Approximate p-value 0.0098
OLS Regression Line (Blue)
OLS Regression Slope -0.0438
OLS Regression Intercept 2,006.9594
Statistically significant evidence of a decreasing trend at the specified level of significance.



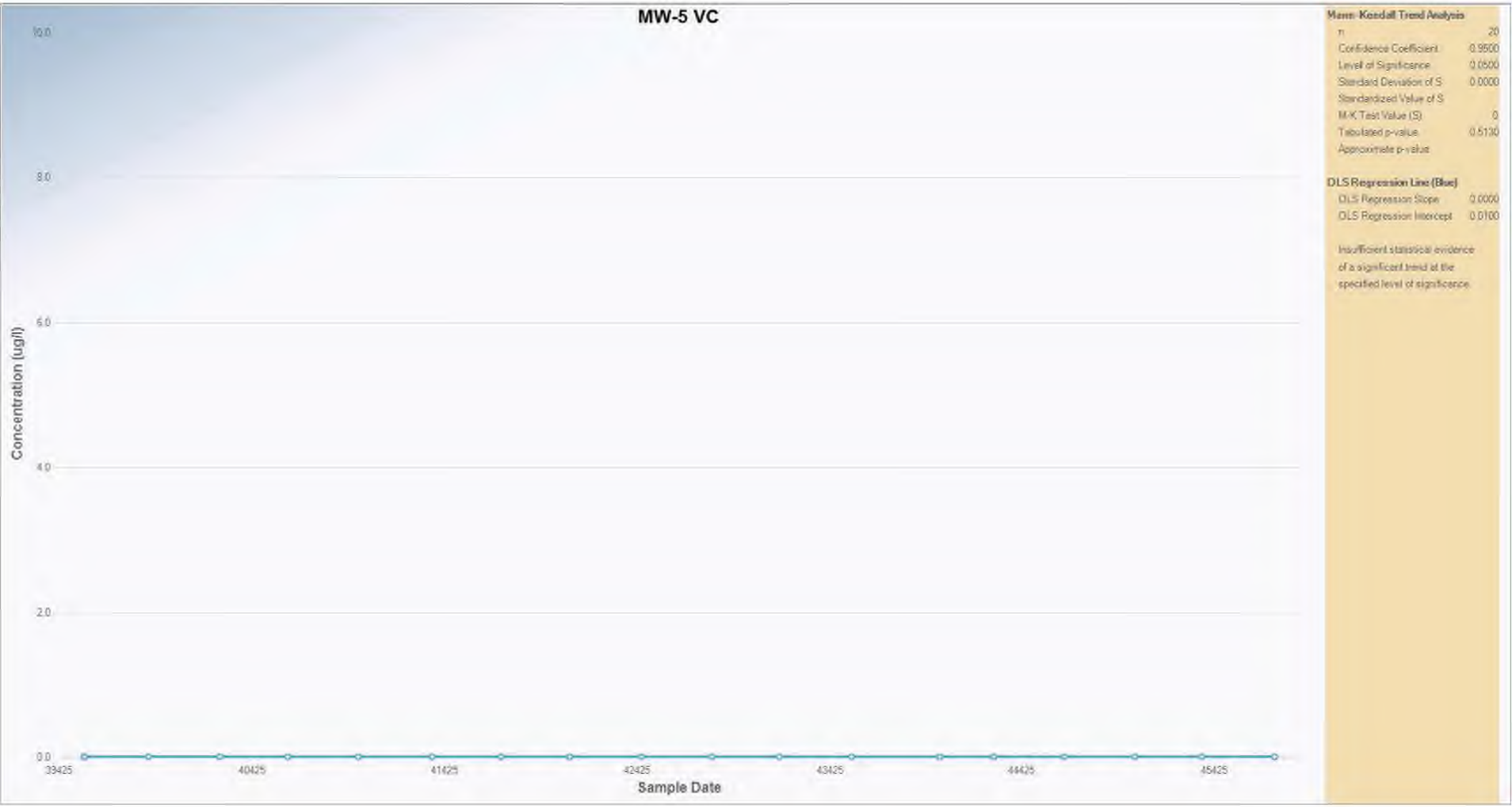
Mann-Kendall Trend Analysis

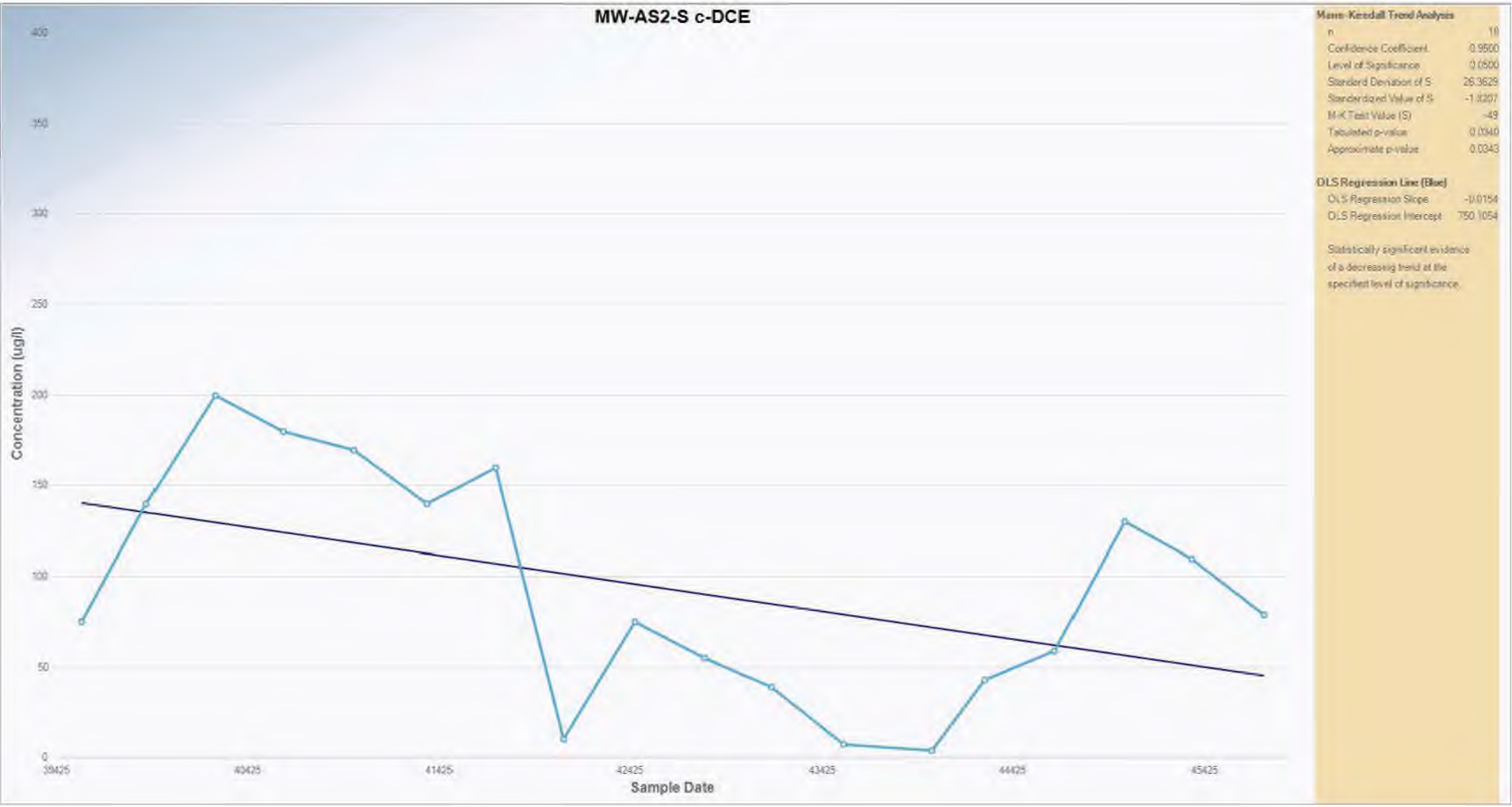
n	20
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	30.7896
Standardized Value of S	-2.0461
M-K Test Value (S)	-64
Tabulated p-value	0.0200
Approximate p-value	0.0204

OLS Regression Line (Blue)

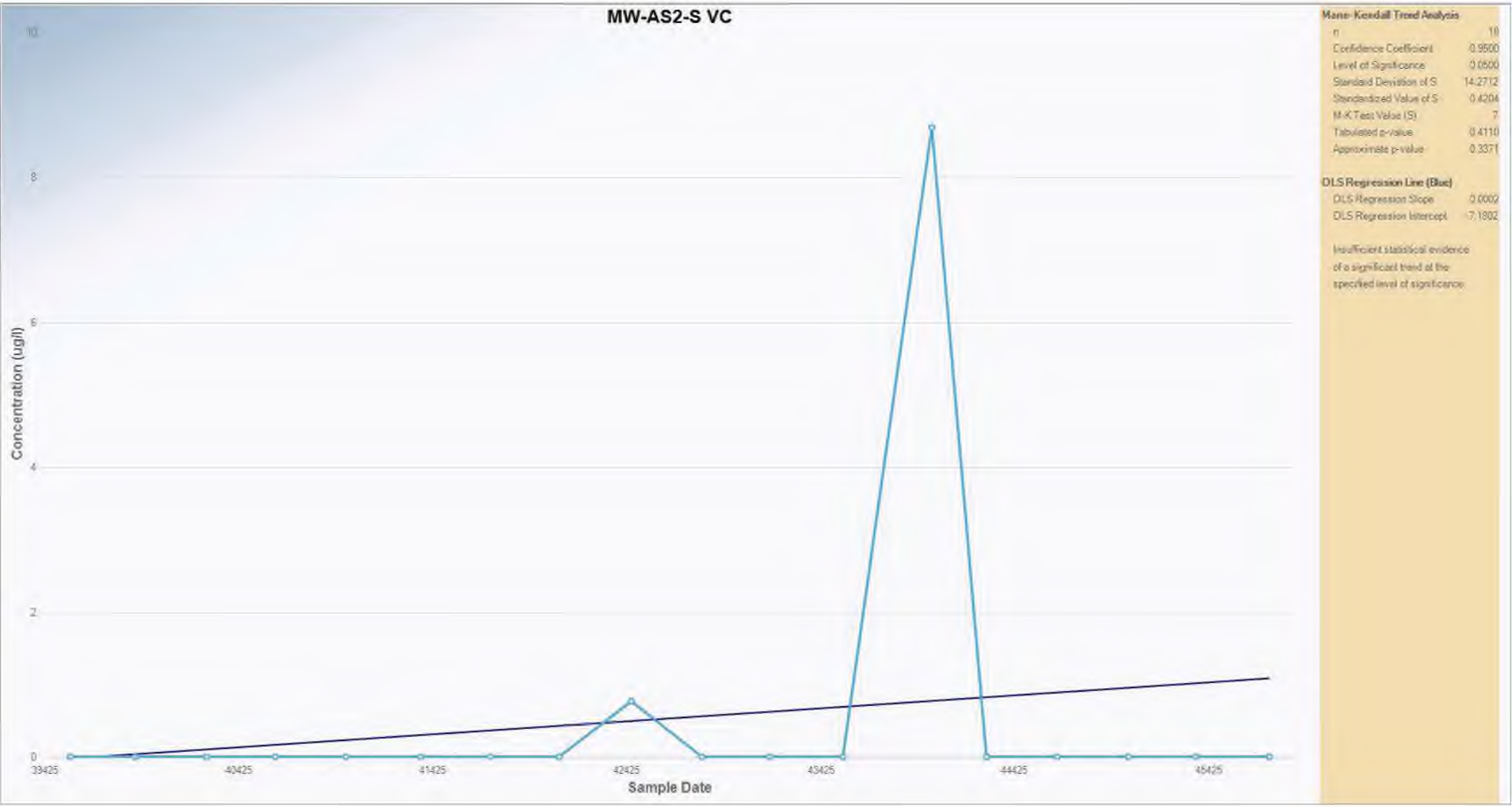
OLS Regression Slope	-0.0392
OLS Regression Intercept	1,936.0264

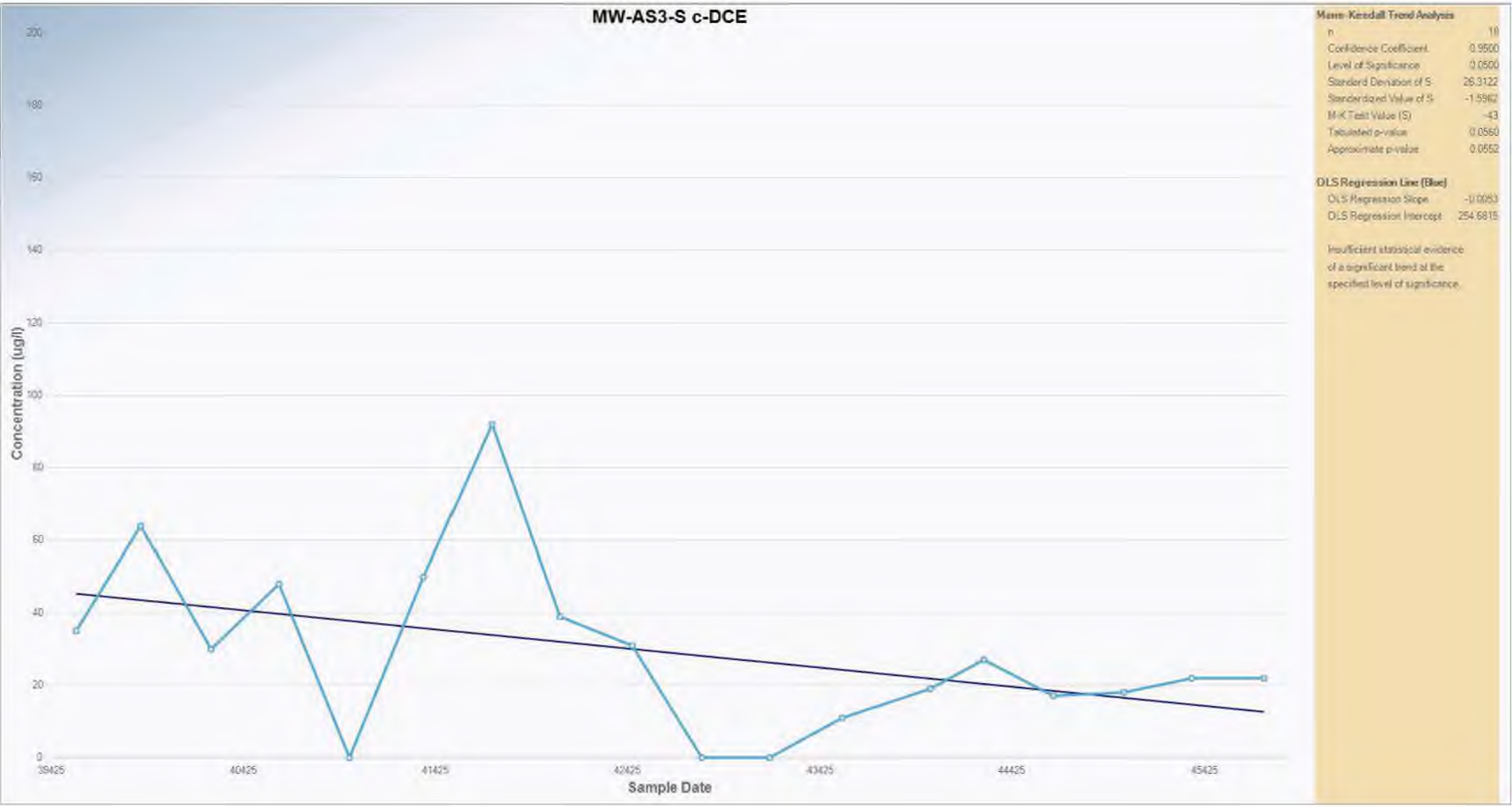
Statistically significant evidence of a decreasing trend at the specified level of significance

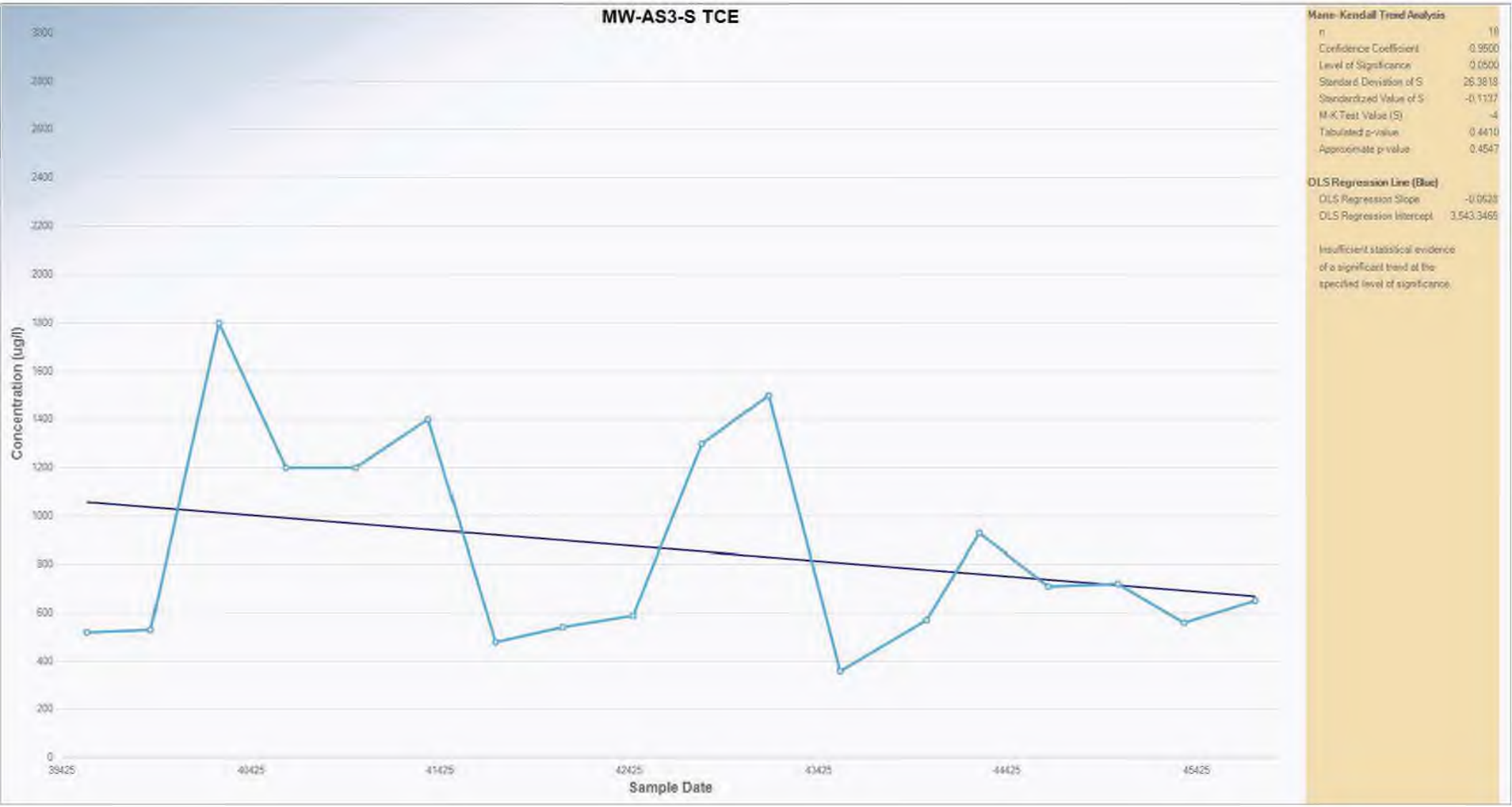

MW-5 VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 20
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5130
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

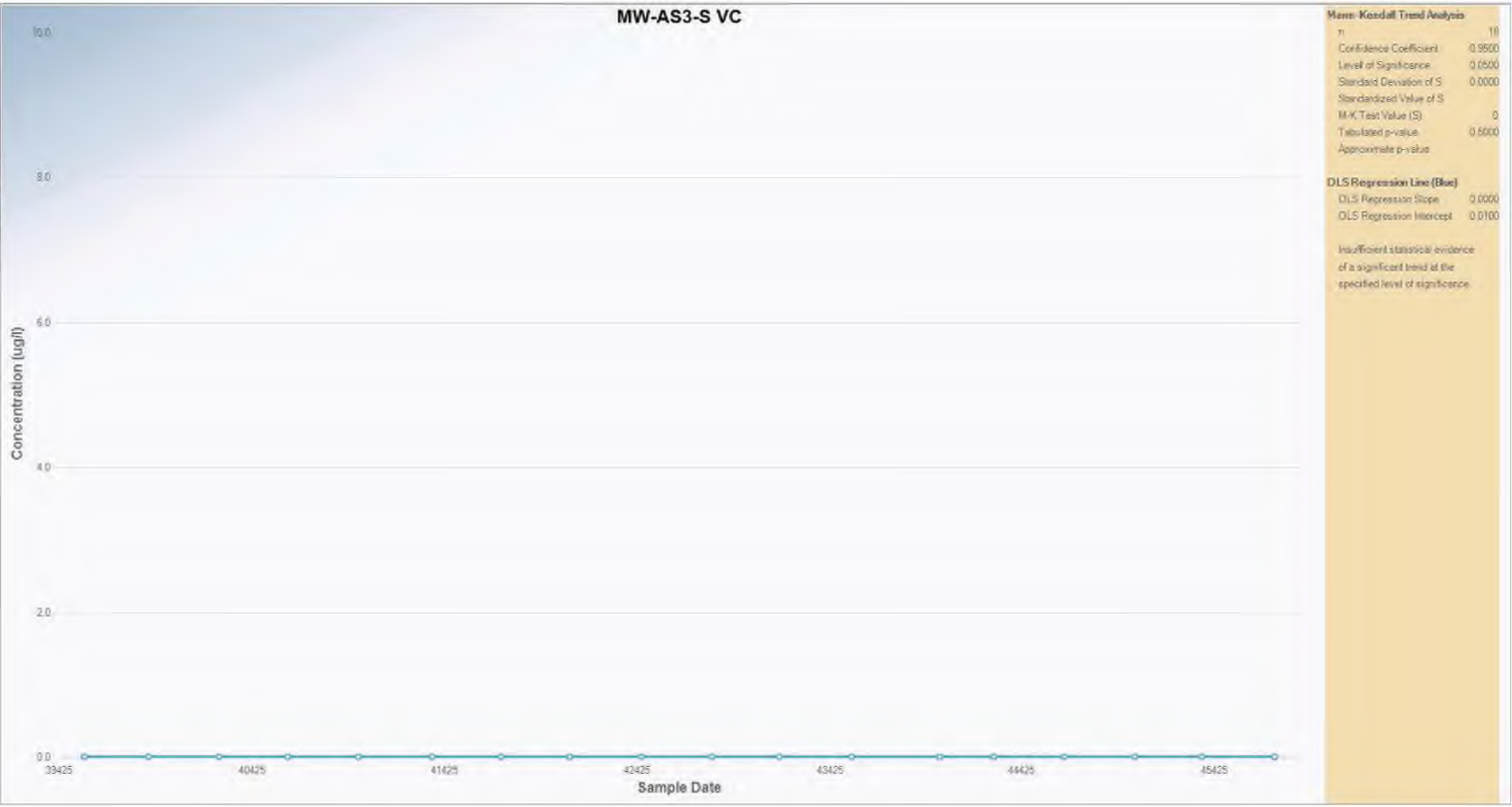

MW-AS2-S c-DCE
Concentration (ug/l)
400
350
300
250
200
150
100
50
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3629
Standardized Value of S -1.8207
M-K Test Value (S) -49
Tabulated p-value 0.0340
Approximate p-value 0.0343
OLS Regression Line (Blue)
OLS Regression Slope -0.0154
OLS Regression Intercept 750.1054
Statistically significant evidence of a decreasing trend at the specified level of significance

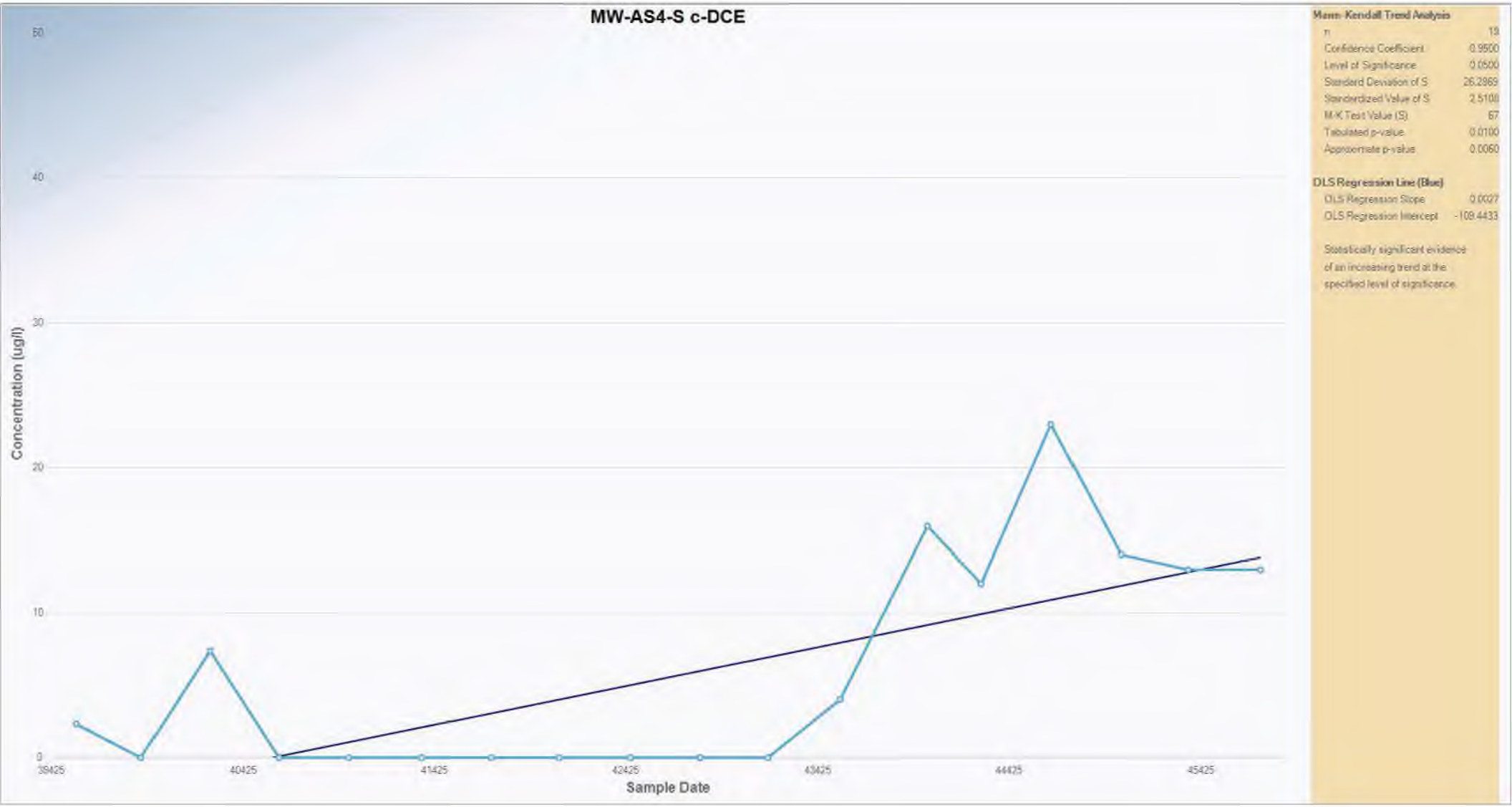

MW-AS2-S TCE
Concentration (ug/l)
800
700
600
500
400
300
200
100
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3629
Standardized Value of S -1.8207
M-K Test Value (S) -49
Tabulated p-value 0.0340
Approximate p-value 0.0343
OLS Regression Line (Blue)
OLS Regression Slope -0.0510
OLS Regression Intercept 2,432.7282
Statistically significant evidence
of a decreasing trend at the
specified level of significance.


MW-AS2-S VC
Concentration (ug/l)
10
8
6
4
2
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 14.2712
Standardized Value of S 0.4204
M-K Test Value (S) 7
Tabulated p-value 0.4110
Approximate p-value 0.3371
OLS Regression Line (Blue)
OLS Regression Slope 0.0002
OLS Regression Intercept -7.1802
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

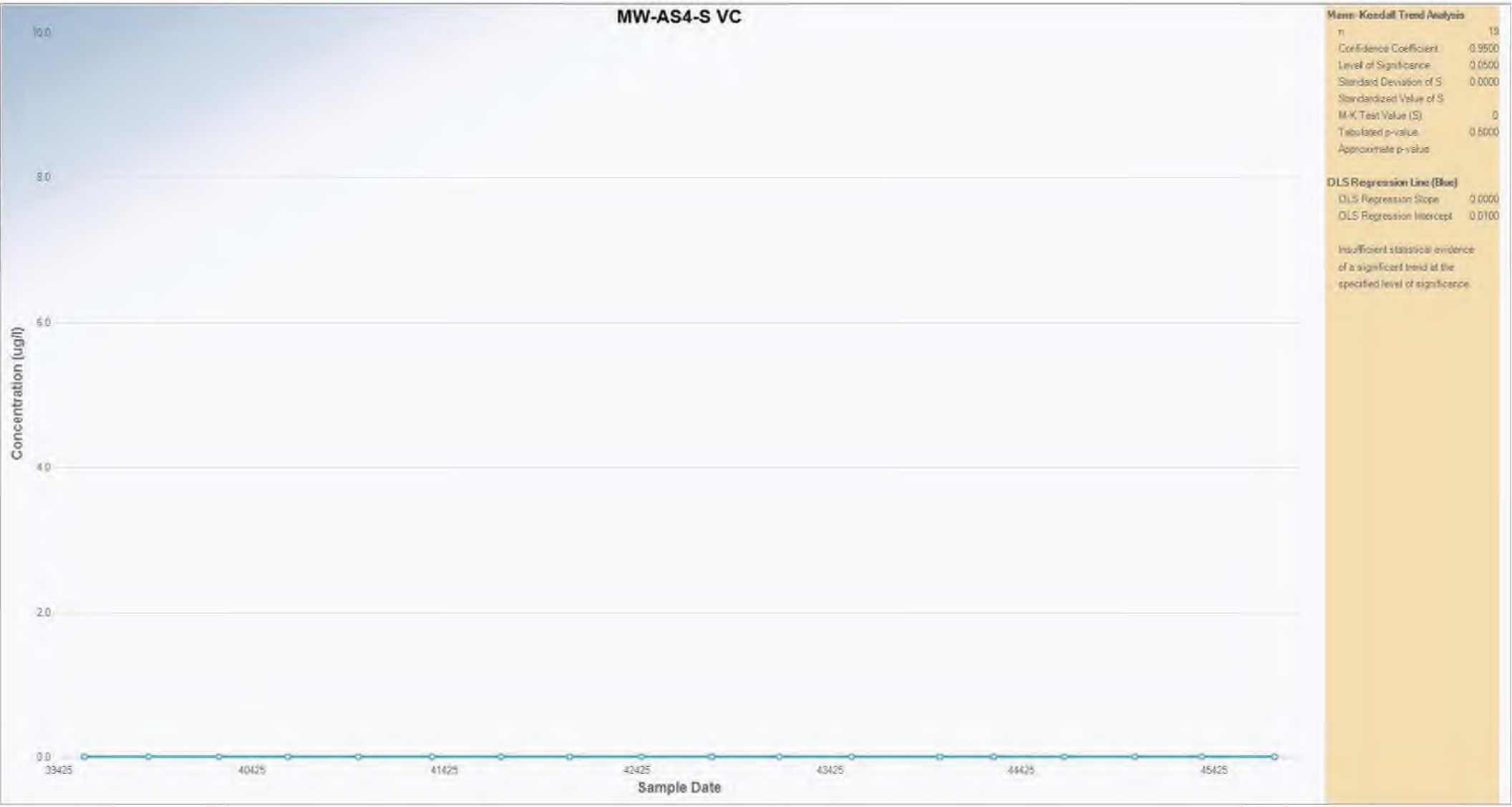

MW-AS3-S c-DCE
Concentration (ug/l)
200
180
160
140
120
100
80
60
40
20
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3122
Standardized Value of S -1.5962
M-K Test Value (S) -43
Tabulated p-value 0.0560
Approximate p-value 0.0552
OLS Regression Line (Blue)
OLS Regression Slope -0.0093
OLS Regression Intercept 254.6815
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

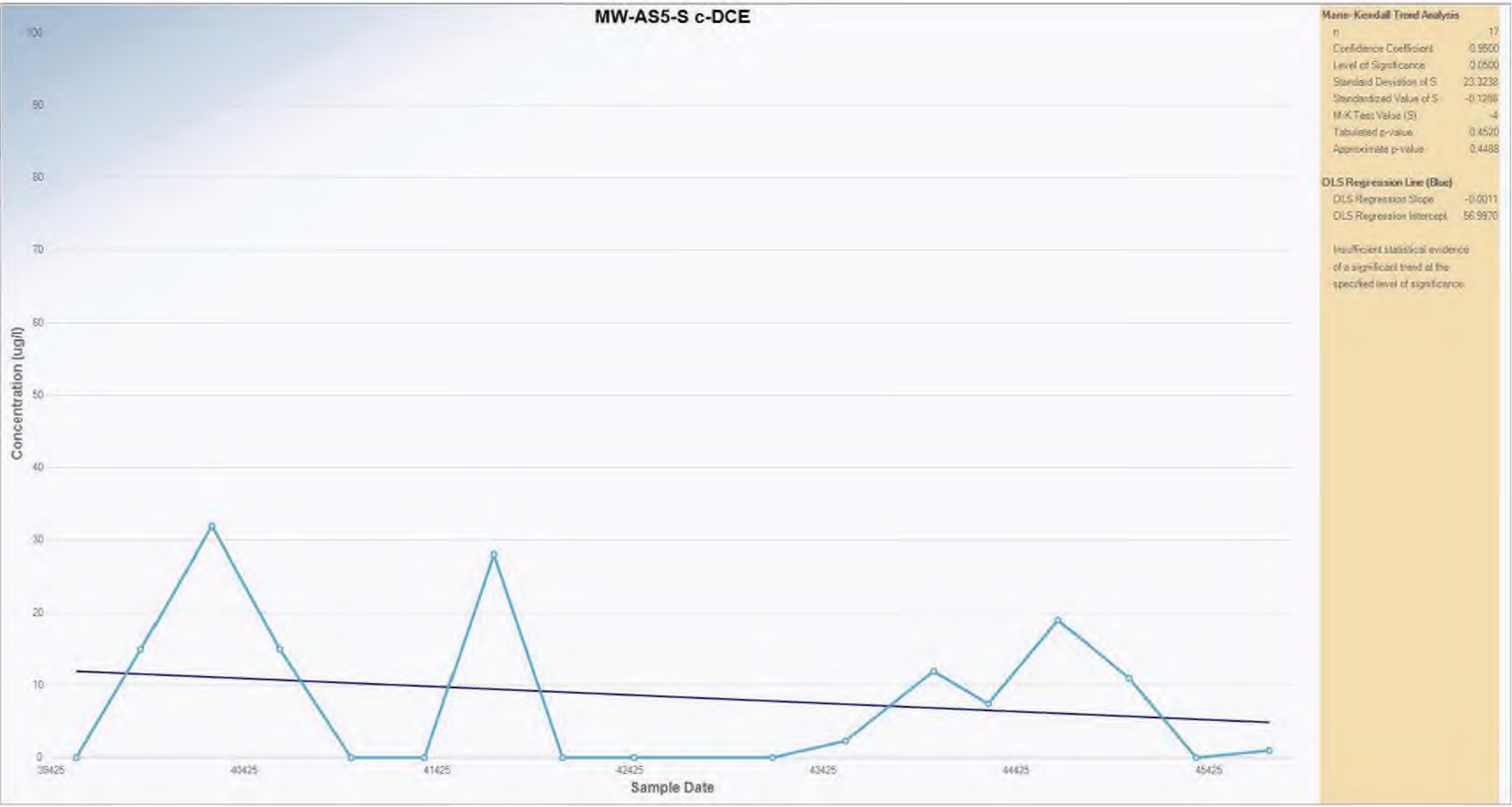

MW-AS3-S TCE
Concentration (ug/l)
3000
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3818
Standardized Value of S -0.1137
M-K Test Value (S) -4
Tabulated p-value 0.4410
Approximate p-value 0.4547
OLS Regression Line (Blue)
OLS Regression Slope -0.0520
OLS Regression Intercept 3,543.3466
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-AS3-S VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

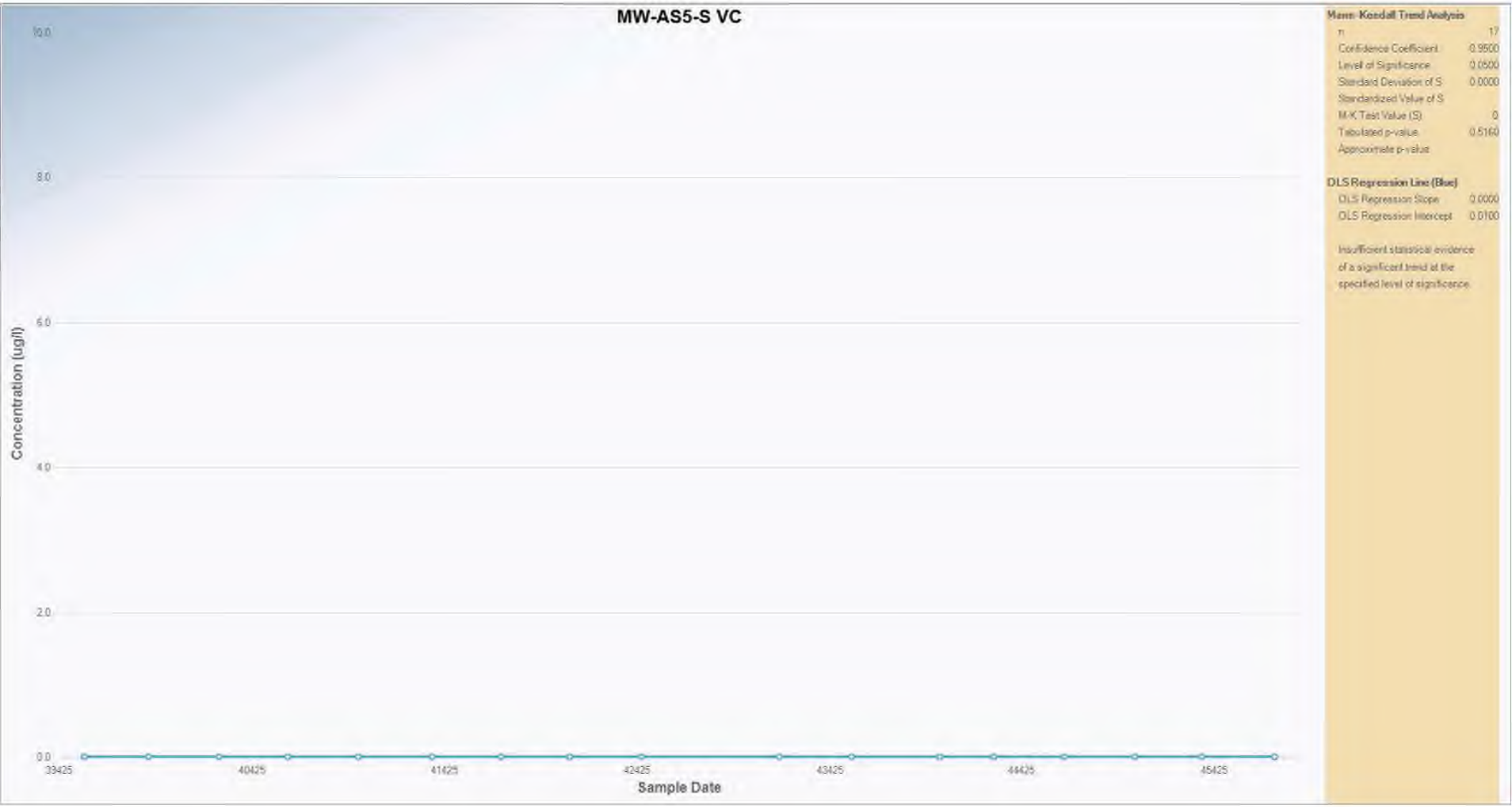

MW-AS4-S c-DCE
Concentration (ug/l)
60
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.2969
Standardized Value of S 2.5108
M-K Test Value (S) 67
Tabulated p-value 0.0100
Approximate p-value 0.0060
OLS Regression Line (Blue)
OLS Regression Slope 0.0027
OLS Regression Intercept -109.4433
Statistically significant evidence of an increasing trend at the specified level of significance.

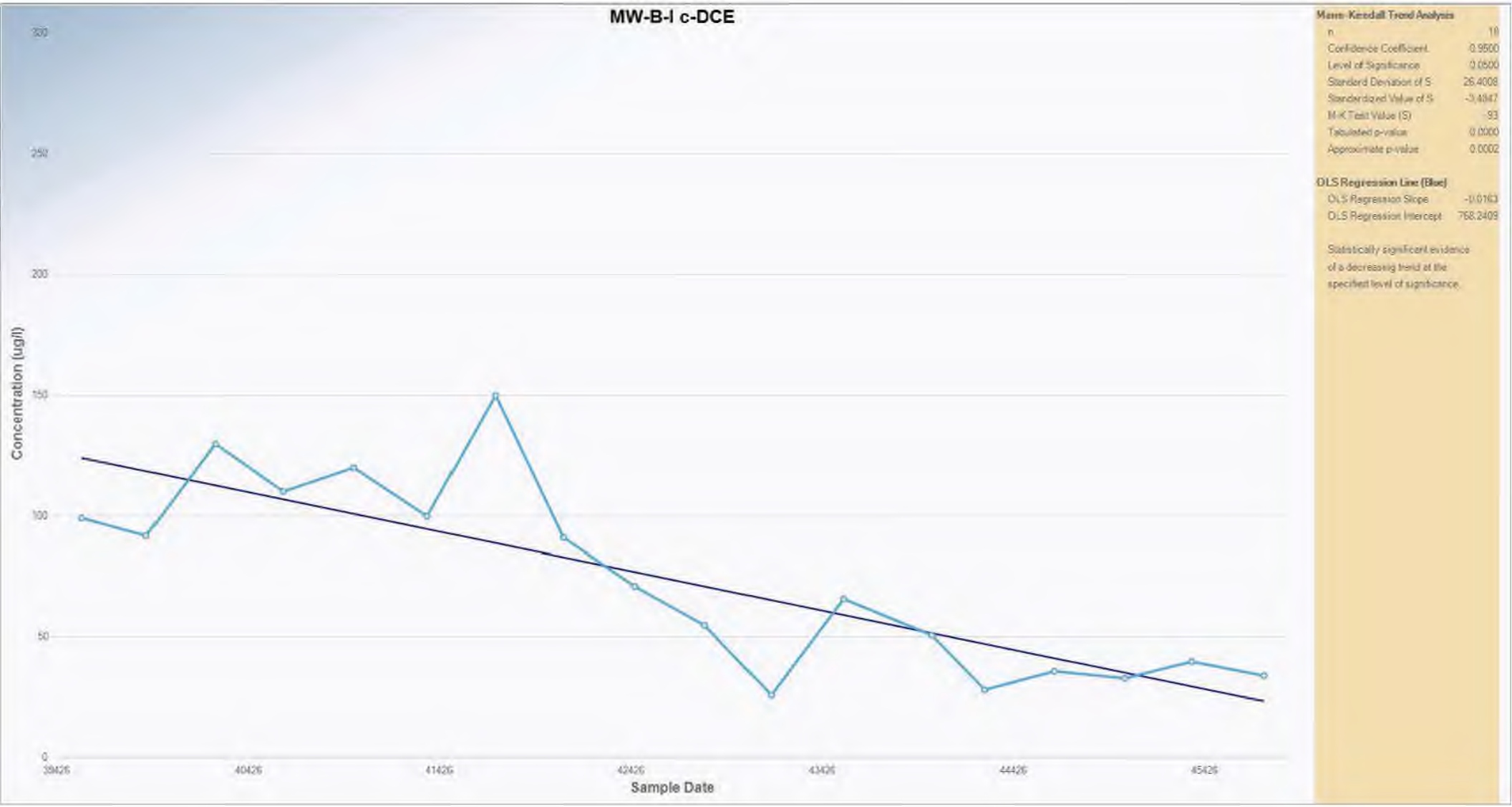

MW-AS4-S TCE
Concentration (ug/l)
3000
1800
1600
1400
1200
1000
800
600
400
200
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 15
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 28.4136
Standardized Value of S -2.6396
M-K Test Value (S) -75
Tabulated p-value 0.0030
Approximate p-value 0.0042
OLS Regression Line (Blue)
OLS Regression Slope -0.0884
OLS Regression Intercept 4,580.4161
Statistically significant evidence of a decreasing trend at the specified level of significance

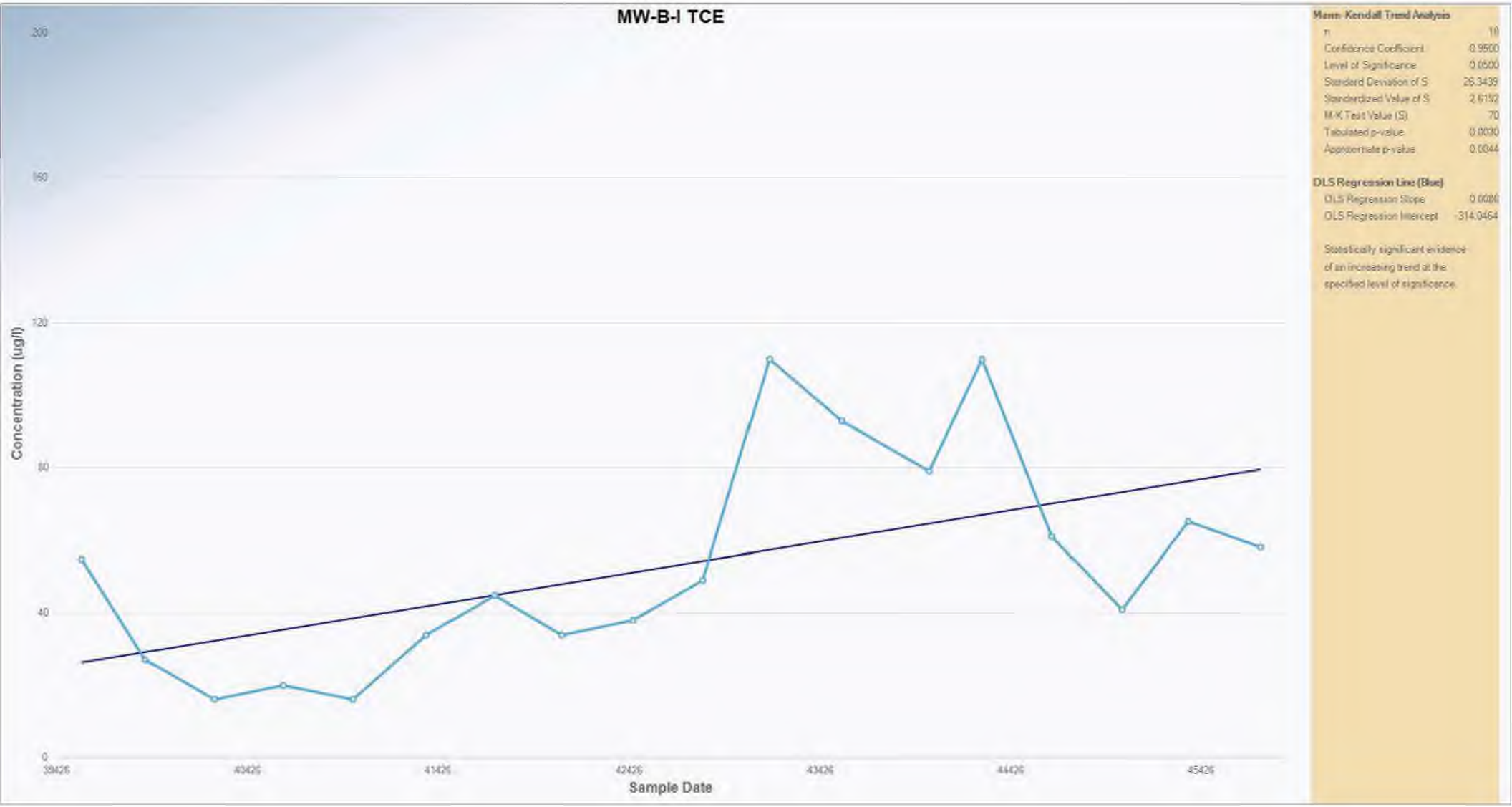

MW-AS4-S VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

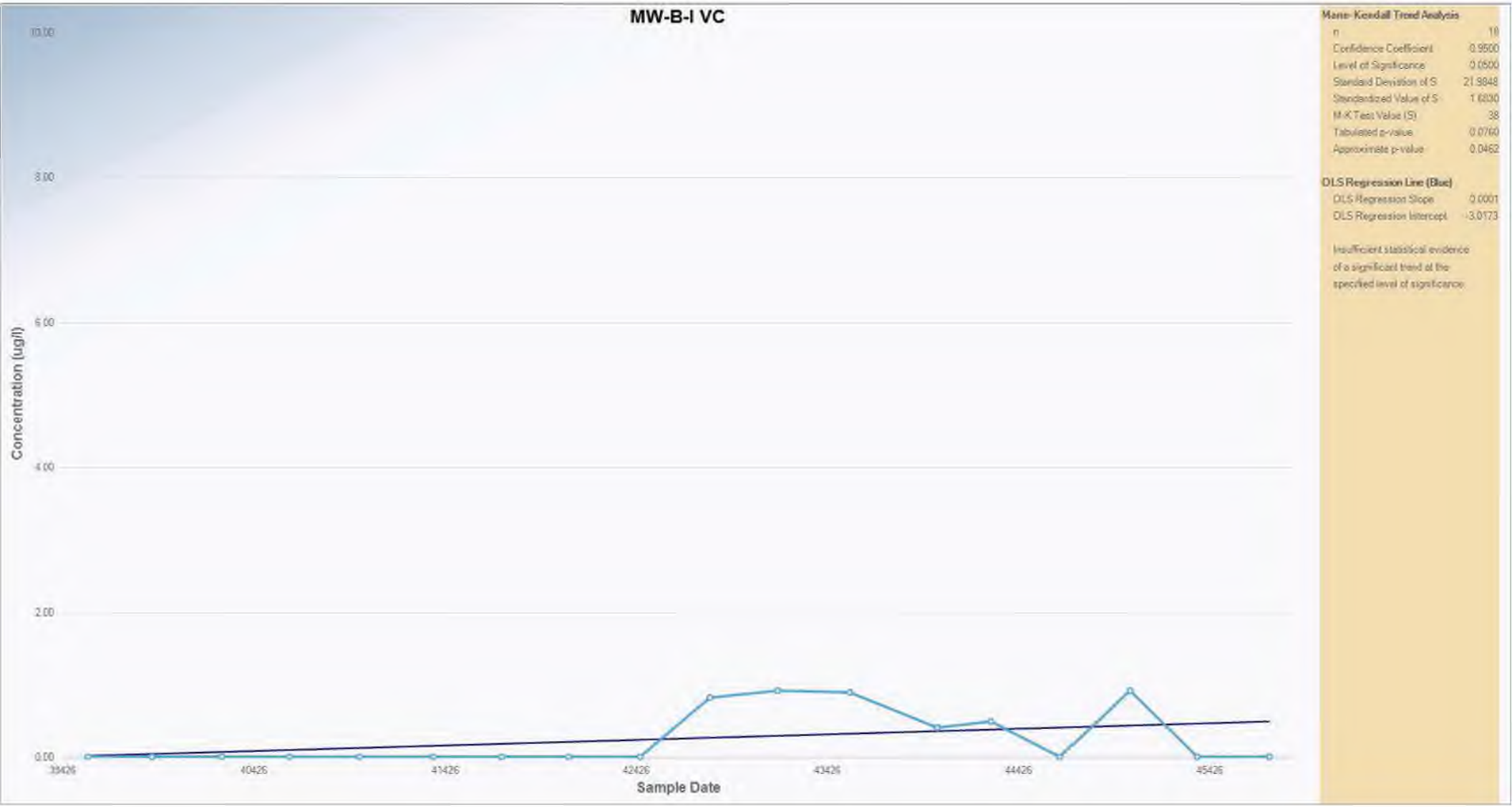

MW-AS5-S c-DCE
Concentration (ug/l)
100
90
80
70
60
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 23.3238
Standardized Value of S -0.1286
M-K Test Value (S) -4
Tabulated p-value 0.4520
Approximate p-value 0.4488
OLS Regression Line (Blue)
OLS Regression Slope -0.0011
OLS Regression Intercept 56.9970
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

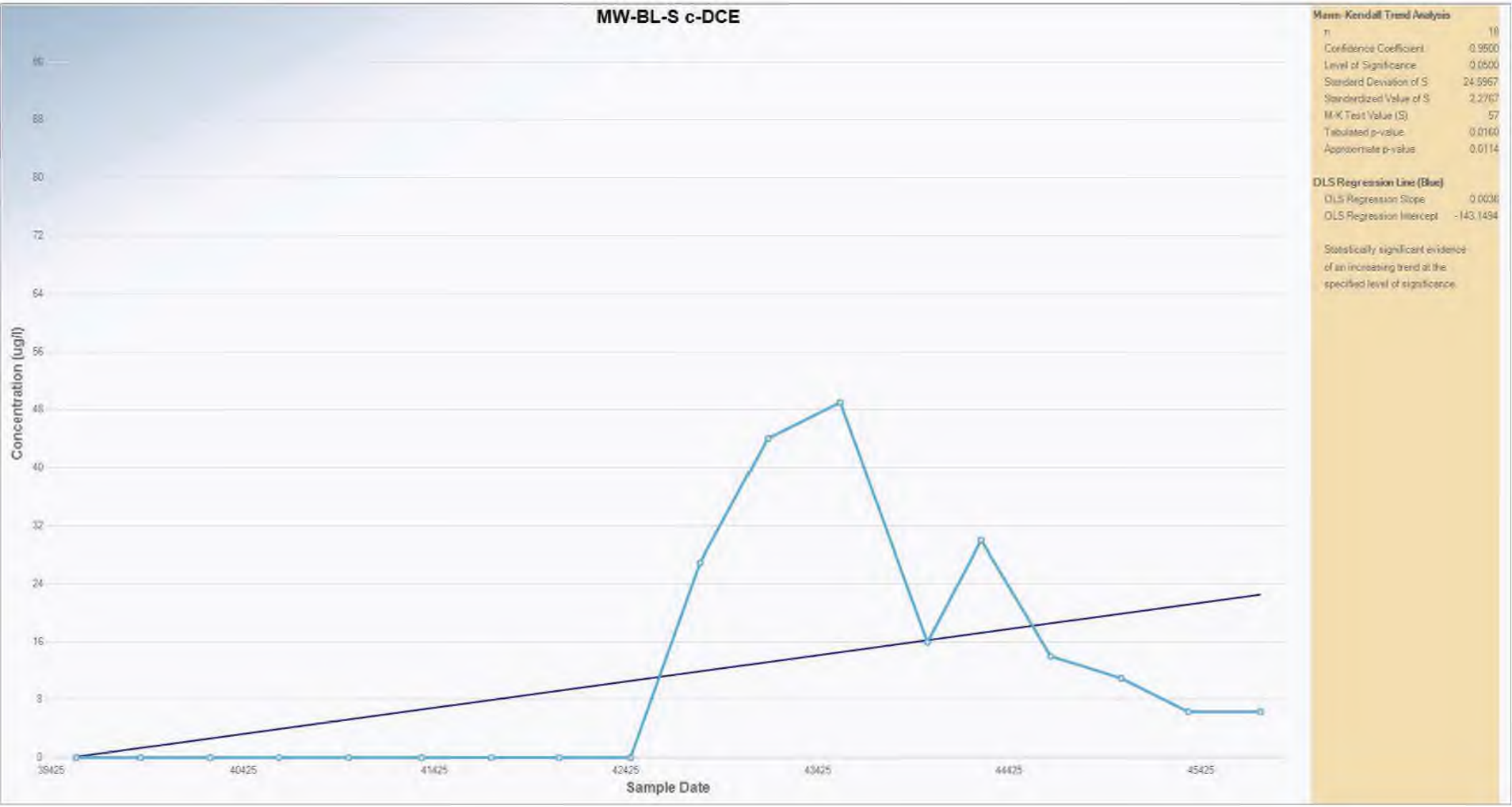

MW-AS5-S TCE
1200
1000
800
600
400
200
0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.1799
Standardized Value of S -3.9289
M-K Test Value (S) -96
Tabulated p-value 0.0000
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope -0.1173
OLS Regression Intercept 5,506.0853
Statistically significant evidence of a decreasing trend at the specified level of significance.

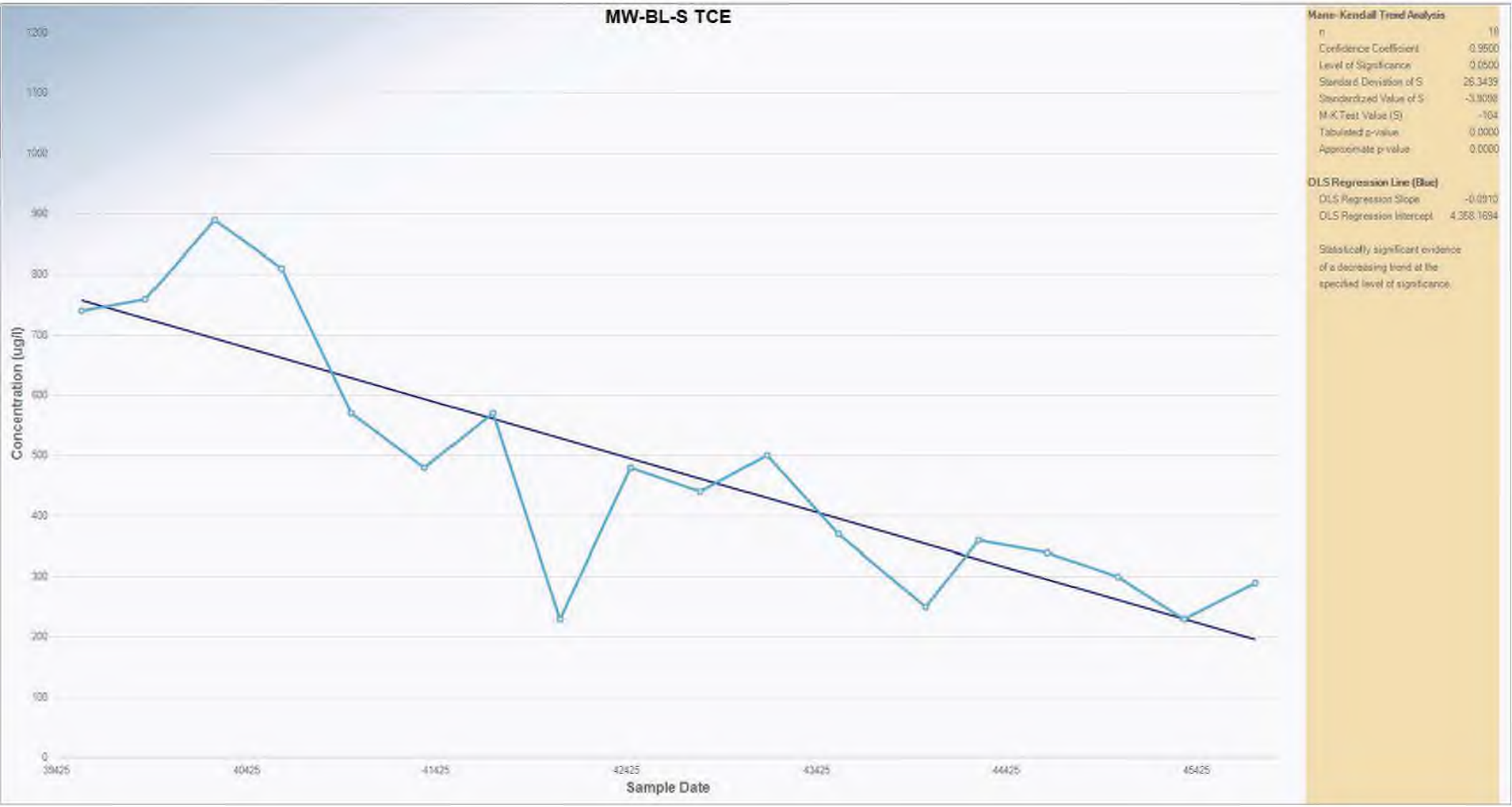

MW-AS5-S VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5160
Approximate p-value
DLS Regression Line (Blue)
DLS Regression Slope 0.0000
DLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

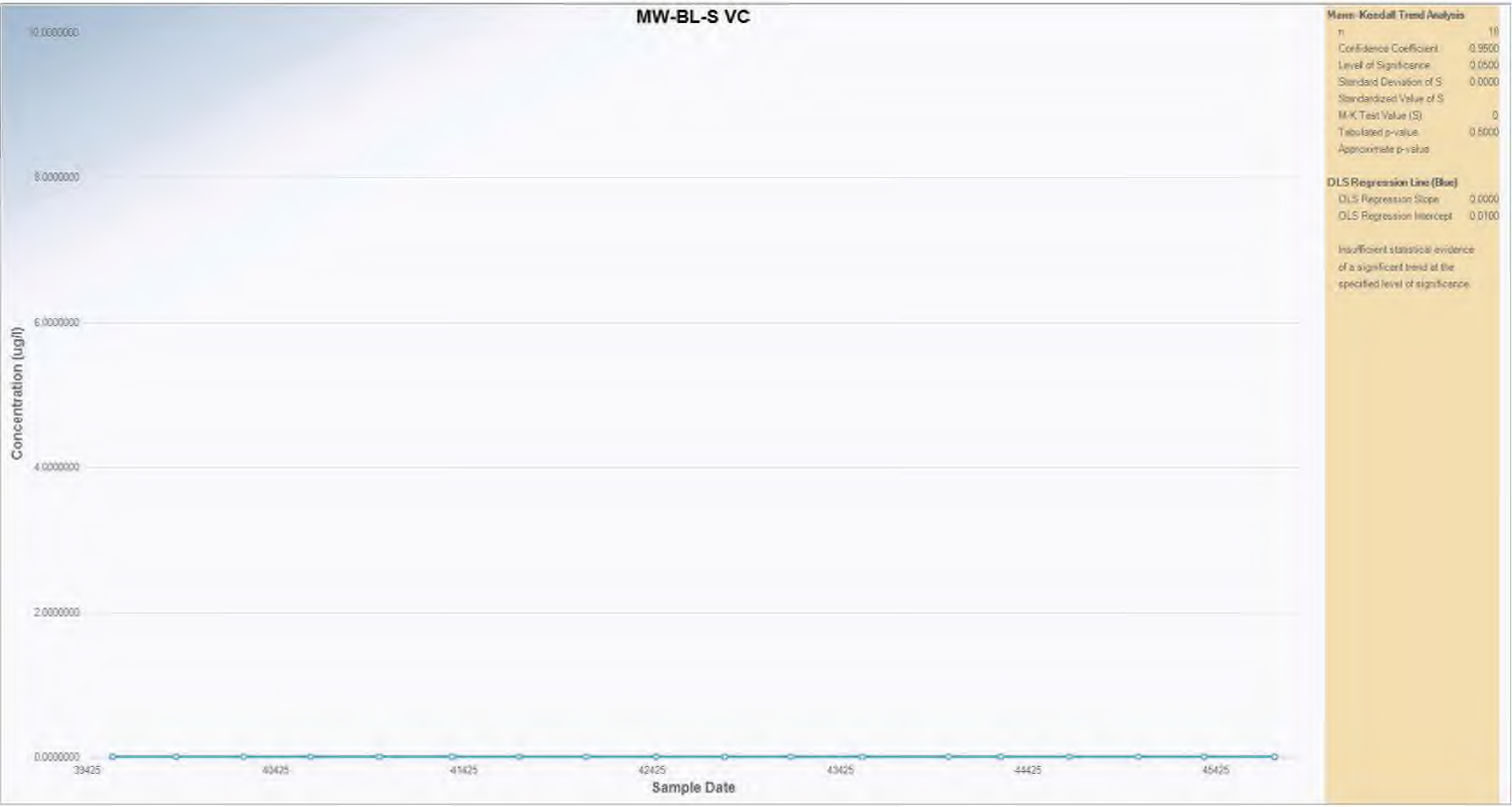

MW-B-I c-DCE
Concentration (ug/l)
300
250
200
150
100
50
0
39426
40426
41426
42426
43426
44426
45426
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.4008
Standardized Value of S -3.4847
M-K Test Value (S) -93
Tabulated p-value 0.0000
Approximate p-value 0.0002
OLS Regression Line (Blue)
OLS Regression Slope -0.0163
OLS Regression Intercept 768.2409
Statistically significant evidence of a decreasing trend at the specified level of significance

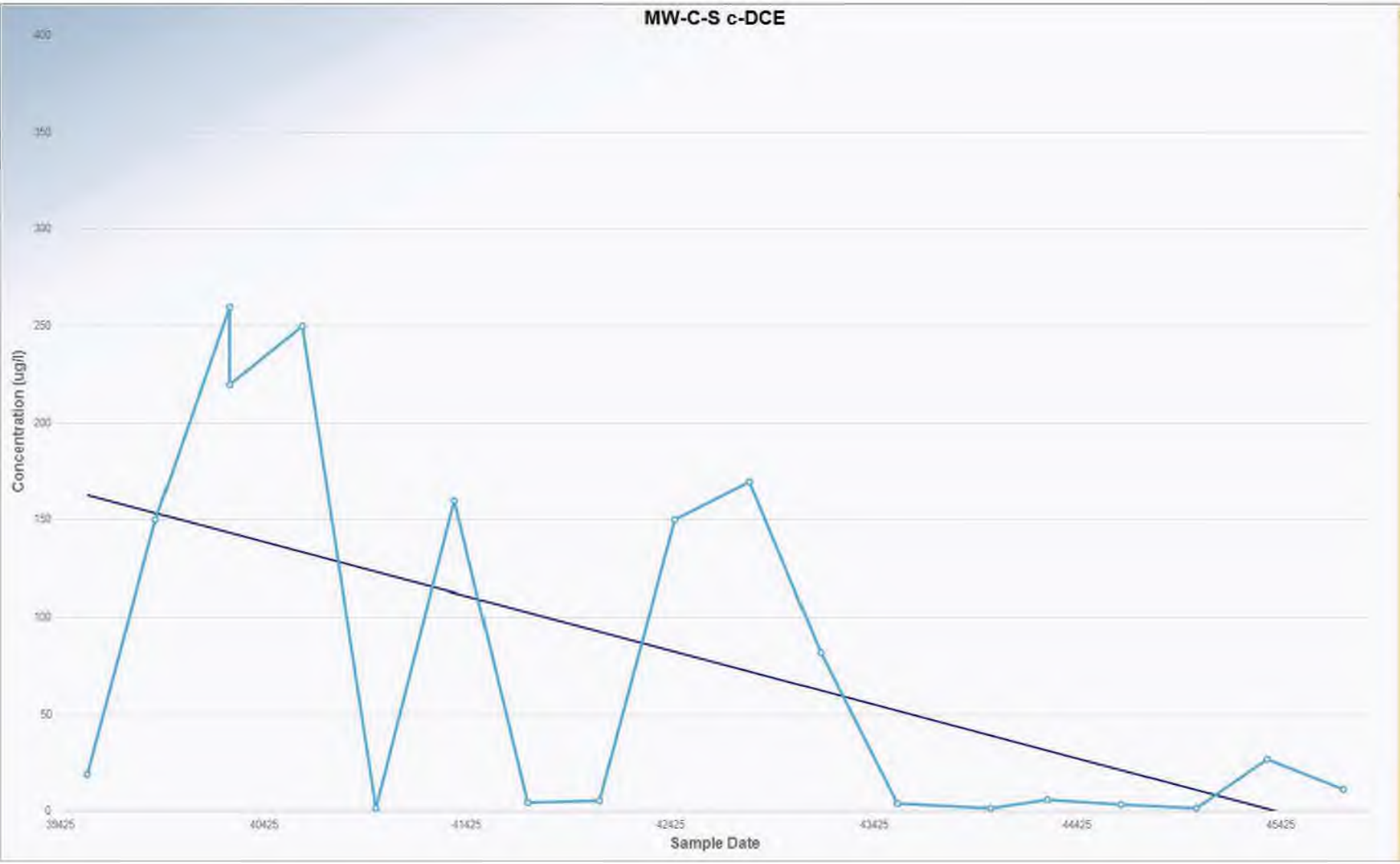

MW-B-I TCE
Concentration (ug/l)
200
160
120
80
40
0
39426
40426
41426
42426
43426
44426
45426
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3439
Standardized Value of S 2.6152
M-K Test Value (S) 70
Tabulated p-value 0.0030
Approximate p-value 0.0044
OLS Regression Line (Blue)
OLS Regression Slope 0.0086
OLS Regression Intercept -314.0464
Statistically significant evidence of an increasing trend at the specified level of significance.


MW-B-I VC
10.00
8.00
6.00
4.00
2.00
0.00
Concentration (ug/l)
39426
40426
41426
42426
43426
44426
45426
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 21.9848
Standardized Value of S 1.6830
M-K Test Value (S) 38
Tabulated p-value 0.0760
Approximate p-value 0.0462
OLS Regression Line (Blue)
OLS Regression Slope 0.0001
OLS Regression Intercept -3.0173
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-BL-S c-DCE
Concentration (ug/l)
0
8
16
24
32
40
48
56
64
72
80
88
96
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.5967
Standardized Value of S 2.2767
M-K Test Value (S) 57
Tabulated p-value 0.0160
Approximate p-value 0.0114
OLS Regression Line (Blue)
OLS Regression Slope 0.0036
OLS Regression Intercept -143.1494
Statistically significant evidence of an increasing trend at the specified level of significance


MW-BL-S TCE
Concentration (ug/l)
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3439
Standardized Value of S -3.8098
M-K Test Value (S) -104
Tabulated p-value 0.0000
Approximate p-value 0.0000
OLS Regression Line (Blue)
OLS Regression Slope -0.0910
OLS Regression Intercept 4,358.1694
Statistically significant evidence of a decreasing trend at the specified level of significance.


MW-BL-S VC
10.0000000
8.0000000
6.0000000
4.0000000
2.0000000
0.0000000
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.



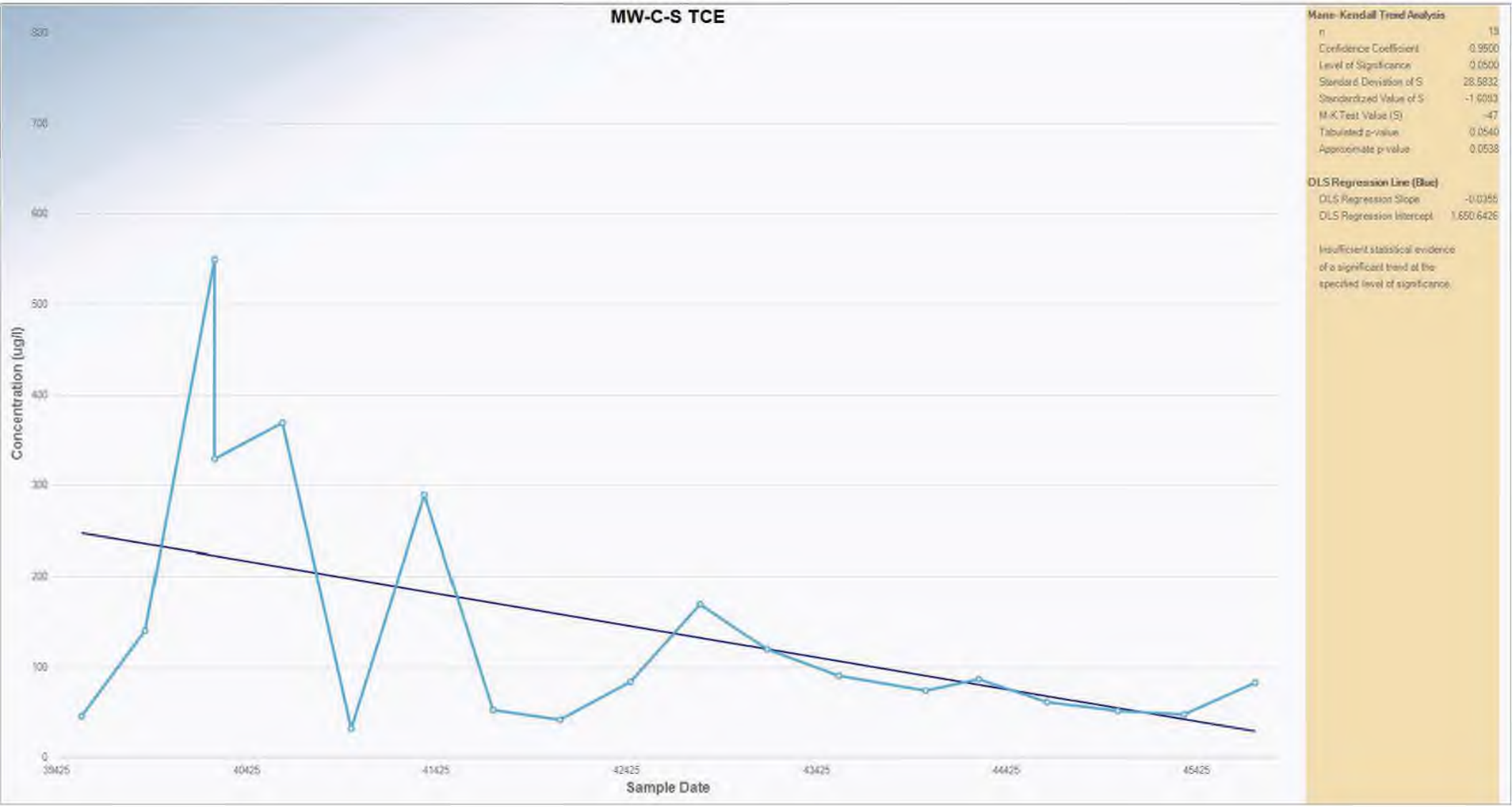
Mann-Kendall Trend Analysis

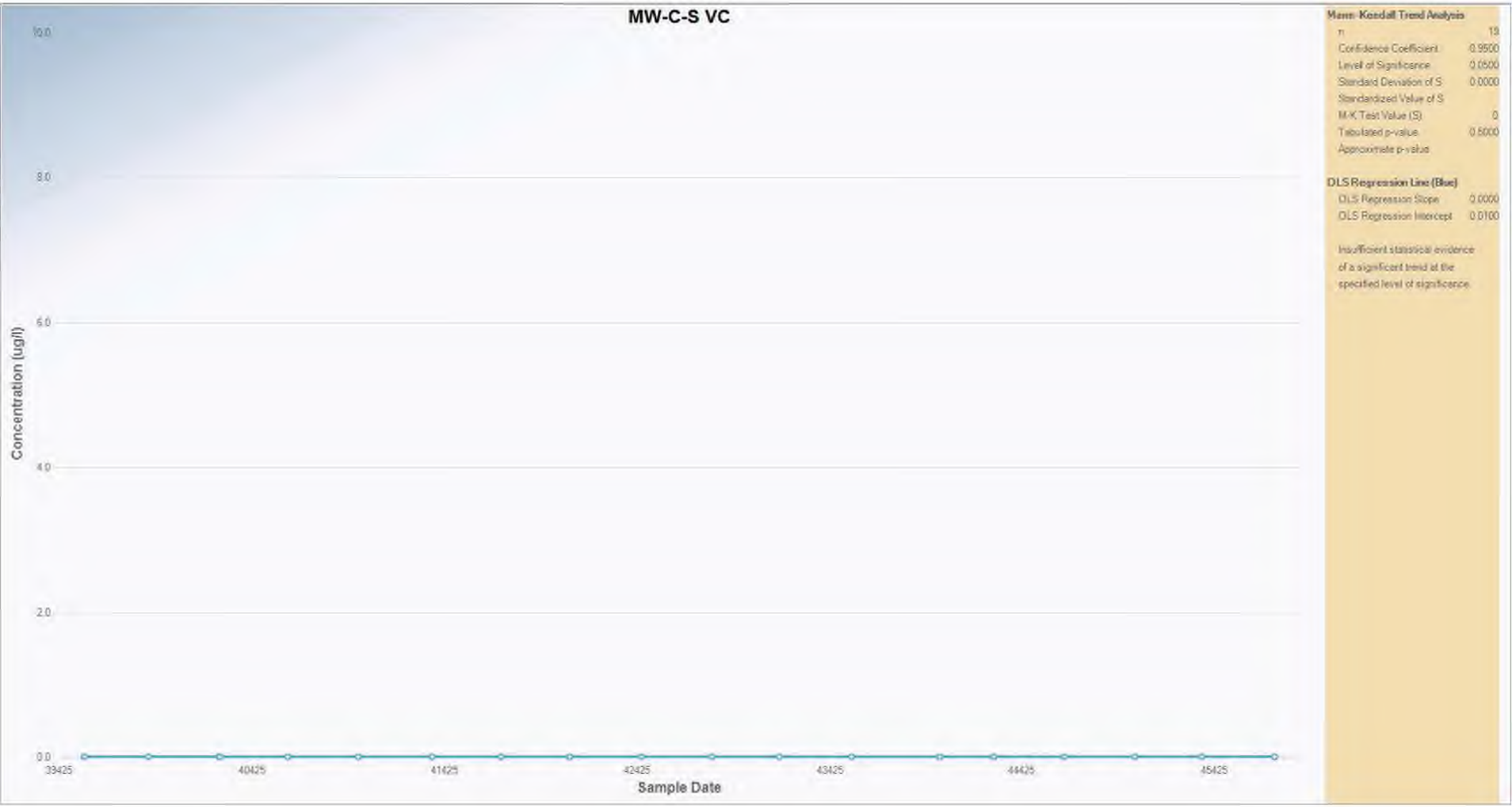
n	15
Confidence Coefficient	0.9500
Level of Significance	0.0500
Standard Deviation of S	28.5657
Standardized Value of S	-2.1354
M-K Test Value (S)	-62
Tabulated p-value	0.0140
Approximate p-value	0.0164

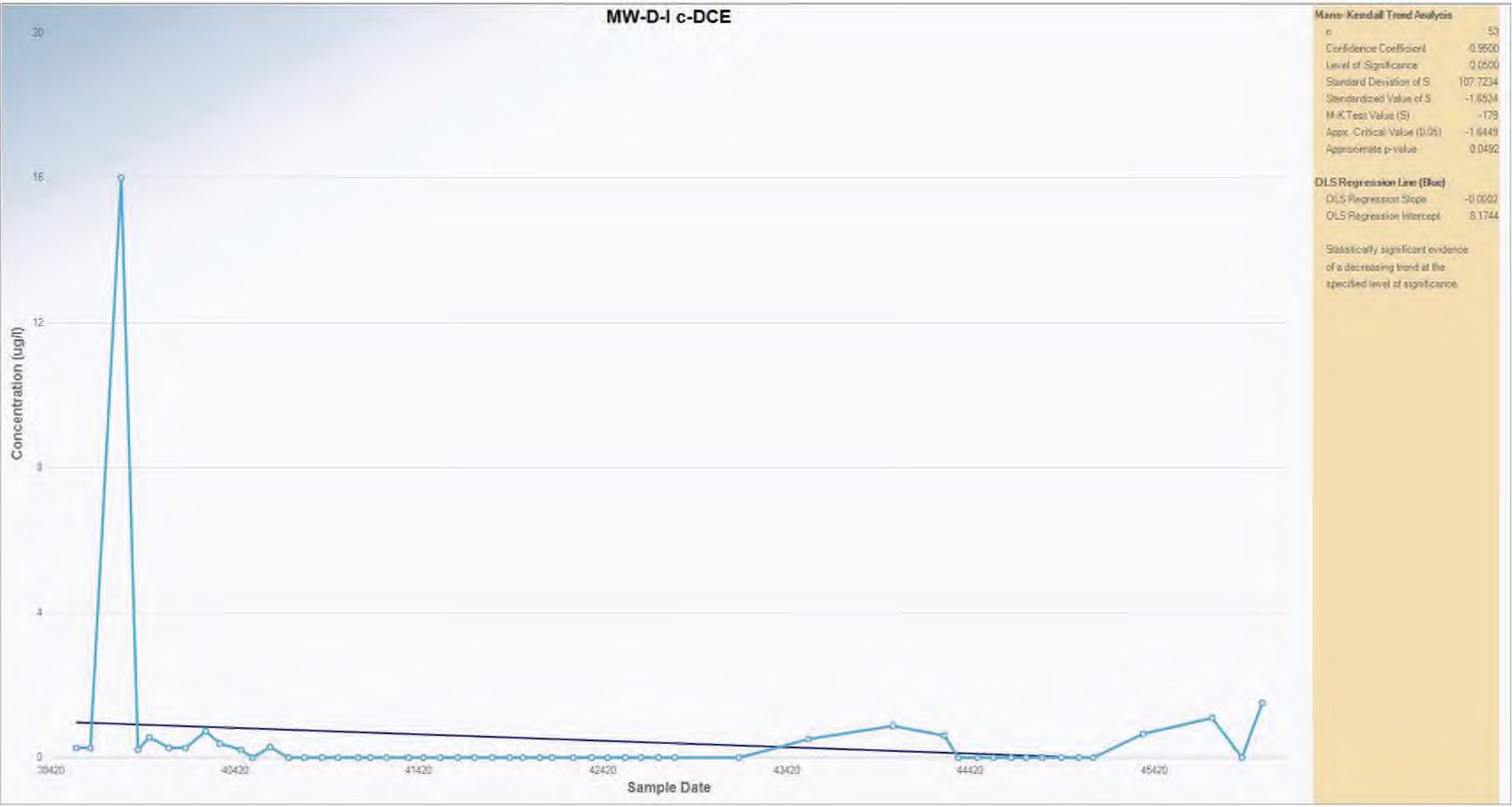
OLS Regression Line (Blue)

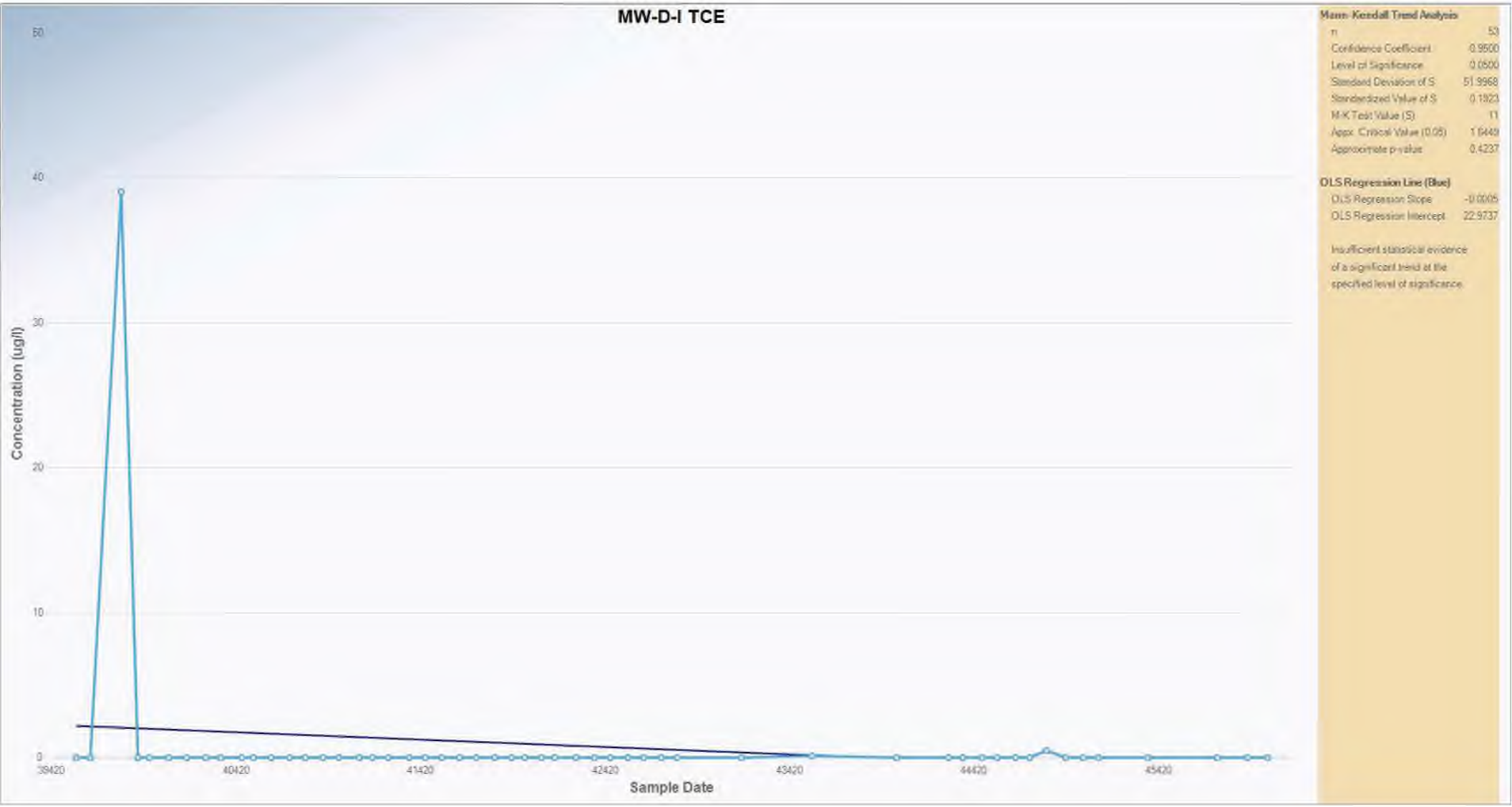
OLS Regression Slope	-0.0280
OLS Regression Intercept	1,270.3904

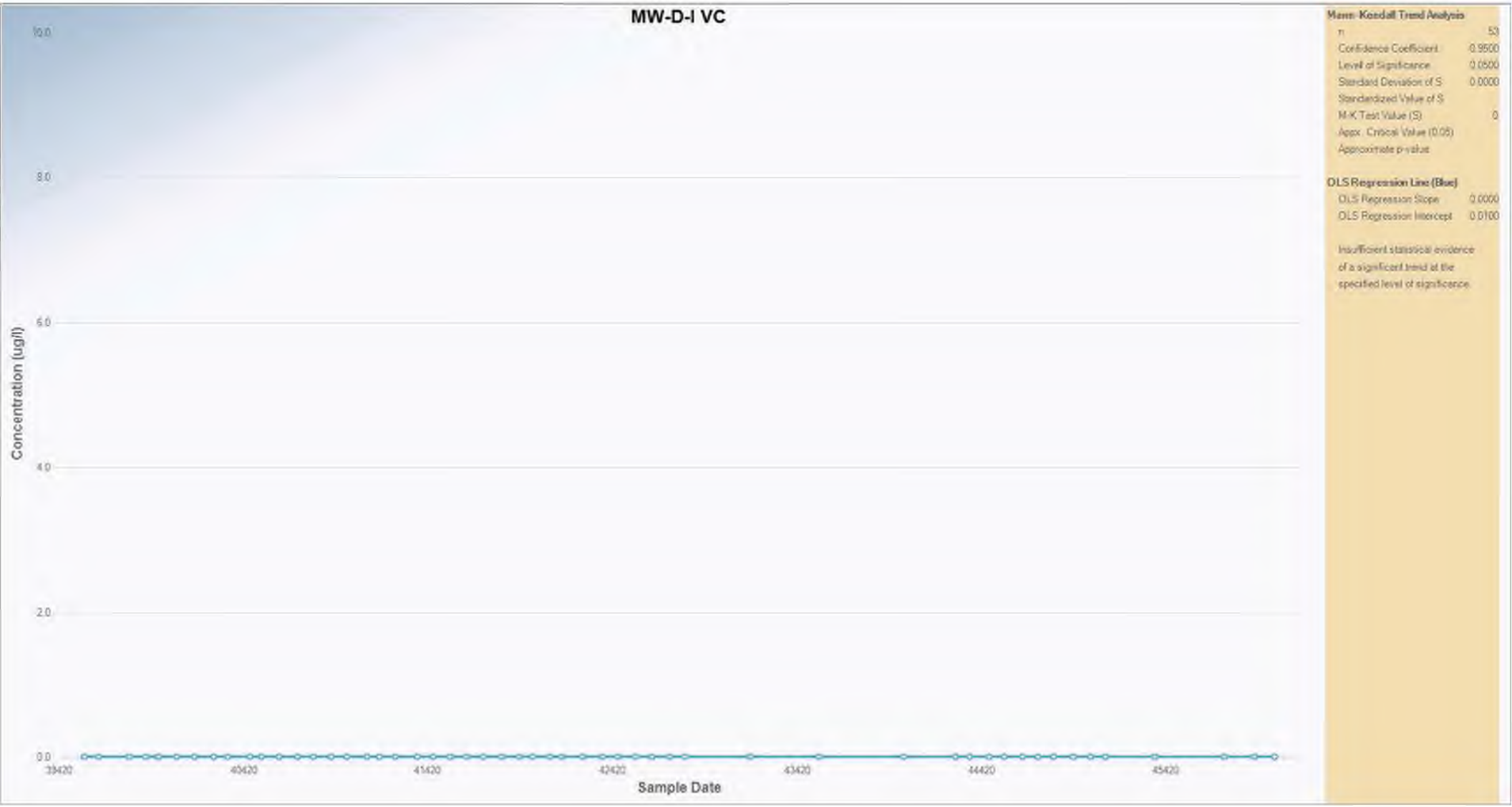
Statistically significant evidence of a decreasing trend at the specified level of significance

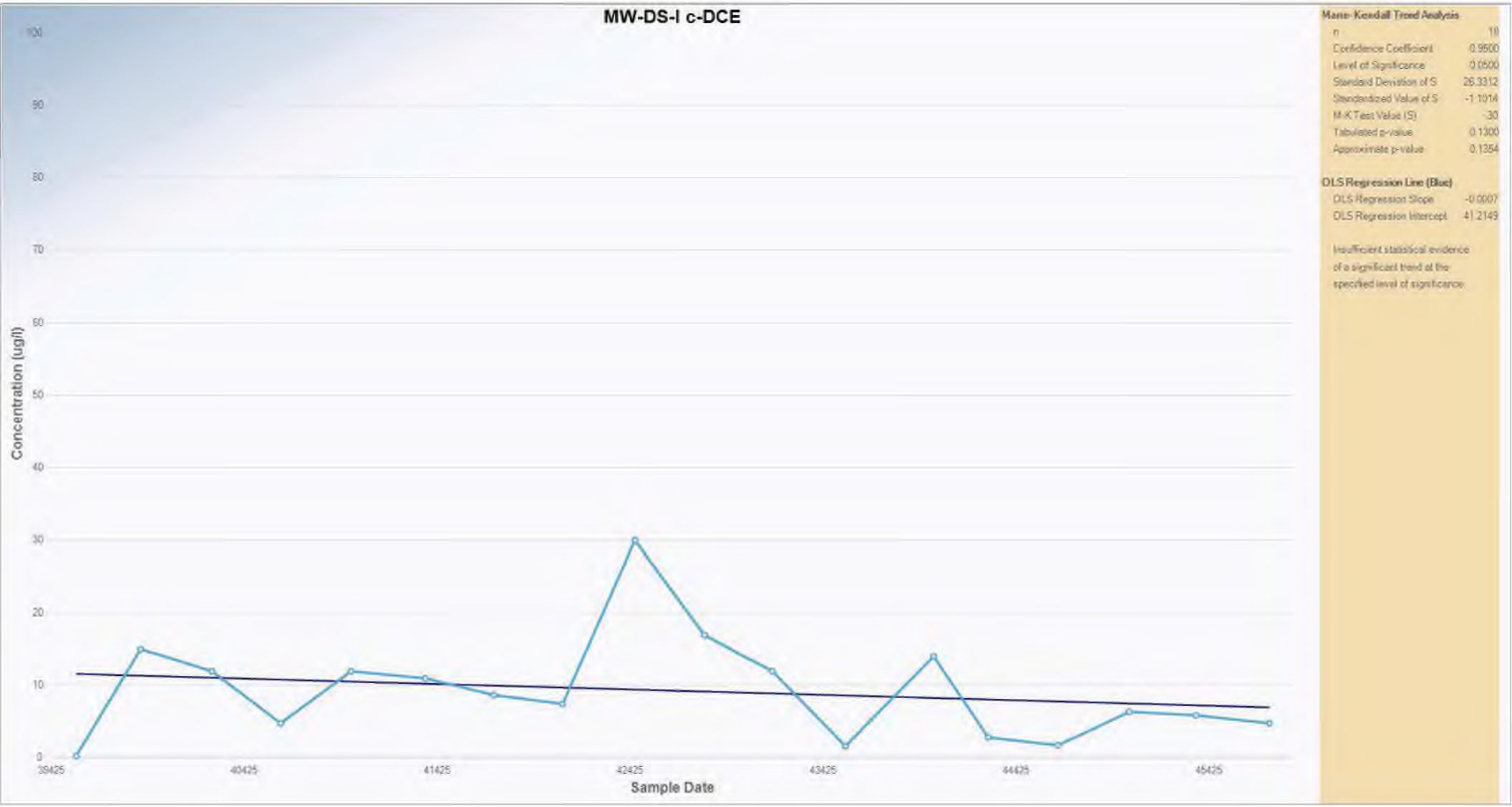

MW-C-S TCE
Concentration (ug/l)
800
700
600
500
400
300
200
100
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 13
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 28.5832
Standardized Value of S -1.6093
M-K Test Value (S) -47
Tabulated p-value 0.0540
Approximate p-value 0.0538
OLS Regression Line (Blue)
OLS Regression Slope -0.0355
OLS Regression Intercept 1,650.6426
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

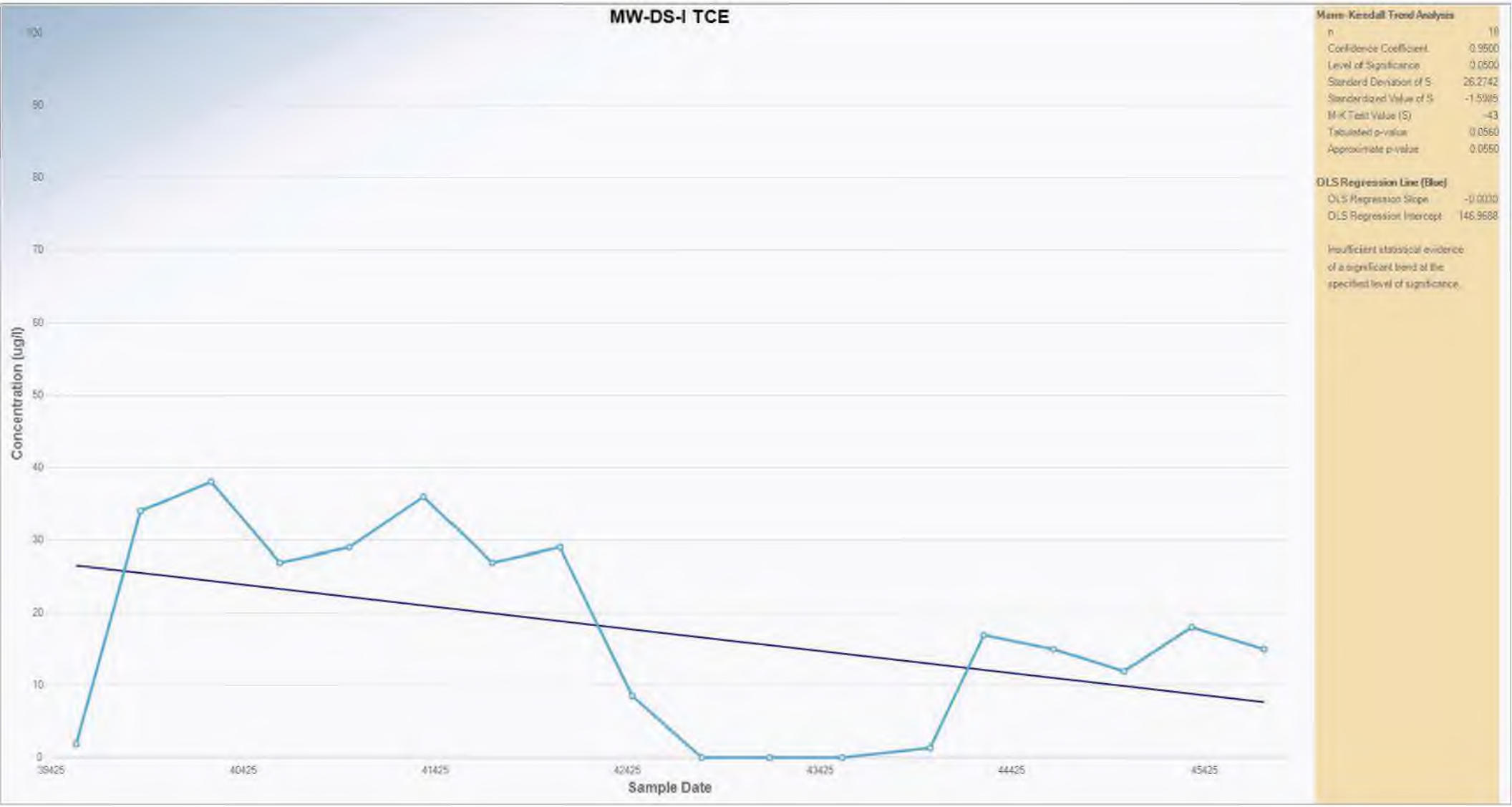

MW-C-S VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

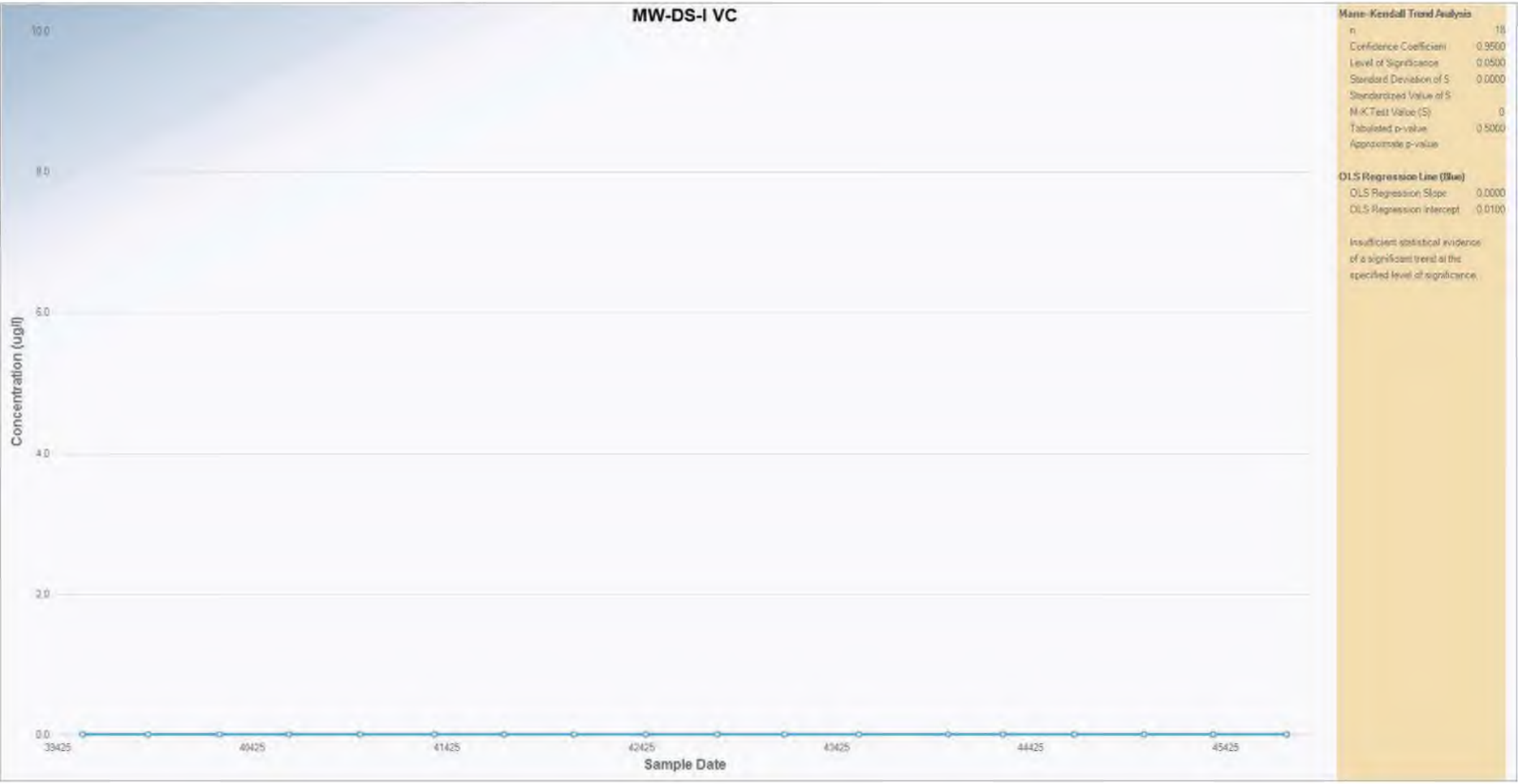

MW-D-I c-DCE
Concentration (ug/l)
Sample Date
0
4
8
12
16
20
39420
40420
41420
42420
43420
44420
45420
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 107.7234
Standardized Value of S -1.6524
M-K Test Value (S) -179
Appr. Critical Value (0.05) -1.6449
Approximate p-value 0.0492
OLS Regression Line (Blue)
OLS Regression Slope -0.0002
OLS Regression Intercept 8.1744
Statistically significant evidence of a decreasing trend at the specified level of significance

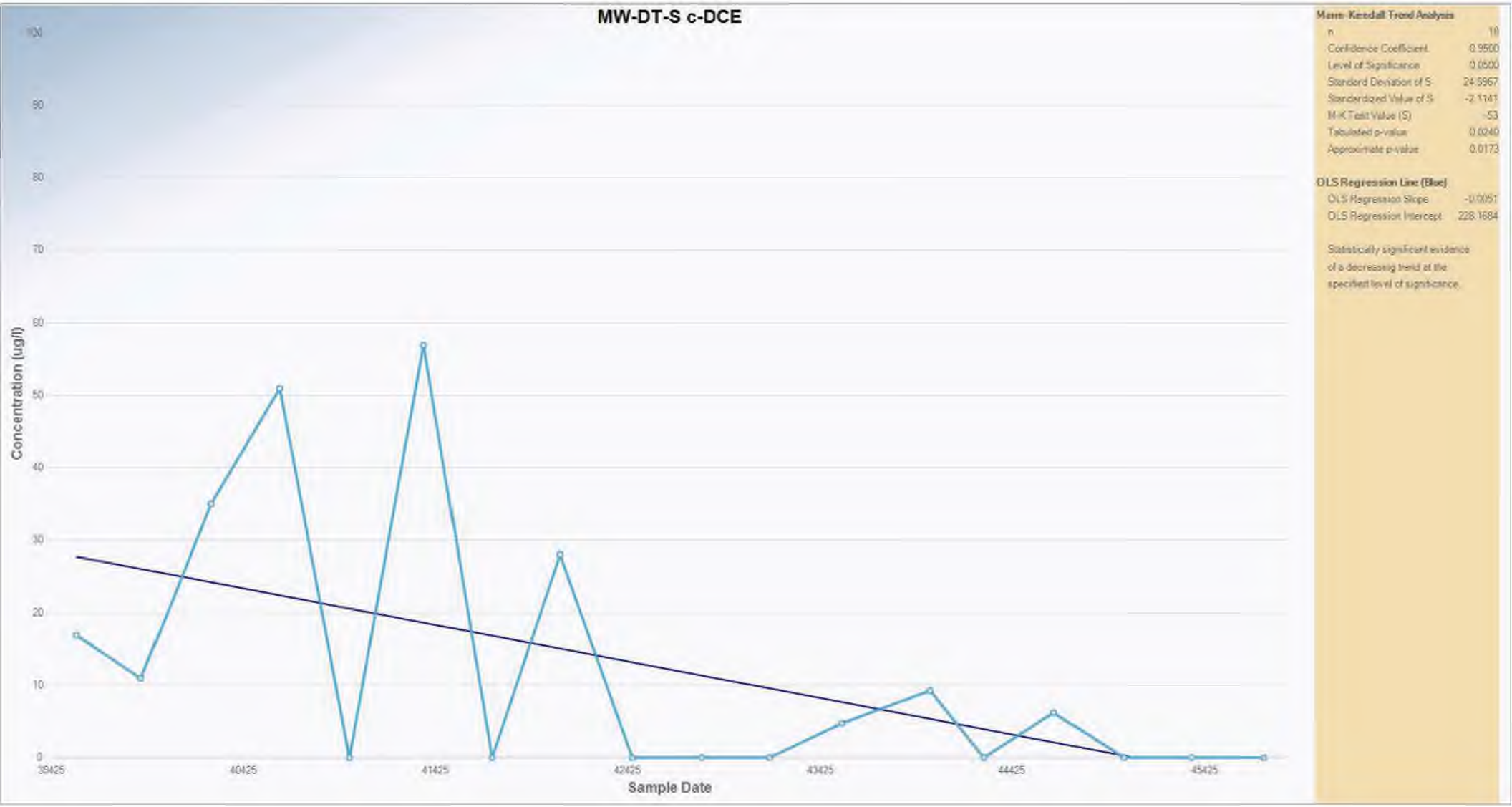

MW-D-I TCE
Concentration (ug/l)
50
40
30
20
10
0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 51.9968
Standardized Value of S 0.1923
M-K Test Value (S) 11
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.4237
OLS Regression Line (Blue)
OLS Regression Slope -0.0005
OLS Regression Intercept 22.9737
Insufficient statistical evidence of a significant trend at the specified level of significance.


MW-D-I VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 53
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

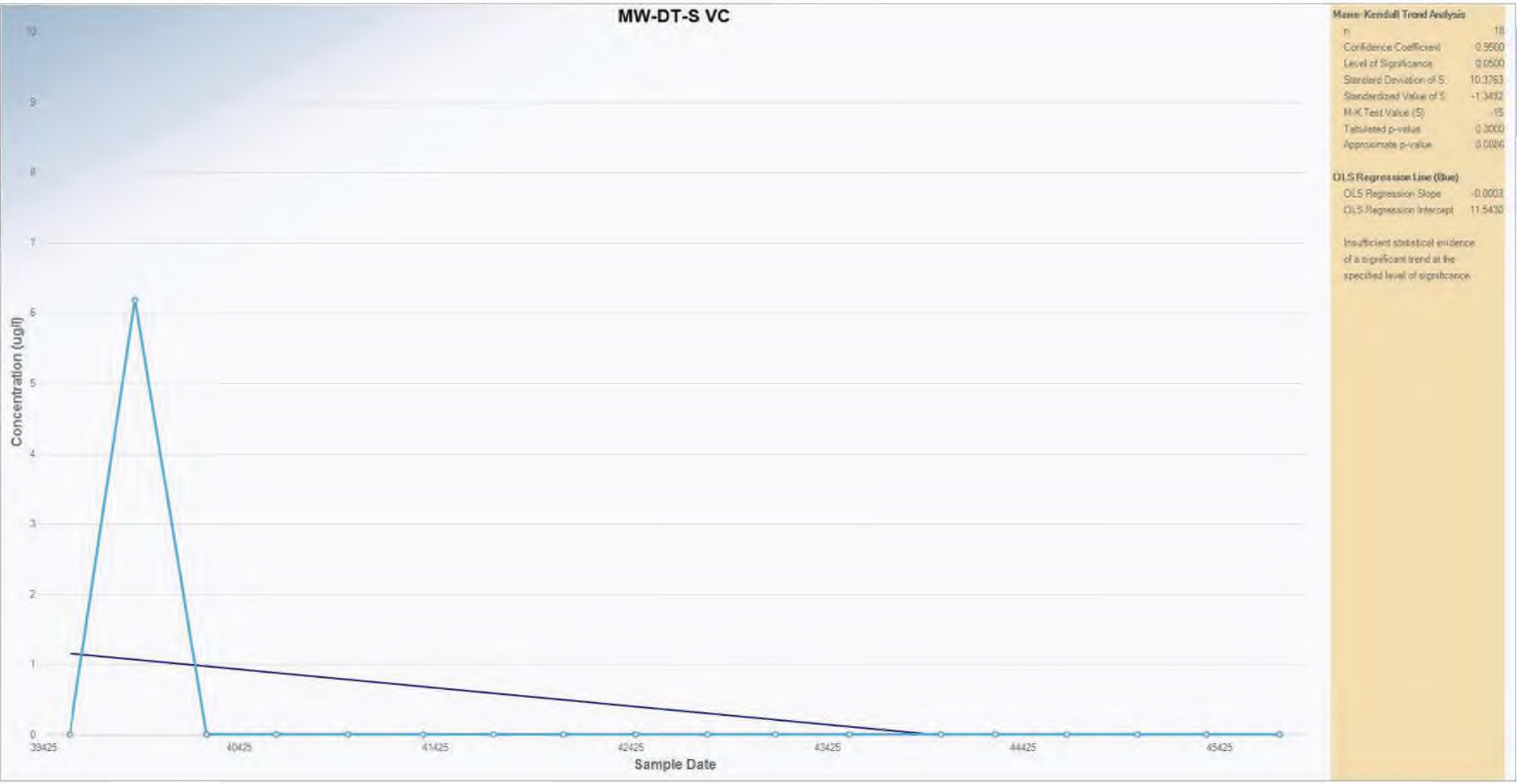

MW-DS-I c-DCE
Concentration (ug/l)
100
90
80
70
60
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3312
Standardized Value of S -1.1014
M-K Test Value (S) -30
Tabulated p-value 0.1300
Approximate p-value 0.1354
OLS Regression Line (Blue)
OLS Regression Slope -0.0007
OLS Regression Intercept 41.2149
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

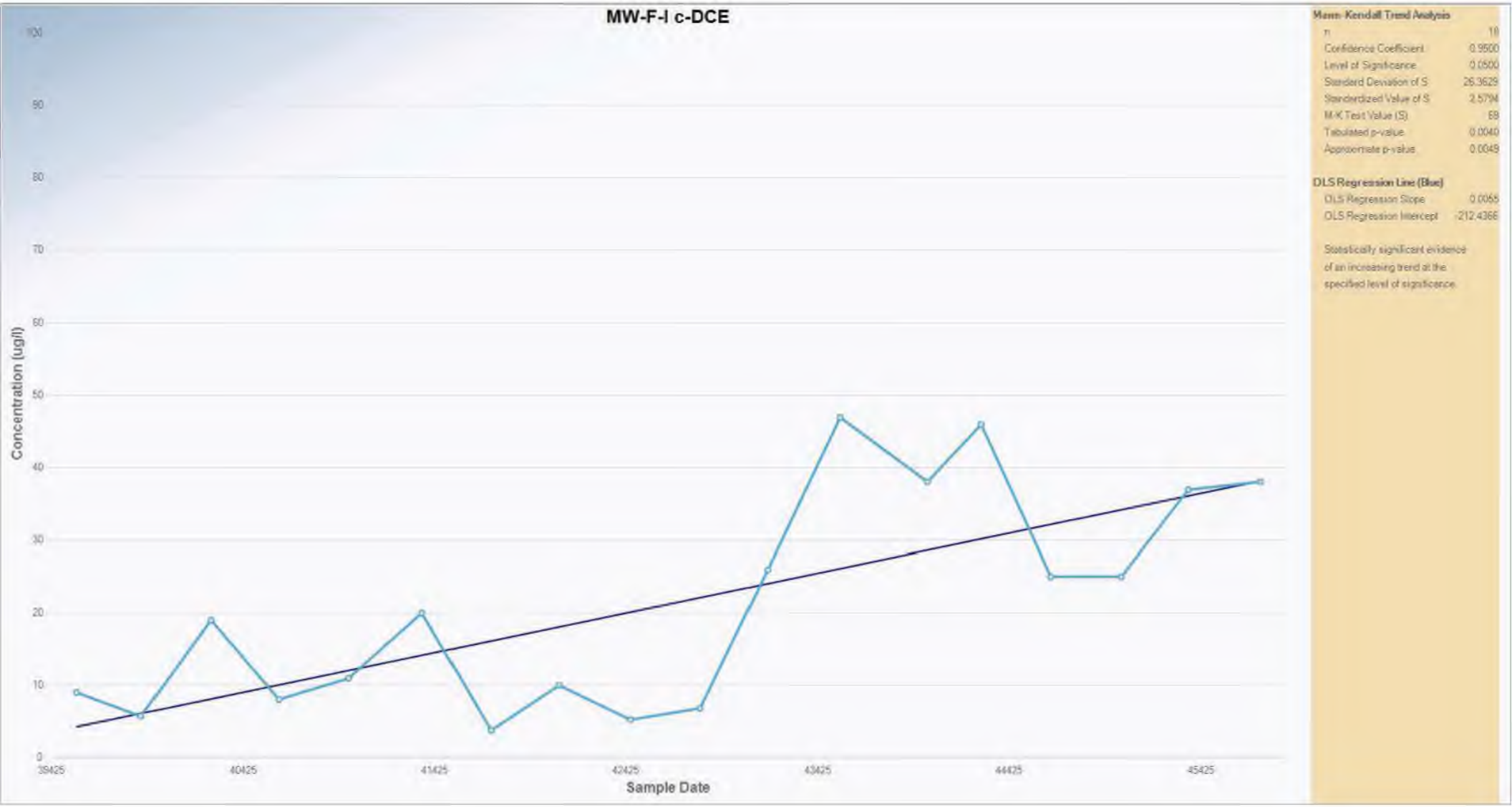

MW-DS-I TCE
Concentration (ug/l)
100
90
80
70
60
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.2742
Standardized Value of S -1.5985
M-K Test Value (S) -43
Tabulated p-value 0.0560
Approximate p-value 0.0550
OLS Regression Line (Blue)
OLS Regression Slope -0.0030
OLS Regression Intercept 146.9688
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

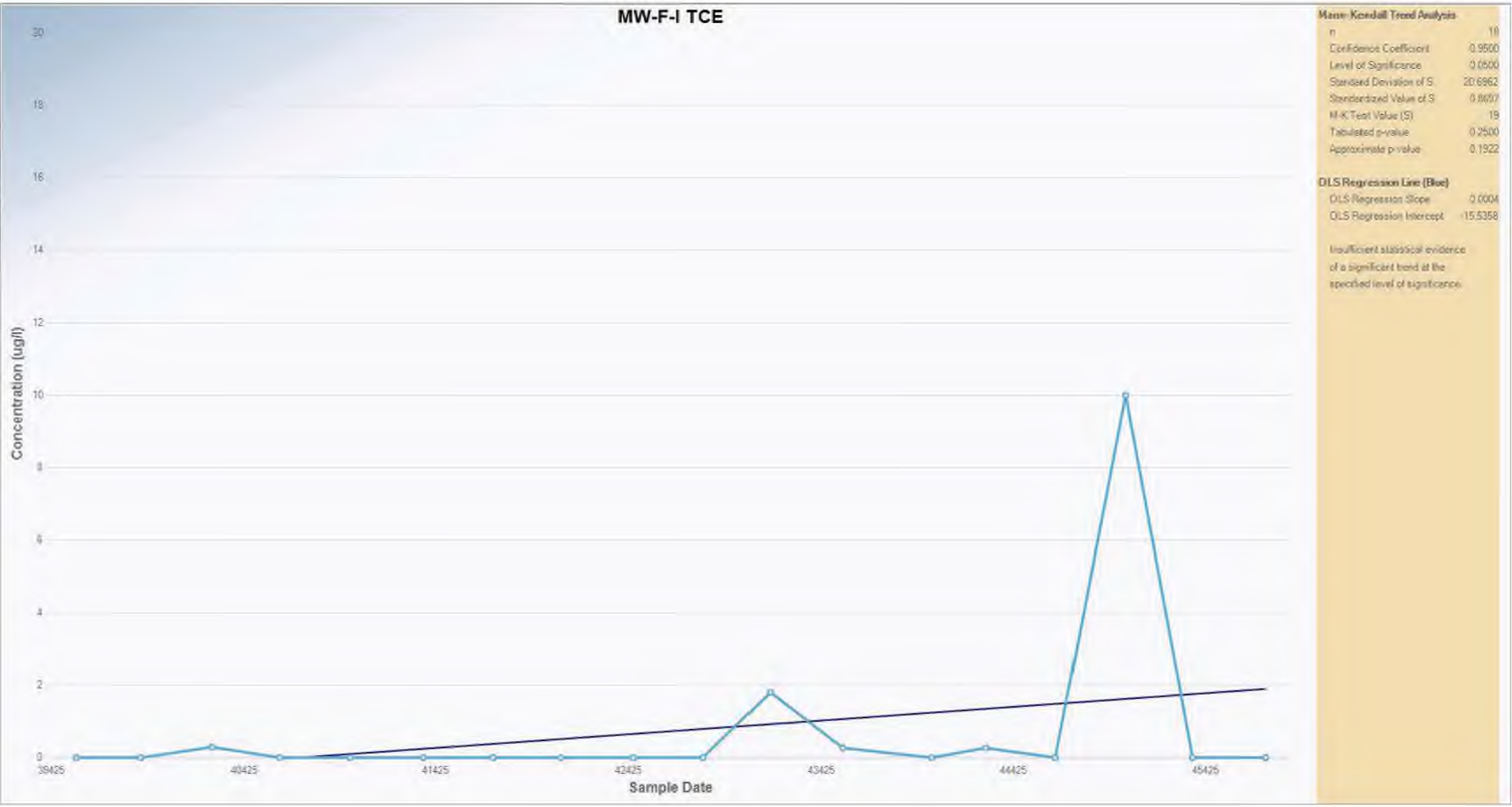

MW-DS-I VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 18
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

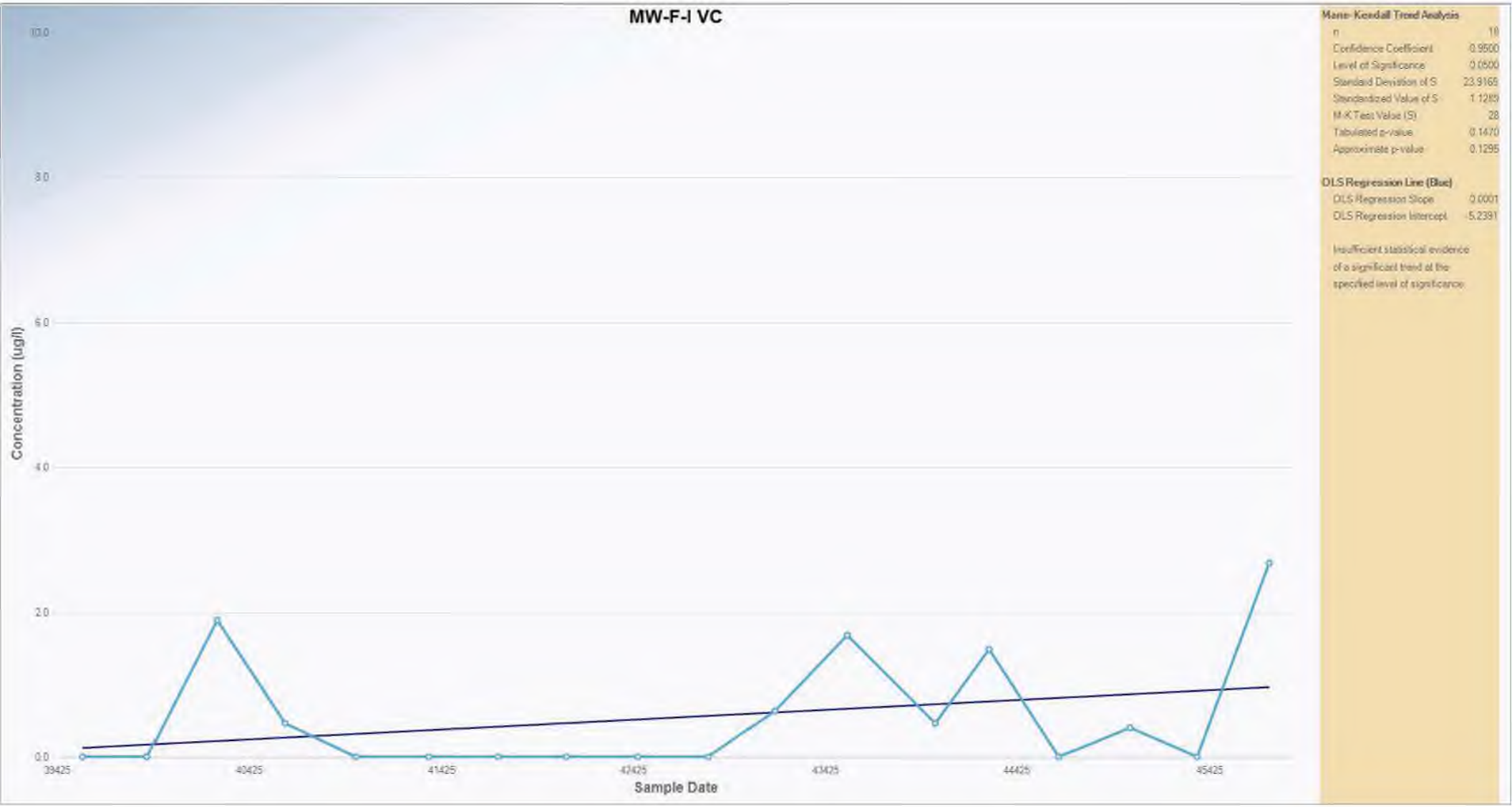

MW-DT-S c-DCE
Concentration (ug/l)
100
90
80
70
60
50
40
30
20
10
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.5967
Standardized Value of S -2.1141
M-K Test Value (S) -53
Tabulated p-value 0.0240
Approximate p-value 0.0173
OLS Regression Line (Blue)
OLS Regression Slope -0.0051
OLS Regression Intercept 228.1684
Statistically significant evidence of a decreasing trend at the specified level of significance

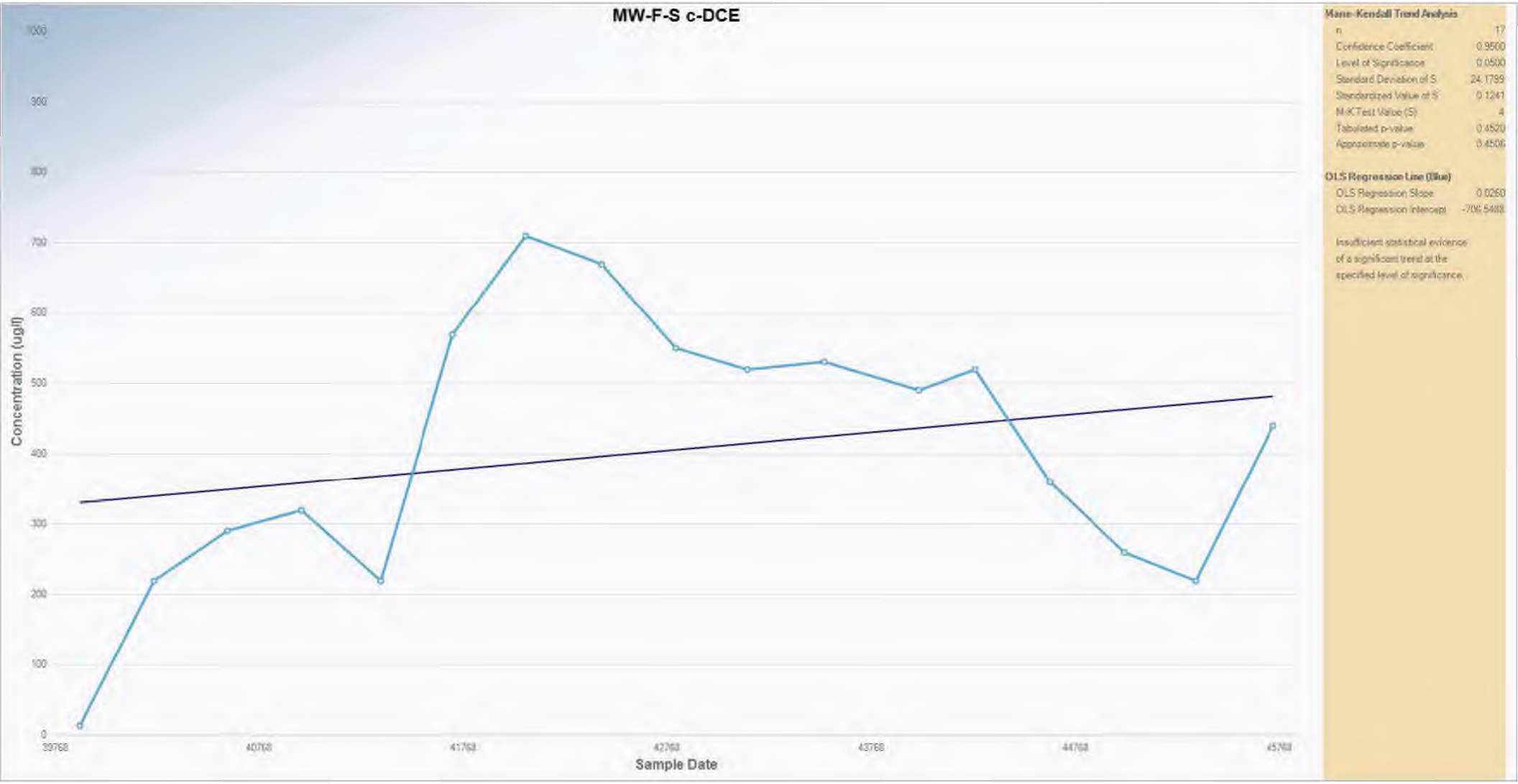

MW-DT-S TCE
Concentration (ug/l)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.2932
Standardized Value of S -0.4194
M-K Test Value (S) -12
Tabulated p-value 0.3270
Approximate p-value 0.3378
OLS Regression Line (Blue)
OLS Regression Slope -0.0140
OLS Regression Intercept 1,449.3285
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

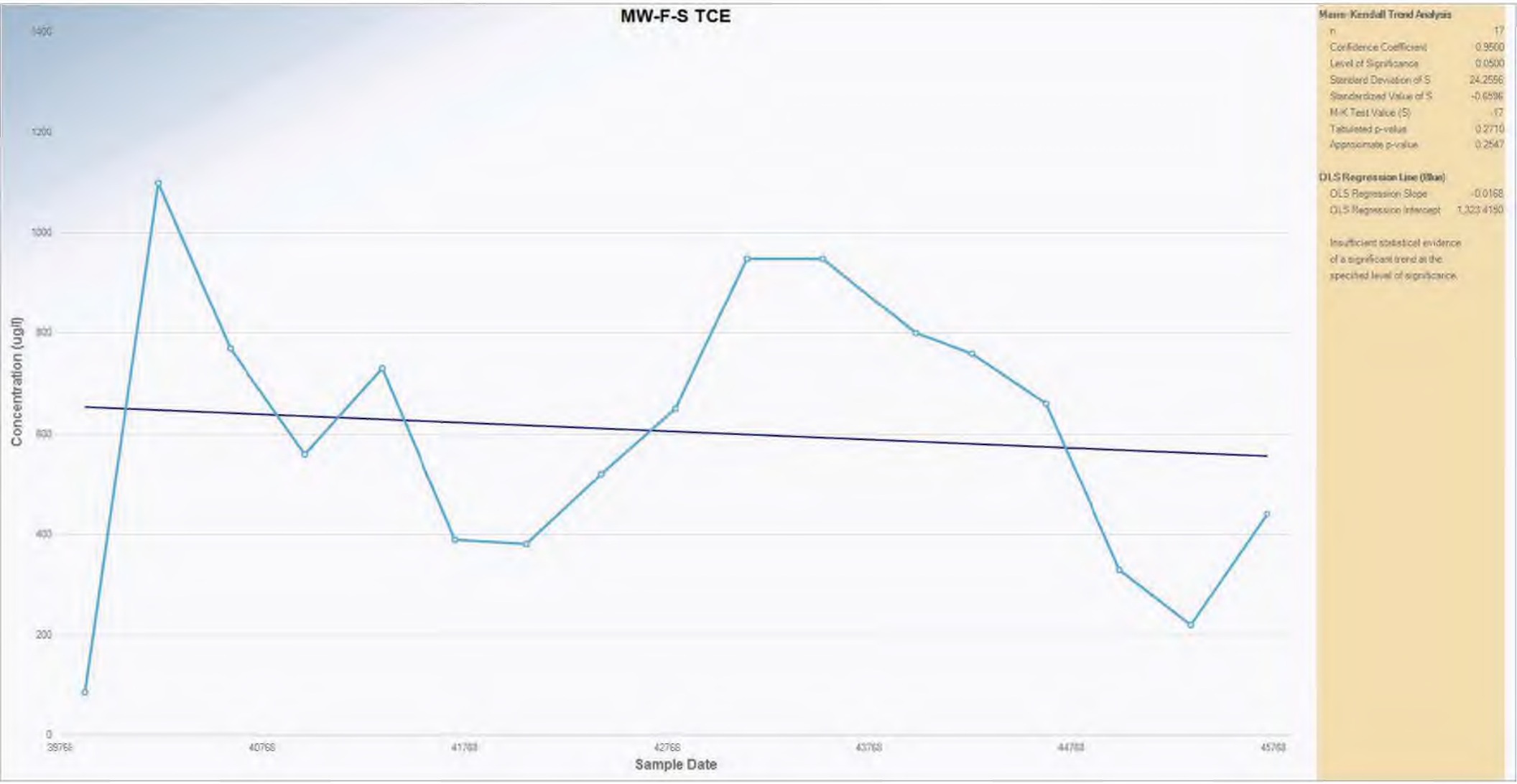

MW-DT-S VC
Concentration (ug/l)
Sample Date
0
1
2
3
4
5
6
7
8
9
10
39425
40425
41425
42425
43425
44425
45425
Mann-Kendall Trend Analysis
n 18
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 10.3763
Standardized Value of S -1.3492
M-K Test Value (S) -15
Tabulated p-value 0.3000
Approximate p-value 0.0886
OLS Regression Line (Blue)
OLS Regression Slope -0.0003
OLS Regression Intercept 11.5430
Insufficient statistical evidence of a significant trend at the specified level of significance.

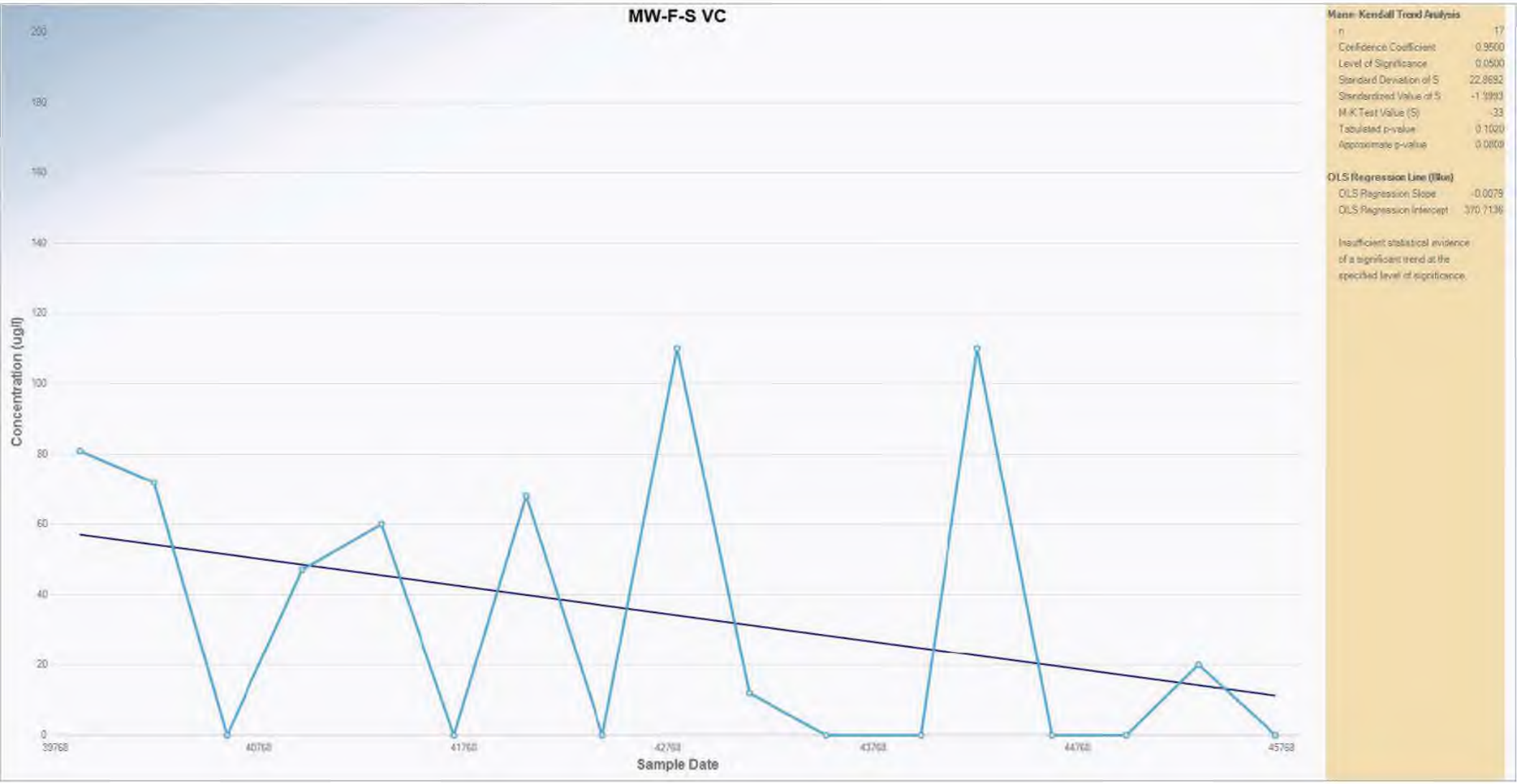

MW-F-I c-DCE
Concentration (ug/l)
Sample Date
0
10
20
30
40
50
60
70
80
90
100
39425
40425
41425
42425
43425
44425
45425
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3629
Standardized Value of S 2.5794
M-K Test Value (S) 69
Tabulated p-value 0.0040
Approximate p-value 0.0049
OLS Regression Line (Blue)
OLS Regression Slope 0.0055
OLS Regression Intercept -212.4366
Statistically significant evidence of an increasing trend at the specified level of significance.


MW-F-I TCE
Concentration (ug/l)
Sample Date
0
2
4
6
8
10
12
14
16
18
20
39425
40425
41425
42425
43425
44425
45425
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 20.6962
Standardized Value of S 0.8657
M-K Test Value (S) 19
Tabulated p-value 0.2500
Approximate p-value 0.1922
OLS Regression Line (Blue)
OLS Regression Slope 0.0004
OLS Regression Intercept -15.5358
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-F-I VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 23.9165
Standardized Value of S 1.1285
M-K Test Value (S) 28
Tabulated p-value 0.1470
Approximate p-value 0.1295
OLS Regression Line (Blue)
OLS Regression Slope 0.0001
OLS Regression Intercept -5.2391
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-F-S c-DCE
Concentration (ug/l)
1000
900
800
700
600
500
400
300
200
100
0
39768
40768
41768
42768
43768
44768
45768
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.1799
Standardized Value of S 0.1241
M-K Test Value (S) 4
Tabulated p-value 0.4520
Approximate p-value 0.4506
OLS Regression Line (Blue)
OLS Regression Slope 0.0260
OLS Regression Intercept -706.5469
Insufficient statistical evidence of a significant trend at the specified level of significance.

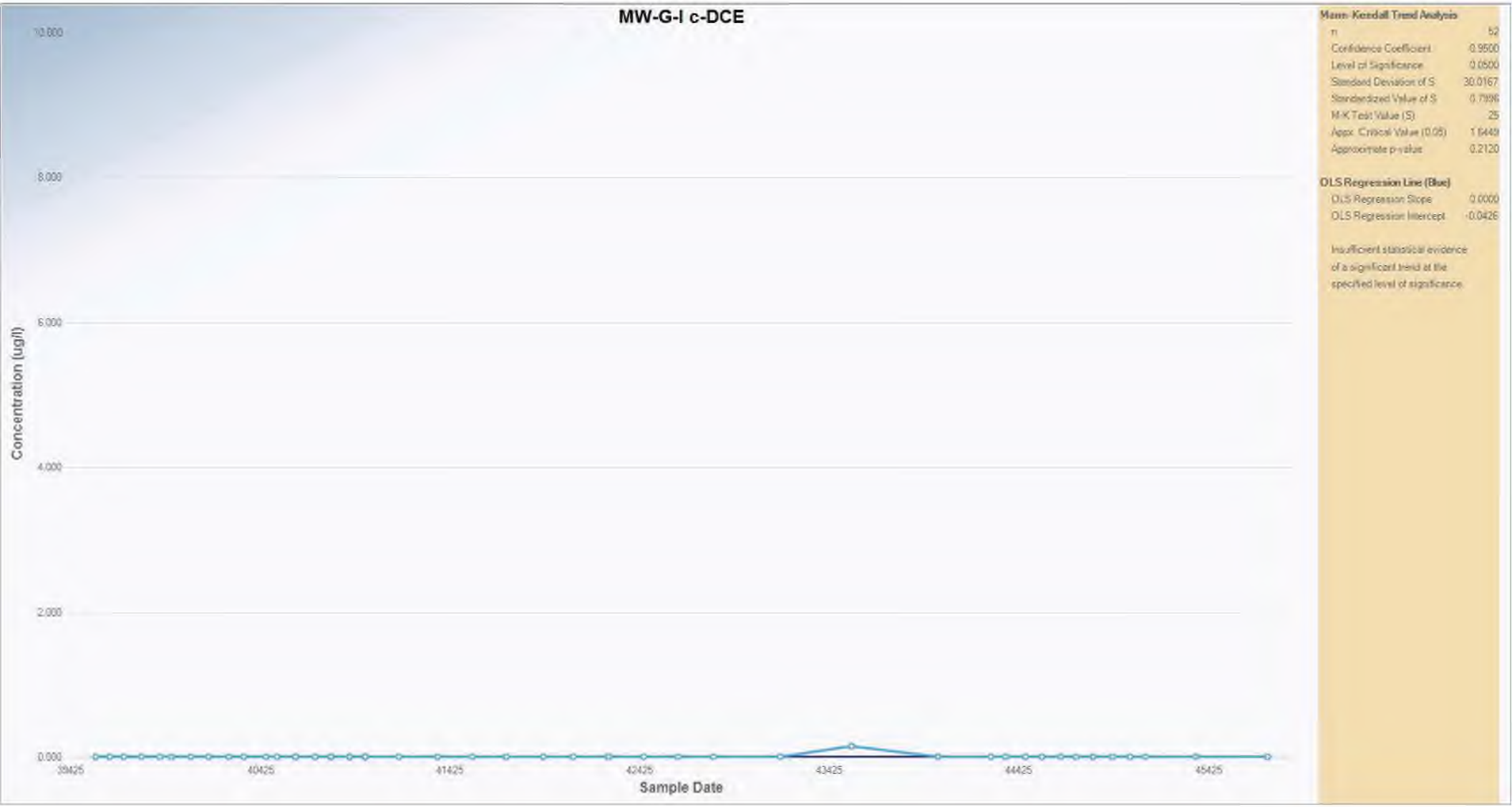

MW-F-S TCE
1400
1200
1000
800
600
400
200
0
Concentration (ug/l)
39768
40768
41768
42768
43768
44768
45768
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 24.2556
Standardized Value of S -0.6596
M-K Test Value (S) -17
Tabulated p-value 0.2710
Approximate p-value 0.2547
OLS Regression Line (Illus)
OLS Regression Slope -0.0168
OLS Regression Intercept 1,323.4190
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

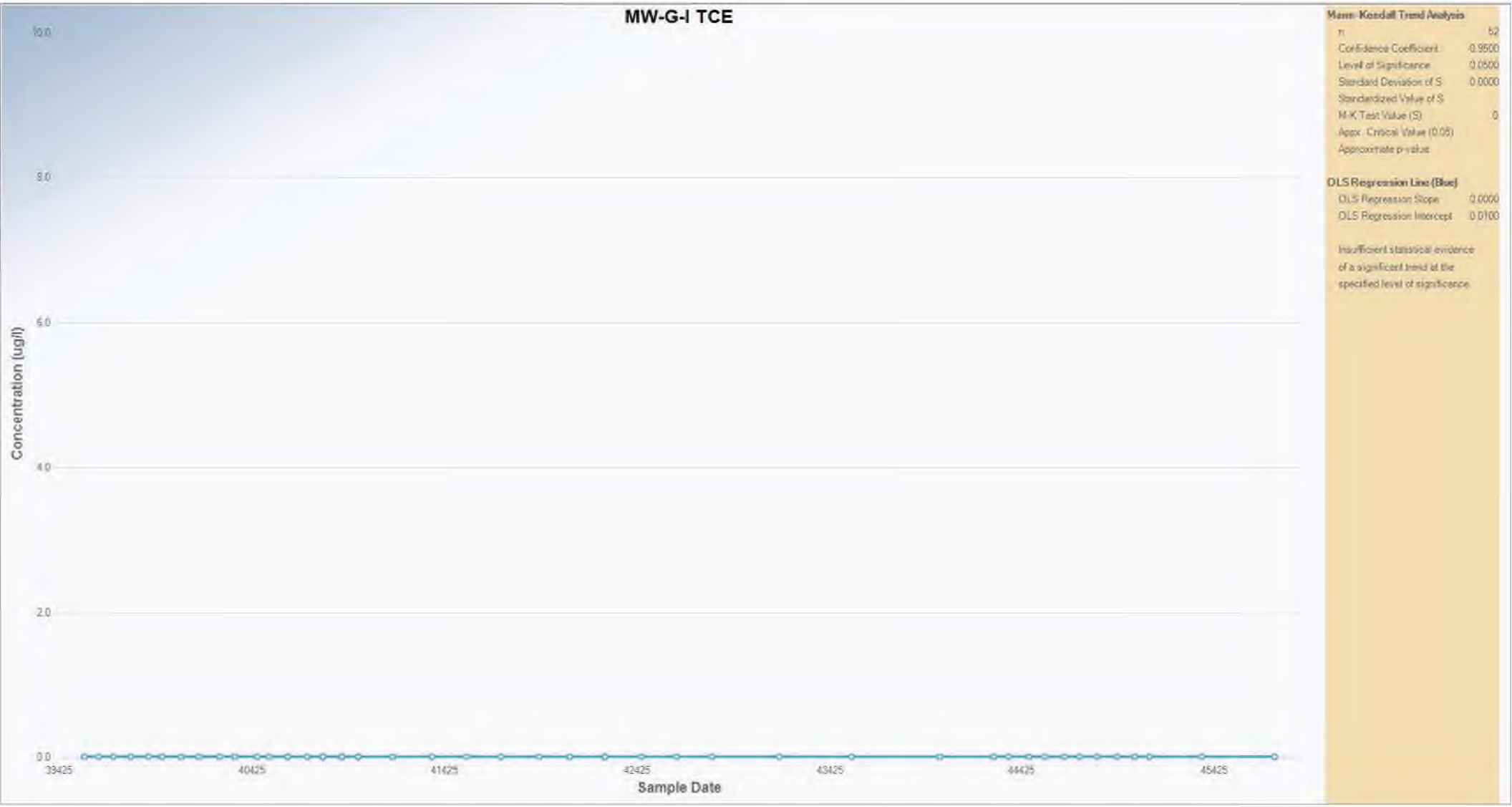

MW-F-S VC
Concentration (ug/l)
200
180
160
140
120
100
80
60
40
20
0
39768
40768
41768
42768
43768
44768
45768
Sample Date
Mann-Kendall Trend Analysis
n 17
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 22.8692
Standardized Value of S -1.9993
M-K Test Value (S) -33
Tabulated p-value 0.1020
Approximate p-value 0.0809
OLS Regression Line (Blue)
OLS Regression Slope -0.0079
OLS Regression Intercept 370.7136
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

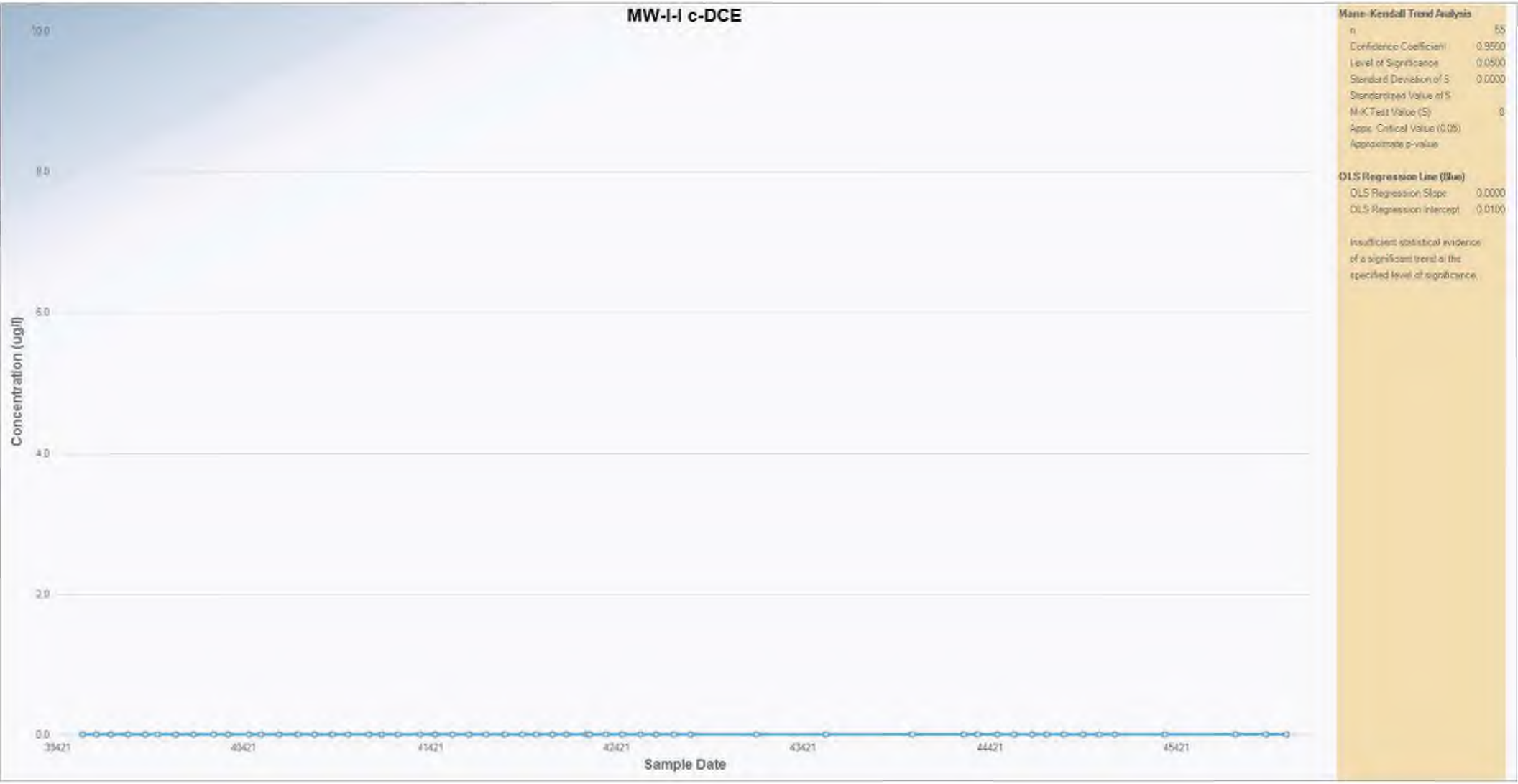

MW-GA-S c-DCE
Concentration (ug/l)
500
450
400
350
300
250
200
150
100
50
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 21
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 32.9393
Standardized Value of S -1.5797
M-K Test Value (S) -53
Tabulated p-value 0.0620
Approximate p-value 0.0572
OLS Regression Line (Blue)
OLS Regression Slope -0.0113
OLS Regression Intercept 634.4678
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

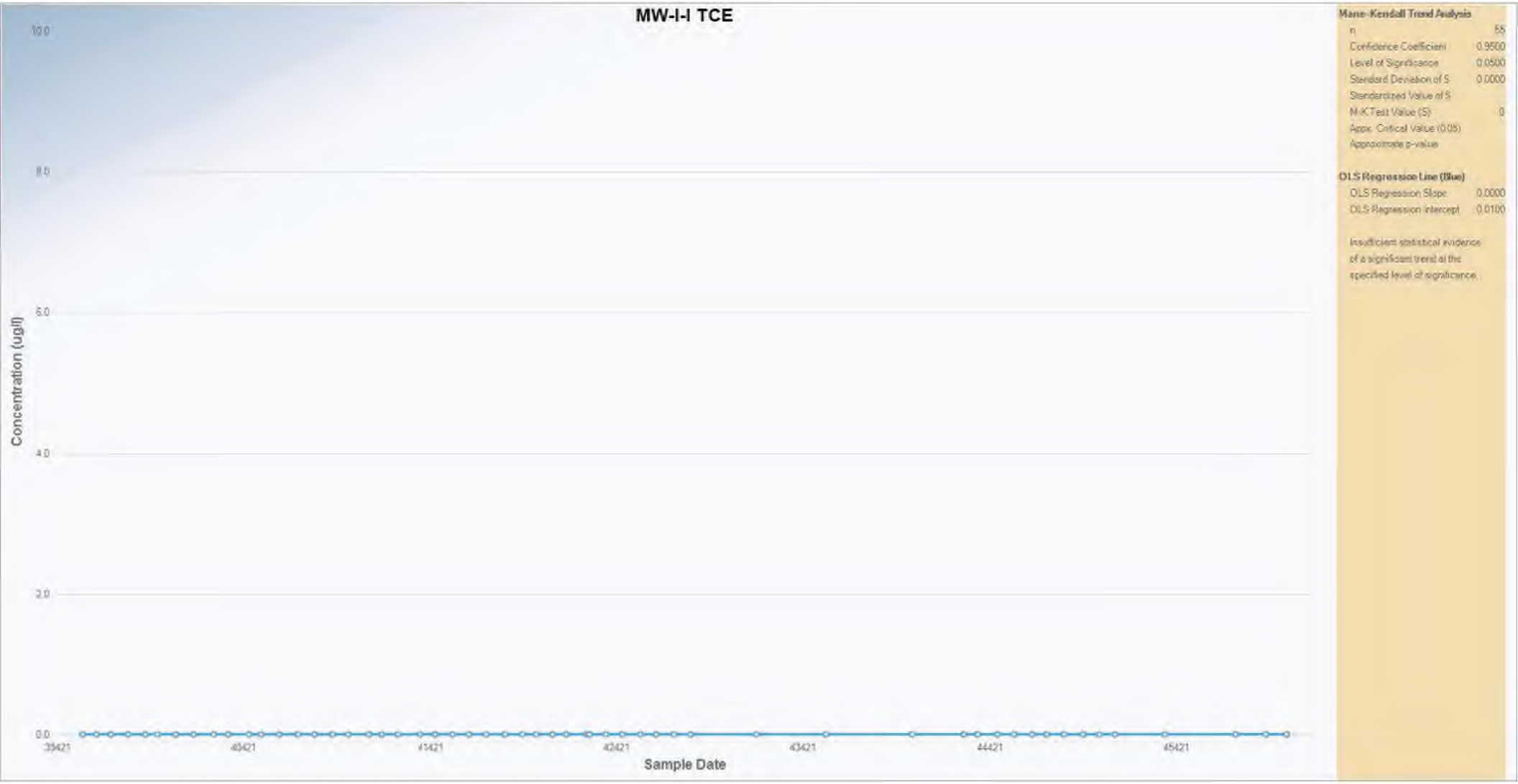

MW-GA-S TCE
Concentration (ug/l)
1000
900
800
700
600
500
400
300
200
100
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 21
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 33.0000
Standardized Value of S -1.5152
M-K Test Value (S) -51
Tabulated p-value 0.0700
Approximate p-value 0.0649
OLS Regression Line (Blue)
OLS Regression Slope -0.0269
OLS Regression Intercept 1,478.4165
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

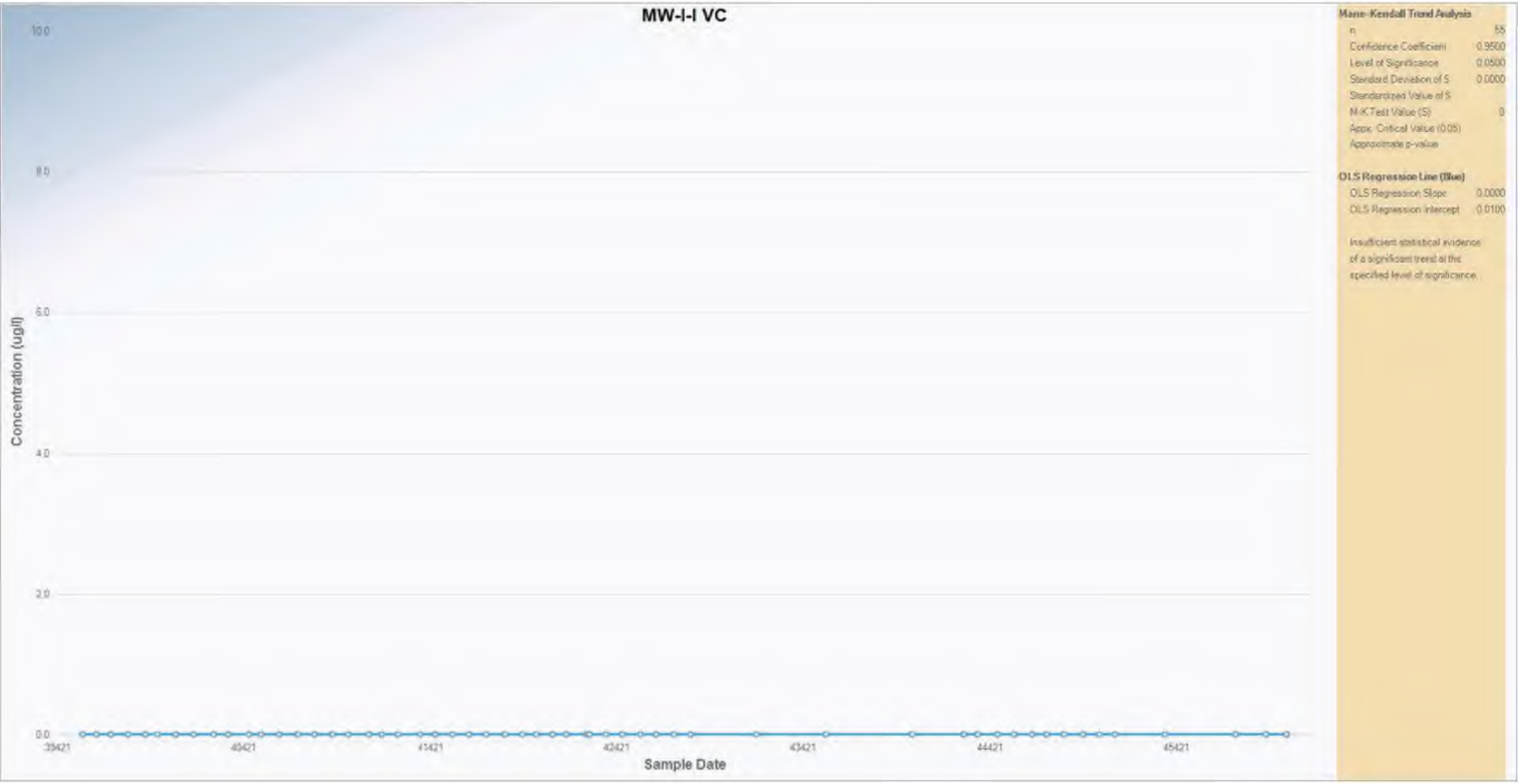

MW-GA-S VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 21
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 22.5241
Standardized Value of S 0.0444
M-K Test Value (S) 2
Tabulated p-value 0.4880
Approximate p-value 0.4823
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -1.3939
Insufficient statistical evidence of a significant trend at the specified level of significance.

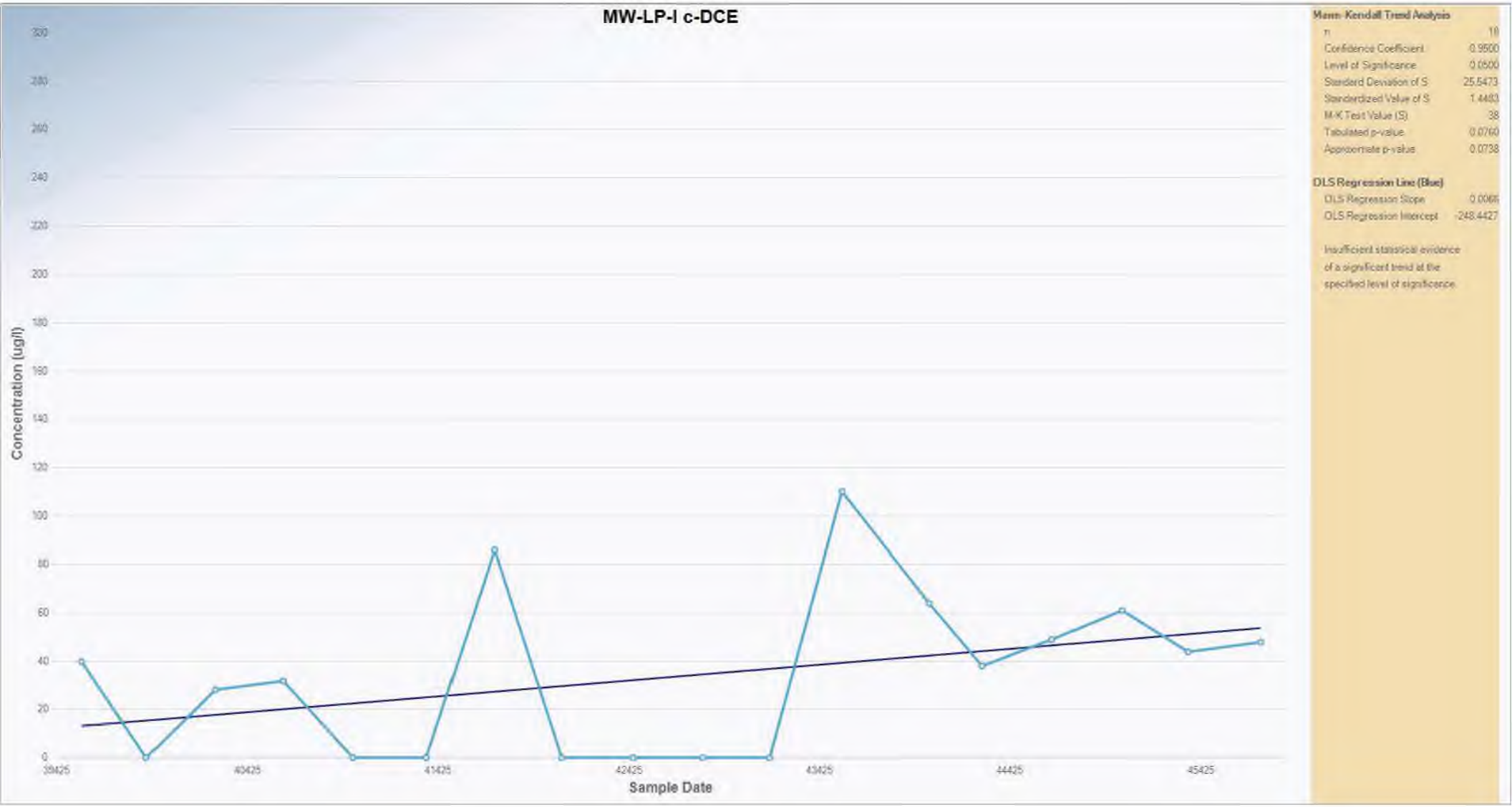

MW-G-I c-DCE
10.000
8.000
6.000
4.000
2.000
0.000
Concentration (ug/l)
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 52
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 30.0167
Standardized Value of S 0.7996
M-K Test Value (S) 25
Appx. Critical Value (0.05) 1.6449
Approximate p-value 0.2120
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept -0.0426
Insufficient statistical evidence
of a significant trend at the
specified level of significance.

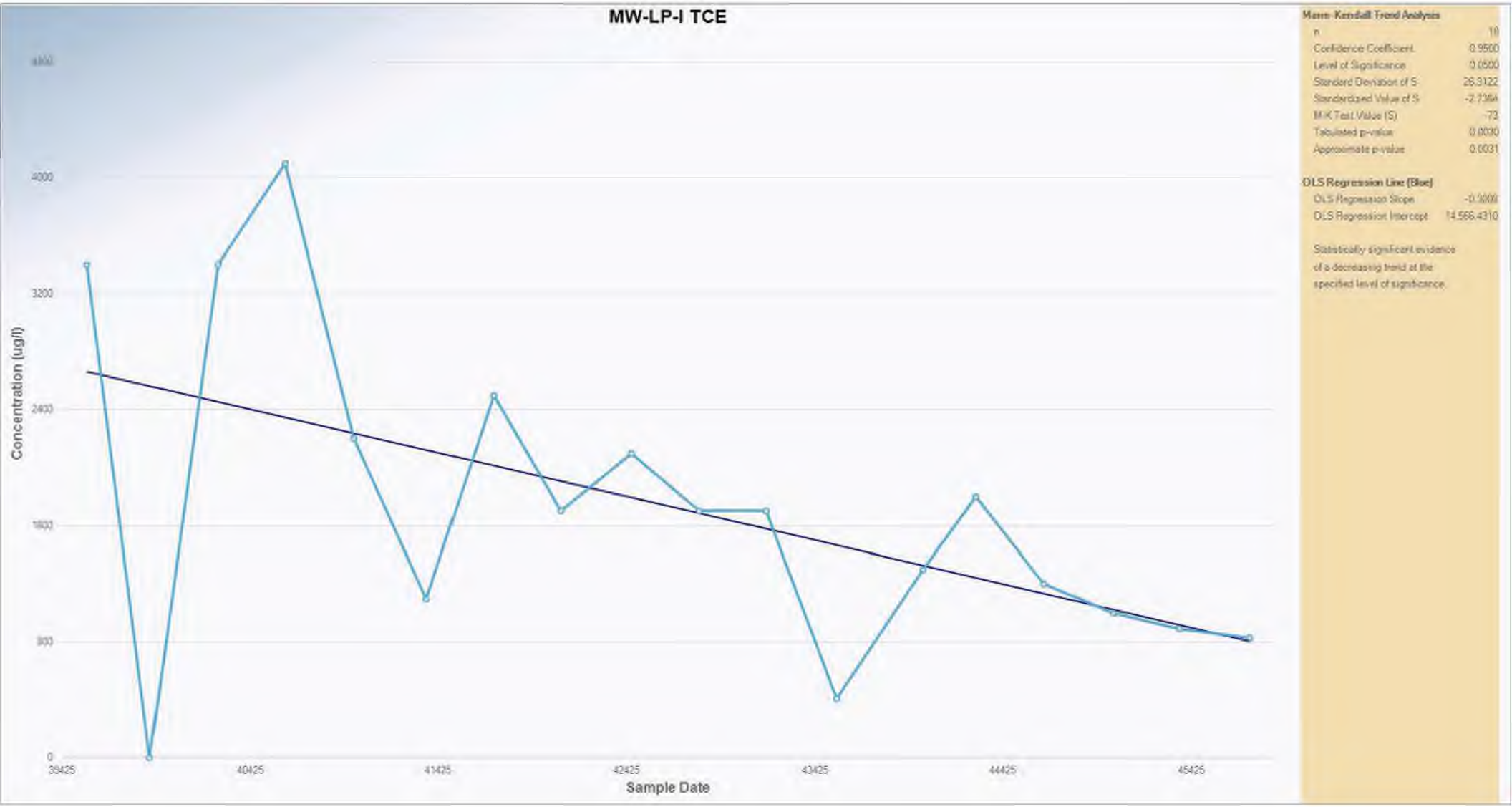

MW-G-I TCE
Mann-Kendall Trend Analysis
n 52
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39425
40425
41425
42425
43425
44425
45425
Sample Date

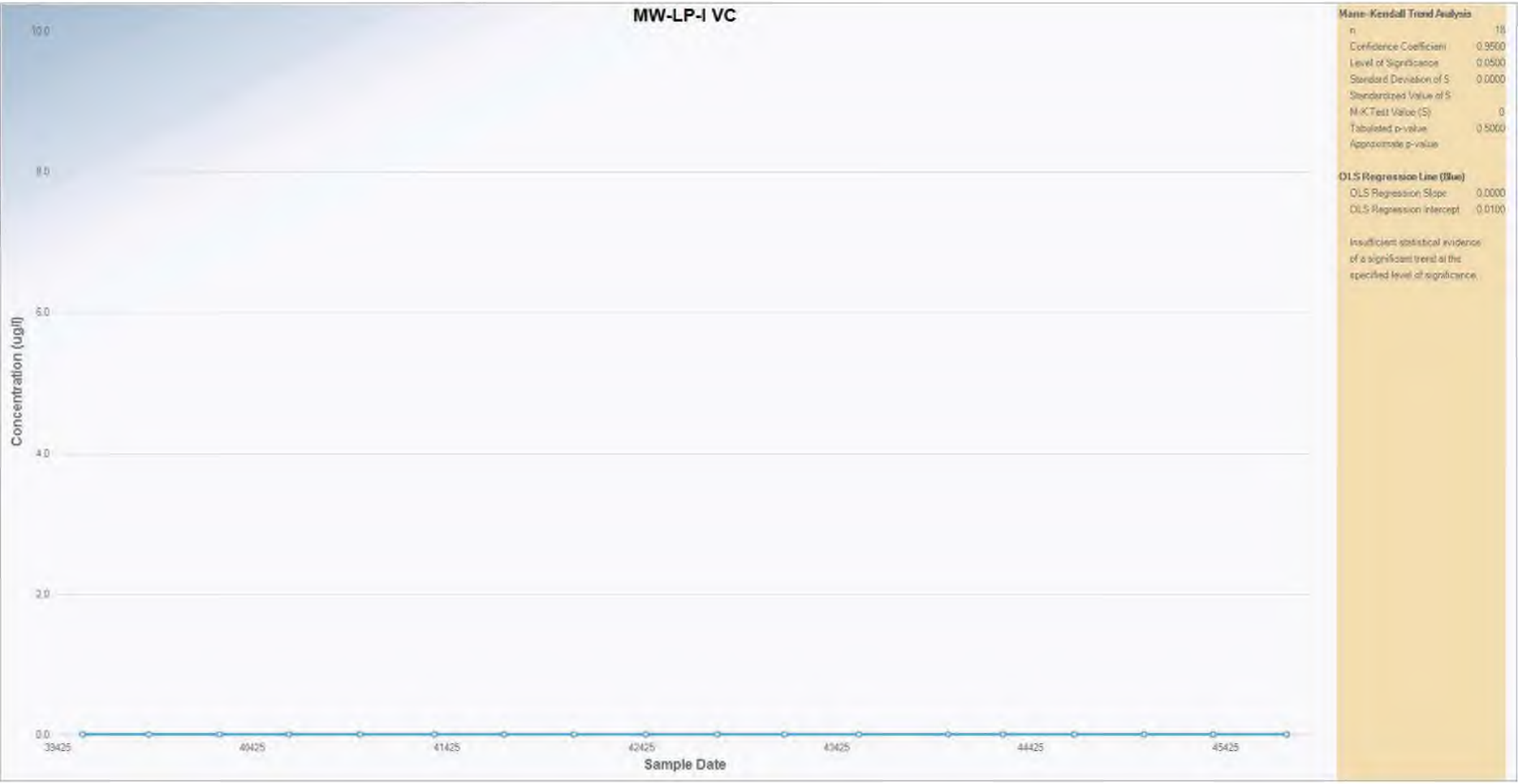

MW-I-I c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 55
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

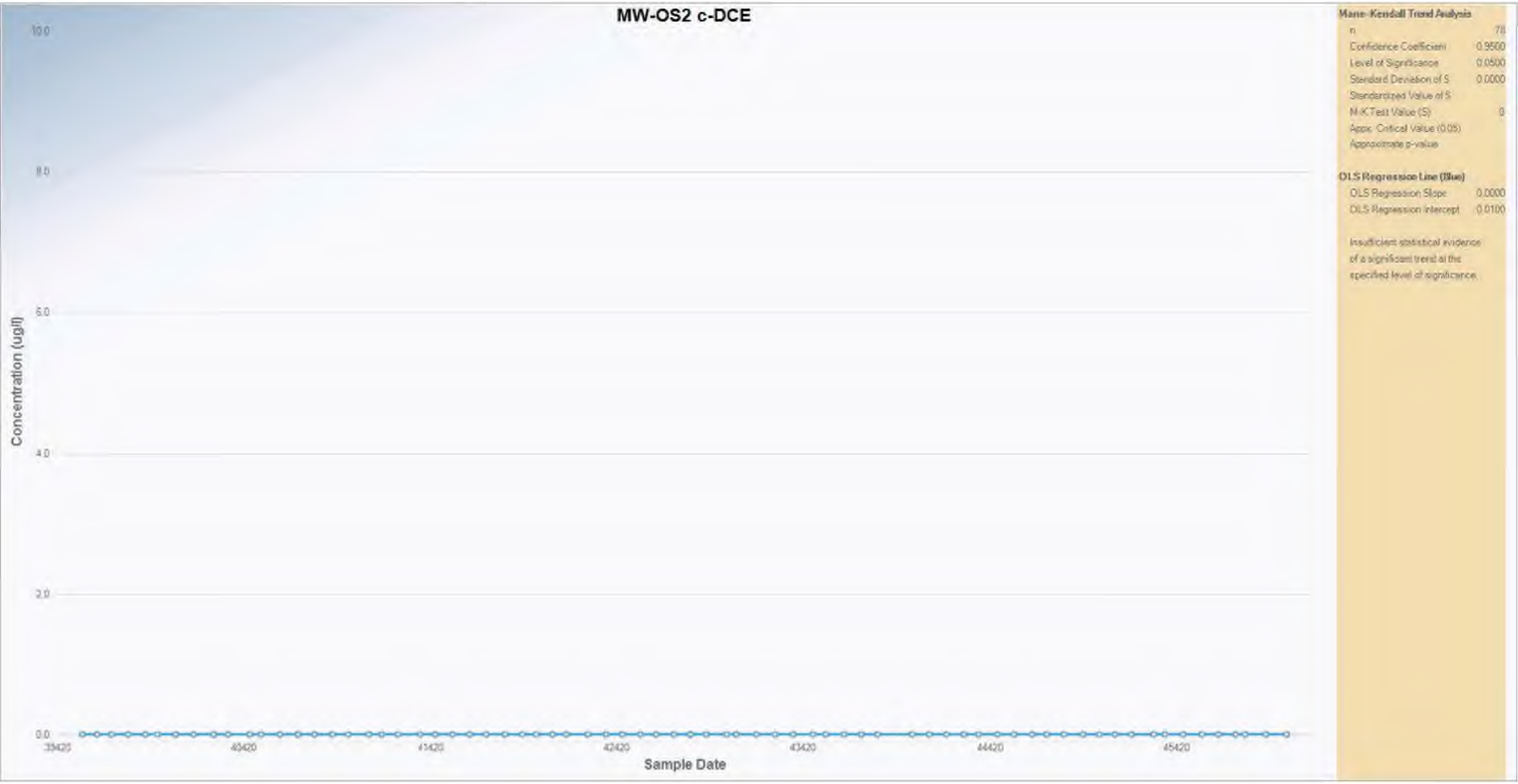

MW-I-I TCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 55
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

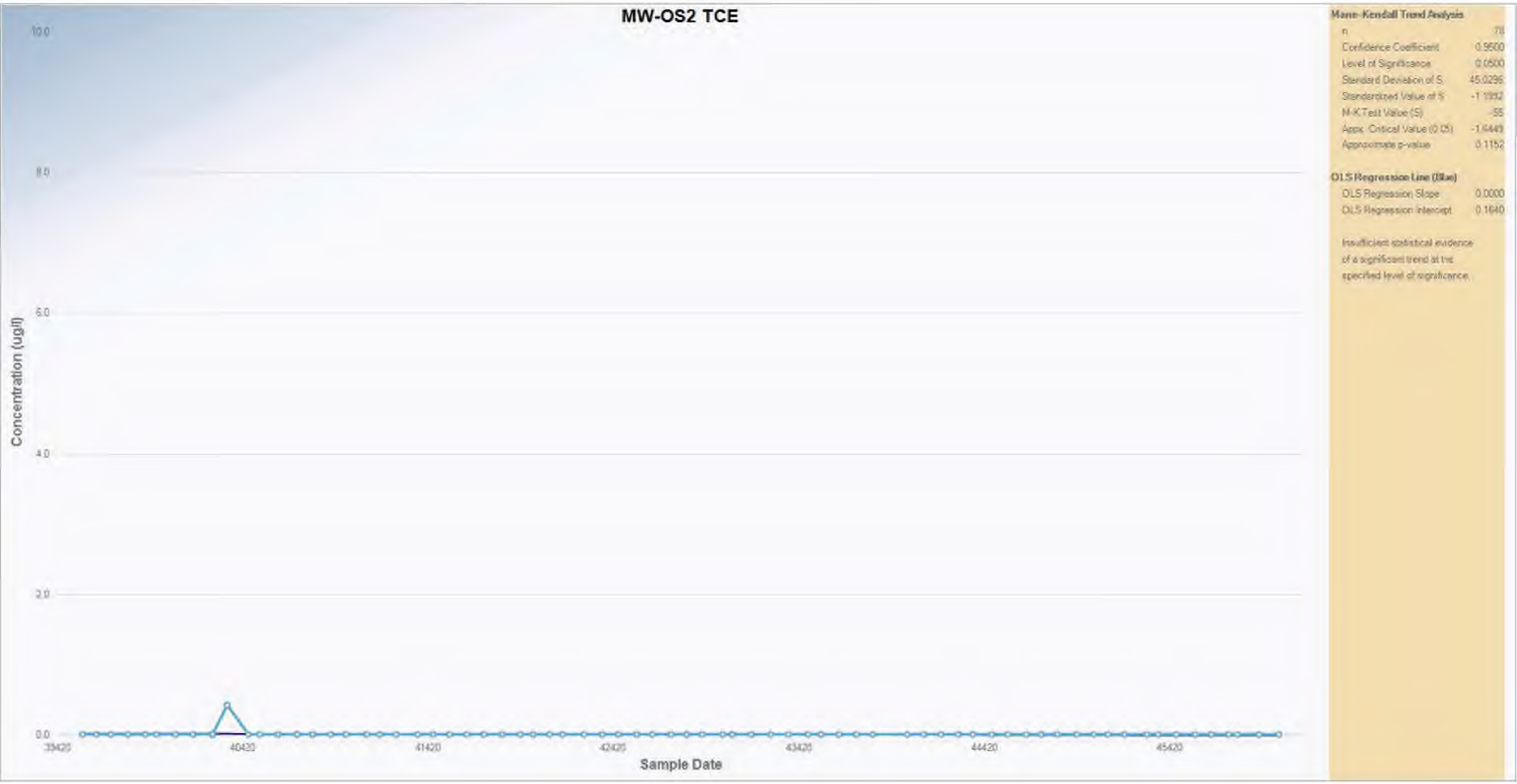

MW-I-I VC
10.0
8.0
6.0
4.0
2.0
0.0
Concentration (ug/l)
39421
40421
41421
42421
43421
44421
45421
Sample Date
Mann-Kendall Trend Analysis
n 55
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.

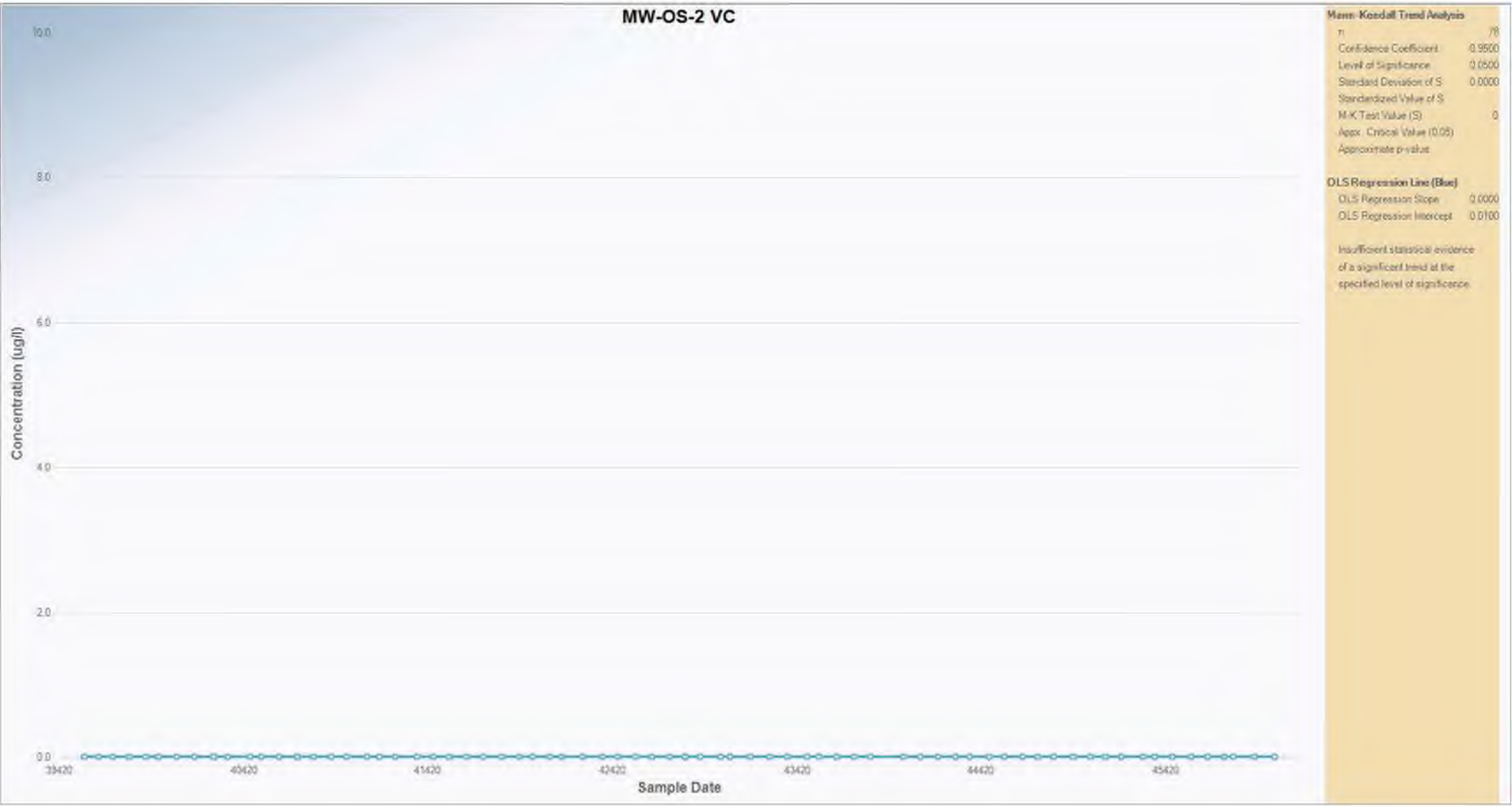

MW-LP-I c-DCE
Concentration (ug/l)
Sample Date
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
39425
40425
41425
42425
43425
44425
45425
Mann-Kendall Trend Analysis
n 19
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 25.5473
Standardized Value of S 1.4493
M-K Test Value (S) 38
Tabulated p-value 0.0760
Approximate p-value 0.0738
OLS Regression Line (Blue)
OLS Regression Slope 0.0065
OLS Regression Intercept -248.4427
Insufficient statistical evidence
of a significant trend at the
specified level of significance.


MW-LP-I TCE
Concentration (ug/l)
4800
4000
3200
2400
1600
800
0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 10
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 26.3122
Standardized Value of S -2.7364
M-K Test Value (S) -73
Tabulated p-value 0.0030
Approximate p-value 0.0031
OLS Regression Line (Blue)
OLS Regression Slope -0.3000
OLS Regression Intercept 14,566.4310
Statistically significant evidence
of a decreasing trend at the
specified level of significance


MW-LP-I VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39425
40425
41425
42425
43425
44425
45425
Sample Date
Mann-Kendall Trend Analysis
n 18
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Tabulated p-value 0.5000
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.


MW-OS2 c-DCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 78
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.


MW-OS2 TCE
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 78
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 45.0296
Standardized Value of S -1.1992
M-K Test Value (S) -55
Appx. Critical Value (0.05) -1.6449
Approximate p-value 0.1152
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.1640
Insufficient statistical evidence of a significant trend at the specified level of significance.


MW-OS-2 VC
Concentration (ug/l)
10.0
8.0
6.0
4.0
2.0
0.0
39420
40420
41420
42420
43420
44420
45420
Sample Date
Mann-Kendall Trend Analysis
n 78
Confidence Coefficient 0.9500
Level of Significance 0.0500
Standard Deviation of S 0.0000
Standardized Value of S
M-K Test Value (S) 0
Appx. Critical Value (0.05)
Approximate p-value
OLS Regression Line (Blue)
OLS Regression Slope 0.0000
OLS Regression Intercept 0.0100
Insufficient statistical evidence of a significant trend at the specified level of significance.