ROD AND WIRE MILL INTERIM MEASURE 2021 PROGRESS REPORT

TRADEPOINT ATLANTIC SPARROWS POINT, MARYLAND

Prepared for:



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1.0 INTRODUCTION

This Progress Report for the Rod and Wire Mill Interim Measure at the Tradepoint Atlantic property has been prepared by ARM Group LLC (ARM). This report presents:

- a brief history of the Rod and Wire Mill Area (RWM),
- a description of historical interim measures (IMs) that operated at the RWM,
- a description of additional remedial efforts that were completed in 2016 and 2017 to treat soil and groundwater in the RWM area,
- the resulting changes observed in groundwater flow patterns and contaminant distribution, and
- an evaluation of the effectiveness of the interim measure.

1.1. TRADEPOINT ATLANTIC SITE BACKGROUND

The Tradepoint Atlantic property is located in Baltimore County, Maryland at the southeastern corner of the Baltimore metropolitan area, approximately nine miles from the downtown area. The property encompasses approximately 3,100 acres located on a peninsula situated on the Patapsco River near its confluence with the Chesapeake Bay, physically positioned in the mouth of the heavily industrialized and urbanized Baltimore Harbor / Patapsco River region. A land connection to the northeast links the peninsula with the adjacent community of Edgemere.

From the late 1800s until 2012, the property was used for the production and manufacturing of steel. Iron and steel production operations and processes at the Site included raw material handling, coke production, sinter production, iron production, steel production, and semi-finished and finished product preparation. In 1970, Sparrows Point was the largest steel facility in the United States, producing hot and cold rolled sheets, coated materials, pipes, plates, and rod and wire. The steelmaking operations at the facility ceased in fall 2012, and current plans for the Site include demolition and redevelopment over the next several years. Some portions of the site have already undergone remediation and/or redevelopment.

The original topography of the peninsula was flat with elevations not exceeding 15 feet based on the North American Vertical Datum 1988 (NAVD88). The peninsula has been significantly altered since the inception of the steel manufacturing activities. Creeks have been filled in and new land has been added to various areas of the Site by building up near-shore areas of the river.

1.2. SITE OWNERSHIP HISTORY

Bethlehem Steel Corporation operated an integrated steelmaking facility at the site from approximately 1916 through 2003. As a result of multiple market factors, Bethlehem Steel declared bankruptcy in 2001 and the facility was subsequently operated by a succession of owners, the last of which (RG Steel Sparrows Point, LLC) filed for bankruptcy in 2012. The site was

subsequently purchased by Sparrows Point, LLC (SPLLC) at a bankruptcy sale on August 7, 2012. Sparrows Point Terminal, LLC (SPT) purchased the real property on September 18, 2014. SPT has subsequently undergone a name change and is now doing business as Tradepoint Atlantic.

1.3. REGULATORY PROCESS

Environmental responses for the RWM and for the site in general are being implemented pursuant to the following:

- Multi-Media Consent Decree (Decree) between Bethlehem Steel Corporation, the United States Environmental Protection Agency (EPA), and the Maryland Department of the Environment (MDE) (effective October 8, 1997); this Decree has been modified in accordance with a stipulated order entered into by Sparrows Point LLC and the respective agencies effective July 28, 2014;
- Administrative Consent Order (ACO) between Sparrows Point Terminal, LLC and the Maryland Department of the Environment (effective September 12, 2014); and,
- Settlement Agreement and Covenant Not to Sue (SA) between Sparrows Point Terminal, LLC and the United States Environmental Protection Agency (effective November 25, 2014).

The original Consent Decree for the Sparrows Point facility dealt with many issues associated with ongoing iron-making, steel-making, coking, byproduct, plating, and finishing operations. To the extent that these operations are no longer conducted, and the associated facilities no longer exist, many specific requirements of the Decree are no longer applicable and have been removed in accordance with the stipulated order implementing modifications to the Decree. The RWM is part of the acreage that remains subject to the requirements of the Decree as documented in correspondence received from EPA on September 12, 2014.

2.0 ROD AND WIRE MILL

2.1. SITE DESCRIPTION

2.1.1. Historical RWM Industrial Activities

The RWM (the Site) is located in the northwestern portion of the Tradepoint Atlantic property. This area has also been given the designation of Parcel A3, as the Tradepoint Atlantic property as a whole has been divided into several separate parcels. Parcel A3 (the RWM), is shown on **Figure 1.**

The RWM is the location of the former mill that produced rods and wire products from the 1940s to the early 1980s. All manufacturing activities at the RWM ceased operation in the early 1980s with subsequent demolition of all structures between 1994 and 2000, based on historical aerial photos.

Manufacturing activities at the RWM included leaching of zinc ore and a subsequent treatment process to remove cadmium impurities. The leaching process was implemented in large tanks located inside the north end of the former RWM building. From the 1950s, the acidic leach residue was stored in the Northwest Pond until about 1959 when filters were utilized to dewater the residues. Dewatered sludge generated from this process was temporarily stored on the ground outside the north end of the mill in the Former Sludge Bin Storage Area. Filtrate from the dewatering process was recycled to the wire plating process. Excess filtrate was discharged to the East Pond until 1971, after which it was sent to the Humphrey Creek Wastewater Treatment Plant (HCWWTP) for treatment. These operations ended in the early 1980s when the Rod and Wire Mill was shut down. The former locations of the Northwest Pond, the Sludge Bin Storage Area, and the East Pond are shown on **Figure 2**.

2.1.2. Site Geology/Hydrogeology

In general, the subsurface geology at the RWM includes slag fill materials overlying natural soils, which include fine-grained sediments (clays and silts) and coarse-grained sediments (sands). Groundwater occurrence at the Site has been segregated into three horizons identified as shallow, intermediate and deep hydrogeologic zones.

The shallow hydrogeologic zone includes recent sedimentary deposits or slag fill material and the unconfined water table at the Site. Monitoring wells and piezometers designated as shallow are screened within this uppermost, unconfined water bearing unit. The "shallow" bottom-of-screen elevations generally range from +5 to -20 feet above mean sea level (amsl). In some areas of the Site, the slag fill is directly underlain by and hydrologically connected to, the coarser-grained beds or lenses within the Talbot Formation that comprise the Upper Talbot Channel Unit. In these areas, the slag fill and Upper Talbot Channel Units form a single groundwater flow system. In much of

the investigation area, the slag fill material is underlain by finer-grained silts and clays that comprise the Talbot Clay Aquitard. In these areas, shallow groundwater flow may be separated from groundwater in any underlying coarse-grained beds or lenses.

The intermediate hydrogeologic zone was the focus of the pump and treat interim measure formerly used at the Site and is therefore also referred to as the intermediate pumping zone. The intermediate zone includes the unconfined to partially confined groundwater in the Pleistoceneaged Upper Talbot unit. The "intermediate" bottom-of-screen elevations range from approximately -20 to -50 feet amsl. The presence of clay and silt layers within the intermediate hydrogeologic zone likely retard the vertical recharge of groundwater from the upper fill material and Upper Talbot channel Unit.

The lower hydrogeologic zone includes the confined groundwater in the Lower Talbot or Upper Patapsco Sand unit. The "lower" bottom-of-screen elevations range from approximately -50 to -141 feet amsl. The lower hydrogeologic zone was not a primary focus of this groundwater investigation. Hydrogeologic zones at greater depth are known to exist based on a review of the regional geology; however, these deeper units are isolated from the upper three units and impacts associated with the former iron and steel operations have not been identified.

2.2. HISTORICAL INTERIM MEASURE FOR GROUNDWATER CONDITIONS

The historical operations within the RWM resulted in releases of cadmium and zinc to soil and groundwater. In 1986, a soil and groundwater remediation program was initiated to address groundwater exhibiting elevated levels of cadmium and zinc, as well as residual soil contamination in the Sludge Bin Storage Area. Remediation initially consisted of a soil flushing program and associated pumping and treatment of groundwater from shallow and intermediate wells. The groundwater pumping was discontinued, and the treatment plant was dismantled in 1999 to support the demolition of the Rod and Wire Mill, allowing for reassessment of the interim measure. A Work Plan to re-establish interim measures was submitted to the reviewing agencies (MDE and EPA) in July 2000, and the Work Plan was approved in November 2000. Re-establishment of the interim measures included the following:

- Institutional controls for soils were established to provide a "Restricted Work Area" to control the exposure of onsite workers to soils in the Former Sludge Bin Storage Area.
- A groundwater monitoring network consisting of 31 wells was installed to monitor the performance of the groundwater pump and treat system. This monitoring network was used to collect water level and groundwater quality data.
- A groundwater pump and treat system was operated and maintained, which consisted of two intermediate zone recovery wells (RW10-PZM020 and RW15-PZM020) that removed water at a rate of between 5 and 12 gallons per minute (gpm). The expected normal operating rate for the treatment system was set at a combined rate of 8 to 12 gpm, with a maximum design flow of 25 gpm.

• Recovered groundwater was transported via a pipeline to the HCWWTP for subsequent treatment and discharge in accordance with the NPDES permit requirements for the facility.

The pumping and treatment of groundwater resumed in September 2001, and continued until September 2016, when it was stopped to support the construction activities at the RWM. In particular, the pumping wells and associated pumps, piping, and pipe racks were shut down and removed in order to install the remediation trenches. The remediation trenches were constructed between October and December 2017 (*Interim Measures Construction Report, In-Situ Groundwater Treatment*, Advanced GeoServices Corp, January 2018).

3.0 NEW INTERIM MEASURE AND GROUNDWATER CONDITIONS

3.1. INTERIM MEASURE REMEDIAL APPROACH

EnviroAnalytics Group contracted Advanced GeoServices (AGS) to design and install remediation trenches to serve as the new interim measure for remediating groundwater at the RWM. The full details of the remediation design are presented in the AGS Work Plan, *Interim Measure Work Plan In-Situ Groundwater Treatment* (AGS, 2016). The primary purpose of this new interim measure, which focused on groundwater in the intermediate zone, was to reduce concentrations of dissolved metals and to minimize contaminant discharges from this zone to surface water. Groundwater in the shallow zone was noted to have a higher pH due to the presence of slag fill, and as a result, the distribution of metals in the shallow zone groundwater indicates very limited mobility (i.e., lack of migration). Therefore, the intermediate zone was the primary focus of the new interim measure.

Groundwater extraction from the pumping wells ceased in September 2016 to support the construction of the remediation trenches. The objective of the remediation trenches is to address the elevated dissolved cadmium and zinc in the intermediate groundwater zone by precipitating the dissolved metals in-situ. This is achieved by raising the existing groundwater pH from approximately 4 to a range of 9.5 to 10 through the addition of alkaline reagents into the intermediate groundwater zone at select high concentration areas. To accomplish this, excavated soils were replaced with alkaline charges that react with acidic groundwater to create alkaline conditions within the aguifer and remove the dissolved cadmium and zinc from solution. The alkaline charges utilized a combination of fast acting TerrabondMG (40% by weight) in conjunction with limestone aggregate (60% by weight). The reagents were placed in trenches in a staggered/offset alignment perpendicular to the anticipated groundwater flow. A typical crosssection of a remediation trench is provided as Figure 3 and the approximate locations of the trenches are shown on the various maps provided as part of this report. As part of creating an updated conceptual site model in the Rod and Wire Mill Interim Measure Supplemental Investigation Report (ARM, Revision 1 dated April 8, 2020), lateral groundwater flow velocities were calculated based on groundwater level measurements in May 2019. Groundwater flow velocity was calculated at 33.8 ft/year in the shallow zone and 4.94 ft/year in the intermediate zone. Details of these calculations can be found in the Rod and Wire Mill Interim Measure Supplemental Investigation Report (ARM 2020a).

Approximately 2,392 cubic yards of contaminated soil were removed from the RWM during construction of the trenches and disposed of at an offsite facility. Construction of the trenches was completed in January 2017.

The interim groundwater treatment goals are to increase the pH in the intermediate groundwater zone in order to precipitate the dissolved metals and achieve a reduction in dissolved

concentrations of cadmium and zinc within and downgradient of the source areas. Ultimately the treatment goal is to demonstrate that the concentrations of the primary contaminants (cadmium and zinc) in groundwater discharging at the shoreline/property boundary are acceptable.

3.2. GROUNDWATER WELL NETWORK

In 2021, there were 76 monitoring wells located at the Site. All wells except two are installed with screen intervals in the shallow zone or the intermediate zone. A "well pair" refers to one shallow zone well and one intermediate zone well installed very close to each other whose well names begin with the same prefix (e.g., RWA-MWS and RWA-MWI). Shallow zone wells have been assigned a well name ending in "-MWS" while intermediate zone wells have been assigned a well name ending in "-MWI". One monitoring well, RW06R-MWD, is installed with a screen interval in the deep zone. Another monitoring well, RW21-MWP, is installed with a screen interval in a localized perched zone (less deep than the shallow zone). This well was installed at the request of the Maryland Department of the Environment (MDE) to monitor non-aqueous phase liquid (NAPL) identified during a previous investigation. Only results from the shallow and intermediate wells are included in this report.

For the purposes of evaluating trends in groundwater, monitoring wells at the Site have been categorized into four groups:

- The "Perimeter" wells are generally located farthest to west (downgradient), running north-south.
- The "Interior" wells are located in the central portion of the site. The Focused well pairs—RWJ, RWK, and RWL—are a subset of Interior wells that were installed directly adjacent to one of the trenches to help assess the trench performance. Proximity was very important due to the rather slow intermediate zone groundwater velocity calculated for the site.
- The "Delineation" wells are located along the northern boundary of the site.
- The "Upgradient" wells are located farthest upgradient, generally farthest to the east.

Well categories are shown in the table below.

Well Categories				
Perimeter	Interior/Focused	Delineation	Upgradient	
RW01-MWS/RW01-MWI	RW09-MWS/RW09-MWI	RW21-MWS/RW21-MWI	RW19-MWS/RW19-MWI	
RW02-MWS/RW02-MWI	RW10-MWI	RWH-MWS/RWH-MWI	RWR-MWS/RWR-MWI	
RW03-MWS/RW03-MWI	RW11-MWS/RW11-MWI	RWI-MWS/RWI-MWI	RWS-MWS/RWS-MWI	
RW04-MWS	RW12-MWS/RW12-MWI	RWO-MWS/RWO-MWI		
RW05-MWS/RW05R-MWI	RW13-MWI	RWP-MWI		
RW06R-MWS/RW06-MWI	RW14-MWS	RWQ-MWS/RWQMWI		
RW07-MWS/RW07-MWI	RW15-MWS/RW15-MWI			
RW08-MWS/RW08-MWI	RW16-MWS/RW16-MWI			
RW22R-MWS/RW22R-MWI	RW18-MWS/RW18-MWI			
RWA-MWS/RWA-MWI	RW23-MWS/RW23-MWI			
RWB-MWS/RWB-MWI	RW24-MWS/RW24-MWI			
RWD-MWS/RWD-MWI	RW25-MWS/RW25-MWI			
RWE-MWS/RWE-MWI	RWJ-MWS/RWJ-MWI			
RWF-MWS/RWF-MWI	RWK-MWS/RWK-MWI			
RWG-MWS/RWG-MWI	RWL-MWS/RWL-MWI			
	RWM-MWS/RWM-MWI			
	RWN-MWS			

As detailed in the RWM Supplemental Investigation Report (ARM, 2020a), well pairs J-K-L were installed in close proximity to the western most trench in order to evaluate the trench performance. Well pair RWJ was installed directly adjacent to the trench. The other two well pairs (RWK and RWL) were installed progressively further from the RWJ pair in the southwestern direction, with the RWK pair approximately 10 feet away and the RWL pair approximately 25 feet away. These three well pairs, along with the RW12 well pair (located immediately upgradient of the western-most trench and approximately colinear with the J-K-L pairs), are used to assess the near-field effect of one of the remediation trenches.

Groundwater samples were collected from all existing shallow and intermediate wells on a monthly basis from February 2017 up to January 2018. Following the January 2018 sampling event, groundwater samples were collected from all existing shallow and intermediate wells on a quarterly basis.

ARM submitted a Rod and Wire Mill Monitoring Network Update Letter dated March 8, 2021 (MNU Letter) to outline a new groundwater sampling plan for the calendar year of 2021 and going forward. This plan consisted of collecting samples from some wells on a semiannual basis and others on an annual basis. The MNU Letter included tables showing the new sampling frequency for the wells and the rationale for each. These tables are included as **Table 1** (shallow wells) and **Table 2** (intermediate wells). Samples collected for the second quarter sampling event (Q2) were collected from May 26 to June 18, 2021. Samples collected for the fourth quarter sampling event (Q4) were collected from October 4 to October 18, 2021. Due to some anomalous sample concentrations from the Q2 sampling event, samples were collected again from a few select wells in a confirmation sampling event in November 2021.

As a result of ongoing grading activities in late 2020 and 2021, the surface completions for several wells were damaged or buried. Before being repaired, a few wells were unable to be opened for a groundwater sample to be collected during the one or both of the 2021 semiannual sampling events. Below is a table showing which wells were not sampled during 2021.

Well ID	Sample Frequency	Sample Not Collected	Reason	Repaired?
RW03-MWS	Semiannually	Q2 and Q4	Buried under landscaping; could not be located with GPS and metal detector.	No
RW03-MWI	Semiannually	Q2 and Q4	Buried under landscaping; could not be located with GPS and metal detector.	No
RW07-MWI	Semiannually	Q2	Buried under landscaping; ultimately uncovered.	Yes ¹
RW12-MWS	Semiannually	Q2	Paved over; ultimately uncovered.	Yes ¹
RW12-MWI	Semiannually	Q2 and Q4	Paved over; ultimately uncovered.	Yes ¹

Note 1: RW07-MWI and RW12-MWS were repaired after the Q2 2021 sampling event, while RW12-MWI was repaired after the Q4 sampling event.

The RW03 well pair is planned for replacement in 2022. As a result of the well damages, groundwater levels could not be measured for some of the wells during 2021. In addition, the subsequent repairs for some of the damaged wells raised or lowered the inner polyvinyl chloride (PVC) well casing but the new casing height was not immediately surveyed. The wells will be surveyed during the 1st quarter of 2022. The top of casing (TOC) elevation is a necessary reference point for determining groundwater elevations, so some of these wells do not appear on the groundwater elevation contour maps included with this report.

This IM Progress Report summarizes groundwater conditions following remediation trench installation, with focus on the results of the two semiannual sampling events carried out in 2021.

3.3. GROUNDWATER CONDITIONS IN 2021

3.3.1. Shallow Groundwater Zone

3.3.1.1 Groundwater Elevations

A synoptic round of groundwater level measurements was collected for the Q2 and Q4 sampling events. Based on the field measurements, groundwater potentiometric surface maps were constructed for the shallow zone for the Q2 and Q4 events and are included as **Figure 4** and **Figure 5**, respectively. As shown on the figures, the predominant flow direction for the shallow zone in the eastern portion of the Site is to the west. In the central and west portions of the Site groundwater flow is to the north and northwest. In the southwest portion of the Site (south of RW06R-MWS) flow is to the southwest.

3.3.1.2 Zinc

Figure 6 displays the distribution of zinc concentrations in the shallow zone during the Q2 sampling event. The highest measured concentration was at RWN-MWS (745,000 μ g/L), located upgradient of the western-most remediation trench and within the former Sludge Bin Storage Area. In addition, zinc was measured in high concentrations (compared to other shallow well concentrations during this event) east of the trenches near the southern edges of the Former East Pond at RWR-MWS (269,000 μ g/L), RWS-MWS (116,000), and north of the remediation trenches in RW22R-MWS (169,000 μ g/L),

Figure 7 displays the distribution of zinc concentrations in the shallow zone during the Q4 sampling event. While samples were collected from fewer wells during this event, relatively high concentrations were measured again at RWR-MWS (298,000 μ g/L) and RW22R-MWS (137,000 μ g/L). The zinc distribution is similar to that of the June event. For contour purposes, if a sample was not collected during the Q4 sampling event, then the concentration from the Q2 sampling event was utilized.

Time-series graphs of zinc concentrations in shallow perimeter wells are included as **Figure 8** (original wells) and **Figure 9** (supplemental wells). Results for the perimeter shallow wells are compared to the relevant surface water criterion for zinc of 81 μg/L. The results show that zinc stayed relatively the same in most wells during the two 2021 semiannual events, except for RW02-MWS, RWE-MWS, and RWA-MWS. In RW02-MWS, zinc significantly decreased during both the Q2 and Q4 events, being measured at its lowest historical level ever during the Q4 2021 event. The zinc concentration in well RWE-MWS exhibited notable fluctuations in concentration during both the Q2 and Q4 events. Zinc in well RWA-MWS exhibited an overall decrease in 2021 from 2020 levels. During the Q4 sampling event, concentrations of zinc in perimeter shallow wells were below the relevant surface water criterion of 81 μg/L in five of the ten perimeter shallow wells sampled in the 4th Quarter 2021: RWA-MWS, RWB-MWS, RWD-MWS, RW02-MWS, and RW05-MWS.

Time-series graphs of zinc concentrations in shallow interior wells are included as **Figure 10** (original wells) and **Figure 11** (supplemental wells). Several interior shallow zone wells were only sampled during the Q2 sampling event. However, zinc levels in these wells remained relatively stable from their 2020 values. Slight increases were observed for zinc concentrations during the Q4 event for wells RW18-MWS, RWJ-MWS, and RW23-MWS (though all of these remained below the relevant surface water criterion of $81 \mu g/L$).

A time-series graph displaying zinc concentrations for the delineation wells is included as **Figure 12.** Zinc concentrations in delineation wells generally remained stable (RWQ-MWS) or decreased (RWO-MWS and RWI-MWS) in 2021. The only exception is well RWH-MWS, which exhibited increases during both 2021 semiannual events.

A time-series graph of the zinc concentrations in the shallow upgradient wells is included as **Figure 13.** Zinc concentrations in upgradient shallow zone well RWS-MWS fluctuated, with an increase during the Q2 2021 event and a decrease during the Q4 event. The zinc level in RWR-MWS stayed relatively the same. Results for zinc concentrations in shallow wells are shown in **Table 3.** Laboratory reports for samples collected during 2021 are included as **Appendix A.**

3.3.1.3 Cadmium

Figure 14 displays a map of the distribution of cadmium concentrations in the shallow zone during the Q2 2021 sampling event. Monitoring well RWN-MWS (located within the Former Sludge Bin Storage Area) had the highest detected concentration of cadmium at 4,850 μ g/L. All cadmium concentrations in wells along the shoreline in the shallow zone were below 15 μ g/L (compared to the relevant surface water criterion for zinc of 7.9 μ g/L). All other measured cadmium concentrations at shallow zone wells were below 100 μ g/L.

Figure 15 displays the distribution of cadmium concentrations in the shallow zone during the Q4 sampling event. For contour purposes, if a sample was not collected during the Q4 sampling event, then the concentration from the Q2 sampling event was utilized. During the Q4 sampling event, RW22R-MWS had the highest detected concentration of cadmium (117 μ g/L) (RWN-MWS is sampled annually in Q2 only). All cadmium concentrations along the shoreline in the intermediate zone were below 5 μ g/L.

Time-series graphs of cadmium concentrations in shallow perimeter wells are included as **Figure 16** (original wells) and **Figure 17** (supplemental wells). Results for the perimeter shallow wells are compared to the relevant surface water criterion for cadmium of 7.9 μ g/L. The results show that cadmium concentrations decreased or stayed relatively stable during the 2021 events. The only exception was well RW22R-MWS which exhibited increases in concentration during the Q2 and Q4 sampling events. During the Q4 2021 sampling event, concentrations of cadmium in perimeter shallow wells were below the relevant surface water criterion of 7.9 μ g/L in all wells except RW22R-MWS (117 μ g/L). Cadmium was not detected in several of the shallow perimeter wells during the 2021 events. Since February 2017, cadmium concentrations in perimeter wells have generally remained stable or decreased over time.

Time-series graphs of cadmium concentrations in shallow interior wells are included as **Figure 18** (original wells) and **Figure 19** (supplemental wells). Sampling results for interior shallow zone wells show that total cadmium was generally below 20 µg/L during 2021, except for in well RWN-MWS. This well is located within the former Sludge Bin Storage Area and had a cadmium concentration that was three orders of magnitude greater than concentrations of most of the shallow zone wells.

A time-series graph displaying cadmium concentrations for the delineation wells is included as **Figure 20.** Cadmium concentrations in delineation wells generally remained stable or decreased

since sampling began at these locations in May 2019, including through both semiannual events of 2021.

A time-series graph of cadmium concentrations in shallow upgradient wells is included as **Figure 21.** Cadmium was detected in upgradient shallow zone well RWS-MWS at very low levels (less than 2 μg/L). The cadmium level in supplemental well RWR-MWS remained relatively stable during both 2021 sampling events. Cadmium concentrations in shallow wells are shown in **Table 4.** Laboratory reports for samples collected during 2021 are included as **Appendix A.** Individual time-series graphs for each shallow zone monitoring well are presented in **Appendix B.**

Measurements of pH in the shallow groundwater zone from the Q2 2021 sampling event, shown on **Figure 22**, ranged from 4.00 to 11.83. Values of pH were generally higher in wells near the shoreline. Wells RWJ-MWS, RW18-MWS and RW16-MWS also had relatively high pH values.

Measurements of pH in the shallow groundwater zone from the Q4 2021 sampling event, shown on **Figure 23**, generally ranged from 4 to 11, with a few pH values outside this range that may be anomalous. In 2022, pH levels that are considered to be anomalous may be tested with a second pH meter or via lab analysis.

3.3.2. Intermediate Groundwater Zone

3.3.2.1 Groundwater Elevations

A synoptic round of groundwater level measurements was collected for the Q2 and Q4 2021 sampling events. Based on these field measurements, groundwater elevation contour maps were constructed for the intermediate zone for the two semiannual events (included as **Figure 24** and **Figure 25**, respectively). The groundwater elevations reveal that the potentiometric surface in the intermediate zone was nearly flat during both 2021 events, with very little variation (less than a half foot of difference) amongst most calculated groundwater elevations across the Site. Well RW22R-MWI had the lowest groundwater elevation during both events and was the only location to have an elevation that was below mean sea level during either event. Well RW21-MWI had a notably higher groundwater elevation in the Q2 event (2.33 feet amsl) compared to its Q4 elevation (1.54 feet amsl) and also compared to other wells in the Q2 event (average of 1 foot amsl).

Groundwater elevations were generally higher (by about half a foot) during the Q4 event than the Q2 event. Well RW18-MWI had a notably higher groundwater elevation in the Q4 event (2.29 feet amsl) compared to its Q2 elevation (1.65 feet amsl) and also compared to other wells in the Q4 event (average of 1.50 feet amsl). Well RW02-MWI also had a notably high groundwater elevation in the Q4 event (2.54 feet amsl) but was not measured in the Q2 event.

Groundwater elevations in the intermediate zone are generally lower than in the shallow zone, indicating a downward vertical gradient. There are some exceptions, as some perimeter well pairs have had a higher groundwater elevation in the shallow well than in the intermediate well. During the Q2 sampling event, an upward gradient occurred in the RWB well pair. During the Q4 sampling event, an upward gradient occurred in the following well pairs, all located in the far southwest corner of the Site: RW01, RW02, RW05R, and RWF. The upward gradient has been observed in this area in several sampling events prior to 2021. During the Q4 sampling event, the shallow wells in well pairs RWH and RWO also had higher groundwater elevations than their intermediate wells. This is the first time an upward gradient has been observed in this area.

3.3.2.2 Zinc

Intermediate groundwater zinc concentrations during the Q2 2021 event, mapped spatially on Figure 26, generally decrease from east to west across the Site. Zinc concentrations were highest outside the north and south edges of the former East Pond source area, at RWP-MWI (3,990,000 μg/L), RWR-MWI (1,400,000 μg/L) and RWS-MWI (858,000). Zinc concentrations above 500,000 µg/L were also observed at locations RWH-MWI, RWI-MWI, and RW21-MWI (at similar concentrations to previous sampling events), which indicates that the contaminant plume in the intermediate zone extends beyond the northern limits of the treatment trenches and that the former Northwest Pond area may have acted as a source of contaminant mass to the intermediate zone groundwater. This impacted area was discussed in the Comment Response Letter: Rod and Wire Mill IM 2020 Progress Report and Parcel A3 NAPL Semi-Annual Monitoring Report (ARM 2022); it was identified in previous sampling and delineation events but was unable to be completely excavated due to the presence of overhead lines. The concentration observed in RWA-MWI was also elevated compared to other intermediate wells during this event. Based on the lower concentration in RW22R-MWI, the relatively high zinc concentration in RWA-MWI appears to be an isolated plume separated from the high concentrations observed around the former Northwest Pond area. At RWJ-MWI, the zinc concentration is low (1,990 µg/L) relative to other intermediate wells nearby. However, concentrations of zinc above 100,000 µg/L extend westward from RWL-MWI toward RWE-MWI, and also to the south from RWL-MWI to RW23-MWI.

Intermediate zone groundwater zinc concentrations during the Q4 2021 event are shown on **Figure 27.** For contour purposes, if a sample was not collected during the Q4 sampling event, then the concentration from the Q2 sampling event was utilized. Even though several interior wells were not sampled during the Q4 event, many of the wells that were sampled exhibited substantially lower concentrations during the Q4 event than the Q2 event. These wells consisted of:

Well	Q2 Concentration (μg/L)	Q4 Concentration (μg/L)	% Decrease
RWO-WMI	208,000	200 U	100%
RWP-MWI	3,990,000	14,300	99.60%
RWR-MWI	1,400,000	48,000	96.60%
RW05R-MWI	79,000	200 U	100%

Note: U flag indicates analyte was not detected.

The sampling purge logs for these wells from the Q4 sampling event were reviewed for any observations that could explain unusual groundwater conditions in these wells but no such observations were found. Due to the anomalous decreases in zinc concentrations, the wells with the three biggest drops by percent (RW05R-MWI, RWO-MWI, and RWP-MWI) were resampled in November 2021. The results are as follows:

- RW05R-MWI: 50,700 μg/L; increased back to a more typical level.
- RWO-MWI: 1,380 μg/L; increased from the original Q4 event (non-detect) but still several orders of magnitude lower than is typical for this well.
- RWP-MWI: 526 μg/L; decreased to an even lower level, several orders of magnitude lower than is typical for this well.

The concentration in well RWH-MWI near the former Northwest Pond was still elevated compared to other wells during this event. The isolated plume in the northwest corner near RWA-MWI persists, as well as the two axes of high concentrations ($60,000-100,000~\mu g/L$) extending from RWL-MWI westward to RWE-MWI and from RWL-MWI southward to RW23-MWI).

Time-series graphs of zinc concentrations in intermediate perimeter wells are included as **Figure 28** (original wells) and **Figure 29** (supplemental wells). While concentrations of zinc in some perimeter wells exhibited increases during 2021, concentrations in the majority of perimeter wells exhibited overall slight decreases during 2021. Well RW07-MWI exhibited a notable increase from June 2020, back to levels that were more typical for this well in March 2020 and 2019. RW02-MWI exhibited a significant decrease in the Q2 2021 event followed by a slight increase in the Q4 2021 event. Wells RW22R-MWI and RWB-MWI both exhibited slight increases during both 2021 events. The graph of RW05R-MWI, shown on **Figure 29**, is particularly revealing in that it shows that the November 2021 zinc concentration is consistent with the slight decreases seen in other perimeter wells and that the original Q4 zinc concentration for this well (collected in October 2021) was an outlier that is likely not representative of groundwater conditions at the well.

Based on accepting the November 2021 re-sample result for RW05-MWI (as opposed to the October 2021 result) as the more representative result, there was only one location (RWB-MWI, 19.1 μ g/L) with zinc concentrations in the intermediate perimeter wells during the Q4 event below the relevant surface water criterion of 81 μ g/L . The highest zinc concentration amongst perimeter wells in 2021 was consistently measured in well RWA-MWI.

Time-series graphs of zinc concentrations in intermediate interior wells are included as **Figure 30** (original wells) and **Figure 31** (supplemental wells). Results showed that zinc concentrations in most of these wells exhibited overall increases in 2021. More substantial fluctuations were observed in original wells while supplemental well concentrations saw only slight increases or

stayed relatively stable over 2021. The only interior well that exhibited a notable decrease in zinc concentration was RW18-MWI.

A time-series graph of zinc concentrations in intermediate delineation wells is included as **Figure 32.** Zinc concentrations in delineation wells have been mostly stable since their installation in March 2019 including through 2021, except for the aforementioned significant drops in concentrations seen during the Q4 2021 event in RWO-MWI and RWP-MWI.

A time-series graph of zinc concentrations in intermediate upgradient wells is included as **Figure 33.** The zinc concentration in upgradient intermediate zone well RW19-MWI exhibited a significant decrease in the Q2 2021 sampling event. The supplemental upgradient well RWR-MWI zinc concentration has generally decreased since its installation, inclusive of the significant decrease already mentioned that was seen in Q4 2021. All intermediate well zinc results are included in **Table 4.** Laboratory reports for samples collected during 2021 are included as **Appendix A.**

3.3.2.3 Cadmium

Intermediate zone cadmium concentrations during the Q2 event, shown on **Figure 34**, vary significantly across the Site. The highest cadmium concentration was measured in RW13-MWI (26,400 μ g/L) located in the former Sludge Bin Storage Area. There were also relatively high concentrations compared to other intermediate well concentrations during this event north of the easternmost trench near the former East Pond in well RWP-MWI (8,430 μ g/L) and north of the westernmost trench near the former Northwest Pond in wells RWI-MWI (6,810 μ g/L) and RWH-MWI (6,760 μ g/L). As with zinc, the high cadmium detection at the northwestern-most corner of the Site at RWA-MWI (11,700 μ g/L) appears to be isolated from the known source areas.

Intermediate zone cadmium concentrations during the Q4 event, shown on **Figure 35**, are similar to those observed during the Q2 event. Relatively high concentrations persisted in northern wells RWH-MWI and RWP-MWI, as well as the isolated plume in the northwest corner at RWA-MWI. Cadmium concentrations in the intermediate perimeter wells during the Q4 event were below the relevant surface water criterion of 7.9 μ g/L in RWB-MWI (1 μ g/L), RW22R-MWI (2.5 μ g/L) and RW02-MWI (1 μ g/L). It is notable that the four wells (RWO-MWI, RWP-MWI, RWR-MWI, and RW05R-MWI) that exhibited near-100% reductions in zinc concentrations between the Q2 and the Q4 events did not have decreases of corresponding proportions in cadmium concentrations between the two events.

Time-series graphs of cadmium concentrations in intermediate perimeter wells are included as **Figure 36** (original wells) and **Figure 37** (supplemental wells). Concentrations of cadmium in wells RW01-MWI, RW06-MWI and RW07-MWI exhibited overall increases in 2021 while wells RW02-MWI, RWG-MWI and RW05R-MWI exhibited notable decreases in 2021. Concentrations of cadmium in most other perimeter wells remained relatively stable over the course of 2021.

While the cadmium level in RW05R-MWI remained relatively stable between the Q2 and Q4 events, it dropped significantly from the original Q4 (October 2021) event to the November 2021 event. This is surprising given that the zinc concentration in this well increased from an anomalously low concentration in the original Q4 sampling event to more typical concentrations in the November sampling event. The highest cadmium concentration in perimeter wells in 2021 was consistently measured in well RWA-MWI.

Time-series graphs of cadmium concentrations in intermediate interior wells are included as **Figure 38** (original wells) and **Figure 39** (supplemental wells). While many of the interior wells were only sampled during the Q2 event, cadmium concentrations in most of the interior wells stayed relatively stable or increased during 2021. Wells RW15-MWI and RW16-MWI exhibited slight increases during the Q2 sampling event. Well RW13-MWI continued its historical pattern of fluctuating significantly by increasing drastically when it was sampled in the Q2 event. Well RWJ-MWI increased during both the Q2 and Q4 events, while the remainder of the intermediate interior supplemental wells were relatively stable.

A time-series graph of cadmium concentrations in intermediate delineation wells is included as **Figure 40.** Cadmium concentrations in intermediate delineation wells remained relatively stable or exhibited slight decreases over the course of the 2021 sampling events, with the exception of well RWP-MWI (large decrease) and RWQ-MWI (slight increase). Similar to the cadmium concentration in RW05R-MWI, the cadmium level in RWP-MWI remained relatively stable between the Q2 and Q4 events but dropped significantly from the original Q4 (October) event to the November event. Unlike RW05-MWI however, the level of cadmium in the November event for RWP-MWI is consistent with the level of zinc observed in this well during the November event, both being more than three orders of magnitude lower than what was measured during the original Q4 sampling event.

A time-series graph of the cadmium concentrations in intermediate upgradient wells is included as **Figure 41.** The cadmium concentration in upgradient well RW19-MWI exhibited a notable decrease during the Q2 sampling event. Wells RWR-MWI and RWS-MWI decreased during the Q2 sampling event but then exhibited greater increases during the Q4 sampling event to new all-time maximum concentrations in each well. Cadmium results for all samples from the intermediate zone are included in **Table 5.** Individual time-series graphs for each intermediate zone monitoring well are presented in **Appendix C.**

For both the Q2 and Q4 event, pH values in the intermediate groundwater zone generally ranged from 4 to 11, with a few pH values outside this range that may be anomalous. In 2022, pH levels that are considered to be anomalous may be tested with a second pH meter or via lab analysis.

Measurements of pH within the intermediate groundwater zone during the Q2 and Q4 events are shown on **Figure 42** and **Figure 43**, respectively. The highest pH value (7.37) during the Q4 event was measured in well RWJ-MWI, the well located directly adjacent to a trench. There were four intermediate zone monitoring wells with pH values less than 3.0 (RWB-MWI, RWE-MWI, RWG-MWI, and RWS-MWI). Previous pH values in these wells ranged from 5.75 to 8.0; therefore these values may be anomalous and will be checked in 2022.

3.3.3. Focused Well Pairs J-K-L

Figure 26 and **Figure 27** show the locations of the Focused wells relative to the trench, along with the intermediate zinc concentrations for the Q2 and Q4 2021 sampling events, respectively. These Focused wells were installed in 2019 which was more than two years following the trench installation. As indicated on **Figure 26**, intermediate groundwater upgradient of the westernmost trench in well RW13-MWI contains over 350,000 μ g/L of dissolved zinc. The zinc concentration in RWJ-MWI, directly adjacent and downgradient of the trench, was 1,990 μ g/L in the Q2 sampling event and 2,840 μ g/L in the Q4 sampling event. As the distance downgradient from the trench increased, the zinc concentration was observed to increase such that the zinc concentration ranged from 23,700 μ g/L to 34,600 μ g/L in RWK-MWI and from 97,000 μ g/L to 110,000 μ g/L in RWL-MWI. The same pattern appears in the intermediate zone for cadmium concentrations. This suggests that the permeable reactive barrier treatment technology and the reagent appears to be effective in raising the pH of the groundwater and removing the metals concentrations. Based on the extremely slow groundwater flow velocity it appears that the treated groundwater has yet to reach RWL-MWI.

Figure 44 presents a time-series graphs of zinc concentrations for the three locations in the intermediate zone. This figure shows relatively stable zinc concentrations from 2019 through 2021 for well RWJ-MWI, RWK-MWI, RWL-MWI. As previously mentioned, these Focused wells were installed in 2019 which was more than two years following the trench installation. Concentrations upgradient from the trench (RW13-MWI concentration from 2021 or RW12-MWI concentrations from 2020) suggest that the zinc concentration at RWJ-MWI has significantly decreased from what it would have been in that area without installation of the trenches. Furthermore, the large differences between zinc levels amongst the Focused wells (shown on the graph) correspond to their distance away from the trench, with the closest well of the three (RWJ-MWI) having the lowest zinc concentration and the farthest well of the three (RWL-MWI) having the highest zinc concentration. The differences can also be seen on **Figure 45** with the time-series graphs of cadmium concentration in these three intermediate wells, although there is not as pronounced of a difference between the levels of RWJ-MWI and RWK-MWI as there is for zinc.

The time-series graph included as **Figure 46** shows that the zinc concentrations in the shallow zone downgradient wells RWK-MWS and RWL-MWS are several orders of magnitude greater than that of RWJ-MWS, which is located directly adjacent to the trench. **Figure 46** shows that the

shallow zone zinc concentrations have remained relatively stable from 2019 through 2021. Since cadmium is rarely detected or is detected below the reporting limit in the shallow Focused wells, no time-series graph was made for cadmium concentrations in these wells.

The groundwater elevations of the Focused well pairs provide evidence that groundwater may be draining through the trenches from the shallow zone to the intermediate zone. In both semiannual sampling events, there is a gradient toward the trench (from L toward J) in these three wells in the shallow zone but a gradient away from the trench (from J toward L) in the intermediate zone.

3.4. CONTAMINANT REDUCTION

The interim groundwater treatment goals are to increase the pH in the intermediate groundwater zone in order to precipitate the dissolved metals and achieve a reduction in dissolved concentrations of cadmium and zinc within the source areas.

The time-series graphs show that the cadmium and zinc concentrations have, in some cases, fluctuated by orders of magnitude between consecutive sampling events. As a result, the comparison of individual quarterly values for some wells can indicate an increase or decrease depending on which specific quarterly values are compared. For ease in visualizing overall trends and magnitude of reductions, annual average concentrations of cadmium and zinc were calculated for each well for which multiple years of data are available. Values for total and dissolved metals were used interchangeably in the calculations based on previous observations that nearly all of the total metals concentrations are accounted for by the dissolved fraction.

Table 7 summarizes average annual groundwater cadmium and zinc concentrations at each shallow zone well installed before the remediation trenches. The tables show that the average cadmium concentrations in shallow zone wells that were sampled in 2021 are all below the ambient surface water quality criterion of 7.9 ug/L, and most have shown decreases over the observed time period. Average cadmium concentrations at interior well RW11-MWS and perimeter well RW06R-MWS have increased since 2017 and 2018, respectively, but are still below the ambient water quality criterion.

Zinc concentrations in the easternmost interior shallow zone wells that were sampled in 2021 (RW16-MWS and RW18-MWS) showed reductions of 91% and 99%, respectively, over the observed time periods. However, zinc concentrations increased from 2015 to 2021 at the more western interior wells RW11-MWS and RW12-MWS. The largest percent increase (372%) was observed at interior well RW11-MWS. Zinc concentrations in perimeter wells RW02-MWS and RW05-MWS decreased by over 90% since they were installed. The only other well that was sampled in 2021 in which 2021 zinc concentrations showed an increase relative to its earliest yearly average was RW07-MWS.

Table 8 summarizes average annual groundwater cadmium and zinc concentrations at each intermediate zone well installed before the remediation trenches. The 2021 yearly average for upgradient well RW19-MWI showed a 95% reduction from its 2017 yearly average. Interior wells that were sampled in 2021 showed decreases from the earliest yearly average to the 2021 yearly average except for wells RW09-MWI and RW15-MWI. The most significant cadmium concentration decreases were observed at RW10-MWI, RW11-MWI, and RW18-MWI, with values decreasing by over 85%. Intermediate zone yearly average cadmium concentrations have increased in perimeter wells RW01-MWI, RW06-MWI and RW07-MWI. The most notable increases were at wells RW06-MWI and RW07-MWI, where average yearly cadmium concentrations increased by 1,655% and 1,653%, respectively, from their earliest yearly average to their 2021 yearly average. However, the 2021 averages for both wells are less than their 2019 averages. Decreases in cadmium concentrations were observed in RW02-MWI and RW08-MWI from their earliest yearly averages to their 2021 yearly averages.

Like cadmium, the 2021 yearly average concentration for zinc in intermediate zone upgradient well RW19-MWI decreased by 96% compared to the 2017 yearly average. Most interior wells showed significant decreases in zinc concentrations from the earliest yearly average to the 2021 yearly average. Only interior wells RW09-MWI and RW15-MWI exhibited increases from their earliest yearly average zinc concentrations to their 2021 average zinc concentrations (similar to corresponding average cadmium concentrations in these wells). Patterns in zinc concentrations for intermediate zone perimeter wells corresponded to those for intermediate zone cadmium, where RW01-MWI, RW06-MWI and RW07-MWI showed increases from their earliest yearly averages to their 2021 yearly averages.

4.0 SUMMARY AND CONCLUSIONS

The current approach for addressing the source area elevated dissolved cadmium and zinc in the intermediate groundwater zone is to precipitate the dissolved metals in-situ by raising the groundwater pH above 7. This approach relies on groundwater movement to distribute the reagent to increase pH and to intercept the migration of metals contaminants in the intermediate zone. Therefore, the effectiveness of the new interim measure is expected to be observed first in the intermediate zone wells closest to the trenches and, due to the relatively slow groundwater velocity (less than 5 ft/year), may not be apparent in downgradient wells for several years after trench installation in January 2017.

The three focused well pairs wells J -K- L were installed directly adjacent to the western most treatment trench to help evaluate overall trench performance. Well RWJ-MWI located closest to the trench exhibited elevated pH values (excluding the anomalous Q2 2021 event value) and most notably a lower zinc concentration when compared to the upgradient groundwater concentrations relative to the trench. It is still early in the generation and evaluation of the groundwater monitoring data, especially due to the relatively flat groundwater gradient in the intermediate zone (as shown on **Figures 24 and 25**). Flow through the trenches is what effects the treatment of the groundwater, and the flow is inhibited by the flat hydraulic gradient. Groundwater monitoring data and the overall trend will continue to be monitored and evaluated to assess the effectiveness of the treatment trenches in precipitating the dissolved metals from the groundwater.

Groundwater in the shallow zone is monitored, although it is not the focus of the interim measure. In general, cadmium and zinc concentrations in shallow wells stayed relatively the same or decreased during 2021, with notable exceptions of zinc in RWH-MWS and cadmium in RW22R-MWS (both located to the northwest of the former Northwest Pond). In the shallow wells along the western shoreline (perimeter wells), cadmium concentrations in nearly all wells are below the ambient surface water quality criterion. However, only about half of zinc concentrations in these wells are below the ambient surface water quality criterion.

In the intermediate groundwater zone, cadmium and zinc concentrations in the interior wells generally stayed relatively the same or exhibited increases during 2021. Both cadmium and zinc increased in well RWJ-MWI, the well installed directly adjacent to one of the trenches, during both 2021 events. As noted in previous reports, the supplemental wells have identified elevated concentrations at additional locations outside the area of influence of the current IM.

For zinc and cadmium concentrations in the intermediate zone perimeter wells, there were more overall increases than decreases in 2021. In delineation wells RWP-MWI and RWO-MWI there were substantial decreases in zinc concentration, as well as for the cadmium concentration in RWP-MWI and zinc concentration in RWR-MWI, during the Q4 2021 event. These

concentrations decreased by several orders of magnitude during this sampling event. They seem to be anomalous results that need to be verified by future sampling data from these wells.

In the IM design, the groundwater velocities were expected to be slow, in the range of 5 to 10 feet per year (later calculated to be less than five feet per year in the RWM Supplemental Investigation Report). Paving at the RWM, completed around the end of March 2018, has reduced aquifer recharge from precipitation. While the whole Site is not paved and it is possible there is some recharge to the intermediate zone via shallow zone groundwater draining through the trenches, it is evident that the end result is still a nearly flat potentiometric surface in the intermediate zone (shown on **Figures 24** and **25**). A lack of gradient in the intermediate zone will have caused the groundwater velocity to slow considerably. Therefore, the increases in metals concentrations observed in the perimeter wells would not be expected to be the result of migration from the upgradient source areas. Rather, the decrease in groundwater flow velocity allows for greater equilibration between the groundwater and residual contamination already present in the aquifer matrix downgradient of the IM area due to greater contact time.

The RWM IM Supplemental Investigation Report (ARM 2020a) identified some areas that may be outside the intended effective zone of the remediation trenches. The long-term effectiveness of the interim measure and the need for additional or alternative remedial measures will be evaluated further as described in the Rod and Wire Mill Groundwater Corrective Measures Study Work Plan (Revision 1, dated January 14, 2021).

Groundwater sampling at the RWM for dissolved cadmium and zinc will continue in 2022 in accordance with the schedule as presented in the RWM Monitoring Network Update letter (ARM 2021c). In accordance with the Comment Response Letter: Rod and Wire Mill IM 2020 Progress Report and Parcel A3 NAPL Semi-Annual Monitoring Report (ARM 2022), groundwater samples will also be collected from select intermediate wells to be analyzed for organics (volatile organic compounds, semi-volatile organic compounds, diesel range organics and gasoline range organics).

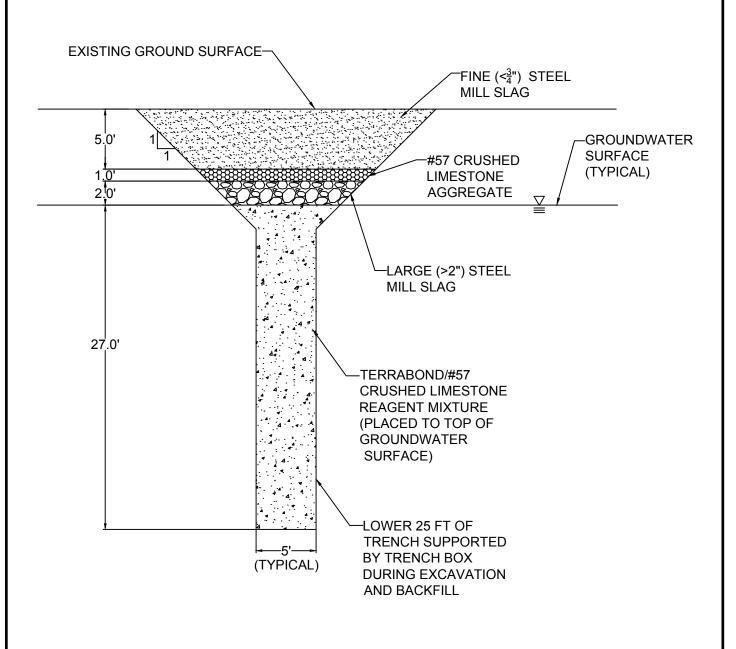
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FIGURES









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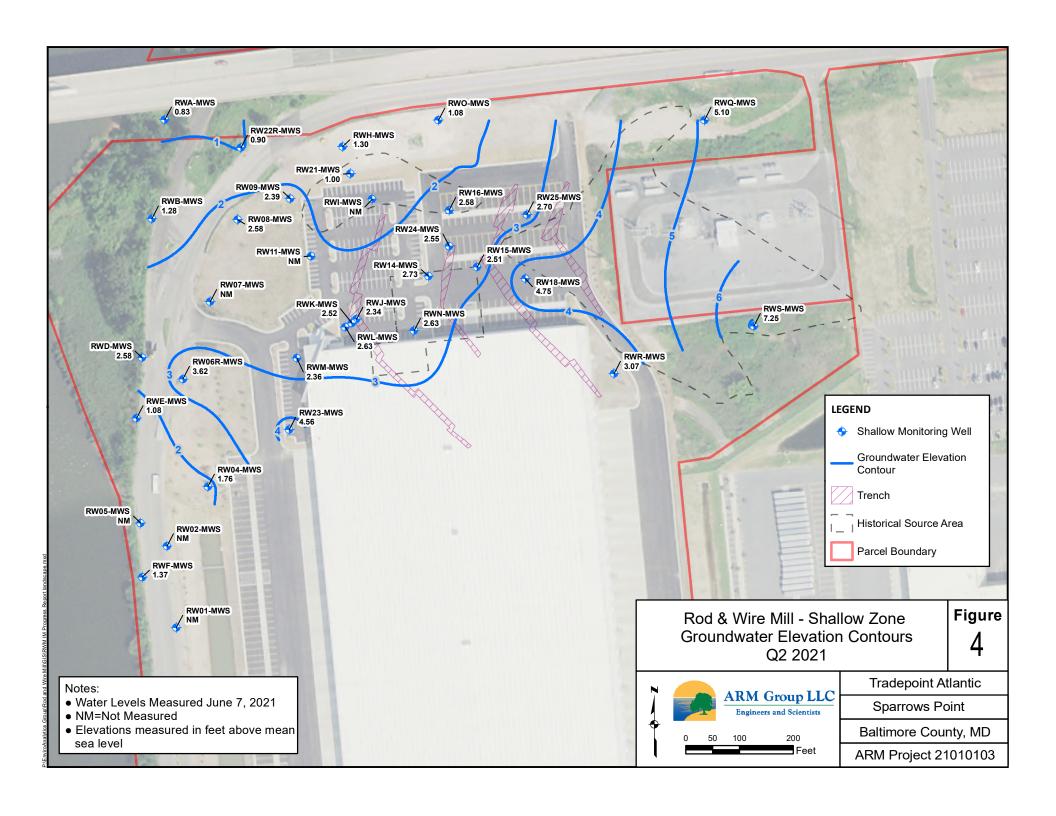
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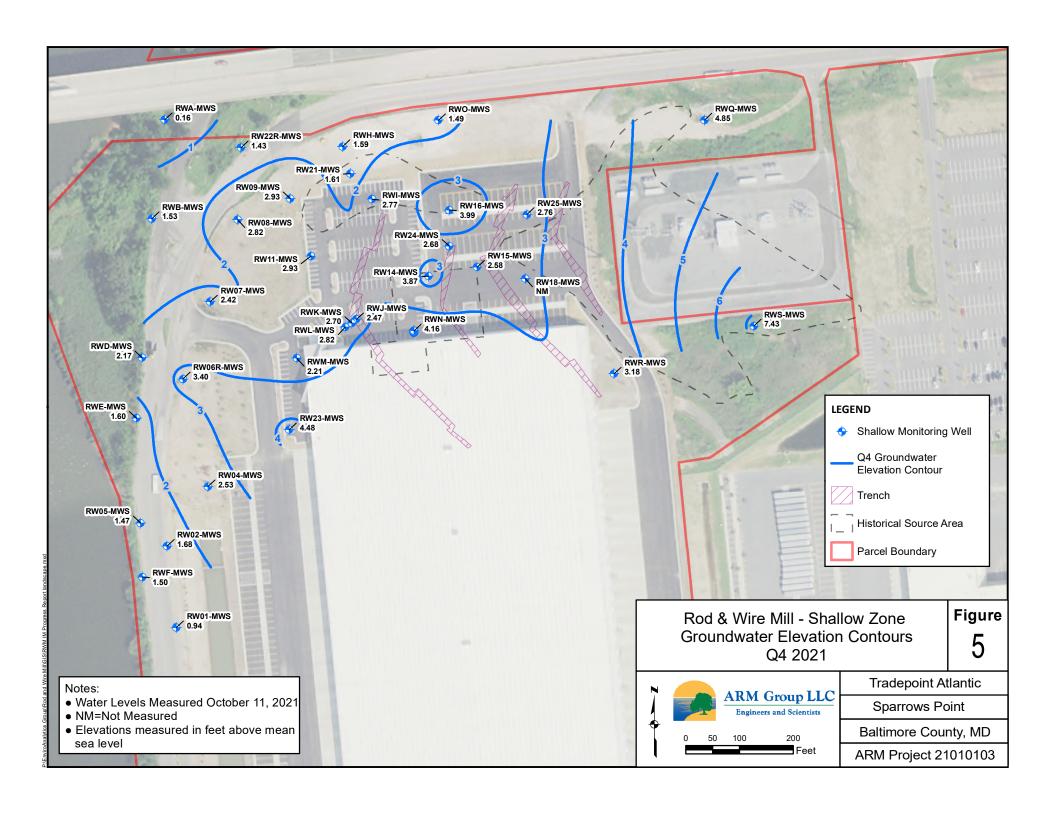
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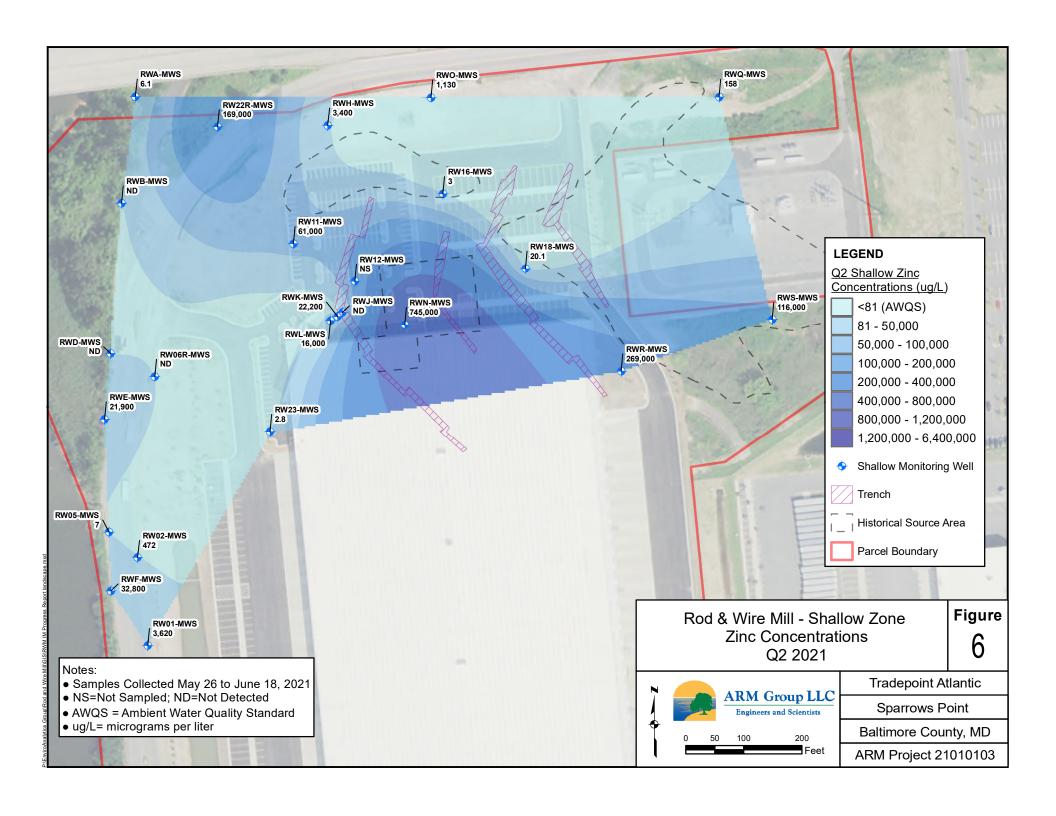
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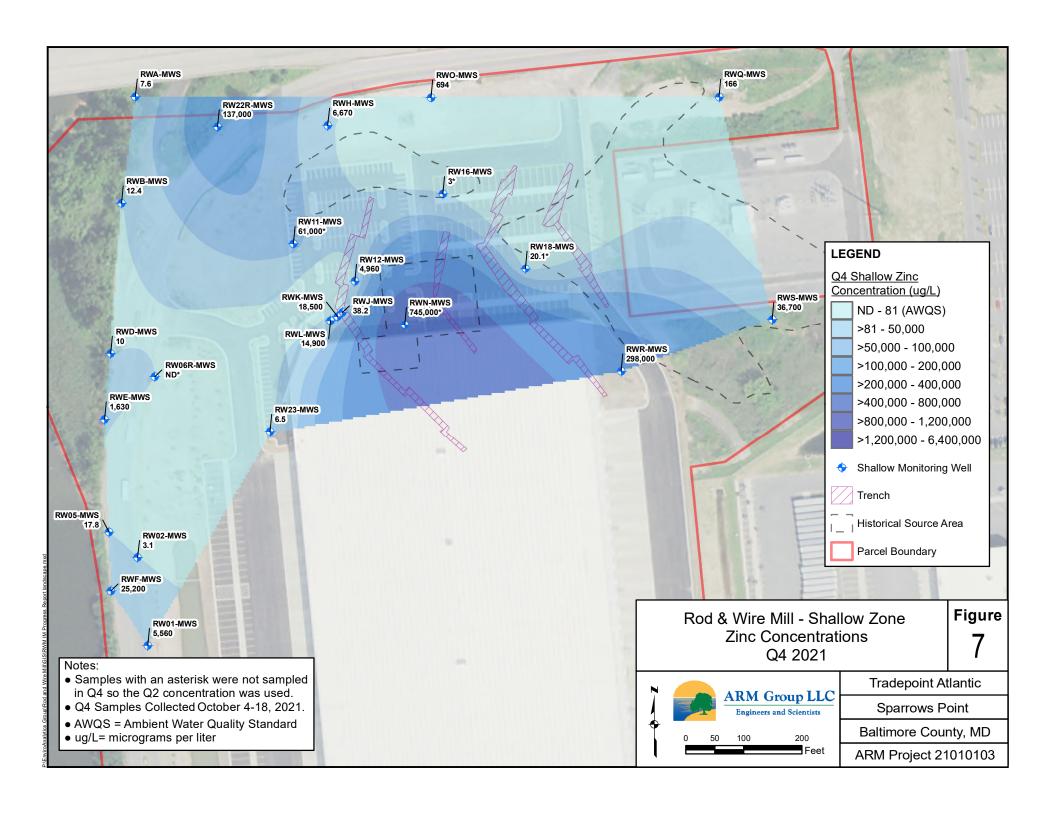
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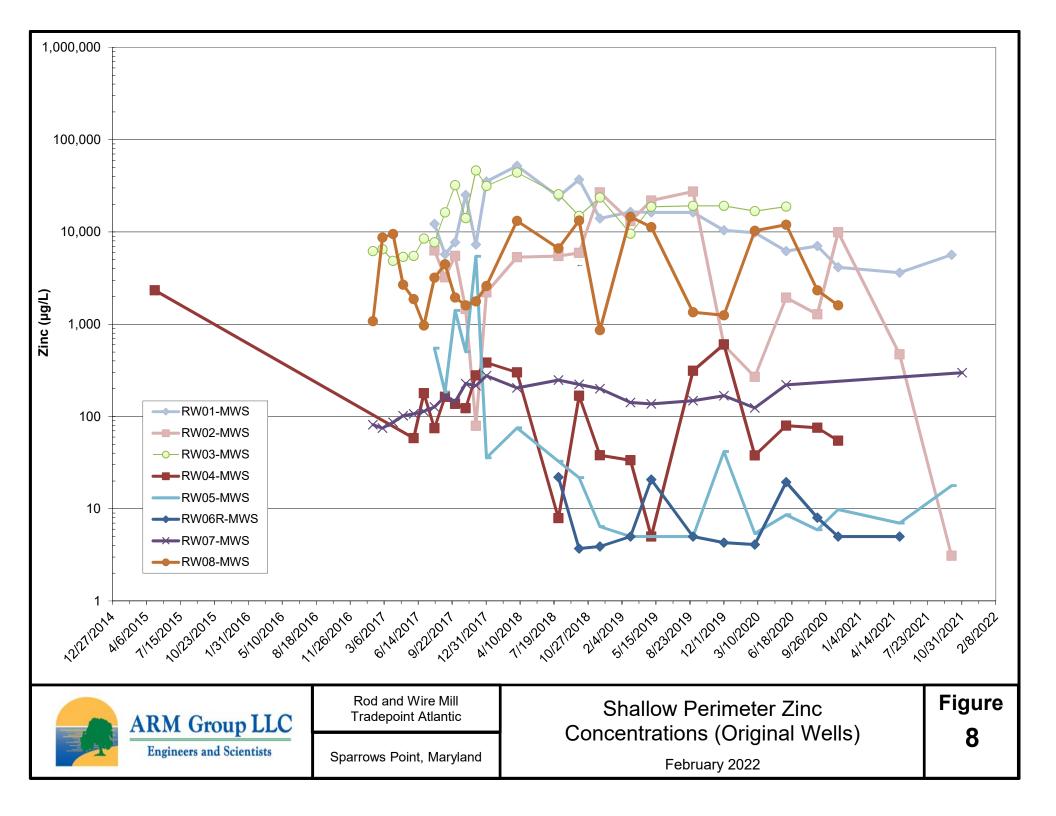
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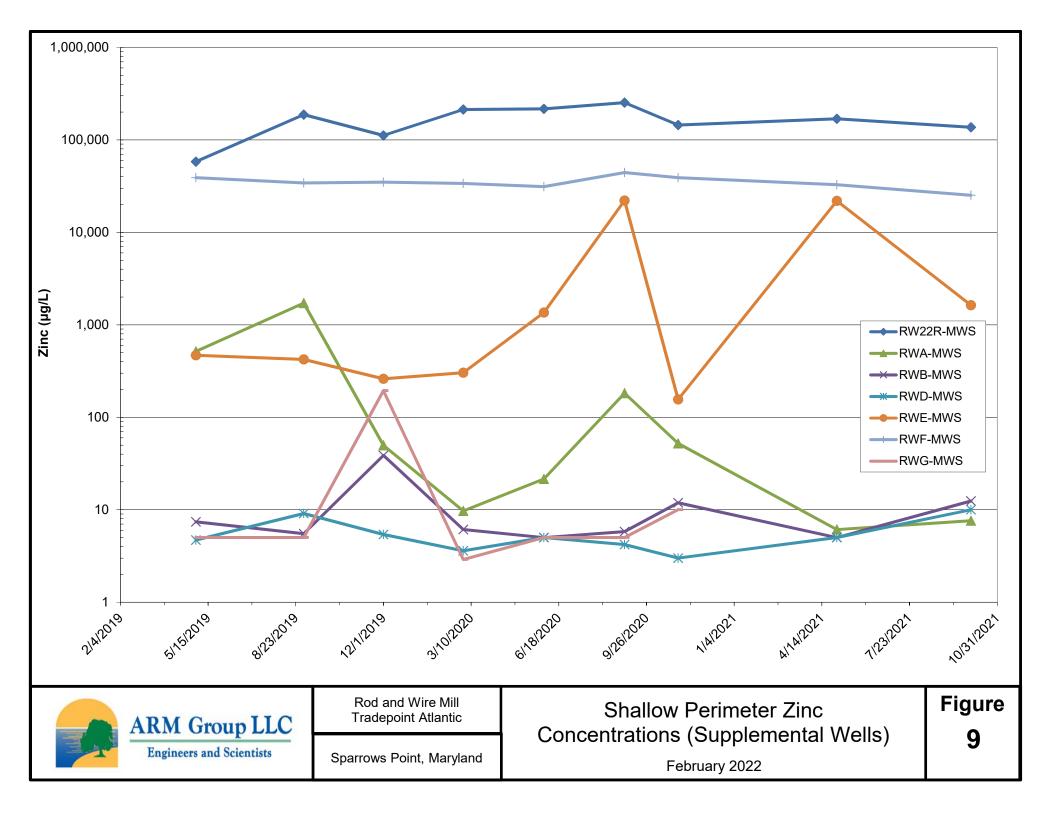


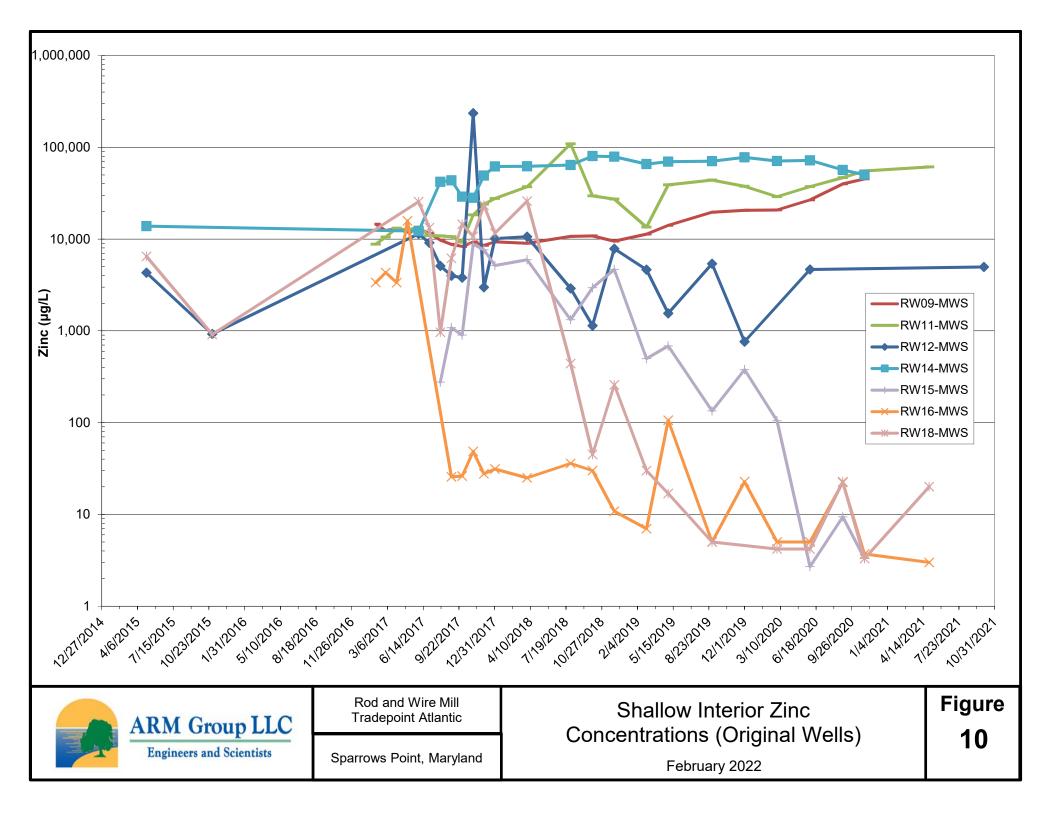


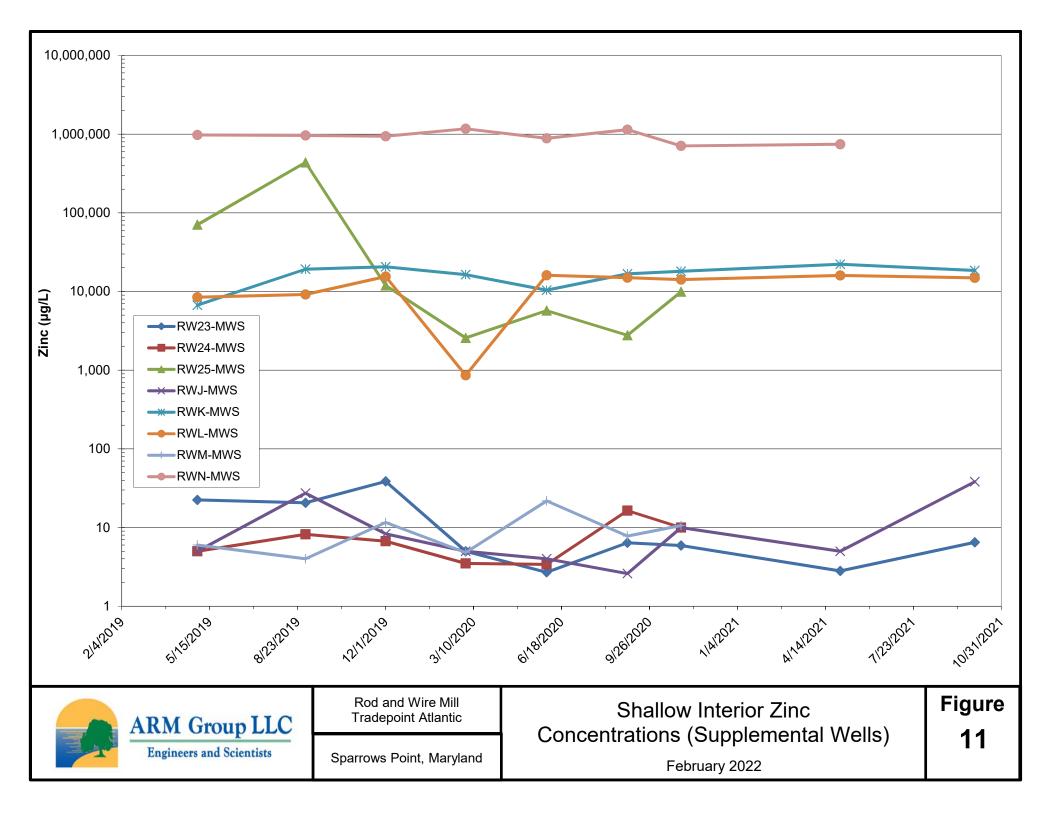


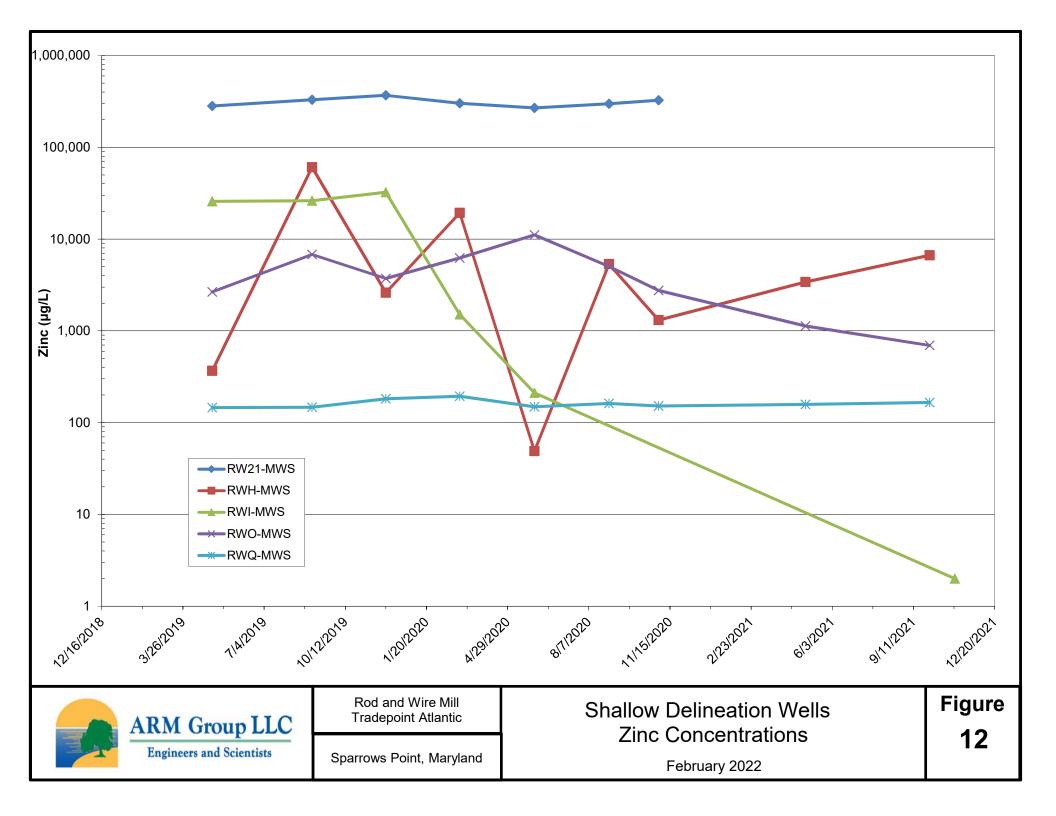


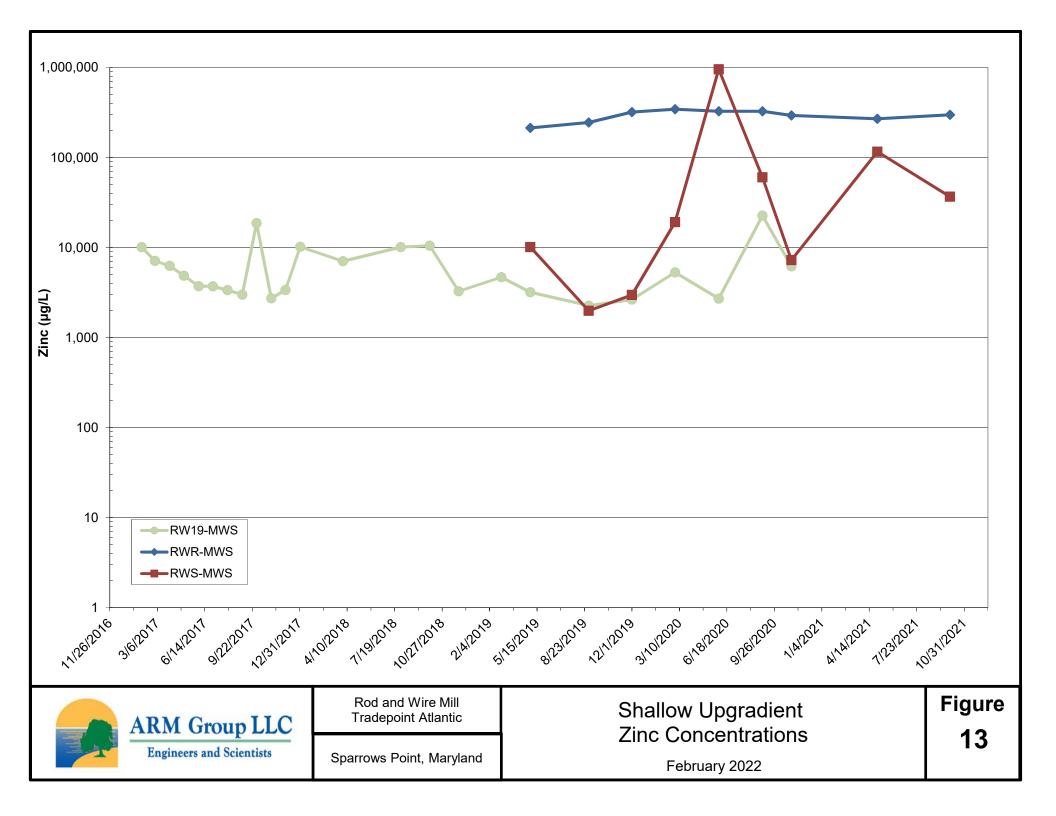


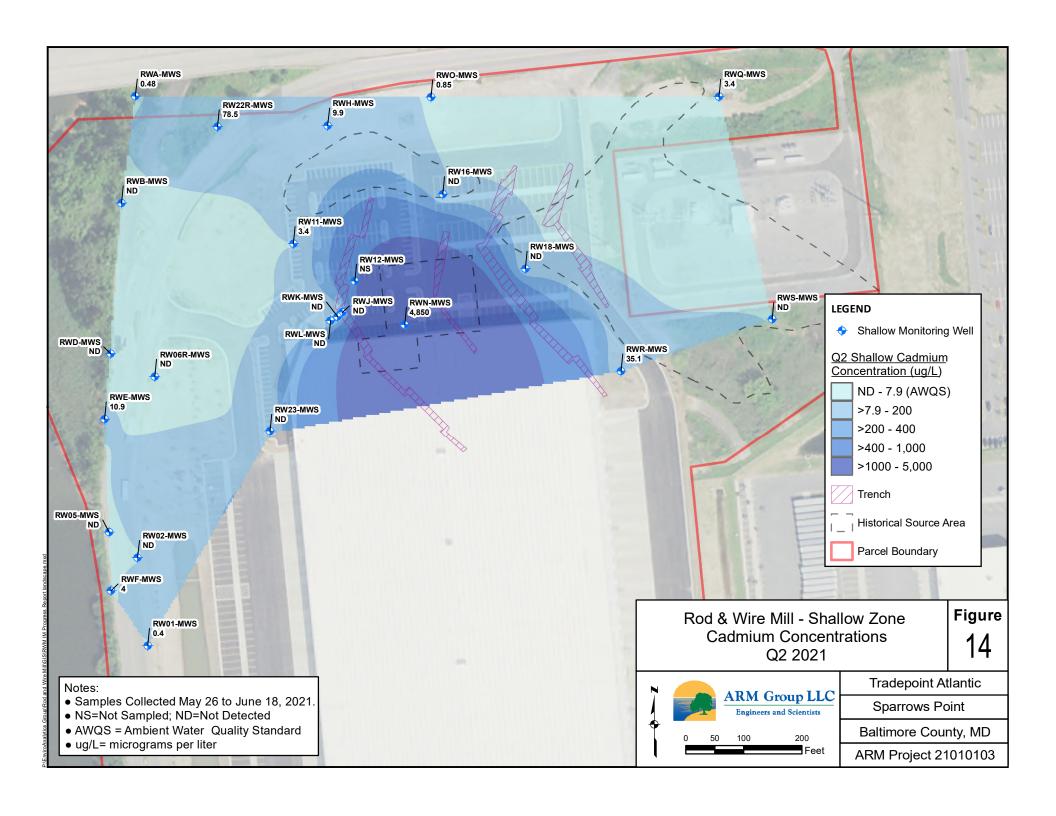


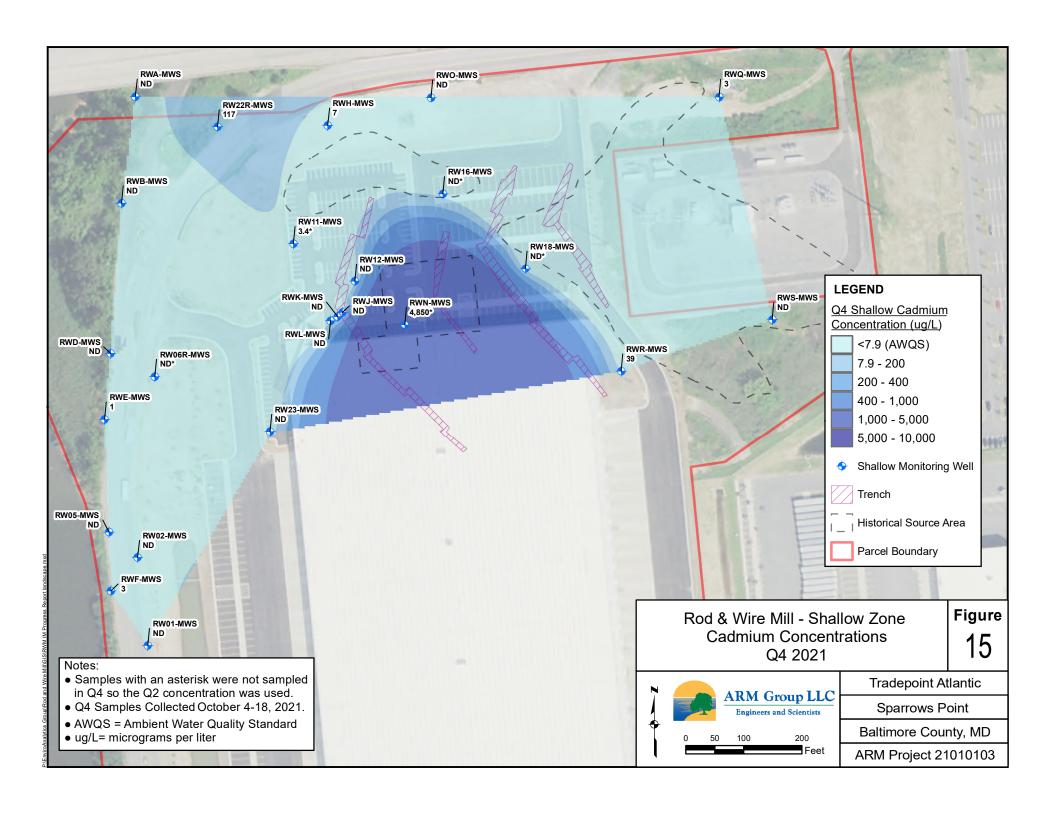


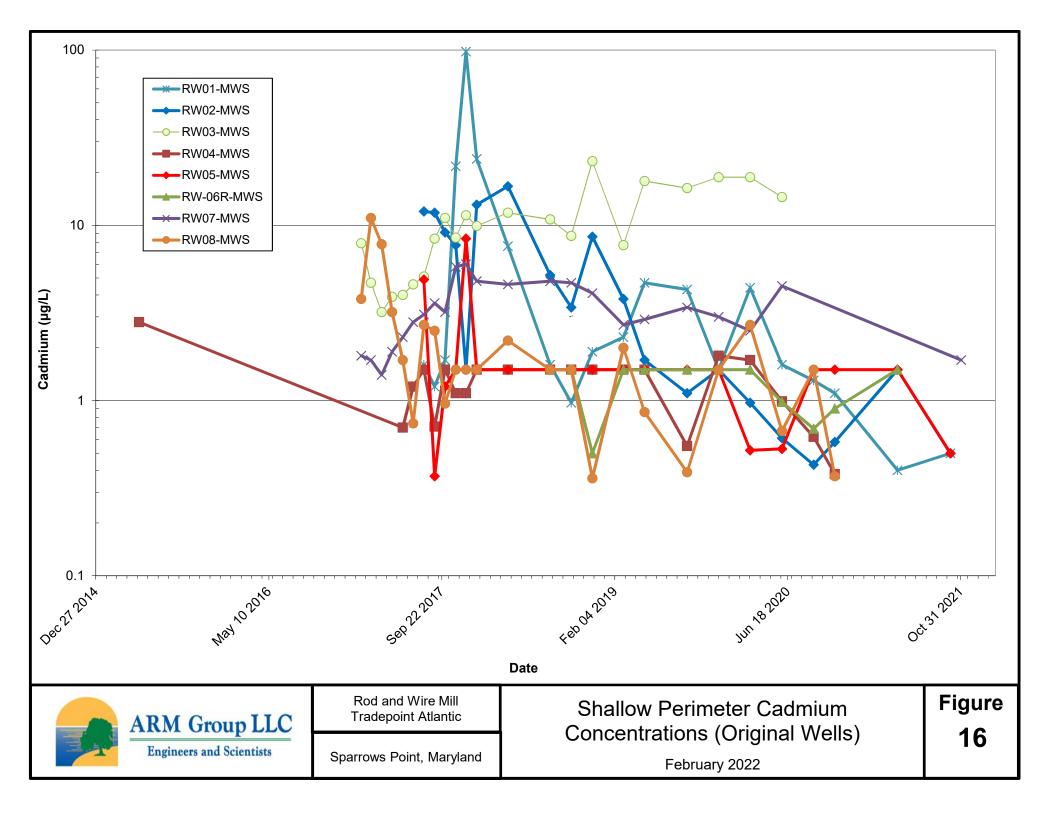


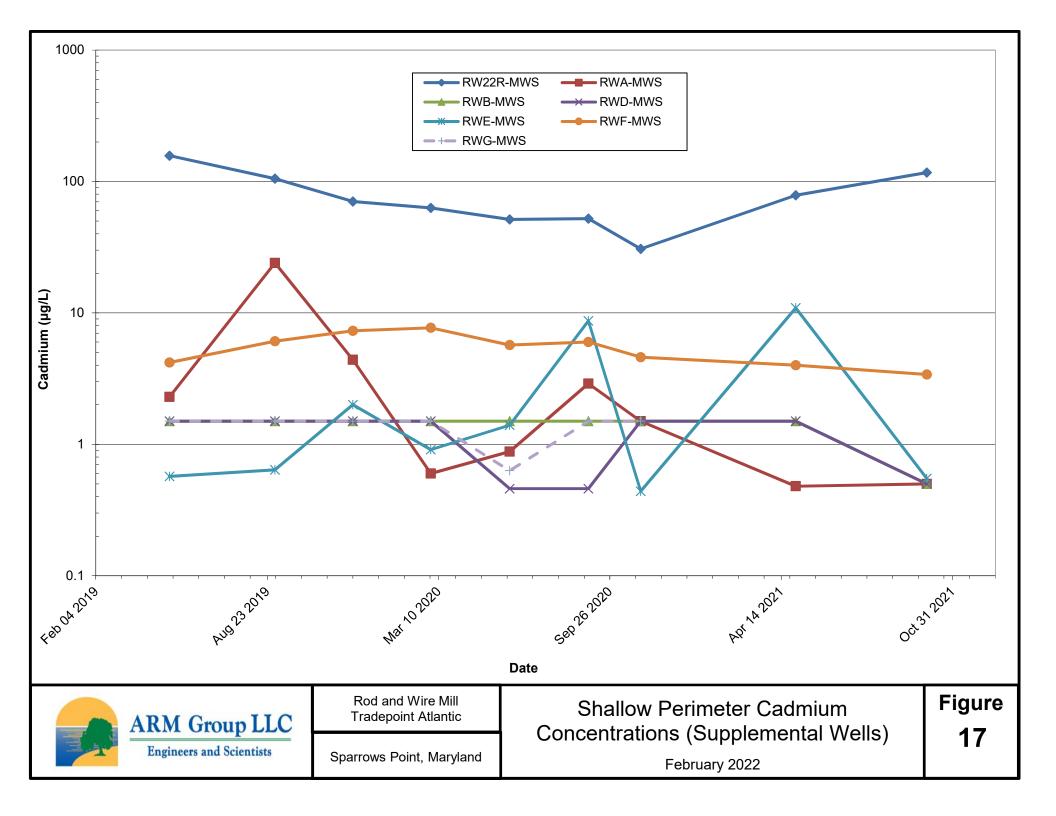


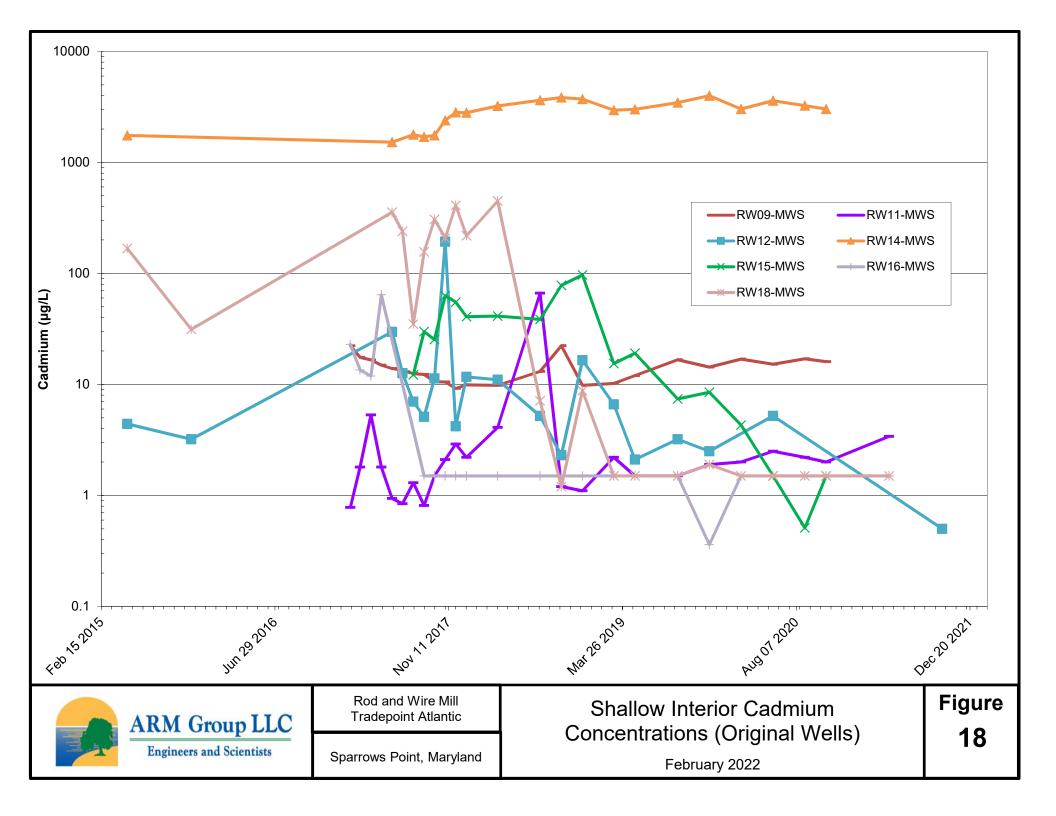


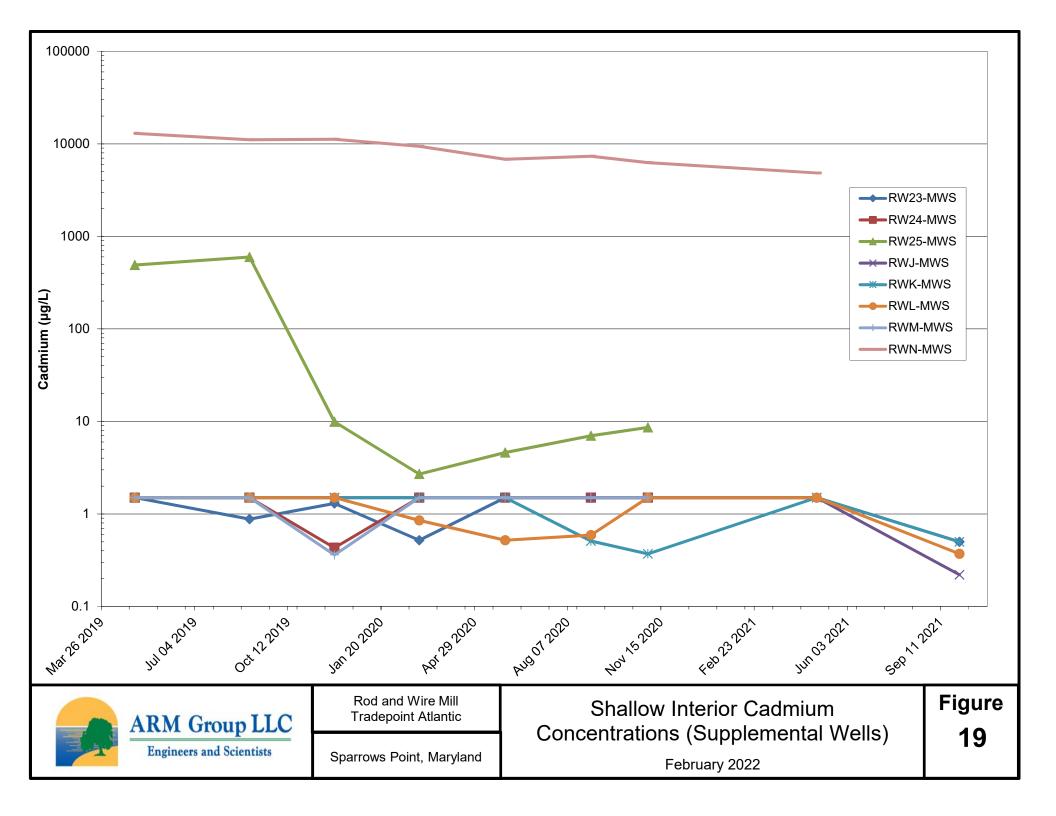


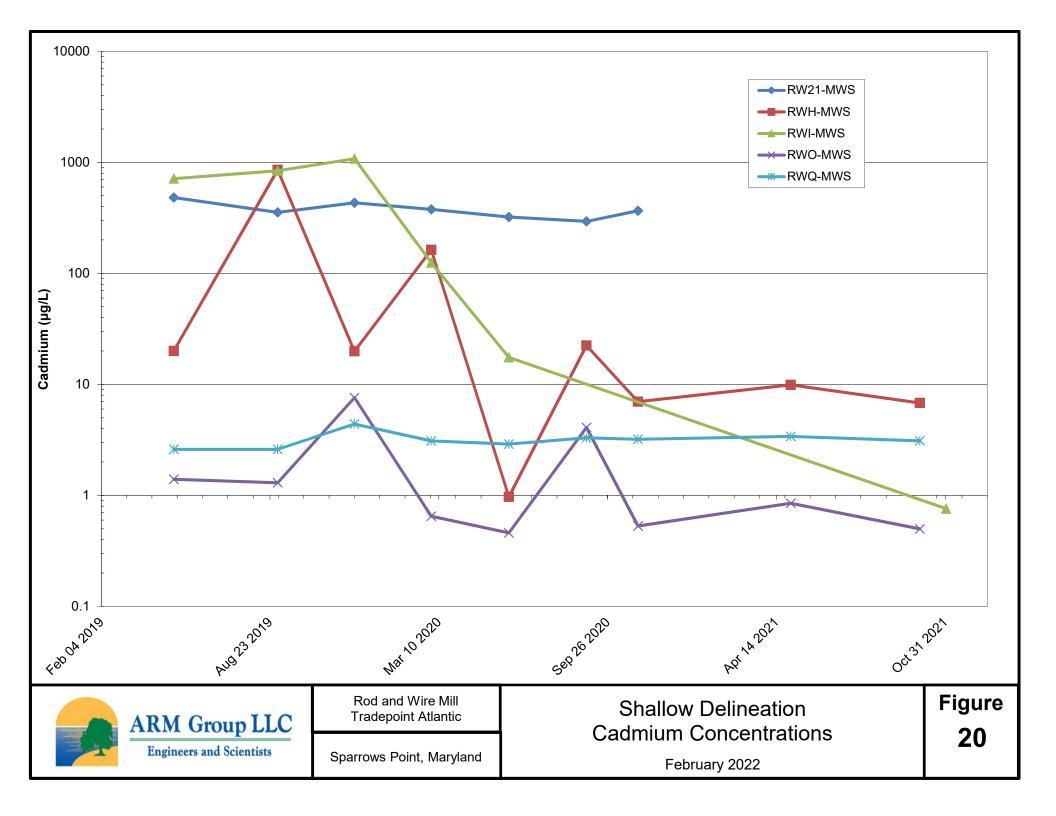


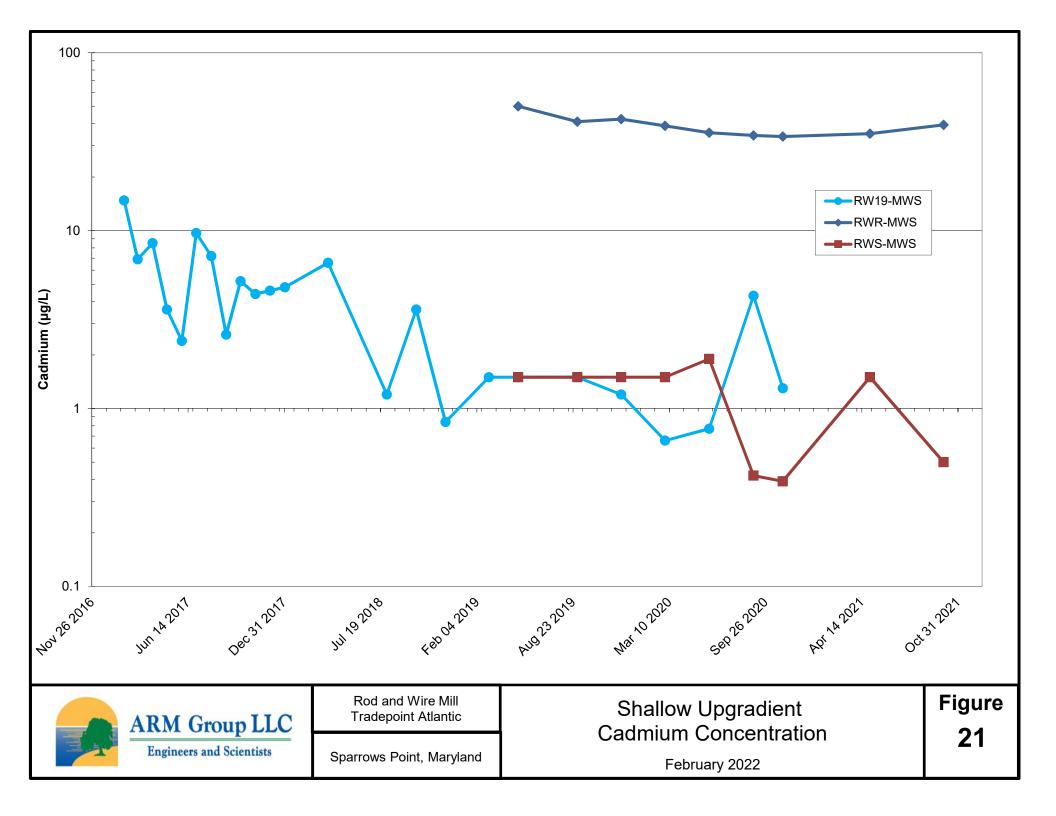


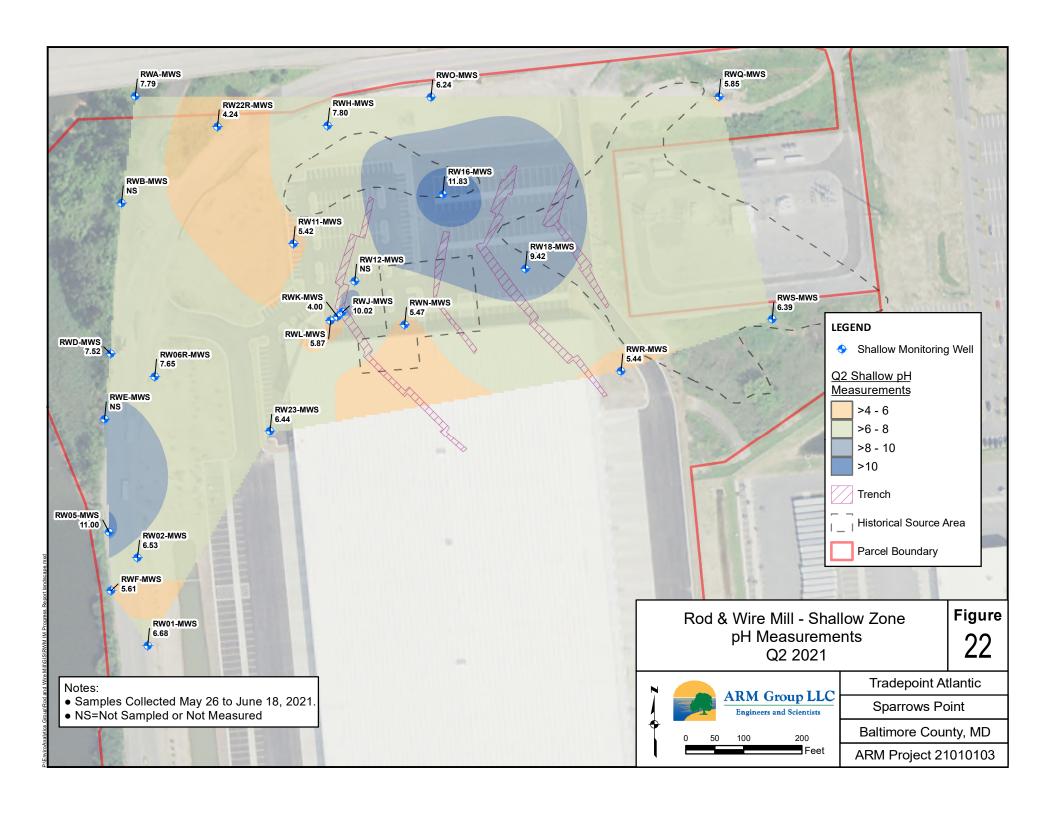


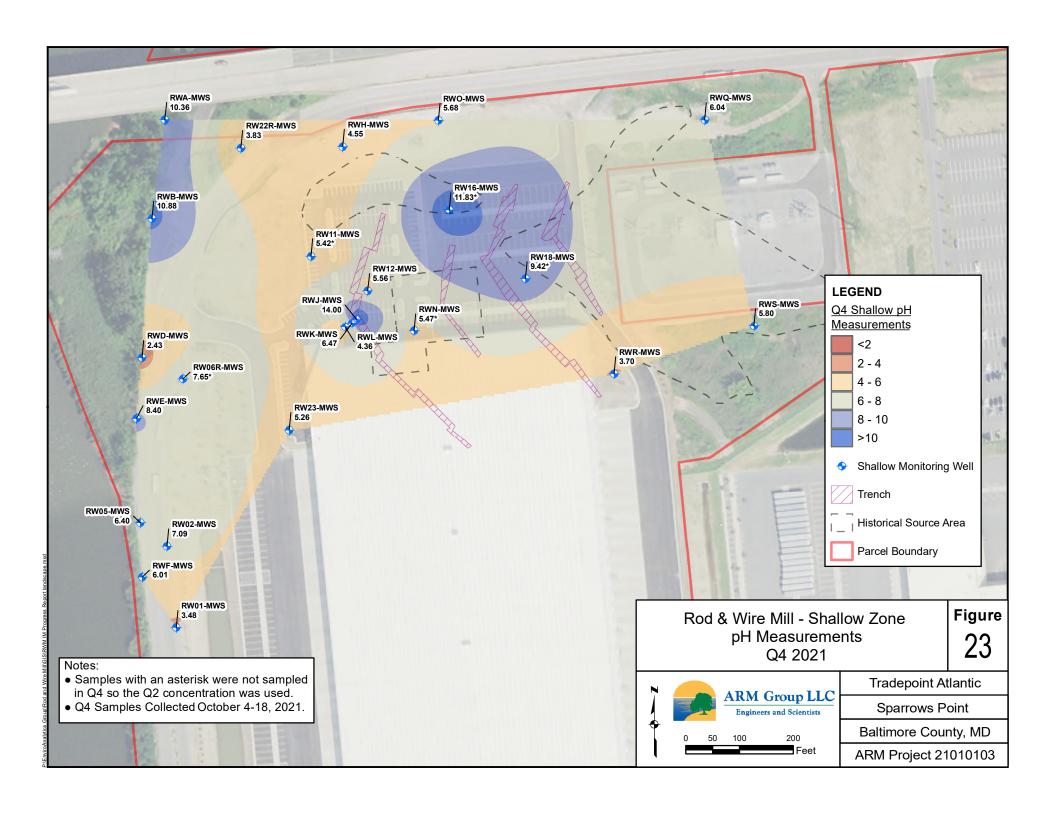


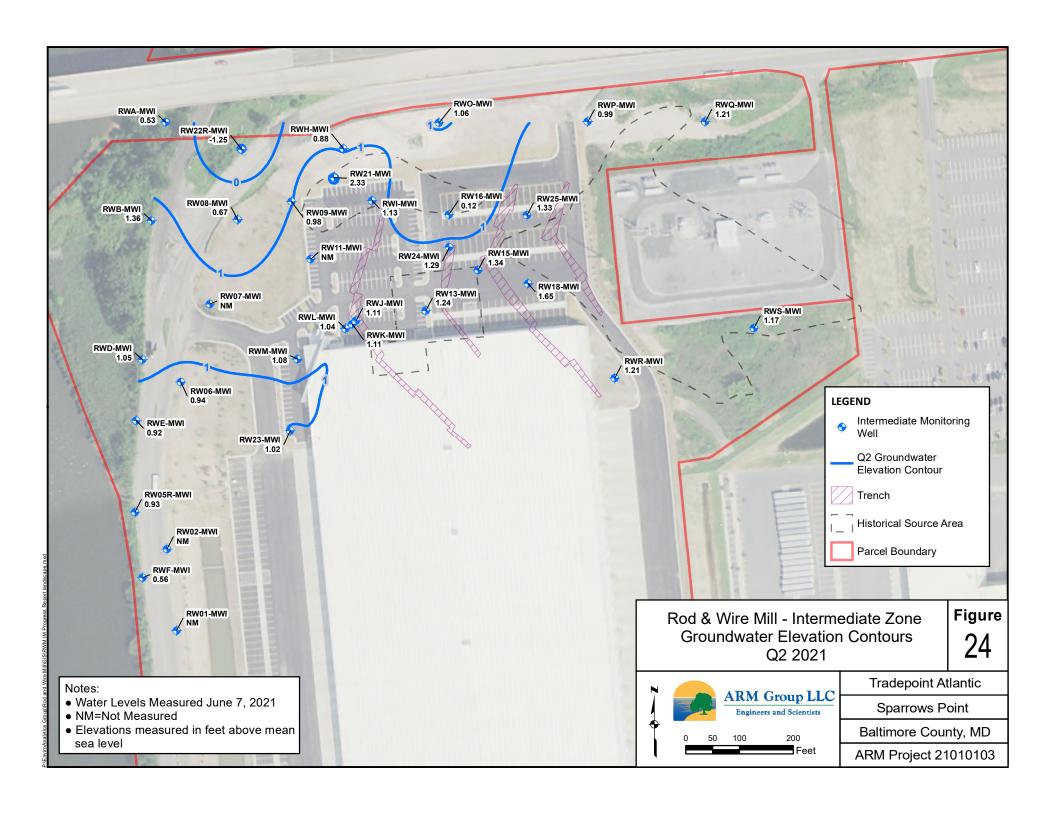


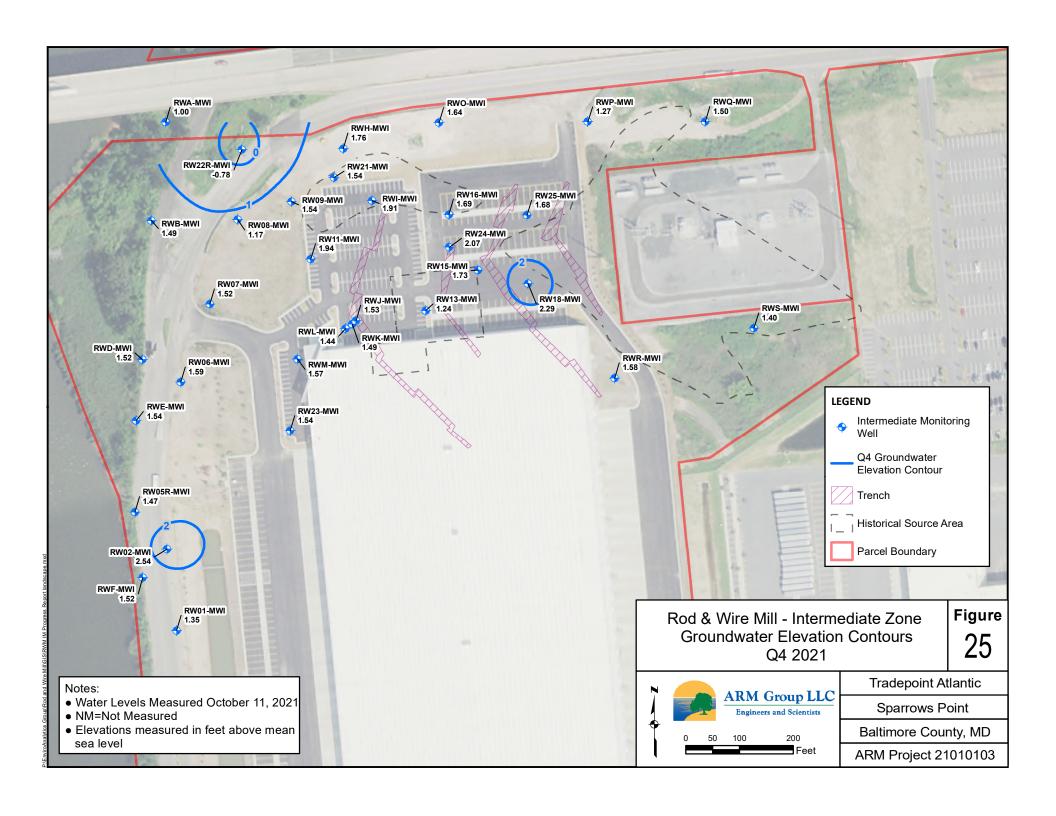


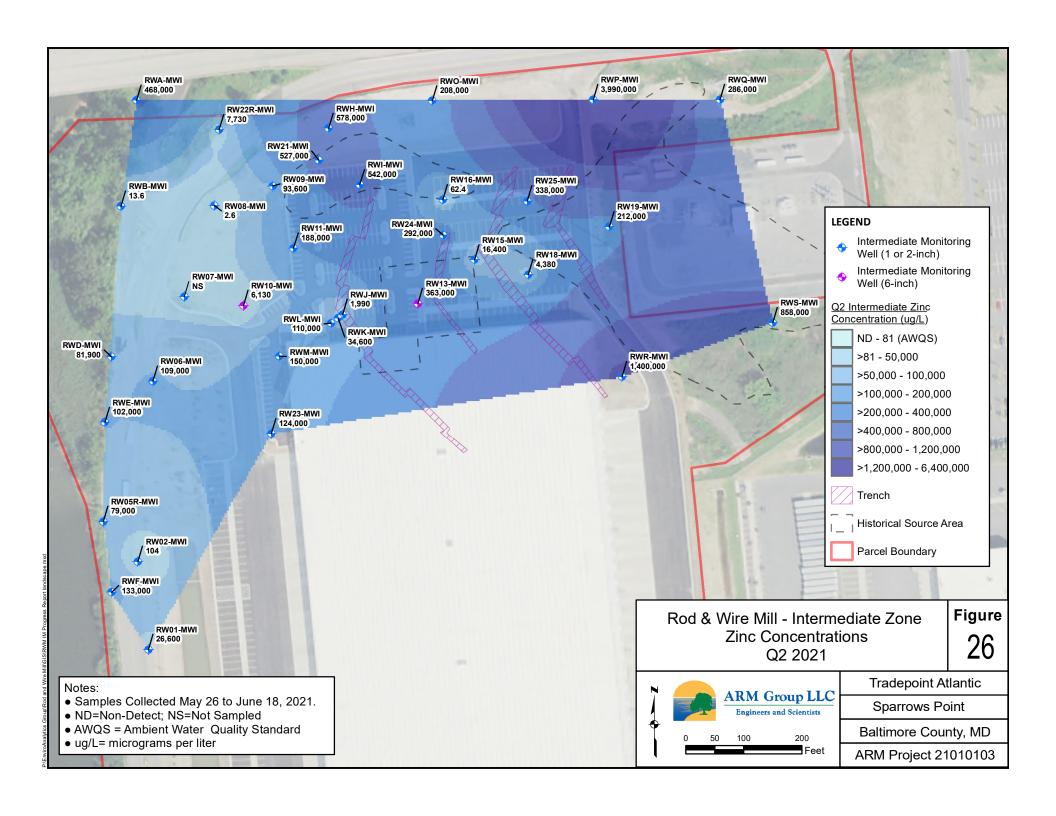


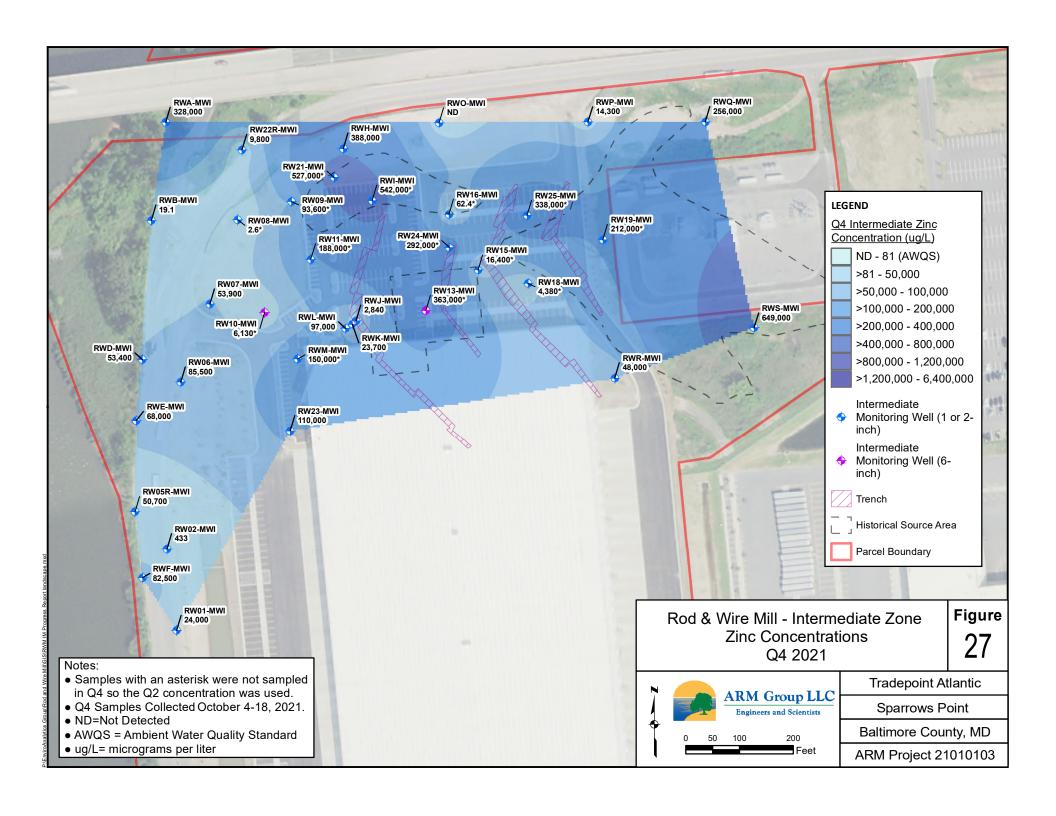


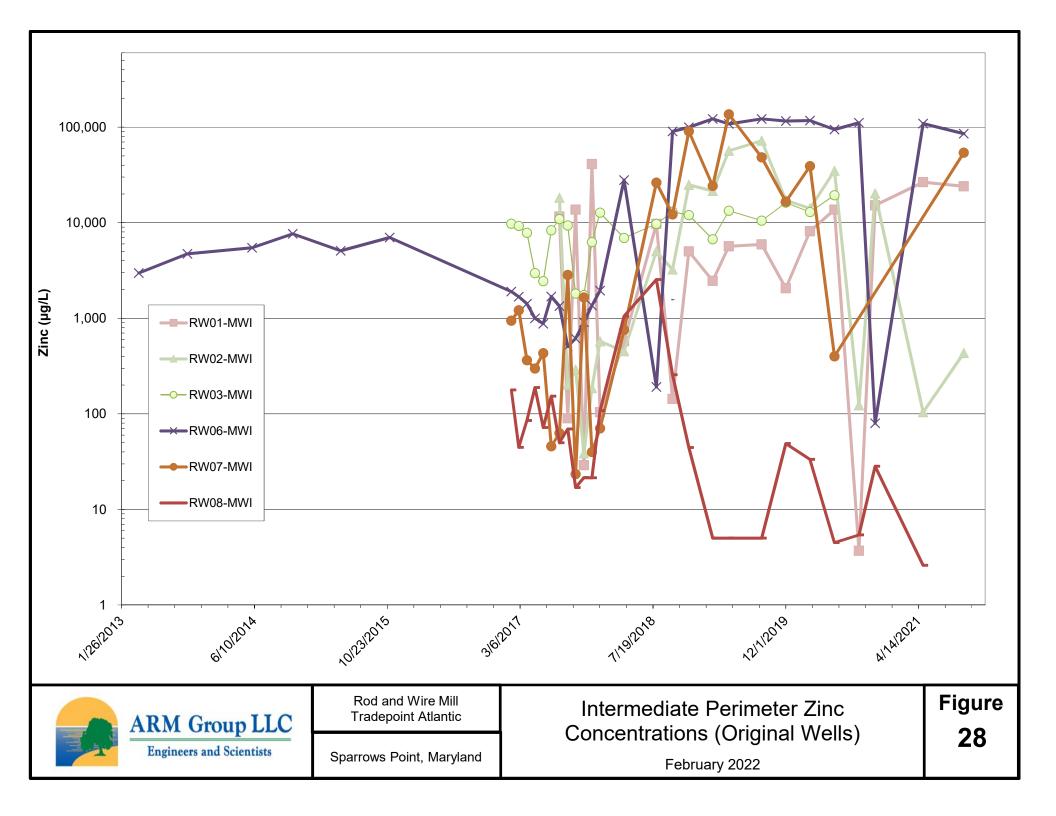


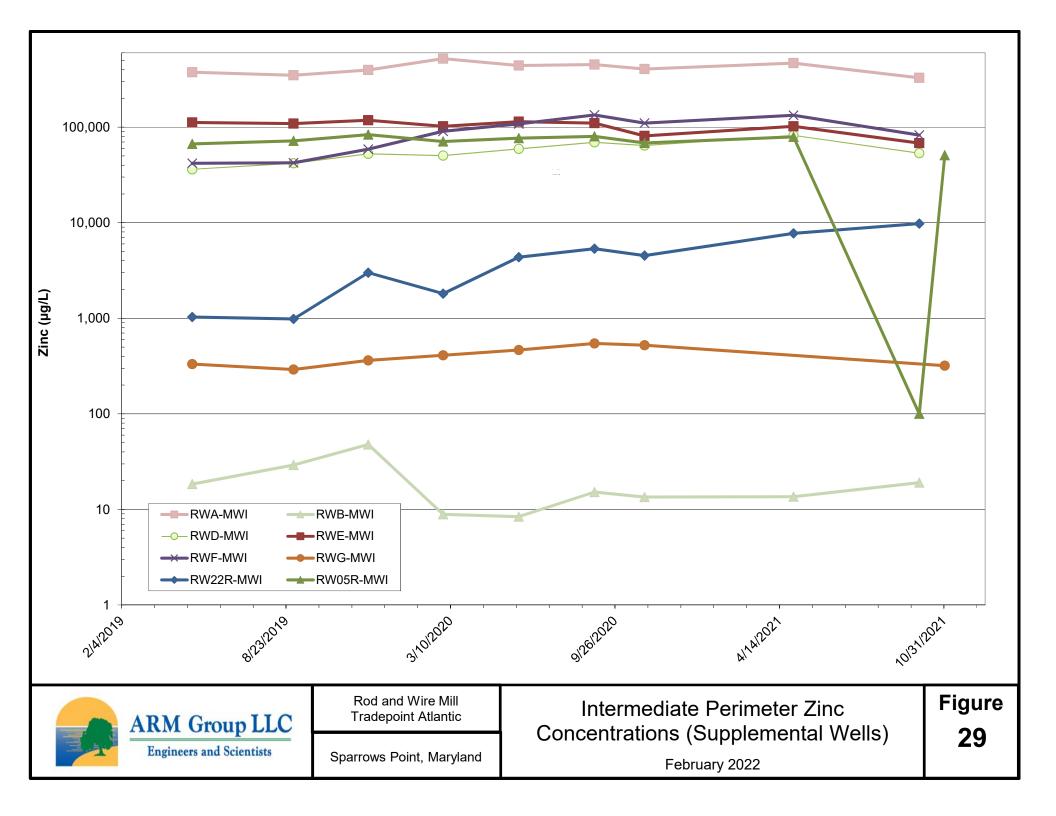


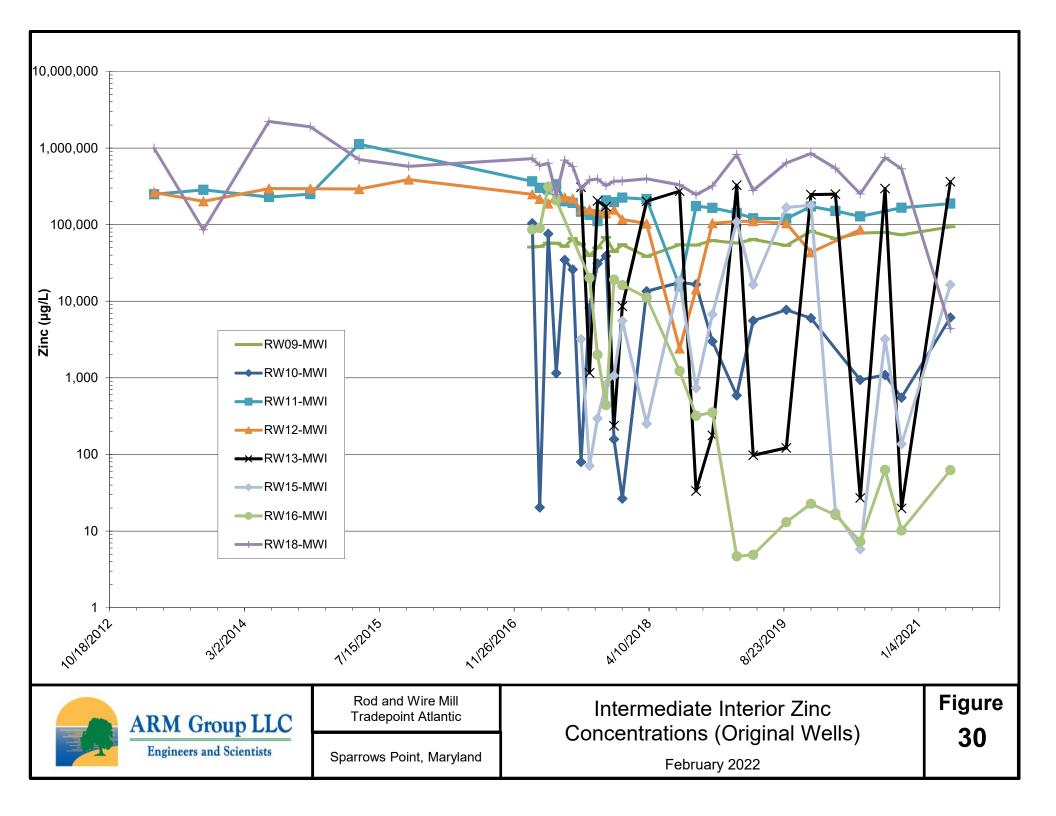


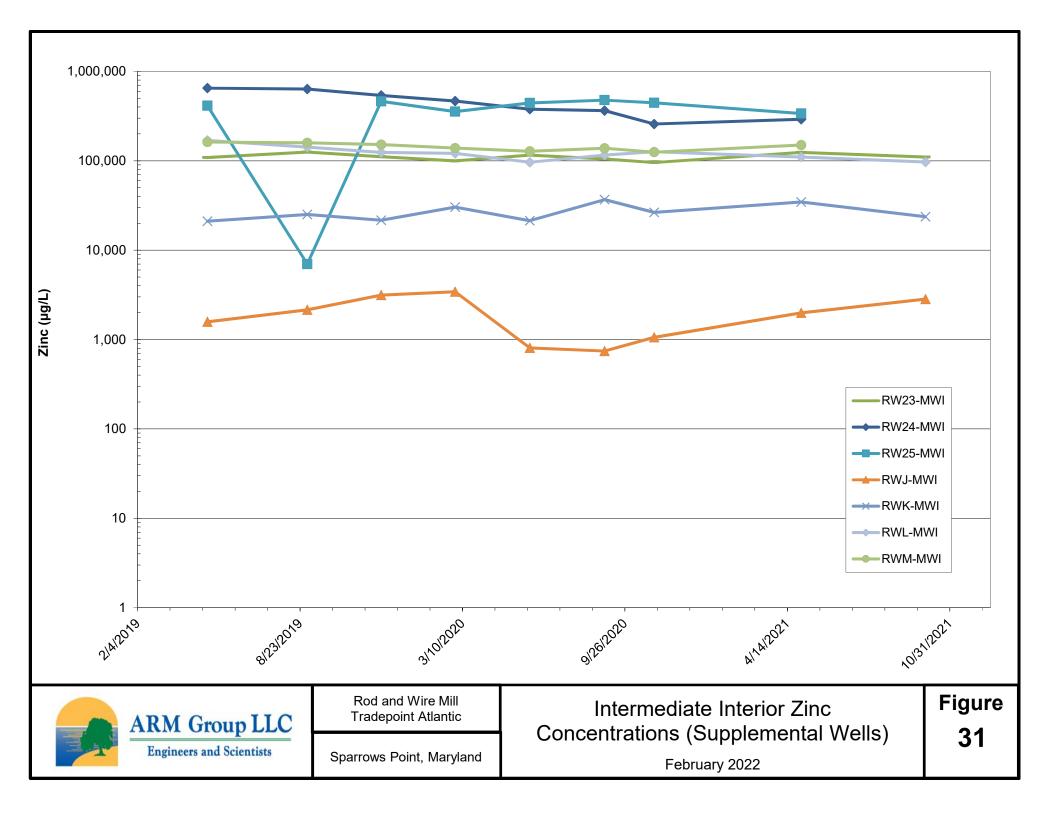


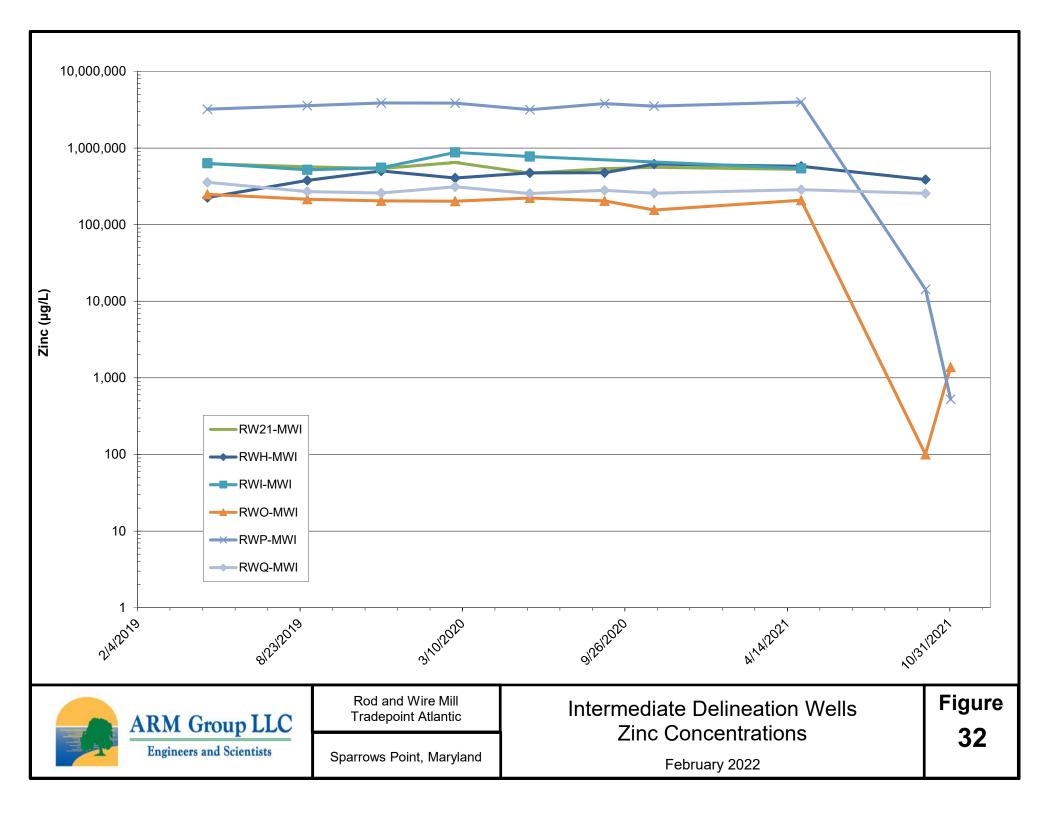


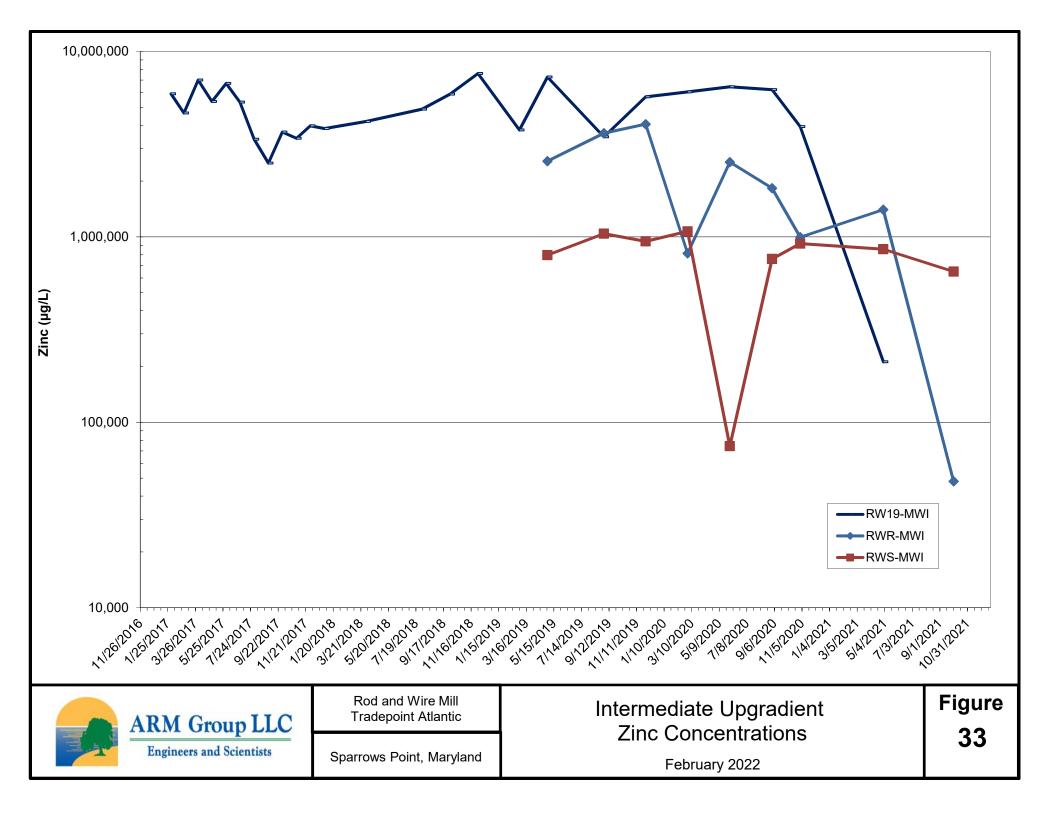


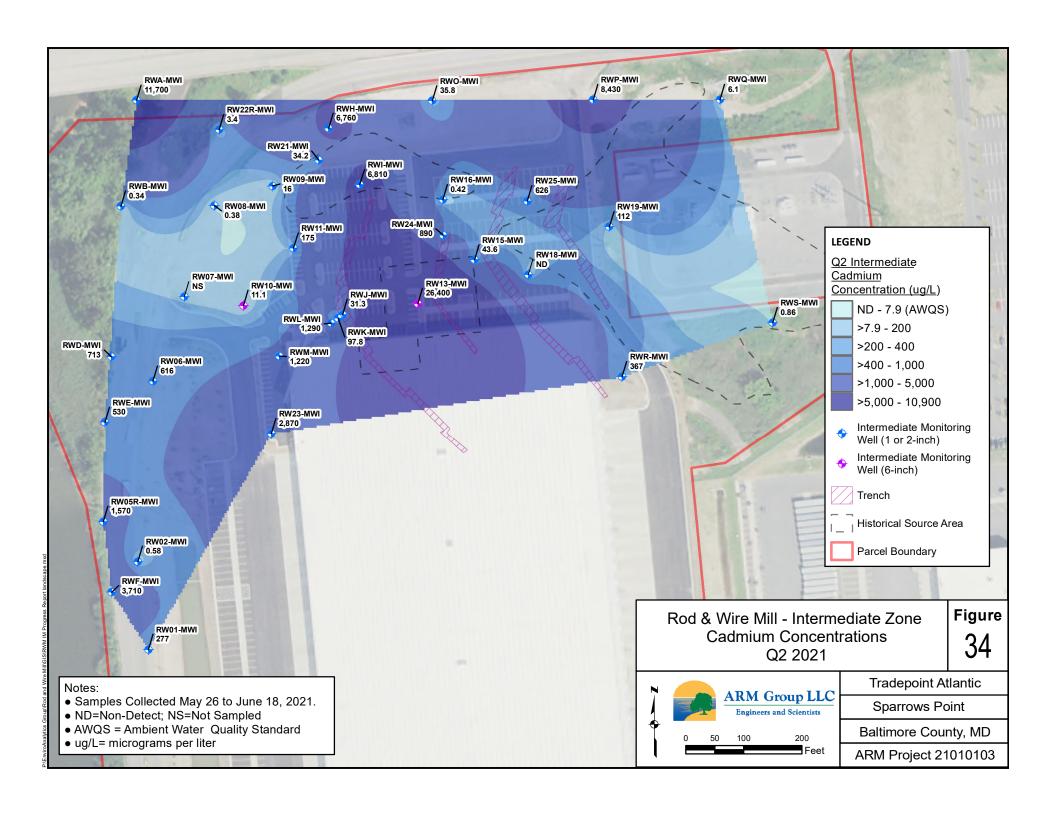


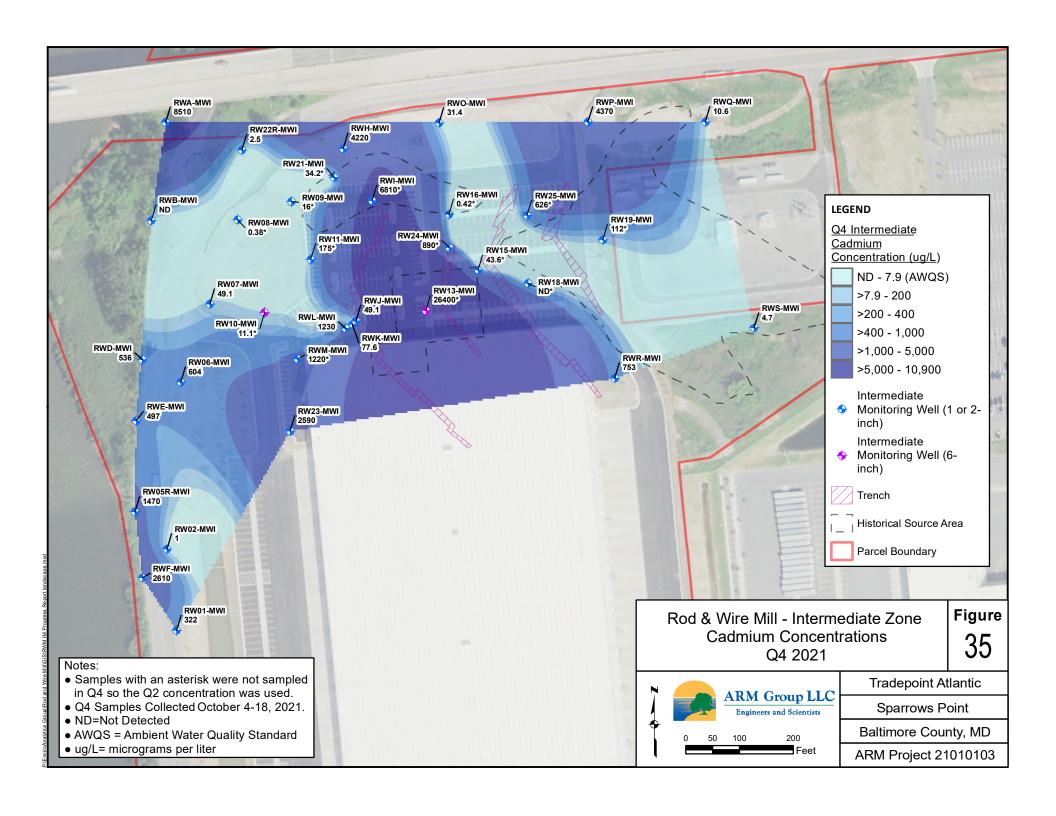


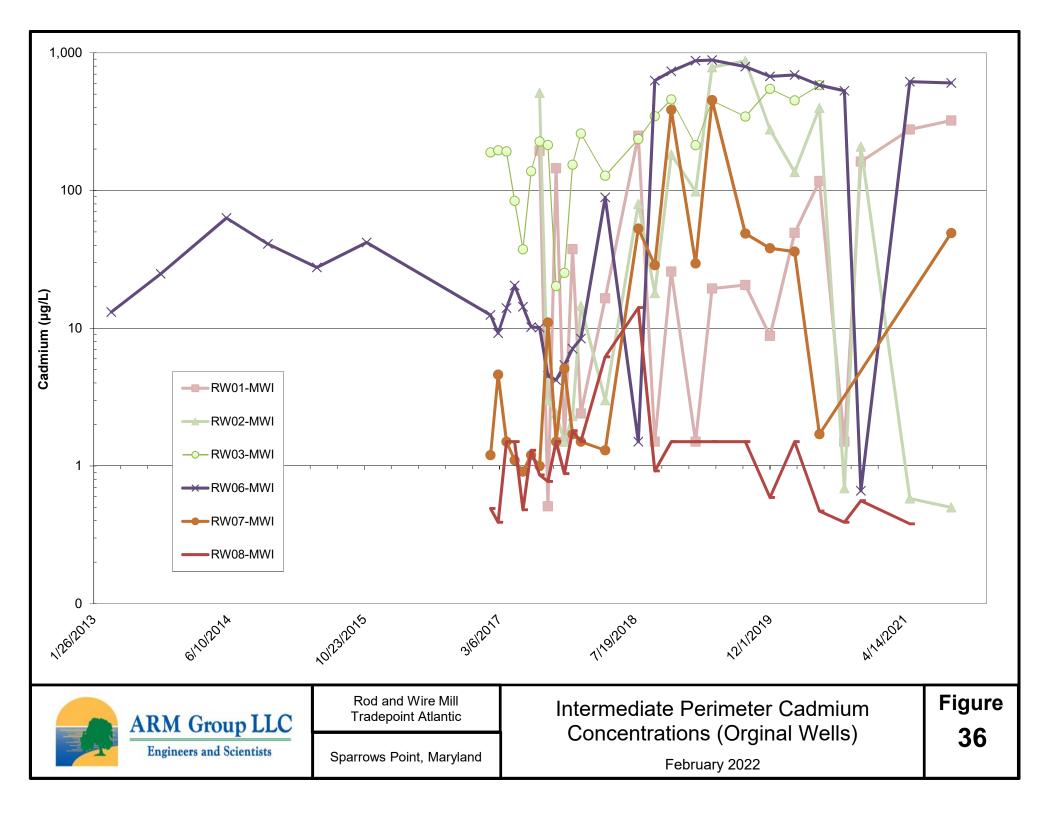


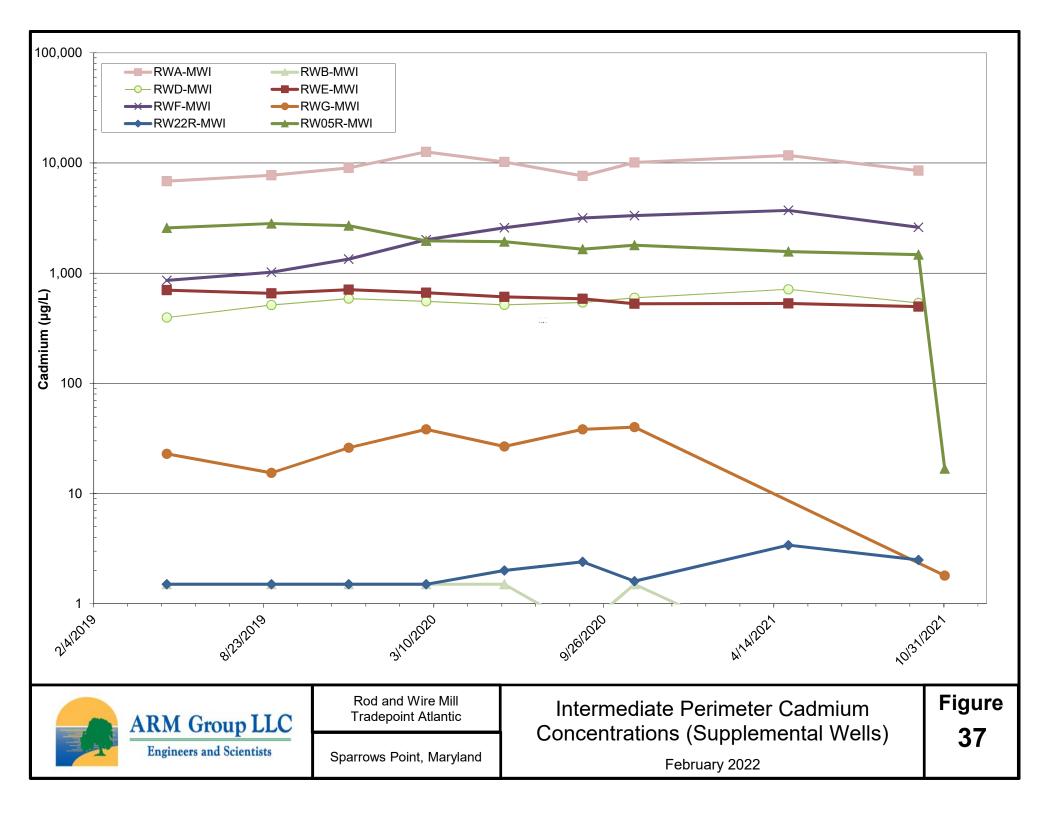


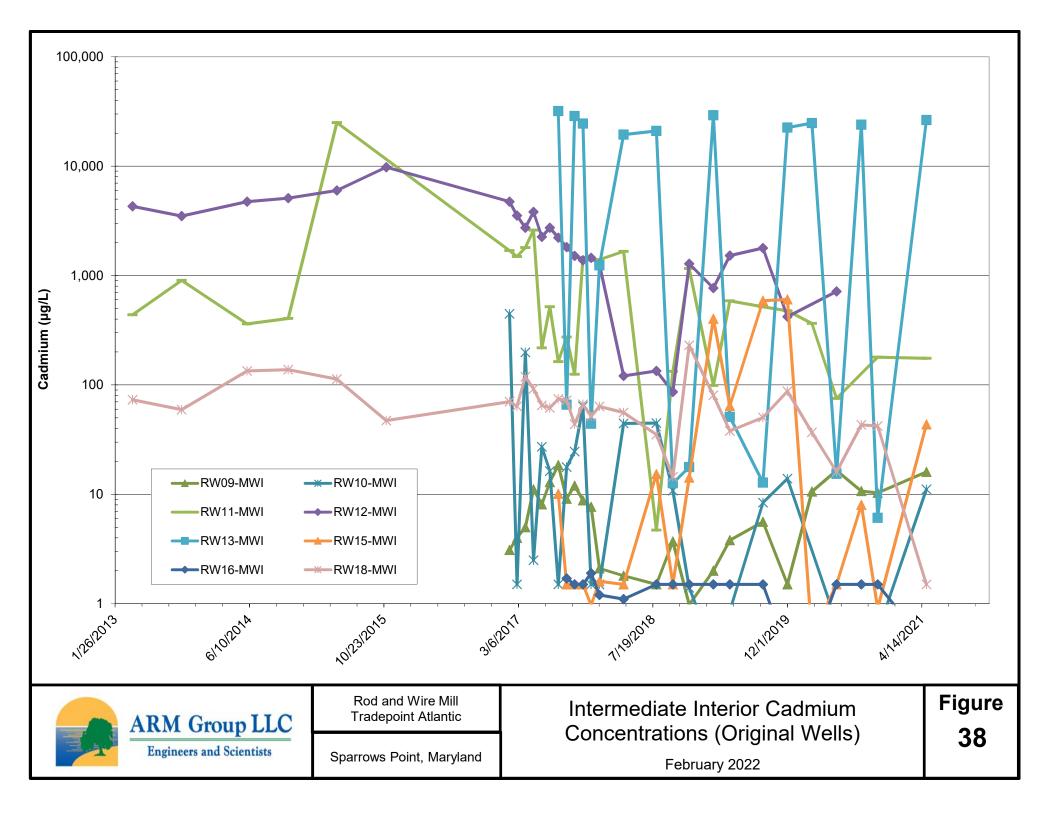


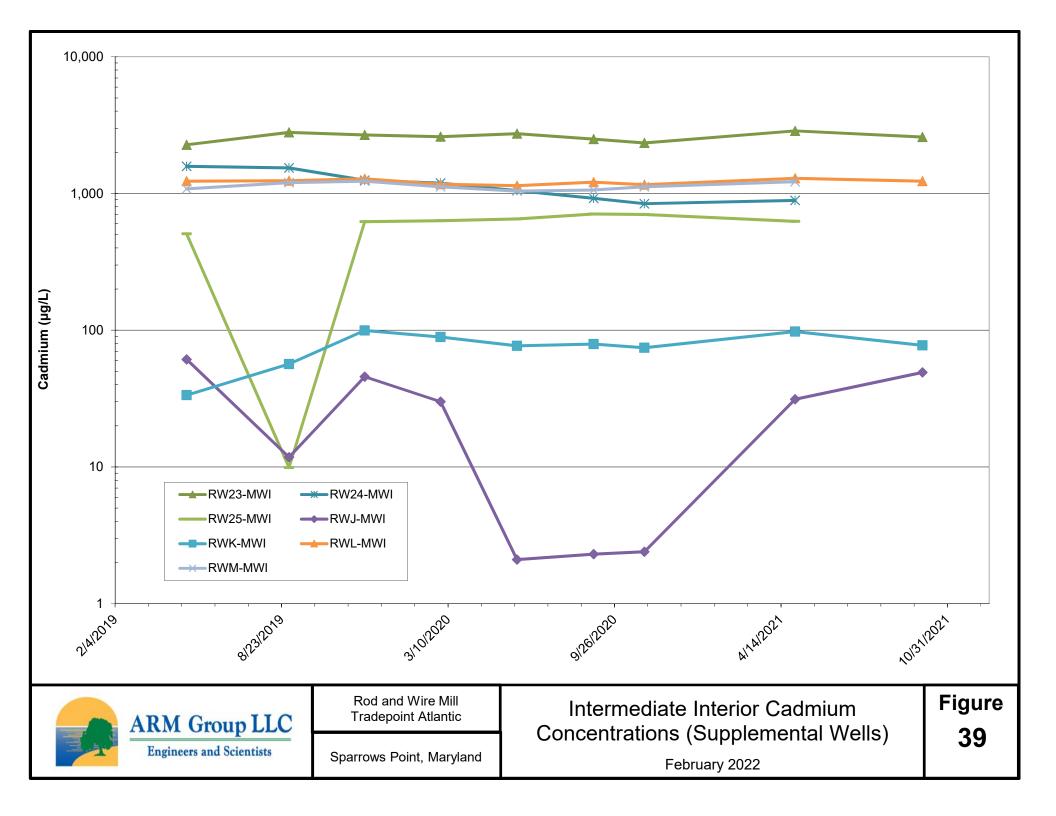


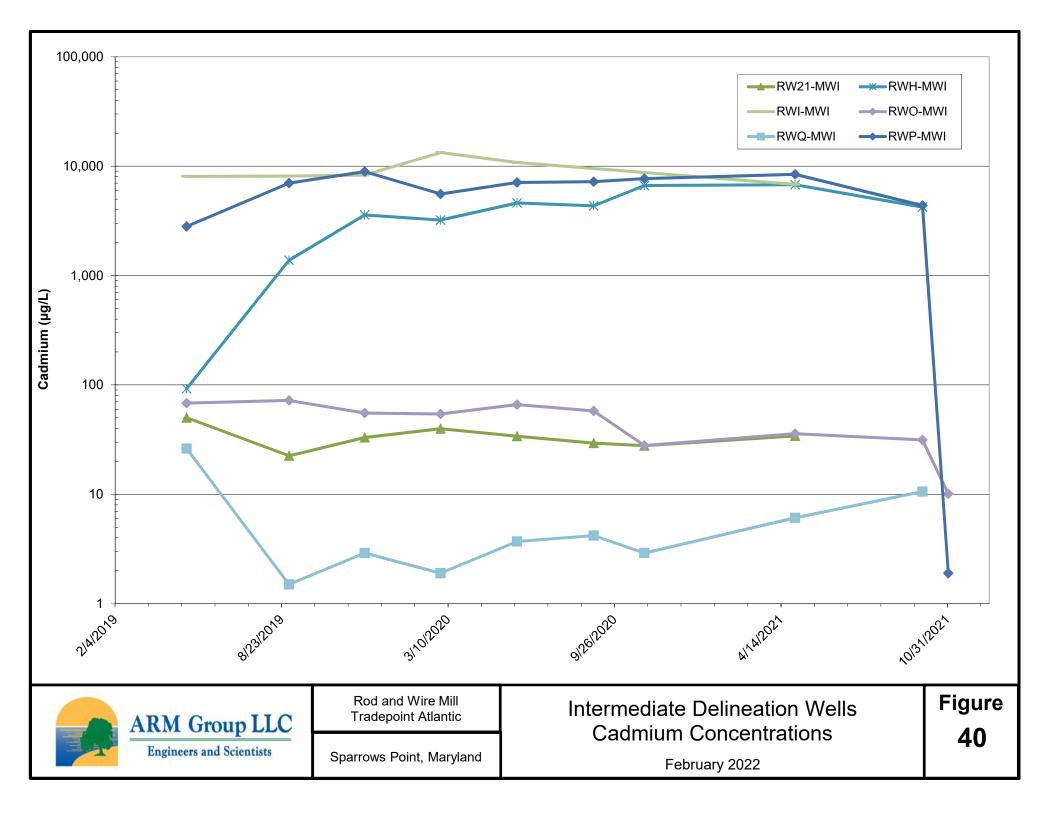


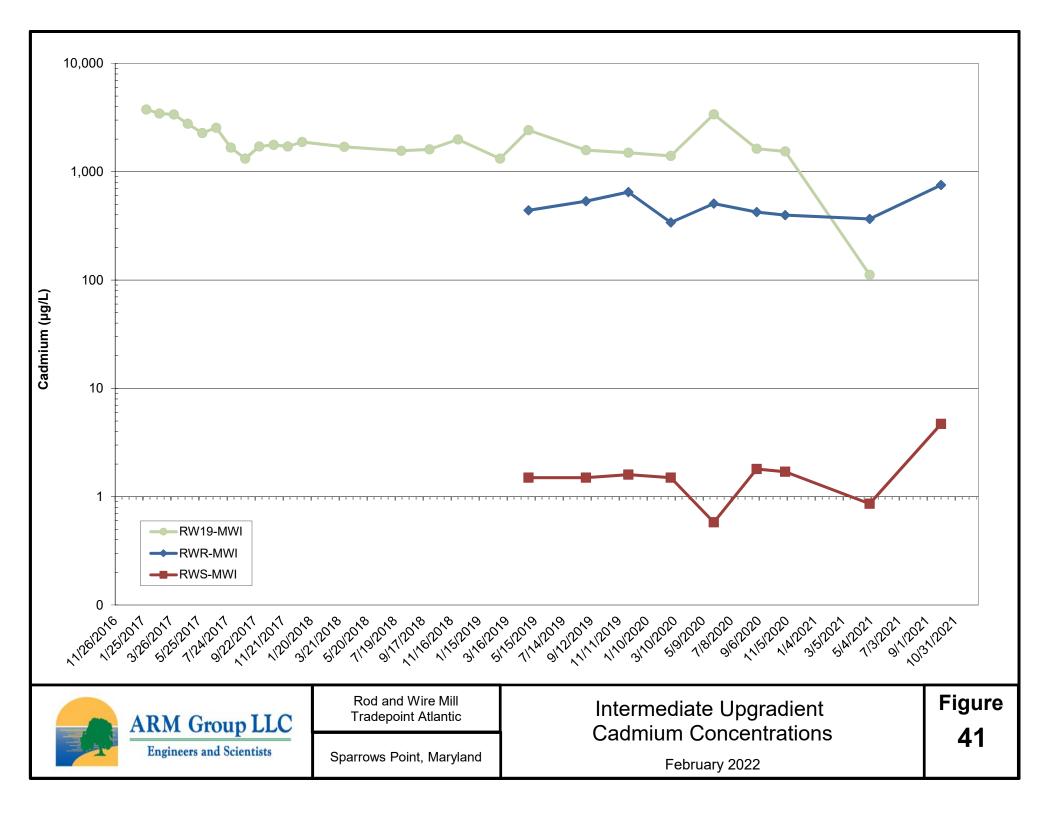


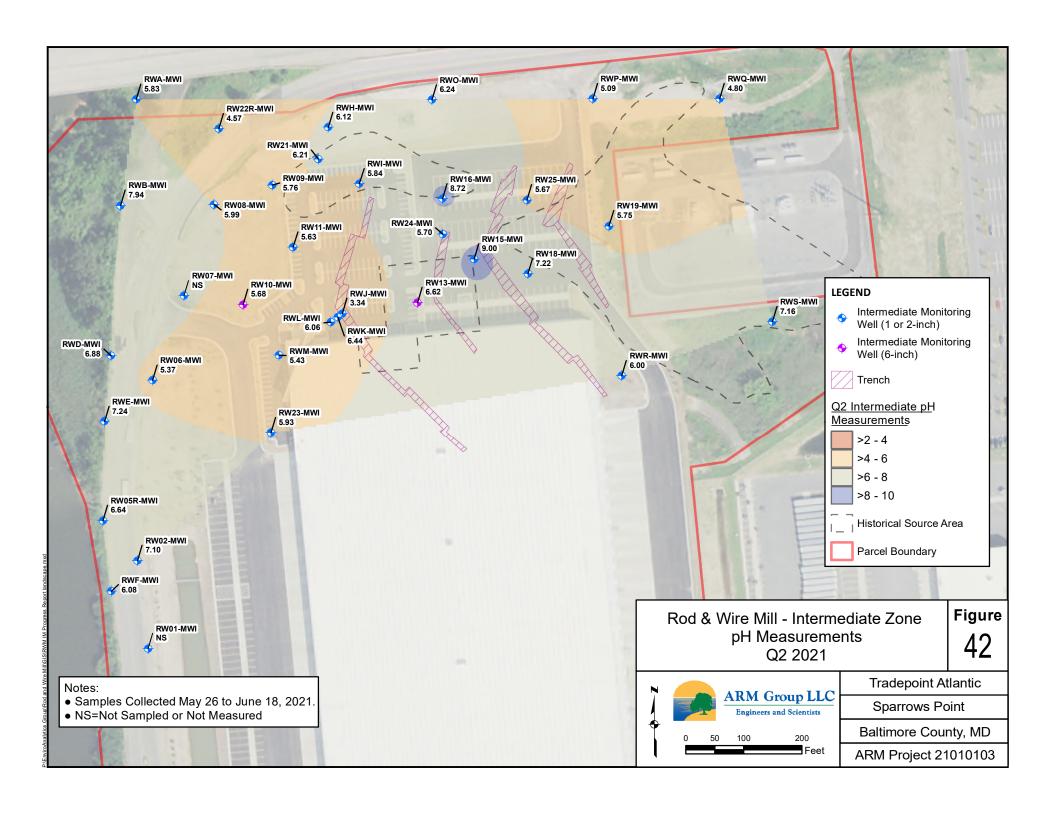


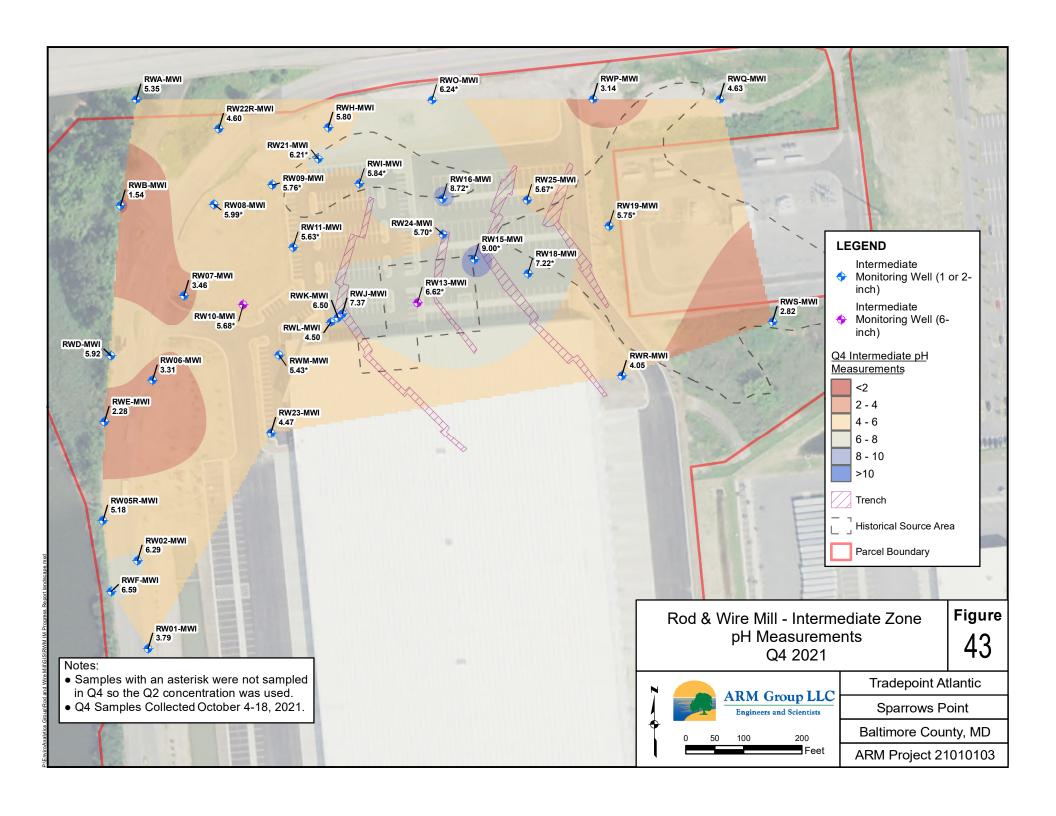


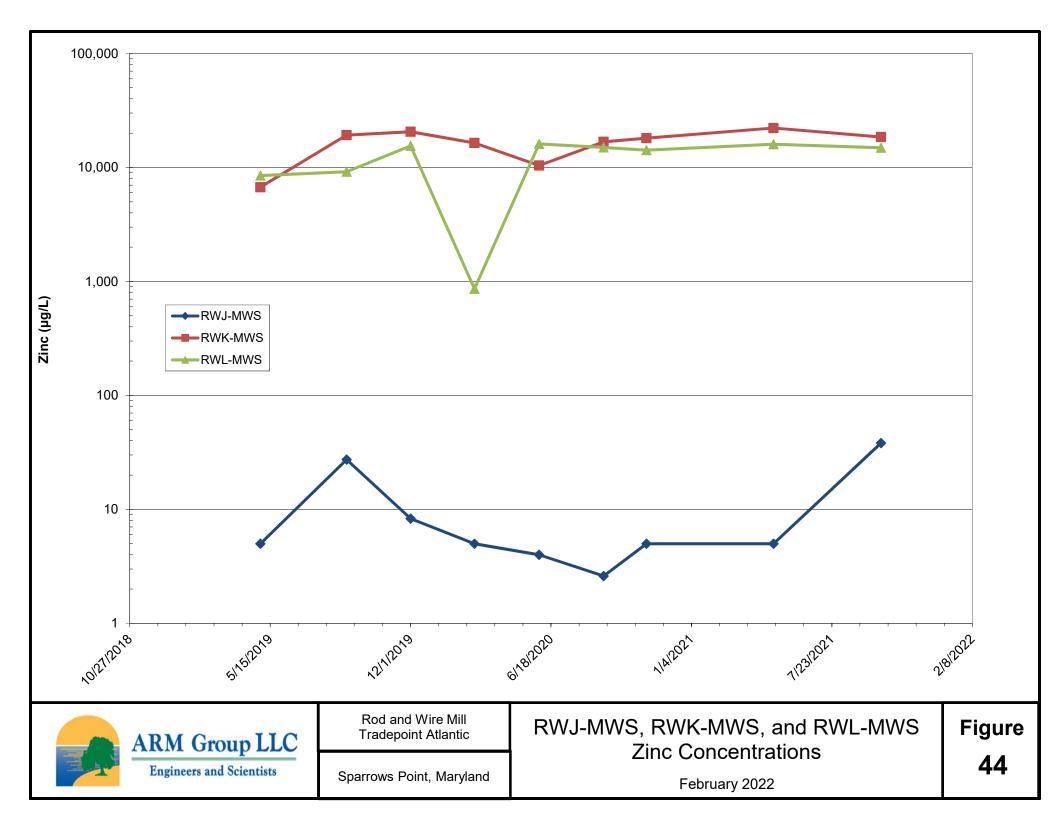


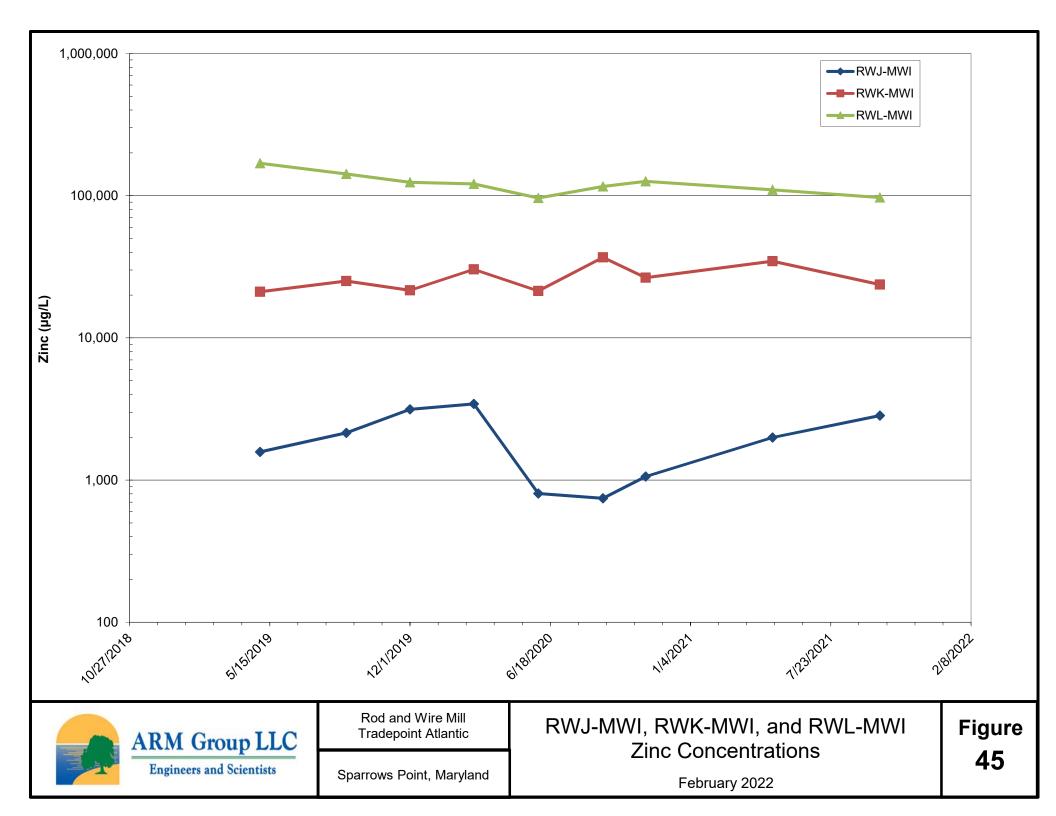


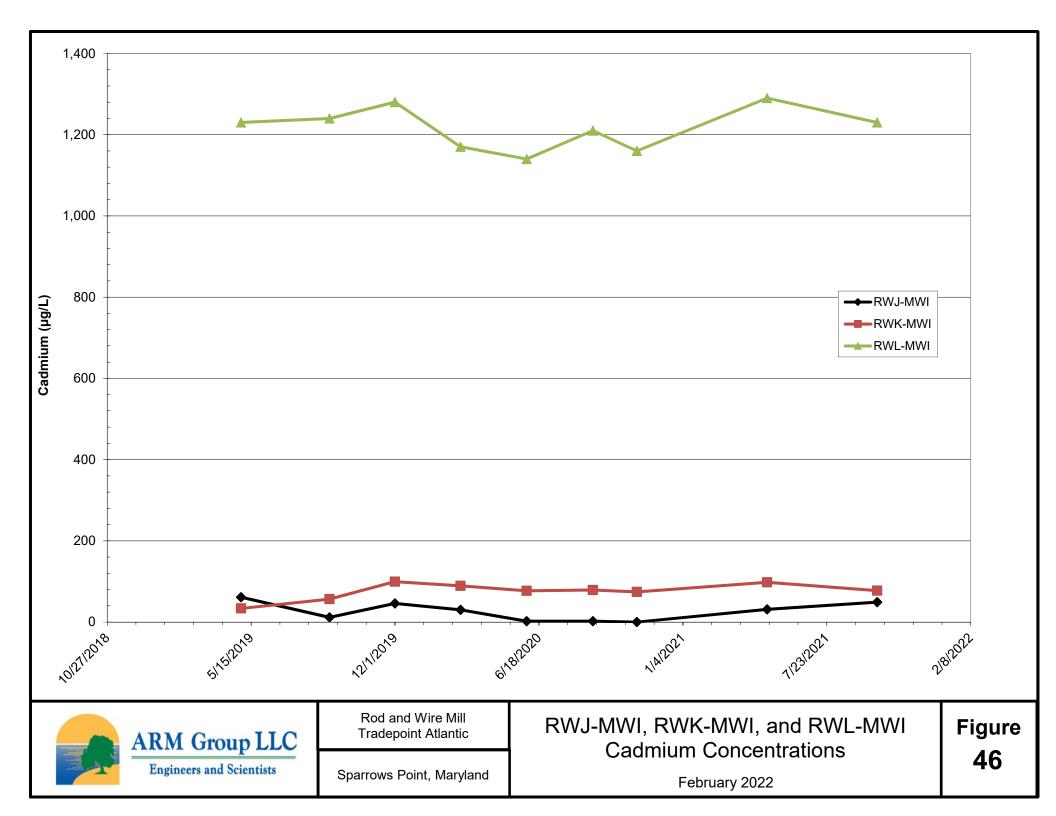












TABLES

Table 1 - Rod and Wire Mill Shallow Wells Sampling Frequency

Well Name	Monitoring Area	Sample Frequency	Sampling Rationale
RWA-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWB-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWD-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWE-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWF-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWG-MWS	Perimeter	Not Sampled	Outside the area of concern (south) and do not expect to see any changes
RWH-MWS	Delineation	Semi-Annually	Monitor northern perimeter concentrations
RWI-MWS	Delineation	Annually	Monitor the northwest pond
RWJ-MWS	Interior	Semi-Annually	Compare to the intermediate well to assess potential vertical migration
RWK-MWS	Interior	Semi-Annually	Compare to the intermediate well to assess potential vertical migration
RWL-MWS	Interior	Semi-Annually	Compare to the intermediate well to assess potential vertical migration
RWM-MWS	Interior	Not Sampled	Not monitoring the perimeter
RWN-MWS	Interior	Annually	Monitor effect on former sludge storage area and any southern direction impacts before the operational building
RWO-MWS	Delineation	Semi-Annually	Monitor northern perimeter concentrations
RWQ-MWS	Delineation	Semi-Annually	Monitor northern perimeter concentrations
RWR-MWS	Upgradient	Semi-Annually	Monitor eastern perimeter concentrations
RWS-MWS	Upgradient	Semi-Annually	Monitor eastern perimeter concentrations
RW01-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW02-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW03-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW04-MWS	Perimeter	Not Sampled	In close proximity to RW03-MWS; not needed to monitor the perimeter
RW05-MWS	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW06R-MWS	Perimeter	Annually	In close proximity to RWD and RWE-MWS; not needed to monitor the perimeter
RW07-MWS	Perimeter	Annually	In close proximity to RWB; not needed to monitor the perimeter
RW08-MWS	Perimeter	Not Sampled	Not monitoring the perimeter
RW09-MWS	Interior	Not Sampled	Not monitoring the perimeter
RW11-MWS	Interior	Annually	Provide spatial coverage in central area
RW12-MWS	Interior	Semi-Annually	Compare to the intermediate well to assess potential vertical migration
RW14-MWS	Interior	Not Sampled	Redundant with other wells monitoring central area
RW15-MWS	Interior	Not Sampled	Redundant with other wells monitoring central area
RW16-MWS	Interior	Annually	Within the area of the northwest disposal pond; provide spatial coverage in central area
RW18-MWS	Interior	Annually	Monitor any southern direction impacts before the operational building; provide spatial coverage in central area
RW19-MWS	Upgradient	Not Sampled	Do not expect to see changes in conditions
RW21-MWP	Delineation	Not Sampled	Installed for NAPL monitoring
RW21-MWS	Delineation	Not Sampled	Redundant with other monitoring wells in the central area
RW22R-MWS	Perimeter	Semi-Annually	Monitor downgradient of northwest pond area; monitor northern perimeter concentrations
RW23-MWS	Interior	Semi-Annually	Monitor southern perimeter and immediately downgradient of operational building concentrations
RW24-MWS	Interior	Not Sampled	Redundant with other monitoring wells in the central area
RW25-MWS	Interior	Not Sampled	Redundant with other monitoring wells in the central area

Table 2 - Rod and Wire Mill Intermediate Wells Sampling Frequency

Well Name	Monitoring Area	Sample Frequency	Sampling Rationale
RWA-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWB-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWD-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWE-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWF-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RWG-MWI	Perimeter	Annually	Monitor for changes in perimeter concentrations
RWH-MWI	Delineation	Semi-Annually	Monitor northern perimeter conditions
RWI-MWI	Delineation	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RWJ-MWI	Performance	Semi-Annually	Near field wells to monitor trench effectiveness; inside final treatment trench
RWK-MWI	Performance	Semi-Annually	Near field wells to monitor trench effectiveness; immediate well downgradient after final treatment trench
RWL-MWI	Performance	Semi-Annually	Near field wells to monitor trench effectiveness; delineation of final treatment trench
RWM-MWI	Performance	Annually	Trench effectiveness is already being monitored closer to the area of concern
RWO-MWI	Delineation	Semi-Annually	Monitor northern perimeter conditions
RWP-MWI	Delineation	Semi-Annually	Monitor northern perimeter conditions
RWQ-MWI	Delineation	Semi-Annually	Monitor northern perimeter conditions
RWR-MWI	Upgradient	Semi-Annually	Monitor eastern perimeter conditions; monitor concentrations proximal to the operational building
RWS-MWI	Upgradient	Semi-Annually	Monitor eastern perimeter conditions
RW01-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW02-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW03-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW05R-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW06-MWI	Perimeter	Semi-Annually	Monitor for changes in perimeter concentrations
RW06R-MWD	Perimeter	Annually	Monitor any vertical movement of groundwater into lower hydrogeologic zone
RW07-MWI	Perimeter	Semi-Annually	Monitor western perimeter
RW08-MWI	Perimeter	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW09-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW10-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW11-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW12-MWI	Performance	Semi-Annually	Near field wells to monitor trench effectiveness; well immediate upgradient to final treatment trench
RW13-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW15-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW16-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW18-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW19-MWI	Upgradient	Annually	Do not expect to see changing conditions because it is upgradient of all treatment trenches
RW21-MWI	Delineation	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW22R-MWI	Perimeter	Semi-Annually	Monitor downgradient of northwest pond area; monitor northern perimeter concentrations
RW23-MWI	Performance	Semi-Annually	Monitor the concentrations along the southern perimeter and immediately downgradient of operational building
RW24-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater
RW25-MWI	Performance	Annually	Do not expect to see rapid changing conditions due to passive condition and slow migration of groundwater

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Sampling Dates	Units	RW01-MWS	RW02-MWS	RW03-MWS	RW04-MWS	RW05-MWS	RW06R-MWS	RW07-MWS	RW08-MWS	RW09-MWS	RW11-MWS
2/10/2017-2/14/2017	μg/L	NS	NS	6,200	NS	NS	NS	81.6	1,080	14,500	8,790
3/28/2017-3/29/2017	μg/L	NS	NS	6,510	NS	NS	NS	74.8	8,710	12,400	10,500
4/25/2017-4/27/2017	μg/L	NS	NS	4,860	NS	NS	NS	86.4	9,520	12,900	13,100
5/22/2017-5/24/2017	μg/L	NS	NS	5,380	NS	NS	NS	102	2,680	11,900	12,500
6/5/2017-6/8/2017	μg/L	NS	NS	5,500	58.2	NS	NS	107	1,870	13,000	13,500
7/10/2017-7/12/2017	μg/L	NS	NS	8,460	179	NS	NS	114	968	11,500	10,900
8/7/2017-8/10/2017	μg/L	12,200	6,290	7,730	74.7	550	NS	127	3,190	9,700	10,800
9/1/2017-9/8/2017	μg/L	5,730	3,220	16,300	163	184	NS	165	4,460	8,750	10,600
10/2/2017-10/6/2017	μg/L	7,730	5,490	32,100	137	1,410	NS	144	1,950	8,310 ML	9,270
11/3/2017-11/13/2017	μg/L	25,200	1,460	14,100	123	503	NS	227	1,600	9,290	18,300
12/4/2017-12/8/2017	μg/L	7,300	79.3	46,400	279	5,440	NS	216	1,770	8,550	24,000
1/2/2018-1/9/2018	μg/L	35,200	2,210	31,500	384	35.7	NS	276	2,600	9,310	27,700
4/8/2018-4/13/2018	μg/L	52,000	5,320	44,000	300	75.3	NS	204	13,200	8,980	37,100
7/30/2018-8/3/2018	μg/L	24,100	5,470	25,600	7.9 J	32.6	22	248	6,640	10,700	109,000
10/1/2018-10/5/2018	μg/L	37,000	5,930	14,900	168	21.7	3.7 J	223	13,300	10,800	29,500
12/10/2018-12/14/2018*	μg/L	13,700	27,400	23,300	23.5	10 U	10 U	176	931	9,200	28,900
3/12/2019-3/19/2019*	μg/L	16,500	13,100	9,570	33.6	10 U	10 U	142	14,600	11,300	13,500
5/3/2019-6/7/2019*	μg/L	16,300	21,900	18,700	10 U	10 U	20.7	137	11,300	14,100	38,900
9/10/2019-9/23/2019*	μg/L	16,300	27,400	19,200	313	8.3 B	4.1 B	148	1,350	19,600	44,000
12/3/2019-12/11/2019	μg/L	10,400	594	19,200	604	41.6	4.3 J	168	1,250	20,600	37,500
3/11/20-3/23/20*	μg/L	9,810	269	16,800	37.8	5.4 J	4.1 J	124	10,300	20,700	28,900
6/8/20-6/30/20*	μg/L	6,200	1,940	18,800	79.4	8.6 J	19.4	220	12,000	26,700	37,200
9/9/20-9/29/20*	μg/L	7,050	1,280	NS	75.4	5.9 J	8 J	NS	2,330	39,900	46,600
11/5/20-11/19/20*	μg/L	4,140	9,950	NS	54.6	9.8 J	10 U	NS	1,600	45,200	55,200
5/26/21-6/18/21*	μg/L	3,620	472	NS	NS	7.0 J	10 U	NS	NS	NS	61,000
10/4/21-10/18/21*	μg/L	5,660	3.1 J	NS	NS	17.8 J	NS	NS	NS	NS	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	298	NS	NS	NS

NS = Not Sampled

DNE = Did Not Exist

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Sampling Dates	Units	RW12-MWS	RW14-MWS	RW15-MWS	RW16-MWS	RW18-MWS	RW19-MWS	RW21-MWS	RW22R-MWS	RW23-MWS	RW24-MWS
2/10/2017-2/14/2017	μg/L	NS	NS	NS	NS	NS	10,100	DNE	DNE	DNE	DNE
3/28/2017-3/29/2017	μg/L	NS	NS	NS	NS	NS	7,100	DNE	DNE	DNE	DNE
4/25/2017-4/27/2017	μg/L	NS	NS	NS	NS	NS	6,260	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	NS	NS	NS	NS	NS	4,860	DNE	DNE	DNE	DNE
6/5/2017-6/8/2017	μg/L	11,400	NS	NS	NS	25,500	3,720	DNE	DNE	DNE	DNE
7/10/2017-7/12/2017	μg/L	9,090	NS	NS	NS	13,300	3,700	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	5,090	42,000	276	NS	964	3,360	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	3,980	43,500	1,080	25.6	6,160	2,990	DNE	DNE	DNE	DNE
10/2/2017-10/6/2017	μg/L	3,790	28,900	900	26.2	14,500	18,700	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	235,000	28,100	8,800	48.6	10,700	2,730	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	2,980	49,200	7,630	27.7	23,400	3,380	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	10,100	61,800	5,150	31.2	11,600	10,200	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	10,600	62,100	5,940	25	25,900	7,060	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	2,900	64,100	1,320	35.9	439	10,100	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	1,140	80,100	2,950	30.0	44.9	10,500	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	8,570	79,200	4,380	5.5 J	12.7	3,390	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	4,640	65,700	499	7 J	30	4,680	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	1,550	69,600	684	106	16.9	3,180	282,000	58,100	22.4	5 J
9/10/2019-9/23/2019*	μg/L	5,390	70,500	134	10.0 U	4.3 B	2,260	330,000	188,000	20.6	8.2 J
12/3/2019-12/11/2019	μg/L	763	77,500	378	22.7	15.2	2,640	368,000	112,000	38.6	6.7 J
3/11/20-3/23/20*	μg/L	NS	70,800	105	10 U	4.2 J	5,300	301,000	213,000	5 J	3.5 J
6/8/20-6/30/20*	μg/L	4,660	71,900	2.7 J	10 U	4.2 J	2,710	268,000	217,000	2.7 J	3.4 J
9/9/20-9/29/20*	μg/L	NS	56,600	9.4 J	22.3	22.7	22,600	298,000	253,000	6.4 J	16.4
11/5/20-11/19/20*	μg/L	NS	50,200	3.3 J	3.7 J	3.3 J	6,190	325,000	145,000	5.9 J	10 U
5/26/21-6/18/21*	μg/L	NS	NS	NS	3.0 J	20.1	NS	NS	169,000	2.8 J	NS
10/4/21-10/18/21*	μg/L	4,960	NS	NS	NS	NS	NS	NS	137,000	6.5 J	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS							

NS = Not Sampled

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Sampling Dates	Units	RW25-MWS	RWA-MWS	RWB-MWS	RWD-MWS	RWE-MWS	RWF-MWS	RWG-MWS	RWH-MWS	RWI-MWS	RWJ-MWS
2/10/2017-2/14/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/28/2017-3/29/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/25/2017-4/27/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
6/5/2017-6/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/10/2017-7/12/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/2/2017-10/6/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	70,500	516	7.4 J	4.7 J	468	39,100	10 U	367	25,800	10 U
9/10/2019-9/23/2019*	μg/L	437,000	1,720	5.5 J	9.1 J	422	34,300	10.0 U	60,600	26,200	27
12/3/2019-12/11/2019	μg/L	11,900	49.7	38.7	5.4 J	261	35,000	194	2,600	32,400	8.3 J
3/11/20-3/23/20*	μg/L	2,570	9.7 J	6.1 J	3.6 J	303	33,900	2.9 J	19,300	1,510	10 U
6/8/20-6/30/20*	μg/L	5,720	21.5	10 U	10 U	1,360	31,200	9.8 J	48.9	211	4 J
9/9/20-9/29/20*	μg/L	2,780	182	5.8 J	4.2 J	22,100	44,400	10 U	5,330	NS	2.6 J
11/5/20-11/19/20*	μg/L	9,930	52.1	11.9	3 J	156	39,000	10 U	1,310	NS	10 U
5/26/21-6/18/21*	μg/L	NS	6.1 J	10 U	10 U	21,900	32,800	NS	3,400	NS	10 U
10/4/21-10/18/21*	μg/L	NS	7.6 J	12.4 J	10 J	1,630	25,200	NS	6,670	NS	38.2
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	NS	NS	2.0 J	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 3
Shallow Zinc Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RWK-MWS	RWL-MWS	RWM-MWS	RWN-MWS	RWO-MWS	RWQ-MWS	RWR-MWS	RWS-MWS
2/10/2017-2/14/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/28/2017-3/29/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/25/2017-4/27/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
6/5/2017-6/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/10/2017-7/12/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/2/2017-10/6/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	6,710	8,480	6 J	978,000	2,660	146	213,000	10,100
9/10/2019-9/23/2019*	μg/L	19,200	9,180	4.0 J	964,000	6,790	147	245,000	1,980
12/3/2019-12/11/2019	μg/L	20,600	15,500	11.6	943,000	3,720	182	320,000	2,970
3/11/20-3/23/20*	μg/L	16,400	861	4.8 J	1,170,000	6,220	194	344,000	19,100
6/8/20-6/30/20*	μg/L	10,400	16,100	21.8	884,000	11,100	149	327,000	954,000
9/9/20-9/29/20*	μg/L	16,800	15,000	7.8 J	1,140,000	5,030	162	326,000	60,300
11/5/20-11/19/20*	μg/L	18,100	14,200	10.6	709,000	2,750	152	293,000	7,260
5/26/21-6/18/21*	μg/L	22,200	16,000	NS	745,000	1,130	158	269,000	116,000
10/4/21-10/18/21*	μg/L	18,500	14,900	NS	NS	694	166	298,000	36,700
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	NS	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 4
Shallow Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW01-MWS	RW02-MWS	RW03-MWS	RW04-MWS	RW05-MWS	RW06R-MWS	RW07-MWS	RW08-MWS	RW09-MWS	RW11-MWS
2/10/2017-2/14/2017	μg/L	NS	NS	7.9	NS	NS	NS	1.8 J	3.8	22.3	0.78 J
3/28/2017-3/29/2017	μg/L	NS	NS	4.7	NS	NS	NS	1.7 J	11	17.5	1.8 J
4/25/2017-4/27/2017	μg/L	NS	NS	3.2	NS	NS	NS	1.4 J	7.8	16.6	5.3
5/22/2017-5/24/2017	μg/L	NS	NS	3.9	NS	NS	NS	1.9 J	3.2	14.9	1.8 J
6/5/2017-6/8/2017	μg/L	NS	NS	4	0.7 J	NS	NS	2.3 J	1.7 J	13.9	0.94 J
7/10/2017-7/12/2017	μg/L	NS	NS	4.6	1.2 J	NS	NS	2.8 J	0.74 J	13.4	0.84 J
8/7/2017-8/10/2017	μg/L	1.6 J	12	5.1	3 U	4.9	NS	3.1	2.7 J	12.5	1.3 J
9/1/2017-9/8/2017	μg/L	1.2 J	11.8	8.4	0.71 J	0.37 J	NS	3.6	2.5 J	12.3	0.81 J
10/2/2017-10/6/2017	μg/L	1.7 J	9.1	11	3 U	1.2 J	NS	3.2	0.96 J	10.6	3 U
11/3/2017-11/13/2017	μg/L	21.7	7.7	8.5	1.1 J	3 U	NS	5.8	3 U	10.5	2.1 J
12/4/2017-12/8/2017	μg/L	98	3 U	11.4	1.1 J	8.4	NS	6	3 U	9.2	2.9 J
1/2/2018-1/9/2018	μg/L	23.9	13.1	9.9	3 U	3 U	NS	4.8	3 U	9.9	2.2 J
4/8/2018-4/13/2018	μg/L	7.6	16.7	11.8	3 U	3 U	NS	4.6	2.2 J	9.8	4.1
7/30/2018-8/3/2018	μg/L	1.6 J	5.2	10.8	3 U	3 U	3 U	4.8	3 U	13.1	66.3
10/1/2018-10/5/2018	μg/L	0.97 J	3.4	8.7	3 U	3 U	3 U	4.7	3 U	22.3	1.2 J
12/10/2018-12/14/2018*	μg/L	1.8 J	9	24	3 U	3 U	0.56 J	4.1	3 U	9.3	0.81 J
3/12/2019-3/19/2019*	μg/L	2.3 J	3.8	7.7	3 U	3 U	3 U	2.7 J	2 J	10.2	2.2 J
5/3/2019-6/7/2019*	μg/L	4.7	1.7 J	17.9	3 U	3 U	3 U	2.9 J	0.86 J	12	1.1 B
9/10/2019-9/23/2019*	μg/L	4.3	1.1 J	16.3	0.55 J	3.0 U	3.0 U	3.4	0.39 J	16.7	3.0 U
12/3/2019-12/11/2019	μg/L	3.9 B	0.55 B	18.8	1.8 J	3.0 U	3.0 U	3.0 J	3.0 U	14.3	1.9 J
3/11/20-3/23/20*	μg/L	4.4	0.97 J	18.8	1.7 J	0.52 J	3 U	2.5 J	2.7 J	16.9	2 J
6/8/20-6/30/20*	μg/L	1.6 J	0.61 J	14.5	0.99 J	0.53 J	0.98 J	4.5	0.67 J	15.2	2.5 J
9/9/20-9/29/20*	μg/L	1.3 J	0.43 J	NS	0.62 J	3 U	0.69 J	NS	3 U	17	2.2 J
11/5/20-11/19/20*	μg/L	1.1 J	0.58 J	NS	0.38 J	3 U	0.9 J	NS	0.37 J	16	2 J
5/26/21-6/18/21*	μg/L	0.40 J	3 U	NS	NS	3 U	3 U	NS	NS	NS	3.4
10/4/21-10/18/21*	μg/L	1 U	1 U	NS	NS	1 U	NS	NS	NS	NS	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	1.7	NS	NS	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 4
Shallow Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW12-MWS	RW14-MWS	RW15-MWS	RW16-MWS	RW18-MWS	RW19-MWS	RW21-MWS	RW22R-MWS	RW23-MWS	RW24-MWS
2/10/2017-2/14/2017	μg/L	NS	NS	NS	NS	NS	14.8	DNE	DNE	DNE	DNE
3/28/2017-3/29/2017	μg/L	NS	NS	NS	NS	NS	6.9	DNE	DNE	DNE	DNE
4/25/2017-4/27/2017	μg/L	NS	NS	NS	NS	NS	8.5	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	NS	NS	NS	NS	NS	3.6	DNE	DNE	DNE	DNE
6/5/2017-6/8/2017	μg/L	29.7	NS	NS	NS	356	2.4 J	DNE	DNE	DNE	DNE
7/10/2017-7/12/2017	μg/L	12.6	NS	NS	NS	240	9.7	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	7	1,780	12.2	NS	34.9	7.2	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	5.1	1,700	29.9	3 U	156	2.6 J	DNE	DNE	DNE	DNE
10/2/2017-10/6/2017	μg/L	11.3	1,750	25.3	3 U	306	5.2	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	193	2,390	63	3 U	208	4.4	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	4.2	2,820	55	3 U	410	4.6	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	11.7	2,800	40.7	3 U	218	4.8	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	11	3,220	41.2	3 U	448	6.6	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	5.2	3,630	38.5	3 U	7.1	1.2 J	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	2.3 J	3,840	78.1	3 U	1.2 J	3.6	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	15.3	3,730	94.4	3 U	1.5 J	3 U	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	6.6	2,960	15.4	3 U	3 U	3 U	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	2.1 J	3,000	19.1	3 U	3 U	3 U	483	157	3 U	3 U
9/10/2019-9/23/2019*	μg/L	3.2	3,450	7.4	3.0 U	3.0 U	3.0 U	354	105	0.88 J	3.0 U
12/3/2019-12/11/2019	μg/L	2.5 J	3,990	8.5	0.36 J	1.9 J	1.2 J	433	70.4	1.3 J	0.43 J
3/11/20-3/23/20*	μg/L	NS	3,020	4.3	3 U	3 U	0.66 J	378	62.9	0.52 J	3 U
6/8/20-6/30/20*	μg/L	5.2	3,590	3 U	3 U	3 U	0.77 J	322	51.4	3 U	3 U
9/9/20-9/29/20*	μg/L	NS	3,240	0.51 J	3 U	3 U	4.3	294	52.1	3 U	3 U
11/5/20-11/19/20*	μg/L	NS	3,020	3 U	3 U	3 U	1.3 J	367	30.7	3 U	3 U
5/26/21-6/18/21*	μg/L	NS	NS	NS	3 U	3 U	NS	NS	78.5	3 U	NS
10/4/21-10/18/21*	μg/L	1 U	NS	NS	NS	NS	NS	NS	117	1 U	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS							

NS = Not Sampled

DNE = Did Not Exist

TABLE 4
Shallow Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW25-MWS	RWA-MWS	RWB-MWS	RWD-MWS	RWE-MWS	RWF-MWS	RWG-MWS	RWH-MWS	RWI-MWS	RWJ-MWS
2/10/2017-2/14/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/28/2017-3/29/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/25/2017-4/27/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
6/5/2017-6/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/10/2017-7/12/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/2/2017-10/6/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	491	2.3 J	3 U	3 U	0.57 J	4.2	3 U	20	714	3 U
9/10/2019-9/23/2019*	μg/L	599	24	3.0 U	3.0 U	0.64 J	6.1	3.0 U	856	840	3.0 U
12/3/2019-12/11/2019	μg/L	9.9	4.4	3.0 U	3.0 U	2.0 J	7.3	3.0 U	19.9	1,080	3.0 U
3/11/20-3/23/20*	μg/L	2.7 J	0.6 J	3 U	3 U	0.91 J	7.7	3 U	163	125	3 U
6/8/20-6/30/20*	μg/L	4.6	0.88 J	3 U	0.46 J	1.4 J	5.7	0.63 J	0.97 J	17.5	3 U
9/9/20-9/29/20*	μg/L	7.0	2.9 J	3 U	0.46 J	8.7	6.0	3 U	22.4	NS	3 U
11/5/20-11/19/20*	μg/L	8.6	1.5 J	3 U	3 U	0.44 J	4.6	3 U	7.0	NS	3 U
5/26/21-6/18/21*	μg/L	NS	0.48 J	3 U	3 U	10.9	4.0	NS	9.9	NS	3 U
10/4/21-10/18/21*	μg/L	NS	1 U	1 U	1 U	0.55 J	3.4	NS	6.8	NS	0.22 J
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	NS	NS	0.76 J	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 4
Shallow Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RWK-MWS	RWL-MWS	RWM-MWS	RWN-MWS	RWO-MWS	RWQ-MWS	RWR-MWS	RWS-MWS
2/10/2017-2/14/2017	μg/L	DNE							
3/28/2017-3/29/2017	μg/L	DNE							
4/25/2017-4/27/2017	μg/L	DNE							
5/22/2017-5/24/2017	μg/L	DNE							
6/5/2017-6/8/2017	μg/L	DNE							
7/10/2017-7/12/2017	μg/L	DNE							
8/7/2017-8/10/2017	μg/L	DNE							
9/1/2017-9/8/2017	μg/L	DNE							
10/2/2017-10/6/2017	μg/L	DNE							
11/3/2017-11/13/2017	μg/L	DNE							
12/4/2017-12/8/2017	μg/L	DNE							
1/2/2018-1/9/2018	μg/L	DNE							
4/8/2018-4/13/2018	μg/L	DNE							
7/30/2018-8/3/2018	μg/L	DNE							
10/1/2018-10/5/2018	μg/L	DNE							
12/10/2018-12/14/2018*	μg/L	DNE							
3/12/2019-3/19/2019*	μg/L	DNE							
5/3/2019-6/7/2019*	μg/L	3 U	3 U	3 U	13,000	1.4 J	2.6 J	50	3 U
9/10/2019-9/23/2019*	μg/L	3.0 U	3.0 U	3.0 U	11,100	1.3 J	2.6 J	41	3.0 U
12/3/2019-12/11/2019	μg/L	3.0 U	3.0 U	0.36 J	11,200	7.6	4.4	42.3	3.0 U
3/11/20-3/23/20*	μg/L	3 U	0.85 J	3 U	9,420	0.65 J	3.1	38.8	3 U
6/8/20-6/30/20*	μg/L	3 U	0.52 J	3 U	6,810	0.46 J	2.9 J	35.5	1.9 J
9/9/20-9/29/20*	μg/L	0.51 J	0.59 J	3 U	7,350	4.1	3.3	34.3	0.42 J
11/5/20-11/19/20*	μg/L	0.37 J	3 U	3 U	6,260	0.53 J	3.2	33.8	0.39 J
5/26/21-6/18/21*	μg/L	3 U	3 U	NS	4,850	0.85 J	3.4	35.1	3 U
10/4/21-10/18/21*	μg/L	1 U	0.37 J	NS	NS	1 U	3.1	39.3	10 U
11/29/21-11/30/21*	μg/L	NS							

NS = Not Sampled

DNE = Did Not Exist

TABLE 5
Intermediate Zinc Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW01-MWI	RW02-MWI	RW03-MWI	RW05-MWI	RW05R-MWI	RW06-MWI	RW07-MWI	RW08-MWI	RW09-MWI	RW10-MWI
2/10/2017-2/16/2017	μg/L	NS	NS	9,740	NS	DNE	1,900	944	178	51,000	104,000
3/27/2017-3/30/2017	μg/L	NS	NS	9,240	NS	DNE	1,680	1,210	44.6	51,900	20.4
4/25/2017-4/28/2017	μg/L	NS	NS	7,830	NS	DNE	1,420	364	85	57,500	75,800
5/22/2017-5/24/2017	μg/L	NS	NS	2,960	NS	DNE	999	298	188	57,200	1,150
6/5/2017-6/9/2017	μg/L	NS	NS	2,440	374	DNE	876	432	71.9	51,900	34,600
7/10/2017-7/13/2017	μg/L	NS	NS	8,330	1,730	DNE	1,690	45.7	153	65,600	25,900
8/7/2017-8/10/2017	μg/L	11,600	18,200	10,900	1,730	DNE	1,340	62.7	49.8	55,500	79.7
9/1/2017-9/8/2017	μg/L	90	203	9,340	328	DNE	508	2,840	69.4	39,400	8,220
10/2/2017-10/9/2017	μg/L	13,700	290	1,810	349	DNE	615	23.4	16.9	49,700	31,000
11/3/2017-11/13/2017	μg/L	29	38.6	1,750	502	DNE	909	1,650	21.5	67,900	39,000
12/4/2017-12/8/2017	μg/L	41,000	186	6,270	205	DNE	1,360	39.8	21.4	44,500	158
1/2/2018-1/9/2018	μg/L	104	573	12,700	173	DNE	1,950	70.6	108	54,700	26.5
4/8/2018-4/13/2018	μg/L	576	452	6,920	402	DNE	27,900	756	1,050	38,400	13,500
7/30/2018-8/3/2018	μg/L	9,710	5,030	9,710	282	DNE	191	26,300	2,540	54,700	17,600
10/1/2018-10/5/2018	μg/L	143	3,240	13,000	110	DNE	90,100	12,200	256	53,800	16,600
12/10/2018-12/14/2018*	μg/L	3,880	25,300	14,900	177	DNE	99,600	86,000	11	66,600	2,520
3/12/2019-3/19/2019*	μg/L	2,460	21,500	6,720	7.5 J	DNE	122,000	24,200	10 U	57,500	591
5/3/2019-6/7/2019*	μg/L	5,670	56,600	13,300	NS	66,800	108,000	136,000	10 U	64,200	5,560
9/10/2019-9/23/2019*	μg/L	5,940	72,000	10,500	NS	71,700	122,000	48,300	11.2 B	53,300	7,730
12/3/2019-12/11/2019	μg/L	2,060	17,200	16,200	NS	83,400	116,000	16,600	48.9	82,000	6,020
3/11/20-3/23/20*	μg/L	8,120	14,100	12,900	NS	70,700	117,000	39,000	33.4	65,600	NS
6/8/20-6/30/20*	μg/L	13,700	34,900	19,400	NS	76,600	94,400	400	4.5 J	77,800	940
9/9/20-9/29/20*	μg/L	3.7 J	123	NS	NS	80,000	111,000	NS	5.4 J	79,100	1,090
11/5/20-11/19/20*	μg/L	15,200	20,200	NS	NS	68,200	79.7	NS	28.3	73,700	550
5/26/21-6/18/21*	μg/L	26,600	104	NS	NS	79,000	109,000	NS	2.6 J	93,600	6,130
10/4/21-10/18/21*	μg/L	24,000	433	NS	NS	200 U	85,500	53,900	NS	NS	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	50,700	NS	NS	NS	NS	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 5
Intermediate Zinc Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW11-MWI	RW12-MWI	RW13-MWI	RW15-MWI	RW16-MWI	RW18-MWI	RW19-MWI	RW21-MWI	RW22-MWI	RW22R-MWI
2/10/2017-2/16/2017	μg/L	368,000	249,000	NS	NS	NS	728,000	5,900,000	DNE	NS	DNE
3/27/2017-3/30/2017	μg/L	301,000	216,000	NS	NS	NS	592,000	4,650,000	DNE	NS	DNE
4/25/2017-4/28/2017	μg/L	288,000	188,000	NS	NS	NS	633,000	7,010,000	DNE	NS	DNE
5/22/2017-5/24/2017	μg/L	336,000	232,000	NS	NS	NS	246,000	5,370,000	DNE	NS	DNE
6/5/2017-6/9/2017	μg/L	201,000	226,000	NS	NS	NS	694,000	6,720,000	DNE	303	DNE
7/10/2017-7/13/2017	μg/L	192,000	219,000	NS	NS	NS	575,000	5,330,000	DNE	103	DNE
8/7/2017-8/10/2017	μg/L	147,000	156,000	308,000	3,210	NS	290,000	3,360,000	DNE	NS	DNE
9/1/2017-9/8/2017	μg/L	134,000	156,000	1,160	71.1	20,200	382,000	2,500,000	DNE	43,000	DNE
10/2/2017-10/9/2017	μg/L	111,000	150,000	204,000	295	2,000	393,000	3,670,000	DNE	16,100	DNE
11/3/2017-11/13/2017	μg/L	207,000	140,000	172,000	825	441	323,000	3,400,000	DNE	3,700	DNE
12/4/2017-12/8/2017	μg/L	197,000	157,000	237	1,070	19,200	369,000	3,970,000	DNE	19,500	DNE
1/2/2018-1/9/2018	μg/L	225,000	117,000	8,600	5,540	16,200	370,000	3,840,000	DNE	27,200	DNE
4/8/2018-4/13/2018	μg/L	215,000	103,000	201,000	252	11,200	396,000	4,190,000	DNE	44,700	DNE
7/30/2018-8/3/2018	μg/L	15,700	2,410	274,000	18,600	1,230	330,000	4,880,000	DNE	73,300	DNE
10/1/2018-10/5/2018	μg/L	174,000	14,300	33.4	736	320	247,000	5,880,000	DNE	47,100	DNE
12/10/2018-12/14/2018*	μg/L	176,000	109,000	116	6,540	6 J	318,000	7,580,000	DNE	68,100	DNE
3/12/2019-3/19/2019*	μg/L	142,000	110,000	328,000	109,000	4.7 J	822,000	3,770,000	DNE	81,100	DNE
5/3/2019-6/7/2019*	μg/L	121,000	111,000	97.7	16,400	4.9 J	279,000	7,280,000	624,000	NS	1,030
9/10/2019-9/23/2019*	μg/L	120,000	104,000	122	168,000	13.1	640,000	3,460,000	570,000	NS	983
12/3/2019-12/11/2019	μg/L	173,000	43,500	246,000	179,000	22.7	849,000	5,690,000	539,000	NS	3,000
3/11/20-3/23/20*	μg/L	151,000	NS	250,000	17.9	16.2	545,000	6,050,000	648,000	NS	1,810
6/8/20-6/30/20*	μg/L	128,000	86,400	27	5.8 J	7.3 J	252,000	6,450,000	470,000	NS	4,350
9/9/20-9/29/20*	μg/L	NS	NS	296,000	3,210	63.1	753,000	6,220,000	536,000	NS	5,340
11/5/20-11/19/20*	μg/L	166,000	NS	19.8	137	10.2	534,000	3,930,000	562,000	NS	4,520
5/26/21-6/18/21*	μg/L	188,000	NS	363,000	16,400	62.4	4,380	212,000	527,000	NS	7,730
10/4/21-10/18/21*	μg/L	NS	NS	NS	9,800						
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS						

NS = Not Sampled DNE = Did Not Exist

TABLE 5
Intermediate Zinc Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW23-MWI	RW24-MWI	RW25-MWI	RWA-MWI	RWB-MWI	RWD-MWI	RWE-MWI	RWF-MWI	RWG-MWI	RWH-MWI
2/10/2017-2/16/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/27/2017-3/30/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/25/2017-4/28/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
6/5/2017-6/9/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/10/2017-7/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/2/2017-10/9/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	109,000	650,000	413,000	375,000	18	36,200	112,000	41,900	332	226,000
9/10/2019-9/23/2019*	μg/L	125,000	635,000	7,000	349,000	29.2	41,900	109,000	42,300	291	378,000
12/3/2019-12/11/2019	μg/L	111,000	538,000	462,000	396,000	47.8	52,600	118,000	58,800	362	502,000
3/11/20-3/23/20*	μg/L	100,000	466,000	355,000	521,000	8.9 J	50,400	102,000	90,400	411	406,000
6/8/20-6/30/20*	μg/L	116,000	378,000	443,000	441,000	8.4 J	59,300	114,000	108,000	465	474,000
9/9/20-9/29/20*	μg/L	105,000	364,000	477,000	452,000	15.2	69,300	110,000	134,000	545	477,000
11/5/20-11/19/20*	μg/L	95,600	258,000	445,000	406,000	13.5	64,200	80,800	110,000	522	618,000
5/26/21-6/18/21*	μg/L	124,000	292,000	338,000	468,000	13.6	81,900	102,000	133,000	NS	578,000
10/4/21-10/18/21*	μg/L	110,000	NS	NS	328,000	19.1 J	53,400	68,000	82,500	NS	388,000
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	NS	NS	319	NS

NS = Not Sampled DNE = Did Not Exist

^{*}Indicates concentrations are for dissolved metals. All other events show total metals.

TABLE 5
Intermediate Zinc Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RWI-MWI	RWJ-MWI	RWK-MWI	RWL-MWI	RWM-MWI	RWO-MWI	RWP-MWI	RWQ-MWI	RWR-MWI	RWS-MWI
2/10/2017-2/16/2017	μg/L	DNE	DNE	DNE	DNE						
3/27/2017-3/30/2017	μg/L	DNE	DNE	DNE	DNE						
4/25/2017-4/28/2017	μg/L	DNE	DNE	DNE	DNE						
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE						
6/5/2017-6/9/2017	μg/L	DNE	DNE	DNE	DNE						
7/10/2017-7/13/2017	μg/L	DNE	DNE	DNE	DNE						
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE						
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE						
10/2/2017-10/9/2017	μg/L	DNE	DNE	DNE	DNE						
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE						
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE						
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE						
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE						
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE						
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE						
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE						
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE						
5/3/2019-6/7/2019*	μg/L	632,000	1,580	21,100	169,000	162,000	249,000	3,210,000	357,000	2,560,000	797,000
9/10/2019-9/23/2019*	μg/L	519,000	2,150	25,100	142,000	159,000	214,000	3,570,000	270,000	3,620,000	1,040,000
12/3/2019-12/11/2019	μg/L	554,000	3,140	21,600	124,000	152,000	204,000	3,880,000	258,000	4,050,000	946,000
3/11/20-3/23/20*	μg/L	875,000	3,430	30,300	121,000	139,000	202,000	3,860,000	312,000	814,000	1,070,000
6/8/20-6/30/20*	μg/L	775,000	805	21,400	96,300	128,000	223,000	3,160,000	255,000	2,530,000	74,300
9/9/20-9/29/20*	μg/L	NS	744	36,800	116,000	138,000	204,000	3,810,000	280,000	1,830,000	760,000
11/5/20-11/19/20*	μg/L	NS	1,060	26,500	126,000	125,000	155,000	3,520,000	257,000	996,000	919,000
5/26/21-6/18/21*	μg/L	542,000	1,990	34,600	110,000	150,000	208,000	3,990,000	286,000	1,400,000	858,000
10/4/21-10/18/21*	μg/L	NS	2,840	23,700	97,000	NS	200 U	14,300	256,000	48,000	649,000
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	1,380	526	NS	NS	NS

NS = Not Sampled DNE = Did Not Exist

DNE – DIG NOT EXIST

TABLE 6
Intermediate Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW01-MWI	RW02-MWI	RW03-MWI	RW05-MWI	RW05R-MWI	RW06-MWI	RW07-MWI	RW08-MWI	RW09-MWI	RW10-MWI
2/10/2017-2/16/2017	μg/L	NS	NS	189	NS	DNE	12.5	1.2 J	0.49 J	3.1	446
3/27/2017-3/30/2017	μg/L	NS	NS	196	NS	DNE	9.2	4.6	0.39 J	4	3 U
4/25/2017-4/28/2017	μg/L	NS	NS	192	NS	DNE	14	3 U	3 U	5	198
5/22/2017-5/24/2017	μg/L	NS	NS	84	NS	DNE	20.4	1.1 J	1.5 J	11.1	2.5 J
6/5/2017-6/9/2017	μg/L	NS	NS	37.4	1.9 J	DNE	14.3	0.91 J	0.48 J	8.1	27.2
7/10/2017-7/13/2017	μg/L	NS	NS	138	17.5	DNE	10.2	1.2 J	1.3 J	12.9	16.3
8/7/2017-8/10/2017	μg/L	194	511	227	19.3	DNE	10.1	1 J	0.86 J	18.5	3 U
9/1/2017-9/8/2017	μg/L	0.51 J	3 J	214	3.7	DNE	4.5	11	0.77 J	9.1	17.7
10/2/2017-10/9/2017	μg/L	145	2.4 J	20.2	4.2	DNE	4.2	3 U	3 U	12	24.6
11/3/2017-11/13/2017	μg/L	3 U	3 U	25.2	4.9	DNE	5.4	5.1	0.88 J	8.8	63.7
12/4/2017-12/8/2017	μg/L	37.5	2.3 J	154	2.7 J	DNE	7.1	1.7 J	1.8 J	7.7	3 U
1/2/2018-1/9/2018	μg/L	2.4 J	14.5	259	2.2 J	DNE	8.4	3 U	3 U	2.1 J	3 U
4/8/2018-4/13/2018	μg/L	16.5	3	128	2.6 J	DNE	89.2	1.3 J	6.2	1.8 J	44.4
7/30/2018-8/3/2018	μg/L	250	79.9	236	1.3 J	DNE	3 U	52.9	14.1	3 U	44.7
10/1/2018-10/5/2018	μg/L	3 U	18	346	3 U	DNE	629	28.7	0.92 J	3.7	10.8
12/10/2018-12/14/2018*	μg/L	9.3	191	342	0.76 J	DNE	752	344	3 U	0.96 J	3 U
3/12/2019-3/19/2019*	μg/L	3 U	98.3	213	3 U	DNE	876	29.5	3 U	2 J	0.38 J
5/3/2019-6/7/2019*	μg/L	19.4	785	449	NS	2,570	885	453	3 U	3.8	0.86 J
9/10/2019-9/23/2019*	μg/L	20.6	873	344	NS	2,820	793	48.7	3.0 U	5.6	8.4
12/3/2019-12/11/2019	μg/L	8.8	277	546	NS	2,700	673	38.1	0.59 J	4.2 B	13.9
3/11/20-3/23/20*	μg/L	49.3	136	451	NS	1,960	690	36	3 U	10.6	NS
6/8/20-6/30/20*	μg/L	117	398	581	NS	1,930	582	1.7 J	0.47 J	16.5	0.67 J
9/9/20-9/29/20*	μg/L	3 U	0.69 J	NS	NS	1,650	530	NS	0.39 J	10.7	0.77 J
11/5/20-11/19/20*	μg/L	162	208	NS	NS	1,790	0.66 J	NS	0.56 J	10.3	0.55 J
5/26/21-6/18/21*	μg/L	277	0.58 J	NS	NS	1,570	616	NS	0.38 J	16	11.1
10/4/21-10/18/21*	μg/L	322	1 U	NS	NS	1,470	604	49.1	NS	NS	NS
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	16.8	NS	NS	NS	NS	NS

NS = Not Sampled

DNE = Did Not Exist

TABLE 6
Intermediate Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW11-MWI	RW12-MWI	RW13-MWI	RW15-MWI	RW16-MWI	RW18-MWI	RW19-MWI	RW21-MWI	RW22-MWI	RW22R-MWI
2/10/2017-2/16/2017	μg/L	1,690	4,740	NS	NS	NS	70.3	3,760	DNE	NS	DNE
3/27/2017-3/30/2017	μg/L	1,490	3,530	NS	NS	NS	63.8	3,450	DNE	NS	DNE
4/25/2017-4/28/2017	μg/L	1,800	2,730	NS	NS	NS	119	3,380	DNE	NS	DNE
5/22/2017-5/24/2017	μg/L	2,600	3,820	NS	NS	NS	92	2,770	DNE	NS	DNE
6/5/2017-6/9/2017	μg/L	218	2,260	NS	NS	NS	65.1	2,280	DNE	0.35 J	DNE
7/10/2017-7/13/2017	μg/L	518	2,730	NS	NS	NS	61.7	2,550	DNE	3 U	DNE
8/7/2017-8/10/2017	μg/L	163	2,220	31,800	10.1	NS	74.4	1,670	DNE	NS	DNE
9/1/2017-9/8/2017	μg/L	274	1,820	66	3 U	1.7 J	72.2	1,320	DNE	2.3 J	DNE
10/2/2017-10/9/2017	μg/L	125	1,510	28,700	3 U	3 U	43.7	1,710	DNE	3 U	DNE
11/3/2017-11/13/2017	μg/L	1,460	1,380	24,500	3 U	3 U	66.6	1,770	DNE	3.8	DNE
12/4/2017-12/8/2017	μg/L	1,380	1,450	44.2	0.97 J	1.9 J	51.5	1,710	DNE	15.2	DNE
1/2/2018-1/9/2018	μg/L	1,400	1,270	1,240	1.6 J	1.2 J	63.5	1,880	DNE	4.1	DNE
4/8/2018-4/13/2018	μg/L	1,660	121	19,400	3 U	1.1 J	55.8	1,700	DNE	3 U	DNE
7/30/2018-8/3/2018	μg/L	4.7	134	21,000	15.3	3 U	35.1	1,560	DNE	3 U	DNE
10/1/2018-10/5/2018	μg/L	133	86.3	12.6	3 U	3 U	14.5	1,610	DNE	3 U	DNE
12/10/2018-12/14/2018*	μg/L	1,160	1,220	3.2	12.9	3 U	44.7	1,900	DNE	3 U	DNE
3/12/2019-3/19/2019*	μg/L	98.9	768	29,200	402	3 U	80.3	1,320	DNE	3 U	DNE
5/3/2019-6/7/2019*	μg/L	586	1,520	51.1	64.2	3 U	38.0	2,420	50.2	NS	3 U
9/10/2019-9/23/2019*	μg/L	517	1,780	12.8	589	3.0 U	50.4	1,580	23	NS	3.0 U
12/3/2019-12/11/2019	μg/L	476	420	22,500	605	0.36 J	87.6	1,500	33.1	NS	3.0 U
3/11/20-3/23/20*	μg/L	365	NS	24,700	0.5 J	0.36 J	36.8	1,400	39.8	NS	3 U
6/8/20-6/30/20*	μg/L	75.1	716	15.4	3 U	3 U	16	3,390	34	NS	2 J
9/9/20-9/29/20*	μg/L	NS	NS	23,900	8	3 U	43.1	1,630	29.4	NS	2.4 J
11/5/20-11/19/20*	μg/L	179	NS	6.1	0.91 J	3 U	42.1	1,540	27.8	NS	1.6 J
5/26/21-6/18/21*	μg/L	175	NS	26,400	43.6	0.42 J	3 U	112	34.2	NS	3.4
10/4/21-10/18/21*	μg/L	NS	2.5 J								
11/29/21-11/30/21*	μg/L	NS									

NS = Not Sampled

DNE = Did Not Exist

TABLE 6
Intermediate Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RW23-MWI	RW24-MWI	RW25-MWI	RWA-MWI	RWB-MWI	RWD-MWI	RWE-MWI	RWF-MWI	RWG-MWI	RWH-MWI
2/10/2017-2/16/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/27/2017-3/30/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/25/2017-4/28/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/22/2017-5/24/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
6/5/2017-6/9/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/10/2017-7/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
8/7/2017-8/10/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
9/1/2017-9/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/2/2017-10/9/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
11/3/2017-11/13/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/4/2017-12/8/2017	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
1/2/2018-1/9/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
4/8/2018-4/13/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
7/30/2018-8/3/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
10/1/2018-10/5/2018	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
12/10/2018-12/14/2018*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
3/12/2019-3/19/2019*	μg/L	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE	DNE
5/3/2019-6/7/2019*	μg/L	2,270	1,580	507	6,830	3 U	395	700	859	23	92
9/10/2019-9/23/2019*	μg/L	2,800	1,540	9.9	7,740	3.0 U	514	656	1,020	15.4	1,380
12/3/2019-12/11/2019	μg/L	2,680	1,250	622	9,020	3.0 U	586	707	1,340	26.0	3,580
3/11/20-3/23/20*	μg/L	2,600	1,190	633	12,600	3 U	555	664	2,010	38.2	3,210
6/8/20-6/30/20*	μg/L	2,740	1,050	652	10,200	3 U	515	609	2,580	26.7	4,610
9/9/20-9/29/20*	μg/L	2,500	922	708	7,630	0.59 J	541	584	3,170	38.2	4,330
11/5/20-11/19/20*	μg/L	2,340	842	703	10,100	3 U	596	527	3,330	40.0	6,650
5/26/21-6/18/21*	μg/L	2,870	890	626	11,700	0.34 J	713	530	3,710	NS	6,760
10/4/21-10/18/21*	μg/L	2,590	NS	NS	8,510	1 U	536	497	2,610	NS	4,220
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	NS	NS	NS	1.8	NS

NS = Not Sampled DNE = Did Not Exist

TABLE 6
Intermediate Cadmium Concentrations
Rod Wire Mill Interim Measures Progress Report

Sampling Dates	Units	RWI-MWI	RWJ-MWI	RWK-MWI	RWL-MWI	RWM-MWI	RWO-MWI	RWP-MWI	RWQ-MWI	RWR-MWI	RWS-MWI
2/10/2017-2/16/2017	μg/L	DNE									
3/27/2017-3/30/2017	μg/L	DNE									
4/25/2017-4/28/2017	μg/L	DNE									
5/22/2017-5/24/2017	μg/L	DNE									
6/5/2017-6/9/2017	μg/L	DNE									
7/10/2017-7/13/2017	μg/L	DNE									
8/7/2017-8/10/2017	μg/L	DNE									
9/1/2017-9/8/2017	μg/L	DNE									
10/2/2017-10/9/2017	μg/L	DNE									
11/3/2017-11/13/2017	μg/L	DNE									
12/4/2017-12/8/2017	μg/L	DNE									
1/2/2018-1/9/2018	μg/L	DNE									
4/8/2018-4/13/2018	μg/L	DNE									
7/30/2018-8/3/2018	μg/L	DNE									
10/1/2018-10/5/2018	μg/L	DNE									
12/10/2018-12/14/2018*	μg/L	DNE									
3/12/2019-3/19/2019*	μg/L	DNE									
5/3/2019-6/7/2019*	μg/L	8,050	61.2	33.5	1,230	1,080	68	2,810	26.2	440	3 U
9/10/2019-9/23/2019*	μg/L	8,120	11.8	56.5	1,240	1,200	72.1	6,990	3.0 U	535	3.0 U
12/3/2019-12/11/2019	μg/L	8,270	45.7	99.5	1,280	1,230	55.4	8,910	2.9 J	650	1.6 J
3/11/20-3/23/20*	μg/L	13,300	30.0	89.1	1,170	1,120	54.3	5,560	1.9 J	340	3 U
6/8/20-6/30/20*	μg/L	10,800	2.1 J	76.9	1,140	1,040	66.2	7,090	3.7	508	0.58 J
9/9/20-9/29/20*	μg/L	NS	2.3 J	79.1	1,210	1,060	57.8	7,220	4.2	425	1.8 J
11/5/20-11/19/20*	μg/L	NS	2.4 J	74.4	1,160	1,120	27.9	7,700	2.9 J	398	1.7 J
5/26/21-6/18/21*	μg/L	6,810	31.3	97.8	1,290	1,220	35.8	8,430	6.1	367	0.86 J
10/4/21-10/18/21*	μg/L	NS	49.1	77.6	1,230	NS	31.4	4,370	10.6	753	4.7 J
11/29/21-11/30/21*	μg/L	NS	NS	NS	NS	NS	10.1	2	NS	NS	NS

NS = Not Sampled DNE = Did Not Exist

*Indicates concentrations are for dissolved

TABLE 7 Average Historical Shallow Zone Concentrations

Rod Wire Mill Interim Measure Progress Report

		Shallow 2	Zone Cadm	ium Conce	entration (µ	g/L)		
Well Group	Well	2015	2017	2018	2019	2020	2021	% Change from Earliest Yearly Average
Upgradient	RW19-MWS	NA	6.4	3.4	1.4	1.8	NS	NA
	RW09-MWS	NA	14.0	13.0	13.3	16.3	NS	NA
	RW11-MWS	NA	1.8	15.0	1.8	2.2	3.4	86%
	RW12-MWS	3.8	37.6	9.3	3.6	5.2	0.5	-87%
Interior	RW14-MWS	NA	2,088	3,440	3,350	3,218	NS	NA
	RW15-MWS	NA	37.1	59.1	12.6	2.0	NS	NA
	RW16-MWS	NA	1.5	1.5	1.2	1.5	1.5	0%
	RW18-MWS	100	244	137	1.6	1.5	1.5	-98%
	RW01-MWS	NA	24.8	7.2	3.2	2.1	0.5	-98%
	RW02-MWS	NA	8.4	9.4	2.0	0.6	1.0	-88%
	RW03-MWS	NA	6.6	12.9	15.2	16.7	NS	NA
Perimeter	RW04-MWS	2.8	1.1	1.5	1.3	0.9	NS	NA
Perimeter	RW05-MWS	NA	3.3	1.5	1.5	1.0	1.0	-69%
	RW06R-MWS	NA	NA	1.2	1.5	1.0	1.5	29%
	RW07-MWS	NA	3.1	4.6	3.0	3.5	1.7	-44%
	RW08-MWS	NA	3.4	1.4	1.2	1.3	NS	NA

		Shallo	w Zone Zin	ic Concenti	ration (μg/I	٦)		
Well Group	Well	2015	2017	2018	2019	2020	2021	% Change from Earliest Yearly Average
Upgradient	RW19-MWS	NA	6,082	8,226	3,190	9,200	NS	NA
	RW09-MWS	NA	10,982	9,856	16,400	33,125	NS	NA
	RW11-MWS	NA	12,933	46,100	33,475	41,975	61,000	372%
	RW12-MWS	2,608	38,761	6,516	3,086	4,660	4,960	90%
Interior	RW14-MWS	NA	38,340	69,380	70,825	62,375	NS	NA
	RW15-MWS	NA	3,737	4,002	424	30	NS	NA
	RW16-MWS	NA	32	26.6	35.2	9.0	3.0	-91%
	RW18-MWS	3,691	13,503	7,648	17.3	8.6	20.1	-99%
	RW01-MWS	NA	11,632	32,460	14,875	6,800	4,640	-60%
	RW02-MWS	NA	3,308	9,146	15,749	3,360	238	-93%
	RW03-MWS	NA	13,958	27,920	16,668	17,800	NS	NA
Perimeter	RW04-MWS	2,330	145	180	239	62	NS	NA
Perimeter	RW05-MWS	NA	1,617	34.3	14.2	7.4	12.4	-99%
	RW06R-MWS	NA	NA	9.9	8.8	9.1	5.0	-49%
	RW07-MWS	NA	131	230	149	172	298	127%
	RW08-MWS	NA	3,436	7,320	7,125	6,558	NS	NA

Positive % change Negative % change NA = Not Applicable NS = Not Sampled

TABLE 8 Average Historical Intermediate Zone Concentrations

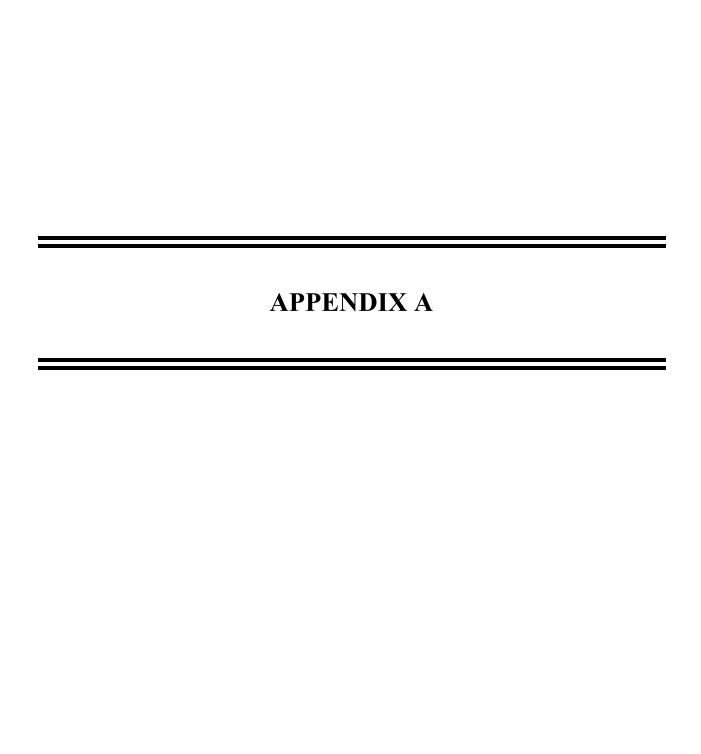
Rod Wire Mill Interim Measure Progress Report

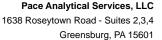
		Avera	ge Cadmiu	m Concent	ration (μg/l	L)		
Well Group	Well	2015	2017	2018	2019	2020	2021	% Change from Earliest Yearly Average
Upgradient	RW19-MWI	NA	2,397	1,748	1,705	1,990	112	-95%
	RW09-MWI	NA	9.1	2.0	3.2	12.0	16.0	75%
	RW10-MWI	NA	72.8	20.6	5.9	0.7	11.1	-85%
	RW11-MWI	25,000	1,065	872	419	206	175	-99%
Interior	RW12-MWI	7,890	2,563	578	1,122	716	NS	NA
Interior	RW13-MWI	44,500	17,022	8,334	12,941	12,155	26,400	-41%
	RW15-MWI	NA	3.1	6.8	415	2.7	43.6	1300%
	RW16-MWI	NA	1.7	1.4	1.2	1.2	0.42	-75%
	RW18-MWI	80.1	70.9	79.8	64.1	34.5	1.5	-98%
	RW01-MWI	NA	75.7	59.2	12.6	82.5	299.5	296%
	RW02-MWI	NA	104	59.5	508	186	1	-99%
Perimeter	RW03-MWI	NA	134	285	388	516	NS	NA
reinneter	RW06-MWI	34.8	10.2	292	807	451	610	1655%
	RW07-MWI	NA	2.8	93.9	142	18.9	49.1	1653%
	RW08-MWI	NA	1.0	4.8	1.3	0.7	0.38	-64%

		Ave	erage Zinc (Concentrat	ion (μg/L)			
Well Group	Well	2015	2017	2018	2019	2020	2020	% Change from Earliest Yearly Average
Upgradient	RW19-MWI	NA	4,716,364	5,278,000	5,050,000	5,662,500	212,000	-96%
	RW09-MWI	NA	53,827	52,740	64,250	74,050	93,600	74%
	RW10-MWI	NA	29,084	10,143	4,975	860	6,130	-79%
	RW11-MWI	1,120,000	225,636	158,940	139,000	148,333	188,000	-83%
Interior	RW12-MWI	339,000	189,909	68,142	92,125	86,400	NS	NA
interior	RW13-MWI	658,000	137,079	96,762	143,555	136,512	363,000	-45%
	RW15-MWI	NA	1,094	6,374	118,100	843	16,400	1399%
	RW16-MWI	NA	10,460	5,861	11.4	29.8	62.4	-99%
	RW18-MWI	642,000	475,000	332,400	647,500	521,000	4,380	-99%
	RW01-MWI	NA	13,284	3,107	4,033	9,256	25,300	90%
	RW02-MWI	NA	3,784	6,839	41,825	17,331	269	-93%
Danimastan	RW03-MWI	NA	6,419	10,866	11,680	16,150	NS	NA
Perimeter	RW06-MWI	6,045	1,209	43,988	117,000	80,620	97,250	1509%
	RW07-MWI	NA	719	25,985	56,275	19,700	53,900	7396%
	RW08-MWI	NA	81.8	800	16.0	17.9	2.6	-97%

Positive % change Negative % change NA = Not Applicable NS = Not Sampled

The RW13-MWI concentrations for 2015 are actually results for a sample from RW-057-PZ, a PDI piezometer existing in November 2015 at a location within a few feet of the current location of RW13-MWI.





(724)850-5600



June 10, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30422745

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuella Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

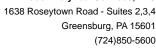
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30422745

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Missouri Certification #: 235

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

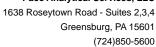
South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30422745

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30422745001	RWB-MWI	Water	05/26/21 09:30	05/26/21 22:30
30422745002	RWD-MWS	Water	05/26/21 10:35	05/26/21 22:30
30422745003	RWD-MWI	Water	05/26/21 11:15	05/26/21 22:30
30422745004	RWE-MWS	Water	05/26/21 12:40	05/26/21 22:30
30422745005	RWE-MWI	Water	05/26/21 13:40	05/26/21 22:30
30422745006	RWB-MWS	Water	05/26/21 14:00	05/26/21 22:30
30422745007	RW05R-MWI	Water	05/26/21 15:00	05/26/21 22:30

REPORT OF LABORATORY ANALYSIS



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30422745

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30422745001	RWB-MWI	EPA 6010C	CTS	2	PASI-PA
30422745002	RWD-MWS	EPA 6010C	CTS	2	PASI-PA
30422745003	RWD-MWI	EPA 6010C	CTS	2	PASI-PA
30422745004	RWE-MWS	EPA 6010C	CTS	2	PASI-PA
30422745005	RWE-MWI	EPA 6010C	CTS	2	PASI-PA
30422745006	RWB-MWS	EPA 6010C	CTS	2	PASI-PA
30422745007	RW05R-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30422745

Date: 06/10/2021 10:06 AM

Sample: RWB-MWI	Lab ID:	30422745001	Collecte	d: 05/26/2	1 09:30	Received: 05	/26/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prec	paration Me	thod: El	PA 3005A			
	•	lytical Services							
Cadmium, Dissolved	0.34J	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 10:19	7440-43-9	
Caarriani, Biccoroa									

REPORT OF LABORATORY ANALYSIS





Project: RWM GW Sampling

Pace Project No.: 30422745

Sample: RWD-MWS	Lab ID:	30422745002	Collecte	d: 05/26/21	10:35	Received: 05/	26/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Pren	aration Met	hod: El	DA 3005A			
	Allalytical			aration inc	nou. Li	A 3003A			
oo loo me i loi ,bissoived	,	ytical Services			iiou. Li	A 3003A			
Cadmium, Dissolved	,				1 1	06/01/21 09:00	06/09/21 10:32	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30422745

Sample: RWD-MWI	Lab ID:	30422745003	Collecte	d: 05/26/2	1 11:15	Received: 05/	/26/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
	,	ytical Services							
	740	/I	300	24.0	100	06/01/21 09:00	06/09/21 10:34	7440 42 0	
Cadmium, Dissolved	713	ug/L	300	34.0	100	06/01/21 09.00	06/09/21 10.34	7440-43-9	





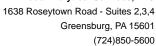
Project: RWM GW Sampling

Pace Project No.: 30422745

Date: 06/10/2021 10:06 AM

Sample: RWE-MWS	Lab ID:	30422745004	Collected	d: 05/26/2	1 12:40	Received: 05/	/26/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	10.9	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 10:42	7440-43-9	
			1000	238			06/09/21 11:42		

REPORT OF LABORATORY ANALYSIS





Project: RWM GW Sampling

Pace Project No.: 30422745

Sample: RWE-MWI	Lab ID:	30422745005	Collected	d: 05/26/2°	13:40	Received: 05/	26/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
,	Pace Anal	vtical Services	- Greenshu	ra					
		,	0.00000	.9					
Cadmium, Dissolved	530	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 10:44	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30422745

Sample: RWB-MWS	Lab ID:	30422745006	Collecte	d: 05/26/21	14:00	Received: 05/	26/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
COLOC MET ICR Discolved	Analytical	Mathadi EDA 6	0400						
OUTUC IVIET ICP, DISSOIVED	Anaiyiicai	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	lytical Services			hod: El	PA 3005A			
Cadmium, Dissolved	,				hod: El	PA 3005A 06/01/21 09:00	06/09/21 11:46	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30422745

Sample: RW05R-MWI	Lab ID:	30422745007	Collected	d: 05/26/2	1 15:00	Received: 05/	/26/21 22:30 M	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: E	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	1570 79000	ug/L ug/L	3.0 1000	0.34 238	1 100	06/01/21 09:00 06/01/21 09:00	06/09/21 10:48 06/09/21 11:48		



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30422745

Date: 06/10/2021 10:06 AM

QC Batch: 450269 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30422745001, 30422745002, 30422745003, 30422745004, 30422745005, 30422745006, 30422745007

METHOD BLANK: 2173184 Matrix: Water

Associated Lab Samples: 30422745001, 30422745002, 30422745003, 30422745004, 30422745005, 30422745006, 30422745007

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/09/21 10:15	
Zinc, Dissolved	ug/L	10.0 U	10.0	2.4	06/09/21 10:15	

LABORATORY CONTROL SAMPLE:	2173185					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	500	492	98	80-120	
Zinc Dissolved	ua/l	500	516	103	80-120	

MATRIX SPIKE & MATRIX SF	PIKE DUPL	ICATE: 2173	187		2173188							
			MS	MSD								
		30422745001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	0.34J	500	500	543	536	109	107	75-125	1	20	
Zinc, Dissolved	ug/L	13.6	500	500	561	551	109	108	75-125	2	20	

MATRIX SPIKE SAMPLE:	2173190						
		30423005004	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	78.5	500	616	108	75-125	
Zinc, Dissolved	ug/L	169000	500	172000	680	75-125 I	MH

	30422745001	Dup		Max	
Units	Result	Result	RPD	RPD	Qualifiers
ug/L	0.34J	3.0 U		20	
ug/L	13.6	12.8	6	20	
	ug/L	Units Result 0.34J	Units Result Result ug/L 0.34J 3.0 U	Units Result Result RPD ug/L 0.34J 3.0 U	Units Result Result RPD RPD ug/L 0.34J 3.0 U 20

SAMPLE DUPLICATE: 2173189						
		30423005004	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	78.5	76.8		20	
Zinc, Dissolved	ug/L	169000	168000	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30422745

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

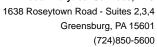
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/10/2021 10:06 AM

MH Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

REPORT OF LABORATORY ANALYSIS





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30422745

Date: 06/10/2021 10:06 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30422745001	RWB-MWI	EPA 3005A	450269	EPA 6010C	450501
30422745002	RWD-MWS	EPA 3005A	450269	EPA 6010C	450501
30422745003	RWD-MWI	EPA 3005A	450269	EPA 6010C	450501
30422745004	RWE-MWS	EPA 3005A	450269	EPA 6010C	450501
30422745005	RWE-MWI	EPA 3005A	450269	EPA 6010C	450501
30422745006	RWB-MWS	EPA 3005A	450269	EPA 6010C	450501
30422745007	RW05R-MWI	EPA 3005A	450269	EPA 6010C	450501

Face Analytical

CITAIN-CI-COOICI / MINIVICAL REQUE The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be

WO#: 30422745

9 P Pace Project No./ Lab I.D. Sample Conditions DRINKING WATER OTHER TIME T GROUND WATER MARS MD **REGULATORY AGENCY** Requested Analysis Filtered (Y/N) T RCRA 52621 DATE Site Location STATE NPDES UST ACCEPTED BY / AFFILIATION 1500 Sparrows Point Blvd Sparrows Point, Md 21219 oniS bevlossiC J muimbsO bevlossio **↓iseT sisylsnA** NIJ Sempany Name: Tradepoint Atlantic Nater Samantha Bayura Jehl Matt Newman Na₂S₂O₃ Preservatives NaOH ЮН nvoice Information: HNO3 Pace Quote Reference: Pace Project Manager: Pace Profile #: [†]OS²H Section C 1808 THE t ention: Unpreserved cdress: # OF CONTAINERS 112/92/5 SAMPLE TEMP AT COLLECTION DATE 77 A430 601 1240 HME H **∀** 三万 Š COMPOSITE END/GRAB COLLECTED DATE RELINQUISHED BY / AFFILIATION Poject Name: RWM GW Sampling TIME Project Number: 2001 6103 COMPOSITE START D, B DATE Required Project Information. Report To: Matt Newman Sopy To: Stew Kabis SAMPLE TYPE (G=GRAB C=COMP) ッ (see valid codes to left) MATRIX CODE Valid Matrix Codes

WATRIX

""VERIGO WATER DW

WIT

WAT Section B O Number DENKING WATER
WATER
WASTEWATER
PRODUCT
SOIL/SOLID
OIL
WIPE
AR
AR
ATER
TISSUE 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS Data Validation Required? (Y/N): Data Package Required? (YŃ) (A-Z, 0-9 / ,-) Sampie IDs MUST BE UNIQUE RW05R-MW - M WS ととは、それできる RWB-MWS 38 36-33 PWE-MUNI SAMPLE ID Tradepoint Atlantic Fax: Section D Required Client Information Section A Required Client Information: Requested Due Date/TAT: ompany: Address: Email To: Phone: 10 Ţ φ 헏 iÓ ۲ œ # MBTI G

Imponent Note: By signing this form you are accepting Piece's NET 30 day payment terms and agreeing to lete charges of 1.5% per month for any invoices not paid within 30 days

SIGNATURE of SAMPLER

PRINT Name of SAMPLER:

Page 15 of 16

(N/A)

Cooler (Y/N) Custody Sealed

Ice (Y/N) Received on

(MM/DD/YY): 05/2(0)

) DATE Signed

21-1021

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Ses S

data package is required, attach data package

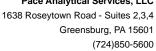
SAMPLER NAME AND SIGNATURE

Pittsburgh Lab Sample Condi	tion	Upor	ı Re	eceipt	r	ft was	
Pace Analytical Client Name:	Tra	dep	ant	- Atlantic	Project #	-3042	2745 -
Courier: Fed Ex UPS USPS Clien	t 🗇	Comme	ercial	DPace Other		Label M ((1
Tracking #: VIA		_			LIM	S Login M((1
Custody Seal on Cooler/Box Present: yes	17/1	no	Seals	s intact: 🔲 yes 🗀] no		-
Thermometer Used12	Type	of Ice:	Wei) Blue None		,	
Cooler Temperature Observed Temp		٠c	Corr	ection Factor: +5	°C Final Tem	_{пр:}	
Temp should be above freezing to 6°C		-					_
				pH paper Lot#	Date and Initial	ls of person examining	
Comments:	Yes	No	N/A	1003801	111	U S/C/1/C/C)	_
Chain of Custody Present:	\vdash	<u> </u>		1.			4
Chain of Custody Filled Out:	<u> </u>	ļ		2.			4
Chain of Custody Relinquished:		<u> </u>		3.			_
Sampler Name & Signature on COC:	\vdash			4.	W		_
Sample Labels match COC:				5.			
-Includes date/time/ID Matrix: V	J)						_
Samples Arrived within Hold Time:	<u> </u>	ļ		6.			_
Short Hold Time Analysis (<72hr remaining):				7.			
Rush Turn Around Time Requested:				8.			
Sufficient Volume:				9.			
Correct Containers Used:				10.			
-Pace Containers Used:							
Containers Intact:	/			11.			
Orthophosphate field filtered			_	12.			
Hex Cr Aqueous sample field filtered				13.			
Organic Samples checked for dechlorination:			/	14.			
Filtered volume received for Dissolved tests			/	15.			
All containers have been checked for preservation.				16.			
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	,					
All containers meet method preservation requirements.				Initial when M (C	Date/time of preservation		
				Lot # of added preservative			
Headspace in VOA Vials (>6mm):				17.			
Trip Blank Present:]	/	18.			1
Trip Blank Custody Seals Present			/				
Rad Samples Screened < 0.5 mrem/hr			/	Initial when completed:	Date;	Survey Meter SN:	
Client Notification/ Resolution:						<u> </u>	i
Person Contacted:			Date/	Гime:	Contacted E	3у:	
Comments/ Resolution:							
							,
							ı
☐ A check in this box indicates that addi	tional	inforn	natio	n has been stored in	ereports.		

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

^{*}PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.







June 10, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: **RWM GW Sampling**

Pace Project No.: 30423005

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on May 27, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuntha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

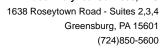
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30423005

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Missouri Certification #: 235

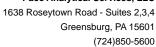
Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Texas/TNI Certification #: T104704188-17-3

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



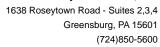


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30423005

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30423005001	RW23-MWS	Water	05/27/21 08:40	05/27/21 22:45
30423005002	RW23-MWI	Water	05/27/21 09:40	05/27/21 22:45
30423005003	RWP-MWI	Water	05/27/21 10:30	05/27/21 22:45
30423005004	RW22R-MWS	Water	05/27/21 12:00	05/27/21 22:45
30423005005	RW22R-MWI	Water	05/27/21 12:50	05/27/21 22:45
30423005006	RW01-MWS	Water	05/27/21 14:20	05/27/21 22:45
30423005007	RW01-MWI	Water	05/27/21 15:15	05/27/21 22:45





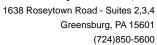
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30423005

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30423005001	RW23-MWS	EPA 6010C	CTS	2	PASI-PA
30423005002	RW23-MWI	EPA 6010C	CTS	2	PASI-PA
30423005003	RWP-MWI	EPA 6010C	CTS	2	PASI-PA
30423005004	RW22R-MWS	EPA 6010C	CTS	2	PASI-PA
30423005005	RW22R-MWI	EPA 6010C	CTS	2	PASI-PA
30423005006	RW01-MWS	EPA 6010C	CTS	2	PASI-PA
30423005007	RW01-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30423005

Sample: RW23-MWS	Lab ID:	30423005001	Collecte	d: 05/27/2°	08:40	Received: 05/	/27/21 22:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	Method: EPA 6 ytical Services			hod: El	PA 3005A			
6010C MET ICP,Dissolved Cadmium, Dissolved	,				hod: El	PA 3005A 06/01/21 09:00	06/09/21 11:51	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30423005

Sample: RW23-MWI	Lab ID:	30423005002	Collecte	d: 05/27/2	1 09:40	Received: 05/	/27/21 22:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
•	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	2870	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 10:53	7440-43-9	
			1000	238		06/01/21 09:00	06/09/21 11:53		





Project: RWM GW Sampling

Pace Project No.: 30423005

Sample: RWP-MWI	Lab ID:	30423005003	Collecte	d: 05/27/2	1 10:30	Received: 05/	/27/21 22:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: EF	PA 3005A			
	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	8430	ug/L	300	34.0	100	06/01/21 09:00	06/09/21 11:55	7440-43-9	
Zinc, Dissolved	3990000	ug/L	10000	2380	1000	06/01/21 09:00	06/09/21 12:03	7440-66-6	





Project: RWM GW Sampling

Pace Project No.: 30423005

Date: 06/10/2021 05:31 PM

Sample: RW22R-MWS	Lab ID:	30423005004	Collecte	d: 05/27/2	1 12:00	Received: 05/	/27/21 22:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,,	,	ytical Services							
Cadmium, Dissolved	78.5	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 10:57	7440-43-9	
Zinc, Dissolved	169000	ug/L	1000	238	100	06/01/21 09:00	06/09/21 12:05	7440-66-6	MH





Project: RWM GW Sampling

Pace Project No.: 30423005

Date: 06/10/2021 05:31 PM

Sample: RW22R-MWI	Lab ID:	30423005005	Collecte	d: 05/27/21	12:50	Received: 05/	27/21 22:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	paration Met	hod: El	PA 3005A			
,	•	vtical Services							
	i acc Anai	y liour Cor vioco	Cicciioba	ıı y					
Cadmium, Dissolved	3.4	ug/L	3.0	0.34	1	06/01/21 09:00	06/09/21 11:13	7440-43-9	



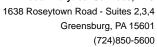


Project: RWM GW Sampling

Pace Project No.: 30423005

Date: 06/10/2021 05:31 PM

Sample: RW01-MWS	Lab ID:	30423005006	Collecte	d: 05/27/2	1 14:20	Received: 05/	/27/21 22:45 M	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: E	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	0.40J 3620	ug/L ug/L	3.0 10.0	0.34 2.4	1 1	06/01/21 09:00 06/01/21 09:00			





Project: RWM GW Sampling

Pace Project No.: 30423005

Sample: RW01-MWI	Lab ID:	30423005007	Collected	d: 05/27/2	1 15:15	Received: 05/	27/21 22:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	•	Method: EPA 6 ytical Services			hod: El	PA 3005A			
6010C MET ICP, Dissolved Cadmium, Dissolved	•				hod: El	PA 3005A 06/01/21 09:00	06/09/21 11:17	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30423005

Date: 06/10/2021 05:31 PM

QC Batch: 450269 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30423005001, 30423005002, 30423005003, 30423005004, 30423005005, 30423005006, 30423005007

METHOD BLANK: 2173184 Matrix: Water

Associated Lab Samples: 30423005001, 30423005002, 30423005003, 30423005004, 30423005005, 30423005006, 30423005007

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/09/21 10:15	
Zinc, Dissolved	ug/L	10.0 U	10.0	2.4	06/09/21 10:15	

LABORATORY CONTROL SAMPLE: 2173185 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 492 98 80-120 ug/L Zinc, Dissolved ug/L 500 516 103 80-120

MATRIX SPIKE & MATRIX SP	PIKE DUPL	ICATE: 2173	187		2173188							
			MS	MSD								
		30422745001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	0.34J	500	500	543	536	109	107	75-125	1	20	
Zinc, Dissolved	ug/L	13.6	500	500	561	551	109	108	75-125	2	20	

MATRIX SPIKE SAMPLE:	2173190						
		30423005004	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	78.5	500	616	108	75-125	
Zinc, Dissolved	ug/L	169000	500	172000	680	75-125	MH

SAMPLE DUPLICATE: 2173186						
		30422745001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	0.34J	3.0 U		20	
Zinc, Dissolved	ug/L	13.6	12.8	6	20	

SAMPLE DUPLICATE: 2173189						
		30423005004	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	78.5	76.8		20	
Zinc, Dissolved	ug/L	169000	168000	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30423005

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

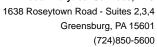
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/10/2021 05:31 PM

MH Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30423005

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30423005001	RW23-MWS	EPA 3005A	450269	EPA 6010C	<u>450501</u>
30423005002	RW23-MWI	EPA 3005A	450269	EPA 6010C	450501
30423005003	RWP-MWI	EPA 3005A	450269	EPA 6010C	450501
30423005004	RW22R-MWS	EPA 3005A	450269	EPA 6010C	450501
30423005005	RW22R-MWI	EPA 3005A	450269	EPA 6010C	450501
30423005006	RW01-MWS	EPA 3005A	450269	EPA 6010C	450501
30423005007	RW01-MWI	EPA 3005A	450269	EPA 6010C	450501

Face Analytical

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be WO#: 30423005

DRINKING WATER OTHER T NPDES T GROUND WATER T REGULATORY AGENCY T RCRA Site Location STATE UST 1600 Sparrows Point Bivd Sparrows Point, Md 21219 Company Name: Tradepoint Atlantic Pace Guote Reference: Rese Project Samantha Bayura Manager: Pace Profile #: Matt Newman Invoice Information: Section C Attention: Acdress: RWM GW Sampling Project Number: 2001 0183 Section B Required Project Information: Report To: Matt Newman Copy To: Stew Kabis roject Name: O Number: 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd Tradepoint Atlantic жä Section A Required Client Information: Requested Due Date/TAT: Company: Email To: ddress:

				-				_	_																	
	Required Client Information MATRIX COL	5005			Õ	COLLECTED	0	_	_		Prese	Preservatives	Se	NV.	ردد	-5										
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4	PW22R-mws		*******	Quest.			12.00	0	sweet.				<u> </u>	I	X	9	L	-		I			\perp			35
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Pittsburgh Lab Sample	Conditio	on (Upo	n Ke	eceipt	E.	
Pace Analytical Client Nar	me: [<u>Y</u> QI	depo	OLÀ-	1 Atlantic	Project #	F_30423
Courier: Fed Ex UPS USPS	☐ Client		Comm	ercial	Pace Other		Label M (C
racking #: U ()						L	MS Login W
Custody Seal on Cooler/Box Present:	yes	Ø r	10	Seals	sintact: 🔲 yes [no	
hermometer Used 2	Т	уре (of Ice:	We	Blue None		
Cooler Temperature Observed Tem emp should be above freezing to 6°C	p <u>, 4</u>		°C	Corr	ection Factor: + 5		
	-				pH paper Lot#	Date and Ini contents£	tials of person examining
Comments:		Yes	No	N/A	10D3801		MI 2158/1051
Chain of Custody Present:					1.		
Chain of Custody Filled Out:				-	2.		
Chain of Custody Relinquished:			ļ		3.		
ampler Name & Signature on COC:					4.		
ample Labels match COC:	Ļ				5.		
-Includes date/time/ID Ma	atrix: \	Л)		 			
amples Arrived within Hold Time:					6.		
hort Hold Time Analysis (<72hr remair	ning): /				7.		
ush Turn Around Time Requested:		_			8.		
ufficient Volume:					9.		
orrect Containers Used:	_				10.		
-Pace Containers Used:							
ontainers Intact:					11.		
rthophosphate field filtered					12.		
ex Cr Aqueous sample field filtered					13.		
rganic Samples checked for dechlor	ination:				14.		
Itered volume received for Dissolved tes	ts			/	15.		
l containers have been checked for preservat	ion.				16.		,
cceptions: VOA, coliform, TOC, O&G, P on-aqueous matrix	henolics, Ra	adon,	•				
Il containers meet method preservation equirements.		$\overline{}$			Initial when completed	Date/time of preservation	
quilonolio,	<u> </u>				Lot # of added preservative	preservation	
eadspace in VOA Vials (>6mm):					17.		
ip Blank Present:					18.		
ip Blank Custody Seals Present				/			
ad Samples Screened < 0.5 mrem/hr				/	Initial when completed:	Date:	Survey Meter SN:
ient Notification/ Resolution:	I		1				
Person Contacted:				Date/	Time:	Contacte	d By:
Comments/ Resolution:					***************************************		*************************************

 $\ \square$ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

(724)850-5600



January 28, 2022

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GM Sampling

Pace Project No.: 30423589

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 01, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

(Greensburg, PA) - Revision 1 - This report replaces the June, 10, 2021 report. This project was revised on January, 28, 2022 to revise sample IDs RWS-MWS to RWJ-MWS and RWU-MWI to RWJ-MWI per client's request. .

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smetonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Kaye Guille, ARM Group Inc.

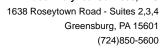
J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GM Sampling

Pace Project No.: 30423589

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040

Guam Certification

Florida: Cert E871149 SEKS WET

Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L





SAMPLE SUMMARY

Project: RWM GM Sampling

Pace Project No.: 30423589

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30423589001	RWJ-MWS	Water	06/01/21 09:25	06/01/21 23:00
30423589002	RWJ-MWI	Water	06/01/21 10:25	06/01/21 23:00
30423589003	RWK-MWS	Water	06/01/21 11:30	06/01/21 23:00
30423589004	RWK-MWI	Water	06/01/21 12:30	06/01/21 23:00
30423589005	RWL-MWS	Water	06/01/21 13:50	06/01/21 23:00
30423589006	RWL-MWI	Water	06/01/21 15:00	06/01/21 23:00



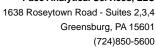
SAMPLE ANALYTE COUNT

Project: RWM GM Sampling

Pace Project No.: 30423589

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30423589001	RWJ-MWS	EPA 6010C	CTS	2	PASI-PA
30423589002	RWJ-MWI	EPA 6010C	CTS	2	PASI-PA
30423589003	RWK-MWS	EPA 6010C	CTS	2	PASI-PA
30423589004	RWK-MWI	EPA 6010C	CTS	2	PASI-PA
30423589005	RWL-MWS	EPA 6010C	CTS	2	PASI-PA
30423589006	RWL-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: RWM GM Sampling

Pace Project No.: 30423589

Method: EPA 6010C

Description: 6010C MET ICP,Dissolved
Client: Tradepoint Atlantic
Date: January 28, 2022

General Information:

6 samples were analyzed for EPA 6010C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 451176

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30423589001,30423821005

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2177875)
 - Zinc, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





Project: RWM GM Sampling

Pace Project No.: 30423589

Sample: RWJ-MWS	Lab ID:	30423589001	Collecte	d: 06/01/2	1 09:25	Received: 06	/01/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	•	Method: EPA 6 lytical Services			thod: E	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	3.0 U 10.0 U	ug/L ug/L	3.0 10.0	0.34 2.4	1 1		06/10/21 08:58 06/10/21 08:58		





Project: RWM GM Sampling

Pace Project No.: 30423589

Sample: RWJ-MWI	Lab ID:	30423589002	Collecte	d: 06/01/21	10:25	Received: 06/	01/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
,	Pace Anal	vtical Services	Greensbu	ıra					
		,	0.00000	. 9					
Cadmium, Dissolved	31.3	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 09:10	7440-43-9	





Project: RWM GM Sampling

Pace Project No.: 30423589

Date: 01/28/2022 08:34 AM

Sample: RWK-MWS	Lab ID:	30423589003	Collecte	d: 06/01/2	1 11:30	Received: 06/	/01/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: El	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	3.0 U 22200	ug/L ug/L	3.0 1000	0.34 238	1 100		06/10/21 09:13 06/10/21 13:39		





Project: RWM GM Sampling

Pace Project No.: 30423589

Sample: RWK-MWI	Lab ID:	30423589004	Collecte	d: 06/01/2	1 12:30	Received: 06/	/01/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: E	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	97.8 34600	ug/L ug/L	3.0 1000	0.34 238	1 100		06/10/21 09:19 06/10/21 13:41		

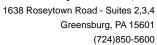




Project: RWM GM Sampling

Pace Project No.: 30423589

Sample: RWL-MWS	Lab ID:	30423589005	Collected	d: 06/01/2	1 13:50	Received: 06/	01/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
20400 MET IODDisas keed	A b - C 1	Mathad EDA 0							
6010C MET ICP DISSOIVED	Anaiyticai	Method: EPA 6	010C Prep	aration Met	:hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	ytical Services			hod: El	PA 3005A			
Cadmium, Dissolved	,				hod: El		06/10/21 09:22	7440-43-9	





Project: RWM GM Sampling

Pace Project No.: 30423589

Sample: RWL-MWI	Lab ID:	30423589006	Collected	d: 06/01/2	15:00	Received: 06/	01/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	hod: Fl	PA 3005A			
,,	,	ytical Services			110a. Li	7.00007.			
Cadmium, Dissolved	,				1		06/10/21 09:24	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GM Sampling

Pace Project No.: 30423589

Zinc, Dissolved

Date: 01/28/2022 08:34 AM

QC Batch: 451176 Analysis Method: EPA 6010C

ug/L

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

102

80-120

Associated Lab Samples: 30423589001, 30423589002, 30423589003, 30423589004, 30423589005, 30423589006

METHOD BLANK: 2177869 Matrix: Water

Associated Lab Samples: 30423589001, 30423589002, 30423589003, 30423589004, 30423589005, 30423589006

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/10/21 08:53	
Zinc, Dissolved	ug/L	10.0 U	10.0	2.4	06/10/21 08:53	

LABORATORY CONTROL SAMPLE:	2177870					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	500	491	98	80-120	

500

MATRIX SPIKE & MATRIX SP	PIKE DUPL	ICATE: 2177	872		2177873							
			MS	MSD								
		30423589001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	3.0 U	500	500	554	575	111	115	75-125	4	20	
Zinc, Dissolved	ug/L	10.0 U	500	500	521	542	104	108	75-125	4	20	

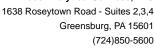
508

MATRIX SPIKE SAMPLE:	2177875						
		30423821005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	6810	500	7290	95	75-125	
Zinc, Dissolved	ug/L	542000	500	535000	-1360	75-125 I	۸L

SAMPLE DUPLICATE: 2177871						
		30423589001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0 U		20	
Zinc, Dissolved	ug/L	10.0 U	10.0 U		20	

SAMPLE DUPLICATE: 2177874		0040004005	5			
		30423821005	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	6810	6870	1	20	
Zinc, Dissolved	ug/L	542000	537000	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GM Sampling

Pace Project No.: 30423589

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

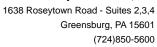
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 01/28/2022 08:34 AM

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GM Sampling

Pace Project No.: 30423589

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30423589001	RWJ-MWS	EPA 3005A	451176	EPA 6010C	451310
30423589002	RWJ-MWI	EPA 3005A	451176	EPA 6010C	451310
30423589003	RWK-MWS	EPA 3005A	451176	EPA 6010C	451310
30423589004	RWK-MWI	EPA 3005A	451176	EPA 6010C	451310
30423589005	RWL-MWS	EPA 3005A	451176	EPA 6010C	451310
30423589006	RWL-MWI	EPA 3005A	451176	EPA 6010C	451310

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

WO#: 30423589 OTHER <u>|</u>__ P NPDES T GROUND TOTAL I UST I RCRA Site Location STATE 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Sempany Name: Tradepoint Atlantic Paze Quole Reference: Rese Project Samantha Bayura Manager: Paze Profile #: Matt Newman invoice Information: At ention: Matt Section C Acdress: Project Name: RWM GW Sampling Project Number: 20010163 Required Project Information: Report To: Matt Newman Copy To: Stew Kabis PO Number: Section B 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd Pace Analytical" Tradepoint Atlantic Fax: Section A Required Client Information: Requested Due Date/TAT: гопрапу: Email To: Address: Phone:

Requested Analysis Filtered (Y/N)

	Section D Required Cleat Information	Valid Matrix Codes			Č	COLLECTED	, LED				Proconcilios	mtile	ي	N	.2~	.55°										i.
		DRINKING WATER DW WATER WT WASTE WATER WW SOLISOLID SIL OIL	codes to teft)	(GMOD=D	COMPOSITE	}	COMPOSITE						,	Ж	>	ר		-								
# MaTi	Sample IDs MUST BE UNIQUE	WPF WP	MATRIX CODE (see veild		DATE	<u>a</u>	DATE	AAMPLE TEMP AT COLLEC	# OF CONTAINERS	Unpreserved A₂SO₄	HCI HNO ³	HOaN	Na ₂ S ₂ O ₃ Other	Test L	muimbsO baviossiO	oniZ bevlossiC								Pace Project No./Lab.ID	To N	<u> </u>
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Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month to any involces not paid within 30 days

17

Pittsburgh Lab Sample Condi	tion	upo ,	n K	eceipt		
Face Analytical Client Name:	,	Tha	leco	bont F	Project # #	042358
Courier: Fed Ex UPS USPS Clien	t 🗆	Comm	ercial	Pace Other	"	abel
Tracking #:					LIMS L	ogin 1000
Custody Seal on Cooler/Box Present: yes	امس	- no	Seal	s intact: yes		
Thermometer Used	Туре	of ice:		D Blue None		
Cooler Temperature Observed Temp	3	۰c	_	ection Factor <u>: r-C/S</u>	°C Final Temp:	4.8 ·c
Temp should be above freezing to 6°C		-				`
				pH paper Lot#	Date and Initials o contents:	f person examining
Comments:	Yes	No	N/A	1003801	contents.	5-2-21
Chain of Custody Present:				1.	<i>V</i>	
Chain of Custody Filled Out:	٠			2.		
Chain of Custody Relinquished:			<u> </u>	3.		
Sampler Name & Signature on COC:	<u> </u>			4.		
Sample Labels match COC:	_		<u> </u>	5.		
-Includes date/time/ID Matrix:	Wt	,	7			
Samples Arrived within Hold Time:				6.		
Short Hold Time Analysis (<72hr remaining):		_		7.		
Rush Turn Around Time Requested:				8.		
Sufficient Volume:	-			9.		
Correct Containers Used:		<u> </u>		10.		
-Pace Containers Used:						
Containers Intact:				11.		
Orthophosphate field filtered			wq	12.		
Hex Cr Aqueous sample field filtered			~	13.		
Organic Samples checked for dechlorination:				14.		
Filtered volume received for Dissolved tests			ţ	15.		
All containers have been checked for preservation.				16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon					
All containers meet method preservation				Initial when	Date/time of	
requirements.				completed γ	preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):				17.		
Trip Blank Present:			_	18.		
Trip Blank Custody Seals Present			٠.			
Rad Samples Screened < 0.5 mrem/hr			-	Initial when		ırvey Meter
Client Notification/ Resolution:	1		Name.	completed:	Date: (ジー)ーン) SN	٠.
Person Contacted:			Date/	'ime:	Contacted By:	
Comments/ Resolution:					Comacieu by.	
						-

 $\ \square$ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Greensburg Lab -Sample Container Count

Pace Analytical *

Client

Profile Number

SPLC Mekn WGFU VOAK U69V T65V H6Đ∧ ecna S69Q Notes UE98 8648 **BP3N** ВЬЗС USPB **BP2S** บเศล има ยפรก BGIN TGDA UBĐA บยอ∀ Kum Gu Sayine ¥G38 NZOA TrəA SroA HFÐA \$ Matrix Sample Line Item 9 Site $^{\circ}$ ന S တ တ ∞

Glass	S			Δ.	Plastic / Misc	Misc
)					-
f Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4	GCUB	GCUB 1 Gallon Cubitainer	EZI	5g Encore
100mL amber glass unprserved	VG9U	40mL clear VOA vial	12GN	12GN 1/2 Gallon Cubitainer	VOAK	Kit for Volatile
100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul	SP5T	SP5T 120mL Coliform Na Thiosulfate	_	Wipe/Swab
1 Gallon Jug	VG9H	40mL clear VOA vial HCI	BP1N	BP1N 1L plastic HNO3	ZPLC	Ziploc Bag
∮L amber glass H2SO4	JGFU	FU 4oz amber wide jar	BP1U	1L plastic unpreserved		
1 amber glass HCI	WGFU	3FU 4oz wide jar unpreserved	BP3S	250mL plastic H2SO4	WT	Water
1 amber glass Na Thiosulfate	BG2U	BG2U 500mL clear glass unpreserved	BP3N	250ml, plastic HNO3	SL	Solid
1L clear glass unpreserved	AG2U	AG2U 500mL amber glass unpreserved	BP3U	250mL plastic unpreserved	<u>ا</u>	Non-adue-nos
Ż50mL amber glass H2SO4	WGKU	GKU 8oz wide jar unpreserved	BP3C	250ml plastic NAOH	WP	Wipe
250mL amber glass unpreserved			BP2S	500mL plastic H2SO4		
			BP2U	BP2U 500mL plastic unpreserved		

Kit for Volatile Solid

AG5U

GJN

AG5T

Container Codes

2

7

GUN

AG1H

AG1T

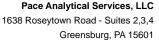
AG1S

BG1U

\G3S AG3U

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(724)850-5600



June 10, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30423821

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 02, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuella Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

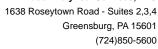
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30423821

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Ohio EPA Rad Approval: #41249

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30423821

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30423821001	RW02-MWS	Water	06/02/21 08:35	06/02/21 23:00
30423821002	RW02-MWI	Water	06/02/21 09:20	06/02/21 23:00
30423821003	RWH-MWS	Water	06/02/21 10:40	06/02/21 23:00
30423821004	RWH-MWI	Water	06/02/21 11:50	06/02/21 23:00
30423821005	RWI-MWI	Water	06/02/21 13:05	06/02/21 23:00
30423821006	RWS-MWS	Water	06/02/21 13:50	06/02/21 23:00
30423821007	RWS-MWI	Water	06/02/21 15:00	06/02/21 23:00



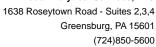
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30423821

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30423821001	RW02-MWS	EPA 6010C	CTS	2	PASI-PA
30423821002	RW02-MWI	EPA 6010C	CTS	2	PASI-PA
30423821003	RWH-MWS	EPA 6010C	CTS	2	PASI-PA
30423821004	RWH-MWI	EPA 6010C	CTS	2	PASI-PA
30423821005	RWI-MWI	EPA 6010C	CTS	2	PASI-PA
30423821006	RWS-MWS	EPA 6010C	CTS	2	PASI-PA
30423821007	RWS-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30423821

Method: EPA 6010C

Description: 6010C MET ICP,Dissolved
Client: Tradepoint Atlantic
Date: June 10, 2021

General Information:

7 samples were analyzed for EPA 6010C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 451176

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30423589001,30423821005

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2177875)
 - Zinc, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RW02-MWS	Lab ID:	30423821001	Collecte	d: 06/02/2	08:35	Received: 06/	/02/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	paration Met	hod: El	PA 3005A			
,	•	vtical Services							
		,		9					
Cadmium, Dissolved	3.0 U	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 09:26	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RW02-MWI	Lab ID:	30423821002	Collecte	d: 06/02/21	09:20	Received: 06/	02/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
,	Pace Anal	vtical Services	Greenshu	ıra					
	i acc Anai	ytical Colvidos	Orccrissa	ı y					
Cadmium, Dissolved	0.58J	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 09:28	7440-43-9	



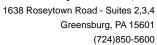


Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RWH-MWS	Lab ID:	30423821003	Collecte	d: 06/02/2	10:40	Received: 06/	/02/21 23:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prec	aration Met	hod: El	PA 3005A			
, , , , , , , , , , , , , , , , , , , ,	,	ytical Services							
		/I	2.0	0.04	4	00/07/04 00:45	00/40/04 00:00	7440 40 0	
Cadmium, Dissolved	9.9	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 09:30	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RWH-MWI	Lab ID:	30423821004	Collected	d: 06/02/2	1 11:50	Received: 06/	/02/21 23:00 M	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: El	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	6760 578000	ug/L ug/L	3.0 1000	0.34 238	1 100	06/07/21 09:15 06/07/21 09:15	06/10/21 09:32 06/10/21 13:47		





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RWI-MWI	Lab ID:	30423821005	Collecte	d: 06/02/2	1 13:05	Received: 06/	/02/21 23:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,	Pace Ana	lytical Services	- Greensbu	rg					
					_				
Cadmium, Dissolved	6810	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 09:35	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RWS-MWS	Lab ID:	30423821006	Collected	d: 06/02/2	1 13:50	Received: 06/	02/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Pren	aration Met	hod: E	DV 300EV			
				aration inc	nou. Li	- A 3003A			
33.33 ME1 13. ,513301704	,	ytical Services			illou. Li	-A 3003A			
Cadmium, Dissolved	,				1		06/10/21 10:11	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Sample: RWS-MWI	Lab ID:	30423821007	Collecte	d: 06/02/2	1 15:00	Received: 06	/02/21 23:00 M	atrix: Water	
David video	Danita	11-26-	Report	MDI	DE	Duamanad	A b l	040 N=	01
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: Ef	PA 3005A			
	Pace Ana	lytical Services	- Greensbu	rg					
Cadmium, Dissolved	0.86J	ug/L	3.0	0.34	1	06/07/21 09:15	06/10/21 10:13	7440-43-9	
Oddiniani, Dissolved									



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

QC Batch: 451176 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30423821001, 30423821002, 30423821003, 30423821004, 30423821005, 30423821006, 30423821007

METHOD BLANK: 2177869 Matrix: Water

Associated Lab Samples: 30423821001, 30423821002, 30423821003, 30423821004, 30423821005, 30423821006, 30423821007

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/10/21 08:53	
Zinc, Dissolved	ug/L	10.0 U	10.0	2.4	06/10/21 08:53	

LABORATORY CONTROL SAMPLE:	2177870	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	500	491	98	80-120	
Zinc, Dissolved	ug/L	500	508	102	80-120	

MATRIX SPIKE & MATRIX SP	PIKE DUPL	ICATE: 2177	872		2177873							
			MS	MSD								
		30423589001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	3.0 U	500	500	554	575	111	115	75-125	4	20	
Zinc, Dissolved	ug/L	10.0 U	500	500	521	542	104	108	75-125	4	20	

MATRIX SPIKE SAMPLE:	2177875						
		30423821005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	6810	500	7290	95	75-125	
Zinc, Dissolved	ug/L	542000	500	535000	-1360	75-125 I	۸L

SAMPLE DUPLICATE: 2177871						
		30423589001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0 U		20	
Zinc, Dissolved	ug/L	10.0 U	10.0 U		20	

SAMPLE DUPLICATE: 2177874						
		30423821005	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	6810	6870	1	20	
Zinc, Dissolved	ug/L	542000	537000	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30423821

Pace Analytica

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

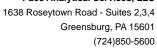
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/10/2021 09:51 PM

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30423821

Date: 06/10/2021 09:51 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30423821001	RW02-MWS	EPA 3005A	451176	EPA 6010C	451310
30423821002	RW02-MWI	EPA 3005A	451176	EPA 6010C	451310
30423821003	RWH-MWS	EPA 3005A	451176	EPA 6010C	451310
30423821004	RWH-MWI	EPA 3005A	451176	EPA 6010C	451310
30423821005	RWI-MWI	EPA 3005A	451176	EPA 6010C	451310
30423821006	RWS-MWS	EPA 3005A	451176	EPA 6010C	451310
30423821007	RWS-MWI	EPA 3005A	451176	EPA 6010C	451310

CTAIN-CT-COJOOIOT / MIRIYIICAI REQUE: The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be co

Pace Analytical

WO#: 30423821

Pace Project No./ Lab I.D. (N/A) Sample Conditions > DRINKING WATER Cooler (Y/N) 38 BB g OTHER ج re (V/V) Received on NPDES ☐ GROUND WATER ☐ L TIME S 死 MD REGULATORY AGENCY 7 Requested Analysis Filtered (Y/N) T RORA DATE でから ななご Site Location STATE: UST DATE Signed
(MM/DD/YY): Oto / 0.2./ ACCEPTED_BY/AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Dissolved Zinc issolved Cadmium N/ **↓** test zievisnAt Ocmpany Name: Tradepoint Atlantic Samantha Bayura Jiper matton: Matt Newman Preservatives _CO_SS_SBN HOSN HCI Invoice Inform Attention: Pace Guote Reference: Pace Project Manager: Pace Profile #: OS2H Section C TIME (00) Unpreserved 230 Acdress: SAMPLER NAME AND SIGNATURE # OF CONTAINERS PRINT Name of SAMPLER: SAMPLE TEMP AT COLLECTION DATE **%** 38 3 350 TIME 2926 040 3 COMPOSITE END/GRAB COLLECTED DATE RELINQUISHED BY FAFFILIATION RWM GW Sampling TIME COMPOSITE DATE Required Project Information: Réport To: Matt Newman Jopy To: Stew Kabis (G=GRAB C=COMP) SAMPLE TYPE > Project Number: (see valid codes to left) MATRIX CODE roject Name: Section B Valid Matrix Codes

MATRIX
CODE
DENKINS WITE DW
WASTE WATER WW
WASTE WATER WW
SOLLSOLID SL
WHE
WHE
AR
AR
AR
TISSUE
TISSUE
TISSUE data package is required, attach data package 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS 381 Data Validation Required? (YN) (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Data Package Required? (Y/N); esut - mu) R105-8012 - MW RW 1- MMI 2435 - MILL Tradepoint Atlantic SAMPLE ID .. ※ Section D Required Client Information R1002 Required Client Information: 4.(1) Requested Due Date/TAT: checklist. ompany: Address: imail To: hone: 10 Ŧ ف 껕 . o # WBLI œ Page 16 of 18

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 784/5.

SIGNATURE of SAMPLER

Pittsburgh Lab Sample Cond	ition	Upo	n Re	eceipt		Acres (
Face Analytical Client Name:		tra	def	Pant	Project #	ος Ο
Courier: Fed Ex UPS USPS Clier	nt 🗆	Comm	nercial	Pace Other	Label	2
Tracking #:					LIMS Login \ \	7
Custody Seal on Cooler/Box Present: yes	-	no	Seal	s intact: 🔲 yes 🛶		0
Thermometer Used	Туре	of Ice	:γWe	t, Blue None		7
Cooler Temperature Observed Temp 3	.60	·c	Corr	ection Factor <u>: </u> O is	°C Final Temp: 4.1 °C	- 44.
Temp should be above freezing to 6°C		-				#
				pH paper Lot#	Date and Initials of person examining contents:	
Comments:	Yes	No	N/A	1003514	1/6-3-01	
Chain of Custody Present:			ļ	1.		
Chain of Custody Filled Out:	<u> </u>	<u>.</u>	ļ	2.		
Chain of Custody Relinquished:	<u> </u>	<u> </u>	ļ	3.		
Sampler Name & Signature on COC:	-			4.		
Sample Labels match COC:			<u> </u>	5.		
-Includes date/time/ID Matrix:	<u>V1</u>	7				
Samples Arrived within Hold Time:				6.		
Short Hold Time Analysis (<72hr remaining):	ļ	_		7.		
Rush Turn Around Time Requested:				8.		
Sufficient Volume:	-			9.		
Correct Containers Used:	-			10.		
-Pace Containers Used:	_					
Containers Intact:				11.		
Orthophosphate field filtered				12.		
Hex Cr Aqueous sample field filtered			<u>-</u>	13.		
Organic Samples checked for dechlorination:			ſ	14.		
Filtered volume received for Dissolved tests	İ		j	15.		
All containers have been checked for preservation.				16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	•				
All containers meet method preservation requirements.	_		•	Initial when	Date/time of	
noquilation.				completed	preservation	
	<u> </u>			preservative		
Headspace in VOA Vials (>6mm):				17.		
Trip Blank Present:				18.		
Trip Blank Custody Seals Present	<u> </u>		0	In the Landson		
Rad Samples Screened < 0.5 mrem/hr				Initial when completed:	Date: G-331 Survey Meter	
Client Notification/ Resolution:						
Person Contacted:		· · · · · · · · · · · · · · · · · · ·	Date/T	ime:	Contacted By:	
Comments/ Resolution:						

A check in this box indicates that additional information has been stored in ereports. Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR

Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

7

Pace Greensburg Lab -Sample Container Count

Profile Number

Client

Site Sample	X	3 1	2	Chry Cie Sempling	conf.	12 g		l		r	ſ	ı	1		-		-		ies	_	-			>		n	11	
Line	intsM	หอ∀	ยเอ∀	เ≀อ∀	เรอ∀	¥G32	ายอ∀	ารอ∀	raəA	าเอย	Besr	игча	DP1U	BP2S	BP2U	овча	BP3N	BP35	UEAB	S690	H69A	T65V	U69V	ΝΑΟV	MGFL	MCK		ZPLC
-	*															1 (4											
2																	Okasi katiya											
က																												
4										·																		
5											·																	
9																	البييد الله										İ	l
7	÷																											1
80																												
တ				·			,																					l
10																												
11																												1
12																												1
Container Codes	r Code	Ş																										!

	Pla	Plastic / Misc.	Misc.
GCUE	GCUB 1 Gallon Cubitainer	EZI	5g Encore
12GN	12GN 1/2 Gallon Cubitainer	VOAK	Kit for Volatile Solid
SP5T	120mL Coliform Na Thiosulfate	_	Wipe/Swab
BP1N	1L plastic HNO3	ZPLC	Ziploc Bag
BP1U	1L plastic unpreserved		
BP3S	250mL plastic H2SO4	WT	Water
BP3N	250mL plastic HNO3	SF	Solid
BP3U	250mL plastic unpreserved	OL	Non-aqueous liquid
ВРЗС	250ml plastic NAOH	WP	Wipe
BP2S	500mL plastic H2SO4		
BP2U	500mL plastic unpreserved		

40mL clear VOA vial Na Thiosul

40mL clear VOA vial

VG9U VG9T 40mL clear VOA vial HCI

VG9H

100mL amber glass Na Thiosulfate

100mL amber glass unprserved

4G5U

SS

AG5T

Gallon Jug with HNO3

4oz amber wide jar

JGFU

L amber glass H2SO4 L amber glass HCI

AG1S AG1H

Gallon Jug

S

40mL amber VOA vial H2SO4

DG9S

Glass

500mL clear glass unpreserved 500mL amber glass unpreserve

4oz wide jar unpreserved

WGFU BG2U 8oz wide jar unpreserved

WGKU

50mL amber glass unpreserved

L clear glass unpreserved 50mL amber glass H2SO4

AG3S

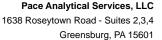
AG3U

AG2U

amber glass Na Thiosulfate

AG1T BG1U # 3042382

FNV-FRM-GRUR-0072 00 29Der2020



(724)850-5600



June 11, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30424014

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 03, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuntha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

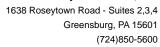
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30424014

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification

Indiana Certification

lowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kontucky Cortification #: KY00133

Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

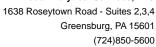
Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



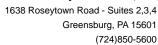


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30424014

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30424014001	RW06-MWS	Water	06/03/21 09:25	06/03/21 23:30
30424014002	RW06-MWI	Water	06/03/21 10:15	06/03/21 23:30
30424014003	RW06-MWD	Water	06/03/21 11:20	06/03/21 23:30
30424014004	RWM-MWI	Water	06/03/21 12:30	06/03/21 23:30
30424014005	RW10-MWI	Water	06/03/21 14:50	06/03/21 23:30





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30424014

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30424014001	RW06-MWS	EPA 6010C	CTS	2	PASI-PA
30424014002	RW06-MWI	EPA 6010C	CTS	2	PASI-PA
30424014003	RW06-MWD	EPA 6010C	CTS	2	PASI-PA
30424014004	RWM-MWI	EPA 6010C	CTS	2	PASI-PA
30424014005	RW10-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30424014

Date: 06/11/2021 04:24 PM

Sample: RW06-MWS	Lab ID:	30424014001	Collecte	d: 06/03/2	1 09:25	Received: 06	/03/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: E	PA 3005A			
,	•	lytical Services							
Cadmium, Dissolved	3.0 U	ug/L	3.0	0.34	1	06/07/21 14:53	06/11/21 08:00	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30424014

Sample: RW06-MWI	Lab ID:	30424014002	Collecte	d: 06/03/2	1 10:15	Received: 06	/03/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,,	,	ytical Services							
Cadmium, Dissolved	616	ug/L	3.0	0.34	1	06/07/21 14:53	06/11/21 08:13	7440-43-9	
Zinc, Dissolved	109000	ug/L	1000	238	100	06/07/21 14:53	06/11/21 08:55	7440-66-6	





Project: RWM GW Sampling

Pace Project No.: 30424014

Sample: RW06-MWD	Lab ID:	30424014003	Collecte	d: 06/03/2	1 11:20	Received: 06/	/03/21 23:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	,	Method: EPA 6 ytical Services			thod: E	PA 3005A			
Cadmium, Dissolved Zinc, Dissolved	0.59J 64.9	ug/L ug/L	3.0 10.0	0.34 2.4	1 1		00/11/21 00110		





Project: RWM GW Sampling

Pace Project No.: 30424014

Sample: RWM-MWI	Lab ID:	30424014004	Collected	l: 06/03/2	1 12:30	Received: 06/	/03/21 23:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP,Dissolved Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Greensburg									
Cadmium, Dissolved Zinc, Dissolved	1220 150000	ug/L ug/L	3.0 1000	0.34 238	1 100	06/07/21 14:53 06/07/21 14:53			





Project: RWM GW Sampling

Pace Project No.: 30424014

Sample: RW10-MWI	Lab ID:	30424014005	Collecte	d: 06/03/2 ²	14:50	Received: 06/	03/21 23:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	0400 D		–	24 00054			
OUTUC MILT ICI (DISSUIVEU	Analytical	Melliou. EFA 6	UTUC Prep	aration iviet	nod: El	PA 3005A			
oo loo will lol, bissoived	,	lytical Services			nod: El	PA 3005A			
Cadmium, Dissolved	,				nod: El		06/11/21 08:24	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30424014

QC Batch: 451258 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30424014001, 30424014002, 30424014003, 30424014004, 30424014005

METHOD BLANK: 2178185 Matrix: Water

Associated Lab Samples: 30424014001, 30424014002, 30424014003, 30424014004, 30424014005

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed 0.34 Cadmium, Dissolved 3.0 U 3.0 06/11/21 07:56 ug/L Zinc, Dissolved 10.0 U 10.0 2.4 06/11/21 07:56 ug/L

LABORATORY CONTROL SAMPLE: 2178186

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 484 97 80-120 ug/L Zinc, Dissolved 500 492 98 80-120 ug/L

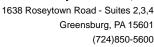
MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2178188 2178189 MS MSD 30424014001 Spike Spike MS MSD MS MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** Qual Cadmium, Dissolved ug/L 3.0 U 500 500 517 518 103 104 75-125 0 20 Zinc, Dissolved 10.0 U 500 500 494 492 75-125 20 ug/L 98 98 0

SAMPLE DUPLICATE: 2178187

Date: 06/11/2021 04:24 PM

		30424014001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0 U		20	
Zinc, Dissolved	ug/L	10.0 U	10.0 U		20)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30424014

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 06/11/2021 04:24 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30424014

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30424014001	RW06-MWS	EPA 3005A	451258	EPA 6010C	451321
30424014002	RW06-MWI	EPA 3005A	451258	EPA 6010C	451321
30424014003	RW06-MWD	EPA 3005A	451258	EPA 6010C	451321
30424014004	RWM-MWI	EPA 3005A	451258	EPA 6010C	451321
30424014005	RW10-MWI	EPA 3005A	451258	EPA 6010C	451321

Face Analytical"

CITALIN-OF-CUST OD 1 / ALI all yllical Request に MO样: 30424014

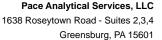
Pace Project No./ Lab I.D. (N/A) Sample Conditions DRINKING WATER Cooler (Y/N) OTHER (N/Y) epi Received on L NPDES - GROUND WATER -TIME MD REGULATORY AGENCY Requested Analysis Filtered (Y/N) T RCRA DATE (5) Lumb C DATE Signed (MMVDD/Y): Q1e (63/202) 30424014 Site Location STATE UST 1600 Sparrows Point Blvd Sparrows Point, Md 21219 ACCEPTED BY / AFFILIATION <u>&</u> > > Dissolved Zinc mulmbeO beviossion Analysis Test N/A Sempany Name: Tradepoint Atlantic Secret Contraction Samantha Bayura Tedi Important Note. By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any involves not paid within 30 day Ç. Matt Newmar Preservatives _EO_SS_SBN NaOH Prode ЮН Invoice Information: CONH Pace Quote Reference: Pace Project Manager: Pace Profile #: PS2O4 Section C 9 HEE 828 Arentlon: Unpreserved Acdress: SAMPLER NAME AND SIGNATURE # OF CONTAINERS SIGNATURE of SAMPLER なるが PRINT Name of SAMPLER: SAMPLE TEMP AT COLLECTION DATE かれし 100 252 हु ii K 1220 E COMPOSITE END/GRAB DATE COLLECTED RELINQUISHED BY / AFFILIATION RWM GW Sampling SO10103 TIME COMPOSITE PA⊞ Required Project Information: Report To: Matt Newman Stew Kabis (G=GRAB C=COMP) SAMPLE TYPE کل ŊŹ. roject Number: roject Name: MATRIX CODE Section B O Number Copy To: data package is required, attach data package 5 day Sparrows Point, MD 21219 ADDITIONAL COMMENTS 1600 Sparrows Point Blvd 12006-musi (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE PLANOIS - MINN Data Validation Required? (Y/N) Data Package Required? (Y/N)) - MIL RUDGIE-MMS - (X)(Y) Tradepoint Atlantic SAMPLE ID Required Client Information PWYM 53 Required Client Information: Requested Due Date/TAT: Section A ompany: checklist Email To: ddress: hone: 9 11 00 ~ 2 ø ō # WBII ~ Page 13 of 14

Pittsburgh Lab Sample Condi	tion !	Upoi	1 Re	eceipt
Pace Analytical Client Name:	Tro	idep	016	# 7-1 lahhr Project # # 3 0 4 2 4 0 1 4
Courier: Fed Ex UPS USPS Clien				
Tracking #: V W			o, o,a,	LIMS Login W/
Custody Seal on Cooler/Box Present: yes	<u> </u>	10	Seals	s intact: yes no
Thermometer Used	Туре	of Ice:	We	Blue None
Cooler Temperature Observed Temp	.4	٠c	Corr	rection Factor: () °C Final Temp: () ~ °C
Temp should be above freezing to 6°C				
				pH paper Lot# Date and Initials of person examining contents
Comments:	Yes	No	N/A	10D 3801 contents (h.l. 6/4/2021
Chain of Custody Present:	/			1.
Chain of Custody Filled Out:				2.
Chain of Custody Relinquished:	<u> </u>			3.
Sampler Name & Signature on COC:				4.
Sample Labels match COC:				5.
-Includes date/time/ID Matrix: V				
Samples Arrived within Hold Time:				6.
Short Hold Time Analysis (<72hr remaining):				7.
Rush Turn Around Time Requested:				8.
Sufficient Volume:				9.
Correct Containers Used:				<u>10.</u>
-Pace Containers Used:				
Containers Intact:				11.
Orthophosphate field filtered				12.
Hex Cr Aqueous sample field filtered			/	13.
Organic Samples checked for dechlorination:			/	14.
Filtered volume received for Dissolved tests			/_	15.
All containers have been checked for preservation.				16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon,			
All containers meet method preservation requirements.		ł		Initial when Completed Date/time of preservation
requirementa.		I		completed TILL preservation Lot # of added
	1	г		preservative
Headspace in VOA Vials (>6mm):			\leq	17.
Trip Blank Present:		/		18.
Trip Blank Custody Seals Present				
Rad Samples Screened < 0.5 mrem/hr			/	Initial when Survey Meter completed: SN:
Client Notification/ Resolution:				
Person Contacted:		[Date/T	Time:Contacted By:
Comments/ Resolution:				
	.			

 $\hfill \Box$ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



(724)850-5600



June 11, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30424223

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuntha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

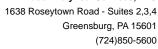
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30424223

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

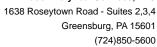
Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

Texas/TNI Certification #: T104704188-17-3

South Dakota Certification
Tennessee Certification #: 02867

Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30424223

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30424223001	RW15-MWI	Water	06/04/21 09:42	06/04/21 23:55
30424223002	RW13-MWI	Water	06/04/21 10:12	06/04/21 23:55
30424223003	RWN-MWS	Water	06/04/21 11:17	06/04/21 23:55
30424223004	RW16-MWS	Water	06/04/21 12:32	06/04/21 23:55
30424223005	RW16-MWI	Water	06/04/21 13:25	06/04/21 23:55



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30424223

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30424223001	RW15-MWI	EPA 6010C	CTS	2	PASI-PA
30424223002	RW13-MWI	EPA 6010C	CTS	2	PASI-PA
30424223003	RWN-MWS	EPA 6010C	CTS	2	PASI-PA
30424223004	RW16-MWS	EPA 6010C	CTS	2	PASI-PA
30424223005	RW16-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30424223

Date: 06/11/2021 04:25 PM

Sample: RW15-MWI	Lab ID:	30424223001	Collecte	d: 06/04/2	1 09:42	Received: 06/	/04/21 23:55 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,,	,	ytical Services							
Cadmium, Dissolved	43.6	ug/L	3.0	0.34	1	06/07/21 14:53	06/11/21 08:27	7440-43-9	
Zinc, Dissolved	16400	ug/L	1000	238	100	06/07/21 14:53	06/11/21 08:46	7440-66-6	





Project: RWM GW Sampling

Pace Project No.: 30424223

Sample: RW13-MWI	Lab ID:	30424223002	Collecte	d: 06/04/2	1 10:12	Received: 06/	/04/21 23:55 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	hod: El	PA 3005A			
,	Pace Anal	ytical Services	- Greensbu	rg					
		_							
Cadmium, Dissolved	26400	ug/L	300	34.0	100	06/07/21 14:53	06/11/21 08:48	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30424223

Sample: RWN-MWS	Lab ID:	30424223003	Collecte	d: 06/04/2	1 11:17	Received: 06/	/04/21 23:55 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,	Pace Anal	ytical Services	- Greensbu	irg					
Cadmium, Dissolved	4850	ug/L	3.0	0.34	1	06/07/21 14:53	06/11/21 08:31	7440-43-9	
Zinc, Dissolved	745000	ug/L	1000	238	100	06/07/21 14:53	06/11/21 08:50	7440-66-6	





Project: RWM GW Sampling

Pace Project No.: 30424223

Sample: RW16-MWS	Lab ID:	30424223004	Collecte	d: 06/04/2°	12:32	Received: 06/	/04/21 23:55 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	Method: EPA 6 ytical Services			hod: El	PA 3005A			
6010C MET ICP, Dissolved Cadmium, Dissolved	,				hod: El		06/11/21 08:52	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30424223

Sample: RW16-MWI	Lab ID:	30424223005	Collected	d: 06/04/21	13:25	Received: 06/	04/21 23:55 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: Ef	PA 3005A			
	,								
	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	Pace Anal 0.42J	ytical Services ug/L	- Greensbu 3.0	o.34	1	06/07/21 14:53	06/11/21 08:35	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30424223

Date: 06/11/2021 04:25 PM

QC Batch: 451258 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30424223001, 30424223002, 30424223003, 30424223004, 30424223005

METHOD BLANK: 2178185 Matrix: Water

Associated Lab Samples: 30424223001, 30424223002, 30424223003, 30424223004, 30424223005

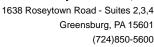
		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/11/21 07:56	
Zinc, Dissolved	ug/L	10.0 U	10.0	2.4	06/11/21 07:56	

LABORATORY CONTROL SAMPLE: 2178186 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 484 97 80-120 ug/L Zinc, Dissolved ug/L 500 492 98 80-120

MATRIX SPIKE & MATRIX SI	PIKE DUPL	ICATE: 2178	188		2178189							
			MS	MSD								
		30424014001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	3.0 U	500	500	517	518	103	104	75-125	0	20	
Zinc, Dissolved	ug/L	10.0 U	500	500	494	492	98	98	75-125	0	20	

SAMPLE DUPLICATE: 2178187 30424014001 Dup Max RPD Parameter Units Result Result **RPD** Qualifiers 3.0 U Cadmium, Dissolved 3.0 U 20 ug/L 10.0 U Zinc, Dissolved 10.0 U 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30424223

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 06/11/2021 04:25 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30424223

Date: 06/11/2021 04:25 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30424223001	RW15-MWI	EPA 3005A	451258	EPA 6010C	<u>451321</u>
30424223002	RW13-MWI	EPA 3005A	451258	EPA 6010C	451321
30424223003	RWN-MWS	EPA 3005A	451258	EPA 6010C	451321
30424223004	RW16-MWS	EPA 3005A	451258	EPA 6010C	451321
30424223005	RW16-MWI	EPA 3005A	451258	EPA 6010C	451321

CIMIN-UF-LUOI UUI / MIAIYIICAI REQUESI LUCUIIIEIII. The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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Pittsburgh Lab Sample Condi				
Pace Analytical Client Name:	rad	epo	$i\Delta t$	+ Atlantic Project #
Courier: Fed Ex UPS USPS Clien	t 🗆	Comm	ercial	Pace Other Label YUm
Tracking #:		_		
Custody Seal on Cooler/Box Present: yes	Q	no	Seal	
Thermometer Used	Туре	of ice:	We	et Blue None
Thermometer Used Cooler Temperature Observed Temp Temp should be above freezing to 6°C Couler Temperature Observed Temp	8	· C	Cori	rrection Factor: 0.1 °C Final Temp: 3.7 °C
Comments:	Yes	No	N/A	pH paper Lot# Date and Initials of person examining contents: 6.33801
Chain of Custody Present:	1			1.
Chain of Custody Filled Out:	1			2.
Chain of Custody Relinquished:		1		3.
Sampler Name & Signature on COC:	17			4.
Sample Labels match COC:	1			5.
	WT	<u></u>	<u>. </u>	
Samples Arrived within Hold Time:	17		Ī	6.
Short Hold Time Analysis (<72hr remaining):		J		7.
Rush Turn Around Time Requested:		17		8.
Sufficient Volume:	1			9.
Correct Containers Used:	1			10.
-Pace Containers Used:	1			- ···
Containers Intact:	1			11.
Orthophosphate field filtered			/	12.
Hex Cr Aqueous sample field filtered			/	13.
Organic Samples checked for dechlorination:	,		/	14.
Filtered volume received for Dissolved tests				15.
All containers have been checked for preservation.	/		·	16.
exceptions: VOA, coliform, TOC, O&G, Phenolics, i Non-aqueous matrix	Radon	1		
All containers meet method preservation equirements.	/			Initial when completed Date/time of preservation
				Lot # of added preservative
leadspace in VOA Vials (>6mm):			V	17.
rip Blank Present:			/	18.
rip Blank Custody Seals Present			/	
ad Samples Screened < 0.5 mrem/hr			/	Initial when Survey Meter completed:) (Date: SN:
lient Notification/ Resolution:		L		Date. SN.
Person Contacted:			Dafe/	Time: Contacted By:
Comments/ Resolution:				OURAUEU Dy.

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR

Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.







June 17, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: **RWM GW Sampling**

Pace Project No.: 30425019

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 09, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samantha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

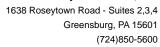
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30425019

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Missouri Certification #: 235

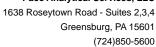
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South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



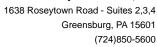


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30425019

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30425019001	RWA-MWS	Water	06/09/21 10:15	06/09/21 22:15
30425019002	RWA-MWI	Water	06/09/21 11:15	06/09/21 22:15
30425019003	RWO-MWS	Water	06/09/21 12:10	06/09/21 22:15
30425019004	RWO-MWI	Water	06/09/21 13:10	06/09/21 22:15
30425019005	RWQ-MWS	Water	06/09/21 14:05	06/09/21 22:15
30425019006	RWQ-MWI	Water	06/09/21 14:50	06/09/21 22:15





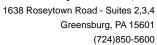
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30425019

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30425019001	RWA-MWS	EPA 6010C	CTS	2	PASI-PA
30425019002	RWA-MWI	EPA 6010C	CTS	2	PASI-PA
30425019003	RWO-MWS	EPA 6010C	CTS	2	PASI-PA
30425019004	RWO-MWI	EPA 6010C	CTS	2	PASI-PA
30425019005	RWQ-MWS	EPA 6010C	CTS	2	PASI-PA
30425019006	RWQ-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30425019

Sample: RWA-MWS	Lab ID:	30425019001	Collecte	d: 06/09/21	10:15	Received: 06/	/09/21 22:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	Method: EPA 6 ytical Services			hod: El	PA 3005A			
6010C MET ICP,Dissolved Cadmium, Dissolved	,				hod: El		06/17/21 07:56	7440-43-9	

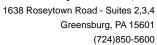




Project: RWM GW Sampling

Pace Project No.: 30425019

Sample: RWA-MWI	Lab ID:	30425019002	Collected	d: 06/09/2	11:15	Received: 06/	/09/21 22:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
,	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	11700	ug/L	300	34.0	100	06/14/21 15:15	06/17/21 08:26	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30425019

Sample: RWO-MWS	Lab ID:	30425019003	Collecte	d: 06/09/2	1 12:10	Received: 06/	/09/21 22:15 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prec	aration Met	hod: E	PA 3005A			
,,	•	lytical Services							
Cadmium, Dissolved	0.85J	ug/L	3.0	0.34	1	06/14/21 15:15	06/17/21 08:10	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30425019

Date: 06/17/2021 05:03 PM

Sample: RWO-MWI	Lab ID:	30425019004	Collected	d: 06/09/2	1 13:10	Received: 06/	09/21 22:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: Fl	PA 3005A			
50.00 m21.101,510001100	,	ytical Services			.1100. L1	71000071			
Cadmium, Dissolved	,				1		06/17/21 08:17	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30425019

Date: 06/17/2021 05:03 PM

Sample: RWQ-MWS	Lab ID:	30425019005	Collecte	d: 06/09/2	1 14:05	Received: 06	/09/21 22:15 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prec	paration Me	thod: E	PA 3005A			
,	•	lytical Services							
Cadmium, Dissolved	3.4	ug/L	3.0	0.34	1	06/14/21 15:15	06/17/21 08:20	7440-43-9	
Zinc, Dissolved	158	ug/L	10.0	2.4	4	00/44/04 45:45	06/17/21 08:20	7440.00.0	





Project: RWM GW Sampling

Pace Project No.: 30425019

Sample: RWQ-MWI	Lab ID:	30425019006	Collected	d: 06/09/2	14:50	Received: 06/	09/21 22:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
•									
	Pace Anal	ytical Services	- Greensbu	rg					
Cadmium, Dissolved	Pace Anal; 6.1	ug/L	- Greensbu 3.0	rg 0.34	1	06/14/21 15:15	06/17/21 08:22	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30425019

0.4.4.D. E. D. ID. 10.4.T.E.

Date: 06/17/2021 05:03 PM

0400040

QC Batch: 452306 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30425019001, 30425019002, 30425019003, 30425019004, 30425019005, 30425019006

METHOD BLANK: 2183614 Matrix: Water

Associated Lab Samples: 30425019001, 30425019002, 30425019003, 30425019004, 30425019005, 30425019006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/17/21 07:51	
Zinc, Dissolved	ug/L	3.4J	10.0	2.4	06/17/21 07:51	

LABORATORY CONTROL SAMPLE:	2183615						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Cadmium, Dissolved	ug/L	500	514	103	80-120		
Zinc. Dissolved	ua/l	500	535	107	80-120		

MATRIX SPIKE & MATRIX SI		2183618										
	3	0425019001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved Zinc, Dissolved	ug/L ug/L	0.48J 6.1J	500 500	500 500	549 528	531 507	110 104	106 100	75-125 75-125	3 4	20 20	

SAMPLE DUPLICATE: 2183616						
		30425019001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	0.48J	0.44J		20	
Zinc, Dissolved	ug/L	6.1J	5.9J		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30425019

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

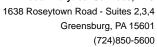
U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30425019

Date: 06/17/2021 05:03 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30425019001	RWA-MWS	EPA 3005A	452306	EPA 6010C	452368
30425019002	RWA-MWI	EPA 3005A	452306	EPA 6010C	452368
30425019003	RWO-MWS	EPA 3005A	452306	EPA 6010C	452368
30425019004	RWO-MWI	EPA 3005A	452306	EPA 6010C	452368
30425019005	RWQ-MWS	EPA 3005A	452306	EPA 6010C	452368
30425019006	RWQ-MWI	EPA 3005A	452306	EPA 6010C	452368

Face Analytical "

MO#:30425019

CHAIN-UF-LUGIUUI / Alialylical Request Documen

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed

SS Pace Project No./ Lab I.D. \check{z} Samples Inlact (V/V) Sample Conditions DRINKING WATER Cooler (Y/N) Sustody Seale OTHER ice (Y/N) L TIME 000 NPDES - GROUND WATER MD REGULATORY AGENCY Requested Analysis Filtered (Y/N) T RCRA 12/6/5 DATE Site Location STATE LST (MM/DD/YY): 016/109 O DATE Signed ACCEPTED BY / AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 \$ > Dissolved Zinc muimbeO beviossion ΝVΑ t iseT sisylanAt Sempany Name: Tradepoint Atlantic Samantha Bayura төңіс Matt Newman _EO_SS_SBN Preservatives HOBN ЮН invoice Information [€]ONH PRINT Name of SAMPLER: LRCMO/12 Pace Quote Reference: Pace Project Vanager: [†]OS²H Section C 1845 Artention: TIME 11,000 Acdress: 3 Unpreserved SAMPLER NAME AND SIGNATURE SIGNATURE of SAMPLER # OF CONTAINERS SAMPLE TEMP AT COLLECTION 510/03/21 12/2/5 DATE 30 1405 びつ 740 TIME 124 COMPOSITE END/GRAB COLLECTED DATE RELINQUISHED BY / AFFILIATION RWM GW Sampling TIME 8 COMPOSITE START 2010/007 DATE Report To: Matt Newman Required Project Information: 20py To: Stew Kabis (4MOD=D BAND=D) SAMPLE TYPE Project Number: Project Name: MATRIX CODE O Number Valid Matrix Codes
MATRIX CODE
DRINKING WATER WY
WATER WW
FRODUCT P
SOULCSOLID S.L
OIL data package is required, attach data package 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS Data Validation Required? (Y/Ñ): (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE Data Package Required? (Y/N) SAMPLE ID SMU-UMS RWO-MWI Tradepoint Atlantic SWM-DOUL ä RWA - MWS CU20-mw RIVA - MINI Section D Required Client Information equired Client Information: Requested Due Date/TAT: Section A этрапу: :mail To: ddress: hone: 2 Ę 전 ø 00 # Matt 49 o Page 14 of 15

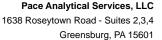
Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not petit within 30 days

Pittsburgh La	ab Sample Condi	tion (Jpoi	n Re	eceipt	#	304250
Pace Analytical	Client Name:	Trad	epo	int	Atlantic	Project #	W I Fag V V
Courier: Fed Ex	UPS USPS Clien	t 🗆	Comm	ercial	Pace Other		Label_M(C
Tracking #: \(\racking\)	A		_			LI	MS Login \M((
Custody Seal on Coole	r/Box Present:	₫ r	10	Seals	s intact: 🔲 yes 🛭	no	
Thermometer Used		Туре	of Ice:	Wet	Blue None		
Cooler Temperature	Observed Temp	.2	٠c	Corre	ection Factor <u>: —,(</u>	°C Final Te	_{emp:}
Temp should be above free	zing to 6°C		•				
					pH paper Lot#	contents:	tials of person examining
Comments:		Yes	No	N/A	1003801	<u>'</u>	1,0001
Chain of Custody Preser					[1.		
Chain of Custody Filled	Out:				2.		
Chain of Custody Relinq	uished:				3.		
Sampler Name & Signat	ure on COC:				4.		
Sample Labels match Co	OC:				5.		
-Includes date/time/ID) Matrix:	<u> </u>		T			
Samples Arrived within I	Hold Time:				6.		
Short Hold Time Analys	sis (<72hr remaining):				7.		
Rush Turn Around Tim	e Requested:				8.		
Sufficient Volume:					9.		
Correct Containers Used	l:				10.		
-Pace Containers Use	ed:						
Containers Intact:		/			11.		
Orthophosphate field filte	ered	ļ			12.		
Hex Cr Aqueous sample	field filtered	ļ			13.		
Organic Samples chec	cked for dechlorination:				14.		
Filtered volume received All containers have been ch					15.		
	•				16.		
exceptions: VOA, colifo Non-aqueous matrix	rm, TOC, O&G, Phenolics,	Radon	1				
All containers meet meth	od preservation				Initial when ompleted	Date/time of	
requirements.						preservation	
					Lot # of added preservative		
Headspace in VOA Vials	(>6mm):				17.	· ·	
Trip Blank Present:					18,		
Trip Blank Custody Seals	Present						
Rad Samples Screened					Initial when completed:	Date:	Survey Meter SN:
Client Notification/ Res	olution:		•••••	/	TO MINIOTO C.		
				Date/	Time:	Contacte	d Bv:
Comments/ Resolution:							<u> </u>
							-

 $\hfill \Box$ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



(724)850-5600



June 17, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30425340

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samantha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

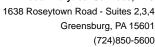
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30425340

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Texas/TNI Certification #: T104704188-17-3

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



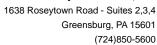


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30425340

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30425340001	RW11-MWS	Water	06/10/21 12:40	06/10/21 22:30
30425340002	RW11-MWI	Water	06/10/21 13:40	06/10/21 22:30
30425340003	RW08-MWI	Water	06/10/21 14:50	06/10/21 22:30





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30425340

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30425340001	RW11-MWS	EPA 6010C	CTS	2	PASI-PA
30425340002	RW11-MWI	EPA 6010C	CTS	2	PASI-PA
30425340003	RW08-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





Project: RWM GW Sampling

Pace Project No.: 30425340

Sample: RW11-MWS	Lab ID:	30425340001	Collecte	d: 06/10/2	1 12:40	Received: 06/	/10/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: E	PA 3005A			
,,	,	ytical Services							
Cadmium, Dissolved	3.4	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 08:49	7440-43-9	
Zinc, Dissolved	61000	ug/L	1000	238	100	06/16/21 08:37	06/17/21 09:43	7440 00 0	1c.B.ML





Project: RWM GW Sampling

Pace Project No.: 30425340

Sample: RW11-MWI	Lab ID:	30425340002	Collected	d: 06/10/2	1 13:40	Received: 06	/10/21 22:30 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	ved Analytical Method: EPA 6010C Preparation Method: EPA 3005A Pace Analytical Services - Greensburg								
Cadmium, Dissolved Zinc, Dissolved	175 188000	ug/L ug/L	3.0 1000	0.34 238	1 100	06/16/21 08:37 06/16/21 08:37	06/17/21 09:02 06/17/21 10:02		В





Project: RWM GW Sampling

Pace Project No.: 30425340

Sample: RW08-MWI	Lab ID:	30425340003	Collecte	d: 06/10/2°	14:50	Received: 06/	10/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Met	hod: El	PA 3005A			
6010C MET ICP,Dissolved	,	Method: EPA 6 lytical Services			hod: El	PA 3005A			
6010C MET ICP,Dissolved Cadmium, Dissolved	,				hod: El	PA 3005A 06/16/21 08:37	06/17/21 09:19	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30425340

Date: 06/17/2021 05:03 PM

QC Batch: 452599 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30425340001, 30425340002, 30425340003

METHOD BLANK: 2185004 Matrix: Water

Associated Lab Samples: 30425340001, 30425340002, 30425340003

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/17/21 08:45	
Zinc, Dissolved	ug/L	22.9	10.0	2.4	06/17/21 08:45	В

LABORATORY CONTROL SAMPLE: 2185005 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 510 102 80-120 ug/L Zinc, Dissolved ug/L 500 512 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2185007						2185008						
			MS	MSD								
		30425340001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	3.4	500	500	578	534	115	106	75-125	8	20	
Zinc, Dissolved	ug/L	61000	500	500	60200	60700	-170	-66	75-125	1	20	ML

SAMPLE DUPLICATE: 2185006 30425340001 Dup Max Parameter Units Result Result **RPD RPD** Qualifiers 3.4 Cadmium, Dissolved 20 3.0 12 ug/L 61000 3 Zinc, Dissolved 59000 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30425340

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

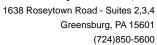
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

- 1c The PDS recovery was outside of the laboratory control limits. Result may be biased high.
- B Analyte was detected in the associated method blank.
- ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30425340

Date: 06/17/2021 05:03 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30425340001	RW11-MWS	EPA 3005A	452599	EPA 6010C	452739
30425340002	RW11-MWI	EPA 3005A	452599	EPA 6010C	452739
30425340003	RW08-MWI	EPA 3005A	452599	EPA 6010C	452739

Pace Analytical "

UTAIN-CIT-COOI COI / AII aly LICAI TEQUES
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be cc

WO#: 30425340

Pace Project No./ Lab L.D. Sample Conditions DRINKING WATER OTHER 1_ TIME 9351 100 NPDES | GROUND WATER REGULATORY AGENCY Requested Analysis Filtered (Y/N) T RCRA 100 12/9/5 DATE Site Location STATE LSI ACCEPTED BY / AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Dissolved Zinc $\overline{}$ muimbsO bevlossion 146 tiseT sisylanA N// Company Name: Tradepoint Atlantic Nater Samantha Bayura Jehlo Matt Newman Preservatives OSSSBN NaOH HCI [€]ONH Pace Quote Reference: Pace Project Menager: PSSO4 ace Profile #: 11000 Section C At ention: 1972 THE Acdress: Unpreserved # OF CONTAINERS 6/10/21 SAMPLE TEMP AT COLLECTION 天 12/01/11 DATE 1340 TIME TIME 0/2/ COMPOSITE END/GRAB COLLECTED DATE RELINQUISHED BY / AFFILIATION RWM GW Sampling COMPOSITE 20016102 3 DATE Required Project Information Report To: Matt Newman Stew Kabis D (G=GRAB C=COMP) **BRYT BJRMA8** Project Number: (see Asig codes to leg) **MATRIX CODE** Project Name: Section B Number: Copy To: Valid Matrix Codes DRINKING WATER WATER WASTE WATER PRODUCT SOILSOLID AIR OTHER TISSUE 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS Data Validation Required? (YM): (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE PW-41-MW Data Package Required? (Y/N): SMU 381 SAMPLE ID Fax Tradepoint Atlantic Section D Required Client Information Section A Required Client Information: PUN OR Requested Due Date/TAT Company: mail To: ddress: \$ a # 언 ILEW # m 4 w φ œ

MACHINA DATE Signed (MMDDYY): 510 10 12 Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to lete charges of 1.5% per month for any invoices not paid within 30 days.

PRINT Name of SAMPLER: LEGARD

SIGNATURE of SAMPLER:

SAMPLER NAME AND SIGNATURE

(N/A) gambjes jutact

Cooler (Y/N) Sustody Seale

Received on Ice (Y/N)

(130)

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PS.

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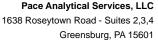
If data package is required, attach data package checklist.

Page 11 of 12

Pillsburgh Lab Sample Condi		•		•		#_30425	7 / 0
Pace Analytical Client Name:	Tro	ropy) <u>o</u> (/	H Allantic	Project #	#_J V 4 Z 3	34V -
Courier: Fed Ex UPS USPS Clier	ıt 🗆	Comm	ercial	Pace Other		Label_\(M((1
Tracking #: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\						LIMS Login VN (1
Custody Seal on Cooler/Box Present: yes	[<u>Z</u>]	- no	Seals	s intact:] no	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4
Thermometer Used	,	of Ice:	(• –			
Cooler Temperature Observed Temp	7	°C		ection Factor:	°C Final	Temp: 3 ·c	
Temp should be above freezing to 6°C	<u></u>	-	COII	ection ractor. (7		Temp. (7)	
				pH paper Lot#		initials of person examining	1
Comments:	Yes	No	N/A	NIA	content	"MU 6/1/2021	
Chain of Custody Present:				1.			
Chain of Custody Filled Out:				2.]
Chain of Custody Relinquished:				3.			
Sampler Name & Signature on COC:				4.]
Sample Labels match COC:				5.]
-Includes date/time/ID Matrix:	UT .						
Samples Arrived within Hold Time:				6.			
Short Hold Time Analysis (<72hr remaining):				7.			
Rush Turn Around Time Requested:				8.			
Sufficient Volume:				9.]
Correct Containers Used:	/			10.			1
-Pace Containers Used:							
Containers Intact:				11.]
Orthophosphate field filtered				12.			
Hex Cr Aqueous sample field filtered			/	13.			1
Organic Samples checked for dechlorination:				14.			7
Filtered volume received for Dissolved tests				15.			1
All containers have been checked for preservation.				16.		0 1 0 000 11 1000	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	١,					
All containers meet method preservation requirements.				Initial when M (L	Date/time of preservation		
	L	l	L	Lot # of added	[F. 230, 130,01]		1
				preservative		·	4
Headspace in VOA Vials (>6mm):				17.	<u> </u>		-
Trip Blank Present:				18.			
Trip Blank Custody Seats Present Rad Samples Screened < 0.5 mrem/hr				Initial when		Survey Meter	4
an dampido dordenda a dio intensin				completed:	Date:	SN:	
Client Notification/ Resolution:				2010-0-1-000-			
Person Contacted:			Date/\	rime:	Conta	cted By:	
Comments/ Resolution:							-
							-
							-

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



(724)850-5600



June 17, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30425556

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 11, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuella Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

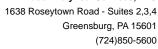
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30425556

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617

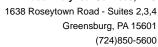
New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



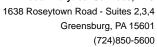


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30425556

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30425556001	RW24-MWI	Water	06/11/21 10:05	06/11/21 21:45





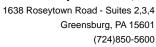
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30425556

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30425556001	RW24-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30425556

Method: EPA 6010C

Description: 6010C MET ICP,Dissolved
Client: Tradepoint Atlantic
Date: June 17, 2021

General Information:

1 sample was analyzed for EPA 6010C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 452599

- B: Analyte was detected in the associated method blank.
 - BLANK for HBN 452599 [MPRP/309 (Lab ID: 2185004)
 - Zinc, Dissolved

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 452599

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30425340001

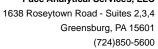
ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2185007)
 - Zinc, Dissolved
- MSD (Lab ID: 2185008)
 - Zinc, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30425556

Method: EPA 6010C

Description:6010C MET ICP,DissolvedClient:Tradepoint AtlanticDate:June 17, 2021

This data package has been reviewed for quality and completeness and is approved for release.





Project: RWM GW Sampling

Pace Project No.: 30425556

Date: 06/17/2021 05:04 PM

Sample: RW24-MWI	Lab ID:	30425556001	Collecte	d: 06/11/2	1 10:05	Received: 06/	/11/21 21:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: E	PA 3005A			
,	,	ytical Services							
Cadmium, Dissolved	890	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 09:21	7440-43-9	
Zinc, Dissolved	292000	ug/L	1000	238	100	06/16/21 08:37	06/17/21 10:04	7440-66-6	В



QUALITY CONTROL DATA

EPA 6010C

Project: RWM GW Sampling

Pace Project No.: 30425556

QC Batch: 452599

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30425556001

METHOD BLANK: 2185004 Matrix: Water

Associated Lab Samples: 30425556001

Blank Reporting Units Limit MDL Qualifiers Parameter Result Analyzed Cadmium, Dissolved 3.0 U 3.0 0.34 06/17/21 08:45 ug/L Zinc, Dissolved 22.9 10.0 2.4 06/17/21 08:45 B ug/L

Analysis Method:

LABORATORY CONTROL SAMPLE: 2185005

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 510 102 80-120 ug/L Zinc, Dissolved ug/L 500 512 102 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2185007 2185008

MS MSD

Parameter	Units	30425340001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cadmium, Dissolved Zinc, Dissolved	ug/L ug/L	3.4 61000	500 500	500 500	578 60200	534 60700	115 -170	106 -66	75-125 75-125	8 1	20 20	ML

SAMPLE DUPLICATE: 2185006

Date: 06/17/2021 05:04 PM

		30425340001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	3.4	3.0	12	20	
Zinc, Dissolved	ug/L	61000	59000	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30425556

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/17/2021 05:04 PM

B Analyte was detected in the associated method blank.

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30425556

Date: 06/17/2021 05:04 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30425556001	RW24-MWI	EPA 3005A	452599	EPA 6010C	452739

CHAIN-UF-CUSIUUTI / MISIYIICSI REQUESI DUCUIIIEIIL

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Face Analytical"

Pace Project No / Lab I.D. Samptes Intact (Y/V) Sample Conditions DRINKING WATER Cooler (Y/V) nalody Seale OTHER cr) Received on Ice (Y/N) ត 30425556 Ł. TIME NPDES - GROUND WATER 25 REGULATORY AGENCY Requested Analysis Filtered (Y/N) Page: T RCRA DATE 12/11/2 77 Site Location STATE UST .. 第0数 30425556 ACCEPTED BY / AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 3 oniS bevlossiC <u>></u> muimbsO bevlossi0 N/A **↓** teeT sisylsnA Company Name: Tradepoint Atlantic Vater Samantha Bayura Jerlic Matt Newman Preservatives Na₂S₂O₃ HOBN HCI Invoice Information: [€]ONH Pace Quote Reference: Pace Project Wanager: Pace Profile #: [≯]OS^zH 1750 Section C 25% 2000 TIME Arentlon: Acdress: Unpreserved SAMPLER NAME AND SIGNATURE # OF CONTAINERS 6/11/21 SAMPLE TEMP AT COLLECTION 18/1/9 5-11-2/ DATE 85 TIME COMPOSITE 3001000 CANA COLLECTED DATE EXE RELINQUISHED BY / AFFILIATION RWM GW Sampling TIME COMPOSITE START - Re DATE CANAN Bem Required Project Information: Report To: Matt Newman Stew Kabis ٥ (G=GRAB C=COMP) SAMPLE TYPE (see valid codes to left) MATRIX CODE Project Number: Project Name: Section B PO Number Copy To: Valid Matrix Codes 마목욕심 data package is required, attach data package RWJ4-MMI 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS Data Validation Required? (Y/N) (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE Data Package Required? (Y/N) Required Client Information:
Company: Tradepoint Atlantic SAMPLE ID Fax: Section D Required Client Information Aquested Due Date/TAT: Section A checklist Email To: ddress: hone: 9 9 £ ٢ 8 # Mati ø Page 11 of 12

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev.06,

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2

DATE Signed (MIM/DD/YY):

Com Born

SIGNATURE of SAMPLER: PRINT Name of SAMPLER:

PONTAN

Toshman

Pittsburgh Lab Sample Condit	uon (Jpoi	11176	ceipi	42	_304255
Face Analytical Client Name:		red	e jyi	mt	Project #	
Courier: Fed Ex UPS USPS Client	. 🗆	Comme	ercial_	Pace Other		Label (SM)
Tracking #:			•		Lin	18 Login Pom
Custody Seal on Cooler/Box Present: yes	r	10	Seals	intact: yes	no	
Thermometer Used				Blue None		
Cooler Temperature Observed Temp	رڅ	° C	Corre	ection Factor: 40, S	°C Final Ter	_{mp:} }, } ·c
Temp should be above freezing to 6°C		•				-
				pH paper Lot#	Date and initi	als of person examining
Comments:	Yes	No	N/A	100 800		
Chain of Custody Present:				1.	-	
Chain of Custody Filled Out:	Para Caraca			2.		
Chain of Custody Relinquished:	The same of the sa			3.		
Sampler Name & Signature on COC:	-		<u></u>	4.		
Sample Labels match COC:	and the same of th	<u> </u>	<u> </u>	5.		
-Includes date/time/ID Matrix:	w-,	1				
Samples Arrived within Hold Time:	-			6.		
Short Hold Time Analysis (<72hr remaining):		~~~		7.		
Rush Turn Around Time Requested:	laomic.			8.		
Sufficient Volume:	*******			9.		
Correct Containers Used:	PO MARINE MARINE			10.		
-Pace Containers Used:						
Containers Intact:	procession.			11.		
Orthophosphate field filtered			**********	12.		
Hex Cr Aqueous sample field filtered			******	13.		
Organic Samples checked for dechlorination:		ļ	and the same of th	14.		
Filtered volume received for Dissolved tests				15.		
All containers have been checked for preservation.	jakan mara	<u> </u>	<u> </u>	16. '		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	١,				
All containers meet method preservation requirements.	· ·			Initial when Completed	Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):		-	rgesperies/ove	17.		
Trip Blank Present:			No. of Concession,	18.		
Trip Blank Custody Seals Present			ACC / SECTION			
Rad Samples Screened < 0.5 mrem/hr			-	Initial when completed:	Date:	Survey Meter SN;
Client Notification/ Resolution:	1			1	. 1	
Person Contacted:			Date/	Time:	Contacted	f-B <u>y:</u>
Comments/ Resolution:					–	

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Greensburg, PA 15601 (724)850-5600



June 17, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30425808

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 14, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuella Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

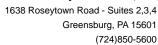
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30425808

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Missouri Certification #: 235

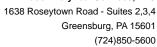
Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



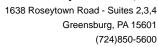


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30425808

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30425808001	RW05-MWS	Water	06/14/21 09:05	06/14/21 23:30
30425808002	RWF-MWI	Water	06/14/21 10:15	06/14/21 23:30
30425808003	RWF-MWS	Water	06/14/21 11:15	06/14/21 23:30
30425808004	RW09-MWI	Water	06/14/21 12:30	06/14/21 23:30
30425808005	RW21-MWI	Water	06/14/21 14:55	06/14/21 23:30





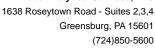
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30425808

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30425808001	RW05-MWS	EPA 6010C	CTS	2	PASI-PA
30425808002	RWF-MWI	EPA 6010C	CTS	2	PASI-PA
30425808003	RWF-MWS	EPA 6010C	CTS	2	PASI-PA
30425808004	RW09-MWI	EPA 6010C	CTS	2	PASI-PA
30425808005	RW21-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30425808

Method: EPA 6010C

Description: 6010C MET ICP,Dissolved
Client: Tradepoint Atlantic
Date: June 17, 2021

General Information:

5 samples were analyzed for EPA 6010C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 452599

- B: Analyte was detected in the associated method blank.
 - BLANK for HBN 452599 [MPRP/309 (Lab ID: 2185004)
 - · Zinc, Dissolved

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 452599

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30425340001

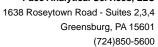
ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 2185007)
 - Zinc, Dissolved
- MSD (Lab ID: 2185008)
 - Zinc, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30425808

Method: EPA 6010C

Description:6010C MET ICP,DissolvedClient:Tradepoint AtlanticDate:June 17, 2021

This data package has been reviewed for quality and completeness and is approved for release.





Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Sample: RW05-MWS	Lab ID:	30425808001	Collecte	d: 06/14/2	1 09:05	Received: 06/	/14/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prec	paration Me	thod: El	PA 3005A			
,,	,	lytical Services							
Cadmium, Dissolved	3.0 U	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 10:06	7440-43-9	
Zinc, Dissolved	7.0J	ug/L	10.0	2.4	1	06/16/21 08:37	06/17/21 10:06	7440-66-6	В





Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Sample: RWF-MWI	Lab ID:	30425808002	Collecte	d: 06/14/2	1 10:15	Received: 06/	/14/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
,,	,	ytical Services							
Cadmium, Dissolved	3710	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 09:26	7440-43-9	
Zinc, Dissolved	133000	ug/L	1000	238	100	06/16/21 08:37	06/17/21 10:08	7440 00 0	В





Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Sample: RWF-MWS	Lab ID:	30425808003	Collecte	d: 06/14/2	1 11:15	Received: 06/	/14/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prec	aration Me	thod: El	PA 3005A			
,	Pace Anal	ytical Services	- Greensbu	irg					
Cadmium, Dissolved	4.0	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 09:28	7440-43-9	
Zinc, Dissolved	32800	ug/L	1000	238	100	06/16/21 08:37	06/17/21 10:10	7440-66-6	В





Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Sample: RW09-MWI	Lab ID:	30425808004	Collecte	d: 06/14/2	1 12:30	Received: 06/	/14/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
, , , , , , , , , , , , , , , , , , , ,	,	ytical Services							
Cadmium, Dissolved	16.0	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 09:30	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Sample: RW21-MWI	Lab ID:	30425808005	Collecte	d: 06/14/2	1 14:55	Received: 06/	/14/21 23:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP.Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A			
	,	ytical Services							
Cadmium, Dissolved	34.2	ug/L	3.0	0.34	1	06/16/21 08:37	06/17/21 09:32	7440-43-9	
Zinc, Dissolved	527000	ug/L	1000	238	100	06/16/21 08:37	06/17/21 10:15	7440-66-6	В



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30425808

CAMPLE BUILDINGATE

Date: 06/17/2021 09:43 PM

0405000

QC Batch: 452599 Analysis Method: EPA 6010C

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30425808001, 30425808002, 30425808003, 30425808004, 30425808005

METHOD BLANK: 2185004 Matrix: Water

Associated Lab Samples: 30425808001, 30425808002, 30425808003, 30425808004, 30425808005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cadmium, Dissolved	ug/L	3.0 U	3.0	0.34	06/17/21 08:45	
Zinc, Dissolved	ug/L	22.9	10.0	2.4	06/17/21 08:45	В

LABORATORY CONTROL SAMPLE:	2185005					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Cadmium, Dissolved	ug/L	500	510	102	80-120	
Zinc Dissolved	ua/l	500	512	102	80-120	

MATRIX SPIKE & MATRIX SI	PIKE DUPLI	CATE: 2185	007		2185008							
			MS	MSD								
	;	30425340001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Cadmium, Dissolved	ug/L	3.4	500	500	578	534	115	106	75-125	8	20	
Zinc, Dissolved	ug/L	61000	500	500	60200	60700	-170	-66	75-125	1	20	ML

SAMPLE DUPLICATE: 2185006						
		30425340001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	3.4	3.0	12	20	
Zinc, Dissolved	ug/L	61000	59000	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30425808

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

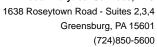
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/17/2021 09:43 PM

B Analyte was detected in the associated method blank.

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30425808

Date: 06/17/2021 09:43 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30425808001	RW05-MWS	EPA 3005A	452599	EPA 6010C	452739
30425808002	RWF-MWI	EPA 3005A	452599	EPA 6010C	452739
30425808003	RWF-MWS	EPA 3005A	452599	EPA 6010C	452739
30425808004	RW09-MWI	EPA 3005A	452599	EPA 6010C	452739
30425808005	RW21-MWI	EPA 3005A	452599	EPA 6010C	452739

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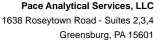
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	of 1.5% per month for any involces not paid within 30 days.			SIGNATUR			18 A		\dashv	DATE Signe (MM/DD/YY)	ی.			9月 네	Co cns	ns2

Pittsburgh Lab Sample Cond	ition ⁽	Upoi	n₁Re	eceipt		
Pace Analytical Client Name:	1	Vuol	le p	remt	Project #	/22/21
Courier: Fed Ex UPS USPS Clien Tracking #:	nt 🗆 (Comm	ercial :	Pace Other	Label <u>JS</u> 17 LIMS Login JS17	Date: 06/
Custody Seal on Cooler/Box Present: yes	4	10	Seals	s intact: 🔲 yes 🛭] no	
Thermometer Used ℓ	Туре	of Ice:		Blue None	ō	ž a
Cooler Temperature Observed Temp Temp should be above freezing to 6°C	6	°C	Corre	ection Factor: "C 1	°C Final Temp: <u>Y,S</u> °C	30425808 Due Date: 08
Comments:	Yes	No	N/A	pH paper Lot# - (V1) 38 <i>0</i> -1	contents: 1/(1)/\lambda 00001	
Chain of Custody Present:				1.		MC# See
Chain of Custody Filled Out:				2.		3 5
Chain of Custody Relinquished:	-			3.		THE SELECT
Sampler Name & Signature on COC:				4.		
Sample Labels match COC:				5.		
-Includes date/time/ID Matrix:	W	<u> </u>	_			
Samples Arrived within Hold Time:	-			6.		
Short Hold Time Analysis (<72hr remaining):				7.		
Rush Turn Around Time Requested:		and the same of th		8.		
Sufficient Volume:	A CONTRACTOR OF THE PERSON.			9.		
Correct Containers Used:				10.		
-Pace Containers Used:						
Containers Intact:				11.		
Orthophosphate field filtered				12.		
Hex Cr Aqueous sample field filtered				13.		
Organic Samples checked for dechlorination:				14.		
Filtered volume received for Dissolved tests All containers have been checked for preservation.				15. 16.		٠,
exceptions: VOA, coliform, TOC, O&G, Phenolics Non-aqueous matrix	Radon	,] 10. 		
All containers meet method preservation requirements.				Initial when BM completed	Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):				17,		
Trip Blank Present:				18.		
Trip Blank Custody Seals Present				•		
Rad Samples Screened < 0.5 mrem/hr				Initial when	Survey Meter	
Client Notification/ Resolution:	<u> </u>			completed:	Date: SN:	
Person Contacted:			Date/	Time:	Contacted By:	
Comments/ Resolution:			Dater	I II II C.	Contacted by.	
					1	

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

 $\ \square$ A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



(724)850-5600



June 23, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30426051

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

This project follows the April 5, 2016 revision 3 Quality Assurance Project Plan for Sparrows Point Terminal Site, Sparrows Point, MD prepared for EnviroAnalytics Group and is not for PA DEP compliance reporting.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samuella Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

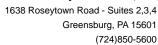
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30426051

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

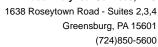
South Dakota Certification
Tennessee Certification #: 02867

Ohio EPA Rad Approval: #41249

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 9526 Washington Certification #: C868 West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



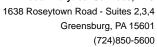


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30426051

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30426051001	RW19-MWI	Water	06/15/21 10:35	06/15/21 23:30





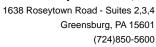
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30426051

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30426051001	RW19-MWI	EPA 6010C	CTS	2	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: RWM GW Sampling

Pace Project No.: 30426051

Method: EPA 6010C

Description: 6010C MET ICP, Dissolved
Client: Tradepoint Atlantic
Date: June 23, 2021

General Information:

1 sample was analyzed for EPA 6010C by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 453291

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30426051001

MH: Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.

- MS (Lab ID: 2188539)
 - Zinc, Dissolved
- MSD (Lab ID: 2188540)
 - Zinc, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.





Project: RWM GW Sampling

Pace Project No.: 30426051

Date: 06/23/2021 01:33 PM

Sample: RW19-MWI	Lab ID:	30426051001	Collected	d: 06/15/2	1 10:35	Received: 06/	/15/21 23:30 M	atrix: Water					
Report													
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual				
6010C MET ICP, Dissolved	Analytical	Method: EPA 6	010C Prep	aration Me	thod: El	PA 3005A							
,	Pace Anal	ytical Services	- Greensbu	rg									
Cadmium, Dissolved	112	ug/L	3.0	0.34	1	06/21/21 08:40	06/23/21 08:28	7440-43-9					
Zinc, Dissolved	212000	ug/L	1000	238	100	06/21/21 08:40	06/23/21 08:58	7440-66-6	MH				



QUALITY CONTROL DATA

EPA 6010C

Project: RWM GW Sampling

Pace Project No.: 30426051

QC Batch: 453291

QC Batch Method: EPA 3005A Analysis Description: 6010C MET Dissolved

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30426051001

METHOD BLANK: 2188536 Matrix: Water

Associated Lab Samples: 30426051001

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 3.0 U 3.0 0.34 06/23/21 08:23 ug/L Zinc, Dissolved 10.0 U 10.0 2.4 06/23/21 08:23 ug/L

Analysis Method:

LABORATORY CONTROL SAMPLE: 2188537

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 500 515 103 80-120 ug/L Zinc, Dissolved 500 514 103 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2188539 2188540

MS MSD 30426051001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 112 500 500 661 660 110 110 75-125 0 20 Zinc, Dissolved 212000 500 500 213000 221000 200 1820 75-125 20 MH ug/L

SAMPLE DUPLICATE: 2188538

Date: 06/23/2021 01:33 PM

		30426051001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Cadmium, Dissolved	ug/L	112	112	0	20	
Zinc, Dissolved	ug/L	212000	223000	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30426051

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

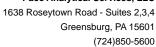
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/23/2021 01:33 PM

MH Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30426051

Date: 06/23/2021 01:33 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30426051001	RW19-MWI	EPA 3005A	453291	EPA 6010C	453397

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical

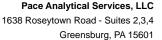
Pace Project No./ Lab I.D. (N/X) Sample Conditions DRINKING WATER Cooler (Y/N) OTHER ر د Received on Ice (Y/N) 1 NPDES - GROUND WATER ł__ 置 2 530 1835 ප් ප් 200 REGULATORY AGENCY Requested Analysis Filtered (Y/N) Page: T RCRA 12/21/9 12-51-DATE 1601 WO#:30426051 Site Location STATE LSJ DATE Signed (MM/DD/YY): ACCEPTED BY / AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Dissolved Zinc $\overline{}$ muimbsO beviossion <u>C</u> N/A taeT sisylsnAt Company Name: Tradepoint Atlantic neteW (C Samantha Bayura かべいい Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days Jerlic Matt Newman _CO_SS_SSN 4 Preservatives HOBN HCI invoice Information: CONH ひらい Pace Quote Reference: Pace Project (Manager: Pace Profile #** OS2H Section C 009/ TIME. 0 Uppreserved Altention: Acdress: SAMPLER NAME AND SIGNATURE 333 # OF CONTAINERS SIGNATURE of SAMPLER: PRINT Name of SAMPLER: アグド 12/21/0 SAMPLE TEMP AT COLLECTION DATE जिन्दिय 1535 TIME COMPOSITE END/GRAB COLLECTED 6)(1/2 DATE RELINQUISHED BY / AFFILIATION RWM GW Sampling 2,01010 TIME COMPOSITE START DATE Required Project Information Report To: Matt Newman Stew Kabis (G=GRAB C=COMP) SAMPLE TYPE Project Number: Project Name: (see valid codes to left) MATRIX CODE Section B PO Number Copy To: Valid Matrix Codes DRINGING WATER
WATER
WASTE WATER
PRODUCT
SOIL/SOLID
WIPE
ARR
TISSUE If data package is required, attach Vafa package checklist. 5 day LASE H Sparrows Point, MD 21219 1600 Sparrows Point Blvd ADDITIONAL COMMENTS Data Validation Required? (Y/N): (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Data Package Required? (Y/N) SAMPLE ID Tradepoint Atlantic Fax RW19 Required Client Information Required Client Information: Requested Due Date/TAT: **Соттрапу**: mail To: hone 2 Ę # MBTI φ œ Page 10 of 11

Pittsburgh Lab Sample Condi	tion I	Upor	n Re	eceipt	
Face Analytical Client Name:		7	RAV	OF POINT Project # 0-30426051	
Courier: Fed Ex UPS USPS Clien	t 🗆	Comm	ercial	Pace Other Label wm	
Tracking #: NIA		_		LIMS Login Top	
Custody Seal on Cooler/Box Present: yes	1	10	Seals	s intact: yes no	
Thermometer Used (2	Туре	of Ice:	Wei	Blue None	
Cooler Temperature Observed Temp 3	;3	°C	Corre	ection Factor: 4,5 °C Final Temp: 3,8 °C	
Temp should be above freezing to 6°C					
			_	pH paper Lot# Date and Initials of person examining contents: IUm 6~16~2 I	
Comments:	Yes	No	N/A	(003801	
Chain of Custody Present:				1.	
Chain of Custody Filled Out:		<u> </u>		2.	
Chain of Custody Relinquished:		1		3.	
Sampler Name & Signature on COC:				4.	
Sample Labels match COC:				5.	
-Includes date/time/ID Matrix:	WT	·			
Samples Arrived within Hold Time:	_	ļ	<u> </u>	6.	
Short Hold Time Analysis (<72hr remaining):	<u> </u>	/	<u> </u>	7.	
Rush Turn Around Time Requested:	<u> </u>	_	<u></u>	8.	
Sufficient Volume:	/		<u> </u>	9.	
Correct Containers Used:	/			10.	
-Pace Containers Used:	_		<u> </u>		
Containers Intact:	/			11.	
Orthophosphate field filtered	<u> </u>			12.	
Hex Cr Aqueous sample field filtered	<u> </u>	ļ	_	13.	
Organic Samples checked for dechlorination:			1	14.	
Filtered volume received for Dissolved tests	<u> </u>		/	15.	
All containers have been checked for preservation.			<u> </u>	16	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	١,			
All containers meet method preservation requirements.	/			Initial when completed A Date/time of preservation	
				Lot # of added preservative	
Headspace in VOA Vials (>6mm):			/	17.	
Trip Blank Present:			/	18.	
Trip Blank Custody Seals Present					
Rad-Samples-Screened < 0.5-mrem/hr			1	Initial when Survey Meter completed: Date: SN:	
Client Notification/ Resolution:					
Person Contacted:			Date/	Time:Contacted By;	
Comments/ Resolution:	-	·			

 \square A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



(724)850-5600



June 29, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30426983

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on June 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Minneapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Samantha Bayura

samantha.bayura@pacelabs.com

Samantha Bayune

(724)850-5622

Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

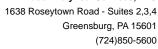
J.Price, ARM Group Inc.

Mr. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30426983

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414

1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air

Lab

A2LA Certification #: 2926.01* Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009*

Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014* Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929

Colorado Certification #: MN00064 Connecticut Certification #: PH-0256

EPA Region 8 Tribal Water Systems+Wyoming DW

Certification #: via MN 027-053-137 Florida Certification #: E87605* Georgia Certification #: 959 Hawaii Certification #: MN00064 Idaho Certification #: MN00064 Illinois Certification #: 200011 Indiana Certification #: C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: Al-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*

Maryland Certification #: 322 Michigan Certification #: 9909

Minnesota Certification #: 027-053-137*

Minnesota Dept of Ag Approval: via MN 027-053-137

Minnesota Petrofund Registration #: 1240* Mississippi Certification #: MN00064 Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*

New Jersey Certification #: MN002 New York Certification #: 11647* North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530

North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification (1700) #: CL101 Ohio VAP Certification (1800) #: CL110*

Oklahoma Certification #: 9507*

Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137

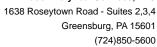
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

USDA Permit #: P330-19-00208

*Please Note: Applicable air certifications are denoted with

an asterisk (*).





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30426983

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30426983001	RWR-MWS	Water	06/18/21 09:20	06/21/21 22:30
30426983002	RWR-MWI	Water	06/18/21 09:50	06/21/21 22:30
30426983003	RW18-MWI	Water	06/18/21 10:27	06/21/21 22:30
30426983004	RW18-MWS	Water	06/18/21 11:35	06/21/21 22:30
30426983005	RW25-MWI	Water	06/18/21 12:37	06/21/21 22:30



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30426983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30426983001	RWR-MWS	EPA 6010D	 DM	2	PASI-M
30426983002	RWR-MWI	EPA 6010D	DM	2	PASI-M
30426983003	RW18-MWI	EPA 6010D	DM	2	PASI-M
30426983004	RW18-MWS	EPA 6010D	DM	2	PASI-M
30426983005	RW25-MWI	EPA 6010D	DM	2	PASI-M

PASI-M = Pace Analytical Services - Minneapolis





Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Sample: RWR-MWS	Lab ID:	30426983001	Collecte	d: 06/18/2 ²	09:20	Received: 06/	/21/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Dissolved	Analytical	Method: EPA 6	010D Pren	aration Met	hod: Fl	PA 3010A			
00102 III.21 101, 210001100	•	vtical Services							
		,							
Cadmium, Dissolved	35.1	ug/L	3.0	0.28	1	06/28/21 05:04	06/28/21 14:50	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Sample: RWR-MWI	Lab ID:	30426983002	Collecte	d: 06/18/2	1 09:50	Received: 06/	21/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Dissolved	Analytical	Method: EPA 6	010D Prep	aration Me	hod: El	PA 3010A			
, 2.000	•	ytical Services							
Cadmium, Dissolved	367	ug/L	3.0	0.28	1	06/28/21 05:04	06/28/21 15:00	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Sample: RW18-MWI	Lab ID:	30426983003	Collecte	d: 06/18/2 ²	1 10:27	Received: 06/	21/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Dissolved	Analytical	Method: EPA 6	010D Pren	aration Mot	bod. Fl	DA 2040A		•	
					noo: 🗀	PA 3010A			
0010D WET ICF, DISSOIVEU	•	ytical Services			nou. Ei	PA 3010A			
Cadmium, Dissolved	•				.noa. Ei	06/28/21 05:04	06/28/21 15:11	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Sample: RW18-MWS	Lab ID:	30426983004	Collected	d: 06/18/21	11:35	Received: 06/	/21/21 22:30 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Dissolved	Analytical	Method: EPA 6	010D Prep	aration Met	hod: Fl	PA 3010A	•		
0010D III. 101, Diccontou	•		•			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Pace Ana	lytical Services	- Minneapo	lis					
Cadmium, Dissolved	Pace Ana 3.0 U	ytical Services ug/L	- Minneapo 3.0	lis 0.28	1	06/28/21 05:04	06/28/21 15:09	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Sample: RW25-MWI	Lab ID:	30426983005	Collected	d: 06/18/2	12:37	Received: 06/	/21/21 22:30 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, Dissolved	Analytical	Method: EPA 6	010D Prep	aration Met	hod: El	PA 3010A			
	•	vtical Services	•						
		,							
Cadmium, Dissolved	626	ug/L	3.0	0.28	1	06/28/21 05:04	06/28/21 15:12	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30426983

QC Batch: 752029 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D Water Dissolved

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 30426983001, 30426983002, 30426983003, 30426983004, 30426983005

METHOD BLANK: 4010487 Matrix: Water

Associated Lab Samples: 30426983001, 30426983002, 30426983003, 30426983004, 30426983005

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 3.0 U 3.0 0.28 06/28/21 14:47 ug/L Zinc, Dissolved 20.0 U 20.0 3.1 06/28/21 14:47 ug/L

LABORATORY CONTROL SAMPLE: 4010488

Date: 06/29/2021 11:47 AM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1030 103 80-120 ug/L Zinc, Dissolved 1000 1030 103 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4010489 4010490 MS MSD 30426983001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 35.1 1000 1000 1040 1030 100 100 75-125 20 Zinc, Dissolved 269000 1000 1000 273000 271000 421 75-125 20 P6 ug/L 193

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30426983

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

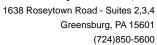
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 06/29/2021 11:47 AM

P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30426983

Date: 06/29/2021 11:47 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30426983001	RWR-MWS	EPA 3010A	752029	EPA 6010D	752515
30426983002	RWR-MWI	EPA 3010A	752029	EPA 6010D	752515
30426983003	RW18-MWI	EPA 3010A	752029	EPA 6010D	752515
30426983004	RW18-MWS	EPA 3010A	752029	EPA 6010D	752515
30426983005	RW25-MWI	EPA 3010A	752029	EPA 6010D	752515

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must t Section C Section B Required Project Information: Face Analytical " Section A Required Client Information:

Company Tradepoint Atlantic Copy To: Stew Kabis	Arention: Matt Newman Company Name: Tradepoint Atlantic Company Name: Tradepoint Atlantic Acdress: 1800 Sparrows Point Blvd Sparrows Point, Md 21219 Pace Project Pace Project Pace Project Pace Project CowPosite ENORTH SINE Location SIN	DIND WATER PORTHKING WATER TOTHER N)
Sparrows Point, MD 21219 Sparrows Point, MD 21219 Ad Due DatesTAT: 5 day Project Number: 3COLLECT Required Client information Section D Required Client information Sample IDs MUST BE UNIQUE Sample IDs MUST BE UNIQUE RAW IS-ANVIT RA	Company Name: Tradepoint Atlantic Acdress: 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Pace Duote Redevence: Pace Project Requested Analy TED Preservatives Requested Analy Sistem TED Preservatives TED Preservatives TE	OWATER T
Sparrows Point, MD 21219 PO Number: Section D Required Client information Sample IDs MUST BE UNIQUE RAW IS - ANWYE RAW I	Acdress: 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Pace Question: Pace Project Manager: Pace Project M	D MATER T
Section D Required Clent information Sample IDs MUST BE UNIQUE Red RAW RAWAT RAW RAW	Page Quote Reference: Reference: Reservative NTAINERS Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested Analysis Filtered (V) STATE: Requested	
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RWR-MWT WT 6 6/19 RWR-MWT WT 6 6/16 RWK-MWT WT 6 6/16 RWWS-MWD WT 6 6/19	SAMPLE T HOP CO HOS HOS HOS HOS HOS HOS HOS HO	Pace Project No./ Lab i.D.
RWR-MWT WTG WIRE RWAS-MWI WTG WIRE RWAS-MWI WTG WIRE WIRE WIRE WIRE WIRE WIRE WIRE WIRE	- 08 B	
RW15-MWI WT G WT RW35-MWI WT G WT C WT C WT C WT C WT C WT C WT C	X X	2,00
RWK-MWS WT G VP	X X L COVERDA	2003
RWOJE-MWI	X W35 1 1 1 2 X	700
) ; LETIRIBI	500
ANDTOWN COMMENTS		
STADMACC TANCELLA		
高く 選びる 音をなって		
	DATE	TIME: Sample Conditions
Data Package Required? (Y/Q); (JANN) BOMN APM	11 6/18/21 1400 July 18/21	100%
		7
If data package is required, attach data package (PS HCC) checklist.	17	
		p
age 13	THE OF SAMPLER: TOSTINMEN BOKNOW	ooyed on (Y/V) ody Seale ody Seale ody Seale (Y/V)
	SIGNATURE of SAMPLER: ANN BONN (MMIDDING) OD/ \$9/31	Reich Custo Coo Coo

Pittsburgh Lab Sample Condition Upon Receipt Client Name: Tradepoint Atlantic Project # \$ 30 426983 . Fáce Analytical` Label M((Courier: Fed Ex UPS USPS Client Commercial To Pace Other LIMS Login NIA Tracking #: Dr no yes no 🗌 Seals intact: Type of Ice: Wet Blue None Thermometer Used Final Temp: Correction Factor: Observed Temp **Cooler Temperature** Temp should be above freezing to 6°C pH paper Lot# Date and Initials of person examining 1003801 N/A Yes No Comments: Chain of Custody Present: 2. Chain of Custody Filled Out: Chain of Custody Relinquished: Sampler Name & Signature on COC: 5. Sample Labels match COC: Matrix: -Includes date/time/ID Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): Rush Turn Around Time Requested: 8 Sufficient Volume: 10. Correct Containers Used: -Pace Containers Used: 11. Containers Intact: 12. Orthophosphate field filtered 13. Hex Cr Aqueous sample field filtered 14. Organic Samples checked for dechlorination: 15. Filtered volume received for Dissolved tests All containers have been checked for preservation. 16. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix Initial when \\\ \ Date/time of All containers meet method preservation preservation requirements. Lot # of added preservative 17. Headspace in VOA Vials (>6mm): 18. Trip Blank Present: Trip Blank Custody Seals Present Survey Meter Initial when Rad Samples Screened < 0.5 mrem/hr completed: Client Notification/ Resolution: Contacted By: Person Contacted: Comments/ Resolution: ☐ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Interr	Internal Transfer Chain of Custody	er Che	in o	of Custod	 <u>></u>								be a	;
				Samples	Samples Pre-Logged into eCOC.	into eCO(ci.	State (State Of Origin: MD	MD			Pace	<i>Pace Analytical</i> www.pacelabs.com
Workord	Workorder: 30426983	Workorder Name:	der Na		RWM GW Sampling			Owner	Cert. Needed: X Te Owner Received Date:	x res d Date:	6/21/2021		ر Results Requested By:	6/29/2021
Report To				Subcontract To	:t To						Request	Requested Analysis		
Samantha Bayura Pace Analytical Pi 1638 Rosevtown F	Samantha Bayura Pace Analytical Pittsburgh 1638 Roseytown Road			Pace Anal 1700 Elm Suite 200	Pace Analytical Minnesota 1700 Elm Street SE Suite 200	sota								
Suites 2,3 Greensbu	Suites 2,3,4 Greensburg, PA 15601			Minne: Phone	Minneapolis, MN 55414 Phone (612)607-1700	114			uz 'p	3	.:. #0 #	10566927	27	
Phone (72	Phone (724)850-5622								JVed Co				· 	
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	A Company of the American	Õ	Sample Collect	Collect			EON			,				
Item Samp	Sample ID	<u> P</u>	Type	Date/Time	Lab ID	Matrix	Н							LAB USE ONLY
1 RWR-MWS	SWM	д	PS (6/18/2021 09:20	30426983001	Water	1		×					177
2 RWR-MWI	NWI	Д	PS (6/18/2021 09:50	30426983002	Water	1		×					CIJ
3 RW18-MWI	MWI	<u>C.</u>	PS	6/18/2021 10:27	30426983003	Water	·		×					CE3
4 RW18-MWS	MWS	Д	PS (6/18/2021 11:35	30426983004	Water	1		×					Cl 4
5 RW25-MWI	.MWI	Ь	PS (6/18/2021 12:37	30426983005	Water	1		×) 17
												Comments	nts	
Transfers	Released By			Date/Time	Received B	Ву		1	Date/Time					
1					T.	Buce		9	62421 084	3				
2						•								
3														·
Cooler T	Cooler Temperature on Receipt \mathcal{Z}	Receipt '		sno ວ _ະ	Custody Seal Y	or (B)		Recei	Received on Ice	e <i>P</i> Oor	z	Sampl	Samples Intact 🧭	or N

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.



Document Name:

Sample Condition Upon Receipt (SCUR) - MN

Document No.:

ENV-FRM-MIN4-0150 Rev.02

Document Revised: 14Apr2021

Page 1 of 1

Pace Analytical Services -Minneapolis

Sample Condition Upon Receipt Outline Upon Receipt			Project	#:		\ Т · ·	105	66927	7
Pace Pittsbur			Tot.				TAN	Due Date: 0	7/01/21
Z C C Z C C C C	USPS Commerc	cial	Client		PM: CLI	JDD ENT: P	ASI-PI		
Tracking Number: 9242 2962 87	48		ee Exceptio NV-FRM-MII					<u> </u>	
Custody Seal on Cooler/Box Present? Yes	ľΝο	Sea	als Intact	? ∐Yes	Z	lo Bi	ological Ti	ssue Frozen?	Yes 🗌 No 🖊 N/A
Packing Material: Bubble Wrap Bubble Ba	gs 💆	None	Oth	er:			Т	emp Blank?	Yes No
Thermometer:	☐OS418- ☐160285		Type of Ice:	✓Wet	∐Biue	∏Nor	ne 🔲 D	ry [Melted	
Did Samples Originate in West Virginia? ☐Yes 📈No	We	re All Co	ntainer 1	Temps Tak	en? ∐Ye	es 🔲 No	☑ N/A		
Temp should be above freezing to 6°C Cooler Temp Rea	ıd w/ten	np blank	:			°C	Avera	ge Corrected	See Exceptions
Correction Factor: + 0 1 Cooler Temp Correcte	d w/tem	p blank:				<u></u> ºC		(no temp blank : <u>3.4</u> ℃	ENV-FRM-MIN4-0142
USDA Regulated Soil: (N/A, vater sample Other:)			itials of	Person E	xamining	Contents: <u></u>	6/24/21
Did samples originate in a quarantine zone within the Unit	_		·	•	•	iginate froi erto Rico)?		source (internation	ally, including
ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check ma If Yes to either question, fill out a R	–		No ecklist (F			,	-	Yes No	
					-,			ΛΕΝΤS:	
Chain of Custody Present and Filled Out?	Yes	∏No	-	1.					· · · · · · · · · · · · · · · · · · ·
Chain of Custody Relinquished?	Yes	ZNo		2.					
Sampler Name and/or Signature on COC?	☐Yes	□No	ZN/A	3.					
Samples Arrived within Hold Time?	Yes	□No		4.					
Short Hold Time Analysis (<72 hr)?	Yes	Μo						form/E coliBOD/orthophosOther	BOD Hex Chrome
Rush Turn Around Time Requested?	Yes	_ Z No		6.					
Sufficient Volume?	Yes	□No		7.					
Correct Containers Used?	Z yes	□No		8.					
-Pace Containers Used? Containers Intact?	Yes	No □ No		9.					
Field Filtered Volume Received for Dissolved Tests?	Yes	ZNo	□N/A		ediment	visible in	the dissolve	ed container?	/es □No
Is sufficient information available to reconcile the samples	Lies	ZINO	L111/A			•	on Contain		See Exception
to the COC?	Yes	□No			·	·			ENV-FRM-MIN4-0142
Matrix: Water Soil Oil Other									
All containers needing acid/base preservation have been checked?	Yes	□No	□N/A	12. Samp	le# ፘ	001-	-005		
All and the second seco	,				7		runo.		F3
All containers needing preservation are found to be in compliance with EPA recommendation?	Yes	□No	□n/a		NaOH	Ą	HNO₃	∐H₂SO₄	Zinc Acetate
(ANO ₂ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)						y	U -		
	_	_	_/ .	Positive f	or Res. 🛚	Yes			See Exception 🗌
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease,	Yes	∏No	⊠ N/A	Chlorine?	<u> </u>	No		er Lot#	ENV-FRM-MIN4-0142
DRO/8015 (water) and Dioxin/PFAS				Res. Chlo	rine	0-6 Roll 2214		0-6 Strip	0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	Yes	□No	Z N/A	13.		12211			See Exception
Headspace in VOA Vials (greater than 6mm)?	Yes	□No	ZN/A	3					ENV-FRM-MIN4-0140
Trip Blank Present?	□Yes	□No	N/A	14.					
Trip Blank Custody Seals Present?	Yes	No	Z N/A	Pac	e Trip Bla	ank Lot # (if purchase	ed):	
CLIENT NOTIFICATION/RESOLUTION						F	ield Data	Required? TY	es 🔲 No
Person Contacted:				Date/Ti	me:				
Comments/Resolution:									<u></u>
Project Manager Review:					Date:				

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of

hold, incorrect preservative, out of temp, incorrect containers).



Document Name:

Sample Condition Upon Receipt (SCUR) Exception Form

Document No.: ENV-FRM-MIN4-0142 Rev.01 Document Revised: 04Jun2020 Page 1 of 1

Pace Analytical Services -Minneapolis

SCON Exceptions:	F 122 - 111 - 11					W	/orka	rder#:		
Out of Temp Sample IDs	Container Type	# of Containe	# \$			Notified?	∐Yes	No	 -	· · · · · ·
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	-			, -	.s, maicac If ni	o, indicate	COILLA	rieu/ua te/	time.	
						o, maicate	reasor:	i wity.		
					Maltinla	Coolee Dro	3	Yes N	·	
					If you answe	red yes, till out	informat	res Ni lon to the lieft.	Ö:	
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				4.1		4.7		- 		
				2-9		3.0				
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Tracking Number/Te	emperature		-	S	ample ID			Туре		itainer
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	pH Adjus	stment L	og for	Preserv	ed Sam	ples				
•	T	рН			Amoun					٥
Sample ID	Type of Preserv.	Upon Receipt A	Date Adjusted	Time Adjusted	t Added	Lot#		In Complia		
			.ajustca	Adjusted	(mL)	Added	After	after a ddit		Initials
								Yes [No	
								Yes	No	
								Yes [No	
ments:										
		A					-			
						· · · · · · · · · · · · · · · · · · ·				
•										
					-					
			·.							

Greensburg, PA 15601 (724)850-5600



October 25, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30443597

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 04, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotomka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Leandra Glumac, ARM Group Inc.

Ms. Kaye Guille, ARM Group Inc.

J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.





1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30443597

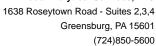
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839



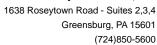


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30443597

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30443597001	RWE-MWI	Water	10/04/21 08:40	10/04/21 21:45
30443597002	RWE-MWS	Water	10/04/21 09:35	10/04/21 21:45
30443597003	RWD-MWI	Water	10/04/21 11:05	10/04/21 21:45
30443597004	RWD-MWS	Water	10/04/21 12:15	10/04/21 21:45
30443597005	RWA-MWS	Water	10/04/21 14:00	10/04/21 21:45
30443597006	RWA-MWI	Water	10/04/21 15:10	10/04/21 21:45





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30443597

Sample ID	Method	Analysts	Analytes Reported	Laboratory
RWE-MWI	EPA 6010D	MEH	2	PASI-BVWV
RWE-MWS	EPA 6010D	MEH	2	PASI-BVWV
RWD-MWI	EPA 6010D	MEH	2	PASI-BVWV
RWD-MWS	EPA 6010D	MEH	2	PASI-BVWV
RWA-MWS	EPA 6010D	MEH	2	PASI-BVWV
RWA-MWI	EPA 6010D	MEH	2	PASI-BVWV
-	RWE-MWI RWE-MWS RWD-MWI RWD-MWS RWA-MWS	RWE-MWI EPA 6010D RWE-MWS EPA 6010D RWD-MWI EPA 6010D RWD-MWS EPA 6010D RWA-MWS EPA 6010D	RWE-MWI EPA 6010D MEH RWE-MWS EPA 6010D MEH RWD-MWI EPA 6010D MEH RWD-MWS EPA 6010D MEH RWA-MWS EPA 6010D MEH	Sample ID Method Analysts Reported RWE-MWI EPA 6010D MEH 2 RWE-MWS EPA 6010D MEH 2 RWD-MWI EPA 6010D MEH 2 RWD-MWS EPA 6010D MEH 2 RWA-MWS EPA 6010D MEH 2

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30443597

Sample: RWE-MWI	Lab ID:	30443597001	Collected	d: 10/04/2	1 08:40	Received: 10	/04/21 21:45 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	497 68000	ug/L ug/L	1.0 2000	0.19 197	1 100	10/15/21 14:42 10/15/21 14:42	. 0, 20, 2		





Project: RWM GW Sampling

Pace Project No.: 30443597

Date: 10/25/2021 02:31 PM

Sample: RWE-MWS	Lab ID:	30443597002	Collecte	d: 10/04/2	1 09:35	Received: 10/	/04/21 21:45 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	•	Method: EPA 6 ytical Services			thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	0.55J 1630	ug/L ug/L	1.0 20.0	0.19 2.0	1 1	10/15/21 14:42 10/15/21 14:42			





Project: RWM GW Sampling

Pace Project No.: 30443597

Sample: RWD-MWI	Lab ID:	30443597003	Collecte	d: 10/04/2	1 11:05	Received: 10/	04/21 21:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	0400 0						
OUTUD ICE. DISSUIVEU. SUTUA	Allalytical	MELLIOU. EFA 0	UTUD Prep	aration iviet	:nod: Ei	PA 3010A			
ou lod lor, dissolved, su loa	,	lytical Services			nod: El	PA 3010A			
Cadmium, Dissolved	,				nod: E1	7A 3010A 10/15/21 14:42	10/20/21 16:11	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30443597

Sample: RWD-MWS	Lab ID:	30443597004	Collecte	d: 10/04/2	12:15	Received: 10/	04/21 21:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP. Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	aration Met	hod: El	PA 3010A			
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 lytical Services			hod: El	PA 3010A			
6010D ICP, Dissolved, 3010A Cadmium, Dissolved	,				hod: El	PA 3010A 10/15/21 14:42	10/20/21 16:17	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30443597

Sample: RWA-MWS	Lab ID:	30443597005	Collecte	d: 10/04/21	14:00	Received: 10/	/04/21 21:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: Ef	PA 3010A			
,,,,	•								
	Pace Anal	ytical Services	- vvestvirgi	nıa					
Cadmium, Dissolved	Pace Anal	ug/L	- vvestvirgi 1.0	nıa 0.19	1	10/15/21 14:42	10/20/21 16:19	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30443597

Sample: RWA-MWI	Lab ID:	30443597006	Collected	d: 10/04/2	1 15:10	Received: 10	/04/21 21:45 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			thod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	8510 328000	ug/L ug/L	100 2000	18.7 197	100 100	10/15/21 14:42 10/15/21 14:42			



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30443597

QC Batch: 87256 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30443597001, 30443597002, 30443597003, 30443597004, 30443597005, 30443597006

METHOD BLANK: 428535 Matrix: Water

Associated Lab Samples: 30443597001, 30443597002, 30443597003, 30443597004, 30443597005, 30443597006

Blank Reporting Qualifiers Parameter Units Result Limit MDL Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/20/21 15:18 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/20/21 15:18 ug/L

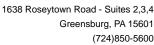
LABORATORY CONTROL SAMPLE: 428536

Date: 10/25/2021 02:31 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1090 109 80-120 ug/L Zinc, Dissolved 2000 2170 109 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 428550 428551 MS MSD 30444377001 Spike Spike MS MSD MS MSD % Rec Max Conc. Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 2590 1000 1000 3610 3560 102 80-120 20 Zinc, Dissolved 110000 2000 2000 80200 78700 -1480 -1550 80-120 2 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30443597

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 10/25/2021 02:31 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30443597

Date: 10/25/2021 02:31 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30443597001	RWE-MWI	EPA 3010A	87256	EPA 6010D	87712
30443597002	RWE-MWS	EPA 3010A	87256	EPA 6010D	87712
30443597003	RWD-MWI	EPA 3010A	87256	EPA 6010D	87712
30443597004	RWD-MWS	EPA 3010A	87256	EPA 6010D	87712
30443597005	RWA-MWS	EPA 3010A	87256	EPA 6010D	87712
30443597006	RWA-MWI	EPA 3010A	87256	EPA 6010D	87712

CTALIV-CT.1.
The Chain-of-Custody

Face Analytical "

WO#: 30443597 COMM-UT-COOLOGIA MINISTER REGIES The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be c

Pace Project No./ Lab I.D. (N/Y) gamojes juraci Sample Conditions \supset DRINKING WATER Cooler (Y/N) OTHER Ice (Y/N) Received on NPDES |- GROUND WATER |-THE 7 9 REGULATORY AGENCY MD Requested Analysis Filtered (Y/N) T RCRA 2/6/0/ 20/2/1 DATE 042 10/2/2 Site Location STATE UST L DATE Signed ... (MM/DD/YY): 1600 Sparrows Point Blvd Sparrows Point, Md 21219 ACCEPTED BY / AFFILIATION oniS bevlossiC muimbed Cadmium N/A Analysis Test Sempany Name: Tradepoint Atlantic Pace Quote
Reference:
Pace Project Samantha Bayura
Manager:
Pace Profile #: 1918W IC がくな Jedic Importent Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1,5% per month for any invoices not paid within 30 days Matt Newman Preservatives CS2SEN HORN HCI المكاك ONH ^tOS²H Section C シズグ Arention: 4cdress: THE L Unpreserved SAMPLER NAME AND SIGNATURE # OF CONTAINERS 2/1/01 SAMPLE TEMP AT COLLECTION PRINT Name of SAMPLER: SIGNATURE of SAMPLER: S B DATE 12.15 1,00 8 14 Ed 840 SIO 50 TIME COMPOSITE END/GRAB 20000 COLLECTED DATE RELINQUISHED BY JAFFILIATION RWM GW Sampling H H COMPOSITE Required Project Information: Report To: Matt Newman Stew Kabis G MA (GEGRAB CECOMP) SAMPLE TYPE ρ (see valid codes to left) Project Number: MATRIX CODE Project Name: Section B PO Number Copy To: Valid Matrix Codes

MATRIX
CODE
DRIANNIS WATER
WATER
WASTER WATER
WASTER WATER
SOLLSOLID
OIL
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ARR
TISSUE data package is required, attach data package 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd RUR-PAUT RUD - Prut RWE-8W3 RUND-MUS ADDITIONAL COMMERNIA HRS. Data Validation Required? (Y/N): (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE とばか / でんごう Data Package Required? (Y/N) Æ Required Client Information: Company: Tradepoint Atlantic SAMPLE ID Required Client Information Requested Due Date/TAT: Email To: ddress: 9 ŧ 2 # Mati ø Page 14 of 19

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另

Pittsburgh Lab Sample Cond	tion	upo	n K	eceipt	Q 4	/
Pace Analytical Client Name:	Trac	lepoi	nt	Atlantic	Project #	0 4 4 3 5 9
Courier: Fed Ex UPS USPS Clier	nt 🔲	Comm	ercial	Pace Other		Label MLC
Tracking #: NA				·	_L	IMS Login MU
Custody Seal on Cooler/Box Present: yes	<u>Z</u> , ı	- 10	Seal	s intact: 🔲 yes [no	
Thermometer Used	Туре	of Ice:	We	t Blue None		
Cooler Temperature Observed Temp	1	٠c		ection Factor: 3	°C Final T	emp: / ° c
Temp should be above freezing to 6°C		•				- 1/1
				pH paper Lot#		itials of person examining
Comments:	Yes	No	N/A	11000411	contents:	01512021 -
Chain of Custody Present:				1.		
Chain of Custody Filled Out:				2.		
Chain of Custody Relinquished:		Ĺ		3.		
Sampler Name & Signature on COC:				4.		
Sample Labels match COC:				5.		
-Includes date/time/ID Matrix:	WI					
Samples Arrived within Hold Time:				6.		
Short Hold Time Analysis (<72hr remaining):				7.		
Rush Turn Around Time Requested:				8.		
Sufficient Volume:				9.		
Correct Containers Used:				10.		
-Pace Containers Used:]		
Containers Intact:				11.		
Orthophosphate field filtered				12.		
Hex Cr Aqueous sample field filtered				13.		
Organic Samples checked for dechlorination:			/	14.		
Filtered volume received for Dissolved tests			/	15.		
All containers have been checked for preservation,				16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon,					
All containers meet method preservation requirements.	17			Initial when \\ completed \ \(\)	Date/time of	
годинания.				Lot # of added	preservation	
	Г			preservative		
Headspace in VOA Vials (>6mm):				17.		
Trip Blank Present:			_	18.		
Trip Blank Custody Seals Present						
Rad Samples Screened < 0.5 mrem/hr				Initial when completed:	Date:	Survey Meter SN:
Client Notification/ Resolution:						
Person Contacted:			Date/	Гime:	Contacte	d By:
Comments/ Resolution:						
			,			

☐ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

	#:739307		Custo	dv)
7393	 		_	s Pre-Logged	l into eC0	OC.			Of Oriç	_	ID Yes	Ē	No			6	Pac	CE Analytical www.pacelabs.com
	rkorder: 30443597	Workorder N		GW Sampling					r Rece			10/4	2021	Re	sults	Reque	sted B	By: 10/19/2021
	ort To		Subcontra	ct To								Re	queste	d Ana	lysis	a control		
Pac 163 Suit Gre	nantha Bayura se Analytical Pittsburgh 8 Roseytown Road ses 2,3,4 ensburg, PA 15601 sne (724)850-5622		225 Ir Beave	Beaver West V ndustrial Park R er, WV 25813 e (800)999-010	RD					Dissolved Cd, Zn								
						Pre	served (Conta	iners	ဗ္ဗ						11	×	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HN03				601								LAB USE ONLY
1	RWE-MWI	PS	10/4/2021 08:40	30443597001	Water	1	\sqcap			Х						11		
2	RWE-MWS	PS	10/4/2021 09:35	30443597002	Water	1				Х						\top	$\neg \neg$	
3	RWD-MWI	PS	10/4/2021 11:05	30443597003	Water	1				Х				H		\top	$\neg \neg$	
4	RWD-MWS	PS	10/4/2021 12:15	30443597004	Water	1				X			1				$\neg \neg$	
5	RWA-MWS	PS	10/4/2021 14:00	30443597005	Water	1	\Box			Х				\Box		$\top \top$	$\neg \neg$	
6	RWA-MWI	PS	10/4/2021 15:10	30443597006	Water	1	\sqcap			Х						11		
															Con	nments		
1 2	sfers Released By	C_1016	Date/Time	Received E	7			_	0-13-21									5 Days
3	l																	

Received on Ice Y or N

Custody Seal Y or N

Cooler Temperature on Receipt

°C

Samples Intact Y or N

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.



The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be c W0#:30443597

Sectic Requir	on A red Client Information:	Section B Required P		mation:						tion ice Inf	C format	ion:										• [3	9.	30	72				
Compa		Report To:	Matt Nev	wman			,		Atrec	ntion:	N	latt I	Newr	nan						1: E				Du	e D	ate:	10/20/	21		
Addres	s: 1600 Sparrows Point Blvd	Copy To:	Stew Ka	bis					Ccm	pany	Name	: Tr	adep	oint	Atlar	ntic			CL	.IEN	IT:	PAC	EPI	TT			-0, 20,		1877	
	Sparrows Point, MD 21219	 					-		Acdr	ess:	16	00 Sp	апож	Point	Blvd S	рапоч	ws Poir	nt, Md 2											52.600.35%	
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	Section D Valid Matrix (Required Client Information MATRIX ORINING WATER WATER WASTE WATER	CODE	left)	COM	COLL	ECTEC				Н	Pr	ese	rvativ	res	T	N/N	H	-				+								
	PRODUCT SOLUSOLID OIL WIPE	P SL OL WP AR	valid codes to left)		'ART	END	POSITE GRAB	COLLECTION																						
	SAMPLE ID OTHER TISSUE (A-Z, 0-9 / ,-) TISSUE Sample IDs MUST BE UNIQUE	OT TS	CODE (see valid TYPE (G=GRAB					F	AINERS	90						3 Test	Cadmium	Zinc												
ITEM #			MATRIX COD SAMPLE TYPE				TIME	AMPLE TEMP	# OF CONTAINERS	Unpreserved	H ₂ SO ₄	를 모	I	la ₂ S ₂ O ₃	DI Water	↓ Analysis		Dissolved 2							i		H-17-31			
1.	RWE-MWI		WI G	DATE		100	840		+	2	+ 1	+	2	2 5	210		-	2	H	+	-	-	++	+	+	Pace	Project	No./ Lab I.	THE PERSON NAMED IN	TOI
2	RWE-MUS		127 6		1.0	710	935		T	-	1	+	\vdash	_	+	1	分	V	+		+	+	$\dagger \dagger$	-	\Box					002
3	RWD-MUZ		WITE	-			1105	, 	1		1		H	+	1		(X)	\Diamond	11	+		_ _	11	\top	\Box					002
4	RWD - mws		WITE				1215	_			1		П				X	Ŷ		7			\Box			•			7	J04
5	RWA-mus	-	WITZ				14.00		1		1		П				X	X.												105
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F-ALL-Q-020rev.06, 2-Feb-2007

Page 18 of 19

Comments:	Yes No	NIA	1000411	8	contents () (7/7)
Chain of Custody Present:	4		1.	ŀ	
Chain of Custody Filled Out:			2.		
Chain of Custody Relinquished:	\sum		3.		
Sampler Name & Signature on COC:	\sum		4.		
Sample Labels match COC:	1		5.		
-Includes date/time/ID Matrix:	LM.				
old Time:	/		6,		
Short Hold Time Analysis (<72hr remaining):	/		7.		
Rush Turn Around Time Requested:	/		8.		
Sufficient Volume:			9.		
Correct Containers Used:	/		10.		
-Pace Containers Used:	7				
Containers Intact:	_		11.		
Orthophosphate field filtered			12.		
Hex Cr Aqueous sample field filtered		1	13.		
Organic Samples checked for dechlorination:		7	14.		
Filtered volume received for Dissolved tests		1	15.		
All containers have been checked for preservation.	/		16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	Radon,				
All containers meet method preservation requirements.	7	0	Initial when \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Date/time of preservation	ne of ration
		7.5	Lot#ofadded preservative		
Headspace in VOA Vials (>6mm):		/	17.		
Trip Blank Present:		Ì	18.		
Trip Blank Custody Seals Present	,,,,,,,	/			
Rad Samples Screened < 0.5 mrem/hr		0 =	Initial when completed:	Date:	Survey Meter SN:
Client Notification/ Resolution:					
Person Contacted:		_Date/Time:	me:		Contacted By:
Comments/ Resolution:					

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compilance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

			10年・/ 3939/人	19
LIMS/3 Lab Sample	LIMS/3 Lab Sample Condition Upon Receipt (West Virginia)	(West Virginia)	J Due Date:	10/20¢21
***************************************	Cilent Name.			Pa
Courier: Fed Ex UPS	USPS Client Commercial	Pace	Jother 3rd Rondy	e
Tracking #:		9	2	
Thermometer Used		Type of Ice: Wet Blue None	e Eno	
Cooler Temperature	Temp	Correction Factor: 1	O °C Final Temp: 1, 2 °C	
Comments:		PH Baber Lot#	Q contents: ODW 10-13.	3.2/
	Yes N	No N/A		
Chain of Custody Present:	\			
Chain of Custody Filled Out:	1	2		
Chain of Custody Relinquished:		.ω		٠
Sampler Name & Signature on COC:	Ω	4. Jub	From Cit	
Sample Labels match COC:		Çī		
Samples Arrived within Hold Time:	Matrix.	6. Lab Labeled by.	Cilected by.	
Short Hold Time Analysis (<72hr remaining):	remaining):	7.		
Rush Turn Around Time Requested:	ed:	8. SDays	\$.7
Sufficient Volume:		ò		,
Correct Containers Used:		10.		
-Pace Containers Used:				1
Containers Intact:		1.2		14
Orthophosphate field filtered:		1,2	-	
-pH adjusted within 24 hours? (If yes, indicate acid lot #)	If yes indicate acid lot #)	Ş		
Filtered volume received for Dissolved tests:	ved tests:	14.		.e.
All containers have been checked for preservation:	or preservation:	15.		00 m
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix	LLMercury, Non-aqueous matrix			- 1,
All containers meet method preservation requirements:	vation requirements:	Initial when Completed COM	W Date: \0, 13.0	
		Tests not preserved:	0.	
Headspace in VOA Vials:		16.		
Trip Blank Present: Trip Blank Custody Seals Present:		17		William P
		Initial when completed	N Date: 10-13-21	7.
Client Notification/ Resolution: Person Contacted:		Date/Time:	Contacted By:	le Residence
Comments/ Resolution:				
				1
] [

MO#: 7393072
PM: BNJ Due Date:

A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

(724)850-5600



October 25, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30443868

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 05, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotomka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Leandra Glumac, ARM Group Inc.

Ms. Kaye Guille, ARM Group Inc.

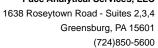
J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30443868

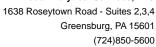
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30443868

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30443868001	RWR-MWS	Water	10/05/21 09:25	10/05/21 22:00
30443868002	RWR-MWI	Water	10/05/21 10:35	10/05/21 22:00
30443868003	RWB-MWI	Water	10/05/21 13:30	10/05/21 22:00
30443868004	RWB-MWS	Water	10/05/21 14:25	10/05/21 22:00
30443868005	RW07-MWI	Water	10/05/21 15:15	10/05/21 22:00



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30443868

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30443868001	RWR-MWS	EPA 6010D	MEH	2	PASI-BVWV
30443868002	RWR-MWI	EPA 6010D	MEH	2	PASI-BVWV
30443868003	RWB-MWI	EPA 6010D	MEH	2	PASI-BVWV
30443868004	RWB-MWS	EPA 6010D	MEH	2	PASI-BVWV
30443868005	RW07-MWI	EPA 6010D	MEH	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia



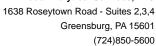


Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Sample: RWR-MWS	Lab ID:	30443868001	Collected	l: 10/05/2	09:25	Received: 10	/05/21 22:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			hod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	39.3 298000	ug/L ug/L	10.0 200	1.9 19.7	10 10	10/15/21 14:47 10/15/21 14:47	10/20/21 13:53 10/20/21 13:53		





Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Sample: RWR-MWI	Lab ID:	30443868002	Collecte	d: 10/05/2	1 10:35	Received: 10/	/05/21 22:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	aration Me	thod: EF	PA 3010A			
, 2.00000, 00.00	,	lytical Services							
Cadmium, Dissolved	753	ug/L	10.0	1.9	10	10/15/21 14:47	10/20/21 13:55	7440-43-9	
Zinc, Dissolved	48000	ug/L	20000	1970	1000	10/15/21 14:47	10/22/21 17:17	7440 66 6	





Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Sample: RWB-MWI	Lab ID:	30443868003	Collecte	d: 10/05/2	1 13:30	Received: 10	/05/21 22:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prer	paration Me	thod: FI	PA 3010A			
, 2.000, 00.00	,	lytical Services							
Cadmium, Dissolved	1.0 U	ug/L	1.0	0.19	1	10/15/21 14:47	10/20/21 13:57	7440-43-9	
Cadmidin, Dissolved									



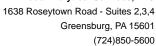


Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Sample: RWB-MWS	Lab ID:	30443868004	Collecte	d: 10/05/2	14:25	Received: 10/	05/21 22:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	aration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- WestVirgi	nia					
Cadmium, Dissolved	Pace Anal	ytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	10/15/21 14:47	10/20/21 13:59	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Sample: RW07-MWI	Lab ID:	30443868005	Collecte	d: 10/05/2	1 15:15	Received: 10	/05/21 22:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Me	thod: E	PA 3010A			
, 2.00000, 00.00	,	ytical Services							
Cadmium, Dissolved	49.1	ug/L	10.0	1.9	10	10/15/21 14:47	10/20/21 14:01	7440-43-9	
Zinc, Dissolved	53900	ug/L	200	19.7	10	10/15/21 14:47	10/20/21 14:01	7440-66-6	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30443868

QC Batch: 87266 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30443868001, 30443868002, 30443868003, 30443868004, 30443868005

METHOD BLANK: 428578 Matrix: Water

Associated Lab Samples: 30443868001, 30443868002, 30443868003, 30443868004, 30443868005

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/20/21 13:17 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/20/21 13:17 ug/L

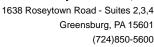
LABORATORY CONTROL SAMPLE: 428579

Date: 10/25/2021 02:20 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1120 112 80-120 ug/L Zinc, Dissolved 2000 2240 112 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 428593 428594 MS MSD 30444324001 Spike Spike MS MSD MS MSD % Rec Max Conc. Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L ND 1000 1000 1080 1110 108 111 80-120 3 20 Zinc, Dissolved ND 2000 2000 2240 2300 80-120 2 20 ug/L 111 114

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30443868

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

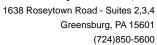
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 10/25/2021 02:20 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30443868

Date: 10/25/2021 02:20 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30443868001	RWR-MWS	EPA 3010A	87266	EPA 6010D	87709
30443868002	RWR-MWI	EPA 3010A	87266	EPA 6010D	87709
30443868003	RWB-MWI	EPA 3010A	87266	EPA 6010D	87709
30443868004	RWB-MWS	EPA 3010A	87266	EPA 6010D	87709
30443868005	RW07-MWI	EPA 3010A	87266	EPA 6010D	87709

Pace Analytical"

Under the Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be committed.

WO#: 30443868

T NPDES F GROUND WATER F DRINKING WATER OTHER 30443868 REGULATORY AGENCY T UST T RCRA Site Location STATE 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Company Name: Tradepoint Atlantic Pece Quote Reference: Pece Preject Samantha Bayura Manager: Pece Profile #: At ention: Matt Newman Invoice Information: Section C Acdress: 2101012 RWM GW Sampling Section B Required Project Information: Report To: Matt Newman Copy To: Stew Kabis Project Number: Project Name: PO Number: 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd Section A
Required Clent Information:
Tradepoint Atlantic F. Requested Due Date/TAT: Email To:

The part Signed (and Date of Arthuron) (b) Water (colored Cadmium)		4 - 3 - 4			ŀ											4	۱	anba	Stea	Anaıy	Kequested Analysis Filtered (Y/N)	Iterec	N(X)	~						
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Pittsburgh Lab Sample Condi	tion (Jpor	n Re	ceipt			
Pace Analytical Client Name:	·	To	ad	appoint Atl	Project #		21
Courier: Fed Ex UPS USPS Client Tracking #: N/A	ı 🗆	Comm	ercial	Pace Other		Label <u>rCh</u> IS Login yC—	10/13/21
Custody Seal on Cooler/Box Present:		10	Seals	intact: 🗌 yes 🗵	rno		ထ္ထုန
Thermometer Used	Type	of Ice:	Wet	Blue None			386
Cooler Temperature Observed Temp Temp should be above freezing to 6°C	1.8	°С	Corre	ection Factor:	- °C Final Ten		44386
Comments:	Yes	No	N/A	pH paper Lot# しりひり[]	contents:	als of person examining	30
Chain of Custody Present:	/			1.			0
Chain of Custody Filled Out:	/			2.			
Chain of Custody Relinquished:				3.			<u> </u>
Sampler Name & Signature on COC:				4.			
Sample Labels match COC:	/			5.			
-Includes date/time/ID Matrix:	WT		.				
Samples Arrived within Hold Time:	1			6.			
Short Hold Time Analysis (<72hr remaining):		/		7.			
Rush Turn Around Time Requested:				8.			
Sufficient Volume:	/			9.			
Correct Containers Used:	/			10.			
-Pace Containers Used:	/						
Containers Intact:				11.			
Orthophosphate field filtered			/	12.			
Hex Cr Aqueous sample field filtered			/	13.			
Organic Samples checked for dechlorination:			1	14.			_
Filtered volume received for Dissolved tests All containers have been checked for preservation.			/	15. 16.		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	1	1				
All containers meet method preservation requirements.	/			initial when completed K	Date/time of preservation		_
				Lot # of added preservative			
Headspace in VOA Vials (>6mm):			1	17.			
Trip Blank Present:			1	18.			
Trip Blank Custody Seals Present			1				
Rad Samples Screened < 0.5 mrem/hr			1	Initial when completed:	Date:	Survey Meter SN:	
Client Notification/ Resolution: Person Contacted:				Fime:	<u>'</u>	Ву:	
Comments/ Resolution:							

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

 \Box A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

WO#	:7	39	30	91
7393091				

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3930	91] Sample	s Pre-Logged	into eCC	OC.		te Of Ori		MD Yes	No		-	Pac	re Analytical www.pacelabs.com
Wo	rkorder	: 30443868	Workorder N	lame: RWM (GW Sampling				ner Rece			10/5/2021	Resul	ts Requ	uested B	y: 10/20/2021
Repo	ort To			Subcontra	ct To							Requested	l Analysi	S		
Pace 1638 Suite Gree	Roseyto es 2,3,4 ensburg,	ayura cal Pittsburgh own Road PA 15601 B50-5622		225 Ir Beave	Beaver West Vi dustrial Park R er, WV 25813 e (800)999-0109	Ď				Dissolved Cd, Zn						
							Pre	served C	ontainers	S						
ltem	Sample	ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3			601						LAB USE ONLY
1	RWR-MWS	3	PS	10/5/2021 09:25	30443868001	Water	1			X						
2	RWR-MWI		PS	10/5/2021 10:35	30443868002	Water	1			Х						
3	RWB-MWI		PS	10/5/2021 13:30	30443868003	Water	1			Х						
4	RWB-MWS	3	PS	10/5/2021 14:25	30443868004	Water	1			Х						
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Received on Ice Y or N

Custody Seal Y or N

°C

Samples Intact Y or N

Cooler Temperature on Receipt

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Page 16 of 19

W0#:7393091

CLIENT: PACEPITT PM: BMJ

Receiving Region Sending Region

IR73-WestVirginia IR30-Pittsburgh

Sending Project Mgr.

Tradepoint Atlantic Samantha Bayura

STD REPORT

QC Deliverable External Client

State of Sample Origin

Due Date: 10/20/21

eaver West Virginia lustrial Park RD , WV 25813 (800)999-0105

INTER_LABORATORY WORK ORDER # 30443868

(To be completed by sending lab)

10/20/2021	REQUESTED COMPLETION DATE: 10/20/2021
10/12/21	Date Prepared: 10/12/21
	Check Box for Consolidated Invoice:
	Receiving Project No:
30443868	Sending Project No. 30443868

Requested Reportable Units All questions should be addressed to sending project manager. Report Wet or Dry Weight? Dry Weight IRWO Lab Need to run? Cert. Needed

6010C Dissolved Cd, Zn **Method Description** BP3N Container Type WORK REQUESTED Quantity of containers HNO3 Preservative O **Unit Price** \$22.00 **TOTAL** Amount \$110.00 \$110.00

Special Requirements: Report D, QC Limits, MDLs (D), Enviroanalytics (841)

	300000	14 TO 17 TO 1		Caccomica disconner
\$22.00	\$88.00	\$110.00	TOTAL	* Custom Revenue Allocation
\$22.00	\$88.00	\$110.00	20	Metals
Client Services Dept. Sending Region (20%)	Receiving Region (80%)			Receiving Region Department
Vilocation	Revenue Allocation	Acctg. Code Totals from above	Acctg. Code	

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region:

No

Yes

×

Original sent to the receiving lab - Copy kept at the sending lab. **DISPOSITION of FORM**

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

Tuesday, October 12, 2021 9:59:34 AM



CHAIN-OF-COSTODT / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be comr'

WO#:30443868

ection A equired Client Information:	Section B Required Project Information		Section C Invoice Information:	WO#:739	3091
ompany: Tradepoint Atlantic	Report To: Matt Newman		At ention: Matt Newman	PM: BMJ D	ue Date: 10/20/21
dress: 1600 Sparrows Point Blvd	Copy To: Stew Kabis		Company Name: Tradepoint Atlantic	CLIENT: PACEPITT	
Sparrows Point, MD 21219			Acdress: 1600 Sparrows Point Blvd Sparrows Point, Md 21219	CLIENT: PHOLIZI	
nail To:	PO Number:		Pace Quote	USI F RCRA	OTHER
one; Fax:	Project Name: RWM GV	V Sampling	Reference: Pace Project Samantha Bayura	Site Location	
quested Due Date/TAT:			Manager: Pace Profile #: '	STATE MD	
5 day	1, 20	10103		2 2 topological and	
Section D Valid Matrix	Codes		1 1	Analysis Fiftered (Y/N)	
Required Client Information MATRIX ORNINGING WATER WASTE WASTE WASTE WASTE PRODUCT SOIUSOULD OIL WIPE AIR (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	CODE (see valid codes to left) TYPE (G=GRAB G=COMP)	COLLECTED DIMPOSITE COMPOSITE ENDICARAB NOLLO BIT COMPOSITE ENDICARAB NOLLO BIT COMPOSITE ENDICARAB NOLLO BIT COMPOSITE ENDICARAB	s Tes		
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RUR-MUS	WIG	10/5/21925		 	1001
2 RWR-MWF	WIE	1035			002
RUB-MUI	Wife	1330		 	803
RWB-MWS RWO7-MWI	MG	1425			oou
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			▍ ▎	++++++++	
		1 1 1 1 1 1 1			
ADDITIONAL COMMENTS	RELINQUISHED BY	AFFILIATION DATE	TIME ACCEPTED BY AFFILIATION	DATE TIME	Sample Conditions
a Package Required? (Y(N))	J 2 50	10/5/21	1600 REB / PACE	10/5/21 160	0 1
a Validation Required? (YN);	RED PA			1 10/01	
ita package is required, attach data package			0111	0501 1835	4 4
oklist.	KDS FAC	2 0521	2200 16 1/2	60-5-21 2200	D Y N T
	V-S		, 0		
		SAMPLER NAME AND SIGN PRINT Name of SAMPLER: SIGNATURE of SAMPLER:	USa Plan DATE Stoned	(2) 4121	Received on lee (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)
			- W A A A A A A A A A A A A A A A A A A	614121	F-ALL-Q-020rev.06, 2-Feb-2007 Page 1

		orm will be sent to the North Carolina DEHNR schedule in LIMS. The review is in the Status	a samples, a copy of this furrect containers) or closes the SRF Review	ompliance temp, incor ct Manager	Carolina o ve, out of the Proje	Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.
		ed in ereports.	ation has been store	informa	litional	☐ A check in this box indicates that additional information has been stored in ereports.
	5 1					Comments/ Resolution:
	•	Contacted By:	Date/Time:	Da		Person Contacted:
	L			-		Client Notification/ Resolution:
	1	Survey Meter Date: SN:	Initial when completed:	\		Rad Samples Screened < 0.5 mrem/hr
			Ģ			Trip Blank Custody Seals Present
			17.			Headspace in VOA Vials (>6mm):
			Lot # of added preservative			
	1,	Date/time of preservation	Initial when completed		\	All containers meet method preservation requirements.
				-	, Radon,	exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix
	L		16.			All containers have been checked for preservation.
			15.	\ \		Organic Samples checked for dechlorination: Filtered volume received for Dissolved tests
			13,			Hex Cr Aqueous sample field filtered
	.1		12.			Orthophosphate field filtered
	1				/	Containers Intact:
					1	-Pace Containers Used:
			10,		\	Correct Containers Used:
			9.		\	Sufficient Volume:
			8.		/	Rush Turn Around Time Requested:
			7.	/		Short Hold Time Analysis (<72hr remaining):
	L		,o		1	old Time:
					25	-includes date/time/ID Matrix:
	1.		Ċυ ,		1	Sample Labels match COC:
6	h		4.		\	Sampler Name & Signature on COC:
10	10		ώ		1	Chain of Custody Relinguished:
#	#		3 .			Chair of Custody Filesoff.
	. 3		111-000	200	, i es	Chair of Craft de Brook
739	304	Date and Initials of person examining contents:	-	-	V23	cally about as above necessity w
93	4	Final Temp: 4,7 °C	Correction Factor:		18.6	d Temp
30	38		Blue None	••		Thermometer Used
91	36		Seals intact:)	3	Custody Seal on Cooler/Box Present: yes
L	8	2		١	0.000	Tracking #: N/A
		Label 17 A	ial Pace Other	Commerci	≥ □	Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Place Other
		# /Project#	Asiet	Trade		Pace Analytical Client Name:
			Receipt	Jpon F	ition t	Pittsburgh Lab Sample Condition Upon Receipt

PM: BMJ

CLIENT: PACEPITT

Due Date: 10/20/21

Page 18 of 19

1111

LIMS73 Lab Sample Condition Upon Receipt (West Virginia

PM: BMJ

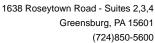
CLIENT: PACEPITT

6	8
Date:	091
10/20/21 Page 21	of 19

The state of the s	Client Name:
Courier: ☐ Fed Ex ☐UPS	USPS Client Commercial Pace Fother 3rd Rondy
Custody Seal on Cooler/Box/Containers Present: yes	
Thermometer Used	Type of Ice: Wet Blue None
Cooler Temperature	Observed Temp 1, 2 °C Correction Factor: 1 O °C Final Temp: 1, 2 °C
Comments:	pH paper Lot# Date and Initials of person examining Contents: ODW 10-13.
	Yes, No N/A
Chain of Custody Present:	
Chain of Custody Filled Out:	,2
Chain of Custody Relinquished:	,3
Sampler Name & Signature on COC:	c / 4 Sub from PiH
Sample Labels match COC:	Çı,
-Includes date/time/ID	Matrix: Lab Labeled by: Checked by:
Samples Armved within Hold Time:	
Short Hold Time Analysis (2nr remaining): Rish Time Around Time Requested:</td <td>remaining):</td>	remaining):
Sufficient Volume:	\
Correct Containers Used:	10.
-Pace Containers Used:	
Containers Intact:	11.
Orthophosphate field filtered:	12
Hex Cr Aqueous sample field filtered:	213.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)	If yes, indicate acid lot #)
Filtered volume received for Dissolved tests:	
All containers have been checked for preservation:	for preservation:
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix	LLMercury, Non-aqueous matrix
All containers meet method preservation requirements:	vation requirements: Initial when OOW Date: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	Tests not preserved:
Headspace in VOA Vials:	16.
Trip Blank Present	177.
Trip Blank Custody Seals Present:	Initial when
	Parishipsen (MV Pate: 10 - 10 - 0)
Client Notification/ Resolution: Person Contacted:	Date/Time:Contacted By:
Comments/ Resolution:	

[☐] A check in this box indicates that additional information has been stored in ereports.

^{*}PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.





November 16, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30444377

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

(Greensburg, PA) - Revision 1 - This report replaces the October, 29, 2021 report. This project was revised on November, 1, 2021 to report Dissolved Zn on sample 005.

(Greensburg, PA) - Revision 2 - This report replaces the November, 01, 2021 report. This project was revised on November, 16, 2021 to report Dissolved Zn on sample 005.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotomka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc. Ms. Kaye Guille, ARM Group Inc.

J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.





1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30444377

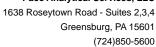
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30444377

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30444377001	RW23-MWI	Water	10/06/21 09:05	10/07/21 23:00
30444377002	RW23-MWS	Water	10/06/21 10:10	10/07/21 23:00
30444377003	RW22R-MWS	Water	10/06/21 11:30	10/07/21 23:00
30444377004	RW22R-MWI	Water	10/06/21 12:40	10/07/21 23:00
30444377005	RWP-MWI	Water	10/06/21 14:05	10/07/21 23:00
30444377006	RW06-MWI	Water	10/06/21 15:40	10/07/21 23:00



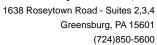
SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30444377

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30444377001	RW23-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444377002	RW23-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444377003	RW22R-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444377004	RW22R-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444377005	RWP-MWI	EPA 6010D	ACH1, MEH	2	PASI-BVWV
30444377006	RW06-MWI	EPA 6010D	MEH	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RW23-MWI	Lab ID: 30444377001		Collected: 10/06/21 09:05			Received: 10	/07/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	•	Method: EPA 6 ytical Services	•		thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	2590 110000	ug/L ug/L	1.0 2000	0.19 197	1 100	10/15/21 14:42 10/15/21 14:42	.0/20/21 .0.22		





Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RW23-MWS	Lab ID: 30444377002		Collected: 10/06/21 10:10			Received: 10/	/07/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP Dissolved 3010A	Analytical	Method: FPA 6	010D Pren	aration Met	hod: FI	PA 3010A			
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 lytical Services			hod: El	PA 3010A			
6010D ICP, Dissolved, 3010A Cadmium, Dissolved	,				hod: El	PA 3010A 10/15/21 14:42	10/20/21 15:37	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RW22R-MWS	Lab ID:	Lab ID: 30444377003			1 11:30	Received: 10/	/07/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	•	Method: EPA 6 ytical Services			thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	117 137000	ug/L ug/L	1.0 2000	0.19 197	1 100	10/15/21 14:42 10/15/21 14:42			





Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RW22R-MWI	Lab ID: 30444377004		Collected: 10/06/21 12:40			Received: 10	/07/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			hod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	2.5J 9800	ug/L ug/L	10.0 200	1.9 19.7	10 10	10/15/21 14:42 10/15/21 14:42	.0/20/21 .01	7440-43-9 7440-66-6	





Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RWP-MWI	Lab ID:	30444377005	Collected: 10/06/21 14:05			Received: 10	/07/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	•	Method: EPA 6 ytical Services			thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	4370 14300	ug/L ug/L	1.0 2000	0.19 197	1 100	10/25/21 12:56 10/25/21 12:56	10/27/21 15:59 10/29/21 17:41		



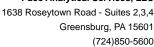


Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Sample: RW06-MWI	Lab ID:	30444377006	Collecte	d: 10/06/2	1 15:40	Received: 10	/07/21 23:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	paration Me	thod: El	PA 3010A			
,,	•	ytical Services							
Cadmium, Dissolved	604	ug/L	1.0	0.19	1	10/15/21 14:42	10/20/21 15:45	7440-43-9	
Zinc, Dissolved	85500	ug/L	2000	197	100	10/15/21 14:42	10/22/21 16:39	7440-66-6	





QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30444377

QC Batch: 87256 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30444377001, 30444377002, 30444377003, 30444377004, 30444377006

METHOD BLANK: 428535 Matrix: Water

Associated Lab Samples: 30444377001, 30444377002, 30444377003, 30444377004, 30444377006

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/20/21 15:18 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/20/21 15:18 ug/L

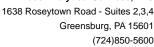
LABORATORY CONTROL SAMPLE: 428536

Date: 11/16/2021 10:55 AM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1090 109 80-120 ug/L Zinc, Dissolved 2000 2170 109 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 428550 428551 MS MSD 30444377001 Spike Spike MS MSD MS MSD % Rec Max Conc. Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 2590 1000 1000 3610 3560 102 80-120 20 Zinc, Dissolved 110000 2000 2000 80200 78700 -1480 -1550 80-120 2 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALITY CONTROL DATA

Project:

RWM GW Sampling

Pace Project No.:

30444377

QC Batch:

88235

QC Batch Method:

EPA 3010A

Analysis Method:

EPA 6010D

Analysis Description:

6010D MET Dissolved

MDL

Laboratory:

Pace Analytical Services - WestVirginia

Associated Lab Samples:

METHOD BLANK:

Matrix: Water

Associated Lab Samples: 30444377005

30444377005

Blank Result Reporting Limit

Analyzed

Qualifiers

Cadmium, Dissolved Zinc, Dissolved

ug/L ug/L

Units

30439085001

Result

Units

ug/L

ug/L

Units

2.6 20.0 U

1.0 20.0 0.19 10/27/21 15:45 2.0 10/27/21 15:45

LABORATORY CONTROL SAMPLE:

Parameter

Parameter

Cadmium, Dissolved

Date: 11/16/2021 10:55 AM

Zinc, Dissolved

Parameter

433901

Spike LCS Conc. Result

LCS % Rec % Rec Limits

Qualifiers

Cadmium, Dissolved 1000 1070 107 80-120 ug/L Zinc, Dissolved 2000 2130 106 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

433910

MSD Spike

Conc.

MS MSD

Result

% Rec Max RPD Limits **RPD** Qual

2.1 0.0040J mg/L

2000

MS

Spike

Conc.

1000

1000 922 2000 1800

Result

433911

984 92 1930 90

MS

% Rec

96

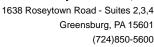
MSD

% Rec

80-120 6 80-120

20 20 7

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30444377

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

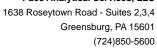
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 11/16/2021 10:55 AM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30444377

Date: 11/16/2021 10:55 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30444377001	RW23-MWI	EPA 3010A	87256	EPA 6010D	87712
30444377002	RW23-MWS	EPA 3010A	87256	EPA 6010D	87712
30444377003	RW22R-MWS	EPA 3010A	87256	EPA 6010D	87712
30444377004	RW22R-MWI	EPA 3010A	87256	EPA 6010D	87712
30444377005	RWP-MWI	EPA 3010A	88235	EPA 6010D	88573
30444377006	RW06-MWI	EPA 3010A	87256	EPA 6010D	87712

Face Analytical

UNAIN-OF-COOLOUT / MIRITURES Request DOCUMENT

The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be completed accurately.

Pace Project No / Lab I.D. Sample Conditions DRINKING WALEK Cooler (Y/N) MO#:30444377 OTHER G T Received on tce (Y/N) T NPDES T GROUND WATER T I., 1603 92/ TIME N N Requested Analysis Fittered (Y/N) L UST I RORA 7/9/01 10-1-4 DATE 2 30444377 Site Location STATE ACCEPTED BY! AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 21219 onis beviossic である muimbsO bevlossion S. rangel tAnalysis Test ↓ N/A Sempany Name: Tradepoint Attantic Nater Reference: Pace Project Samantha Bayura Meneger: Pace Profile #: Olher Matt Newman _CO_SS_SN Preservatives HOBN HCI CONH 10/6/24 1745 OS2H 600 Section C 1330 JOO TIME Pace Quote Acdress: Unpreserved SAMPLER NAME AND SIGNATURE # OF CONTAINERS 12/9/01 SAMPLE TEMP AT COLLECTION DATE 0240 No. 240 0.0 1130 905 IME COMPOSITE END/GRAB COLLECTED PATE 7 210102103 RELINQUISHED BY / AFFILIATION ē RWM GW Sampling Ţ 0 START OATE Required Project Information: Report To: Matt Newman Copy To: Stew Kabis 7 N to P N X £ 4 (G=GRAB C=COL:P) SAMPLE TYPE Project Number: MATRIX CODE Project Name: Section B PO Number: Valid Matrix Codes DRINGING WATER DW
WATER WT
WASTE WATER WW
PRODUCE P
SCILICOLD OL
OL
WPE WP
ARR AR
TISSUE OT f data package is required, attach data package Ru 27-R-Put 5 day RW22 R-MUS RUDG-BOLLH Sparrows Point, MD 21219 RW 23-MUT 1600 Sparrows Point Blvd ADDITIONAL COMMENTS J23-m RwP-rwt Data Validation Required? (YM): Data Package Required? (Y///): (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE SAMPLE ID Tradepoint Atlantic ă Required Client Information Section A Required Client Information: Requested Due Date/TAT: company: Email To: ddress: 2 4. 2 # WB1

(N/A)

F-ALL-Q-020rev.06, 2-Feb-200,

9/01

DATE Signed

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

SIGNATURE of SAMPLERS

PRINT Name of SAMPLER:

Pittsburgh Lab Sample Condi	tion	Upo	n Re	eceipt				
Pace Analytical Client Name:		ro	der	20mr	Project #		- 5	1
Courier: Fed Ex UPS USPS Clien	t 🗆	Comm	ercial	Pace Other		Label_M	7 10/15/21)
Tracking #:				_	LIN	1S Login , N	1 🛌 🗆	
Custody Seal on Cooler/Box Present: yes	42	no	Seal	s intact: 🔲 yes 🔎	⊒ ño	V (437	!
Thermometer Used	Туре	of Ice:	(We	t Blue None			4	
Cooler Temperature Observed Temp 5, (٧	• C	Corr	rection Factor: **C+	C Final Ter	mp: <u>C(9</u> ·c	304443	TNTOC
Comments:	Yes	No	N/A	pH paper Lot#	Date and Initia	M (0-5-)	98	TPONEDOTAL
Chain of Custody Present:	استعني.			1.				
Chain of Custody Filled Out;				2.			#S SHE	CL IENT.
Chain of Custody Relinquished:	(3.			3 5	
Sampler Name & Signature on COC:				4.]	_
Sample Labels match COC:	_			5.			1	
-Includes date/time/ID Matrix:	W							
Samples Arrived within Hold Time:				6.			1	
Short Hold Time Analysis (<72hr remaining):				7.			1	
Rush Turn Around Time Requested:				8,			1	
Sufficient Volume:	<u>~</u>			9.			1	
Correct Containers Used:				10.]	
-Pace Containers Used:	,==,							
Containers Intact:				11.			1	
Orthophosphate field filtered			ţ	12.				
Hex Cr Aqueous sample field filtered			ş	13.				
Organic Samples checked for dechlorination:			١	14.				
Filtered volume received for Dissolved tests			1	15.				
All containers have been checked for preservation.)			16.				
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	,						
All containers meet method preservation requirements.	_			Initial when completed K	Date/time of preservation			
				Lot # of added preservative		. '		
Headspace in VOA Vials (>6mm):			~-	17.				
Trip Blank Present:			~	18.				
Trip Blank Custody Seals Present			٠,			;		
Rad Samples Screened < 0.5 mrem/hr			ب	Initial when completed: MLM	Date: (0~8	Survey Meter SN:		
Client Notification/ Resolution:					10000 (0 0	0.1	l	
Person Contacted:			Date/	Time:	Contacted	By:	•	
Comments/ Resolution:						<u></u>		
		<u>. </u>						

 \square A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Pace Greensburg Lab -Sample Container Count

Profile Number 3373

Client

	SPLC											
	мекп											ľ
	WGFU											
	VOAK											
	Uebv											
	T65V											
	Н65Л											
	ause											
10	S690											
Notes	UE9B											
	BP3S											
	BP3N	7		حسورسه			->					
	BP3C											
	US98									,		
	8248											
	UI48											
	NI-da											
	กรอย											
	กเอย											
	TGĐA											
	UBĐA											
\sim	UEĐA		,									
Kenn Gee Sompling	SE9A											
3	USĐA											
ک ک	T19A											
3	SFÐA											
•	нгэч					:						
	XintsM	4 KA				D.	_ -					•
Site	Sample Line Item	-	2	က	4	5	9	7	80	6	10	

	Р	Plastic / Misc.	Misc.
GCUB	GCUB 1 Gallon Cubitainer	EZI	5g Encore
12GN	12GN 1/2 Gallon Cubitainer	VOAK	Kit for Volatile Solid
SP5T	SP5T 120mL Coliform Na Thiosulfate		Wipe/Swab
BP1N	BP1N 1L plastic HNO3	ZPLC	Ziploc Bag
BP1U	BP1U 1L plastic unpreserved		
BP3S	BP3S 250mL plastic H2SO4	WT	Water
BP3N	BP3N 250mL plastic HNO3	SL	Solid
BP3U	BP3U 250mL plastic ur	A A C.C.	
BP3C	BP3C 250ml plastic N/	MO4 1 304446 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
BP2S	BP2S 500mL plastic H PM. CMB	ć	
BP2U	BP2U 500mL plastic ur	CLIENT: TRADEPOINT	bue Date: 10/15/21 INT

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ı			
ı			
_			

500mL clear glass unpreserved

4oz wide jar unpreserved

WGFU

BG2U

L amber glass Na Thiosulfate

AG1T BG1U AG3S

AG2U

500mL amber glass unpreserve

8oz wide jar unpreserved

WGKU

L clear glass unpreserved 50mL amber glass H2SO4

40mL clear VOA vial Na Thiosul

40ml, clear VOA vial

VG9U

40mL clear VOA vial HCI

VG9H

VG9T

100mL amber glass unprserved

4oz amber wide jar

JGFU

L amber glass H2SO4 L amber glass HCl

4G18 4G1H

Gallon Jug

N S

40mL amber VOA vial H2SO4

DG9S

Gallon Jug with HNO3

AG5U

GST

Glass

Container Codes

739				s Pre-Logged	into eCC	DC.	Cert	e Of O	ed:	X Yes		No		- /-			e Analytica www.pacelabs.com
Table	rkorder: 30444377 Wor	korder N	lame: RWM (SW Sampling			Own	er Rec	eived	Date:		2021	Result Analys	Its Red	queste	d By	: 10/15/2021
Meg Pace 1638 Suite Gree	gan J. Smetanka e Analytical Pittsburgh 8 Roseytown Road es 2,3,4 ensburg, PA 15601 ne (724)850-5600		Pace 225 Ir Beave	Beaver West Vidustrial Park R er, WV 25813 e (800)999-010	lD .				ved Cd, Zn			questec	L Analys				a a
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Pres	erved Cor	ntainers	6010C Dissolv								LAB USE ONLY
1	RW23-MWI	PS	10/6/2021 09:05	30444377001	Water	1			X								
2	RW23-MWS	PS	10/6/2021 10:10	30444377002	Water	1			X								
3	RW22R-MWS	PS	10/6/2021 11:30	30444377003	Water	1			Х								
4	RW22R-MWI	PS	10/6/2021 12:40	30444377004	Water	1			Х		\Box			Ш		\sqcup	
5	RWP-MWI	PS	10/6/2021 14:05	30444377005	Water	1			X		\Box			\sqcup		\sqcup	
6	RW06-MWI	PS	10/6/2021 15:40	30444377006	Water	1			Х	$oxed{oxed}$				$\perp \perp$			
Trans	sfers Released By		Date/Time	Received E	By y			Date/1	ime 21 3 101	1				Commen	its		5 Days

Received on Ice Y or N

Custody Seal Y or N

°C

Samples Intact Y or N

Cooler Temperature on Receipt

LIO# . 7392872

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

7392872 10/19/21

CLIENT: PACEPITT Due Date:

To:

Beaver West Virginia
Industrial Park RD
Beaver, WV 25813
Phone (800)999-0105

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ed by sending lab) Page 19 of 23

10/15/2021	REQUESTED COMPLETION DATE: 10/15/2021
10/11/21	Date Prepared: 10/11/21
	Check Box for Consolidated Invoice:
	Receiving Project No:
30444377	Sending Project No. 30444377
to see the second	2

	to sending project manager.	All questions should be addressed to sending project manager.	All
STD REPORT	QC Deliverable	MD	State of Sample Origin
Tradepoint Atlantic	External Client	IR73-WestVirginia	Receiving Region
Megan J. Smetanka	Serialing Froject Mgr.	וואסט-רוונאטטוקוו	Seliging Region

Requested Reportable Units	Report Wet or Dry Weight? Dry Weight RWO Lab Need to run? Cert	? Dry Weight	IRWO	Lab Need to	run? Cert. Nee	eded
	WORK RI	WORK REQUESTED				
Method Description	Container Type Quantity of Preservative Quantity of Unit Price	Quantity of containers	Preservative	Quantity of Samples	Unit Price	Amount
6010C Dissolved Cd, Zn	BP3N	Т	HNO3	တ	\$22.00	\$132

Special Requirements: Report D, QC Limits, MDLs (D), Enviroanalytics (841)

TOTAL

\$132.00

\$26.40	\$105.60	\$132.00	TOTAL	* Custom Revenue Allocation
\$26.4	\$105.60	\$132.00	20	Metals
Client Services Dept. Sending Region (20%)	Receiving Region (80%)			Receiving Region Department
Vilocation	Revenue Al	Acctg. Code Totals from above	Acctg. Code	

Sending Region: L

×

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.

DISPOSITION of FORM

Original sent to the receiving lab - Copy kept at the sending lab.

5 Days

CHMIN-OF-COSTODI / Milalytical Nequest Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

MO#: 7392872

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Sectio Regulra	on A ed Client Information:	Section I Required		t Inforr	mation:						ion C e Info		lon:	- 4	••	,	1-1.				PM:	BMJ			D	ue l	Date:	10/19/	21	
Compa	The state of the s	Report To:	_	10000						Atten		projetice.	att N	ewm	an						CLIE			CEP	ITT					
Address	s: 1600 Sparrows Point Blvd	Сору То:	Stev	w Kat	ois				\neg	Comp	any N	lame:	Tra	depo	oint A	Atlant	tic				V									
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	Sparrows Point, MD 21219	<u> </u>								Acdre		16	ии фра	mows i	Point 6	sivo Sp	BHOW	VS POI	III, IVAU Z	1219	- 60		- 10							
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																		R	eque	sted	Analy	sis Fi	tere	d (Y/N	4)					
	Section D Valid Matrix C Required Client Information MATRIX	CODE	Π			COLL	ECTED	,				Pr	eser	etive	es		Y/N													
	DRINKING WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIPE	DW	(see valid codes to left)	WB C=COLP)		FOOTE ART	СОМР	OSITE GRAB	COLLECTION			٠٠ (دنيا																		,
ITEM#	SAMPLE ID OTHER TISSUE (A-Z, 0-9 / ,-) TISSUE Sample IDs MUST BE UNIQUE	OT TS	MATRIX CODE (See v	SAMPLE TYPE (G=GRAB	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COL	# OF CONTAINERS	Unpreserved	HNO.	HCI	NaOH	Na ₂ S ₂ O ₃ Other	DI Water	Analysis Test	Dissolved Cadmium	Dissolved Zinc								Pace	Project	No./ Lab	i.D.
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3	RWZZR-MWS		wt	5				1130		ì		\perp	Щ		1	Ш		X	X				_		\sqcup	_ _				
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5	RWP-MWT		Wi	6				1465		7		1			_	\perp		X	X		\vdash	$\perp \perp$	_		\vdash					
6	RWO6-MWI		WT	0				1540			\perp	1	1_	_	4	Ш		X	X	4	\vdash	\perp	_	_		_				
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Data	Package Required? (Y/N):)	d'y	2	0	2){	2		10/6	21	16	00	ŀ	34	\geq	$\hat{=}$		P	AC	E				16		1	1603				
Data	Validation Required? (YAN):	B	EB-	1	10	44	-	10/6	121	17	145	5 9	0	5	ملسح		2	350				10	7-0	M	1	900	4			
f data	package is required, attach data package	1/1	NO.	<u> </u>	5			070	1	23	00	+		L	2 V	Ten	PA	1				N	77		13	Ke	4.9	V	2	
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	"Important Note: By signing this form you are accepting Pace"	s NET 30 day	payme	nt term	s and anne	eing to late	charges	of 1.5% per	month	fo an	iovoi y	ces no	bisq to	within :	30 days	s.										-	-ALL-Q-02	Jrev.06, 2-	-e0-200/	

	d in ereports.	n has been store	nformatio	tional i	☐ A check in this box indicates that additional information has been stored in ereports.
			ļ		Comments/ Resolution:
*	Contacted By:	Time:	Date/Time:		Client Notification/ Resolution: Person Contacted:
	Date: (c-8 SN:	completed: KL	ı		The compression of the man
	Sinvey Meter	initial when			Trip Blank Custody Seals Present
		, œ	3		Trip Blank Present:
		17.	1		Headspace in VOA Vials (>6mm):
		Lot # of added preservative			
ä	Date/time of preservation	Initial when completed R		\	All containers meet method preservation requirements.
				Radon,	exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix
		16.)	All containers have been checked for preservation.
		15,	1		Filtered volume received for Dissolved tests
		14.	7		Organic Samples checked for dechlorination:
		13,	ï		Hex Cr Aqueous sample field filtered
	2	12	3		Orthophosphate field filtered
		11.	-	ı	Containers Intact:
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		10.		l,	Correct Containers Used:
		9.		J	Sufficient Volume:
		œ	1		Rush Turn Around Time Requested:
		7.	1		Short Hold Time Analysis (<72hr remaining):
		6		\	Samples Arrived within Hold Time:
				Z	-Includes date/time/ID Matrix:
		S		ı	Sample Labels match COC:
		4.		1	Sampler Name & Signature on COC:
W		3.)	Chain of Custody Relinquished:
0		2.		ı	Chain of Custody Filled Out:
#				j	Chain of Custody Present:
: 73	Date and Initials of person examining contents:	pH paper Lot#	No N/A	Yes	Comments:
392			Corr		Cooler Temperature Observed Temp \sqrt{C}
28		Blue None		Type of Ice:	8
72		Seals intact:		§ [⊅	Custody Seal on Cooler/Box Present: yes
2					Tracking #:
	M lade I	Page Other	ommercial	- - -	Courier: Fed Ex IBS
	Project #	PMY	Yode PomY	1-	Face Analytical Client Name:
		الرائد	Comment of the invocation	֝֟֝֟֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	י ייייטימי שיי בעד טעוווףיט טעוועו

PM: BMJ

CLIENT: PACEPITT

Due Date: 10/19/21

Page 21 of 23

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

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JN	Gallor	n Jug w	ith HNO	3		DG9S				vial H2	2804	1		GCUB	-	-	-	-			EZI	Auvo-	5g En	соге			174		
35U	-			prserved		VG9U			VOA vi	~~~~~				12GN							VOAK				ile Solic	1			
JN	100mL 1 Gallor		giass Na	a Thiosu	irate	VG9T VG9H	-		VOA vi	ial Na T	niosul				120ml			Inio	sultate		ZPLC		Wipe/ Ziploc						
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31H	1L amb	~							-			1		region covers.	250ml					1	WT		Water	-		0.00.00.00			********
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31U			unprese			AG2U				s unpre	serve				250ml			11	0#	. ว	Λ	// /	2	77	ل: ــــــــــــــــــــــــــــــــــــ				
33S	250mL	amber	glass H2	2804		WGKU	8oz wi	ide jar	unpres	served				BP3C	250ml	plastic	N/	M	U#	. 3	U4	44	131			_			

BP2S 500mL plastic H

BP2U 500mL plastic ur

PM: SMB

CLIENT: TRADEPOINT

G3U

250mL amber glass unpreserved

Due Date: 10/15/21

LIMS73 Lab Sample Condition Upon Receipt (West Virgini WO#: Face Analytical

Client Name:

CLIENT: PACE

Due	392
Date:	872
10/19/28 Page 28	of 23

	Comments/ Resolution:
Date/Time: Contacted By:	Client Notification/ Resolution: Person Contacted:
completed: (Dw Date: 10-12-2)	
	Trip Blank Custody Seals Present:
17.	Trip Blank Present:
16.	Headspace in VOA Vials:
Tests not preserved:	
on requirements: Initial when Date: D - Q - Q	All containers meet method preservation requirements:
	exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix
preservation:	All containers have been checked for preservation:
i tests:	Filtered volume received for Dissolved tests:
es, indicate acid lot #)	-pH adjusted within 24 hours? (If yes, indicate acid lot #)
73	Hex Cr Aqueous sample field filtered:
12.	Orthophosphate field filtered:
1.	Containers Intact:
	-Pace Containers Used:
10.	Correct Containers Used:
\	Sufficient Volume:
· Sday	Rush Turn Around Time Requested:
naining):	Short Hold Time Analysis (<72hr remaining):
	Samples Arrived within Hold Time:
Matrix: W Lab Labeled by: (Q) Checked by(Q)	-Includes date/time/ID
	Sample Labels match COC:
1. Ved from Pit	Sampler Name & Signature on COC:
3.	Chain of Custody Relinquished:
2.	Chain of Custody Filled Out:
,1,2	Chain of Custody Present:
Yes No N/A	
Date and Initials of person examining contents: Ow (0-12-	Comments:
0	Cooler Temperature C
of ice: (Wey Blue None	Thermometer Used
yes	Custody Seal on Cooler/Box/Containers Present:
USPS Client Commercial Pace Comer. Of a Torres	Tracking #:
]]

A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

Greensburg, PA 15601 (724)850-5600



October 25, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30444395

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Leandra Glumac, ARM Group Inc.

Ms. Kaye Guille, ARM Group Inc.

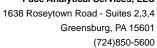
J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30444395

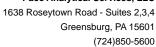
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30444395

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30444395001	RWL-MWI	Water	10/07/21 08:45	10/07/21 23:00
30444395002	RWL-MWS	Water	10/07/21 10:00	10/07/21 23:00
30444395003	RWK-MWI	Water	10/07/21 11:20	10/07/21 23:00
30444395004	RWK-MWS	Water	10/07/21 12:30	10/07/21 23:00
30444395005	RWJ-MWI	Water	10/07/21 13:55	10/07/21 23:00
30444395006	RWJ-MWS	Water	10/07/21 14:50	10/07/21 23:00



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30444395

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30444395001	RWL-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444395002	RWL-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444395003	RWK-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444395004	RWK-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444395005	RWJ-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444395006	RWJ-MWS	EPA 6010D	MEH	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWL-MWI	Lab ID:	30444395001	Collected	d: 10/07/2	1 08:45	Received: 10	/07/21 23:00 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	•	Method: EPA 6 ytical Services	•		thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	1230 97000	ug/L ug/L	1.0 2000	0.19 197	1 100	10/15/21 14:42 10/15/21 14:42	.0,20,20		





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWL-MWS	Lab ID:	30444395002	Collecte	d: 10/07/2	10:00	Received: 10/	/07/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: EF	PA 3010A			
			- · · · · · · · · · · · · · · · · · · ·						
	Pace Anal	ytical Services	- WestVirgi	nia					
Cadmium, Dissolved	Pace Anal	ytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	10/15/21 14:42	10/20/21 15:53	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWK-MWI	Lab ID:	30444395003	Collecte	d: 10/07/2	11:20	Received: 10/	07/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6			hod: El	PA 3010A			
6010D ICP, Dissolved, 3010A Cadmium, Dissolved	,	Method: EPA 6 ytical Services ug/L			hod: El		10/20/21 15:55	7440 42 0	





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWK-MWS	Lab ID:	30444395004	Collecte	d: 10/07/2	1 12:30	Received: 10	/07/21 23:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prer	paration Me	thod: Fl	PA 3010A			
00.000.00.4.00.00.00.00.00.00.00.00.00.0	,	lytical Services	'			. , , , , , , , , , , , , , , , , , , ,			
Cadmium, Dissolved	1.0 U	ug/L	1.0	0.19	1	10/15/21 14:42	10/20/21 15:57	7440-43-9	
Zinc, Dissolved	18500	ug/L	20.0	2.0	4	10/15/21 14:42	10/20/21 15:57	7440 66 6	





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWJ-MWI	Lab ID:	30444395005	Collecte	d: 10/07/2	1 13:55	Received: 10	/07/21 23:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Me	hod: El	PA 3010A			
, 2.000, 00.00	,	lytical Services							
Cadmium, Dissolved	49.1	ug/L	1.0	0.19	1	10/15/21 14:42	10/20/21 15:59	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Sample: RWJ-MWS	Lab ID:	30444395006	Collecte	d: 10/07/2	14:50	Received: 10/	07/21 23:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: Ef	PA 3010A			
,,,	•								
	Pace Anal	ytical Services	- WestVirgii	nia					
Cadmium, Dissolved	Pace Anal 0.22J	ytical Services ug/L	- WestVirgii 1.0	nia 0.19	1	10/15/21 14:42	10/20/21 16:01	7440-43-9	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30444395

QC Batch: 87256 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30444395001, 30444395002, 30444395003, 30444395004, 30444395005, 30444395006

METHOD BLANK: 428535 Matrix: Water

Associated Lab Samples: 30444395001, 30444395002, 30444395003, 30444395004, 30444395005, 30444395006

Blank Reporting Qualifiers Parameter Units Result Limit MDL Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/20/21 15:18 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/20/21 15:18 ug/L

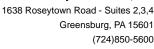
LABORATORY CONTROL SAMPLE: 428536

Date: 10/25/2021 02:30 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1090 109 80-120 ug/L Zinc, Dissolved 2000 2170 109 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 428550 428551 MS MSD 30444377001 Spike Spike MS MSD MS MSD % Rec Max Conc. Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 2590 1000 1000 3610 3560 102 80-120 20 Zinc, Dissolved 110000 2000 2000 80200 78700 -1480 -1550 80-120 2 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30444395

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 10/25/2021 02:30 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30444395

Date: 10/25/2021 02:30 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30444395001	RWL-MWI	EPA 3010A	87256	EPA 6010D	87712
30444395002	RWL-MWS	EPA 3010A	87256	EPA 6010D	87712
30444395003	RWK-MWI	EPA 3010A	87256	EPA 6010D	87712
30444395004	RWK-MWS	EPA 3010A	87256	EPA 6010D	87712
30444395005	RWJ-MWI	EPA 3010A	87256	EPA 6010D	87712
30444395006	RWJ-MWS	EPA 3010A	87256	EPA 6010D	87712

WO#: 30444395 30444395 CHAIN-UF-COOLOUL / MIRIYIICAI REQUESI DUCUIIIEIIL The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be comr Section C Required Project Information: Section B Pace Analytical "

Pace Project No./ Lab I.D. (N/A) Sample Conditions --- GROUND WATER IN DRINKING WATER Cooler (Y/N) OTHER Ses Ice (Y/V) B D Received on 1... भ्र TIME T RCRA Requested Analysis Filtered (Y/N) 10/2/21 19-81 16-2-31 DATE 10(1)O[Site Location STATE UST DATE Signed (MIM/DD/YY): ACCEPTED BY / AFFILIATION 1600 Sparrows Point Blvd Sparrows Point, Md 213 Dissolved Zinc muimbsO beviossi Ň/ Analysis Test Company Name: Tradepoint Atlantic 3 Samantha Bayura Jiner Invoice Information: At ention: Matt Newman Preservatives _EO_SS_SBN HOBN ICI JSA Pace Quote
Reference:
Pace Project
Menager:
Pace Profile #: *OS^zH 10001 Acdress: 2300 Unpreserved SAMPLER NAME AND SIGNATURE # OF CONTAINERS SAMPLE TEMP AT COLLECTION 12/1/21 10/7 (21 PRINT Name of SAMPLER: SIGNATURE of SAMPLER: DATE 1120 200 10/11/1845 200 355 1457 TIME COMPOSITE 210101210 COLLECTED DATE RELINQUISHED BY / AFFILIATION RWM GW Sampling TIME COMPOSITE PATE Report To: Matt Newman Popy To: Stew Kabis しら <u>10</u> ℓ_{i} (G=GRAB C=COMP) SAMPLE TYPE Project Number: (see valid codes to telt) MATRIX CODE roject Name: O Number Valid Matrix Codes

MATRIX
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FRODUCT
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SOLLSCUID
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TISSUE If data package is required, attach data package checklist. 5 day Zimwi-このと 2m1/ - my Sparrows Point, MD 21219 1800 L - mws 1600 Sparrows Point Blvd ADDITIONAL COMMENTS (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE Data Validation Required? (서/시): Data Package Required? (Y/M) SAMPLE 1D Tradepoint Atlantic Fax Required Client Information FE.3 アジア Required Client Information: х 3 3 Requested Due Date/TAT 3 Company: Email To: ddress: \$ က 9 o ŧ 2 # WBI Page 14 of 21

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

Pace Analytical Client Name:		You	epo	mt	Project #
Courier: Fed Ex UPS USPS Clier	nt 🔲	Comm	ercial	Pace Other	Label_/^\
Tracking #:					LIMS Login //
Custody Seal on Cooler/Box Present: yes		- no	Seals	s intact: ☐ yes 🔑	
Thermometer Used 13		of Ice:		<i>)</i>	
Cooler Temperature Observed Temp	C	• C		ection Factor: C.	°C Final Temp: 2.8
Temp should be above freezing to 6°C	• 1	-	0011	Codon racion. Ci	- I mai remp. Ox v
				pH paper Lot#	Date and Initials of person examinit
Comments:	Yes	No	N/A	/cvani	contents:
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Chain of Custody Filled Out:				2.	
Chain of Custody Relinquished:	_			3.	, , ,
Sampler Name & Signature on COC:	_			4.	
Sample Labels match COC:	-			5.	
-Includes date/time/ID Matrix:C	V				
Samples Arrived within Hold Time;	_			6.	
Short Hold Time Analysis (<72hr remaining):		_		7.	
Rush Turn Around Time Requested:		PU	7 8	8.	
Sufficient Volume:				9.	
Correct Containers Used:	_			10.	
-Pace Containers Used:	_				
Containers Intact:	/			11.	
Orthophosphate field filtered				12.	
Hex Cr Aqueous sample field filtered			-7	13.	
Organic Samples checked for dechlorination:			٦.	14.	
Filtered volume received for Dissolved tests			-	15.	
All containers have been checked for preservation.				16.	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon				
All containers meet method preservation				Initial when	Date/time of
equirements.				completed / // Lot # of added	preservation
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leadspace in VOA Vials (>6mm):			_	17.	
rip Blank Present:			•	18,	
rip Blank Custody Seals Present			١		
Rad Samples Screened < 0.5 mrem/hr			1	Initial when completed:	Survey Meter Date: 0 - 3 SN:
lient Notification/ Resolution:		i			
Person Contacted:		ĺ	Date/1	ime:	Contacted By:
Comments/ Resolution:					<u> </u>

CLIENT: TRADEPOINT

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

 \square A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

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Pace Analytical "

Client

Profile Number

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	U69V												Plastic / Misc.	5g Encore	or Vola	
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	Sample Line			 					10	1-1	12	aine			AG5U	1

 EZI	VOAK	lte l	ZPLC		WT	Ü
GCUB 1 Gallon Cubitainer	12GN 1/2 Gallon Cubitainer	SP5T 120mL Coliform Na Thiosulfate	BP1N 1L plastic HNO3	stic unpreserved	plastic H2SO4	pa plastic HNO3
GCUB	12GN 1	SP5T 1	BP1N 1		1300	(C) 117
nL amber VOA vial H2SO4	nL. clear VOA vial	nL clear VOA vial Na Thiosuf	nL clear VOA vial HCl	amber wide jar	110# - 20443355	

40mL clear VOA vial Na Thiosul 40mL clear VOA vial HCI 4oz amber wide jar

VG9T VG9H

1L amber glass H2SO4

AG1S AG1H

Gallon Jug

3 2

L amber glass HCI

NGFU IGFU

BG2U AG2U

L amber glass Na Thiosulfate

AG1T BG1U BP2U 500mL plastic unpreserved

plastic H2SO4

CLIENT: TRADEPOINT

NGKU

250mL amber glass unpreserved

250mL amber glass H2SO4 1L clear glass unpreserved

Wipe/Swab Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

775			Custo	yk												1	Pace	e Analyticai
739		III .] Sample	s Pre-Logged	into eCC	OC.			Of O		MD X Yes	Г	No		1	/_/	1 acc	www.pacelabs.com
Wo	orkorder: 30444395	Workorder N	Name: RWM	GW Sampling			C	Owne	er Rec	eived	Date:	10/7	/2021	Res	ults R	eques	sted By	: 10/15/2021
Rep	ort To		Subcontra	ct To								Re	equeste	d Analy	sis		Yatar	
Pad 163 Suit Gre	gan J. Smetanka ce Analytical Pittsburgh 88 Roseytown Road tes 2,3,4 eensburg, PA 15601 one (724)850-5600		225 Ir Beave	Beaver West V ndustrial Park R er, WV 25813 e (800)999-010	RD					Dissolved Cd, Zn								
						Pre	eserved	d Con	tainers			1 1					1 1	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3				6010								LAB USE ONLY
1	RWL-MWI	PS	10/7/2021 08:45	30444395001	Water	1				Х								
2	RWL-MWS	PS	10/7/2021 10:00	30444395002	Water	1				Х								
3	RWK-MWI	PS	10/7/2021 11:20	30444395003	Water	1				X								
4	RWK-MWS	PS	10/7/2021 12:30	30444395004	Water	1				X								
5	RWJ-MWI	PS	10/7/2021 13:55	30444395005	Water	1				Х								
6	RWJ-MWS	PS	10/7/2021 14:50	30444395006	Water	1				Х								
Man.										14.16					Comn	nents		
1 2 3																		
Cod	oler Temperature on I	Receipt	°C Cus	stody Seal `	Y or N	1		Rece	eived	on Ice	Y or	· N			Sam	oles Ir	tact Y	or N

LIOH: 7392878

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.



The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be comp WO#:7392878

Due Date: 10/19/21

****	d Client Information:	Section Required		t Inform	nation:						tion C		lon:									T: I		PA	CEP	ITT					
Company	y: Tradepoint Atlantic	Report To	: Mat	t New	man					Ate	ntion:	M	att N	ewma	an			***************************************													
Address:	1600 Sparrows Point Blvd	Сору То:	Stev	w Kab	is					Com	pany N	vame:	Tra	depo	int A	tlant	ic			•	44,54	ga 1949	provin	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
	Sparrows Point, MD 21219						**********			Acdı	ess:	160	00 Spai	TOWS P	oint B	lvd Sp	arrow	vs Poi	nt, Md 2	12			1	oriu	UND Y	VATER	[- D	RINKIN	G WATE	R	
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c	PRODUCT SOIL/SOLID OIL WIPE	WT WW P SL OL WP	alid codes to left)	AB C=COMP)	COMP	POSITE	COMP	OSITE GRAB	COLLECTION			Pr	eserv	ative	S		NIA														
ITEM#	SAMPLE ID AR OTHER (A-Z, 0-9 / -) TISSUE Sample IDS MUST BE UNIQUE	AR OT TS	MATRIX CODE (see valid	SAMPLE TYPE (G=GRAB	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLL	# OF CONTAINERS	Unpreserved	HNO3	HCI	NaoN Nasso	Other	1	Analysis Test		Dissolved Zinc									Pace	Project	No / I	.ab I.D.
1.	RWL-MWI		WT	6		ίΘ	1/24	-	-	1		1	\sqcap		Ĭ			X	Ż	1	\neg	\top	T	十	1		a		· · · · · · ·	110.11	
2	RUL-MUS		164	6			(1000		i		1	П	\top	1	П		X		T	7	T	Ħ			\vdash	G				
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4	RWK-mus		wit					1230		1	\Box	1	П	T	1		1	X	V		7	" -	H	7	1		CO	•			
5	RWJ-MWI			6	-			1355		1		1	\Box				Ī	X.	$\hat{\chi}$	П							æ		***************************************		
6	RUJ - MUS	1120	WT				1	1450		1		1	П	1	\Box	П	ı	V		П	\neg	+	П	1	\top	\vdash		Ž.			
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Data P	ackage Required? (Y/M)		,		<u> </u>			1-1-	10.		-	7	701	7		+	-	1000	- 200 N	WWW.		1.	-	7	1	-	<u> </u>		oumpio o	Tionton	
Data V	alidation Required? (Y/N):)	1	100	\preceq	PP	FUE	===	ר 01 נר 0			00		3	<u> </u>		70	_	-	E		·····	to	7-1	21	H	160		7		+	
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	Important Note: By signing this form you are accepting Pace's I	VET 30 day p	ayment	terms a	nd agreein	ng to late o	harges of	1.5% per	nonth i	o any	invoice	es not	paid wit	hin 30	days.	0	awith:	AV.	-	-			-			F	F-ALL-C	2-020r		Feb.99	9718 of 21

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		SN:	Date:(0~8	completed: YAC	,				-
	Survey Meter	Survi		Initial when		1		Rad Samples Screened < 0.5 mrem/hr	
				Ģ	,	-		Trin Blank Custody Spale Drasant	
				18	i	-		Trip Blank Present:	****
				17.)			Headspace in VOA Vials (>6mm):	
				Lot # of added preservative					,
an and			Date/time of preservation	completed by		-		requirements.	
						idon,	Phenolics, Ra	exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix	
				16.		. 3	ation.	All containers have been checked for preservation.	
				15.	ſ	_	sts	Filtered volume received for Dissolved tests	
				14.	ز		orination:	Organic Samples checked for dechlorination:	
				13.	3			Hex Cr Aqueous sample field filtered	200000
				12.	١	-		Orthophosphate field filtered	
				11.				Containers Intact:	
						,		-Pace Containers Used:	
				10.		7.	Γχ.	Correct Containers Used:	
				ģ		1		Sufficient Volume:	
				8.	pres	1		Rush Turn Around Time Requested:	
w				7.		3	lining):	Short Hold Time Analysis (<72hr remaining):	
				б.		7		Samples Arrived within Hold Time:	
						۱	Matrix: OK	-Includes date/time/ID	
				5.		<u>\</u>	<u> </u>	Sample Labels match COC:	
				4.		(Sampler Name & Signature on COC:	
	h			3.		1		Chain of Custody Relinquished:	
	10			2.		j		Chain of Custody Filled Out:	
				1.		_		Chain of Custody Present:	
PACE	:7	Jac !	contents;	/cvan	N/A	Yes No		Comments:	
PIT	on examining	itials of n	Date and in	pH paper Lot#			î	reez	
Due	٠, م		°C Final Temp:	Correction Factor: C.		ى (ر		Cooler Temperature Observed Temp	
Da Da	00			Blue None	e: (Wed	Type of Ice:		Thermometer Used S	
te:	4	1	E E	Segus intact: Uyes	Seals	S	☐yes	Custody Seal on Cooler/Box Present:	
10/:	E	Label		Commercial Pace Other	mercial	Com	S Client	Courier: Fed Ex UPS USPS Client	
19/2			,		-	-			
21			Project #	₹	Youdenow +	7	ame:	Face Analytical Client Name:	
				Seihr.	טוו ווע	ָ יַטְ	ם רסוזמונוי	י וויפאמיאו דמא המווואום החומוווחוו האחודו ובהפואר	

CLIENT: PACEPITT

Page 19 of 21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

	Pace	Analy	⁄tical ື					P	ace	Gree	ensk	ourg	Lab	-Sai	mple	Co	ntaiı	ner	Cou	nt					ω	,			
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te		R	um	GW)														Note	s									
ample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	врзс	BP3N	BP3S	вьзо	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC	
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JN	Gallon Jug with HNO3 DG9S 40mL ar										2804					********	bitaine				EZI		5g En						
35U															2 Gallon Cubitainer					VOAK	(ile Solic	<u>i</u>				
35T	T 100mL amber glass Na Thiosulfate								***************************************	ial Na T	Thiosul			SP5T 120mL Coliform Na Thiosulfate I BP1N 1L plastic HNO3 Z						I ZPLC		-	Swab						
JN	I Company and The						8		VOA vi			1		BEJN	1L. pia			1			ZPLC		Ziploo	Bag					
<u>31S</u>	S 1L amber glass H2SO4 JGFU 4oz amber wide jar								1c unpreserved																				
31H L amber glass HCl																													
31T		************				BG2U						e Dat	0. 1	0/19	/21	-	tic HNC			1	SL		Solid						
<u>31U</u>	B.		unprese			AG2U		PM: I	BMJ			e vat				-	tic unpi		ea	ł	OL WP			aqueou	ıs liquic	ī			
338			glass H			WGKU	2	CLIE	NT:	PACEF	TTIC					-	ic NAO			ł	WP		Wipe						
33U	250mL	amber	glass ur	preserve	ed		L									as	tic H2S	U4		1									

BP2U 500mL plastic unpreserved

LIMS73 Lab Sample Condition Upon Receipt (West Virginia

MO# Due Date: 10/19/21 Page 21

	Comments/ Resolution:	
Date/Time:Contacted B <u>y</u> ;	Client Notification/ Resolution: Person Contacted:	Client Not
completed: Date: 10-12-21		
	Trip Blank Custody Seals Present:	Trip Blank
177	Present	Trip Blank Present:
16.	Headspace in VOA Vials:	Headspace
Tests not preserved:		
completed (DA) Date: 10-12-21	All containers meet method preservation requirements:	All containe
	exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix	exceptions
15.	All containers have been checked for preservation:	All contains
14.	Filtered volume received for Dissolved tests:	Filtered vol
	-pH adjusted within 24 hours? (If yes, indicate acid lot #)	-рН аdj
13	Hex Cr Aqueous sample field filtered:	Hex Cr Aqu
12	Orthophosphate field filtered:	Orthophos
1.2	s Intact:	Containers Intact:
	-Pace Containers Used:	-Pace C
10	Correct Containers Used:	Correct Cor
9.9	Volume:	Sufficient Volume:
8. 5day	Rush Turn Around Time Requested:	Rush Turn
7.	Short Hold Time Analysis (<72hr remaining):	Short Hold
	Samples Arrived within Hold Time:	Samples A
The Lab Labeled by: (C) Checked by: (A)	Includes date/time/ID Matrix: U	-Include
(s)	Sample Labels match COC:	Sample Lat
1. Jub from PiH	Sampler Name & Signature on COC:	Sampler Na
ω	Chain of Custody Relinquished:	Chain of Cu
2.	Chain of Custody Filled Out:	Chain of Cu
-1	Chain of Custody Present	Chain of Cu
Yes No N/A		
Date and Initials of person examining contents: Obo (0-12-	ν.	Comments:
,	mperature Observed Temp	Cooler Temperature
:: (We) Blue None	U.	Thermometer Used
	al on Cooler/Box/Containers Present: yes	Custody Se
Commercial Pace Other Srd Parky	Fed Ex UPS USPS Client	Courier: Fed Ex
		•••
CLIENT: PACEPITT	FaceAnalytical Client Name:	Pace

A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

(724)850-5600



October 25, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30444936

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 12, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotomka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Leandra Glumac, ARM Group Inc.

Ms. Kaye Guille, ARM Group Inc.

J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.





1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30444936

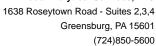
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839



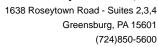


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30444936

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30444936001	RWH-MWI	Water	10/12/21 09:55	10/12/21 19:43
30444936002	RWH-MWS	Water	10/12/21 10:45	10/12/21 19:43
30444936003	RWQ-MWI	Water	10/12/21 12:20	10/12/21 19:43
30444936004	RWQ-MWS	Water	10/12/21 13:20	10/12/21 19:43
30444936005	RWS-MWI	Water	10/12/21 14:30	10/12/21 19:43
30444936006	RWS-MWS	Water	10/12/21 15:15	10/12/21 19:43





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30444936

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30444936001	RWH-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444936002	RWH-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444936003	RWQ-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444936004	RWQ-MWS	EPA 6010D	MEH	2	PASI-BVWV
30444936005	RWS-MWI	EPA 6010D	MEH	2	PASI-BVWV
30444936006	RWS-MWS	EPA 6010D	MEH	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30444936

Date: 10/25/2021 02:21 PM

Sample: RWH-MWI	Lab ID:	30444936001	Collected	d: 10/12/2	09:55	Received: 10	/12/21 19:43 Ma	atrix: Water		
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ICP, Dissolved, 3010A Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - WestVirginia										
Cadmium, Dissolved Zinc, Dissolved	4220 388000	ug/L ug/L	10.0 200	1.9 19.7	10 10	10/15/21 14:47 10/15/21 14:47	10/20/21 13:37 10/20/21 13:37			

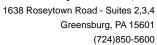




Project: RWM GW Sampling

Pace Project No.: 30444936

Sample: RWH-MWS	Lab ID:	30444936002	Collecte	d: 10/12/21	10:45	Received: 10/	/12/21 19:43 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: Ef	PA 3010A			
,,	. ,								
	Pace Anal	ytical Services	 WestVirging 	nia					
Cadmium, Dissolved	Pace Anal	ytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	10/15/21 14:47	10/20/21 13:39	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30444936

Sample: RWQ-MWI	Lab ID:	30444936003	Collected	d: 10/12/2	1 12:20	Received: 10	/12/21 19:43 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			thod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	10.6 256000	ug/L ug/L	10.0 200	1.9 19.7	10 10	10/15/21 14:47 10/15/21 14:47	10/20/21 13:41 10/20/21 13:41		

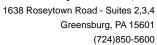




Project: RWM GW Sampling

Pace Project No.: 30444936

Sample: RWQ-MWS	Lab ID:	30444936004	Collecte	d: 10/12/2	13:20	Received: 10/	/12/21 19:43 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- WestVirgi	nia					
Cadmium, Dissolved	Pace Anal	ytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	10/15/21 14:47	10/20/21 13:43	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30444936

Sample: RWS-MWI	Lab ID:	30444936005	Collecte	d: 10/12/2	1 14:30	Received: 10	/12/21 19:43 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			thod: Ef	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	4.7J 649000	ug/L ug/L	10.0 20000	1.9 1970	10 1000	10/15/21 14:47 10/15/21 14:47	10/20/21 13:45 10/22/21 17:09		





Project: RWM GW Sampling

Pace Project No.: 30444936

Date: 10/25/2021 02:21 PM

Sample: RWS-MWS	Lab ID:	30444936006	Collecte	d: 10/12/2	1 15:15	Received: 10	/12/21 19:43 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	aration Me	thod: E	PA 3010A			
,,,,	Pace Ana	lytical Services	- WestVirgi	nia					
Cadmium, Dissolved	10.0 U	ug/L	10.0	1.9	10	10/15/21 14:47	10/20/21 13:51	7440-43-9	
Zinc, Dissolved	36700	ug/L	200	19.7	10	10/15/21 14:47	10/20/21 13:51	7440-66-6	



QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30444936

QC Batch: 87266 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30444936001, 30444936002, 30444936003, 30444936004, 30444936005, 30444936006

METHOD BLANK: 428578 Matrix: Water

Associated Lab Samples: 30444936001, 30444936002, 30444936003, 30444936004, 30444936005, 30444936006

Blank Reporting Qualifiers Parameter Units Result Limit MDL Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/20/21 13:17 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/20/21 13:17 ug/L

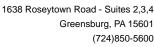
LABORATORY CONTROL SAMPLE: 428579

Date: 10/25/2021 02:21 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1120 112 80-120 ug/L Zinc, Dissolved 2000 2240 112 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 428593 428594 MS MSD 30444324001 Spike Spike MS MSD MS MSD % Rec Max Conc. Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L ND 1000 1000 1080 1110 108 111 80-120 3 20 Zinc, Dissolved ND 2000 2000 2240 2300 80-120 2 20 ug/L 111 114

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30444936

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

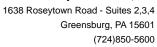
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 10/25/2021 02:21 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30444936

Date: 10/25/2021 02:21 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30444936001	RWH-MWI	EPA 3010A	87266	EPA 6010D	87709
30444936002	RWH-MWS	EPA 3010A	87266	EPA 6010D	87709
30444936003	RWQ-MWI	EPA 3010A	87266	EPA 6010D	87709
30444936004	RWQ-MWS	EPA 3010A	87266	EPA 6010D	87709
30444936005	RWS-MWI	EPA 3010A	87266	EPA 6010D	87709
30444936006	RWS-MWS	EPA 3010A	87266	EPA 6010D	87709

Pace Analytical

MO#:30444936 REGULATORY AGENCY CTANIN-CT-CODICUT / ANDIQUEGI REGUESI
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant field: Sempany Name: Tradepoint Atlantic Matt Newman Section C Required Project Information: Report To: Matt Newman COPY To: Stew Kabis Section B

DRINKING WATER

NPDES | GROUND WATER |

1800 Spamwa. Point Blvd Spanowa Point, Md 21219

Acdress:

OTHER

F RORA

UST

Site Location STATE

Samantha Bayura

Pace Quote Reference: Pace Project Menegen: Pace Profile #:

RWM GW Sampling

Project Name:

Fax:

PO Number

Sparrows Point, MD 21219

Email To:

1600 Sparrows Point Blvd

odress:

Required Olisal Information: Company: Tradepoint Atlantic

Saction.A

Project Number:

Scay

toquested Due Date/TAT

Pace Project No./ Lab I.D. (N/A) Sample Conditions Cooler (Y/V) Received on Ice (Y/V) ,67 0,70 0,00 9031 TIME Requested Analysis Filtered (Y/N) اني DATE 10/15/ 10/15 DATE Signed (MXI/DD/YY): ACCEPTED BY ! AFFILIATION Dissolved Zinc muimbsO beviossio t test zievienA Ŵ i Water STARTS Swarn tarit _CO_SS_SBN Preservatives NaOH ЮH ONH A A OS²F 200 3330 TIME Jupreserved SAMPLER NAME AND SIGNATURE H OF CONTAINERS 1912 SAMPLE TEMP AT COLLECTION PRINT Name of SAMPLER: SIGNATURE of SAMPLER: 12/21/01 1001 DATE 320 (220 1430 TIME 155 COMPOSITE COLLECTED DATE 2701072 RELINQUISHED BY / AFFILIATION D 20 불 COMPOSITE DATE 200 5 MYC (GHOD=D BARD=D) SAMPLE TYPE É Þ Ę (get of sector offer left) **BUOD XISTAM** CODE MATRIX COGIS—
MATRIX COGIS—
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Important Note: By signing this form you are accepting Paca's MET 30 day payment terms and agreeting to late changes of 1.5% per month to Pary invoices not paid within 30 days.

WO#: 7393075

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 930] Samples	Pre-Logged	into eCC	C.			e Of Orig	-		П.,			1-	/ ac	www.pacelabs.com
7.7.7	korder: 30444936	Workorder N	ame: RWMG	W Sampling					. Needed er Recei		Yes	N		Result	ls Regi	iested l	By: 10/20/2021
	ort To	Workorder iv	Subcontrac		27-1	100	100	0111	01 110001	- Cu	Duto.		_	Analysis		iootou i	-y: Torzorzozi
Meg Pace 1638 Suite Gree	an J. Smetanka e Analytical Pittsburgh B Roseytown Road es 2,3,4 ensburg, PA 15601 ne (724)850-5600		Pace I 225 In Beave	Beaver West Vi dustrial Park R r, WV 25813 (800)999-0108	Ď	F	reser	ved Co	ntainers	Dissolved Cd and Zn							
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HNO3				6010C							LAB USE ONLY
1	RWH-MWI	PS	10/12/2021 09:55	30444936001	Water	1				Х							
2	RWH-MWS	PS	10/12/2021 10:45	30444936002	Water	1				Х		шш					
3	RWQ-MWI	PS	10/12/2021 12:20	30444936003	Water	1				Х							
4	RWQ-MWS	PS	10/12/2021 13:20	30444936004	Water	1				Х							
5	RWS-MWI	PS	10/12/2021 14:30	30444936005	Water	1		Щ		Х							
6	RWS-MWS	PS	10/12/2021 15:15	30444936006	Water	1				Х							
														C	omment	5	Colora Action
Tran	sfers Released By	1 1	Date/Time	Received E	-				Date/Tim								
1	-Maren ;	2 (cy	10-17-7021	CEP	as de				10-12-21	Va-1	22.						

Received on Ice Y or N

Custody Seal Y or N

Samples Intact Y or N

Cooler Temperature on Receipt

°C

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

CHAIN-OF-COSTODI / Alialytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields r

WO#:7393075

PM:	BMJ	
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Due Date: 10/20/21

Section	A d Client Information:	Section Required		Inform	nation:						tion C ce Info		n:						TE	NT:	PAC	EPI	TT					
Compan		Report To	THE REAL PROPERTY.	CHARLES TO				-		At er	ntion:	Ma	att Ne	wma	n					•••								
Address	1600 Sparrows Point Blvd	Сору То:	Stev	v Kat	ois					Ccm	pany N	ame:	Trac	lepoir	nt Atl	antic				REG	BULA	TOR	Y AGI	ENCY	•			
	Sparrows Point, MD 21219									Acdr	ess:	160	0 Sparr	ows Po	int Blvo	Sparro	ows Po	oint, Md	21219	Г	NPD	ES F	GRO	JND W	ATER [DRINKI	NG WATER	
Email To		PO Numb	er:								Quote	-				-				1	UST	r	RCRA	A	Γ	OTHER	-	
Phone:	Fax:	Project Na	me:	RW	M GW	Samplin	ıa			Pace	ence: Project	Sa	mant	ha B	ayura	1				Site	Loca	itlon						
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ITEM			-	OWNERS OF TAXABLE PARTY.	DATE		DATE	TIME	ΥS	#	2 3	호	Ĭ.	žž	₹ i		Š	ă	_	+	_	_			\vdash	Pace	Project N	lo./ Lab I.D.
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						PRIN	T Name	of SAMP	LER:		1	50	4	ev	4	1	T	DATE S	laned			1				Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
						SIGN	ATURE	of SAMP	LER:		Les See	OX	Le				+ ((MM/DI	D/YY):	ίC	11	2)	2				30	<u> </u>
	3 12 20 M25 12 2 2 22 22 22						charges o	of 1.5% no	mont	100	ny invoi	cae no	naid w	ithin 30	dave							/			F	ALL-Q-02	urev.06, 2-	-ep-200/ 0 0. 10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.	☐ A check in this box indicates that additional information has been stored in ereports.			Client Notification/ Resolution: Person Contacted: Date/Time:	Rad Samples Screened < 0.5 mrem/hr Initial when completed: Date:	\	Trip Blank Present:	Headspace in VOA Vials (>6mm):	Lot # of added preservative	requirements. Initial when \(\) Date/time of completed \(\) preservation	Phenolics, Radon,	16.	Filtered volume received for Dissolved tests 15.	Organic Samples checked for dechlorination: / 14.	Hex Cr Aqueous sample field filtered / 13.	Orthophosphate field filtered / 12.	Containers Intact: 11.	-Pace Containers Used:	Correct Containers Used:	Sufficient Volume: 9.	Rush Turn Around Time Requested: 8.	remaining):	-Includes date/time/ID Matrix:	Sampler Name & Signature on COC: / 4.	Chain of Custody Relinquished: 3.	Chain of Custody Filled Out: 2.	1.	Yes No N/A ODOU	Collection Factor	Type of Ice: Wet Blue None	oler/Box Present: ☐ yes ♀ no	Client Commercial Pace Other			Pittsburgh Lab Sample Condition Upon Receipt
form will be sent to the North Carolina DEHNR schedule in LIMS. The review is in the Status	ed in ereports.		Collected by.	Contacted By	Date: Survey Meter SN:					Date/time of preservation																		Date and Initials of person examining contents:	Final Temp:	i N	по	Label MS/		Droipot #	
)t	1:	7	3	930	17	5					

J:\QAQC\17_Master\Document Management\Sample Mgt\Mastercontrol\ENV-FRM-GBUR-0088 00 Sample Condition Upon Receipt-Pittsburgh

Page 17 of 18

CLIENT: PACEPITT

PM: BMJ

Due Date: 10/20/21

LIMS73 Lab Sample Condition Upon Receipt (West Virginia)

CLIENT: PACEPITT

B Date:	075
10/20721	of 18

	Client Name:	CLIENT: THEETER
Courier: Fed Ex UPS	□USPS □Client [Commercial Pace Dother: 3rd Rondy
Custody Seal on Cooler/Box/Containers Present: yes	itainers Present: yes	⊇no Seals intact: ☐ yes ☐no
Thermometer Used	0	
Cooler Temperature	Observed Temp	Corre
Comments:		pH paper Lot# Date and Initials of person examining Contents: DDW 10-13
		Yes, No N/A
Chain of Custody Present		
Chain of Custody Filled Out:		2.2
Chain of Custody Relinquished:		
Sampler Name & Signature on COC:	Ω	1 Sub from Pill
Sample Labels match COC:		
-Includes date/time/ID	Matrix:	Lab Labeled by: Checked by:
Samples Arrived within Hold Time:		5.
Short Hold Time Analysis (<72hr remaining):	remaining):	7.
Rush lum Around lime kequested:	ied:	
Correct Containers Used:		10
-Pace Containers Used:		
Containers Intact:		/ 11.
Orthophosphate field filtered:		12.
Hex Cr Aqueous sample field filtered:	ŭ.	13.
-pH adjusted within 24 hours? (If yes, indicate acid lot #)	If yes, indicate acid lot #)	\
Filtered volume received for Dissolved tests:	ved tests:	14.
All containers have been checked for preservation:	or preservation:	15.
exceptions: VOA, coliform, O&G, LLMercury, Non-aqueous matrix	LLMercury, Non-aqueous ma	tix
All containers meet method preservation requirements:	vation requirements:	completed (DW) Date: \D \ 13.8)
		Tests not preserved:
Headspace in VOA Vials:		16.
Trip Blank Present:		17.
Trip Blank Custody Seals Present:		
		completed DA Date: 10-13-2
Client Notification/ Resolution: Person Contacted:		Date/Time: Contacted By:
Comments/ Resolution:		

A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS, when the Project Manager closes the SRF Review schedule in LIMS. The status may be reviewed in the Status section of the Workorder Edit Screen.

Greensburg, PA 15601 (724)850-5600



October 29, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30445209

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 13, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

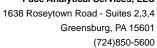
cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Kaye Guille, ARM Group Inc. J.Price, ARM Group Inc. Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30445209

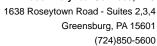
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839





SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30445209

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30445209001	RW01-MWI	Water	10/13/21 09:45	10/13/21 22:15
30445209002	RW01-MWS	Water	10/13/21 10:35	10/13/21 22:15
30445209003	RW02-MWI	Water	10/13/21 12:05	10/13/21 22:15
30445209004	RW02-MWS	Water	10/13/21 12:45	10/13/21 22:15
30445209005	RWF-MWI	Water	10/13/21 14:10	10/13/21 22:15
30445209006	RWF-MWS	Water	10/13/21 14:50	10/13/21 22:15



SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30445209

Sample ID	Method	Analysts	Analytes Reported	Laboratory
RW01-MWI	EPA 6010D	ACH1	2	PASI-BVWV
RW01-MWS	EPA 6010D	ACH1	2	PASI-BVWV
RW02-MWI	EPA 6010D	ACH1	2	PASI-BVWV
RW02-MWS	EPA 6010D	ACH1	2	PASI-BVWV
RWF-MWI	EPA 6010D	ACH1	2	PASI-BVWV
RWF-MWS	EPA 6010D	ACH1	2	PASI-BVWV
	RW01-MWI RW01-MWS RW02-MWI RW02-MWS RWF-MWI	RW01-MWI EPA 6010D RW01-MWS EPA 6010D RW02-MWI EPA 6010D RW02-MWS EPA 6010D RWF-MWI EPA 6010D	RW01-MWI EPA 6010D ACH1 RW01-MWS EPA 6010D ACH1 RW02-MWI EPA 6010D ACH1 RW02-MWS EPA 6010D ACH1 RWF-MWI EPA 6010D ACH1	Sample ID Method Analysts Reported RW01-MWI EPA 6010D ACH1 2 RW01-MWS EPA 6010D ACH1 2 RW02-MWI EPA 6010D ACH1 2 RW02-MWS EPA 6010D ACH1 2 RWF-MWI EPA 6010D ACH1 2

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30445209

Sample: RW01-MWI	Lab ID:	30445209001	Collecte	d: 10/13/2	1 09:45	Received: 10	/13/21 22:15 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Me	thod: E	PA 3010A			
, 2.00000, 00.00	,	ytical Services							
Cadmium, Dissolved	322	ug/L	10.0	1.9	10	10/26/21 14:18	10/27/21 21:06	7440-43-9	
Zinc, Dissolved	24000	ug/L	200	19.7	10	10/26/21 14:18	10/27/21 21:06		





Project: RWM GW Sampling

Pace Project No.: 30445209

Sample: RW01-MWS	Lab ID:	30445209002	Collecte	d: 10/13/2	1 10:35	Received: 10	/13/21 22:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			hod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	1.0 U 5560	ug/L ug/L	1.0 20.0	0.19 2.0	1 1	10/26/21 14:18 10/26/21 14:18	. 0, 2., 2. 200		





Project: RWM GW Sampling

Pace Project No.: 30445209

Sample: RW02-MWI	Lab ID:	30445209003	Collecte	d: 10/13/2	1 12:05	Received: 10	/13/21 22:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			thod: El	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	1.0 U 433	ug/L ug/L	1.0 20.0	0.19 2.0	1 1	10/26/21 14:18 10/26/21 14:18			



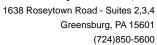


Project: RWM GW Sampling

Pace Project No.: 30445209

Date: 10/29/2021 11:00 AM

Sample: RW02-MWS	Lab ID:	30445209004	Collecte	d: 10/13/2	1 12:45	Received: 10	/13/21 22:15 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	paration Me	thod: El	PA 3010A			
, 2.00000, 00.00.	,	lytical Services							
Cadmium, Dissolved	1.0 U	ug/L	1.0	0.19	1	10/26/21 14:18	10/27/21 21:12	7440-43-9	
Zinc, Dissolved	3.1J	ug/L	20.0	2.0	1	10/26/21 14:18	10/27/21 21:12	7440-66-6	В





Project: RWM GW Sampling

Pace Project No.: 30445209

Date: 10/29/2021 11:00 AM

Sample: RWF-MWI	Lab ID:	30445209005	Collecte	d: 10/13/2	1 14:10	Received: 10	/13/21 22:15 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 lytical Services			thod: E	PA 3010A			
Cadmium, Dissolved Zinc, Dissolved	2610 82500	ug/L ug/L	10.0 200	1.9 19.7	10 10	10/26/21 14:18 10/26/21 14:18			

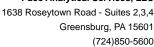




Project: RWM GW Sampling

Pace Project No.: 30445209

Sample: RWF-MWS	Lab ID:	30445209006	Collecte	d: 10/13/2	14:50	Received: 10/	/13/21 22:15 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	aration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- WestVirgi	nia					
Cadmium, Dissolved	Pace Anal	ytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	10/26/21 14:18	10/27/21 21:16	7440-43-9	





QUALITY CONTROL DATA

Project: RWM GW Sampling

Pace Project No.: 30445209

QC Batch: 88450 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30445209001, 30445209002, 30445209003, 30445209004, 30445209005, 30445209006

METHOD BLANK: 434665 Matrix: Water

Associated Lab Samples: 30445209001, 30445209002, 30445209003, 30445209004, 30445209005, 30445209006

Blank Reporting Qualifiers Parameter Units Result Limit MDL Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/28/21 14:16 ug/L Zinc, Dissolved 2.3J 20.0 2.0 10/28/21 14:16 ug/L

LABORATORY CONTROL SAMPLE: 434666

Date: 10/29/2021 11:00 AM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1060 106 80-120 ug/L Zinc, Dissolved 2000 2070 104 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 434667 434668 MS MSD 30439085002 Spike Spike MS MSD MS MSD % Rec Max Result Conc. Parameter Units Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Cadmium, Dissolved ug/L 1.0 U 1000 1000 1060 1070 106 107 80-120 20 Zinc, Dissolved 0.010J 2000 2000 2080 103 105 80-120 20 ug/L 2110 mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30445209

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

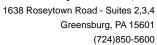
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 10/29/2021 11:00 AM

B Analyte was detected in the associated method blank.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30445209

Date: 10/29/2021 11:00 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30445209001	RW01-MWI	EPA 3010A	88450	EPA 6010D	88624
30445209002	RW01-MWS	EPA 3010A	88450	EPA 6010D	88624
30445209003	RW02-MWI	EPA 3010A	88450	EPA 6010D	88624
30445209004	RW02-MWS	EPA 3010A	88450	EPA 6010D	88624
30445209005	RWF-MWI	EPA 3010A	88450	EPA 6010D	88624
30445209006	RWF-MWS	EPA 3010A	88450	EPA 6010D	88624

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be comp

WO#: 30445209

Pace Analytical

DRINKING WATER OTHER 니 NPDES 및 GROUND WATER 한 30445209 REGULATORY AGENCY F UST F RCRA 1600 Sparrows Point Blvd Sparrows Point, Md 21219 Company Name: Tradepoint Atlantic Invoice information: Atention: Matt Newman Section C Acdress: Pace Quote Required Project Information: Report To: Matt Newman Copy To: Stew Kabis Section B PO Number: Sparrows Point, MD 21219 1600 Sparrows Point Blvd Tradepoint Atlantic Section A Required Client Information: Company: Address: Email To:

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Pittsburgh Lab Sample Condi	tion	Upoi	n Re	eceipt		
Pace Analytical Client Name:	Trac	dep	din	+ Atlantic	Project #	3044520
Courier: Fed Ex UPS USPS Clien	t 🗆	Comm	ercial	N Pace Other		Label Ml(
Tracking #: V(VA						LIMS Login MUL
Custody Seal on Cooler/Box Present:	[X]	10	Seal	s intact: 🔲 yes 🗀] no	
Thermometer Used	Туре	of ice:				. ·
Cooler Temperature Observed Temp _ 3. Temp should be above freezing to 6°C	1	· C	Corr	rection Factor <u>3</u>	°C Final	Temp <u>: (, 8</u> ° c
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Comments:	Yes	No	N/A	1000411	<u> </u>	"ML(10/14/12021
Chain of Custody Present:		ļ		1.		
Chain of Custody Filled Out:				2.		
Chain of Custody Relinquished:	<u> </u>			3.		
Sampler Name & Signature on COC:				4.		
Sample Labels match COC:				5.		
-Includes date/time/ID Matrix:	M	1_	·			
Samples Arrived within Hold Time:				6.		
Short Hold Time Analysis (<72hr remaining):				7.		
Rush Turn Around Time Requested:				8.	,	
Sufficient Volume:				9.		
Correct Containers Used:				10.		
-Pace Containers Used:						
Containers Intact;				11.		
Orthophosphate field filtered			/	12.		
Hex Cr Aqueous sample field filtered				13.		
Organic Samples checked for dechlorination:				14.		
Filtered volume received for Dissolved tests				15.		
All containers have been checked for preservation.				16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon,					
All containers meet method preservation requirements.				Initial when w((Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):			/	17.		
Trip Blank Present:			/	18.		
Trip Blank Custody Seals Present			/			
Rad Samples Screened < 0.5 mrem/hr		ĺ		Initial when completed:	Date:	Survey Meter SN:
Client Notification/ Resolution:				Lastinbioras.	Judio.	011,
Person Contacted:			Date/	Time:	Contact	led By:
Comments/ Resolution:						· · · · · · · · · · · · · · · · · · ·
						

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

 \square A check in this box indicates that additional information has been stored in ereports.

^{*}PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

(724)850-5600



November 04, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30445937

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on October 18, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

(Greensburg, PA) - Revision 1 - This report replaces the October, 28, 2021 report. This project was revised on November, 04, 2021 to correct sample ID RW12-MWS per client's request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Kaye Guille, ARM Group Inc.

J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.





1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30445937

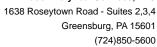
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839



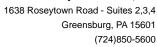


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30445937

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30445937001	RW05R-MWI	Water	10/18/21 09:00	10/18/21 22:00
30445937002	RW05-MWS	Water	10/18/21 10:15	10/18/21 22:00
30445937003	RW0-MWI	Water	10/18/21 12:05	10/18/21 22:00
30445937004	RW0-MWS	Water	10/18/21 13:00	10/18/21 22:00
30445937005	RW12-MWS	Water	10/18/21 15:15	10/18/21 22:00





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30445937

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30445937001	RW05R-MWI	EPA 6010D	ACH1	2	PASI-BVWV
30445937002	RW05-MWS	EPA 6010D	ACH1	2	PASI-BVWV
30445937003	RW0-MWI	EPA 6010D	ACH1	2	PASI-BVWV
30445937004	RW0-MWS	EPA 6010D	ACH1	2	PASI-BVWV
30445937005	RW12-MWS	EPA 6010D	ACH1	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Sample: RW05R-MWI	Lab ID:	30445937001	Collected	d: 10/18/2	1 09:00	Received: 10	18/21 22:00 Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 lytical Services			thod: El	PA 3010A				
Cadmium, Dissolved Zinc, Dissolved	1470 200 U	ug/L ug/L	1.0 200	0.19 19.7	1 10	10/21/21 10:19 10/21/21 10:19	10/26/21 13:53 10/27/21 16:08			





Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Sample: RW05-MWS	Lab ID:	30445937002	Collecte	d: 10/18/2	1 10:15	Received: 10	/18/21 22:00 Ma	00 Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual		
6010D ICP, Dissolved, 3010A	,	Method: EPA 6 ytical Services			hod: El	PA 3010A					
Cadmium, Dissolved Zinc, Dissolved	1.0 U 17.8J	ug/L ug/L	1.0 20.0	0.19 2.0	1 1	10/21/21 10:19 10/21/21 10:19	10/26/21 13:55 10/26/21 13:55				





Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Sample: RW0-MWI	Lab ID:	30445937003	Collecte	d: 10/18/2 ²	12:05	Received: 10/	/18/21 22:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	0400 0		–				
	Allalytical	IVIELLIOU. EFA O	UTUD Prep	aration iviet	nod: ⊨I	PA 3010A			
0010D 101, D13301Ved, 3010A	,	lytical Services			nod: El	PA 3010A			
Cadmium, Dissolved	,				nod: El	7A 3010A 10/21/21 10:19	10/26/21 13:57	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Sample: RW0-MWS	Lab ID:	30445937004	Collecte	d: 10/18/2	13:00	Received: 10/	/18/21 22:00 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: El	PA 3010A			
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Cadmium, Dissolved	1.0 U	ug/L	1.0	0.19	1	10/21/21 10:19	10/26/21 14:03	7440-43-9	



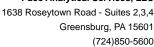


Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Sample: RW12-MWS	Lab ID:	30445937005	Collecte	d: 10/18/2	1 15:15	Received: 10	/18/21 22:00 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Me	thod: FI	PA 3010A			
30.102.101, 2.10301.104, 00.107.1	,	lytical Services				. , , , , , , , , , , , , , , , , , , ,			
Cadmium, Dissolved	1.0 U	ug/L	1.0	0.19	1	10/21/21 10:19	10/26/21 14:05	7440-43-9	
Zinc, Dissolved	4960	ug/L	20.0	2.0		10/21/21 10:19	10/26/21 14:05		





Project: RWM GW Sampling

Pace Project No.: 30445937

QC Batch: 87836 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30445937001, 30445937002, 30445937003, 30445937004, 30445937005

METHOD BLANK: 431777 Matrix: Water

Associated Lab Samples: 30445937001, 30445937002, 30445937003, 30445937004, 30445937005

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 10/25/21 21:36 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 10/25/21 21:36 ug/L

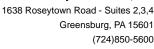
LABORATORY CONTROL SAMPLE: 431778

Date: 11/04/2021 11:01 AM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 1040 104 80-120 ug/L Zinc, Dissolved 2000 2080 104 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 431779 431780 MS MSD 7393669003 Spike Spike MS MSD MS MSD % Rec Max RPD Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** Qual Cadmium, Dissolved ug/L ND 1000 1000 1010 1030 101 103 80-120 3 20 Zinc, Dissolved 0.0085J 2000 2000 2010 2070 100 103 80-120 3 20 ug/L mg/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30445937

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

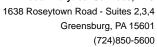
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 11/04/2021 11:01 AM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30445937

Date: 11/04/2021 11:01 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30445937001	RW05R-MWI	EPA 3010A	87836	EPA 6010D	87953
30445937002	RW05-MWS	EPA 3010A	87836	EPA 6010D	87953
30445937003	RW0-MWI	EPA 3010A	87836	EPA 6010D	87953
30445937004	RW0-MWS	EPA 3010A	87836	EPA 6010D	87953
30445937005	RW12-MWS	EPA 3010A	87836	EPA 6010D	87953

Face Analytical

MO#: 30445937 יווםוווחסם יכשחששע ושחוולווט ו עומר ו מסייסטר בל-אוולווס The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be comp.

004 Pace Project No./ Lab I.D. Ö (N/A) Sample Conditions DRINKING WATER Cooler (Y/N) OTHER (N/A) eo(Received on NPDES | GROUND WATER | REGULATORY AGENCY Requested Analysis Filtered (Y/N) T RCRA 30445937 10/3/01 DATE Site Location STATE UST 1600 Sparrows Point Blvd Sparrows Point, Md 21219 DATE Signed (MM/IDD/YY): ACCEPTED BY / AFFILIATION Dissolved Zinc $\overline{\succ}$ muimbsO beviossio N/A Analysis Test Sempany Name: Tradepoint Atlantic 1916W IC Samantha Bayura Jehic Matt Newman Va₂S₂O₃ Š HOBN IOF nvoice Information: HNO3 Pace Quote Reference: Pace Project Menager: Pace Profile #: ^bOS²H Section C SOCK. 1/2/N Acdress: 19:06 Unpreserved TIME SAMPLER NAME AND SIGNATURE # OF CONTAINERS SAMPLE TEMP AT COLLECTION 12/81/07 16/18/21 PRINT Name of SAMPLER: 0183 DATE 300 アダ a B 0 0 72 TIME COMPOSITE END/GRAB COLLECTED 119/2 DATE 2101015 RWM GW Sampling RELINQUISHED BY / AFFILIATION TIME COMPOSITE DATE Required Project Information: Report To: Matt Newman Stew Kabis W/ 6-1 (G=GRA8 C=COMP) SAMPLE TYPE Project Number: (see valid codes to left) Project Name: MATRIX CODE Section B PO Number Copy To: Valid Matrix Codes MATRIX CODE DRINKING WATER
WATER
WATER
WATER
PRODUCT
SOLUSOLID
SOLUSOLID
WIPE
AIR
TISSUE 5 day Sparrows Point, MD 21219 13061 S COUNT 1600 Sparrows Point Blvd RWO-MUT PNU 53361 ADDITIONAL COMMENTS data package is required, attach data (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE Data Package Required? (Y/N); Data Validation Required? (Y/M) Tradepoint Atlantic Fax SAMPLE ID Rwosp RW 12 Section A Required Client Information: RW OS RAIO Requested Due Date/TAT: Company: Email To: ddress: # Mati 2 £ ŭ

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. SIGNATURE of SAMPLER:

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9

Page 13 of 18

Pittsburgh Lab Sample Condition Upon Receipt . Pace Analytical` Client Name: Tradepart Hlanki Project # Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other Label Tracking #: LIMS Login 🕅 по Seals intact: (Wet) Blue None Type of Ice: Thermometer Used ٠C Final Temp: Correction Factor: -Cooler Temperature Temp should be above freezing to 6°C pH paper Lot# Date and Initials of person examining contents: MDOUL N/A Yes No Comments: Chain of Custody Present: Chain of Custody Filled Out: Chain of Custody Relinquished: Sampler Name & Signature on COC: Sample Labels match COC: -Includes date/time/ID Matrix: Samples Arrived within Hold Time: Short Hold Time Analysis (<72hr remaining): 8. Rush Turn Around Time Requested: Sufficient Volume: 10. Correct Containers Used: -Pace Containers Used: 11. Containers Intact: 12. Orthophosphate field filtered Hex Cr Aqueous sample field filtered 13. Organic Samples checked for dechlorination: 14. 15. Filtered volume received for Dissolved tests All containers have been checked for preservation. 16. exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix All containers meet method preservation Initial when Date/time of preservation completed requirements. Lot # of added preservative Headspace in VOA Vials (>6mm): Trip Blank Present: 18. Trip Blank Custody Seals Present Survey Meter Initial when Rad Samples Screened < 0.5 mrem/hr Date: SN: completed: Client Notification/ Resolution: Date/Time: Contacted By: Person Contacted: Comments/ Resolution:

 \square A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

WO#:	7394064
7394064	

ustody

Samples Pre-Logged into eCOC.

State Of Origin: MD

No

www.pacelabs.com

Cert. Needed: Yes Workorder Name: RWM GW Sampling Workorder: 30445937 **Owner Received Date:** 10/18/2021 Results Requested By: 10/26/2021 Subcontract To **Requested Analysis** Report To Megan J. Smetanka Pace Beaver West Virginia Pace Analytical Pittsburgh 225 Industrial Park RD 1638 Roseytown Road Beaver, WV 25813 Dissolved Cd and Zn Suites 2,3,4 Phone (800)999-0105 Greensburg, PA 15601 Phone (724)850-5600 **Preserved Containers** 6010C HN03 Sample Collect LAB USE ONLY Item Sample ID Type Date/Time Lab ID Matrix PS X RW05R-MWI 10/18/2021 09:00 30445937001 Water X PS RW05-MWS 10/18/2021 10:15 30445937002 Water PS Х RW0-MWI 10/18/2021 12:05 30445937003 Water X RW0-MWS PS 10/18/2021 13:00 30445937004 Water 1 X PS RW12-MW 10/18/2021 15:15 30445937005 Water Comments Date/Time Date/Time Transfers Released By Received By 10-20-21 3106 2 Custody Seal Y or N °C Cooler Temperature on Receipt Received on Ice Y or N Samples Intact Y or N

^{***}In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical "

CHAIN-OF-COSTODT / Analytical Request Document

Section Require	n A ed Client Information:	Section Required		t Info	mation:						ectio		nation:									10	1	•	7.	20	A	06	A		
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	WATER WASTE WATER PRODUCT SOL/SOLIO OIL WIPE	WT WW P SL OL WP	(see valid codes to left)	3 C=COMP)		APOSITE TART	CON	POSITE D'GRAB	CTION																						
	SAMPLE ID (A-Z, 0-9 /) Sample IDs MUST BE UNIQUE	AR OT TS	CODE (see vali	PE (G=GRAB					AP AT COLLECTION	AINERS	pe						Tont	lest &	inc												
ITEM#		y.	MATRIX CO	SAMPLE TYF	DATE	TIME	DATE	TIME	SAMPLE TEN	# OF CONTAINERS	Unpreserve	H ₂ SO ₄	HC	NaOH	Na ₂ S ₂ O ₃	Offher	I Amalyeis	Jecolvod C	Dissolved Zinc									Davi	B14	v	
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WO#: 7394064 MO#: 304	Propert Code Prop	pH paper Lot# D DOULI 1. 2. 3. 4. 4. 5. 6. 6. 7. 7. 8. 8. 8. 9. 10. 11. 11. 11. 11. 11. 11. 11. 11. 11	o N/A DH PH P o N/A 1/1 1. 2. 3. 3. 4. 4. 4. 1. 1. 1. 1. 1. 1. 1	Yes No Yes No Orona Information (Note that the project Maria Compiler Out of temp, Strong Maria Compiler Out of temp, Str	Comments: Chain of Custody Flesent: Combiners Index: Containers Used: Containers Index: Con
445937	LIMS Login h	Seals intact: yes no Wet Blue None Correction Factor: C	Seals i	Comme	Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other Tracking #:
	ject #	Irade part 14/antic Project#	on Re	on Up	Pittsburgh Lab Sample Condition Upon Receipt Face Analytical Client Name: 18 ade part

Due Date: 10/27/21

PM: BMJ

CLIENT: PACEPITT

Page 17 of 18

Due Date: 10/26/21

PM: MS1

CLIENT: TRADEPOINT

LIMS73 Lab Sample Condition Upon Receipt (West Virgin

PM: BMJ

WO#: 7394064

(724)850-5600



December 15, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: **RWM GW Sampling**

Pace Project No.: 30452488

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on November 29, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

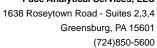
Ms. Kaye Guille, ARM Group Inc. J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30452488

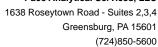
Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839



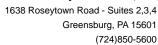


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30452488

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
30452488001	RWG-MWI	Water	11/29/21 13:00	11/29/21 21:50	
30452488002	RW07-MWS	Water	11/29/21 14:00	11/29/21 21:50	
30452488003	RWI-MWS	Water	11/29/21 14:55	11/29/21 21:50	





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30452488

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30452488001	RWG-MWI	EPA 6010D	ACH1	2	PASI-BVWV
30452488002	RW07-MWS	EPA 6010D	ACH1	13	PASI-BVWV
30452488003	RWI-MWS	EPA 6010D	ACH1	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia



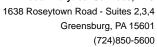


Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

Sample: RWG-MWI	Lab ID:	30452488001	Collecte	d: 11/29/21	13:00	Received: 11/	29/21 21:50 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prep	aration Met	hod: Ef	PA 3010A			
	Pace Anal	ytical Services	- WestVirgi	nia					
Cadmium, Dissolved	Pace Anal	lytical Services ug/L	- WestVirgi 1.0	nia 0.19	1	12/10/21 14:47	12/13/21 20:39	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

Sample: RW07-MWS	Lab ID:	30452488002	Collected	l: 11/29/21	14:00	Received: 11/	29/21 21:50 Ma	atrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
1 drameters									
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Prepa	aration Met	hod: El	PA 3010A			
	Pace Anal	ytical Services	- WestVirgir	nia					
Barium, Dissolved	81.6	ug/L	5.0	1.0	1	12/08/21 14:30	12/09/21 15:15	7440-39-3	
Cadmium, Dissolved	1.7	ug/L	1.0	0.19	1	12/08/21 14:30	12/09/21 15:15	7440-43-9	
Chromium, Dissolved	9.6	ug/L	5.0	0.58	1	12/08/21 14:30	12/09/21 15:15	7440-47-3	
Copper, Dissolved	5.0 U	ug/L	5.0	2.8	1	12/08/21 14:30	12/09/21 15:15	7440-50-8	
Iron, Dissolved	83.9	ug/L	50.0	7.6	1	12/08/21 14:30	12/09/21 15:15	7439-89-6	
Lead, Dissolved	10.0 U	ug/L	10.0	2.5	1	12/08/21 14:30	12/09/21 15:15	7439-92-1	
Manganese, Dissolved	54.8	ug/L	5.0	0.44	1	12/08/21 14:30	12/09/21 15:15	7439-96-5	
Selenium, Dissolved	17.5J	ug/L	20.0	7.6	1	12/08/21 14:30	12/09/21 15:15	7782-49-2	В
Silver, Dissolved	5.0 U	ug/L	5.0	2.0	1	12/08/21 14:30	12/09/21 15:15	7440-22-4	
Zinc, Dissolved	298	ug/L	20.0	2.0	1	12/08/21 14:30	12/09/21 15:15	7440-66-6	
Calcium, Dissolved	392000	ug/L	500	28.8	1	12/08/21 14:30	12/09/21 15:15	7440-70-2	
Magnesium, Dissolved	82800	ug/L	500	47.5	1	12/08/21 14:30	12/09/21 15:15	7439-95-4	
Potassium, Dissolved	63000	ug/L	500	190	1	12/08/21 14:30	12/09/21 15:15	7440-09-7	





Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

Sample: RWI-MWS	Lab ID:	30452488003	Collecte	d: 11/29/2	l 14:55	Received: 11/	/29/21 21:50 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Me	thod: El	PA 3010A			
, 2.00000, 00.00	,	lytical Services							
Cadmium, Dissolved	0.76J	ug/L	1.0	0.19	1	12/08/21 14:30	12/09/21 15:34	7440-43-9	



Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

QC Batch: 92945 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30452488002, 30452488003

METHOD BLANK: 461993 Matrix: Water

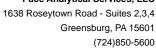
Associated Lab Samples: 30452488002, 30452488003

,	,					
5		Blank	Reporting	MDI		0 11"
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Barium, Dissolved	ug/L	5.0 U	5.0	1.0	12/09/21 15:11	
Cadmium, Dissolved	ug/L	1.0 U	1.0	0.19	12/09/21 15:11	
Calcium, Dissolved	ug/L	500 U	500	28.8	12/09/21 15:11	
Chromium, Dissolved	ug/L	5.0 U	5.0	0.58	12/09/21 15:11	
Copper, Dissolved	ug/L	5.0 U	5.0	2.8	12/09/21 15:11	
Iron, Dissolved	ug/L	50.0 U	50.0	7.6	12/09/21 15:11	
Lead, Dissolved	ug/L	10.0 U	10.0	2.5	12/09/21 15:11	
Magnesium, Dissolved	ug/L	500 U	500	47.5	12/09/21 15:11	
Manganese, Dissolved	ug/L	5.0 U	5.0	0.44	12/09/21 15:11	
Potassium, Dissolved	ug/L	500 U	500	190	12/09/21 15:11	
Selenium, Dissolved	ug/L	8.9J	20.0	7.6	12/09/21 15:11	
Silver, Dissolved	ug/L	5.0 U	5.0	2.0	12/09/21 15:11	
Zinc, Dissolved	ug/L	20.0 U	20.0	2.0	12/09/21 15:11	

LABORATORY CONTROL SAMPLE:	461994					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Barium, Dissolved	ug/L	2000	2060	103	80-120	
Cadmium, Dissolved	ug/L	1000	959	96	80-120	
Calcium, Dissolved	ug/L	40000	40700	102	80-120	
Chromium, Dissolved	ug/L	2000	2020	101	80-120	
Copper, Dissolved	ug/L	2000	2030	101	80-120	
Iron, Dissolved	ug/L	2000	2050	103	80-120	
Lead, Dissolved	ug/L	2000	2000	100	80-120	
Magnesium, Dissolved	ug/L	20000	20100	100	80-120	
Manganese, Dissolved	ug/L	2000	2100	105	80-120	
Potassium, Dissolved	ug/L	20000	20400	102	80-120	
Selenium, Dissolved	ug/L	2000	1930	97	80-120	
Silver, Dissolved	ug/L	500	514	103	80-120	
Zinc, Dissolved	ug/L	2000	2030	101	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPL	ICATE: 4620	25		462026							
			MS	MSD								
		30452488002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Barium, Dissolved	ug/L	81.6	2000	2000	1970	1970	95	95	80-120	0	20	
Cadmium, Dissolved	ug/L	1.7	1000	1000	854	854	85	85	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

MATRIX SPIKE & MATRIX S	SPIKE DUPL	ICATE: 4620	_		462026							
Parameter	Units	30452488002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium, Dissolved	ug/L	392000	40000	40000	425000	425000	83	83	80-120	0	20	
Chromium, Dissolved	ug/L	9.6	2000	2000	1890	1890	94	94	80-120	0	20	
Copper, Dissolved	ug/L	5.0 U	2000	2000	2080	2080	104	104	80-120	0	20	
Iron, Dissolved	ug/L	83.9	2000	2000	1940	1940	93	93	80-120	0	20	
Lead, Dissolved	ug/L	10.0 U	2000	2000	1810	1810	90	90	80-120	0	20	
Magnesium, Dissolved	ug/L	82800	20000	20000	102000	102000	96	96	80-120	0	20	
Manganese, Dissolved	ug/L	54.8	2000	2000	1980	1980	96	96	80-120	0	20	
Potassium, Dissolved	ug/L	63000	20000	20000	86200	86200	116	116	80-120	0	20	
Selenium, Dissolved	ug/L	17.5J	2000	2000	1870	1870	93	93	80-120	0	20	
Silver, Dissolved	ug/L	5.0 U	500	500	534	534	107	107	80-120	0	20	
Zinc, Dissolved	ug/L	298	2000	2000	2090	2090	89	89	80-120	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:

RWM GW Sampling

Pace Project No.:

30452488

QC Batch:

QC Batch Method:

93184

EPA 3010A

Analysis Method:

EPA 6010D

Analysis Description:

6010D MET Dissolved

MDL

Laboratory:

Pace Analytical Services - WestVirginia

Associated Lab Samples:

METHOD BLANK:

Matrix: Water

Associated Lab Samples:

30452488001

30452488001

Parameter

Blank Result Reporting Limit

Analyzed

Qualifiers

Cadmium, Dissolved Zinc, Dissolved

Units ug/L ug/L

Units

30452488001

Result

1.0 U 20.0 U

1.0 20.0 0.19 12/13/21 20:35 2.0 12/13/21 20:35

LABORATORY CONTROL SAMPLE:

Parameter

Spike LCS Conc. Result

LCS % Rec % Rec Limits

Qualifiers

Cadmium, Dissolved Zinc, Dissolved

ug/L ug/L

ug/L

ug/L

1000 2000

1040 2050

104 103 80-120 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:

464177

1.8

319

MSD

1000

2000

464178 MSD

MS

MSD

% Rec

Max RPD **RPD**

Cadmium, Dissolved

Zinc, Dissolved

Parameter Units

MS Spike Conc.

1000

2000

Spike Conc.

MS Result

993

2260

Result % Rec 983 2240

99 97 % Rec 96

Limits 80-120

20 80-120

20

Qual

Date: 12/15/2021 01:11 PM

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30452488

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

Date: 12/15/2021 01:11 PM

B Analyte was detected in the associated method blank.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30452488

Date: 12/15/2021 01:11 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30452488001	RWG-MWI	EPA 3010A	93184	EPA 6010D	93362
30452488002 30452488003	RW07-MWS RWI-MWS	EPA 3010A EPA 3010A	92945 92945	EPA 6010D EPA 6010D	93050 93050

VITAIN-UT-VOOI VOI / AMAINTICAI REQUESI VOCUMENT. THE Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Face Analytical"

WO#: 30452488 T NPDES T GROUND WATER T DRINKING WATER OTHER 30452488 Requested Analysis Filtered (Y/N) I UST I RCRA Site Location STATE 1600 Sparrows Point Bivd Sparrows Point, Md 21219 Сстралу Name: Tradepoint Atlantic Pace Quote
Reference:
Pace Project Samantha Bayura
Managar:
Pace Profile #: invoice Information: Arention: Matt Newman Section C Acdress: 2010102 RWM GW Sampling Required Project Information: Report To: Matt Newman Copy To: Stew Kabis Project Number: Project Name: Section B O Number: 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd Tradepoint Atlantic Fax Required Client Information: Requested Due Date/TAT: Address: Company: Email To: Phone:

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15	Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charge	ccepting Pace's NET 30 day	payment ter	rms and ag	greeing to		pes of 1.5% per month for any invoices not paid within 30 days.	er month	for any in	hvoices m	ot paid n	within 30 d	tays.	1			1	+	1		l	Į.	1-0-020	rev.06, 2-	F-ALL-Q-020rev.06, 2-Feb-2007	7

Face Analytical Client Name:		Ţc	rde	point	Project #_		07/21
Courier: Fed Ex UPS USPS Clien	ıt 🗀					Label $\mathcal{\mathcal{U}}_{n}$	488 ate: 12/07
Tracking #: \\ \\ \/\/					L	MS Login / ~	248 gr
Custody Seal on Cooler/Box Present: yes	2	₹ 10	Seals	s intact: 🔲 yes 💆	/no		
Thermometer Used \Z	Type	of Ice:					1 21
				ection Factor <u>: 🥌 서</u>	_ °C Final Te	emp: 3,6 °C	30452
				pH paper Lot#	Date and Init	tials of person examining	
Comments:	Yes	No	N/A	1003801	CONTENTO.		# 1
Chain of Custody Present:	/			1.			
Chain of Custody Filled Out:	1			2.			3
Chain of Custody Relinquished:	/			3.			
Sampler Name & Signature on COC:	/			4.			
Sample Labels match COC:				5.			
-Includes date/time/ID Matrix:	WT						
Samples Arrived within Hold Time:				6.			
Short Hold Time Analysis (<72hr remaining):		/		7.			
Rush Turn Around Time Requested:	/			8.			
Sufficient Volume:	_			9.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Correct Containers Used:	/			10.]
-Pace Containers Used:	-			1			
Containers Intact:	/			11.			1
Orthophosphate field filtered			/	12.			1
Hex Cr Aqueous sample field filtered			_	13.			1
Organic Samples checked for dechlorination:			/	14.			1
Filtered volume received for Dissolved tests				15.			1
All containers have been checked for preservation.	1			16.			1
exceptions: VOA, coliform, TOC, O&G, Phenolics Non-aqueous matrix	, Radon	l,					
All containers meet method preservation requirements.	/			Initial when completed Y	Date/time of preservation		_
				Lot # of added preservative			
Headspace in VOA Vials (>6mm):			1	17.			
Trip Blank Present:			~	18.			
Trip Blank Custody Seals Present			1				
Rad Samples Screened < 0.5 mrem/hr			/	Initial when completed:	Date:	Survey Meter SN:	
Client Notification/ Resolution:		L	<u>.</u>	, T			4
Person Contacted:			Date/	Time:	Contacte	ed By:	
Comments/ Resolution:			•	***			-
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Pittsburgh Lab Sample Condition Upon Receipt

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

A check in this box indicates that additional information has been stored in ereports.

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.



CHAIN-OF-COSTODI / Allaiyucal Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information	Section B Required Project Informs	ation		ection C		Pa	ge: \	of)
Company: Tradepoint Atlantic	Report To: Matt Newn	man		ention: Matt Newman		1 _		
Address 1600 Sparrows Point Blvd	Copy To Stew Kabis	S	Com	mpany Name Tradepoint Atlantic		REGULATORY	GENCY	The second secon
Sparrows Point, MD 21219			Acdr	dress: 1600 Sparrows Point Blvd Spa	rrows Point, Md 21219	F NPDES F G	ROUND WATER -	DRINKING WATER
Email To.	PO Number:			pe Quote		L UST L K	CRA F	OTHER
Phone Fax:	Project Name: RWM	GW Sampling	Pace	terence ce Project Samantha Bayura		Site Location		100 march 100 ma
equested Due Date/TAT: 5 day	Project Number: 2	1010103	mena	nager ce Profile #		STATE:	<u>MD</u>	
					Requested	Analysis Filtered	(Y/N)	
Section D Required Clent Information Required Clent Information MATRIX DRINGING WA WATER WASTE WATE PRODUCT SOLUSOLID OL WIPE AR OTHER TISSUE	CODE TER DW WT € C	COLLECTED COMPOSITE START COMPOSITE ENDIGRAB	COLLECTION	posted	ium y			
Sample IDs MUST BE UNIQUE	MATRIX CODE SAMPLE TYPE	DATE TIME DATE TIME	SAMPLE TEMP AT CO # OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ C/P HCI NaOH Na2S ₂ O ₃ Other	Dissolved Zinc			Pace Project No./ Lab I.D.
RWG-MWI	WHG	11/29/2/1300		12	XX			
RW07-mus	W16	1 1400		14	XX			
RNI-MUS	WIG	1455		1 25	XX			
					1			
ADDITIONAL COMMENTS	RELINQUISHED B	Y/AFFILIATION DATE	TI	TIME ACCEPTED	BY / AFFILIATION	DATE	TIME	Sample Conditions
Package Required? (Y/N)	18400		124 161	000				
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			4	bisa Perrin	DATE Signed		125 //	Received Ice (Y/N) Custody Se Cooler (Y/ Samples In
		SIGNATURE of SAMPLE	0	Sada	(MM/DD/YY):	11/29/	11	S Sar Color

Greensburg, PA 15601 (724)850-5600



December 13, 2021

Mr. Bob Tworkowski Tradepoint Atlantic 1600 Sparrow's Point Boulevard Sparrows Point, MD 21219

RE: Project: RWM GW Sampling

Pace Project No.: 30452747

Dear Mr. Tworkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on November 30, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - WestVirginia

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Megan Smotonka

Megan J. Smetanka megan.smetanka@pacelabs.com (724)850-5600 Project Manager

Enclosures

cc: Ms. Penny Gardner, Environmental Data Quality, Inc.

Ms. Kaye Guille, ARM Group Inc.

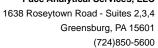
J.Price, ARM Group Inc.

Stewart Kabis, ARM Group Inc.

Mr. Eric S. Magdar, ARM Group Inc.

Ms. Shawne M. Rodgers, Environmental Data Quality, Inc.







CERTIFICATIONS

Project: RWM GW Sampling

Pace Project No.: 30452747

Pace Analytical Services Beaver

225 Industrial Park Drive, Beaver, WV 25813

Virginia VELAP 460148 West Virginia DEP 060 West Virginia DHHR 00412CM North Carolina DEQ 466

Kentucky Wastewater Certification KY90039

Pennsylvania DEP 68-00839



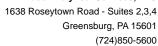


SAMPLE SUMMARY

Project: RWM GW Sampling

Pace Project No.: 30452747

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
30452747001	RW05R-WMI	Water	11/30/21 08:45	11/30/21 21:45	
30452747002	RWP-MWI	Water	11/30/21 09:30	11/30/21 21:45	
30452747003	RWO-MWI	Water	11/30/21 11:50	11/30/21 21:45	





SAMPLE ANALYTE COUNT

Project: RWM GW Sampling

Pace Project No.: 30452747

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30452747001	RW05R-WMI	EPA 6010D	ACH1	2	PASI-BVWV
30452747002	RWP-MWI	EPA 6010D	ACH1	2	PASI-BVWV
30452747003	RWO-MWI	EPA 6010D	ACH1	2	PASI-BVWV

PASI-BVWV = Pace Analytical Services - WestVirginia





Project: RWM GW Sampling

Pace Project No.: 30452747

Date: 12/13/2021 02:10 PM

Sample: RW05R-WMI	Lab ID:	30452747001	Collecte	d: 11/30/2	1 08:45	Received: 11/	/30/21 21:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	paration Me	thod: E	PA 3010A			
,,	,	ytical Services							
Cadmium, Dissolved	16.8	ug/L	1.0	0.19	1	12/08/21 14:30	12/09/21 15:48	7440-43-9	
Zinc, Dissolved	50700	ug/L	200	19.7	10	12/08/21 14:30	12/10/21 18:38	7440-66-6	



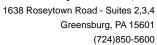


Project: RWM GW Sampling

Pace Project No.: 30452747

Date: 12/13/2021 02:10 PM

Sample: RWP-MWI	Lab ID:	30452747002	Collecte	d: 11/30/2	1 09:30	Received: 11/	30/21 21:45 M	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pred	paration Me	thod: El	PA 3010A			
, 2.00000, 00.00	,	lytical Services							
Cadmium, Dissolved	1.9	ug/L	1.0	0.19	1	12/08/21 14:30	12/09/21 15:50	7440-43-9	
Zinc, Dissolved	526	ug/L	20.0	2.0	1	12/08/21 14:30	12/09/21 15:50	7440-66-6	



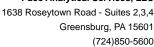


Project: RWM GW Sampling

Pace Project No.: 30452747

Date: 12/13/2021 02:10 PM

Sample: RWO-MWI	Lab ID:	30452747003	Collecte	d: 11/30/21	11:50	Received: 11/	30/21 21:45 Ma	atrix: Water	
			Report						
Parameters	Results	Units	Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ICP, Dissolved, 3010A	Analytical	Method: EPA 6	010D Pren	paration Met	hod: Fl	DΔ 3010Δ			
	Analytical	Mictiliou. El / Co	O I OD I I OP		iiou. Li	7 30 107			
outob for, bissorved, outob	•	lytical Services	•		.110G. L1	A 30 10A			
Cadmium, Dissolved	•		•		1	12/08/21 14:30	12/09/21 15:52	7440-43-9	





Project: RWM GW Sampling

Pace Project No.: 30452747

QC Batch: 92945 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A Analysis Description: 6010D MET Dissolved

Laboratory: Pace Analytical Services - WestVirginia

Associated Lab Samples: 30452747001, 30452747002, 30452747003

METHOD BLANK: 461993 Matrix: Water

Associated Lab Samples: 30452747001, 30452747002, 30452747003

Blank Reporting MDL Qualifiers Parameter Units Result Limit Analyzed Cadmium, Dissolved 1.0 U 1.0 0.19 12/09/21 15:11 ug/L Zinc, Dissolved 20.0 U 20.0 2.0 12/09/21 15:11 ug/L

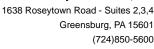
LABORATORY CONTROL SAMPLE: 461994

Date: 12/13/2021 02:10 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Cadmium, Dissolved 1000 959 96 80-120 ug/L Zinc, Dissolved 2000 2030 101 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 462025 462026 MS MSD 30452488002 Spike Spike MS MSD MS MSD % Rec Max Conc. RPD Parameter Units Result Conc. Result Result % Rec % Rec Limits **RPD** Qual Cadmium, Dissolved ug/L 1.7 1000 1000 854 854 85 80-120 0 20 Zinc, Dissolved 298 2000 2000 2090 2090 89 89 80-120 0 20 ug/L

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project: RWM GW Sampling

Pace Project No.: 30452747

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Date: 12/13/2021 02:10 PM





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RWM GW Sampling

Pace Project No.: 30452747

Date: 12/13/2021 02:10 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30452747001	RW05R-WMI	EPA 3010A	92945	EPA 6010D	93050
30452747002	RWP-MWI	EPA 3010A	92945	EPA 6010D	93050
30452747003	RWO-MWI	EPA 3010A	92945	EPA 6010D	93050

DRINKING WATER WO#: 30452747 OTHER T NPDES T GROUND WATER T REGULATORYAGENCY 30452747 T RCRA STATE Site Location LST 1600 Sparrows Point Blvd Sparrows Point, Md 21219 The Chair-of-Custody is a LEGAL DOCUMENT. All relevant fields must be Sempany Name: Tradepoint Atlantic Peze Quote Reference: Peze Project Samantha Bayura Manager: Peze Profile #: At ention: Matt Newman invoice Information: Section C Acdress: 2401010 RWM GW Sampling Required Project Information; Report To: Matt Newman Copy To: Stew Kabis Project Name: Project Number: PO Number: Section B 5 day Sparrows Point, MD 21219 1600 Sparrows Point Blvd Face Analytical " Tradepoint Atlantic Section A
Required Client Information:
Company: Tradepoint A Requested Due Date/TAT:

Email To:

Hone:

.ddress:

Requested Analysis Filtered (Y/N)

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Pittsburgh Lab Sample Condi	tion	upoi	nike	eceipt	JI 2	
Face Analytical Client Name:	Trai	lepa)ih-	A+laptic	Project #	0452747
Courier: Fed Ex UPS USPS Clien					•	Label M((
Tracking #: NIV						
Custody Seal on Cooler/Box Present: yes	<u> </u>	10	Seals	s intact:] no	
Thermometer Used	Туре	of Ice:	(We)	-		
Cooler Temperature Observed Temp		٠c	\sim	ection Factor: -	°C Final	Temp: 7 () • c
Temp should be above freezing to 6°C						
				pH paper Lot#	Date and contents	Initials of person examining
Comments:	Yes	No	N/A	1003801	contents	Mil Tefficier
Chain of Custody Present:		<u> </u>		1.		
Chain of Custody Filled Out:		ļ		2.		
Chain of Custody Relinquished:		<u> </u>		3.		
Sampler Name & Signature on COC:				4.		
Sample Labels match COC:		L		5.		
-Includes date/time/ID Matrix:	JT_		~			
Samples Arrived within Hold Time:		<u> </u>		6,		
Short Hold Time Analysis (<72hr remaining):				7.		
Rush Turn Around Time Requested:	<u> </u>			8.		
Sufficient Volume:				9.		
Correct Containers Used:				10.		
-Pace Containers Used:	/	<u> </u>				
Containers Intact:				11.		
Orthophosphate field filtered				12.		
Hex Cr Aqueous sample field filtered				13.		
Organic Samples checked for dechlorination:				14.		
Filtered volume received for Dissolved tests				15.		
All containers have been checked for preservation.				16.		
exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, Non-aqueous matrix						
All containers meet method preservation requirements.				initial when M(Date/time of preservation	
				Lot # of added preservative		
Headspace in VOA Vials (>6mm):				17.		
Trip Blank Present:			/	18.		
Trip Blank Custody Seals Present						
Rad Samples Screened < 0.5 mrem/hr				Initial when completed:	Date:	Survey Meter SN:
Client Notification/ Resolution:	LI			jinposed.	1-40.	
Person Contacted: Date/Time: Contacted By:						
Comments/ Resolution:						<u> </u>

A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR

section of the Workorder Edit Screen.

Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)
*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status

APPENDIX B

