

RESPONSE AND DEVELOPMENT COMPLETION REPORT

AREA A: SUB-PARCEL A3-1
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

Prepared For:



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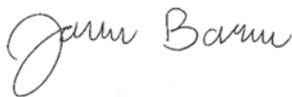
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Respectfully Submitted,
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Revision 1 – April 11, 2024

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1.0 INTRODUCTION

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic, has prepared this Response and Development Completion Report for the portion of the Tradepoint Atlantic property that has been designated as Area A: Sub-Parcel A3-1 (the Site). All documents related to the investigation and development of the sub-parcel are listed in the Reference List in **Appendix A**. Copies of relevant email communication are provided in **Appendix B**.

The Sub-Parcel A3-1 Response and Development Work Plan (RADWP) Revision 3 was submitted to the Maryland Department of the Environment (MDE) and the United States Environmental Protection Agency (USEPA) on April 24, 2017 and updated on June 5, 2017. An accompanying Comment Response Letter was submitted on June 5, 2017. The RADWP was approved via email from the MDE and the USEPA on April 28, 2017 and June 20, 2017, respectively. An addendum to the RADWP detailing modifications to the development layout was submitted to the MDE and USEPA on December 13, 2019. An accompanying Comment Response Letter was submitted on January 16, 2020. The addendum to the RADWP and associated Comment Response Letter were approved for implementation by the MDE via email on January 23, 2020.

The development of Sub-Parcel A3-1 generally included grading, placement of subbase, construction of floor slabs, construction of a warehouse building, paving, installation of underground utility and foundation structures, lighting improvements, and landscaping improvements.

1.1. REPORT PURPOSE

The purpose of this Response and Development Completion Report is to document response action and development activities undertaken in order to secure a No Further Action (NFA) Letter and Certificate of Completion (COC) for the Site. In addition, this report is being submitted in accordance with the requirements outlined in the following agreements:

- Administrative Consent Order (ACO) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the Maryland Department of the Environment (MDE), effective September 12, 2014; and
- Settlement Agreement and Covenant Not to Sue (SA) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the United States Environmental Protection Agency (USEPA), effective November 25, 2014.

The following section (Section 1.2) provides the project background and Section 1.3 provides an overview of the Site development and response action activities. The response actions performed are described in Section 2, and conclusions are provided in Section 3.

1.2. PROJECT BACKGROUND

1.2.1. Site Description and History

From the late 1800s until 2012, the production and manufacturing of steel was conducted at Sparrows Point. Iron and steel production operations and processes at Sparrows Point 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 steel making operations at the Facility ceased in fall 2012.

Parcel A3 comprises approximately 64 acres of an approximately 3,100-acre former steel mill (**Figure 1**) that operated for over one hundred years. Several iron and steel work processes were completed within the Phase 1 Development Area formerly known as the Cold Mill, Coating Mills and the Finishing Mills Areas. The former facilities and processes generally included steel finishing operations including hot and cold milling and various plating operations including chrome, tin and zinc alloys. In 2012, steelmaking operations at the facility ceased. All historical buildings were demolished, and the Site was cleared of all significant vegetation prior to the start of development activities.

Sub-Parcel A3-1 (the Site) consists of approximately 54 acres located east of Riverside Drive (**Figure 2**). The Development Area is bounded to the west by Riverside Drive, to the north by Bethlehem Boulevard, to the south by Cold Mill Road (also known as South Pipe Mill Road), and to the east by the Federal Express warehouse facility (also known as Parcel A1). The Site is zoned Manufacturing Heavy-Industrial Major (MH-IM) and was not occupied prior to the start of development activities. Prior to the start of development activities, all former buildings were demolished, and the parcel was cleared of all significant vegetation. Several relatively small pits and basements were filled at the Site.

1.2.2. Historical Environmental Activities

Prior to demolition, the A3-1 Development Area was occupied by the Rod and Wire Mill, which contained the former mills that produced rods and wire products from the 1940s to the early 1980s. All manufacturing activities at the Rod and Wire Mill area 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 Rod and Wire Mill included leaching of zinc ore and a subsequent treatment process to remove cadmium impurities. These activities resulted in zinc and cadmium contaminated soil and groundwater. The leaching process was implemented in large tanks located inside the north end of the former Rod and Wire Mill building. In the 1950s through the early 1970s, the acidic leach residue was stored in a former pond until about 1959 when filters were

installed 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. More information regarding previous steel finishing activities can be found in the Phase II Investigation Report – Area A: Parcel A3 (Revision 1 dated July 8, 2016).

Historically, as part of a series of site investigations conducted by the then owner, Bethlehem Steel Corporation, there were various Solid Waste Management Units (SWMUs) identified in the vicinity of the Rod and Wire Mill area during the mid-1980s and on through the early 1990s. Specifically, there were eight SWMUs identified in the January 1998 Description of Current Conditions (DCC) report prepared by Rust Environmental and Infrastructure.

The identified SWMUs are listed below:

SWMU 27:	Sludge Bin Storage Area
SWMU 28:	Northwest Pond
SWMU 29:	East Pond
SWMU 30:	Rod Mill Equalization Tanks (2)
SWMU 38:	Cadmium Treatment Trenches
SWMU 39:	Rod Mill Scale Pits (2)
SWMU 44:	Rod Mill Cooling Tower
SWMU 45:	Rod Mill Trenches/Sumps

A Phase I Environmental Site Assessment (ESA) was completed by Weaver Boos Consultants for the entire Sparrows Point property on May 19, 2014. The Phase I ESA identified particular features across the Tradepoint Atlantic property which presented potential risks to the environment. The results of the Phase I ESA are described in more detail in the Sub-Parcel A3-1 RADWP (Revision 3 dated April 24, 2017).

The Phase I ESA identified the following Recognized Environmental Conditions (RECs) within the Parcel B22 Phase 1 boundaries. These RECs were cross-listed as SWMUs and Areas of Concern (AOCs).

- Rod Mill Remediation Area (REC 6A)
- [Filled] Northwest Pond (REC 6B)
- [Filled] East Pond (REC 6C)
- Rod Mill Trenches/Sumps (REC 6D)
- Unknown Aboveground Tank (REC 6E)

1.2.3. Phase II Investigation

A Phase II Investigation was conducted for all of Parcel A3 in accordance with the Parcel A3 Phase II Investigation Work Plan dated September 17, 2015. The results of the Phase II Investigation are presented in the Phase II Investigation Report Area A: Parcel A3 (Revision 1 dated June 8, 2016) and the Response to MDE/USEPA Comments dated June 8, 2016. The agencies sent a comment via email on June 15, 2016 related to laboratory analysis. The comment was satisfactorily addressed in an email from EnviroAnalytics Group (EAG) dated August 4, 2016. The Phase II Investigation Report and associated responses to agency comments were approved on November 28, 2017.

1.3. SITE DEVELOPMENT AND RESPONSE ACTIONS

The Site has been developed for use as a warehouse facility with development activities generally including grading, asphalt paving, construction of a slab on grade warehouse building totaling approximately 979,200 square feet with an additional 32,000 square foot building entrance area, stormwater management and lighting and security improvements. Subsequent Site use would involve indoor workers in the warehouse and associated offices, and truck drivers entering and leaving the Site with goods.

The response and development actions approved for protection of human health and the environment at the Site included proper abandonment of wells and piezometers, delineation and removal of two areas with lead-contaminated media in excess of 10,000 milligrams per kilogram (mg/kg), delineation and removal of one area with arsenic-contaminated media in excess of 200 mg/kg, delineation and removal of petroleum-contaminated soil in 13 areas, and environmental capping of 100% of the Development Area.

2.0 RESPONSE ACTIVITIES

2.1. WELL ABANDONMENT AND INSTALLATION

A total of 87 permanent wells and temporary groundwater collection points (piezometers) were removed or abandoned on Sub-Parcel A3-1. A total of 41 wells and piezometers installed during or prior to the Phase II Investigation and proposed for abandonment or relocation in the Sub-Parcel A3-1 RADWP were removed or properly abandoned in accordance with Code of Maryland Regulations (COMAR) 26.04.04.34 through 36 between January 4 and June 6, 2017, prior to the start of grading activities. Subsequently, additional groundwater monitoring wells were installed within Sub-Parcel A3-1 following the abandonment of the above-mentioned wells and piezometers to facilitate the collection of groundwater data and to monitor the presence of non-aqueous phase liquid (NAPL). Several wells were relocated, re-installed, or renamed, as documented in the Rod and Wire Mill Interim Measures Progress Reports and Supplemental Investigation Report. All of the abandonments of wells or piezometers installed after the Phase II Investigation occurred between June and October of 2017.

A total of 79 monitoring wells currently remain on the sub-parcel. Additional details regarding the groundwater monitoring network and ongoing results are presented in the following documents:

- Pre-Design Investigation Rod and Wire Mill (RWM) Area Characterization Report Area A: Parcel A3. (Revision 0 – June 10, 2016)
- RWM Interim Measures (IM) Progress Report (Revision 0, dated January 26, 2018)
- RMW IM Progress Report – January 2018 (Revision 0, dated November 2, 2018)
- RMW IM Progress Report – August 2018 (Revision 0, dated November 2, 2018)
- RMW IM Progress Report – December 2018 (Revision 0, dated February 15, 2019)
- RWM IM Supplemental Investigation Work Plan (Revision 1, dated March 7, 2019)
- RWM IM 2019 Progress Report (Revision 0, February 14, 2020)
- RWM IM Supplemental Investigation Report (Revision 1, dated April 8, 2020)
- RWM IM 2020 Progress Report (Revision 0, April 22, 2021)

The locations of existing and abandoned wells and piezometers are shown on **Figure 3**. Well and piezometer abandonment records are provided in **Appendix C**. The locations of existing wells are

shown on **Figure 4** in relation to the previously installed remediation trenches in the northern portion of the Site.

2.2. EXCAVATION ACTIVITIES

A total of 13 locations with exceedances of screening criteria in soil for Oil & Grease or that otherwise exhibited evidence of NAPL contamination were excavated following the Parcel A3 Phase II Investigation. Petroleum-impacted soils were excavated as documented in the Response Action Completion Report: Area A: Parcel A3: NAPL/Oil & Grease Response Areas, included as **Attachment 1**. The identified NAPL and Oil & Grease impacted soils were removed to the requisite delineation levels in accordance with the approved Lead and NAPL/Oil & Grease Delineation and Excavation Work Plan, Revision 2, dated March 1, 2017, with the exception of the area immediately to the north of the RW-003 Response Area, where the excavation was terminated with MDE permission due to physical barriers. NAPL impacted soil to the north of the RW-003 Response Area was left in place with MDE authorization because the excavation was bounded to the north by low overhead utility lines and a BGE easement for their high voltage overhead utility line. The area of material excavation and the approximate area of remaining NAPL impacts are presented in **Figure 5**.

Three locations with exceedances of relevant screening criteria in soil for lead or arsenic were excavated following the Parcel A3 Phase II Investigation. Soils impacted by lead and arsenic were excavated as documented in the Response Action Completion Report: Area A: Parcel A3: Metals Response Areas, included as **Attachment 2**. Excavations were completed at three locations, and the identified metals impacted soils were removed to the requisite delineation levels in accordance with the approved Lead and NAPL/Oil & Grease Delineation and Excavation Work Plan, Revision 2, dated March 1, 2017.

A map displaying the extent of completed excavation activities is included as **Figure 6**.

3.0 SITE DEVELOPMENT ACTIVITIES

This section presents a summary of the completed development work as well as materials management and other protocols that were followed during the development of Sub-Parcel A3-1 to adequately mitigate potential risks for future uses of the property. Development work was conducted in two phases. The first phase of development work was completed under the Sub-Parcel A3-1 RADWP dated April 24, 2017 (updated on June 5, 2017) and the accompanying Comment Response Letter dated June 5, 2017. The second phase of development work was completed under the Sub-Parcel A3-1 RADWP Addendum dated December 13, 2019 and associated Comment Response Letter dated January 16, 2020.

Full-time oversight, including performing dust monitoring and soil screening services, was performed by an Environmental Professional (EP) provided by Hillis Carnes Engineering Associates (HCEA) during development activities to ensure compliance with environmental regulations and the development plans. The Notice of Completion of Remedial Actions letter provided by HCEA (**Appendix D**) states that development activities were completed in general accordance with the Sub-Parcel A3-1 RADWP and the Sub-Parcel A3-1 RADWP Addendum. The distribution of the completed surface types is summarized on **Figure 7**.

Daily Field Reports prepared by the EP are included as an electronic attachment. Select photos from general development activities and notable occurrences are included in **Appendix E**.

The first phase of development activities began on April 24, 2017 with ARCO as the General Contractor. No development work was performed between October 2018 and January 2020. The second phase of development work commenced on January 6, 2020.

Site development activities are discussed in the following Quarterly Development Status Updates:

- Area A: Sub-Parcel A3-1 Development Status Update (Third Quarter 2017, dated November 1, 2017)
 - Responses to Agency Comments dated January 29, 2018
- Area A: Sub-Parcel A3-1 Development Status Update (Fourth Quarter 2017, dated January 29, 2018)
- Area A: Sub-Parcel A3-1 Development Status Update (First Quarter 2018, dated May 3, 2018)
 - Responses to Agency Comments dated July 17, 2018
- Area A: Sub-Parcel A3-1 Development Status Update (Second Quarter 2018, dated August 21, 2018)

- Area A: Sub-Parcel A3-1 Development Status Update (Third Quarter 2018, dated October 31, 2019)
- Area A: Sub-Parcel A3-1 Development Status Update (First Quarter 2020, dated April 27, 2020)
- Area A: Sub-Parcel A3-1 Development Status Update (Second Quarter 2020, dated July 31, 2020)
- Area A: Sub-Parcel A3-1 Development Status Update (Third Quarter 2020, dated October 28, 2020)

The above-referenced Quarterly Development Status Updates and associated Responses to Agency Comments are included in **Appendix F**. Details regarding soil management, stockpiling, sample and disposal are provided in the Quarterly Development Status Updates and in the associated comment response letters. The following sections provide information not covered in the Quarterly Development Status Updates or in associated Responses to Agency Comments.

3.1. PRE-CONSTRUCTION MEETING

Prior to any earthwork being conducted on-site, a pre-construction meeting was held to address proper operating procedures for working on-site and handling potentially contaminated material. Records are provided for both phases of development work in **Appendix G**.

3.2. EROSION AND SEDIMENT CONTROL INSTALLATION FOR DEVELOPMENT

Installation of erosion and sediment controls was completed in accordance with the requirements of the Baltimore County permit prior to any construction at the Site.

3.3. FILL

The following fill materials were used during the development of Sub-Parcel A3-1:

- Approximately 3,800 cy of clean fill from Back River, approved by the MDE via email on April 21, 2015;
- Approximately 5,000 cy of topsoil from Waugh Chapel (Chesterfield Farms in Gambrills, MD), approved by the MDE via email on February 27, 2018;
- Approximately 4,500 cy of clay from Tanyard Cove for use as a compacted clay liner for basin construction, approved by the MDE via email on March 27, 2018;
- Backfill materials from Martin Marietta's Cockeysville (Texas) Quarry, approved by the MDE for general use on the Sparrows Point property via email on May 16, 2018; and
- Approximately 31,000 tons (22,140 cy) of clean fill from Mountain Materials and Reclamation, sourced by EAG and approved as clean fill in November 2019.

Fill approval documentation is provided in **Appendix H**.

3.4. SOIL MANAGEMENT

Stockpile sample laboratory reports for all materials sampled during the Sub-Parcel A3-1 development are included in **Appendix I**. Copies of relevant email communication pertaining to approval documentation are provided in **Appendix B**.

3.4.1. Main Development Area

3.4.1.1. Pre-Development Phase

Three stockpiles of soil (approximately 100 cubic yard (cy) each) were segregated due to evidence of impacts (elevated PID readings, odors, or staining) during the pre-development (demolition) phase. The soil was sampled on July 19, 2017 and submitted to Phase Separation Science, Inc. and analyzed for polychlorinated biphenyls (PCBs), Oil & Grease, Toxicity Characteristic Leaching Procedure (TCLP) Metals, and total petroleum hydrocarbons (TPH) – diesel range organics (DRO). Following the receipt of analytical results, the soil was approved for re-use under aggregate base in paved areas outside the building footprint by the MDE in an email dated August 7, 2017 and was placed under a parking area.

3.4.1.2. First Phase of Development Work

Approximately 100 cy of soil were segregated during storm drain work during the first phase of development work. The soil was sampled on July 20, 2017 and submitted to Phase Separation Science, Inc. and analyzed for PCBs, Oil & Grease, TCLP Metals, and TPH-DRO. Following the receipt of analytical results, the sampled soil was approved for re-use under the cap in paved areas by the MDE in an email dated September 19, 2017 and was subsequently placed under paved areas.

3.4.1.3. Second Phase of Development Work

During the second phase of development work, approximately 50 cy of impacted soil were stockpiled. The soil was sampled on June 22, 2020 and submitted to Maryland Spectral Services and analyzed for PCBs, Priority Pollutant Metals, manganese, Oil & Grease, volatile organic compounds (VOCs), TPH-DRO, TPH-gasoline range organics (GRO), and hexavalent chromium. Following the receipt of analytical results, the MDE required that the material be transported to Greys Landfill in an email dated September 8, 2020.

During the second phase of development work, approximately 500 cy of excess slag were generated. Because this slag was placed during grading activities for the first phase of development and did not include native soils, and because there was no evidence of impacts, the MDE permitted reusing this material on a different parcel without sampling (see **Appendix B**). This material was transported to Sub-Parcel B2-3 for use during mass grading activities.

3.4.2. Exclusion Zones

As specified in the Sub-Parcel A3-1 RADWP and RADWP Addendum, all soil excavated within the exclusion zones was segregated, stockpiled, and covered with plastic sheeting. Stockpile sample laboratory reports for the exclusion zones are included in **Appendix L**. Photographs 11 and 12 included in **Appendix E** show the exclusion zone development work. All soil excavated within the exclusion zones was approved for reuse beneath paved areas or for transport to Greys Landfill (see **Appendix B**). Disposal manifests for all materials transported to Greys Landfill from the exclusion zones during the first phase of development work are provided in **Appendix M**. No material was transported to Greys Landfill from the exclusion zones during second phase of development work.

3.4.2.1. *First Phase of Development Work*

During the first phase of development work, two areas of stockpiled soil containing approximately 500 cy (Exclusion Zone I) and 2,000 cy (Exclusion Zone II) generated during excavation inside the exclusion zones were sampled during two sampling events on September 28, 2017 and October 18, 2017. The samples were submitted to Phase Separation Science, Inc. and tested for DRO, GRO, Oil & Grease, PCBs, total metals, and hexavalent chromium. The soils from the two stockpile areas (500 cy and 2,000 cy) were approved for re-use under capped areas on-site by the MDE in emails dated October 5, 2017 and October 25, 2017, respectively. However, because the contractor determined that the soils were not suitable for compaction, the soils were disposed of at Greys Landfill. The soils were approved for disposal by the MDE in emails dated October 12, 2017 and October 25, 2017 for the first and second rounds of sampling, respectively.

During the disposal of soil from the exclusion zones, a stockpile of less than 100 cy of soil originating from a water line excavation that occurred on September 20, 2017 was inadvertently transported to Greys Landfill and disposed of prior to sampling and testing. The soil had been segregated due to mild odors and a maximum PID reading of 250 parts per million (ppm). No evidence of oily substances or staining was observed.

During the first phase of development work, a stockpile of soil from within the exclusion zone containing approximately 250 cy (Exclusion Zone III – 1 stockpile) was sampled during one sampling event on January 30, 2018. A 10-point composite sample was collected from the stockpile and submitted to Phase Separation Science, Inc. and tested for DRO, Oil & Grease, PCBs, total metals, and vanadium and manganese. The stockpiled soil was approved for re-use beneath capped landscaped areas and for the sediment basin on-site by the MDE on February 7, 2018.

During the first phase of development work, stockpiled soil from within the exclusion zones, containing approximately 600 cy total (3 stockpiles), was sampled during two sampling events on April 5 (BGE Conduit #6-#7 – two stockpiles in western exclusion zone) and April 18, 2018 (BGE Conduit #8 – one stockpile in eastern exclusion zone). A 10-point composite sample was collected

from each of the stockpiles and submitted to Phase Separation Science, Inc. and tested for DRO, Oil & Grease, PCBs, total metals, and vanadium and manganese. Based on the laboratory results, the MDE requested additional sampling with full TCLP analysis. One composite sample was collected from the two stockpiles in the western exclusion zone on May 1, 2018 and analyzed for full TCLP. The materials in all three sampled stockpiles were approved for transport to Greys Landfill by the MDE on May 15, 2018 and the material was transported to Greys Landfill on May 24, 2018.

3.4.2.2. Second Phase of Development Work

During the second phase of development work, stockpiled soil from the East Pond Exclusion Zone, containing approximately 150 cy, was sampled on July 13, 2020. A 10-point composite sample was collected from each of the stockpiles and submitted to Phase Separation Science, Inc. and tested for TCLP metals and total cadmium. The soil was approved for reuse under an industrial cap by the MDE via email on September 8, 2020. The soil was transported to Sub-Parcel B2-3 and used during mass grading activities.

During second phase of development work, stockpiled soil from the Storage Bin Exclusion Zone during the second phase of development work, containing approximately 100 cy was sampled on September 10. A 10-point composite sample was collected from each of the stockpiles and submitted to Phase Separation Science, Inc. and tested for manganese, PCBs, TPH-DRO, and TPH-GRO. The soil was approved for reuse under an industrial cap by the MDE via email on October 14, 2020. The soil was transported to Sub-Parcel B2-3 and used during mass grading activities.

3.5. COAL TAR-IMPACTED MATERIAL

During first phase of development work, material was excavated during a conduit line excavation through an area containing coal tar. Approximately 190 cy of material impacted by coal tar were stockpiled. A sample of the coal tar-impacted material was collected on April 5, 2018 and submitted to Phase Separation Science, Inc. and tested for TCLP metals, TCLP VOCs, TCLP semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, and PCBs. The coal tar-impacted material was approved for transport to Greys Landfill by the MDE via email on April 24, 2018 (see **Appendix B**). Gray & Son, Inc. brought the 190 cy of material to Greys Landfill for disposal. The laboratory report and disposal ticket are included in **Appendix N**.

3.6. WATER MANAGEMENT

Dewatering during construction was necessary for underground utility work (trenches/excavations) and light pole installation. The EP inspected the water that collected in the excavations/trenches. If the water exhibited indications of significant contamination (sheen, odor, discoloration, presence of product), or if the excavation/trench was within a known area of significant groundwater contamination (if groundwater is the source of the intrusive water) or a

significant Phase II Investigation target, the water was sampled and analyzed in order to determine the appropriate discharge action. Two aqueous samples were collected from excavations/trenches during Sub-Parcel A3-1 development activities. The samples were submitted to Phase Separation Science, Inc. At the direction of Tradepoint Atlantic, the sample collected on March 3, 2017 during demolition activities was analyzed for RCRA metals, total zinc, and dissolved zinc. At the direction of Tradepoint Atlantic, the sample collected on September 11, 2017 from a pre-existing 60-inch water line was analyzed for PCBs, VOCs, zinc, and cadmium. The analytical results, included in **Appendix J**, were submitted to Tradepoint Atlantic. Tradepoint Atlantic personnel approved the discharge of the water in question to the HCWWTP based on known threshold limits of the plant.

During the first phase of development work, water that collected in excavations/trenches due to intrusion of groundwater and/or stormwater was pumped to a frac tank before being pumped to a storm drain leading to the HCWWTP at the direction of Tradepoint Atlantic personnel. During second phase of development work, at the direction of Tradepoint Atlantic personnel, all dewatering discharges were pumped to a drain identified by Tradepoint Atlantic that conveyed to the HCWWTP. When limited amounts of dewatering were required, the contractor conveyed the water to the HCWWTP via truck. The water conveyed to the HCWWTP was treated and discharged in accordance with NPDES Permit No. 90-DP-0064A; I. Special Conditions; A.4; Effluent Limitations and Monitoring Requirements.

3.7. DUST CONTROL

General construction operations, including removal of existing foundations or utilities, soil excavation and transport, soil grading, trenching for utilities, and cap construction activities were performed at the Site. To limit worker exposure to contaminants borne on dust and windblown particulates, dust control measures were to be implemented, if warranted when the above activities were performed. The action level used for the purpose of determining the need for dust suppression techniques (e.g. watering and/or misting) and/or continuous monitoring during the response and development activities on Site was 3.0 milligrams per cubic meter (mg/m^3).

Dust monitoring was performed with a ThermoElectron Corporation Personal Data RAM 1000AN Dust Monitor from October 2016 to May 2017. Three MetOne E-sampler dust monitors were used from May 2017 to the conclusion of intrusive activities. Three dust monitors were placed daily upwind of, downwind of, and inside the active work zone. Dust readings were recorded at each monitor at a rate of once per minute. Daily summaries of 15-minute average dust readings are provided as an electronic attachment. Dust control measures were to be implemented if a sustained level above $3.0 \text{ mg}/\text{m}^3$ was observed. Some exceedances of the $3.0 \text{ mg}/\text{m}^3$ action level were observed during construction activities. However, the exceedances appeared to be associated with trucks passing near the monitor and did not last more than five minutes. Dust monitoring was terminated on February 15, 2018 after the majority of the Site had been capped. After this date, the EP continued to visually inspect the site for visible dust until the conclusion of all development

activities. Electronic dust monitoring was not performed during the second phase of development work because the majority of the Site had been capped and because intrusive activities outside the constructed building were limited. The Contractor utilized a water truck to mitigate dust generation during the development work operations.

3.8. HEALTH AND SAFETY

A site-specific Health and Safety Plan (HASP) was developed by the on-site contractor to present the minimum requirements for worker health and safety protection for the project. All site work was performed under the site-specific HASP. The contractor was responsible for following safety procedures, including schedule limitations, to control contact with potentially contaminated soil or groundwater. During the first phase of development work, the contractor complied with the 120-day allowable duration for intrusive work outside the building footprint and 60-day allowable duration for intrusive work inside the building footprint. In lieu of tracking exposure days, Modified Level D personal protection equipment (PPE) was implemented during the second phase of development work. The contractor Health and Safety acknowledgement documentation included in **Appendix K**. Details regarding the Screening Level Risk Assessment (SLRA) completed for the sub-parcel and the determination of the allowable duration for intrusive work are presented in the Sub-Parcel A3-1 RADWP.

3.9. CONSTRUCTION OF STORMWATER MANAGEMENT FEATURES

On October 9, 2017, a letter was submitted to the agencies to request approval to modify the design of the liner for the stormwater pond constructed as part of the development within Sub-Parcel A3-1. The requested modification to install 2 feet of clay in place of the 30-mil liner, with 6 inches of clean topsoil placed above the clay layer met the approved requirements for landscaped caps installed at the site. The proposed modification was approved by the MDE by email on October 26, 2017 (**Appendix B**) with the following conditions:

1. All clay material used must be documented to comply with the Voluntary Cleanup Program (VCP) clean fill requirement.
2. The clay material must be placed in such a manner as to ensure that the final permeability is demonstrated to be similar to or better than the original 30-ml plastic liner and all documentation must be included in the final completion report.

Permeability tests were conducted by HCEA on a selected clay material, and the results were submitted to the MDE. The MDE approved the use of the selected clay material via email on March 27, 2018 (see **Appendix B**).

3.10. LANDSCAPED AREAS

As stated in the Notice of Completion of Remedial Actions (**Appendix D**), capping in the landscaped areas was installed under the oversight of an HCEA EP to meet the specifications established in the Sub-Parcel A3-1 RADWP and the RADWP Addendum. As discussed above in Section 3.4 (Fill Materials), the materials used in landscaped areas were approved by the MDE (**Appendix H**).

The selected marker fabric (see **Appendix O**) meets the specifications given in the RADWP and the RADWP Addendum.

Landscape capping inside the Sub-Parcel A3-1 boundary but outside the project's limit of disturbance (LOD) was completed separately under the oversight and direction of EnviroAnalytics Group (EAG), as discussed in detail in the following section.

3.11. ACCESS ROAD AND NORTHERN CAPPING AREA

On July 18, 2018, a letter was submitted to the agencies to clarify that the northern access road connecting Sub-Parcel A3-1 to Bethlehem Boulevard was being implemented as shown on a revised set of development drawings included in the approved RADWP and to notify the agencies that EAG (instead of Tradepoint Atlantic) would be implementing the landscape capping remedy in the northern portion of the Site (located inside the Sub-Parcel A3-1 boundary but outside the Contractor's Limit of Disturbance (LOD)). The access road was constructed in accordance with the development plan and red line drawing provided as Attachment 1 and Attachment 2 to the referenced letter, which has been included in **Appendix P**.

The landscape capping remedy in the northern portion of the site was installed between March and October 2020. A layer of geotextile marker fabric was placed throughout the capping area prior to placing clean fill. A minimum of 24 inches of clean fill was placed above the geotextile marker fabric throughout the capping area. Clean fill material from a virgin source was imported from Mountain Materials and Reclamation of Joppa, MD, an MDE-approved clean fill facility. Stone placed around electrical towers was sourced from Martin Marietta. A photograph log of the landscape capping work is included as **Appendix Q**.

Tradepoint Atlantic coordinated with Baltimore Gas and Electric (BGE), which maintains a substation and electrical structures in the area, to ensure that electrical features were protected throughout the site work. Due to the site's relatively flat topography, extra care had to be taken to ensure that drainage swales would have positive drainage toward existing stormwater inlets along Bethlehem Boulevard. Grade adjustments were made to the cap and its swales in several areas to ensure drainage away from the substation. Following the completion of regrading activities, each section of the capped area was seeded and stabilized.

3.12. NOTABLE OCCURRENCES

Monitoring wells RW06-MW(S) and RW06-MW(D) were damaged during construction in the first quarter of 2018 and were replaced on April 30 and May 1, 2018.

3.13. POST REMEDIATION REQUIREMENTS

Long-term conditions related to future use of the Site will be described within the NFA and COC. Post remediation requirements will include compliance with the conditions specified in the NFA, COC, and the deed restrictions recorded for the Site. Deed restrictions as defined by the MDE VCP in the NFA and COC will be recorded by the responsible party within 30 days after receipt of the final NFA. In addition, no enclosed buildings may be constructed within the area where NAPL-contaminated soils could not be removed due to physical barriers without further evaluation of the potential for vapor intrusion.

The entire Site will be subject to a restriction that limits the use of the property to non-residential land use as well as a restriction prohibiting the use of groundwater for any purpose at the Site and a requirement to characterize, containerize, and properly dispose of groundwater in the event of deep excavations encountering groundwater.

Maintenance requirements will include inspection and maintenance of landscape and hardscape capped areas to minimize degradation of the cap and exposure to the underlying soil. Specific inspection protocols and maintenance schedules will be addressed in an Institutional Controls and Operations & Maintenance Plan, specific to Sub-Parcel A3-1, to be submitted under separate cover.

The responsible party will perform cap maintenance inspections, perform maintenance of the cap, and retain cap inspection records. Areas of the cap that have degraded will be repaired in accordance with the Institutional Controls and Operations & Maintenance Plan. The MDE shall be notified within ten business days of any repairs that are the result of cap failure. The notification will include documentation of the conditions being repaired and the location of the repair.

The MDE will be provided with a written notice at least 30 days prior to any planned excavation activities at the Site that will penetrate through the cap. Written notice of planned excavation activities will include the proposed date(s) for the excavation, location of the excavation, health and safety protocols (as required), clean fill source (as required), and proposed characterization and disposal procedures in accordance with applicable local, state and federal requirements.

4.0 CONCLUSION

From October 2016 through December 2017 and January 2020 through July 2020, response and development actions were conducted as part of the redevelopment of the Site identified as Sub-Parcel A3-1. The primary response and development actions included soil delineation and excavations, abandonment of temporary groundwater collection points and wells, construction of a slab on-grade warehouse with associated stormwater management features, underground utilities, lighting improvements, parking areas, and landscaped areas.

A Notice of Completion of Remedial Actions prepared by the EP is enclosed in **Appendix D** to certify that the response actions have been completed in accordance with the requirements described in the RADWP and the Site is suitable for occupancy and use.

As a result of the information contained herein, it has been demonstrated that the response and development actions have been completed in accordance with the approved RADWP and RADWP Addendum. With construction of the containment remedy (caps) in conjunction with redevelopment of the Site, the applicable requirements for obtaining a NFA Letter and COC for this Site have been fulfilled. Therefore, Tradepoint Atlantic is respectfully requesting issuance of a NFA Letter for the Site at this time. Please find enclosed as **Appendix R** a copy of the surveyed metes and bounds of Sub-Parcel A3-1. It is ARM's understanding that Tradepoint Atlantic will record the NFA Letter and the deed restrictions identified in the RADWP and RADWP Addendum within 30 days after receipt of the final NFA Letter. Proof of recordation will be submitted to MDE upon receipt from Baltimore County.