

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III**

**FINAL DECISION AND RESPONSE TO COMMENTS
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND**

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments (FDRTC or Final Decision) selecting the final remedy for soils and interim remedy for groundwater (Final Remedy) at five parcels of property, Parcels A2, A3, B3, B4 Remnant Area, and B15 (Parcels), respectively, located on the 3,100-acre Sparrows Point Facility (SPF or Facility) owned by Tradepoint Atlantic (TPA) in Baltimore Harbor. This Final Decision is issued pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. Section 6901, et seq. (RCRA).

The Facility is subject to RCRA's Corrective Action Program, which is designed to ensure that owners and operators of certain facilities subject to RCRA investigate and address releases of hazardous waste and hazardous constituents, often in the form of soil or groundwater contamination, that have occurred at or emanated from their properties. The State of Maryland (Maryland) is not authorized for the Corrective Action Program under Section 3006 of RCRA; therefore, EPA retains primary authority in Maryland to implement it.

Corrective Action obligations have been performed at the Facility pursuant to a 1997 federal Consent Decree entered into under Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h), among other authorities, by Bethlehem Steel Corporation, the Maryland Department of Environment (MDE), and EPA (Civil Action Nos. JFM-97-558 and JFM-97-559) and a 2014 Settlement Agreement and Covenant Not to Sue Sparrows Point Terminal, LLC (Docket #CERCLA/RCRA-03-2014-0279PP) entered into by Sparrows Point Terminal LLC, EPA, and MDE.

I. FINAL REMEDY FOR SOILS

EPA hereby selects the following components as the Final Remedy for soils at Parcels A2, A3, B3, B4 Remnant Area, and B15, respectively:

- Parcel A2 – Compliance with an approved Soil Management Plan and Land Use Restrictions implemented through Institutional Controls (ICs)
- Parcel B3 – Land use restrictions implemented through ICs
- Parcel A3 – Soil excavation, installation of an engineered cap, compliance with an approved Soil Management Plan and Land Use Restrictions implemented through ICs
- Parcel B4 Remnant Area – Soil excavation, compliance with an approved Soil Management Plan, soil vapor intrusion investigation and remediation as necessary, and Land Use Restrictions implemented through ICs

- Parcel B15 – Installation of an engineered cap, compliance with an approved Soil Management Plan and Land Use Restrictions implemented through ICs.

II. INTERIM REMEDY FOR GROUNDWATER

EPA hereby selects the following use restrictions as the interim remedy for groundwater at Parcels A2, A3, B3, B4 Remnant Area, and B15:

- Groundwater use is prohibited for any purpose.

III. PUBLIC COMMENT PERIOD

EPA issued a Statement of Basis (SB) dated March 3, 2020, in which it proposed a remedy for soils and an interim remedy for groundwater at the Parcels and solicited public comment on its proposal consistent with the public participation provisions under RCRA. The public comment period ended on May 5, 2020.

IV. RESPONSE TO COMMENTS

During the public comment period, EPA received two comments on the SB, which are included as Attachment B.

The first comment received by EPA during the comment period was in an email dated April 16, 2020, submitted by Mr. Keith Taylor, President of the Sparrows Point/North Point Historical Society, requesting “information on the Corrective Action Cleanup Proposal process.” EPA has reviewed Mr. Taylor’s comment, and its response is provided in Attachment C. The second set of comments EPA received was in a letter dated May 5, 2020 submitted jointly by Mr. Ridgway Hall, on behalf of Blue Water Baltimore, Inc., and Mr. Paul Smail, on behalf of Chesapeake Bay Foundation, Inc. The letter included general comments, parcel-specific comments, and a request for a public hearing. EPA has reviewed Mr. Hall and Mr. Smail’s comments, and its responses are provided in Attachment C.

After carefully considering all the public comments received, EPA has not modified the Proposed Remedy as set forth in the SB. Consequentially, the Final Remedy for Soils and Interim Remedy for Groundwater are unchanged from that proposed in the SB. The SB is hereby incorporated into this Final Decision by reference and made a part hereof as Attachment A.

V. DECLARATION

Based on the Administrative Record compiled for the corrective action at Parcels A2, A3, B3, B4 remnant Area, and B15, respectively, I have determined that the remedy selected in this Final Decision, which incorporates the March 3, 2020 Statement of Basis, is protective of human health and the environment.

Date: 7/22/20

John A. Armstead

John A. Armstead, Director
Land, Chemicals and Redevelopment Division
U.S. Environmental Protection Agency, Region III

Attachment A: Statement of Basis
Attachment B: Public Comments
Attachment C: Response to Comments



ATTACHMENT A

STATEMENT OF BASIS

PARCELS A2, A3, B3, B4 REMNANT AREA, AND B15

TRADEPOINT ATLANTIC

**SPARROWS POINT, MARYLAND
MDD053945432**



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

Tradeport Atlantic
Sparrows Point, Maryland
EPA ID no. MDD 053 945 432

EPA Region III
Land, Chemicals & Redevelopment Division

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I. INTRODUCTION

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for five parcels (Parcels) of property, Parcels A2, A3, B3, B4 Remnant Area, and B15, respectively, located on the 3,100-acre Sparrows Point Facility (Facility) in Baltimore Harbor (**Figure 1**). Tradepoint Atlantic (TPA), the current owner of the Facility, is subdividing the Facility into parcels for redevelopment. EPA understands that TPA has already leased several of the Parcels and that development and construction are currently under way.

The Facility is subject to EPA's Corrective Action authorities under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 *et seq.* The Corrective Action Program requires that facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, often in the form of soil or groundwater contamination, that have occurred at or from their property. Maryland is not authorized for the Corrective Action Program under Section 3006 of RCRA, therefore, EPA retains primary authority in the State of Maryland to implement it.

EPA's proposed remedies for soils at the Parcels are as follows:

- Parcel A2 – Compliance with an approved Soil Management Plan and Land Use Restrictions implemented through Institutional Controls (ICs).
- Parcel B3 – Land use restrictions implemented through ICs.
- Parcel A3- Soil excavation, installation of an engineered cap, compliance with an approved Soil Management Plan and Land Use Restrictions implemented through ICs
- Parcel B4 Remnant Area – Soil excavation, compliance with an approved Soil Management Plan; soil vapor intrusion investigation and remediation as necessary, and Land Use Restrictions implemented through ICs
- B15 – Installation of an engineered cap, compliance with an approved Soil Management Plan and Land Use Restrictions implemented through ICs.

This SB does not include a proposed final remedy for groundwater. EPA will issue a separate SB for Facility-wide groundwater and solicit public comment on its proposal once the groundwater at the entire Facility has been evaluated. In the interim, EPA, is proposing groundwater use restrictions at the Parcels to prevent all uses of shallow groundwater until a final remedy for Facility-wide groundwater is selected.

EPA has compiled an Administrative Record (AR) containing all documents, including the complete set of reports that document Facility conditions, on which EPA's proposed remedy is based. EPA encourages anyone interested in this matter to review the AR.

EPA is providing a thirty (30) day public comment period on this SB. EPA will address all significant comments received during the public comment period. If EPA determines that new information or public comments warrant a significant modification to the proposed remedies, EPA will modify the proposed remedies or select other alternatives based on such new information and/or public comments and will solicit public comment on its modified proposed remedies. If any of the final remedies is substantially unchanged from the one proposed, EPA will issue a Final Decision and Response to Comments (FDRTC) and inform all persons who submitted written comments or requested notice of EPA's Final Decision.

Information on the RCRA Corrective Action Program as well as a fact sheet for the Facility can be found by navigating to <https://www.epa.gov/hwcorrectiveaction/hazardous-waste-cleanup-sparrows-point-llc-sparrows-point-md>. An index to the Administrative Record (AR) which supports this SB is attached as Attachment 1, and references all documents, including data and quality assurance information, on which each of EPA's proposed remedies is based. See Section IX, Public Participation, for information on how you may review the AR.

II. FACILITY BACKGROUND

A. History

The Facility comprises a 3,100-acre peninsula in Baltimore Harbor (Sparrows Point Peninsula or Peninsula), generally bounded by the Back River, Bear Creek, and the Northwest Branch of the Patapsco River. In 1887, Maryland Steel built an iron furnace on the Facility, and the first iron was cast in 1889. The Bethlehem Steel Corporation (BSC) purchased the property in 1916 and enlarged it, building mills to produce hot rolled sheet, cold rolled sheet, galvanized sheet tin mill products, and steel plate. During peak production in 1959, BSC operated 12 coke-oven batteries, 10 blast furnaces, and four open-hearth furnaces at the Facility.

This SB summarizes work undertaken pursuant to a 1997 federal consent decree and a 2014 administrative settlement agreement, as detailed below. RCRA corrective action work is ongoing at the Facility.

In 1997, the Federal District Court for the District of Maryland entered a Consent Decree (CD) under Section 3008(h) of RCRA, 42 U.S.C. § 6928(h), that had been signed by BSC, the Maryland Department of Environment (MDE), and EPA (Civil Action Nos. JFM-97-558 and JFM-97-559). The CD required BSC to undertake certain RCRA Corrective Action activities at the Facility, including, among other tasks, completing a Site Wide Investigation (SWI) and a Corrective Measures Study (CMS), and implementation of Interim Measures (IMs) as necessary. A Phase I Environmental Site Assessment (ESA) was completed for the Facility on May 19, 2014. The Phase I ESA identified Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) across the Facility property that presented potential risks to the environment including buildings and process areas where releases of hazardous substances and/or petroleum products potentially may have occurred. At the time the CD was entered, EPA and MDE had identified eighty-one (81) SWMUs and twenty-eight (28) AOCs at the Facility and designated five special study areas to focus on initially in the SWI, consisting of the Tin Mill Canal/Finishing Mills, Greys Landfill, Coke Point Landfill, Coke Oven Areas and Humphreys Impoundment. The CD did not require implementation of corrective measures, apart from IMs, several of which are currently in operation at the Facility.

BSC declared bankruptcy in 2003, steelmaking continued at the Facility under a series of new owners, each of whom also continued to carry out the work required under the CD. Steelmaking operations at the Facility ended in 2012, when then-owner, RG Steel Sparrows Point LLC, declared bankruptcy. In August 2012 several companies, including Sparrows Point LLC (SPLLC), purchased the Facility from RG Steel Sparrows Point LLC through a bankruptcy sale. SPLLC subsequently acquired all the property interests in the Facility. In July 2014, the District Court entered an amendment to the CD adding SPLLC as a Respondent. Meanwhile, SPLLC had notified EPA and MDE of its interest in selling the Facility to Sparrows Point Terminal LLC (SPTLLC). In September 2014, EPA and MDE entered into a Settlement Agreement and Covenant Not to Sue (SA) that was subject to public comment, and an Administrative Order on Consent (ACO), respectively, with SPTLLC. The agreements, together, provide for the cleanup

Statement of Basis

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of the Facility under both RCRA Corrective Action and Maryland law. SPTLLC subsequently acquired the Facility, and following public comment and publication of EPA's response, the SA was finalized in November 2014. In 2016 SPTLLC changed its name to Tradepoint Atlantic (Tradepoint). Tradepoint has organized the Facility into parcels for redevelopment as commercial, light industrial and logistics facilities.

The EPA and MDE have been working jointly to oversee the investigation and cleanup of the Facility being conducted under MDE's ACO and EPA's SA.

B. Site Geology and Hydrogeology

The Facility is located within the Coastal Plain Physiographic Province, which is the relatively low-lying portion of the Atlantic Slope. The unconsolidated sediments beneath the Sparrows Point Peninsula lie horizontally on a bedrock surface of Precambrian and Early Paleozoic crystalline rock that slopes downward to the southeast. The unconsolidated sediments include (from youngest corresponding to surficial to oldest) recent fill deposits consisting primarily of iron- and steel-making slag; the Pleistocene Talbot Formation (predominantly clays, organic clays, silts, and muds) approximately five to 100 ft. thick; the Upper Cretaceous Patapsco Formation (predominantly sand and gravel interbedded with lenses of sandy clay) approximately 145 to 255 ft. thick; the Upper Cretaceous Arundel Formation (predominantly dense, plastic clays with nodules of iron oxide and a few discontinuous lenses of sand) approximately 20 to 180 ft. thick with an average thickness of 100 ft.; and the Lower Cretaceous Patuxent Formation (interbedded and lenticular beds of gravel, sand, sandy clay, and clay) approximately 50 to 250 ft. thick. The Cretaceous formations comprise the Potomac Group.

The aquifer system immediately underlying the Sparrow's Point Peninsula is called the Lower Patapsco Aquifer system. A deeper confined aquifer exists below the approximately 100 feet overlying Arundel Clay confining unit in the Patuxent Formation and is called the Patuxent aquifer system. Groundwater investigations at Sparrow's Point are conducted solely in the Lower Patapsco because there is no connection between the two aquifers.

Unconfined groundwater exists within the shallow aquifer comprised of the slag fill material, and intermediate and deeper aquifers exist within the Talbot and Patapsco Formations, respectively. The Lower Patapsco aquifers are hydraulically interconnected but are partially separated in areas by discontinuous lenses of silt and clay. Radial flow on the western side of the peninsula is toward Bear Creek and the Patapsco River to the west. Flow on the south side of the peninsula is south toward the southern shoreline and turning basin. Flow on the east side of the peninsula is toward Old Road Bay to the east. Groundwater flow direction within the intermediate aquifer along the western portion of the Peninsula is northwest, influenced by historical pumping activities in the area near the shipyard to the west of the Peninsula. Groundwater flow direction within the intermediate aquifer along the eastern portion of the peninsula is south-southwest in the apparent direction of the natural gradient. Groundwater flow direction within the deep aquifer is unidirectional to the east-northeast.

III. PARCEL DESCRIPTION

The investigation results of the Parcels are presented in the following subsections. Samples of soil, groundwater, and soil gas as necessary were collected at the Parcels and compared with site-wide Project Action Limits (PALs) (screening values) that were established in a Quality Assurance Project Plan, dated April 5, 2016, which in turn were based on EPA's Regional Screening Levels, including a worker composite exposure to soil and potable use of groundwater. The soil vapor levels are from MDE Tier 1 Target Commercial Gas Screening Levels. Each constituent that exceeded its PAL is deemed a Constituent of Potential Concern (COPC).

Complete details, including sampling data, can be found in the individual reports listed in the Index to the AR, and located in the AR. Sampling included soil, groundwater, and sub-slab soil gas at the Parcels. Chemicals of concern (COCs) include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and inorganics (e.g., mercury).

A. Parcel A2

Parcel A2 is comprised of 41 acres (**Figure 2**) and is bound to the south and east by the Baltimore Beltway. This parcel is partially occupied by the Reservoir Road Warehouse and the Process Storage Building, also known as the DACS Building. The remainder of the parcel is occupied by roads or undeveloped areas comprised of open space and woods. The Reservoir Road Warehouse was formerly used for material storage of refractory supplies, electrical materials, and other parts. The DACs Building was formerly used for storage of materials, most notably drums containing lubricants. Both the Reservoir Road Warehouse and DACs Building are currently intact and are now occupied.

EPA and MDE approved a Land Use Environmental Covenant (EC) for the northern section of Parcel A2 in October 2019. Once EPA makes a final remedy decision, a separate EC shall be created for the remainder of Parcel A2 (Parcel A2 Remnant Area).

B. Parcel A3

Parcel A3 is approximately 64 acres (**Figure 3**). Parcel A3 is bounded to the west by Riverside Drive and Bear Creek, to the north by Bethlehem Boulevard and Interstate 695, and to the east by the by Federal Express warehouse facility (also known as Parcel A1). The eastern area of the parcel (Sub-Parcel A3-1), located east of Riverside Drive has undergone recent industrial development as approved in the Response and Development Work Plan (RDWP) submitted to MDE and EPA, which includes construction of a Warehouse/Distribution Center, asphalt paving and landscaped area. The remainder of Parcel A3 (Parcel A3 Remnant Area) consists of an 11.3-acre plot located primarily along the western and southern edges of Sub-Parcel A3-1.

The Rod and Wire Mill was located in the northwestern portion of Parcel A3 and 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 1980s with subsequent demolition of all structures between 1994 and 2000.

Manufacturing activities at the Rod and Wire Mill 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 former Rod and Wire Mill building. In the 1950s through the early 1970s, the acidic leach residue was stored in the former Northwest 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 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 former East Pond until 1971. The operations ended in the early 1980's when the Rod and Wire Mill was shut down. These activities resulted in zinc and cadmium contaminated soil and groundwater. Light non-aqueous phase liquid (LNAPL) was also discovered in shallow groundwater in the northwestern portion of the site in 2015.

C. Parcel B3

Parcel B3 is comprised of 54.3 acres (**Figure 4**). This parcel is bounded to the west by the Plant Garage and a portion of the former residential area that was occupied by mill workers (within Parcel B2), to the north by the former Finishing Mills Area and the former Hot Strip Mill Area (within Parcel B22 and Parcel B6), to the south by the former Blast Furnace Area (within Parcel B5) and the former Penwood Storage Tank Farm (within Parcel B19), and to the east by the Baltimore County Vehicle Maintenance Shops and Baltimore Fire Academy (within Parcel B7). The parcel is comprised of several buildings which have either been demolished or are proposed for demolition. Parcel B3 also contains the main Tradepoint Atlantic office and the former Roll Grinding Facility, currently occupied by MCM Construction that conducts material handling onsite.

D. Parcel B4 Remnant Area

Parcel B4 is comprised of approximately 72 acres (**Figure 5**). This SB addresses a portion of Parcel B4 (Remnant Area) which consists of a 36.9-acre plot. This SB does not address the central portion of Parcel B4 which is designated as Sub-Parcel B4-1. Sub-Parcel B4-1 consists of approximately 21.0 acres and is now part of the Sub-Parcel B1-1 development. EPA selected a Final Remedy for Sub-Parcel B4-1 in June 2017. Sub-Parcel B4-1 has been redeveloped as an automotive and distribution center (Roll-On, Roll-off or RORO) with development activities including grading, asphalt paving, lighting and security improvements.

E. Parcel B15

Parcel B15 is comprised of 19.3 acres (**Figure 6**). This parcel is bounded to the south by a former Carpenter Shop (within Parcel B23), to the north by the Tin Mill Canal (within Parcel B16), to the west by the Humphrey Creek Waste Water Treatment Plant (within Parcel B24), and to the east by the Finishing Mills Study Area (within Parcel B21). Parcel B15 includes a 4,275-square foot enclosed building that is within the historical Brick Sheds and 4.5 acres of historical pavement and laydown areas. The Brick Sheds are standing on elevated floor slabs with open sides.

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IV. SUMMARY OF ENVIRONMENTAL INVESTIGATIONS

The investigation results of the Parcels are presented in the following subsections. Samples of soil, groundwater, and soil gas as necessary were collected at all parcels and compared with site-wide Project Action Limits (PALs) (screening values) that were established in a Quality Assurance Project Plan, dated April 5, 2016. PALs were based on EPA's Regional Screening Levels, including a worker composite exposure to soil and potable use of groundwater. The soil vapor levels are from MDE Tier 1 Target Commercial Soil Gas Screening Levels. Each constituent that exceeded its PAL is deemed a Constituent of Potential Concern (COPC).

Complete details, including sampling data, can be found in the individual reports listed in the Index to the AR, and located in the AR. Sampling included soil, groundwater and sub-slab soil gas at the Parcels.

A Human Health Screening Level Risk Assessment (SLRA) was conducted for all Parcels to evaluate the potential risks for use of the Parcels associated with current and future receptors.

A. Parcel A2

1. *Soil Exposure Pathway*

A total of 50 soil samples were collected as part of Parcel A2 Phase II Investigation. Soil borings were advanced at 23 locations across the Parcel to assess the presence or absence of soil contamination. Samples were analyzed for VOCs, SVOCs, metals, cyanide, Oil & Grease and PCBs. One SVOC (benzo[a]pyrene) and four inorganic compounds (arsenic, manganese, lead, and hexavalent chromium) were detected above their respective PALs.

2. *Groundwater Results*

Four temporary groundwater sample collection points were installed to facilitate the collection of groundwater samples at Parcel A2 during the Phase II Investigation. Groundwater samples were analyzed for VOCs, SVOCs, Oil & Grease, Dissolved Metals, and cyanide. No concentration of any VOC compound exceeded its groundwater PAL. 1,4-dioxane is the only SVOC detected at a concentration that exceed its PAL. Four inorganic compounds (arsenic, manganese, cobalt, and iron) were also detected above their respective PALs.

3. *Vapor Intrusion*

A total of 18 sub-slab temporary monitoring probes were installed in the Reservoir Road Warehouse and the DACS building to collect sub-slab soil gas samples. No VOCs detected in the sub-slab soil gas samples exceeded their respective PALs.

4. *Human Health Screening Level Risk Assessment*

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A SLRA was conducted for soils to evaluate the site conditions in support of the design of necessary response measures at Parcel A2. In surface soils, the SLRA indicated that the cancer risk and the non-cancer hazard index for the Composite Worker do not exceed the target acceptable values.

The carcinogenic risk for the Composite Worker exposure to subsurface soils were below the target. However, an elevated hazard above the acceptable Hazard Index (HI) of 1 was calculated for the nervous system (due to elevated manganese) for a potential Composite Worker exposure to subsurface soils. Based on this assessment, unacceptable risk to a Composite Worker may be encountered if soil disturbances occur that relocate manganese-impacted soils to the surface.

The Construction Worker SLRA for an exposure duration of 35 workdays demonstrated that the cancer risks for surface and subsurface soils were below the acceptable values. In addition, no elevated non-cancer hazards above the HI of 1 were calculated for any target organ for surface or subsurface soils using the 35-day exposure duration. These findings show that there are no potentially unacceptable risks/hazards resulting from exposures to Parcel A2 soils if the duration of intrusive work for future development projects is limited to 35 days.

B. Parcel A3

1. Soil Exposure Pathway

Sub-Parcel A3-1

A total of 159 soil samples were collected and analyzed to assess the presence or absence of soil contamination in Sub-Parcel A3-1. Samples were analyzed for VOCs, SVOCs, Oil & Grease, metals, cyanide, TPH and PCBs. Results show that three VOCs (trichloroethene, 1,2-dibromo-3-chloropropane, and 1,4-dichlorobenzene) and seven SVOCs (all PAHs) were detected above their respective PALs. In addition, two PCB groups, Oil & Grease, and five inorganics (arsenic, manganese, cadmium, lead and hexavalent chromium) were also detected above their respective PALs.

Parcel A3 Remnant Area

Nineteen soil samples were collected from 10 boring locations in and adjacent to the Parcel A3 Remnant Area and analyzed for the same constituents as were analyzed for Sub-Parcel A3-1, listed directly above. Results showed that one SVOC (benzo[a]pyrene), two PCB groups, and four inorganics (arsenic, manganese, thallium and vanadium) exceeded their respective PALs.

2. Groundwater Results

A total of 18 groundwater samples were collected for analysis as part of the Parcel A3 Phase II Investigations. Samples were analyzed for VOCs, SVOCs, Oil & Grease, dissolved metals, cyanide and TPH.

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Analytical results identified two VOCs (1,1-dichloroethane and trichloroethene), five SVOCs (benzo{a}anthracene, benzo{b}fluoranthene, naphthalene, pentachlorophenol and 1,4-dioxane), TPH, Oil & Grease, and eleven inorganic compounds (cadmium, hexavalent chromium, manganese, antimony, iron, zinc, cyanide, vanadium, cobalt, thallium, and arsenic) that were detected above their respective PALs. A groundwater Pump and Treat system was operational at the Rod & Wire Mill between 1986 and 2016 to address groundwater that exhibited elevated concentrations of cadmium and zinc. An interim measure that contains in-situ groundwater treatment of zinc and cadmium contamination is currently in operation at the Rod & Wire Mill.

In addition, a small area of Light Non-Aqueous Phase Liquid (LNAPL) was detected in a Sub-Parcel A3-1 piezometer during the groundwater investigation. Subsequently, the LNAPL was delineated and excavated. Post excavation NAPL monitoring is ongoing in the northern border area of Sub-Parcel A3-1

3. Human Health Screening Level Risk Assessment

Two separate SLRAs were conducted for soils at Sub-Parcel A3-1 and the Parcel A3 Remnant Area, respectively. The SLRAs were conducted to further evaluate the site conditions in support of the design of necessary response measures.

For Sub-Parcel A3-1, the SLRA results for the Composite Worker for both surface and subsurface soils showed cancer risk estimates exceeding 1 in 100,000, but less than 1 in 10,000. There were no unacceptable non-cancer hazard quotients for the Composite Worker. Based on the SLRA findings, EPA is proposing to require that Sub-Parcel A3-1 have an engineered cap to protect Composite Workers. For Construction Workers, the SLRA results show acceptable cancer risk (below 1 in 100,000), but an elevated hazard index (HI) of greater than the target of 1 for surface and subsurface soils. This elevated HI was due to elevated soil cadmium concentrations, which are restricted to specific areas in Sub-Parcel A3-1 (the former East Pond, the former Sludge Bin Storage Area, and the former Northwest Pond). These specific areas will be identified as Cadmium Exclusion Zones, for which intrusive work by construction workers cannot be conducted unless all soils containing cadmium at concentrations greater than 934 mg/kg have first been removed.

In addition, soil Oil & Grease PAL exceedances that do not appear to be petroleum related have been identified in a number of soil borings in Sub-Parcel A3-1. These areas will be evaluated for NAPL mobility, potentially delineated for excavation, and/or assessed relative to proposed subsurface structures. Also, soil lead PAL exceedances were found within the footprint of the proposed building development for Sub-Parcel A3-1 and were further delineated to provide data for input into the EPA Adult Lead Model. While the model results showed no unacceptable risk to potential pregnant workers and the entire lead impacted area will be subject to an engineered cap, the areas of two highest lead concentrations (greater than 10,000 mg/kg) was excavated and removed for an additional degree of worker protection.

For the Parcel A3 Remnant Area, the SLRA results for Composite Worker exposure to surface soil indicate cancer risk and non-cancer hazard estimates below the acceptable targets. However, the sub-surface soil poses an unacceptable non-cancer hazard to the Composite Worker, while

the cancer risk is below the acceptable target. Therefore, the surface soils will be required to remain undisturbed as a natural cap to protect Composite Workers from sub-surface soil exposure. The SLRA does not include an evaluation of Construction Worker risk because it is not anticipated that this Remnant Area could be developed due to its steep grade and location on the bank of Bear Creek.

C. Parcel B3

1. *Soil Exposure Pathway*

A total of 65 soil samples were collected and analyzed as part of the Parcel B3 Phase II Investigation. Samples were analyzed for SVOCs, TPH and, Oil and Grease, PCBs, inorganics, and cyanide. Results show that exceedances of the PALs in soil within Parcel B3 were limited to a single inorganic constituent: arsenic.

2. *Groundwater Results*

Groundwater at Parcel B3 was investigated as part of the larger Area B Groundwater Phase II Investigation and the Finishing Mills Phase II Groundwater Investigation. Aqueous PAL exceedances in the shallow groundwater in the vicinity of Parcel B3 consisted of one VOC (benzene), two SVOCs (naphthalene and pentachlorophenol), three inorganic compounds (cobalt, manganese, and hexavalent chromium) and TPH.

3. *Vapor Intrusion*

A total of seven temporary vapor monitoring probes were installed to collect sub-slab soil gas samples. Three sample locations were completed in the Tradepoint Atlantic Office and four sample locations were completed in the former Roll Grinding Facility (MCM Building). While there were VOCs detected in both buildings, none of the detections exceeded the PALs in any of the sub-slab soil gas samples submitted for analysis. These results indicate no concern for vapor intrusion into existing or future building located on Parcel B3.

4. *Human Health Screening Level Risk Assessment*

A SLRA was conducted for soils to further evaluate the site conditions in support of the design of necessary response measures, to address the future Composite Worker and Construction Worker in the event that future development is proposed for Parcel B3. The SLRA indicated that the cancer risk and non-cancer hazard estimates were below the acceptable targets for the Composite Worker exposure to surface and sub-surface soils. In addition, the SLRA determined that both cancer risk and non-cancer hazard were below the acceptable targets for a 250-day exposure for the Construction Worker, for both surface and sub-surface soils.

D. Parcel B4 Remnant Area

1. *Soil Exposure Pathway*

A total of 60 soil samples were collected from 30 boring locations during the Phase II investigation at the Remnant Area of Parcel B4. Soil samples were analyzed for VOCs, SVOCs, TPH, metals, cyanide and PCBs. PAL exceedances in the soil samples relevant for the Parcel B4 Remnant Area included two SVOCs (benzo[a]pyrene and naphthalene), three PCB groups (Aroclor 1254, Aroclor 1260, and total PCBs), and six inorganics (arsenic, chromium VI, lead, manganese, thallium, and vanadium). In addition, one boring location exhibited physical evidence of non-aqueous phase liquid (NAPL) in the soil.

Additional PCB delineation activities were completed to further characterize a detection of PCBs more than 50 mg/kg (the limit at which mandatory excavation and removal of PCB-impacted material is required) at one boring location. PCB delineation activities resulted in the collection of 117 additional soil samples. Results show that vertical distribution of material exceeding 50 mg/kg of total PCBs is limited to the shallow soil.

2. *Groundwater Results*

Eight shallow groundwater samples were collected from permanent monitoring wells during the Area B Groundwater Phase II Investigation, and the data from these samples were included in the evaluation of current conditions under the Parcel B4 Remnant Area. The groundwater samples were analyzed for VOCs, SVOCs, TPH, metals (total and dissolved), hexavalent chromium (total), cyanide and PCBs. PAL exceedances in the shallow groundwater in the vicinity of the Parcel B4 Remnant Area consisted of two VOCs (benzene and chloroform), four SVOCs (1,1-biphenyl, benz[a]anthracene, benzo[a]pyrene, and naphthalene), three inorganics (cobalt, manganese, and cyanide) and TPH. In addition, a NAPL plume is being delineated around the soil boring with NAPL traces (B4-018-SB).

3. *Human Health Screening Level Risk Assessment*

A SLRA was conducted for the B4 Remnant Area to evaluate the risk posed by soil exposure to Composite and Construction Workers in support of the design of potential response measures. PCB data from the soil samples exhibiting exceedances of 50 mg/kg of total PCBs were excluded from the SLRA because TPA proposed to excavate and dispose of soils exceeding the threshold of 50 mg/kg. For the lifetime Composite Worker and Construction Worker 80 -day exposure scenarios, SLRA results show that the carcinogenic risk estimates and the non-carcinogenic hazards do not exceed the acceptable values in the Parcel B4 Remnant Area soils.

E. Parcel B15

1. *Soil Exposure Pathway*

A total of 49 soil samples were collected as part of the Parcel B15 Phase II Investigation. Soil borings were advanced at 21 locations across the parcel to assess the presence or absence of soil contamination. Soil samples were analyzed for SVOCs, metals, TPH, Oil and Grease, PCBs, and cyanide. PAL exceedances in soil within Parcel B15 consisted of five inorganics (arsenic, lead, manganese, thallium, and vanadium), six SVOCs (benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz [a, h] anthracene, indeno [1,2,3-c, d] pyrene, and naphthalene), PCBs, Oil & Grease, and TPH. A number of Parcel B15 soil borings showed evidence of NAPL and/or elevated concentrations of TPH/Oil & Grease. Several of these borings were thoroughly investigated with a piezometer study for indications of NAPL mobility into groundwater. NAPL was not detected in groundwater throughout the investigation, indicating that the observed traces of soil boring NAPL are not mobile.

2. *Groundwater Results*

Groundwater at Parcel B15 was investigated as part of the Area B Groundwater Phase II Investigation and the Finishing Mills groundwater investigation, plus three additional site-specific temporary wells. PAL exceedances in groundwater at Parcel B15 included two VOCs (tetrachloroethene and chloroform), three SVOCs (1,1-biphenyl, benz[a]anthracene, and naphthalene), two inorganic compounds (thallium and vanadium), TPH, and Oil and Grease.

3. *Vapor Intrusion*

Three temporary vapor monitoring probes were installed within the enclosed portion of the Southern Brick Shed to collect sub-slab soil gas samples for VOC analysis. None of the VOCs detected exceeded the PALs in any of the sub-slab soil gas samples, indicating no concern for vapor intrusion into the enclosed Southern Brick Shed.

4. *Human Health Screening Level Risk Assessment*

A SLRA was conducted for soils to further evaluate the site conditions in support of the design of necessary response measures for Parcel B15. The SLRA results for the Composite Worker for both surface and subsurface soils showed cancer risk estimates exceeding 1 in 100,000, but less than 1 in 10,000, and unacceptable hazard indices for surface and sub-surface soils. Based on these results, EPA is proposing to require that Parcel B15 have an engineered cap to protect Composite Workers. For Construction Workers, the SLRA results show acceptable cancer risk and non-cancer hazard for a 35-day exposure to both surface and sub-surface soils.

V. CORRECTIVE ACTION OBJECTIVES

EPA's Corrective Action Objectives for the specific environmental media at the Parcels are as follows:

1. EPA's Corrective Action Objective for soils at the Parcels is to prevent direct human contact with Parcel soils shown to pose unacceptable cancer risk (greater than 1 in 100,000) or non-cancer hazard (greater than a hazard quotient of 1) to composite workers and/or construction workers, as documented in the SLRA.
2. EPA's Corrective Action Objective for soil vapor intrusion into occupied buildings located on the Parcels is to prevent worker exposure to volatile chemicals emanating from subsurface soil or groundwater at concentration exceeding industrial air Regional Screening Levels set at a cancer risk of 1 in 100,000 or hazard quotient of 1.

While Facility-wide groundwater is being evaluated under the Corrective Action Program, EPA's proposed interim corrective action objective for groundwater at the Parcels is to prevent exposures to hazardous constituents in groundwater that have been detected above applicable PALs.

VI. PROPOSED REMEDY FOR SOILS AND GROUNDWATER

A. Soils

EPA's Proposed Remedies for soils at the Parcels are as described below. Specific requirement for ICs is described in a separate section later in this document. Once EPA selects the Final Remedy for the Parcels, the components of the Final Remedy will be incorporated into and become enforceable under paragraph 72 of the SA. In addition, if required, within sixty (60) days of the issuance of the Final Remedy, TPA shall submit for EPA approval, a Corrective Measures Implementation Workplan ("CMI Workplan") for implementation of the corrective measure selected in the Final Remedy. EPA acknowledges that TPA may not be required to submit a CMI Workplan if EPA determines that all the information required in a CMI Workplan has been included in the Response and Development Workplans (RADWP) submitted for the Parcels. If EPA determines that a CMI Workplan is not required, EPA will so notify TPA, and the RADWP will then be enforceable by EPA under paragraph 72 of the SA.

1. *Parcel A2* – The proposed remedy for soils at Parcel A2 is Land Use Restrictions implemented through Institutional Controls (ICs). As documented in the SLRA, the hazard index for composite workers exceeded 1 for subsurface soils. Therefore, the Parcel A2 property owner shall submit 30-day notification to MDE and EPA of any intrusive soil activities that exceed one foot in depth, consistent with the Parcel A2 Environmental Covenant Institutional Controls Management Plan. Land use restrictions shall be implemented to prevent land use for commercial, recreational, or residential purposes.
2. *Parcel A3* – The proposed remedy for soils in the Sub-Parcel A3-1 Development Area includes some selective removal of contaminated soils followed by the installation of an engineered cap for the entire sub-parcel consisting of building slabs, paving, lined detention ponds, and capped landscaping. The requirements for the individual cap components are described in the Sub-Parcel A3-1 RADWP. Sub-Parcel A3-1-specific ICs will include a prohibition of intrusive construction work in the Cadmium Exclusion Zones, unless all soils containing cadmium at concentrations greater than 934 mg/kg have first been removed. Secondly, if the Sub-Parcel A3-1 property owner proposes intrusive soil disturbance of a duration exceeding 60 days for the building footprint or 120 days for all areas outside the building footprint in a rolling year for construction workers, the property owner shall submit 30-day notification to MDE and EPA which must detail specific measures (modified PPE, OSHA HAZWOP certified workers, cycling of crews, or a revised SLRA) to ensure construction worker protection.

The proposed remedy for soils in the Parcel A3 Remnant Area is land use restrictions implemented through ICs. The surface soil shall not be disturbed in any way, such that it is maintained as a natural cap protecting workers from sub-surface soil exposure. If a future construction project is proposed for the Parcel A3 Remnant Area, a comprehensive evaluation of Construction Worker risk will be required to be submitted and approved by EPA and MDE prior to any intrusive activities.

Statement of Basis

Tradepoint Atlantic

In addition, land use restrictions shall be implemented for the entire Parcel A3 in order to prevent land use for commercial, recreational, or residential purposes.

3. Parcel B3 - The proposed remedy for soils at Parcel B3 is Land Use Restrictions implemented through ICs. Land use restrictions shall be implemented in order to prevent land use for agricultural, recreational, or residential purposes.
4. Parcel B4 Remnant Area - The proposed remedy for soils at Parcel B4 Remnant Area is comprised of soil excavation and Land Use Restrictions implemented through ICs. Selective removal of the defined area containing concentrations of total PCBs greater than 50 mg/kg will be conducted. In addition, if the Parcel B4 Remnant Area property owner proposes intrusive soil disturbance of a duration exceeding 80 days in a rolling year for construction workers, the property owner shall submit 30-day notification to MDE and EPA which must detail specific measures (modified PPE, OSHA HAZWOP certified workers, cycling of crews, or a revised SLRA) to ensure construction worker protection. Land use restrictions shall be implemented in order to prevent land use for commercial, recreational, or residential purposes.

NAPL contamination initially found in a piezometer placed at the B4-018-SB soil boring location in the Parcel B4 Remnant Area will be delineated, and the affected area will be surveyed and monitored. Any future building proposed for the NAPL area shall be required to either include a vapor mitigation system or provide a demonstration via a soil gas survey that such mitigation is unnecessary. Also, if potential future construction includes sub-surface utilities in the vicinity of the soil boring locations which had evidence of NAPL protocols for mitigation of potential product mobility must be specified in a future RADWP.

5. Parcel B15 - The proposed remedy for soils at Parcel B15 is engineering controls which consist of paved capping on the entire Parcel, and Land Use Restrictions implemented through Institutional Controls. In addition, if the Parcel B15 property owner proposes intrusive soil disturbance of a duration exceeding 35 days in a rolling year for construction workers, the property owner shall submit 30-day notification to MDE and EPA which must detail specific measures (modified PPE, OSHA HAZWOP certified workers, cycling of crews, or a revised SLRA) to ensure construction worker protection. Also, if potential future construction includes sub-surface utilities in the vicinity of the soil boring locations which had evidence of NAPL and/or elevated concentrations of soil TPH/Oil & Grease (B15-003-SB, B15-006-SB, B15-008-SB, B15-017-SB, B15-018-SB, and B15-021-SB), protocols for mitigation of potential product mobility must be specified in a future RADWP.

Land use restrictions shall be implemented for Parcel B15 in order to prevent land use for commercial, recreational, or residential purposes.

Institutional Controls

EPA's proposed remedy for soils at the Parcels includes the following use restrictions and requirements to be implemented through institutional controls (ICs):

Statement of Basis

- The Parcels shall not be used for residential purposes, and within 90 days of EPA's issuance of a Final Decision, the then-current owner shall file an environmental covenant to prevent use of the Parcels for residences, schools, day care facilities, or recreational uses that would result in exposure to contaminated soil above residential risk-based concentrations and shall limit land use to commercial or industrial;
- The then-current owner shall maintain the integrity of all caps and covers on Parcels by conducting regular periodic inspections (no less frequently than yearly), making timely repairs if needed, and maintaining a record of such inspection and maintenance.
- All earth moving activities on the Parcels including excavation, grading, and/or utility construction, shall be conducted in compliance with an MDE-approved Soil Management Plan such that the activity will not pose a threat to human health and the environment or adversely affect or interfere with the covered areas;
- A site-specific Health and Safety Plan shall be submitted to MDE and EPA for approval prior to any earth moving activities to protect construction workers from engaging in activities that could expose them to contaminants remaining in soils; and
- The then-current owner shall allow EPA, MDE and/or their authorized agents and representatives, access to the Parcels to inspect and evaluate the continued effectiveness of caps and covers, and (if necessary) to ensure completion of any additional remediation necessary to ensure the protection of public health and safety and the environment.

EPA anticipates that the above-listed use restrictions necessary to prevent human exposure to contaminants remaining in soils at the Parcels will be implemented through an enforceable environmental covenant, filed with the Baltimore County Land Records Office or other appropriate office. If EPA determines that additional maintenance and monitoring activities, use restrictions, or other corrective actions are necessary to protect human health or the environment, EPA has the authority to require and enforce such additional corrective actions through an enforceable instrument, provided any necessary public participation requirements are met.

B. Groundwater

Because contaminants remain in the groundwater at the Facility, while Facility-wide groundwater is being investigated further, EPA is proposing to prohibit the use of groundwater at the Parcels and Sub-Parcels for any purpose as an interim remedy. The groundwater use restriction will be implemented through enforceable ICs in conjunction with the land use restriction described above.

In addition, for any proposed excavation encountering groundwater, the property owner shall implement the requirements of a site-specific health and safety plan to ensure worker protection measures are met and provide 30-day written notification to MDE.

Statement of Basis

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VII. EVALUATION OF PROPOSED REMEDY

For purposes of EPA's evaluation below, the proposed remedy for soils and the proposed interim remedy for groundwater will be hereinafter referred to collectively as the Proposed Remedy.

A. Threshold Criteria

1. Protect Human Health and the Environment

The Proposed Remedy will protect human health from exposure, including future exposure, to soil and groundwater contamination. At Parcels A3 and B15 where capping is proposed, the Proposed Remedy will require that the owner install caps throughout the Parcels where soil samples show exceedances of PALs. In addition, because contaminants will remain in the soil and groundwater at the Parcels at levels inappropriate for residential use, EPA's Proposed Remedy requires land and groundwater use restrictions that will prohibit future uses that would pose an unacceptable risk.

2. Achieve Media Cleanup Objectives

EPA's Proposed Remedy meets the soil cleanup objectives appropriate for the current and reasonably anticipated future land use. The Proposed Remedy does not include cleanup of groundwater, which will instead be addressed separately by a Facility-wide groundwater remedy developed for the entire 3,100-acre Sparrows Point Facility. In the short-term, the Proposed Remedy will prohibit potable use of groundwater at the Parcels.

3. Remediating the Source of Releases

The soil management procedures will require the proper removal and disposal of potentially contaminated soils that are disturbed during any construction/excavation activities conducted on-Site in accordance with applicable state and federal laws and regulations, thereby removing the source of contaminants from Facility soils and thereby reducing the potential for contaminants to migrate from those soils to groundwater. In addition, selective excavation and removal of contaminated soils will reduce the potential for future releases at the affected Parcels.

B. Balancing/Evaluation Criteria

1. Long-Term Effectiveness

The Proposed Remedy will provide long-term effectiveness in protecting human health and the environment by controlling exposure to contaminants remaining in soils. Land use restrictions will prohibit use of the Parcels for residences, schools, day care facilities, and recreational uses that could result in exposure to contaminated soil above residential risk-based concentrations. The Proposed Remedy requires compliance with an MDE-approved Soil Management Plan to control exposure to and spread of contaminated soil during construction and regrading activities. Additionally, the ICs will impose a requirement that the owner inspect the engineering covers at

Statement of Basis

Parcels A3 and B15 no less than annually, and to make repairs as necessary. While EPA is not proposing a remedy for groundwater in this SB, EPA is proposing an interim remedy which will provide long-term effectiveness by prohibiting groundwater withdrawal for all potable uses.

2. Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents

Compliance with an MDE-approved Soil Management Plan in construction and landscaping activities will control exposure and spread of contaminated soil. No new activities are anticipated at the Parcels that would further contaminate soil or groundwater.

3. Short-Term Effectiveness

The installation of caps and covers requires minimal installation time, minimal excavation, and minimal offsite disposal which minimizes short-term exposure to contaminated soil. The work that was performed in accordance with the approved RDWP at Parcels A3 and B15 was carried out by qualified persons in compliance with the MDE-approved Soil Management and an acceptable health and safety plan.

4. Implementability

EPA does not anticipate any technical or institutional constraints that will inhibit installation of the covers or implementation of the ICs proposed.

5. Cost

The Proposed Remedy will meet the corrective action objectives at a cost significantly lower than other alternatives such as complete removal of contaminated media. The remedy construction and maintenance costs are incorporated into the necessary costs to develop the Parcels.

6. Community Acceptance

EPA will solicit public comment on the Proposed Remedy and will review comments received during the 30-day public comment period to evaluate community acceptance. If requested, a public meeting will be held. Responses to comments and any subsequent modifications to the Proposed remedy will be included in EPA's Final Decision and Response to Comments.

7. State/Support Agency Acceptance

MDE and EPA have jointly conducted this investigation. The Proposed Remedy is consistent with applicable MDE requirements and addresses the applicable requirements of MDE Voluntary Cleanup Program.

VIII. FINANCIAL ASSURANCE

The ACO requires Tradepoint to establish and maintain financial assurance for completion of work in accordance with Section XIII (Financial Assurance) of the ACO. Tradepoint has provided MDE a copy of the Trust Agreement and documentation that the Trust has been initially funded with \$43 million, in addition to a \$5 million letter of credit. This financial assurance, for which MDE is the custodian, will also satisfy EPA's financial assurance requirements for this Proposed Remedy.

IX. PUBLIC PARTICIPATION

Before EPA selects a Final Remedy for the Parcels, the public may participate in the remedy selection process by reviewing this SB and documents contained in the Administrative Record (AR). The AR contains all information considered by EPA in reaching this proposed decision and is available for public review during office hours at two locations:

Barbara Brown
Land Management Administration
Maryland Department of the Environment
1800 Washington Boulevard Baltimore, Maryland 21230
(410) 537-3493

Or

Moshood Oduwole
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
(215) 814-3362

Interested parties are encouraged to review the AR and comment on EPA's Proposed Remedy. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. You may submit comments by mail, fax, or e-mail to Mr. Moshood Oduwole, EPA project manager. EPA may hold a public meeting to discuss this Proposed Remedy upon request, which should also be made to Mr. Oduwole whose contact information is listed above.

EPA will respond to all relevant comments received during the comment period. If EPA determines that new information warrants a modification to the Proposed Remedy, EPA will modify the Proposed Remedy or select other alternatives based on such new information and/or public comments. EPA will announce its Final Remedy and explain the rationale for any changes in the Final Decision. All persons who comment on this Proposed Remedy will receive a copy of the Final Decision. Others may obtain a copy by contacting Mr. Oduwole at the address listed above.

Date: 3.3.20



John Armstead, Director
Land, Chemicals and Redevelopment Division
U.S. Environmental Protection Agency, Region III

Statement of Basis

Tradepoint Atlantic

INDEX OF ADMINISTRATIVE RECORD

1. Phase I Environmental Site Assessment – Former RG Steel Facility Final Draft May 19, 2014.
2. Phase II Investigation Report – Area A: Parcel A2 Revision 4 March 14, 2018.
3. Environmental Covenant – Reservoir Road (Parcel A2 or Land Unit 5) October 2019.
4. Phase II Investigation Report – Area A: Parcel A3 Revision 0 June 10, 2016.
5. Response and Development Work Plan – Area A: Sub-Parcel A3-1 Revision 3 April 24, 2017.
6. Response and Development Work Plan Addendum – Area A: Sub-Parcel A3-1 December 13, 2019.
7. Screening Level Risk Assessment Report – Area A: Parcel A3 Remnant Area Revision 0 August 30, 2019.
8. Phase II Investigation Report – Area B: Parcel B3 Revision 0 April 13, 2018
9. Technical Memorandum- Delineation of NAPL (RW22-PZM)- Parcel A3 June 14, 2017
10. Response to MDE/EPA Comments – RW-052-SB Lead Excavation Work May 18, 2017.
11. Phase II Investigation Report – Area B: Parcel B4 revision 0 March 3, 2017
12. Statement of Basis – Parcel A1 and Sub-Parcel B4-1 February 2017.
13. Screening Level Risk Assessment Report – Area B: Parcel B4 Remnant Area Revision 0 August 2019.
14. Phase II Investigation Report – Area B: Parcel B15 Revision 1 April 2018.

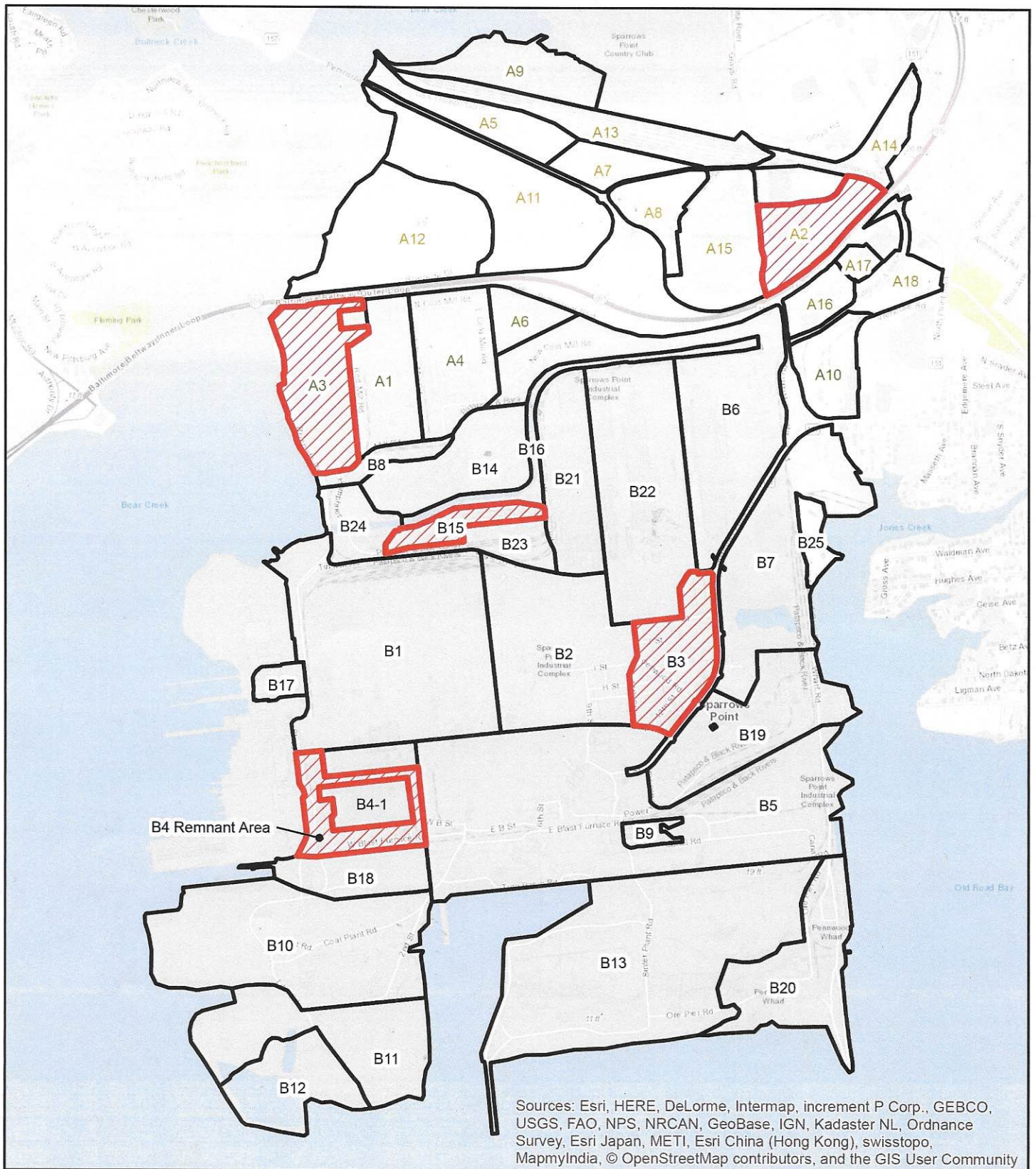


Figure 1
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432



-  Parcels for Proposed Remedy
-  Parcel Boundaries



Figure 2
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432



- Parcel A2
- Area of Existing Environmental Covenant
- Parcel A2 Remnant Area

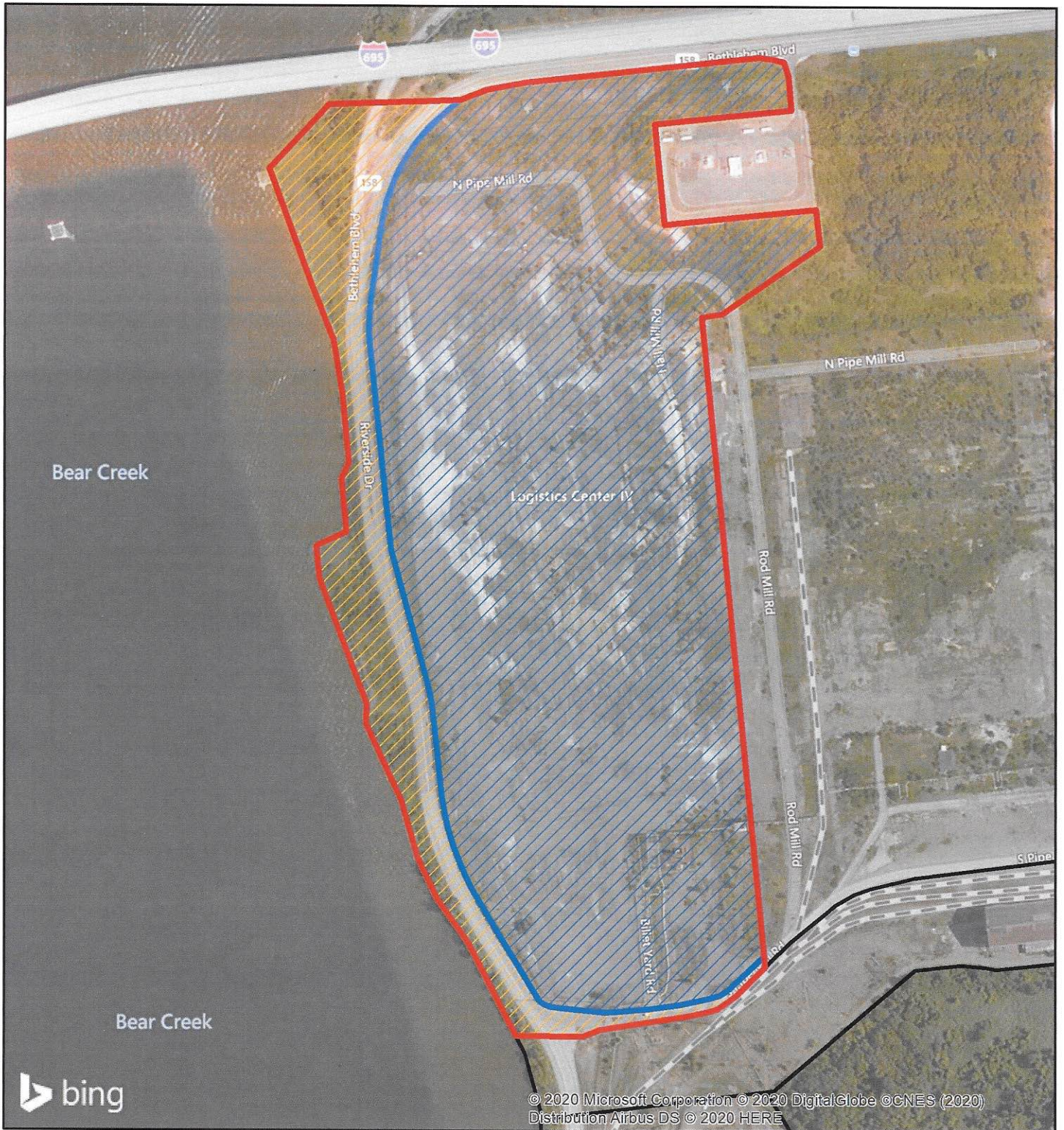


Figure 3
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432



- Parcel A3
- Sub-Parcel A3-1
- Parcel A3 Remnant Area

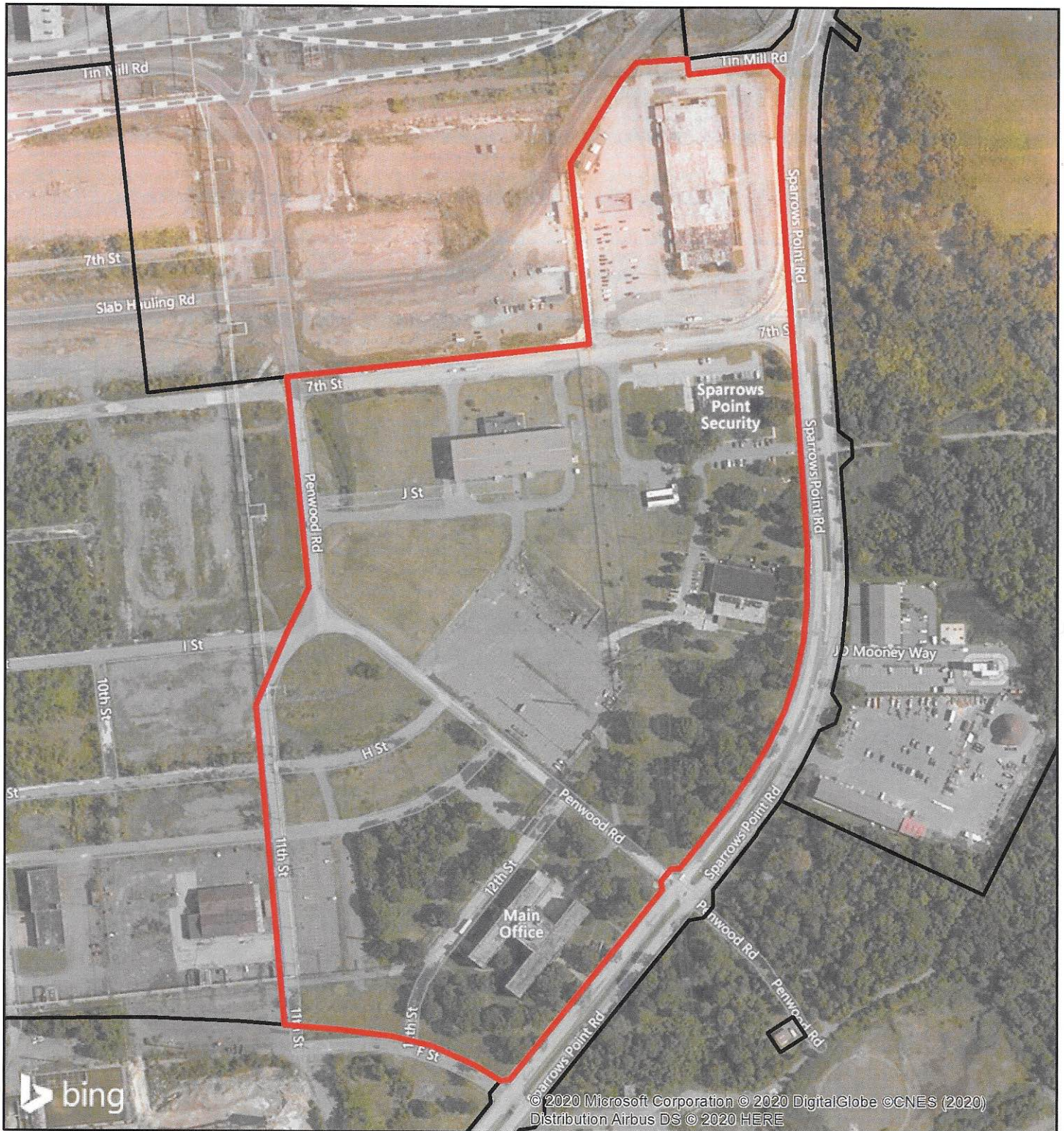


Figure 4
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432

 Parcel B3

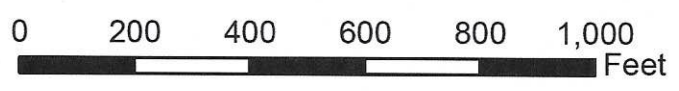




Figure 5
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432

-  Parcel B4 Remnant Area
-  Sub-Parcel B4-1

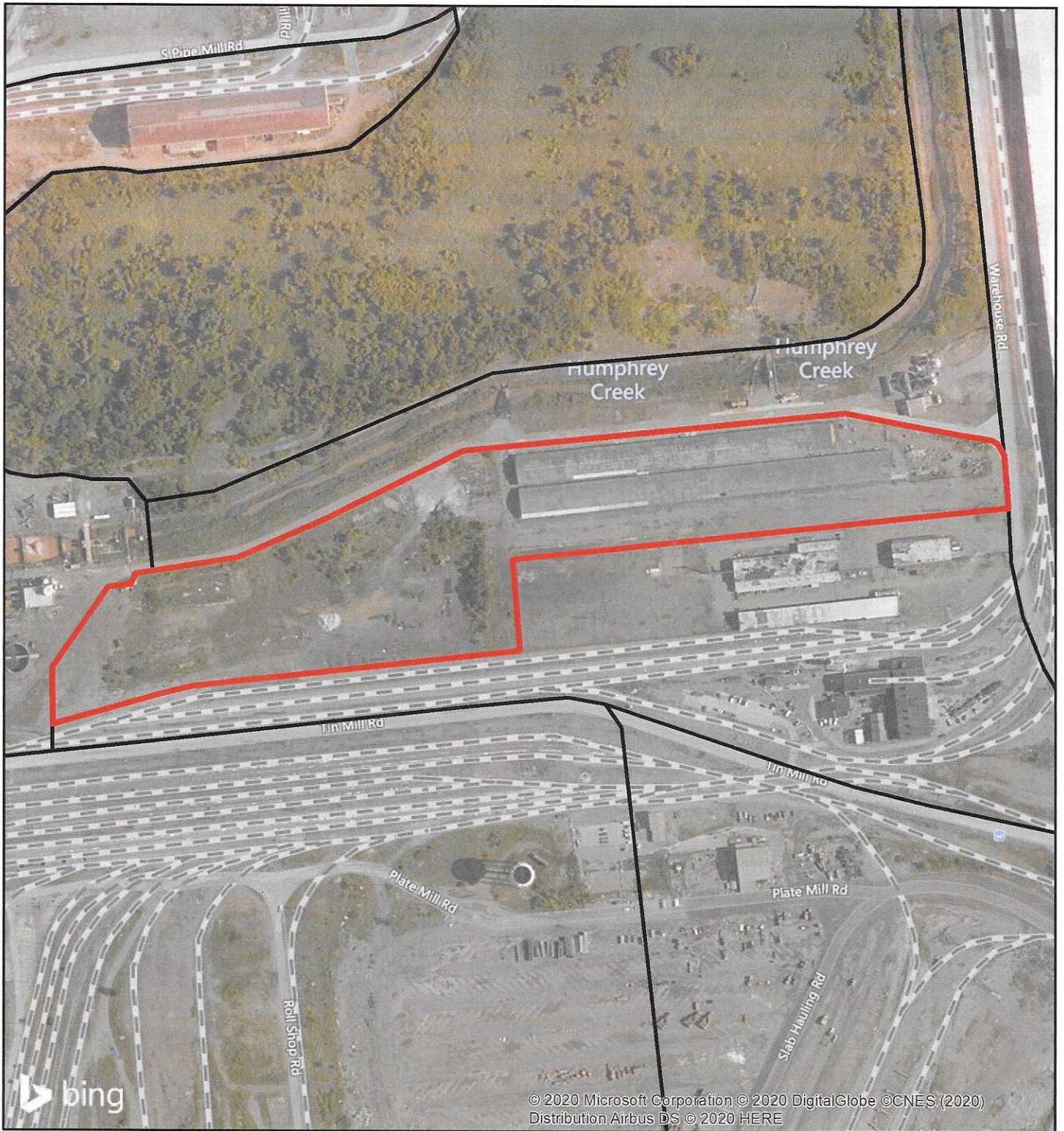


Figure 6
TradePoint Atlantic
Sparrows Point, MD
EPA ID # MDD053945432

 Parcel B15

ATTACHMENT B
PUBLIC COMMENTS

Good morning Mr. Moshood -I would like to request some information on the Corrective Action Cleanup Proposal process.

I have testified at Baltimore County for acreage (B7) at Trade Point Atlantic and would like to see how the process is outlined.

Please provide additional information.

Thank you!

Kind Regards,
Keith Taylor
President
Sparrows Point / North Point Historical Society
7218 River Drive Rd.
Sparrows Point, MD. 21219
410-913-4161



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure



May 5, 2020

By Electronic Mail Only

Mr. Moshood Oduwole
EPA Project Manager
U. S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103
(Email: Oduwole.moshood@epa.gov)

Re: Proposed RCRA Corrective Action – Cleanup Proposal for Sparrows Point Terminal LLC
(Tradepoint Atlantic) in Sparrows Point, MD – EPA ID: MDD053945432

Dear Mr. Oduwole:

These comments are submitted by Blue Water Baltimore (BWB) and the Chesapeake Bay Foundation (CBF) to address EPA's Statement of Basis (SB) issued in March, 2020, for five parcels of property, Parcels A2, A3, B3, B4 Remnant Area and B15 located at the 3,100-acre Sparrows Point Facility in Baltimore owned by Tradepoint Atlantic (TPA) which are the subject of EPA's Public Notice dated April 5, 2020. As you may know, BWB and CBF have had a strong interest in this site going back for many years, due to the risks posed to human health and the environment from nearly a century of steelmaking and related processes which were carried out at this site on a very large scale. These industrial processes generated enormous quantities of hazardous wastes, resulting in widespread contamination of soils and groundwater, much of which remains present at the site today.

Our objective is to ensure that this entire site, and the various facilities and parcels located on it, including the five parcels that are the subject of this SB, are properly closed, including all legally required and appropriate remedial and corrective action, and that before any redevelopment and reuse is commenced, all appropriate safeguards are put in place to prevent any exposure of human or animal receptors or the environment to any hazardous wastes or constituents that remain at the site. We have previously provided EPA Region 3 and the Maryland Department of the Environment (MDE) with descriptions of CBF and BWB and our interests in the Sparrows Point site (*see, e.g.*, our comment letter of March 10, 2017, on EPA's Statement of Basis for Parcel A1 and Subparcel B4-1, which is hereby incorporated by reference).

For the reasons set forth below, there are significant deficiencies in the remedial and corrective actions proposed for each of the five parcels which must be fixed before any redevelopment or reuse can take place.

I. GENERAL COMMENTS APPLICABLE TO ALL PARCELS

- A. *EPA's Evaluations of the Proposed Remedies Are Fatally Flawed Because Neither an Ecological Exposure Assessment nor an Environmental Risk Assessment Was Performed, Making it Impossible for EPA to Determine Whether the Proposed Remedies Will Be Protective of the Environment or Ecological Receptors.*

It appears that ecological exposure pathways were not extrapolated from the groundwater well concentrations of contaminants to potential surface waters of Bear Creek and the Patapsco River. Such conceptual pathways need to be sufficiently established to calculate dilution factors that would allow comparison of those concentrations characterized as exceeding PALs in groundwater for human health exposure risk to the risk of lethal or sub-lethal exposure to aquatic and marine organisms either separately or as a combination of chemicals. Moreover, the bioconcentration within exposed organisms, especially those low on the estuarine food web and subsequent bioaccumulation up the food web to higher order consumers like crabs, fish and marine birds has not been considered, nor the potential for human health risk associated with subsistence fisheries known to occur in the area.

We believe that both a baseline risk of these ecological exposures and any changes to that risk positive or negative as a result of terrestrial disturbance, remediation or redevelopment are necessary to fully comply with the requirements of closure and post-closure care regulations discussed below.

The federal Resource, Conservation and Recovery Act (RCRA) requires that corrective action, which the SB correctly states at p.1 applies to the remedial actions which are being proposed here, must “protect human health *and the environment.*” *see* RCRA Section 3004(v), 42 U.S.C. 6924(v) [emphasis added], and 40 CFR 264.100(e)(2) and -.101(a) and (c). Because neither the SB nor any of the Investigation Reports listed in the Index of Administrative Record (SB p.21) discuss environmental or ecological exposures, nor do they contain any environmental or ecological risk assessments, the SB lacks any basis to conclude that the proposed measures will protect the environment. This is a fatal flaw.

The assertions in Section VII (SB pp. 17, *et seq.*) that the selected remedial measures “will provide long-term effectiveness in protecting human health and the environment by controlling exposure to contaminants remaining in soils” are flawed for two reasons. First, as discussed below, they fail to consider the groundwater pathway and include groundwater protection measures. Second, and of particular relevance to this discussion, there is no factual basis for the assertion that the measures will provide adequate protection for the environment. Because protection for the environment is required by law, the SB must be withdrawn, and this significant deficiency must be corrected. Specifically, a fresh site investigation must be conducted which identifies potential environmental and ecological receptors and their consumers, and their actual or potential exposure to chemicals of concern, and then includes an ecological risk assessment for each of the parcels.

B. *The Statement of Basis is Fatally Flawed Because it Impermissibly Fails to Require the Groundwater Protection Measures Required by RCRA.*

On page 1 the SB correctly states that the Sparrows Point Facility, including the five parcels that are the subject of this SB, “is subject to EPA’s Corrective Action authorities under...the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 *et seq.* The Corrective Action Program requires that [covered] facilities...investigate and address releases of hazardous waste and hazardous constituents, often in the form of soil or groundwater contamination, that have occurred at or from their property.” The SB says later on the same page “This SB does not include a proposed final remedy for groundwater. EPA will issue a separate SB for Facility-wide groundwater and solicit public comment on its proposal once the groundwater at the entire facility has been evaluated.”

The Site Investigations of soil and groundwater carried out for each of the five parcels found hazardous wastes and constituents in both the soil and groundwater samples for every single parcel in excess of the Project Action Levels (PALs) established for the protection of human health. In the groundwater samples in particular, results for Parcel A2 showed exceedances for 1 SVOC and 4 inorganic compounds; for Parcel A3 there were exceedances for 2 VOCs, 5 SVOCs, 11 inorganic compounds and TPH; for Parcel B3 there were exceedances for 1 VOC, 2 SVOCs, 3 inorganic compounds and TPH; for Parcel B4 there were exceedances for 2 VOCs, 4 SVOCs, 3 inorganic compounds and TPH (there was also a NAPL found in the groundwater); and at Parcel B-15 there were exceedances for 2 VOCs, 3 SVOCs, 2 inorganic compounds and TPH. (SB, p. 7-12).

As discussed above, some review of how these PAL exceedances translate to ecological risk from logical exposure pathways is necessary. At the very least, groundwater plume migration vectors and magnitudes should be used to predict concentrations of pollutants at compliance well locations before an opportunity for groundwater to migrate offshore. That way ongoing monitoring can verify those expected concentrations relative to background levels of each pollutant and pollutant mixtures and identify any additional corrective actions that may be needed. Ultimately, our objective is to “stop the bleeding” of contaminants migrating to the offshore domain which would re-contaminate areas already naturally remediating because of sedimentation.

When a location where hazardous waste has been managed is effectively closed and remediated for redevelopment, as is the desired outcome here, the RCRA corrective action regulations require that it can either be “clean closed”, by which all hazardous waste is removed, or given a permit under RCRA or a similar “enforceable document” which must incorporate all applicable requirements of 40 CFR Part 264 (See the permitting requirements at 40 CFR 270.14 and -.17, and 40 CFR Part 264, Subpart F “Releases from Solid Waste Management Units” and Subpart G “Closure and Post-Closure”). “Clean closure” is probably not practical here because of the magnitude and extent of the volume of contaminated soils and groundwater. In any case, that has not been proposed by either TPA or EPA. Thus, the closure permit or “enforceable document” is the prescribed mechanism.

The main objectives of closure and post-closure care are to protect human health and the environment, prevent or minimize the escape of hazardous wastes or constituents, and provide for monitoring, detection and corrective action plans to detect and remediate any releases. There must be regular inspections and maintenance.

The “closure and post-closure care” regulations in Subpart G (40 CFR § 264.110 through 264.120) require closure and post-closure care plans for any hazardous waste management facility. While the requirements are detailed, the ones most pertinent to this case are the requirements that the closure and post-closure plans must ensure that the facility (or parcel) complies with the groundwater monitoring and protection provisions of Subpart F, which is 40 CFR Sections 264.90 – 264.101. (See 40 CFR 264.112(a) for the closure plan and 264.118(a) and (b) for the post-closure care plan).

An alternative to a post-closure permit is allowed by 40 CFR 270.1(c)(7) in the form of an “enforceable document”, mentioned above, for post-closure care “imposing the requirements of 40 CFR § 265.121.” That section requires compliance with, among other things, “The requirements for facility-wide corrective action in Sec. 264.101” and “The requirements of 40 CFR §§ 264.91 through 264.100.” The elements of 40 CFR §§ 264.90 – 264.101 which must be included in an “enforceable document” are:

- A “monitoring and response program” which includes monitoring, detection and, if relevant concentration levels of hazardous constituents are detected, corrective action. 264.91.
- Establishment of a “groundwater protection standard” which sets risk-based maximum concentrations of hazardous constituents which must be monitored for and which may not be exceeded at the “point of compliance” in the upper-most aquifer beneath the facility (here, each parcel). 264.92 and 264.95
- Specification of the hazardous constituents which must be monitored for, based on the contents of the facility. 264.93
- Concentration limits not to be exceeded, based on EPA specifications and a facility-specific risk assessment. 264.94
- A point of compliance downgradient from the facility. 264.95
- A compliance period, which includes the post-closure care period and is extended following any corrective action until three consecutive years of compliance with the groundwater protection standard is demonstrated. 264.96
- Installation of a sufficient number of groundwater monitoring wells upgradient of the facility, to demonstrate “background” concentrations of constituents, and downgradient so as to detect possible migration of constituents from the facility; the wells must meet specified quality requirements, and the monitoring frequency must be specified. 264.97

- A detection monitoring program which includes measures for determining when there is statistically significant evidence of a release of any hazardous constituent for which monitoring is being conducted, provision of notice of this to EPA, and the triggering of enhanced monitoring to determine whether the maximum concentration at the compliance point for any constituent has been exceeded. 264.98
- A “compliance monitoring program” designed to ascertain whether there has been release of a hazardous constituent from the facility. 264.99
- A corrective action program designed to prevent further releases or migration of hazardous constituents which exceed the groundwater protection standard established under 264.92. 264.100 and 264.101
- This Post-closure care program must continue for 30 years. 264.90(c)(2), incorporating by reference 264.117.

The detailed requirements for closure and post-closure care of each parcel must be designed for that parcel and implemented at that parcel, because each is a discrete hazardous waste management facility. The RCRA regulations also require that when a facility is closed, and corrective action is applied, the corrective action must address all media at the facility at the same time, namely both soils and groundwater. There is no provision in RCRA or its implementing regulations which allows corrective action for groundwater to be separated out from the corrective action for soils or other media and deferred to some indefinite date in the future, as EPA proposes here, with one exception discussed immediately below.

The one situation where the groundwater protection requirements might be deferred to a date later than the implementation of corrective measures for contaminated soil is if a permit or enforceable document allows the use of “alternative requirements” that are in place and that “will protect human health and the environment and will satisfy the closure performance standard of 264.111(a) and (b).” 40 C.F.R. 264.110(c). The “closure performance standard” in 40 C.F.R. 264.111(a) and (b) requires, among other things, a closure program that “Controls, minimizes or eliminates to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface water or to the atmosphere...” 40 C.F.R. 264.111(b).

However, EPA has provided absolutely no evidence in the SB that any such alternative measures are in place with respect to contaminated groundwater that “will protect human health and the environment.” Furthermore, neither EPA nor TPA can provide any such evidence because there are not enough groundwater monitoring wells in the vicinity of any of the five parcels to satisfy the RCRA regulations’ groundwater monitoring and release detection requirements. There has not even been adequate monitoring (at least quarterly) of those few monitoring wells that do exist in the area. Therefore, the RCRA-required groundwater protection program may not be deferred.

In fact, the only measure proposed regarding groundwater in the SB is the prohibition on the use of the groundwater for human consumption using “institutional controls”, along with capping. This may protect occupants of the property and workers, but it does nothing to prevent the migration of contaminated groundwater off site and into Bear Creek and the Patapsco River, where it may have adverse effects on the environment, including ecological receptors like crabs or fish, and human consumers. Furthermore, of course, it does not at all comply with the RCRA closure and groundwater protection requirements described above.

Because of EPA’s failure to require installation of RCRA-compliant groundwater protection measures at each of the five parcels, it is unable to demonstrate compliance with one of its essential Corrective Action Objectives (p.13), namely, “prevent exposure to hazardous constituents in groundwater that have been detected above applicable PALs.” For that reason and because EPA’s SB fails to address possible releases of contaminated groundwater from any of the five parcels, and fails to comply with the RCRA requirements for closure and post-closure care, it must be withdrawn and replaced with a new SB and Work Plan which include compliance with the RCRA requirements for groundwater protection.

C. *The Absence of a Facility-wide Groundwater Protection Plan Is a Major Failure to Comply with RCRA and Exposes Ecological Receptors and Human Consumers to Risk of Harm.*

In the preceding section we described the unlawful failure to comply with the RCRA groundwater protection requirements at the five parcels that are addressed in the SB. The statement in the SB that a site-wide groundwater monitoring and protection program will be forthcoming in the future is one we have been hearing for many years. In its Statement of Basis for Parcel A1 and Subparcel B4-1 (February 2017) EPA said that “Facility-wide groundwater is being evaluated under the Corrective Action Program” (p.8) and that groundwater corrective action would be addressed at some point in the future on a Sparrows Point facility-wide basis.

A similar statement was made in EPA’s Statement of Basis for the Tin Mill Canal (TMC), Parcel 16, in July, 2017, at p. 9. CBF and BWB in written comments objected strenuously to EPA’s failure to require that contaminated groundwater be addressed in a corrective action program as part of the TMC closure. EPA disagreed with us, and repeated its assurances that contaminated groundwater would be addressed on a sitewide basis. On October 25, 2017, in its Response to Comments, Attachment C to its “Final Decision and Response to Comments” on the TMC SB, EPA assured us that “EPA has directed TPA to conduct an extensive, facility-wide groundwater investigation...that will address the various assertions made by the experts cited by CBF/BWB in their comments.” (pp.5-6).

EPA added that: “A Facility-wide groundwater characterization has been taking place over the past two years...” and that historical groundwater data were being reviewed. It then said:

EPA will ultimately ensure that groundwater characterization will consolidate all the groundwater data, assess the extent and magnitude of contamination, identify primary constituents-of-concern, define potential

groundwater usage and establish groundwater cleanup goals. Once the characterization is completed and EPA evaluates it, EPA will propose a Facility-wide groundwater remedy.

Id., p. 6

That was nearly three years ago and serious deficiencies remain. Where is the sitewide groundwater remedy? Where is the sitewide groundwater protection program required by RCRA? Such items are still outstanding. Meanwhile highly contaminated groundwater beneath most if not all of this 3,100-acre Facility may be migrating into adjacent waters and causing harm to the environment, to ecological receptors including crabs, benthic organisms and fish, and to subsistence fishermen and others who consume those receptors.

EPA's failure to require compliance with RCRA groundwater protection measures at each parcel as it is closed, and as the contaminated soils are remediated, and its failure to proceed at the same time with the Facility-wide groundwater protection program which it has been promising the public for years, puts people and the environment at risk. EPA should require TPA to correct these deficiencies as a top priority and on a stringent time schedule, starting with these five parcels.

D. *Failure to Address Migration of Contaminated Soils Dislodged During Corrective Actions and Construction Activity Presents a Needless Environmental Risk*

The SB lacks detailed information about how the migration of contaminated soils dislodged during corrective actions, construction activity, and stormwater runoff will be addressed. There is mention of a soil management plan that will be approved by MDE, but no details of what that plan will consist of.

Additionally, each parcel states different requirements of notification to MDE and EPA for soil disturbance. Given the widespread contamination of the entire site, we recommend uniform requirements across all parcels. These requirements should be as conservative as possible, due to the fact that the agencies don't have adequate information about whether the contaminants are actively migrating, concentrating in pools in groundwater, or the potential for plumes in surrounding water bodies. Furthermore, the SB does not provide for adequate notification to communities in the area when soil disturbance is scheduled to take place. This information is necessary for the public to make informed decisions about how they interact with the water in Bear Creek or the Patapsco River due to the potential of contaminated sediments entering these waterways.

While it appears that a human health exposure risk assessment has been completed, particularly with regard to workers wearing the proper Personal Protective Equipment on-site, there is no evidence that an ecological risk assessment has been conducted. It is critical that an ecological risk assessment be completed in order to determine how aquatic organisms and other wildlife living in and around the water are potentially exposed to the known toxins emanating from each contaminated parcel. This is the only way to ensure the protection of both human and ecological health as development moves forward on these parcels of land.

II. PARCEL-SPECIFIC COMMENTS

A. Parcel A2.

The proposed remedy is the application of institutional controls and land use restrictions. While this may protect workers from elevated risk, there are elevated levels of contaminants of concern above PAL levels in both the soil and groundwater (SB, p. 7). Hazardous constituents in the groundwater could be transported off site, resulting in the harm which a proper groundwater protection program is designed to prevent. As discussed above, this risk should be addressed on a site-wide basis, and further action at each of the five parcels that are the subject of this SB should be halted until that is done.

B. Parcel A3.

This parcel is described in the SB as containing both sub-parcel A3-1 and the “Parcel A3 Remnant Area.” The A3 Remnant Area is the slender waterfront edge directly adjacent to Bear Creek that remained after the larger part, Sub-Parcel A3-1, was carved out. Sub-Parcel A3-1 was developed with a large warehouse, after excavation of any soil contaminated by PCB concentrations exceeding 50 mg/kg and the installation of a cap, approximately three years ago. The proposed remedy for the A3 Remnant Area of this shoreline parcel is limited to institutional controls, including a restriction on groundwater use, limiting use of the land to industrial purposes, and notification to MDE and EPA prior to any soil disturbance.

Parcel A3 also includes underlying groundwater plumes which overlap and are contaminated by cadmium and zinc resulting from the operation of the former Rod and Wire Mill. According to the Groundwater Corrective Measures Study Work Plan dated October 18, 2019, these groundwater plumes are limited to the west by the Bear Creek shoreline. The Rod and Wire Mill area includes Parcel A3 (*Id.* P. 1). TPA installed remediation trenches designed to precipitate the dissolved metals and reduce the dissolved concentrations in cadmium and zinc. These trenches currently lie beneath the existing warehouse building slab and asphalt cap, and their effectiveness is being monitored. Our understanding is that the CMS Work Plan is currently under review by MDE and EPA. Until these measures are evaluated and one is selected, the proposed final remedies for Parcel A3 are premature. We presume that groundwater contamination at Parcel A3 will be addressed in an approved Rod and Wire Mill Groundwater Corrective Measures Study, since that area is a component of the entire parcel.

C. Parcel B3.

The description of this parcel in the SB describes extensive groundwater contamination. Our concerns regarding this parcel are similar to those expressed for Parcels A2 and A3.

D. Parcel B4.

Parcel B4 is 72 acres, of which the “remnant area” being addressed here, after excluding B4-1, is 36.9 acres. B4-1, in the center of B4, was previously remediated in 2017 by a paved asphalt cap to create the “roll-on, roll-off” motor vehicle storage facility. Any stormwater from

the developed sub-parcel appears to drain to the southwest over adjacent uncapped land to be discharged from Outfall 012, according to the current Stormwater Pollution Prevention Plan, revision 7, dated January 24, 2019. The site investigation for the remnant area showed extensive soil and groundwater contamination, including contaminants above PALs and the presence of NAPL. The proposed remedy is selective soil removal and land use restrictions. This does nothing to address contaminated groundwater, so that the proposed remedy is incomplete for the reasons described more fully in the General Comments above. In addition, nothing is said about what will be done with the NAPL monitoring results, including prevention against off-site migration. This should be addressed before any remedy is implemented.

E. Parcel B15.

This 19.3-acre parcel runs along the south side of the western leg of the TMC. As the SB points out at p.12, both the soils and groundwater are severely contaminated with hazardous substances. The Phase II Investigation report (April 1, 2018) summary states that PALs in soils were exceeded for five inorganics, six SVOCs, PCBs and TPH. Evidence of NAPL was also found. In groundwater, PALs were exceeded for two VOCs, three SVOCs, two inorganics and TPH. The “proposed remedy for soils is...paved capping on the entire Parcel, and Land Use Restrictions implemented through Institutional Controls.” (SB, p.15). As stated above, no remedy is proposed at this time for the contaminated groundwater.

What the SB fails to disclose is that this “proposed remedy” has already been implemented. The capping of the entire parcel was carried out during November, 2016, and April, 2017, and documented in the *Response and Development Completion Report: Area B: Parcel B15* dated April 3, 2018, prepared by EnviroAnalytics for TPA. We discovered this late last year when we saw this report posted on the MDE web site. On December 9, 2019, counsel for BWB and CBF wrote to Susan Hodges at EPA and Matthew Zimmerman of MDE (both agency counsel), citing this report and objecting strenuously to the implementation of this remedial action without having first made available the Work Plan and an SB prepared by EPA for public review and comment, as required by the Administrative Consent Order (Paras. 38 and 39) and the Settlement Agreement (Paras. 68 – 70) of 2014. A copy of that letter is attached hereto as Exhibit A. As we pointed out in that letter, the total capping of this parcel with no public notice is especially troublesome because it is immediately adjacent to the TMC, which existed for decades as an unlined hazardous waste storage and disposal surface impoundment, from which hazardous wastes were leached to the soils and groundwater now covered by Parcel B15.

On March 18, 2020, we received an email from Meghan Kelly, Assistant Regional Counsel at EPA, advising that she had replaced Susan Hodges on this matter and replying to our letter of December 9. She assured us that “EPA has not yet selected a final remedy with respect to the parcels identified in your letter: Parcels B-15, A-2, A-3, B-3, and the B-4 Remnant Area.” A copy of that email is attached as Exhibit B. We were surprised by this since the April 3, 2018, report clearly documented the completion of the capping of the entire surfaces of Parcel B15 except for those parts already covered by buildings or impervious slabs. We had also been told by TPA personnel that that capping had been completed. Counsel for BWB, Ridgway Hall,

replied to her email by email dated March 20 asking if she could clarify this (copy attached as Exhibit C), but so far we have received no response.

This approach to what ought to be a meaningful opportunity for public input repeats the procedure followed by EPA for Parcel B4-1, wherein a Statement of Basis is published for public comment well after the remedy has been selected, approved in every practical sense by the responsible agency, and then implemented. While we appreciate the access our organizations have in communicating many of our concerns directly to TPA, we are deeply troubled by this violation by EPA and TPA of the public notice and comment requirements of the ACO and Settlement Agreement. EPA's Statements of Basis effectively serve as after-the-fact notice to the community of one or more selected remedies. The situation is exacerbated by the fact that once the work is performed, there is presumably no way to undo that now that the remedy has been implemented without great expense and potential to disrupt current tenant operations. What is more troubling, and still not too late to address, is the uncontrolled contaminated groundwater under this parcel and the rest of the 3100-acre Sparrows Point facility that remains unmonitored and uncontrolled. This is one more example of why the Sitewide groundwater protection program, requested and promised many times, must be given the highest priority.


III. REQUEST FOR PUBLIC HEARING

BWB and CBF request a public hearing on EPA's proposed action, including but not limited to all of the issues raised in the preceding comments.

We realize that in these unusual times when public gatherings are constrained due to the coronavirus a traditional live public hearing may not be feasible at any time during the next several months, and possibly longer. Therefore we request that EPA consider using Zoom, conference call, or other similar technology to conduct a "virtual" public hearing, so that we and other interested parties can have the opportunity to ask questions and raise and discuss issues of concern, as would be possible at a face-to-face hearing.

We appreciate the opportunity to submit these comments and would be happy to discuss any aspect of them with you or your colleagues.

Respectfully submitted,



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Encl.

Cc: Luis Pizarro, EPA, pizarro.luis@epa.gov
Meghan Kelley, EPA, Kelley.meghan@epa.gov
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EXHIBIT A



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure



December 9, 2019

VIA ELECTRONIC MAIL ONLY

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**Re: Sparrows Point Site Remediation
Parcel B-15 Final Remedy Selection
Public Notice and Comment Requirements**

Dear Susan and Matt:

It has been a while since we have been in touch with you regarding the remedial activities going on at Sparrows Point because, for the most part, they have been going smoothly, and we have done our best to resolve any concerns directly with Tradepoint Atlantic.

However, a matter has arisen that we must raise directly with you given the agencies' Sparrows Point cleanup oversight roles relating to the remedial measures at Parcel B-15. This is a 19-acre parcel located just south of, and adjacent to, the western segment of the Tin Mill Canal. Although for some reason we did not receive notice of the most recent EPA/MDE public briefing on activities at the Sparrows Point Site on October 3, 2019, we learned about it later and obtained a set of the slides from the agencies' presentations. A slide titled "Final Remedy Selection – 5 Parcels" presented during the EPA/MDE public meeting on October 3, 2019 states that a response and development work plan has been approved for Parcel B-15 (and 4 others), and that EPA was preparing a Statement of Basis for it, with public comment "expected 4th quarter of 2019".

Upon going to the MDE web page dedicated to the Sparrows Point Voluntary Cleanup Program, we learned that in fact the remedy that TPA had proposed in its 2016 work plan had already been completed, as documented in the *Response and Development Completion Report: Area B Parcel*

B15, dated April 3, 2018. The remedy consisted primarily of capping most of the area with asphalt and leaving in place paving slabs in the storage buildings existing on the site, **despite elevated levels of metals and organic contaminants in the underlying soils and groundwater.**

Public Review and Comment Required Prior to Implementation of Remedy

It is a clear violation of the public comment requirements of the Administrative Consent Order (ACO) and Settlement Agreement (SA) of 2014 for EPA and MDE to have allowed TPA to implement this remedy *before* the completion and publication of its Statement of Basis, and before allowing any public comment on the proposed Remedial and Development Work Plan and Statement of Basis.

Specifically, Paragraph 38 of the ACO provides in pertinent part that “After EPA prepares its Statement of Basis, the Area Work Plan and Statement of Basis shall proceed with the public participation process, and in so doing shall comply with the requirements of Environmental Article 7-509 (Public Participation) and 40 C.F.R. Part 124.” As you know, the statute and regulations both require at least a 30-day public comment period (*see* 40 C.F.R. 124.10). The ACO then allows modification of the Work Plan, if appropriate, after the public comment period. *See* Paragraph 39.

The SA also requires this public comment period. Paragraph 68 requires that EPA make the “Work Plan... and EPA’s... Statement of Basis available to the public for review and comment for at least thirty (30) calendar days.” Paragraph 70 requires that after the public comment period EPA will issue a “Final Decision and Response to Comments” including any appropriate revisions to the Work Plan to make sure that, among other things, any hazardous wastes or constituents located at the parcel at levels that might pose any risk of harm to human or ecological receptors are appropriately addressed under RCRA.

EPA and MDE, and by extension TPA, violated these public comment provisions. The result is that we and other members of the public were denied the opportunity to review and comment on the draft work plan or the statement of basis. This violation is troublesome because the Response and Development Completion Report documented the presence of hazardous wastes and constituents in the soils and groundwater at Parcel B-15 above relevant action levels (*see* pp. 3-5 of the Report).

Relationship of Parcel B-15 to Tin Mill Canal

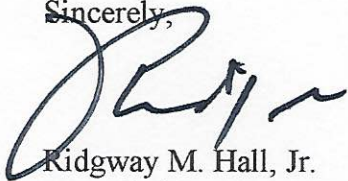
This is particularly troublesome because Parcel 15 is directly adjacent to the Tin Mill Canal – a major hazardous waste storage and disposal facility at which EPA and MDE allowed TPA to proceed with a RCRA closure that remediated only the soils and not the underlying and adjacent groundwater. The agencies did so without requiring the groundwater protection plan required by the RCRA regulations at 40 C.F.R. Part 264, Subparts F and G, over our vigorous objection. *See, e.g.,* Letter of August 25, 2017, from Ridgway Hall and Paul Smail to Erich Weissbart at EPA; our letter of January 22, 2018, to Eric Weissbart; and our letter of July 23, 2018, to Susan Hodges.

We have been in discussions with TPA for months regarding these concerns following the TMC decision in October, 2017. To TPA's credit, they have agreed to design and implement a hydrogeological study for the groundwater in the vicinity of the TMC which we hope will identify any hazardous constituents in the groundwater and enable us to determine what, if any, remedial measures may be necessary or appropriate to prevent their migration into adjacent Bear Creek and the Patapsco River. However, we are now surprised to learn that most of a 19-acre parcel in the very area to be sampled has been paved over with asphalt. Ridge Hall raised this concern in a phone call with EPA's current project manager, Moshood Oduwole, on November 13. Mr. Oduwole said that if necessary, the asphalt cap could be drilled through or partially removed. Clearly with a tenant in possession, paying rent and using the property, there will be enormous resistance to such disruptive activity. It is precisely to avoid such problems that the ACO and SA require public comment *before* implementation of the remedial and development measures, and *not afterwards*.

We would like to discuss with you and TPA what the next steps should be regarding Parcel B-15 to make sure that, in addition to protection of human health and ecological receptors, adequate protections are put in place to prevent possible migration of contaminated groundwater as this parcel is developed and occupied. We also request your assurance, and by copy of this to TPA their assurance as well, that there will be no future violations of the public participation requirements of the SA and ACO throughout the duration of their implementation.

We look forward to hearing from you on these matters.

Sincerely,



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Randall Lutz, Saul Ewing Email: randy.lutz@saul.com

EXHIBIT B

Email from Meghan Kelley, EPA, to RMH et al 3-18-20

Kelley, Meghan <kelley.meghan@epa.gov>

4:48 PM (25
minutes ago)

to matthew.zimmerman@maryland.gov, Luis, Moshood, barbara.brown1@maryland.gov, phaid@tradepointatlantic.com, randy.lutz@saul.com, me, PSmal@cbf.org, jaiosa@bluewaterbaltimore.org

Ridge and Paul,

Thank you for your December 9, 2019 letter. I apologize that it has taken us some time to respond to you. Susan Hodges recently retired from the agency and was unable to respond to your message before her retirement. I'll be taking her place as the EPA attorney on this matter.

I want to address the concern you raised in your letter regarding the October 3, 2019 public meeting. Although I was not part of the Sparrows Point team at that time, after speaking to folks internally, I can say emphatically that we did not realize that Chesapeake Bay Foundation and Blue Water Baltimore were unaware of the meeting. Moving forward, as I believe Moshood has told you verbally, we will commit to notifying you personally of any future public meetings related to Sparrows Point to avoid this happening again.

I also want to assure you that EPA has not yet selected a final remedy with respect to the parcels you identified in your letter: Parcel B-15, A-2, A-3, B-3, and the B-4 Remnant Area. The Statement of Basis proposing final remedies at these parcels will be available shortly for a 30-day public comment period. You are welcome to resubmit your December 9, 2019 letter, or any comments from that letter, in addition to other comments you may have after reviewing the Statement of Basis. We will review them and respond. If we determine that your comments warrant a modification to the proposed remedy, we will modify the proposed remedy based on the comments. Once the Statement of Basis is available to the public, we will send it to you, and should you choose to comment, we will send you a copy of the Final Decision and Response to Comments as well.

If you'd like to discuss any of this further, Moshood and I are more than happy to speak with you. Please let us know. I look forward to working with you on this matter. My contact information is listed below should you wish to reach out to me directly.

Best,
Meghan

Meghan E. Kelley
Assistant Regional Counsel
U.S. EPA, Region III (3RC10)

1650 Arch Street
Philadelphia, PA 19103
(215) 814-2616

EXHIBIT C

Ridgway Hall to Meghan Kelley Fri., Mar. 20, 2020, 9:31 am

to Meghan, matthew.zimmerman@maryland.gov, Luis, Moshood, barbara.brown1@maryland.gov, jaiosa@bluewaterbaltimore.org, phaid@tradepointatlantic.com, randy.lutz@saul.com, PSmal@cbf.org

Meghan: Thanks ever so much for your thoughtful reply to Paul's and my letter of December 9. Welcome to Sparrows Point! Susan was one of the real long ball hitters on this site at EPA. That honor probably now belongs to Luis Pizarro.

Regarding the status of Parcel B-15, I'm encouraged by your statement that a "final remedy" has not been selected for it, but it leaves me puzzled about the significance of the April 3, 2018, *Response and Development Completion Report* prepared for TPA by their technical consultants, ARM, and posted on the agencies' web site. That report describes the completion of the selected response action, which was paving over the entire area with asphalt, except for those areas already covered by impervious slabs. This was done despite elevated levels of metals, PCBs, PAHs and other hydrocarbons in the groundwater in excess of non-residential cleanup standards. TPA has confirmed to me by phone that that paving has in fact been completed. I'm not sure what further "final remedy" might be in the offing, but I hope you will clarify that for me.

Meanwhile we do look forward to reviewing and commenting on other Statements of Basis for the remaining parcels at Sparrows Point before any response, remedial, development or corrective actions are approved by the agencies or implemented at the site. We will be very grateful for your vigilant oversight on this.

Best regards,
Ridge

ATTACHMENT C
RESPONSE TO COMMENTS

ATTACHMENT C (Five Parcels)

EPA Response to Comments

This section summarizes the questions and comments regarding the Statement of Basis for Parcels A2, A3, B3, B4 Remnant Area, and B15 (Parcels) at the Sparrows Point Facility (SPF) in Baltimore, Maryland. The questions and comments were received via email during the public comment period. After each question or comment, EPA's response is provided.

1. Comment from Mr. Keith Taylor, President of the Sparrows Point/North Point Historical Society, submitted in an email dated April 16, 2020:

Mr. Taylor's comment on the SB concerned the Corrective Action cleanup process. Mr. Taylor stated he "would like to request some information on the Corrective Action Cleanup Proposal process...and would like to see how the process is outlined." He asked EPA to "[p]lease provide additional information."

EPA's response:

EPA thanks Mr. Taylor for his interest in the Corrective Action Program. Information regarding EPA's Corrective Action Program as well as key documents that explain the cleanup process are available at: <https://www.epa.gov/hw/learn-about-corrective-action#whatis>.

2. Comments from CBF and BWB, submitted in a letter dated May 5, 2020:

The following summarizes the questions and comments submitted by the Chesapeake Bay Foundation (CBF) and Blue Water Baltimore (BWB) in their letter regarding the SB for the Parcels dated May 5, 2020, which included three exhibits. The letter can be found in its entirety in the Administrative Record for SPF and is attached to the FDRTC as Attachment B.

CBF and BWB's Introduction

After explaining the history of its interest and involvement with the Facility, CBF and BWB assert that "there are significant deficiencies in the remedial and corrective actions proposed for each of the five parcels which must be fixed before any redevelopment or reuse can take place."

EPA's Response:

EPA appreciates CBF and BWB's continued interest and involvement with the Facility, including their detailed comments, but respectfully disagrees that there "are significant deficiencies in the remedial and corrective actions proposed for each of the five parcels." The cleanup at the Facility is subject to the Corrective Action Program and is being conducted pursuant to two agreements. In 2014, EPA and MDE entered into a Settlement Agreement (SA)

with Sparrow's Point Terminal, LLC, prior to its purchase of the Facility.

<https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/SP%20PPA.pdf>. The SA was finalized in November 2014 following a 30-day public comment period. Also, in 2014, MDE entered into an Administrative Order on Consent (ACO) with Sparrows Point Terminal, LLC. The SA and the ACO require satisfaction of corrective action obligations and facilitate the redevelopment of SPF in keeping with EPA's policy to foster the redevelopment and reuse of RCRA facilities. *See, e.g., Prospective Purchaser Agreements and Other Tools to Facilitate Cleanup and Reuse of RCRA Sites*, U.S. EPA (April 8, 2003), available at: <https://www.epa.gov/sites/production/files/documents/memoppa.pdf>; *Enforcement Discretion Guidance Regarding Statutory Criteria for Those Who May Qualify as CERCLA Bona Fide Prospective Purchasers, Contiguous Property Owners, or Innocent Landowners ("Common Elements")*, U.S. EPA (June 29, 2019), available at: <https://www.epa.gov/sites/production/files/2019-08/documents/common-elements-guide-mem-2019.pdf>.

EPA and MDE closely coordinate to ensure that the cleanup and redevelopment at SPF are conducted in a manner that protects human health and the environment while promoting reuse at the Facility. Each of the remedies that EPA has proposed and selected at the Facility have met the evaluation criteria necessary to protect human health and the environment in accordance with the *Guidance on RCRA Corrective Action Decision Documents: Statement of Basis and Response to Comments*, EC-G-2002-103 at 1-7 (April 29, 1991), available at: <https://www.epa.gov/sites/production/files/2013-10/documents/rcradecisiidoc-mem.pdf>.

EPA disagrees that the corrective actions proposed for the Parcels "must be fixed before any redevelopment or reuse can take place." As explained further below under CBF and BWB's General Comments I.A. and II.E., TPA may voluntarily implement cleanup measures under MDE's Voluntary Cleanup Program (VCP) to pursue development at SPF, and in doing so, it voluntarily undertakes a risk. When TPA implements voluntary cleanup actions at certain parcels prior to EPA's selection of corrective measures, TPA's actions may or may not satisfy corrective action obligations under the SA that EPA selects in final remedies for those parcels after public comment. EPA agrees that the public must have an opportunity to comment on proposed remedies pursuant to the Corrective Action Program, and EPA is obligated to evaluate those comments, respond, and change the proposed remedy before finalizing it if EPA learns new information from those comments that require a change. If EPA selects a final remedy that alters its proposed remedy based on public comment, regardless of any voluntary cleanup actions it has taken, TPA must implement the final remedy that EPA selects.

I. General Comments Applicable to All Parcels

"A. EPA's Evaluations of the Proposed Remedies Are Fatally Flawed Because Neither an Ecological Exposure Assessment nor an Environmental Risk Assessment Was Performed, Making It Impossible for EPA to Determine Whether the Proposed Remedies Will Be Protective of the Environment or Ecological Receptors."

CBF and BWB state that: “It appears that ecological exposure pathways were not extrapolated from the groundwater well concentrations of contaminants to potential surface waters of Bear Creek and the Patapsco River.” Moreover, CBF and BWB assert that “the bioconcentration within exposed organisms, especially those low on the estuarine food web and subsequent bioaccumulation up the food web to higher order consumers like crabs, fish and marine birds has not been considered, nor the potential for human health risk associated with subsistence fisheries”

CBF and BWB also state: “We believe that both a baseline risk of these ecological exposures and any changes to that risk positive or negative as a result of terrestrial disturbance, remediation or redevelopment are necessary to fully comply with the requirements of closure and post-closure care regulations. . . .”

CBF and BWB conclude by stating: “. . . a fresh site investigation must be conducted which identifies potential environmental and ecological receptors and their consumers, and their actual or potential exposure to chemicals of concern, and then includes an ecological risk assessment for each of the parcels.”

EPA’s Response:

EPA disagrees that additional site investigations are necessary to identify risks of potential exposure to ecological receptors and their consumers. The EPA Removal Program has conducted assessments which comprehensively explain the offshore ecological risks from the Facility groundwater and stormwater, and EPA will use them to support subsequent remedial decision-making. As explained in the SB, the proposed remedy did not include a proposed final remedy for groundwater. Instead, it proposed a final remedy for soils at the Parcels, and an interim remedy for groundwater until a final Facility-wide groundwater remedy is selected. EPA has been working for the last several years to accurately characterize the Facility-wide groundwater contamination in order to develop a comprehensive Facility-wide groundwater remedy. In addition, EPA has overseen or conducted several investigations to delineate the extent of offshore sediment contamination, which is the primary medium for groundwater discharge and characterizes the worst-case effects of groundwater discharge to surface water bodies. A Phase I offshore investigation into Bear Creek, described further below, also modeled surface water impacts from stormwater data and found the impact to be insignificant.

In 2014 and 2015, a Phase I investigation of offshore sediments conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sampled sediment, pore water, and stormwater to delineate offshore impacts to Bear Creek from SPF. The objectives of the Phase I investigation included conducting human health and ecological risk assessments for the offshore area, as well as providing information that will be considered in EPA’s remedial decision-making. The human health and ecological risk assessments evaluated the potential cumulative risks for human and ecological receptors from exposure to surface water, sediment, and fish and crab tissue within the investigation area. *See Phase I Offshore Investigation Report for the Sparrows Point Site, Baltimore, Maryland*, EA Engineering, Science, and Technology, Inc., PBC, March 2016 available at:

https://response.epa.gov/sites/9893/files/Offshore%20Investigation%20Report_Final_March2016.pdf; Risk Assessment of Offshore Areas Adjacent to the Proposed Coke Point Dredged Material Containment Facility at Sparrows Point, EA Engineering, Science and Technology, Inc. for the Maryland Port Administration, May 2011 available at: [https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment\[1\].pdf](https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment[1].pdf); see also *Summary of the Phase I Offshore Investigation Report for the Sparrows Point Site, March 2016* available at: https://www.epa.gov/sites/production/files/2016-07/documents/sparrowspoint_offshorereportssummary.pdf (summarizing the human health risk assessment results with respect to swimming exposures and exposures from crab or fish consumption).

EPA also conducted a subsequent assessment under CERCLA that included sampling in 2016 and 2017 of offshore sediments along the southeast shoreline of SPF within the Patapsco River, Old Road Bay, and Jones Creek. For the final report for that assessment, see *Final Trip Report – Sediment Assessment-Second Round of Sample Collection July 2017 Mobilization*, Weston Solutions, Inc., April 24, 2018, available at: https://response.epa.gov/sites/9893/files/Sparrows%20Point%20SE%20Shoreline_Sediment%20Assessment_Trip%20Report_Final%202.pdf. These assessments comprehensively explain the offshore ecological risks from the Facility groundwater and stormwater

“B. The Statement of Basis is Fatally Flawed Because It Impermissibly Fails to Require the Groundwater Protection Measures Required by RCRA.”

CBF and BWB cite results for various groundwater samples at Parcels A2, A3, B3, B4, and B15, which show Project Action Limit (PAL) exceedances (i.e., exceedances of project screening values set by MDE and EPA as part of the TPA investigations) for various contaminants in groundwater, including volatile and semivolatile organic compounds, inorganic compounds, and total petroleum hydrocarbons. CBF and BWB explain “some review of how these PAL exceedances translate to ecological risk from logical exposure pathways is necessary. At the very least, groundwater plume migration vectors and magnitudes should be used to predict concentrations of pollutants at compliance well locations before an opportunity for groundwater to migrate offshore.”

CBF and BWB additionally state that: “The one situation where the groundwater protection requirements might be deferred to a date later than the implementation of corrective measures for contaminated soil is if a permit or enforceable document allows the use of ‘alternative requirements’ that are in place and that ‘will protect human health and the environment and will satisfy the closure performance standard of 264.111(a) and (b),’” citing to 40 C.F.R. 264.110(c) in and 40 C.F.R. 264.111(a) and (b) to support this statement. CBF and BWB also assert that “EPA has provided absolutely no evidence in the SB that any such alternative measures are in place with respect to contaminated groundwater that ‘will protect human health and the environment’” and that “neither EPA nor TPA can provide any such evidence because there are not enough groundwater monitoring wells in the vicinity of any of the five parcels to satisfy the RCRA regulations’ groundwater monitoring and release detection requirements.”

For those monitoring wells that do exist, CBF and BWB assert: “There has not even been adequate monitoring (at least quarterly) of those few monitoring wells....” Finally, CBF and BWB explain that “the only measure proposed regarding groundwater in the SB is the prohibition on the use of the groundwater for human consumption using ‘institutional controls’, along with capping,” which, according to CBF and BWB, “may protect occupants of the property and workers, but it does nothing to prevent the migration of contaminated groundwater off site and into Bear Creek and the Patapsco River, where it may have adverse effects on the environment, including ecological receptors like crabs or fish, and human consumers.”

CBF and BWB conclude by stating: “Because of EPA’s failure to require installation of RCRA-compliant groundwater protection measures at each of the five parcels, it is unable to demonstrate compliance with one of its essential Corrective Action Objectives (p.13), namely, ‘prevent exposure to hazardous constituents in groundwater that have been detected above applicable PALs.’”

EPA’s Response:

EPA disagrees with CBF and BWB’s analysis that the Parcels are subject to closure and post-closure care requirements that are specific to RCRA regulated units under 40 C.F.R. 264.110-111. RCRA regulated units are defined in 40 C.F.R. 264.90 as surface impoundments, waste piles, land treatment units, and landfills that received hazardous wastes after July 26, 1982. None of the Parcels were or are regulated units subject to 40 C.F.R. 264.110-111.

As explained in EPA’s Final Decision for the Tin Mill Canal, even if the Parcels were considered regulated units, the 1988 RCRA Closure Rule gives EPA the authority at facilities, including at interim status facilities like SPF, to replace the unit-specific requirements in Part 265 with alternative requirements where a regulated unit is situated among solid waste management units and both types of units are likely to have contributed to the release. *See* 40 C.F.R. 265.111; 40 C.F.R. 265.110(d). These alternative requirements must be set out in an approved closure or post-closure plan, or an enforceable document as defined in 40 C.F.R. 270.1(c)(7) (such as the SA at this Facility), protect human health and the environment, and satisfy closure performance standards in 40 C.F.R. 265.111(a) and (b). *See* 40 C.F.R. 265.110(d).

With respect to CBF and BWB’s concerns regarding EPA’s failure to assess ecological risk to the offshore area, an area which EPA notes is not within the scope of this SB, as stated above, a CERCLA Phase I investigation of offshore sediments has been conducted, including additional subsequent sampling by EPA. These assessments will inform EPA’s subsequent remedial decision-making. *See Phase I Offshore Investigation Report for the Sparrows Point Site, Baltimore, Maryland*, EA Engineering, Science, and Technology, Inc., PBC, March 2016 available at: https://response.epa.gov/sites/9893/files/Offshore%20Investigation%20Report_Final_March2016.pdf; Risk Assessment of Offshore Areas Adjacent to the Proposed Coke Point Dredged Material Containment Facility at Sparrows Point, EA Engineering, Science and Technology, Inc. for the Maryland Port Administration, May 2011 available at:

[https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment\[1\].pdf](https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment[1].pdf); see also *Final Trip Report – Sediment Assessment-Second Round of Sample Collection July 2017 Mobilization*, Weston Solutions, Inc., April 24, 2018, available at: https://response.epa.gov/sites/9893/files/Sparrows%20Point%20SE%20Shoreline_Sediment%20Assessment_Trip%20Report_Final%202.pdf.

Regarding CBF and BWB’s concern that EPA has not appropriately addressed groundwater contamination at SPF, EPA notes that under the Corrective Action Program it can develop separate remedies to address different areas or media of a facility to prioritize risks. EPA uses this approach at many facilities, such as SPF, that consist of areas and media that present distinct environmental concerns and risks. This approach is also supported by EPA’s guidance on Corrective Action activities at RCRA facilities. See *Handbook of Groundwater Protection and Cleanup Policies for RCRA Corrective Action*, EPA530-R-04-30 (April 2004), available at: <https://www.epa.gov/sites/production/files/2017-02/documents/gwhb041404.pdf> (explaining that EPA’s groundwater protection and cleanup strategy for RCRA corrective action “generally is to: focus resources that warrant action in the near term; control short-term threats; prioritize actions within facilities to address the greatest risks first; and make progress toward the ultimate goal of returning contaminated groundwater to its beneficial use”); see also *Final Guidance on Completion of Corrective Action Activities at RCRA Facilities*, 68 FR 8757, 8762 (Feb. 25, 2003) (noting that “a facility may have contaminated groundwater undergoing corrective action years after the source of contamination has been removed, and the soil cleaned up to unrestricted levels”). At SPF, EPA determined that it had enough data and information to propose a final remedy for soils and an interim remedy for groundwater at the Parcels; and therefore, chose to proceed with that remedy proposal, rather than delaying it while the Facility-wide groundwater investigation is completed.

Finally, EPA disagrees that it is unable to demonstrate compliance with its Corrective Action Objective to “prevent exposure to hazardous constituents in groundwater that have been detected above applicable PALs.” To the contrary, EPA has proposed interim measures that protect against immediate risks to exposure to groundwater contaminants while EPA continues to evaluate Facility-wide groundwater. Specifically, the SB proposed as an interim remedy for groundwater to “prohibit use of groundwater at the Parcels and Sub-Parcels for any purpose... [which] will be implemented through enforceable ICs....” SB at 16. Also, the SB proposed that “for any proposed excavation encountering groundwater, the property owner shall implement the requirements of a site-specific health and safety plan to ensure worker protection measures are met and provide 30-day written notification to MDE.” *Id.*

“C. The Absence of a Facility-wide Groundwater Protection Plan Is a Major Failure to Comply with RCRA and Exposes Ecological Receptors and Human Consumers to Risk of Harm.”

CBF and BWB assert that: “The statement in the SB that a site-wide groundwater monitoring and protection program will be forthcoming in the future is one we have been hearing for many years” and cites to Statements of Basis from 2017 for Parcel A1 and Sub-parcel B4-1 and for the

Tin Mill Canal. CBF and BWB express that: “That was nearly three years ago and serious deficiencies remain. Where is the sitewide groundwater remedy? Where is the sitewide groundwater protection program required by RCRA? Such items are still outstanding.” CBF and BWB state that: “Meanwhile highly contaminated groundwater beneath most if not all of this 3,100-acre Facility may be migrating into adjacent waters and causing harm to the environment” including to ecological receptors and humans who consume them.” Finally, CBF and BWB state: “EPA should require TPA to correct these deficiencies as a top priority and on a stringent time schedule, starting with these five parcels.”

EPA’s Response:

EPA agrees with CBF and BWB that addressing groundwater contamination is a priority at SPF. To that end, EPA expects to have a comprehensive compilation of groundwater information to present to the public that will inform a remedy proposal to address Facility-wide groundwater by September 15, 2020.

As you are aware, EPA, in collaboration with MDE, has been overseeing groundwater investigations at SPF for the last several years. Moreover, in several instances, TPA has implemented interim measures through MDE’s VCP to directly address groundwater contamination while EPA works to develop a proposed Facility-wide groundwater remedy. *See Rod and Wire Mill Interim Measure 2019 Progress Report*, ARM Group LLC, February 14, 2020, available at:

<https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/RWM%20IM%202019%20Progress%20Report%20Rev.0%202-14-2020.pdf>; *see also Coke Oven Interim Measure 2019 Progress Report*, ARM Group LLC, January 31, 2020, available at: <https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Coke%20Oven%202019%20IM%20Progress%20Report%20rev0%201-31-2020.pdf>.

While EPA has been developing a comprehensive Facility-wide groundwater remedy, it has had to address risks posed by the redevelopment at SPF. As CBF and BWB state, SPF is a 3,100-acre facility. Accordingly, EPA has had to prioritize nuanced and overlapping areas of contamination in order to protect human health in the environment while redevelopment is happening. Thus, on a parallel track, EPA has made significant progress in moving forward with the investigation and remediation of the more complex contaminated areas of the Facility and will continue to concentrate on the following high priorities: 1) addressing the groundwater contamination at the Rod and Wire Mill area; 2) addressing the groundwater contamination at the Coke Point area; and 3) developing a comprehensive Facility-wide groundwater remedy and, as necessary, additional groundwater remedies for areas of high concern.

“D. Failure to Address Migration of Contaminated Soils Dislodged During Corrective Actions and Construction Activity Presents a Needless Environmental Risk.”

CBF and BWB assert that “[t]he SB lacks detailed information about how the migration of contaminated soils dislodged during corrective actions, construction activity, and stormwater runoff will be addressed.” CBF and BWB note the SB refers to “a soil management plan that will

be approved by MDE” but asserts the SB contains “no details of what that plan will consist of.” Furthermore, CBF and BWB state “each parcel states different requirements of notification to MDE and EPA for soil disturbance” and that they “recommend uniform requirements across all parcels.”

In addition, CBF and BWB opine that “the SB does not provide for adequate notification to communities in the area when soil disturbance is scheduled to take place,” which “is necessary for the public to make informed decisions about how they interact with the water in Bear Creek or the Patapsco River due to the potential of contaminated sediments entering these waterways.” Finally, CBF and BWB assert that: “While it appears that a human health exposure risk assessment has been completed, particularly with regard to workers wearing the proper Personal Protective Equipment on-site, there is no evidence that an ecological risk assessment has been conducted.”

EPA’s Response:

Regarding CBF and BWB’s concern about stormwater runoff, EPA notes that there are several stormwater management controls in place at SPF. Baltimore County Soil Conservation District and the Baltimore County Department of Environmental Protection and Sustainability have reviewed and approved the design for both parcel-specific and site-wide stormwater management systems. Also, MDE’s Water Management Administration enforces requirements to manage stormwater and prevent erosion through a Facility-specific Storm Water Pollution Prevention Plan. *See Stormwater Pollution Prevention Plant (SWPP)*, Tradepoint Atlantic, ARM Group Inc., January 24, 2019, available at: https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Sparrows%20Point%20Hazardous%20Waste%20Site/TPA%20SWPPP_rev%207_1-24-19%20FINAL_signed.pdf.

Specific to CBF and BWB’s concern regarding mobilizing contamination, MDE requires TPA to either pump any stormwater/de-watering water generated during construction to the Facility wastewater treatment plant via existing outfalls or collect and treat prior to discharge. EPA, together with MDE’s Land Restoration Program, reviews each of TPA’s response and development work plans (RADWPs) to ensure protection of human health and the environment, including with respect to stormwater impacts.

Regarding the details of the soil management plan, TPA is required to include soil management procedures in the RADWPs, which are available on MDE’s VCP website for SPF: <https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Pages/SPVoluntaryCleanupProgram.aspx>. These soil management procedures must be submitted to EPA for approval as part of a Corrective Measures Implementation (CMI) Workplan, or as part of the RADWP for EPA approval, if EPA determines a CMI Workplan is not required. *See SB at 14.* Regarding TPA notifications to EPA and MDE for intrusive soil activities, EPA believes that the notification requirements described in the SB are appropriate. As described in the SB, when TPA is required to provide such notification, at minimum, this consists of a thirty-day advance notification to EPA and MDE, but some of the Parcels have additional requirements based on the

contamination found there to ensure protection of human health and the environment. In addition, to ensure the community remains aware of activities at SPF, EPA will continue to conduct annual public meetings.

With respect to CBF and BWB's concern about risk assessments at the Facility, as CBF and BWB correctly point out, EPA has assessed human health risk at the Parcels. The ecological risk concerns via groundwater that CBF and BWB raise throughout its comment letter do not relate to the proposed remedy in this SB because, as explained above, the proposed remedy primarily related to soils and use restrictions for groundwater at the Parcels. As explained above, ecological risk in the offshore areas surrounding the Facility from groundwater and stormwater has been assessed and will inform EPA's subsequent remedial decision-making. *See Phase I Offshore Investigation Report for the Sparrows Point Site, Baltimore, Maryland*, EA Engineering, Science, and Technology, Inc., PBC, March 2016 available at: https://response.epa.gov/sites/9893/files/Offshore%20Investigation%20Report_Final_March2016.pdf; Risk Assessment of Offshore Areas Adjacent to the Proposed Coke Point Dredged Material Containment Facility at Sparrows Point, EA Engineering, Science and Technology, Inc. for the Maryland Port Administration, May 2011 available at: [https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment\[1\].pdf](https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Documents/Full_Coke_Point_Risk_Assessment[1].pdf); *see also Final Trip Report – Sediment Assessment-Second Round of Sample Collection July 2017 Mobilization*, Weston Solutions, Inc., April 24, 2018, available at: https://response.epa.gov/sites/9893/files/Sparrows%20Point%20SE%20Shoreline_Sediment%20Assessment_Trip%20Report_Final%202.pdf.

II. Parcel-Specific Comments

A. Parcel A2.

CBF and BWB note that: "The proposed remedy is the application of institutional controls and land use restrictions" and state that: "While this may protect workers from elevated risk, there are elevated levels of contaminants of concern above PAL levels in both the soil and groundwater...." CBF and BWB add that: "Hazardous constituents in the groundwater could be transported off site, resulting in the harm which a proper groundwater protection program is designed to prevent." As explained in CBF and BWB's general comments, CBF and BWB assert that "this risk should be addressed on a site-wide basis, and further action at each of the five parcels that are the subject of this SB should be halted until that is done."

EPA's Response:

EPA agrees that the groundwater should be addressed on a Facility-wide basis. As discussed above, EPA, in collaboration with MDE, has been overseeing groundwater investigations for the last several years, in order to accurately and fully characterize the groundwater contamination at SPF. As stated in the SB, EPA will issue a separate SB for Facility-wide groundwater and solicit public comment on its proposal once the groundwater at the entire Facility has been evaluated. In

the interim, the groundwater use restrictions will provide immediate human health short-term protectiveness while EPA develops a comprehensive Facility-wide groundwater strategy.

EPA does not agree that further action at the Parcels should be halted until EPA's Facility-wide groundwater evaluation is complete. Groundwater investigation and future implementation of groundwater remedies will be able to proceed even if parcels have been redeveloped.

B. Parcel A3.

CBF and BWB note that: "The Rod and Wire Mill area includes Parcel A3" and that "TPA installed remediation trenches designed to precipitate the dissolved metals and reduce the dissolved concentrations in cadmium and zinc." With respect to this work, CBF and BWB articulate that: "Our understanding is that the CMS Work Plan is currently under review by MDE and EPA" and that "until these measures are evaluated and one is selected, the proposed final remedies for Parcel A3 are premature." CBF and BWB conclude by stating: "We presume that groundwater contamination at Parcel A3 will be addressed in an approved Rod and Wire Mill Groundwater Corrective Measures Study, since that area is a component of the entire parcel."

EPA's Response:

CBF and BWB is correct that the CMS Work Plan for the Rod and Wire Mill groundwater is currently under review by MDE and EPA, which will include Parcel A3. EPA does not agree that proposing a final remedy as described in this SB at Parcel A3 is premature, given the development that is taking place at SPF and the need to protect against potential resulting risks.

As described above, EPA will propose a Facility-wide groundwater remedy and anticipates this remedy will include or incorporate final groundwater remedies for the Rod and Wire Mill area and the Coke Oven area. Finally, EPA disagrees that existing buildings and structures will be an impediment to any final groundwater remedy, as explained below in its response to CBF and BWB's comment on Parcel B15, below.

C. Parcel B3.

CBF and BWB state that: "The description of this parcel in the SB describes extensive groundwater contamination. Our concerns regarding this parcel are similar to those expressed for Parcels A2 and A3."

EPA's Response:

Please see EPA's responses to CBF and BWB's comments on Parcels A2 and A3 above.

D. Parcel B4.

CBF and BWB state that: “B4-1, in the center of B4, was previously remediated in 2017 by a paved asphalt cap to create the ‘roll-on, roll-off’ motor vehicle storage facility.” CBF and BWB assert that: “Any stormwater from the developed sub-parcel appears to drain to the southwest over adjacent uncapped land to be discharged from Outfall 012, according to the current Stormwater Pollution Prevention Plan, revision 7, dated January 24, 2019.”

CBF and BWB additionally state that: “The site investigation for the remnant area showed extensive soil and groundwater contamination, including contaminants above PALs and the presence of NAPL.” CBF and BWB assert that: “The proposed remedy does nothing to address contaminated groundwater.... In addition, nothing is said about what will be done with the NAPL monitoring results, including prevention against off-site migration,” arguing that “[t]his should be addressed before any remedy is implemented.”

EPA’s Response:

Groundwater contamination, including non-aqueous phase liquids at Parcel B4, will be included in a proposed Facility-wide groundwater remedy. Please see EPA’s response to CBF and BWB’s General Comments I.B.-D., regarding groundwater contamination and stormwater runoff concerns at the Facility.

E. Parcel B15.

CBF and BWB explain that, with respect to Parcel B15: “What the SB fails to disclose is that this ‘proposed remedy’ has already been implemented. The capping of the entire parcel was carried out during November, 2016, and April, 2017, and documented in the Response and Development Completion Report: Area B: Parcel B15 dated April 3, 2018, prepared by EnviroAnalytics for TPA.” CBF and BWB explain that: “On December 9, 2019, counsel for BWB and CBF wrote to Susan Hodges at EPA and Matthew Zimmerman of MDE (both agency counsel).” CBF and BWB note that they “object[ed] strenuously to the implementation of this remedial action without having first made available the Work Plan and an SB prepared by EPA for public review and comment, as required by the Administrative Consent Order (Paras. 38 and 39) and the Settlement Agreement (Paras. 68 – 70) of 2014.” CBF and BWB note that “the total capping of this parcel with no public notice is especially troublesome because it is immediately adjacent to the TMC,” asserting that TMC “existed for decades as an unlined hazardous waste storage and disposal surface impoundment, from which hazardous wastes were leached to the soils and groundwater now covered by Parcel B15.”

CBF and BWB next explain that: “On March 18, 2020, we received an email from Meghan Kelly [sic], Assistant Regional Counsel at EPA, advising that she had replaced Susan Hodges on this matter and replying to our letter of December 9.” CBF and BWB state: “She assured us that ‘EPA has not yet selected a final remedy with respect to the parcels identified in your letter: Parcels B-15, A-2, A-3, B-3, and the B-4 Remnant Area.’” CBF and BWB express that they “were surprised by this since the April 3, 2018, report clearly documented the completion of the capping of the entire surfaces of Parcel B15 except for those parts already covered by buildings

or impervious slabs” and they “had also been told by TPA personnel that that capping had been completed.” CBF and BWB assert that: “Counsel for BWB, Ridgway Hall, replied to her email by email dated March 20 asking if she could clarify this...but so far we have received no response.”

CBF and BWB explain that this: “repeats the procedure followed by EPA for Parcel B4-1, wherein a Statement of Basis is published for public comment well after the remedy has been selected, approved in every practical sense by the responsible agency, and then implemented.” CBF and BWB state that: “While we appreciate the access our organizations have in communicating many of our concerns directly to TPA, we are deeply troubled by this violation by EPA and TPA of the public notice and comment requirements of the ACO and Settlement Agreement.”

Finally, CBF and BWB assert that: “EPA’s Statements of Basis effectively serve as after-the-fact notice to the community of one or more selected remedies” and that “[t]he situation is exacerbated by the fact that once the work is performed, there is presumably no way to undo that now that the remedy has been implemented without great expense and potential to disrupt current tenant operations.” CBF and BWB conclude by stating: “What is more troubling, and still not too late to address, is the uncontrolled contaminated groundwater under this parcel and the rest of the 3100-acre Sparrows Point facility that remains unmonitored and uncontrolled” and this demonstrates “one more example of why the Sitewide groundwater protection program, requested and promised many times, must be given the highest priority.”

EPA’s Response:

Regarding EPA’s March 18, 2020 response to CBF and BWB’s letter of December 9, 2019, in which EPA stated it “had not yet selected a final remedy” with respect to the Parcels, this response also stated that “[t]he Statement of Basis proposing final remedies at these parcels will be available shortly for a 30-day comment period. You are welcome to resubmit your December 9, 2019, letter, or any comments you may have after reviewing the Statement of Basis.” EPA did note Mr. Hall’s statement in his response email of March 20, 2020 that “I’m not sure what further ‘final remedy might be in the offing, but I hope you will clarify that for me” but also noted his statement that “we look forward to reviewing and commenting on other Statements of Basis for the remaining parcels at Sparrows Point” EPA interpreted the combination of these statements as Mr. Hall informing the agency that BWB and CBF would likely submit this as a comment on this SB and that it expected EPA to respond then. This is, in fact, what happened, so EPA will respond here.

EPA maintains that its statement in its March 18, 2020 email is correct: final remedies at the Parcels had not yet been selected prior to the issuance of this Final Decision. As explained in EPA’s response to General Comment I.A., TPA may voluntarily undertake cleanup measures under the VCP to pursue development at SPF, and in doing so, it undertakes a risk. When TPA implements voluntary cleanup actions at certain parcels prior to EPA’s selection of corrective measures, TPA’s actions may or may not satisfy corrective action obligations under the SA that EPA selects in final remedies for those parcels after public comment. EPA agrees that the public

must have an opportunity to comment on proposed remedies pursuant to the Corrective Action Program, and EPA is obligated to evaluate those comments, respond, and change the proposed remedy before finalization if it learns new information from those comments that require a change. This is the exact process EPA has followed for the Parcels' proposed remedy and this Final Decision.

EPA and MDE have not hidden actions that TPA has implemented at SPF. In fact, the SB states that there has been development and construction at the Parcels. Extensive information regarding work plans, public meeting slides, proposed remedies, and sampling is available on EPA's and MDE's websites dedicated to SPF in order to be as transparent as possible to the public. *See* Maryland Hazardous Waste Site Information for Sparrows Point Steel Mill, <https://mde.maryland.gov/programs/LAND/MarylandBrownfieldVCP/Pages/sparrowspt.aspx>; *see also* Hazardous Waste Cleanup: Sparrows Point Terminal LLC (Trade Point Atlantic) in Sparrows Point, Maryland, <https://www.epa.gov/hwcorrectiveaction/hazardous-waste-cleanup-sparrows-point-llc-sparrows-point-md>.

One of CBF and BWB's main concerns with respect to EPA not proposing a groundwater remedy in this SB appears to be that "once the work is performed, there is presumably no way to undo that now that the remedy has been implemented without great expense and potential to disrupt current tenant operations." EPA disagrees that a groundwater remedy cannot be implemented at developed areas of SPF. As explained above, EPA has prioritized soils remediation and institutional controls because of the immediate risks posed from development, but it continues to work to propose a comprehensive Facility-wide remedy for groundwater. EPA would not be working to develop this Facility-wide remedy if it were true that groundwater remediation was precluded by development. Any development TPA has undertaken at SPF has been done with the understanding that corrective action obligations, including groundwater remediation, must be satisfied pursuant to the SA. Any development taking place the Facility does not excuse these obligations under the SA.

III. Request for Public Hearing

CBF and BWB requested "a public hearing on EPA's proposed action, including but not limited to all the issues raised in the preceding comments" and noted that, given the circumstances of COVID-19, such a hearing could be conducted virtually.

EPA's Response:

CBF and BWB withdrew their request for a public hearing on June 15, 2020. Once EPA has completed groundwater data collection and has evaluated the data, EPA will hold a public meeting during which it will provide the public with comprehensive compilation of groundwater information, including groundwater data and maps, which will identify data gaps, identify where long-term groundwater monitoring may be needed, and support the development of corrective action objectives for proposed groundwater remedy(s). EPA anticipates holding this public

meeting by September 15, 2020. In addition to that public meeting, EPA plans to hold a public hearing as part of the public comment process after EPA issues a Statement of Basis describing its proposed remedy for Facility-wide groundwater.