

Public Informational Meeting on the Former Sparrows Point Steel Mill Environmental Cleanup



April 25, 2018



Maryland
Department of
the Environment

Site Investigation Status from June 16, 2017 to April 19, 2018



Phase II Work Plans Submitted Since June 2017

The Agencies have received the Phase II Work Plans with proposed soil, groundwater and soil gas sampling points based on the location of potential releases from historical processes conducted at that parcel and sufficient additional sampling locations to provide coverage of the entire parcel. The Agencies have approved or are currently reviewing these work plans.

Phase II Work Plans Submitted:

Area A Parcels:

A-5, A-9, Grey's Rail yard (Approved)
A-7 (Approved)

Area B Parcels:

B5-2 Phase II Addendum (Approved)
B7 (Under Review)
B-14 (Humphrey's Impoundment) (Approved)
B-17 (Approved)
B-18-Ground Water Investigation Addendum (Under Review)
B-21 (Former Tin Mill) (Under Review)





Human Health Screening Level Risk Assessment (SLRA)



Populations based on Land Usage:

Industrial-Composite Worker and Construction Worker

Commercial-Composite Work, Construction Worker, Youth Visitor and Child Visitor

Identify Exposure Units

Buildings/Parking Lots/Open Space etc.

Identify Constituents of Potential Concern (COPCs)

(above USEPA RSLs set at target cancer risk of $1E-6$ or non-cancer Hazard Quotient of 0.1)

Exposure Point Concentrations

Statistical Analysis of Surface (0-1 foot), Subsurface (greater than 1 foot depth) and Pooled

Evaluation of Risk Ratio's as Compared to Cancer Risk of $1E-5$ and Non-Cancer HQ of 1

Assess Lead and Petroleum Contaminants

Response and Development Work Plans



Received for Parcels:
A-1, A-3, A8-1, B4-1, B2-1, B5-1,
B6-1, B6-2, B-15, B19-1 and B22

The evaluation of risks and development of remedial measures as part of the redevelopment process relies on the information collected from site-wide studies conducted over 20 years and current soil and groundwater samples collected under the ACO procedure for Parcels or Portions of Parcels.

This process ensures that redevelopment occurs in a way that protects human health and the environment.

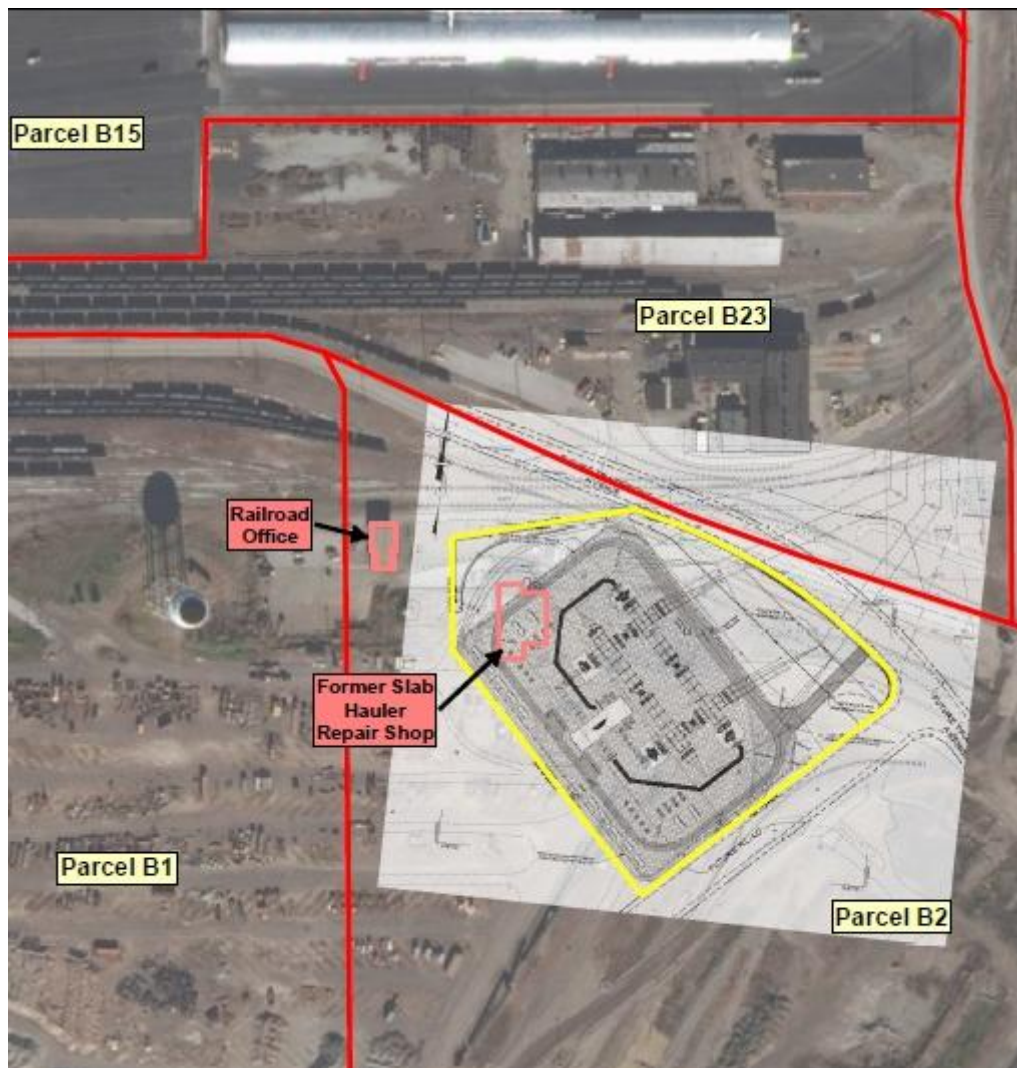
Response and Development Work Plans

Based upon the results of the Development Area Specific Risk Assessment and Depending on the Parcel Conditions and Proposed Development Configuration Each Development Work Plan May Include Procedures for:

- Delineation and Removal of Contaminated Soil
- Installation of Sediment and Erosion Controls
- Monitoring well abandonment
- Grading and site preparation
- Light Standard Pier Installation
- Installation of underground utilities
- Landscaping
- Asphalt Paving
- Security and Lighting
- Storm Water Management
- Dust control
- Soil Management
- Dewatering
- Health and Safety
- Long Term Maintenance



Response and Development Work Plan Parcel B2-1

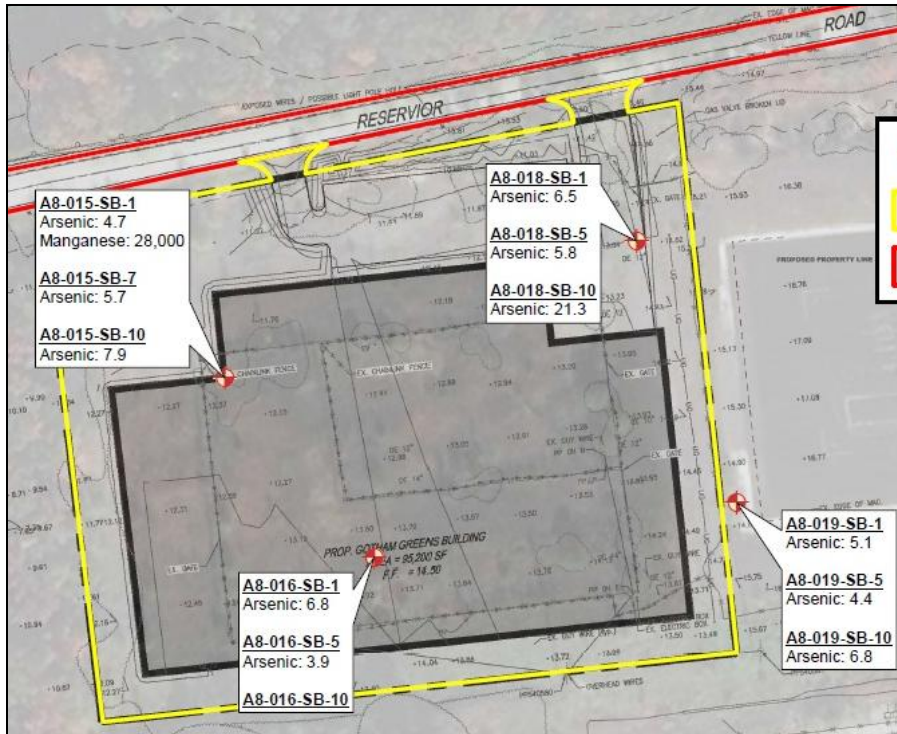


Plan Dated March 14, 2018
Approximately 7.2 Acres Total

Proposed Development of Electrical
Sub-Station

Additional Sampling Requested

Response and Development Work Plan Parcel A8-1



Site Specific SLRA Indicates Site will not Require an Environmental Cap

RDWP Details:

Construction Duration

Description of Site Work

Soil and Ground Water Management

Contingencies

Development Exposure Unit			
Worker Scenario	Medium	Hazard Index (>1)	Total Cancer Risk
Composite Worker	Soil (Maximum Values)	none	7E-6

Development Exposure Unit			
Worker Scenario	Medium	Hazard Index (>1)	Total Cancer Risk
Construction Worker (45 work day schedule)	Soil (Maximum Values)	none	3E-7

Parcel B6-2 was evaluated for Commercial Land Use

50.5 Acres

Tin Mill Canal Splits Parcel B6-2 into Northern and Southern Sections

One Development Plan for Site Wide Grading

SLRA Indicates Capping Required for Entire Parcel

Plans for Individual Retail Lots as Developed will include Capping Plans





52 Samples from 26 Soil Borings plus data from B6-063-SB, B6-066-SB, and B6-082-SB located in close proximity to the site.

Contaminants exceeding initial screening levels included metals (arsenic, manganese, thallium, vanadium, and lead), one SVOC (benzo[a]pyrene), total PCBs, and Diesel Range Organics (DRO).



A total of 13 groundwater samples were collected from temporary groundwater sample collection points (commonly referred to as piezometers) and permanent monitoring wells within Sub-Parcel B6-2. Of these 13 groundwater sample points, 10 samples were collected from the shallow hydrogeologic zone.

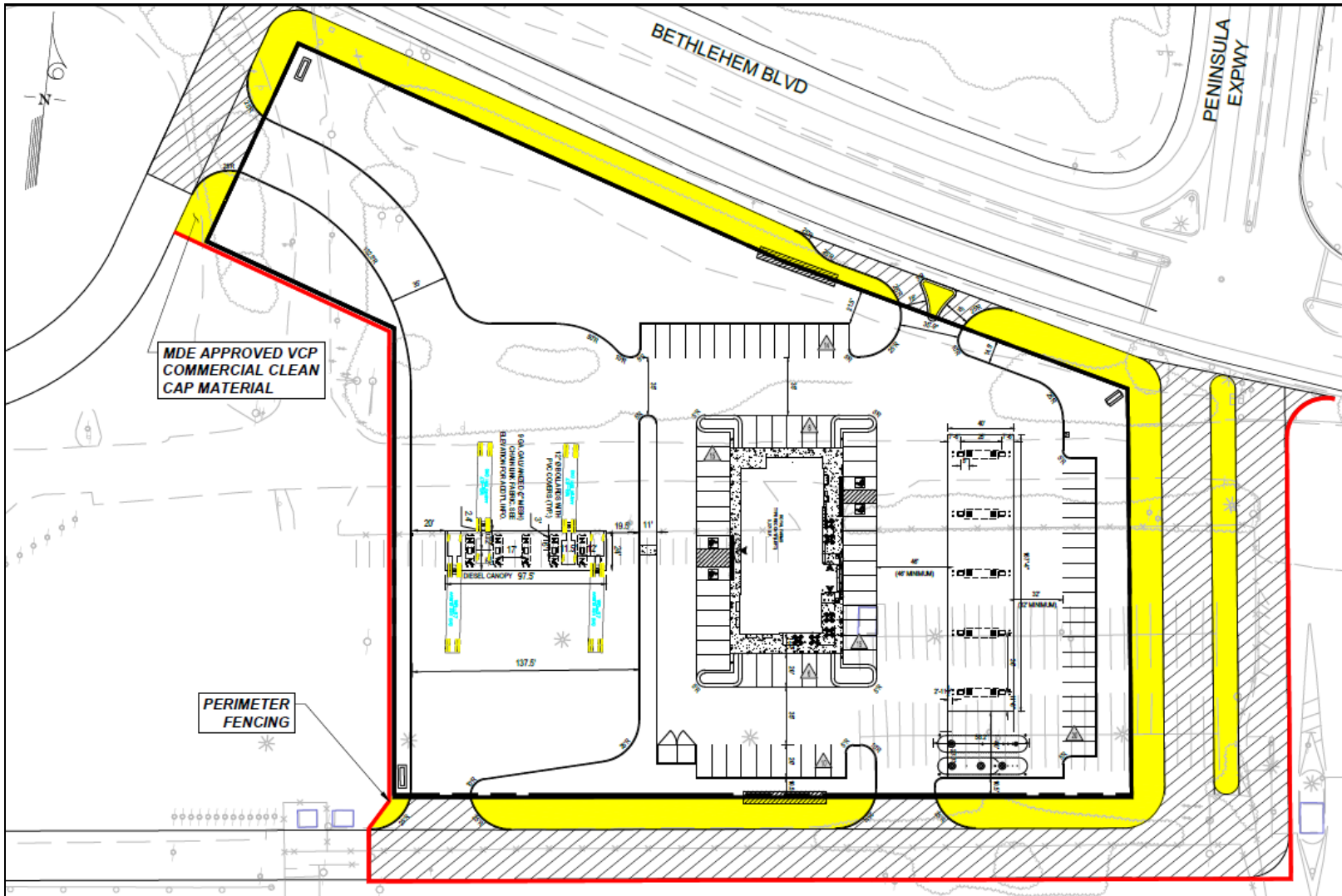
Groundwater initial screening level exceedances in the vicinity of the Site consisted of nine inorganic compounds (arsenic, chromium, cobalt, iron, lead, manganese, nickel, thallium, and vanadium), three SVOCs (benz[a]anthracene, naphthalene, and pentachlorophenol), and DRO.



“The Site will be raised with net fill. Since the Site will require imported fill material, there is not expected to be a significant amount of excavated material (if any) which will need to be disposed of off-site. According to the design engineer, on-site grading will involve the excavation (cut) of approximately 47,200 cubic yards of material and the placement (fill) of approximately 321,140 cubic yards of material.”

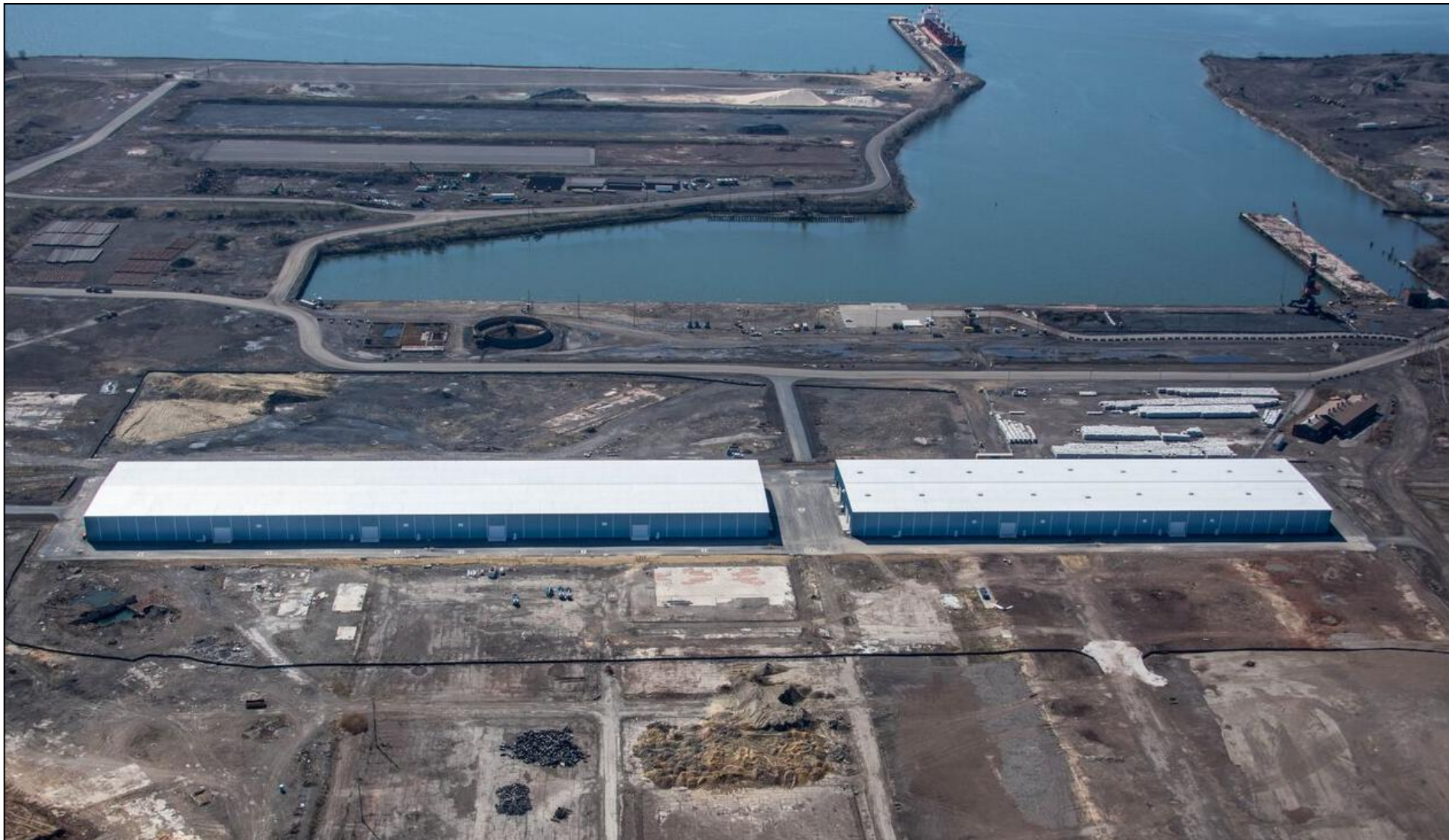


Parcel B6-2 Current Conditions



First Retail Tenant-Site Layout

Response and Development Work Plan Parcel B5-1





Response and Development Work Plan Parcel B6-1 and Parcel B22



Photo credit Kyle Donaldson Tradeport Atlantic

Demolition Former Administrative Building



Demolition Former Penwood Power Plant



Grey's Landfill



Grey's Landfill is nearing full capacity and final elevation of 141 feet above sea level. A closure plan is anticipated to be submitted late this year or early next year



For Additional Information From MDE

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Visit the MDE Website!

<http://www.mde.maryland.gov>

EPA Status Update

Rod & Wire Mill Interim Measure

Coke Oven Area Interim Measure

Sitewide Groundwater Investigation &
Remedy Selection

Former IM – Groundwater Extraction

Current IM – Interception Trenches



Interim Measures Parcel A3 Rod and Wire Mill



1. This map was prepared by the Maryland Department of the Environment, Office of the Chief Engineer, Division of Water Management, in cooperation with the United States Environmental Protection Agency, Office of Research and Development, under the terms of a contract awarded to the State of Maryland. The map is the property of the State of Maryland and is loaned to the United States Environmental Protection Agency for its use. It is not to be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of the Maryland Department of the Environment.

Interim Measures Coke Oven Area



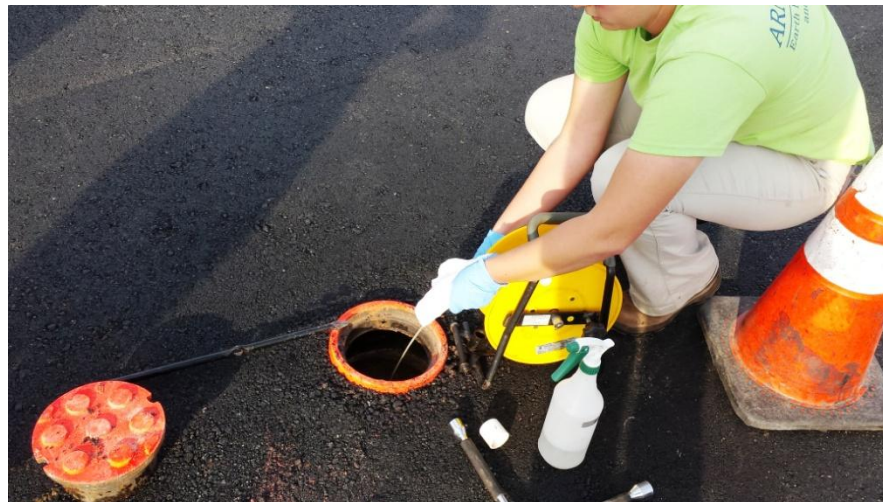
Coke Oven Area Remediation Cells

Groundwater Extraction, Free Product Recovery, Dual-phase Extraction

Site Wide Groundwater Study

Groundwater Study Objectives and Goals:

- Complete EPA's Groundwater Environmental Indicator form (CA750) in 2017 and identify the status of the EI regarding Migration of Contaminated Groundwater (Y,N or I);
- Propose a Conceptual Site Model for Groundwater Flow and Contaminant Migration;
- Characterize Groundwater Usage and
- Select Correct Action Objectives for Appropriate Usage of Groundwater.



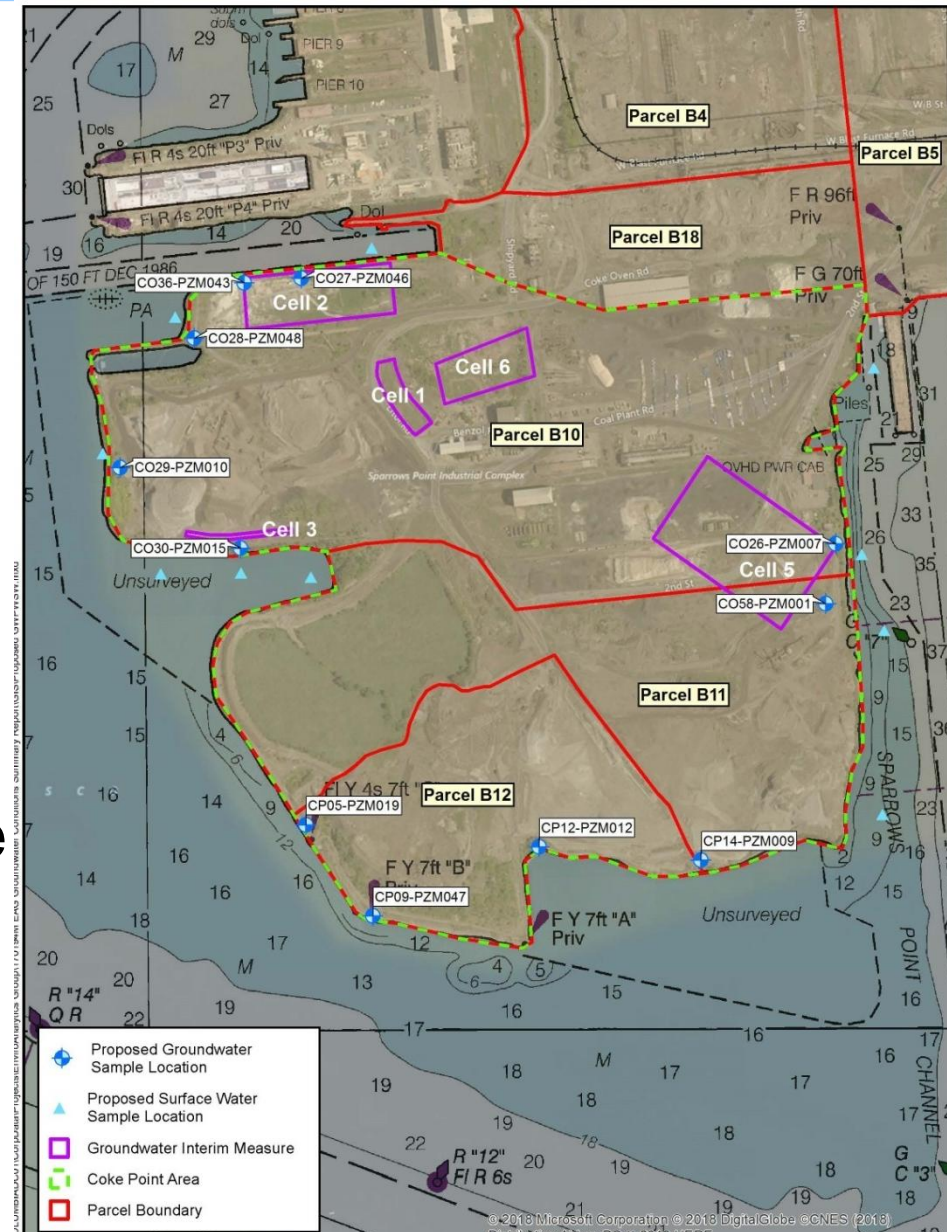


Site Wide Groundwater Study



- Groundwater sampled during parcel investigation: A1, A2, A3, A4, A7, A8 and A11.
- Facility-wide B parcel groundwater investigation (2015-2016). Finishing Mill (B22) and Tin Mill Canal (B16) groundwater sampled.
- Routine groundwater monitoring Grey's Landfill and COA.
- Conclusions: randomly elevated constituents identified across the site, predominantly
 - Diesel Range Organics
 - Iron
 - Manganese
 - Benzene
 - Naphthalene
 - Cyanide
- No additional contaminant plumes based on locations of existing wells

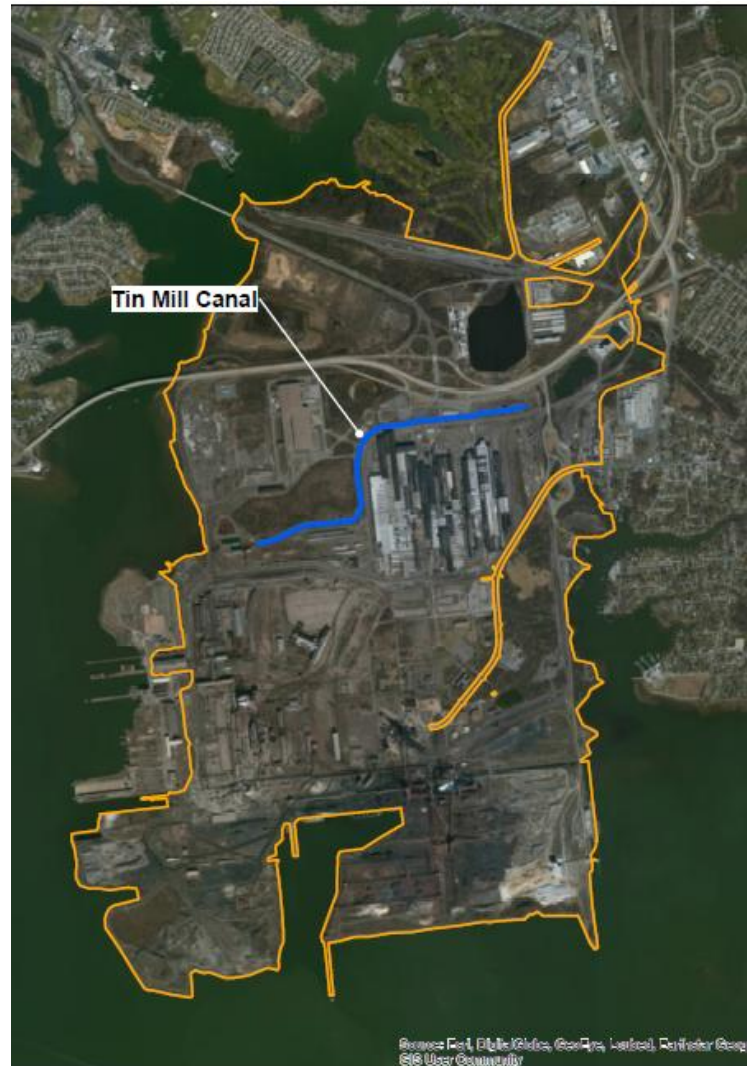
- Are COCs present in the groundwater at concentrations posing a threat to sediment?
- Are groundwater discharges adversely affecting off-shore?
- What areas of Coke Point could be affecting off-shore?
- Is off-shore data necessary to determine remedial objectives?
- Are current remedies effective at reducing or eliminating COCs to surface water?



- Atlantic Coastal Plain aquifer system
- Sparrows Point peninsula
- Almost 50% fill, much of it man-made (slag)
- Elevated Total Dissolved Solids
- Elevated pH
- Elevated iron & manganese



Tin Mill Canal Presentation by TPA



Site Map - Location of Tin Mill Canal