

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

September 10, 2020

## Please read these **GROUND RULES** before we get started

**Please mute yourself** during speaker presentations.

**Please turn off your webcam** during speaker presentations.

If you encounter **technical difficulties** during the webinar, call the conference line to listen in.

**Questions (Q&A)** will be taken after all presentations have concluded.

**Questions** will be taken in the following order during the **designated Q&A** period:

1. 'Chat' box
  - Type your question into the Chat area.
2. Identified speakers in 'Chat' box
  - If you prefer to speak, indicate in the 'Chat' box .
3. Telephone participants
  - For telephone participants, use \* 6 to unmute during **designated Q&A** – one person at a time.

# Presentation Agenda

- Site Investigation Status – MDE
- RCRA Corrective Action Process – EPA
- Sparrows Point Groundwater – TPA
- Path to a Groundwater Remedy – EPA

# Site Investigation Status

MDE update



## Site Investigation Status August 2020



## Phase II Work Plans Submitted Since September 2019

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 these work plans.

Phase II Work Plans Submitted  
And Approved:

Area A Parcels:  
A18

Area B Parcels:  
B9 (Former Penwood Power Plant)  
B11 (Coke Oven Area)  
B20 (LaFarge)  
B24 (Waste Water Treatment Plant)



## Phase II Reports Submitted Since September 2019

The Agencies have reviewed the Phase II Work Plans, conducted site visits and requested revisions, if necessary. Upon approval of the Phase II Work Plan, field work can begin at the Parcel. Once the field work is completed and the data is validated the Phase II Report summarizing the sample results and initial risk screening is submitted to the Agencies for review.

### Area A Parcels:

A2 (Approved)

A4 (Approved)

A6 (Approved)

A5, A9, A13 (Grey's Rail yard)

A9 will require additional characterization

A11, Rev 1 (Pending response to comments)

### Area B Parcels:

B18 (Pending response to comments)

B21

B23 (Pending response to comments)

## Response and Development Work Plans

### Received and Approved for Parcels:

A3-1 Addendum (new building addition)  
A8-1 Addendum (Gotham Greens)  
B1-1 Addendum (Volkswagen)  
B2-1 Addendum (BGE Substation)  
B2-3  
B5-1 Addendum (A-Yard)  
B6-2 (Royal Farms Retail Area)  
B6-3

### Submitted and Reviewed Pending Revision:

A8-2  
A10-1

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.

Any changes to an approved RDWP must be submitted in a RDWP Addendum to be reviewed and approved by the Department.



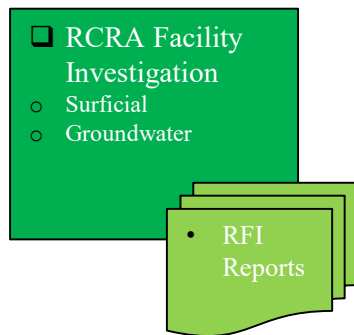
# Response and Development Completion Reports B4-1, B19-1 and B22-Phase 1



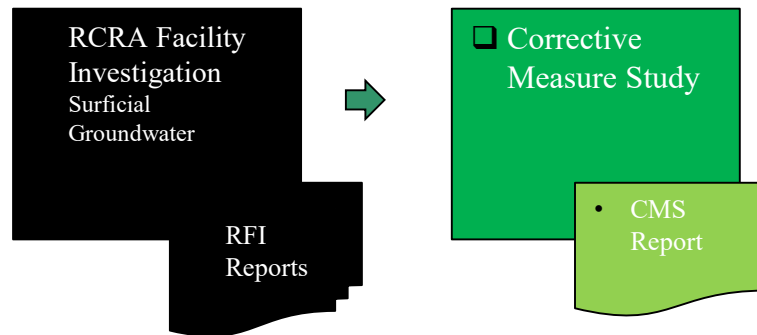
# RCRA Corrective Action Process

- The Elements of the CA Process:
  - Site Assessment/Characterization
  - Remedy Evaluations
  - Remedy Decision
  - Remedy Implementation
  - Interim Actions
- A flexible program

# Site Characterization



# Remedy Evaluation

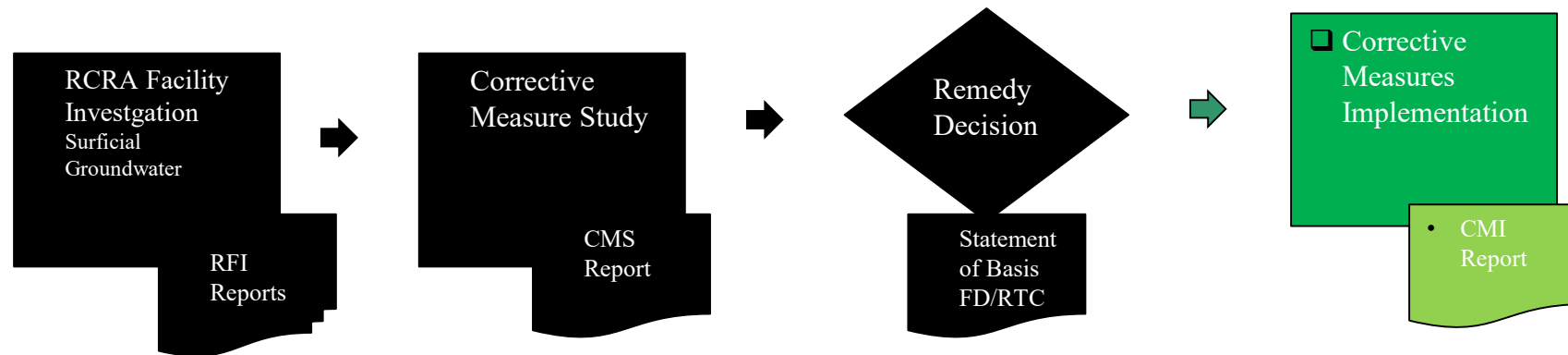




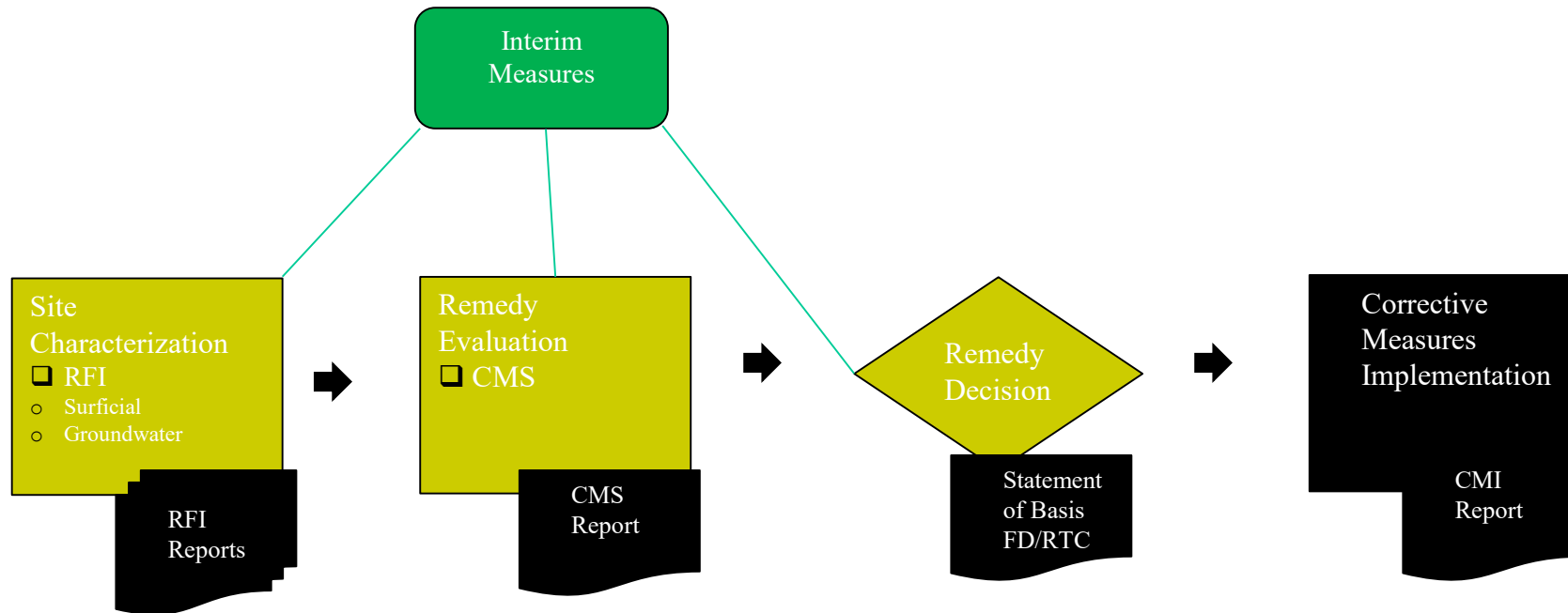
# Remedy Decision



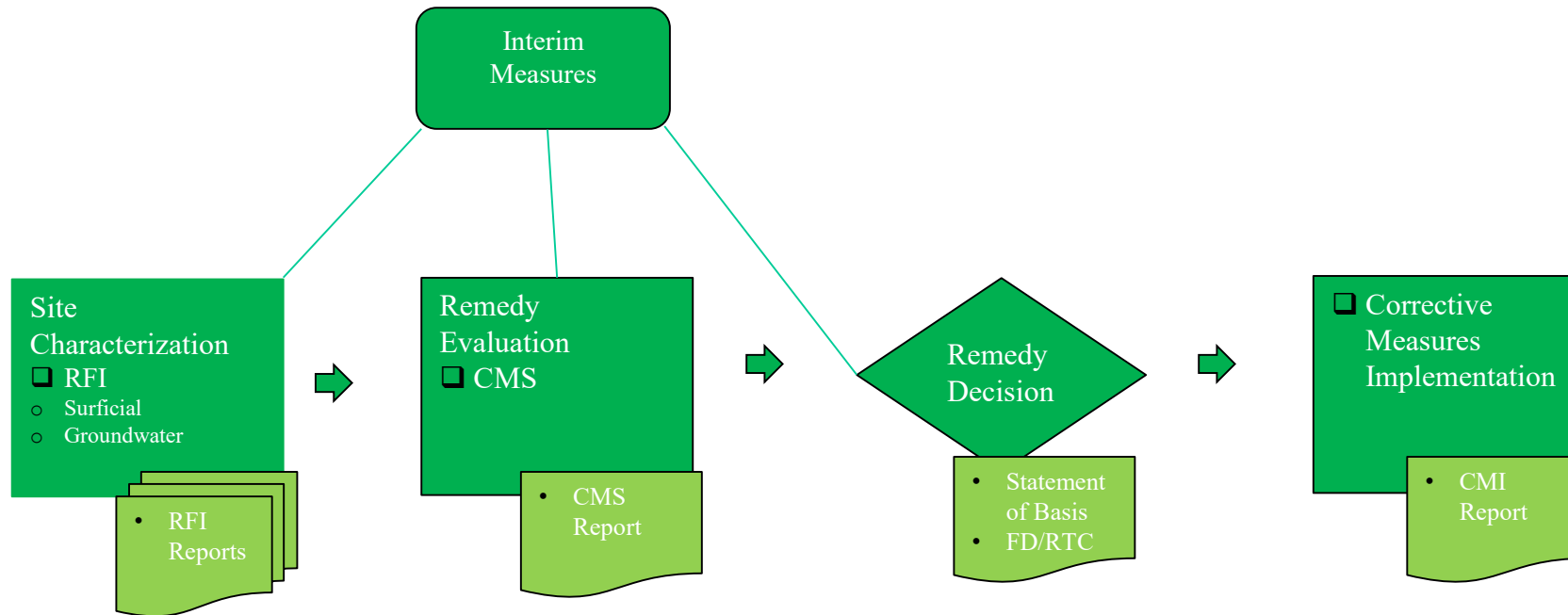
# Remedy Implementation



# Interim Actions



# The Process



# Long Term Care

- Long-Term Protection
  - Protects integrity of remedy
  - Prevents/Limits exposure
- Institutional Controls

# RCRA Corrective Action Process at Sparrows Point

- **Remedy** decisions for individual parcels
- Groundwater interim measures for:
  - Coke Oven Area
  - Rod & Wire Mill
  - NAPL anywhere on site
- Remedy decision for groundwater

Tradepoint Atlantic Site

# Site-Wide Groundwater Cleanup

# Site History



# Site Progression

## 2018 Aerial View Site Features



# Groundwater Investigation

# Site-wide Groundwater Sampling

- 1,143 wells installed
- 3,919 groundwater samples collected



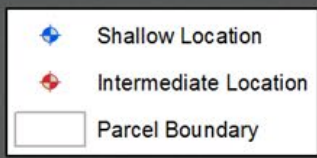




# Rod and Wire Mill Area Groundwater

Shallow &  
Intermediate Zone

- ◆ Shallow Location
- ◆ Intermediate Location
- ▭ Parcel Boundary



# Coke Point Area Groundwater

Shallow &  
Intermediate Zone



# Findings



# Shallow Groundwater

## Benzene Isoconcentration Map



# Shallow Groundwater

## Naphthalene Isoconcentration Map





# Shallow Groundwater

## NAPL Status Map



# Shallow Groundwater

## Zinc Isoconcentration Map

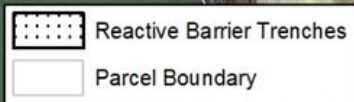


# Response Actions





Rod and  
Wire Mill  
Reactive  
Barrier





Section of  
trench  
backfilled with  
the reagent  
blend up to  
the top of the  
water table



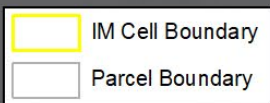
## Rod and Wire Mill Reactive Barrier



Backfilling a  
section of  
trench with  
the reagent  
mixture using  
a dump truck



# Coke Oven Area Interim Measures



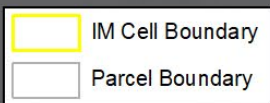




Coke Oven  
Area Cell 1



# Coke Oven Area Interim Measures





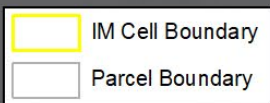


## Coke Oven Area Cell 2





# Coke Oven Area Interim Measures



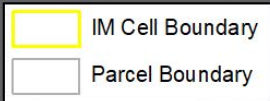




Coke Oven  
Area Cell 3



# Coke Oven Area Interim Measures



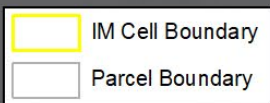




Coke Oven  
Area Cell 5



# Coke Oven Area Interim Measures

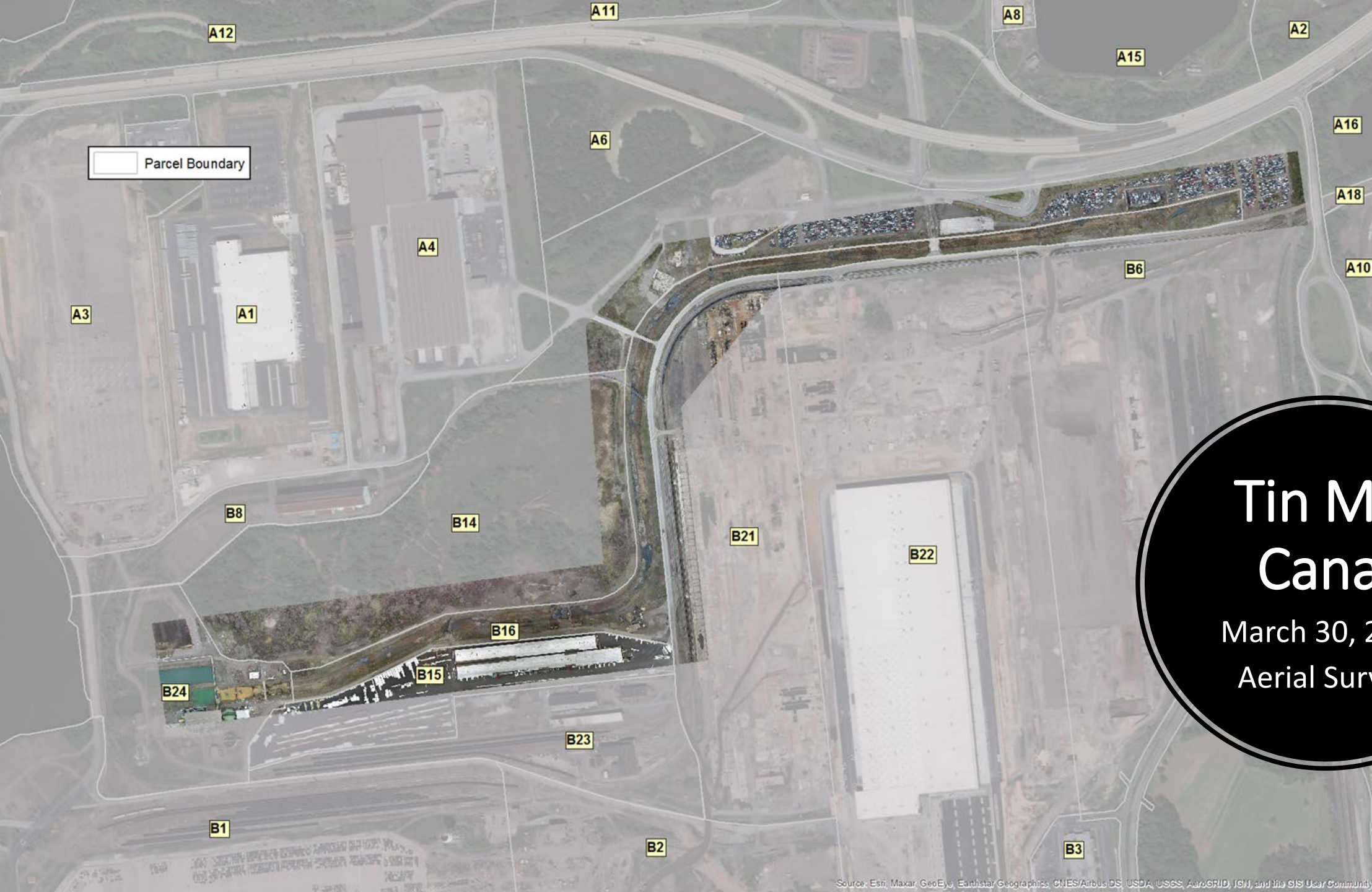






Coke Oven  
Area Cell 6

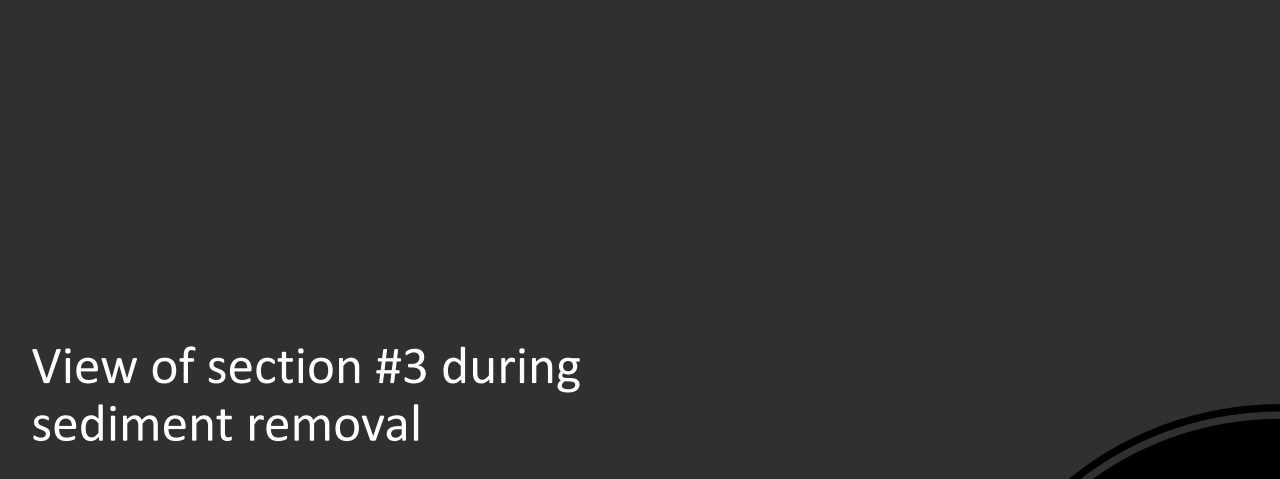




# Tin Mill Canal

March 30, 2017  
Aerial Survey





View of section #3 during  
sediment removal



Tin Mill  
Canal  
Restoration



View of section #5 during  
sediment removal





# Tin Mill Canal

August 28, 2019  
Aerial Survey





View of the completed  
section #5

## Tin Mill Canal Restoration



View of the completed  
section #3



# Active Monitoring

- Monthly or Quarterly NAPL Gauging
- Quarterly COA Interim Measures
- Quarterly RWM Interim Measures
- Semi-Annual Landfill Wells



# Path to a Groundwater Remedy

- Cleanup Objectives
  - Coke Point Area
  - Rod & Wire Mill
  - Site-wide Groundwater
- Remedy Selection & Implementation

# Cleanup Objectives

- Also called Corrective Action Objectives
- What, where, when
  - Cleanup levels or performance measures
  - Location where cleanup levels apply
  - Time frame to achieve (short-term, intermediate, final cleanup goals)

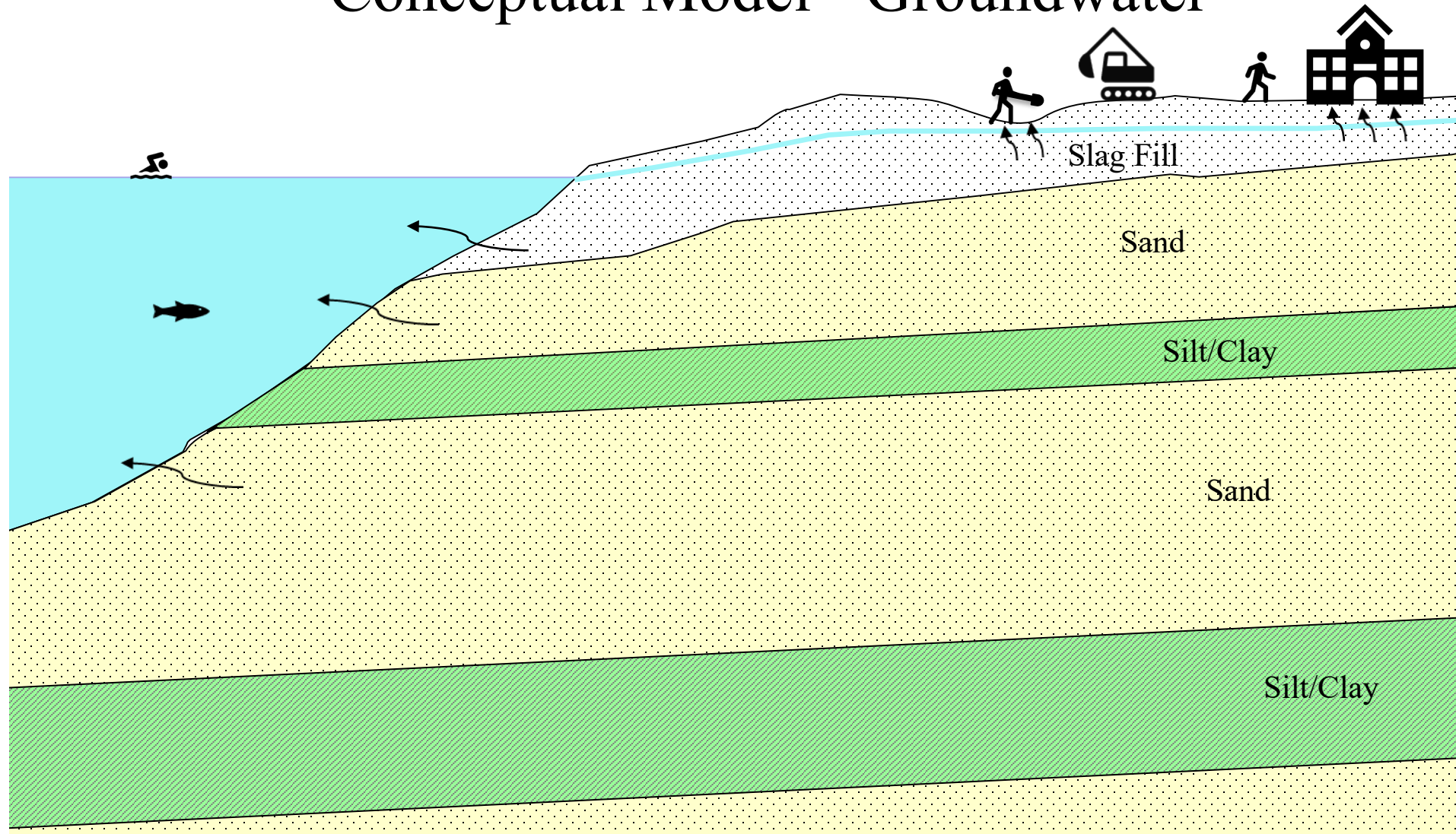
# Cleanup Levels

- Based on:
  - Who (or what) exposed
  - Type and duration of exposure
  - Chemicals in groundwater
  - Properties of the chemicals

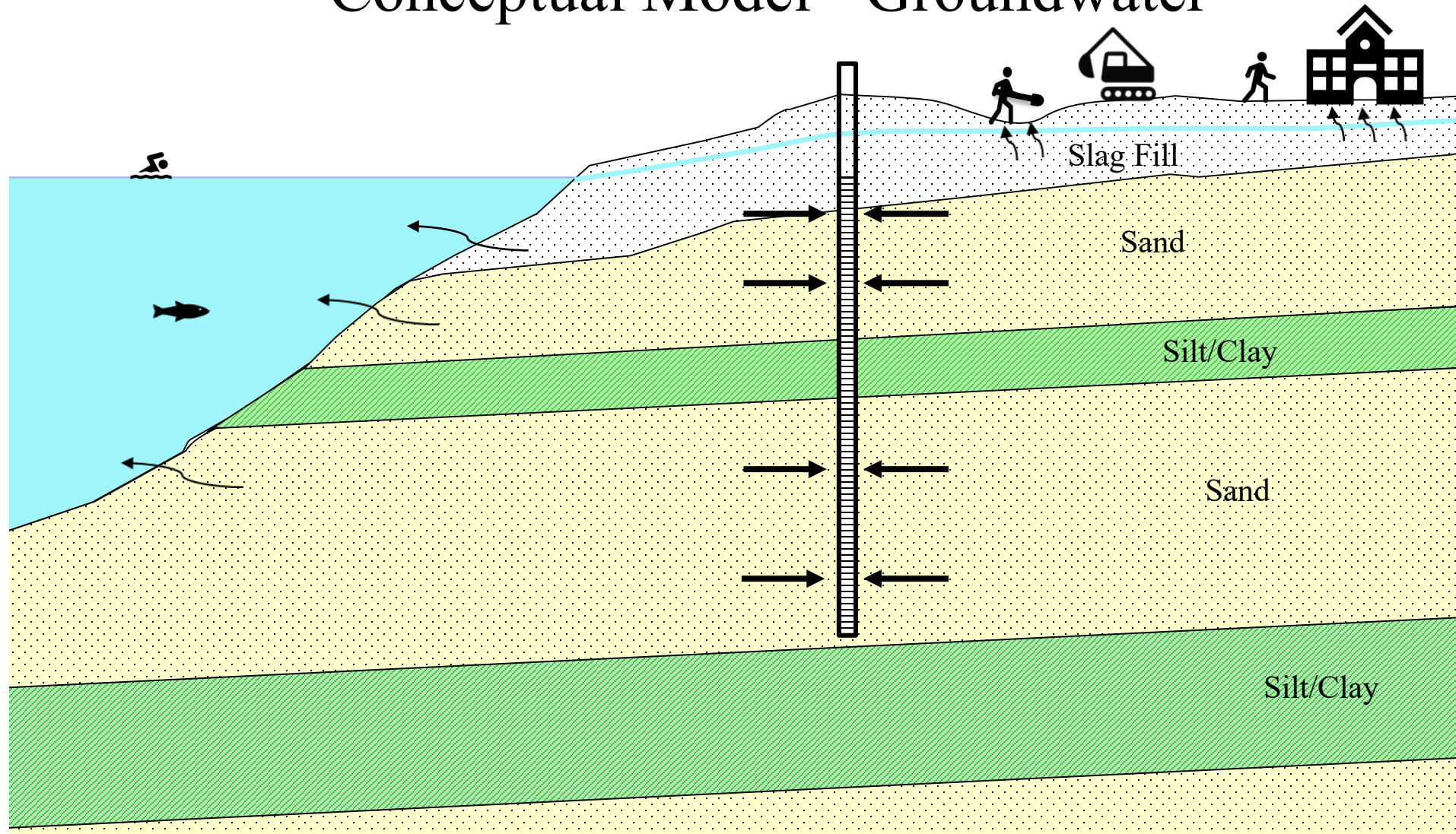
# How do we develop cleanup objectives?



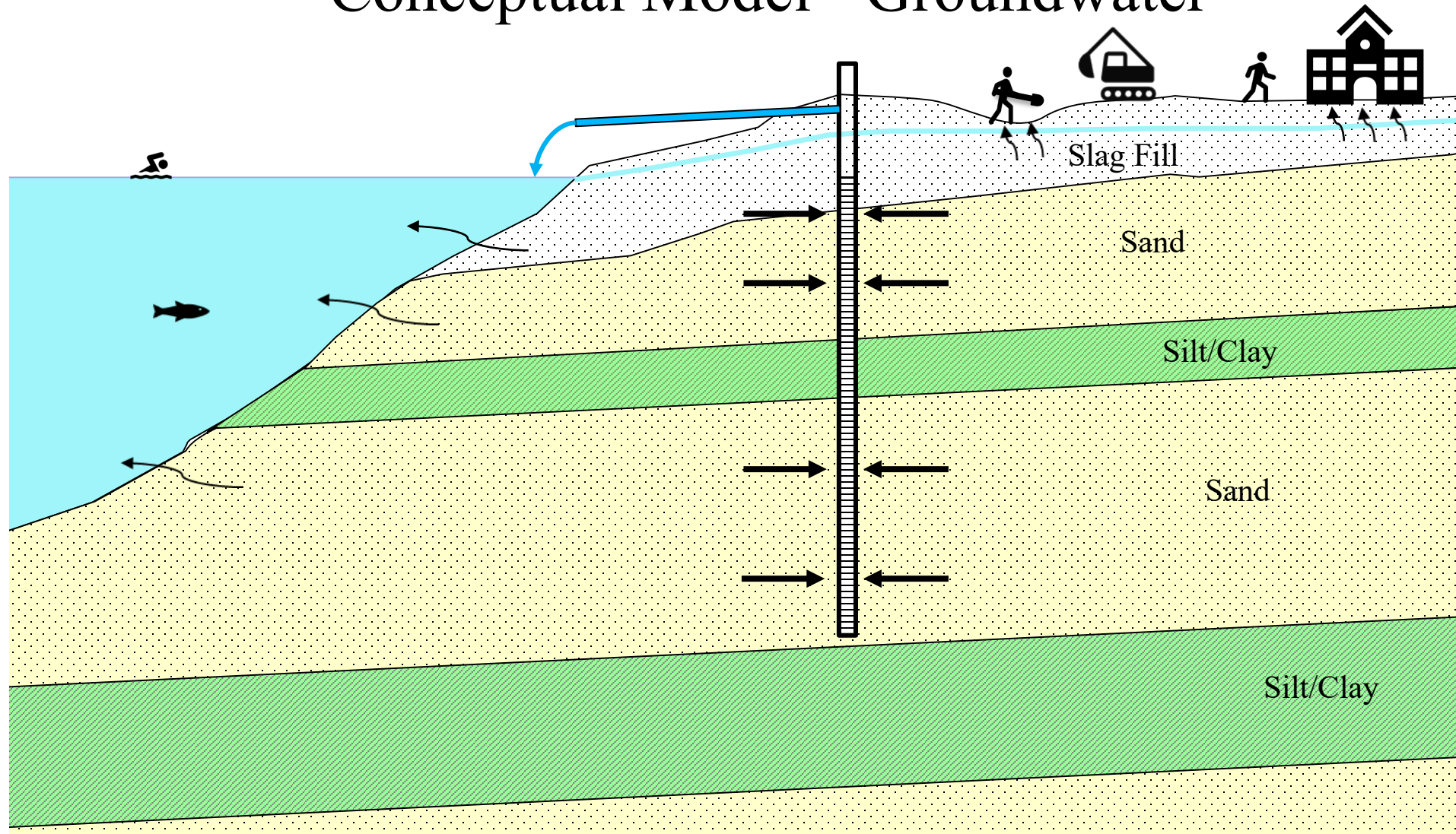
# Conceptual Model - Groundwater



## Conceptual Model - Groundwater



## Conceptual Model - Groundwater





# Groundwater Remedy Components

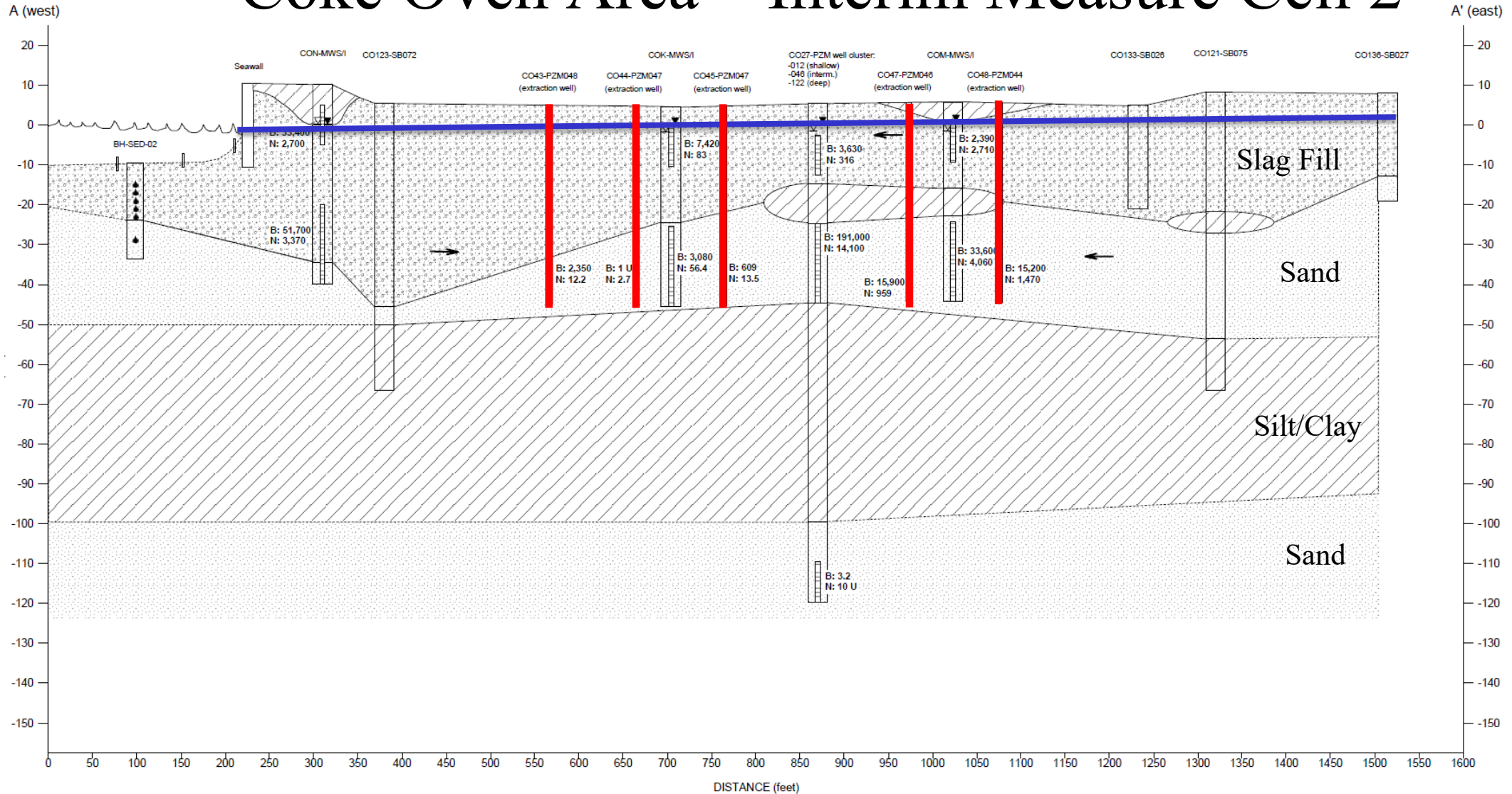
(institutional & engineering control examples)

- Control use
- Prevent exposure
- Manage exposure
- Control groundwater migration & discharge
- Control/mitigate sources
- Groundwater treatment
- Natural attenuation
- Long-term monitoring

## Site Investigation Status August 2020



# Coke Oven Area – Interim Measure Cell 2





# Groundwater Remedy Selection

- Currently have Groundwater CMS work plans for:
  - Rod & Wire Mill
  - Coke Point
- Currently developing CMS work plan for site-wide groundwater
- Once approved, CMS conducted & report issued
- EPA prepares Statement of Basis
- Public Comment Period
- EPA issues Final Decision and Response to Comments

# Remedy Selection Criteria

## Threshold Criteria

- Protect human health & environment
- Achieve media cleanup objectives
- Control sources of release

## Balancing Criteria

- Long-term reliability and effectiveness
- Reduction of toxicity, mobility, or volume
- Short-term effectiveness
- Implementability
- Cost
- Community acceptance
- State acceptance

# Thank You