

# LANGAN

**Former Elementis  
Pigments Facility  
1525 Wood Avenue  
Easton PA**

**PADEP Northeast Regional Office,  
EPA Region III**



Technical Excellence  
Practical Experience  
Client Responsiveness

**03 September 2025**



# SITE BACKGROUND & HISTORY



- 114-acre industrial site, Wood Avenue, Easton, Northampton County, PA
- 1876: Commenced operations by C.K Williams Company processing locally mined ore
- 1940s: Start using pickle liquor and scrap steel to produce synthetic iron oxides
- Processes onsite included iron oxide, magnetic iron oxide, black oxide and contact sulfuric acid manufacturing
- 1998: Elementis Pigments purchase- continued manufacture of iron oxide pigments
- 2021: Abruzzi Trust purchase – current owner
- 2018-Present: All buildings demolished
- Residential, light industrial/commercial surrounding land use

# PROJECT BACKGROUND, REGULATORY FRAMEWORK

## PADEP and EPA One Clean-up Program - MOA

### RCRA - USEPA

- 1990 - RCRA Facility Assessment
  - 44 Solid Waste Management Units (SWMUs) Identified
  - WWTP, pickle liquor tanks, loading areas, iron oxide waste areas, oil/water separator, drum storage, and other waste storage areas
  - Pickle liquor no longer considered a hazardous waste
- 2003 – RCRA Indicator Reports
  - a) Groundwater and Soil Impacts
  - b) Surface Water and Sediment in Spring Brook
  - c) Complete Pathways for Human Exposure
  - d) Current Human Exposures Controlled
- 2014 – WWTP Closure, 2020 Demolition

### PADEP Investigations and Remediation

- Former USTs/ASTs – Removed, Investigated, Closed – PADEP eFACTs
- PADEP Act 2 GW Attainment Area – 2007



# ENVIRONMENTAL HISTORY - DOCUMENTS

1989 – Hydrogeologic Assessment and RCRA Corrective Action Assessment for the Acid Plant Area

1990 – RCRA Phase II Facility Assessment

1999, 2007 and 2018 Phase I Environmental Site Assessments

2002 and 2003 RCRA Environmental Indicator Reports

2002, 2003, 2010 and 2020 Select PADEP Tank Characterization, Remedial Action and Closure Reports

2006-2007 Pennsylvania Final Act 2 Report & Addenda for Groundwater with PADEP approval

2008 Limited Site Investigation Report (soil, sediment, groundwater)

2014 – Wastewater Pond Closure Summary

2024 – PADEP Notice of Intent to Remediate, Site-Wide

2024 – PADEP Remedial Investigation, Risk Assessment, Clean-up Plan Submittal, with PADEP approval

2025 – EPA RCRA Input on Clean-up Plan

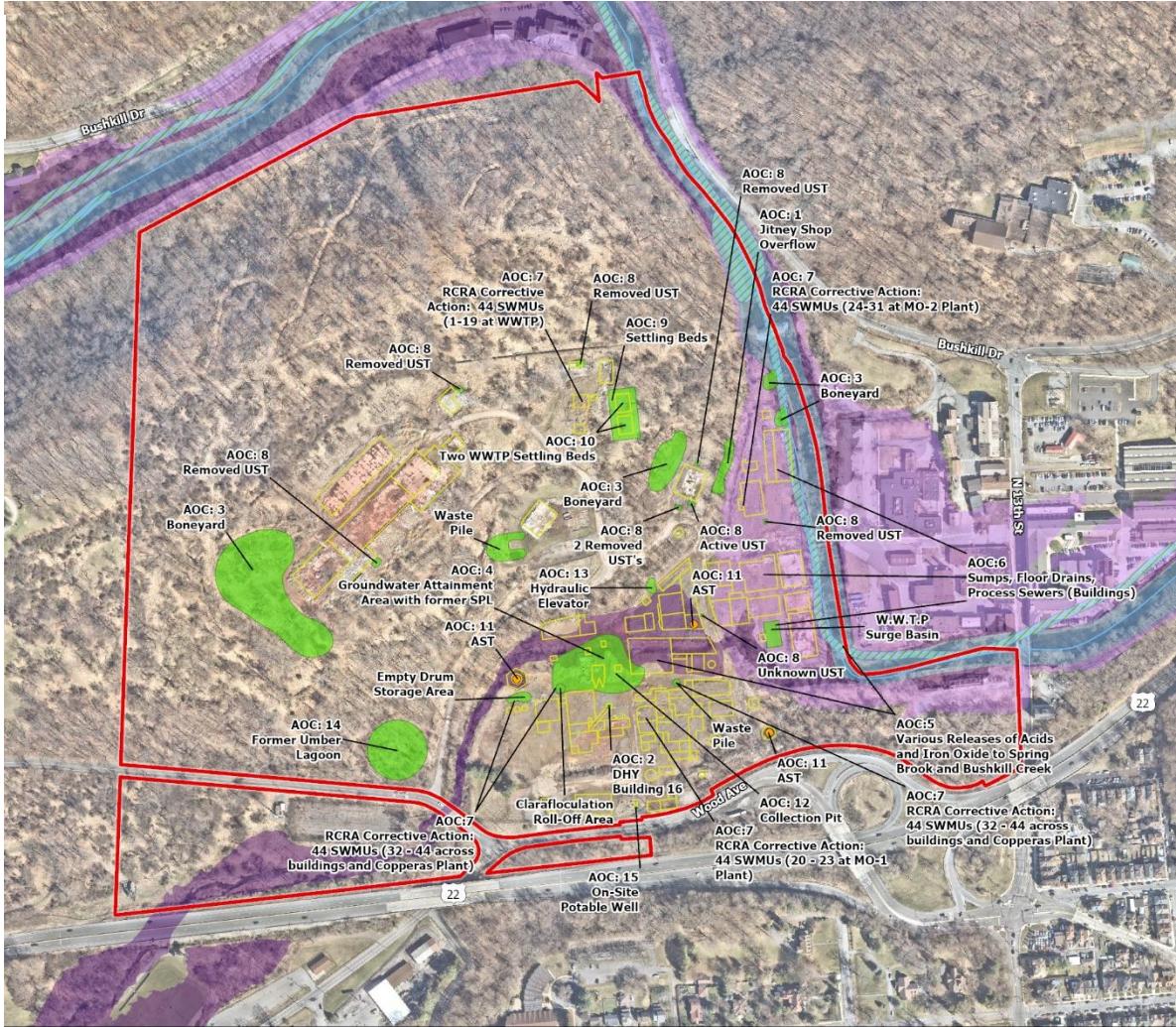
# ENVIRONMENTAL HISTORY

|               |   |
|---------------|---|
| <b>AOC-1</b>  | Wast Oil Tank, Jitney Shop, Building 118, Discharge to Drainage Swale       |
| <b>AOC-2</b>  | DHY Building 16, Rainwater in Circuit Breaker Room                          |
| <b>AOC-3</b>  | Boneyard, west of Finishing Plant Tank Farm (Building 125)                  |
| <b>AOC-4</b>  | Groundwater Contamination with SPL  |
| <b>AOC-5</b>  | Various releases of acids and iron oxide to Spring Brook and Bushkill Creek |
| <b>AOC-6</b>  | Sumps, Floor Drains, Process Sewers   |
| <b>AOC-7</b>  | RCRA Corrective Action - 44 SWMU and 1 AOC                                  |
| <b>AOC-8</b>  | USTs  |
| <b>AOC-9</b>  | Settling Beds   |
| <b>AOC-10</b> | Wastewater Treatment Plant Settling Beds                                    |
| <b>AOC-11</b> | ASTs  |
| <b>AOC-12</b> | Collection Pit, breaches due to corrosion                                   |
| <b>AOC-13</b> | Hydraulic Elevators (2), may contain PCBs                                   |
| <b>AOC-14</b> | Former Umber Lagoons  |
| <b>AOC-15</b> | On-Site potable well  |

## Legend

- Legend:

  - Fuel Oil Tank
  - Former Building or Site Feature
  - Site Boundary
  - NHD Stream
  - Area of Concern
  - NWI Wetland
  - 1% Annual Chance Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Regulatory Floodway

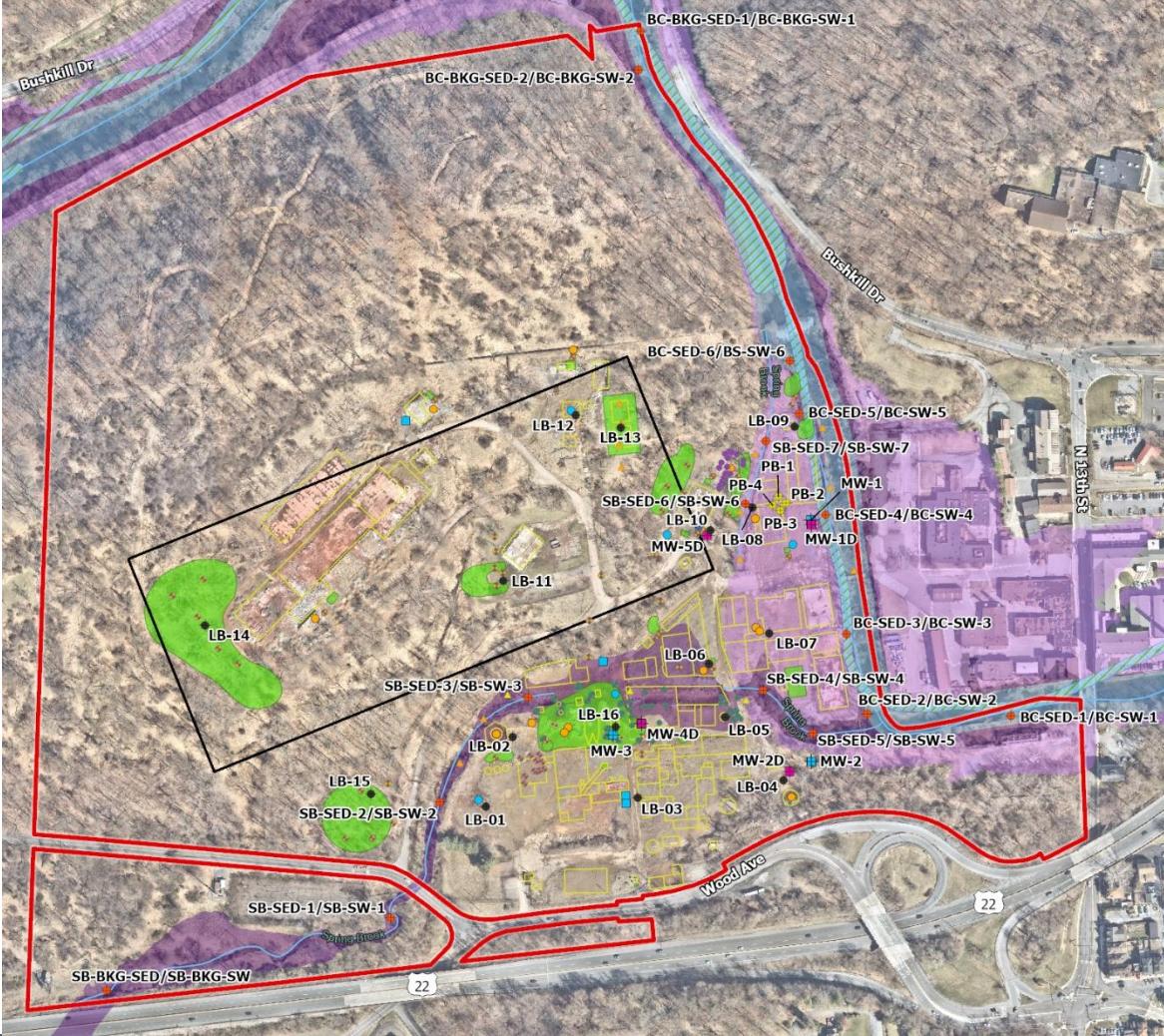


# ENVIRONMENTAL INVESTIGATIONS

## Legend

- Legend:

  - Langan Overburden Monitoring Well Location
  - Langan Bedrock Monitoring Well Location
  - Langan Sediment and Surface Water Sample Location
  - Langan Soil Boring Location
  - Langan Fire Incident Investigation Soil Boring Location
  - EarthTech 2001 - Formerly Installed Piezometer
  - Roux Associates, Inc. 2005 - Formerly Installed Piezometer
  - Synergy Environmental, Inc. 2020 - Soil Sample Location
  - MT Environmental Technologies, Inc. 2010 - Soil Sample Location
  - Delta 2008 - Soil Sample Location
  - Delta 2008 - Sediment Sample Location
  - Delta 2008 - Waste Pile Sample Location
  - EarthRes Group, Inc. 2003 - Soil Sample Location
  - EarthTech 2001 - Soil Sample Location
  - Delta 2008 - Temporary Monitoring Well Location
  - Roux Associates, Inc. 2005 - Monitoring Well Location
  - Roux Associates, Inc. 2005 - Microwell Location
  - Roux Associates, Inc. 2005 - Spring Brook Guaging Point Location
  - EarthTech 2001 - Overburden Monitoring Well Location
  - EarthTech 2001 - Bedrock Monitoring Well Location
  - Front Load Container
  - Fuel Oil Tank
  - Waste Container
  - Site Boundary
  - New Building Outline
  - Former Building or Site Feature
  - Area of Concern
  - Stream
  - NWI Wetland
  - 1% Annual Chance Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Regulatory Floodway



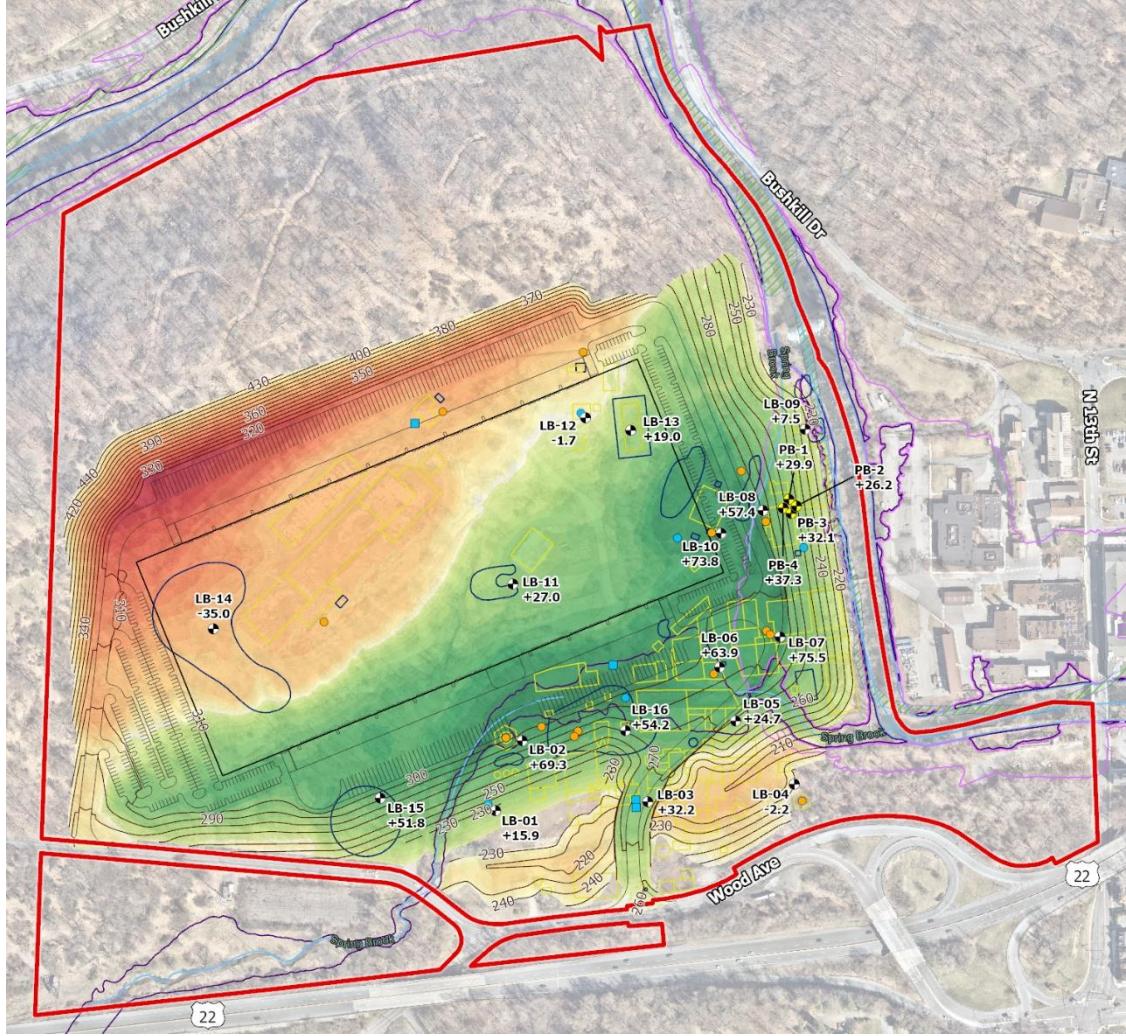
# REDEVELOPMENT PLAN

## Cut Fill Thickness (Feet)

|             |
|-------------|
| ≤ -120      |
| -120 - -110 |
| -110 - -100 |
| -100 - -90  |
| -90 - -80   |
| -80 - -70   |
| -70 - -60   |
| -60 - -50   |
| -50 - -40   |
| -40 - -30   |
| -30 - -20   |
| -20 - -15   |
| -15 - -10   |
| -10 - -5    |
| -5 - -2     |
| -2 - 0      |
| 0 - 2       |
| 2 - 5       |
| 5 - 10      |
| 10 - 15     |
| 15 - 20     |
| 20 - 30     |
| 30 - 40     |
| 40 - 50     |
| 50 - 60     |
| 60 - 70     |
| 70 - 80     |
| 80 - 90     |
| > 90        |

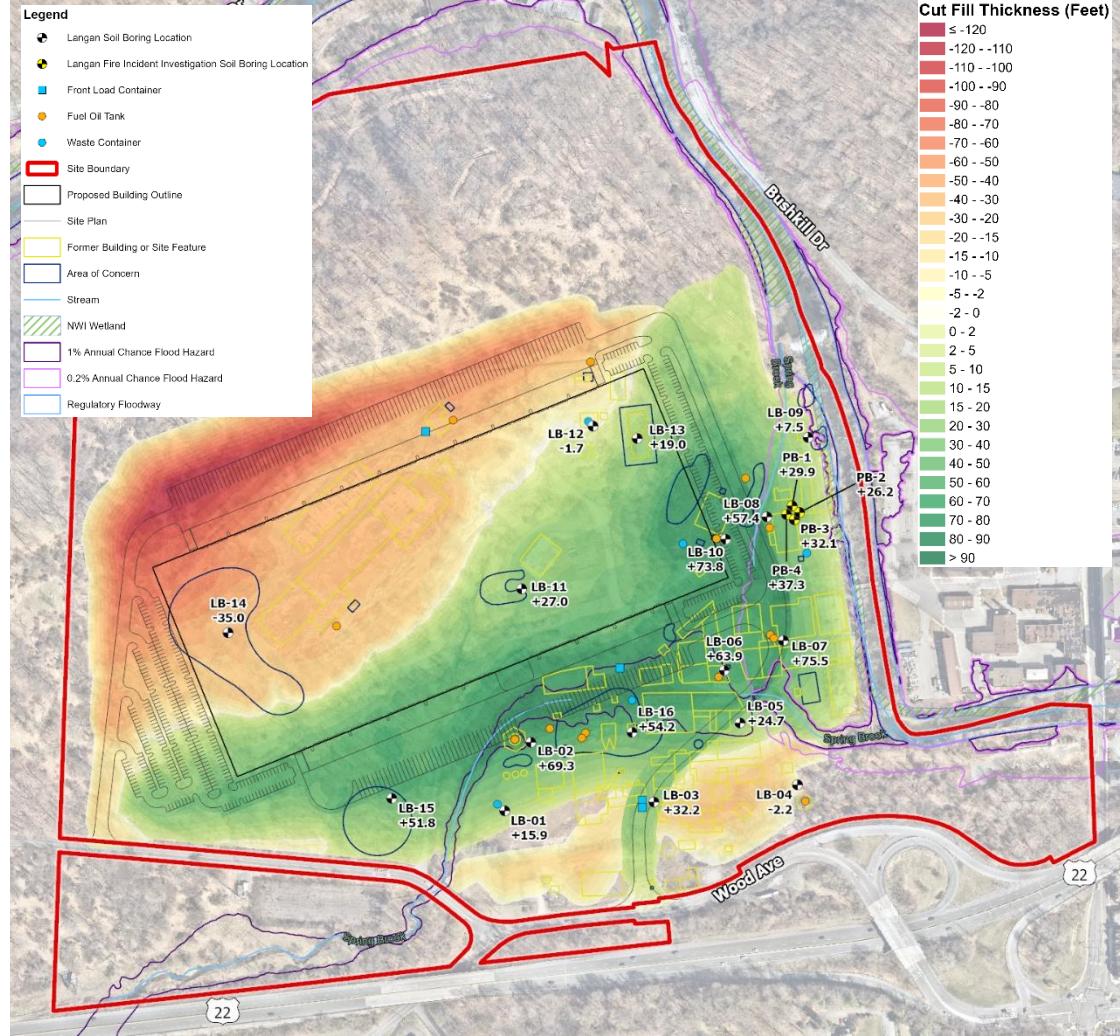
## Legend

- Langan Soil Boring Location
- Langan Fire Incident Investigation Soil Boring Location
- Front Load Container
- Fuel Oil Tank
- Waste Container
- Site Boundary
- Proposed Building Outline
- Site Plan
- 10-ft. Grading Plan Contours
- Former Building or Site Feature
- Area of Concern
- Stream
- NWI Wetland
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway



# PADEP ACT 2 REMEDIAL INVESTIGATION - SOIL

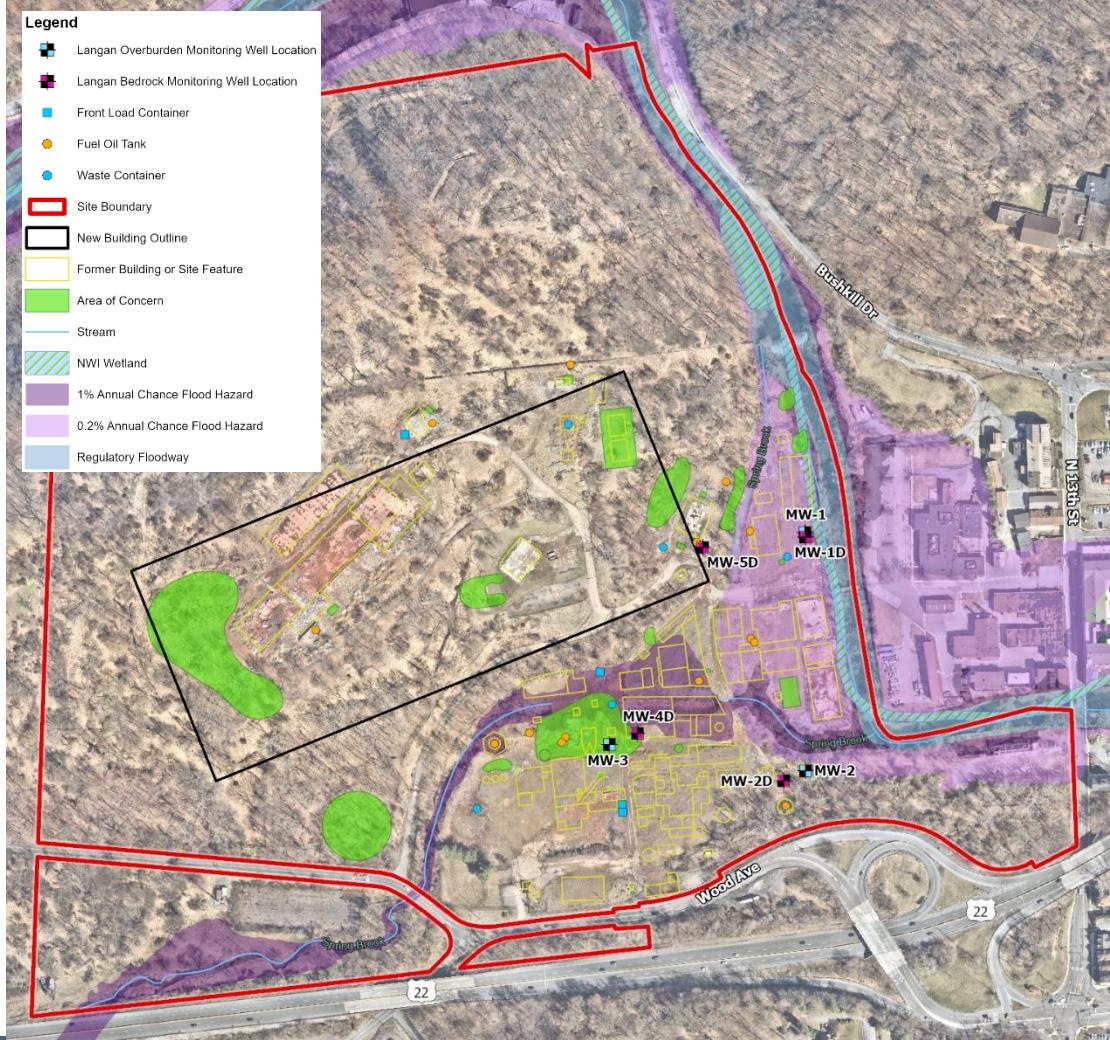
- Metals are the primary COCs, as expected
- Antimony, cobalt, nickel, lead, manganese and arsenic exceeded the applicable PADEP Soil to GW Non-Residential SHS
- Iron exceeded the applicable PADEP Soil 0-2 Direct Contact Non-Residential SHS
- PFOA, PFOS and PFBS were not detected above laboratory detection limits, below PADEP MSCs



# PADEP ACT 2 REMEDIAL INVESTIGATION - GROUNDWATER

## Groundwater Sampling

- 4 rounds of sampling
  - Analyzed Parameters: VOCs, SVOCs, PCBs, TAL Metals
  - Metals: Manganese, iron aluminum, beryllium, cobalt and nickel were detected above the PADEP Residential and Non-Residential GW SHS.



# RISK ASSESSMENTS SUMMARY

- **The HHRA evaluated the risk to select receptors from exposure pathways. Conclusions:**
  - No unacceptable risks to a trespasser.
  - No unacceptable cancer risks for the future on-Site industrial worker receptor. However, there are potential non-cancer hazards based on the current Site conditions.
  - No unacceptable cancer risks to construction worker. Potential non-cancer hazards to construction workers. These findings suggest potentially unacceptable hazards to construction workers that warrant appropriate Health and Safety measures and exposure controls during construction.
- **An ecological health evaluation completed with a surface water and sediment investigation and a risk assessment with collocated sediment and porewater samples, and desktop food chain modeling. Conclusions based on multiple lines of evidence:**
  - Ecological risk from Site-related CPECs is de minimis and related to background conditions.

# CLEAN-UP PLAN

Cleanup to be Integrated with Site Redevelopment – Fill Areas > 15'

## Institutional Controls

- Materials Management Plan
- Post-Remediation Care Plan
- Environmental Covenant, Activity and Use Limitation (AUL)
- Groundwater Restrictions

