

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



pennsylvania

DEPARTMENT OF ENVIRONMENTAL
PROTECTION

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

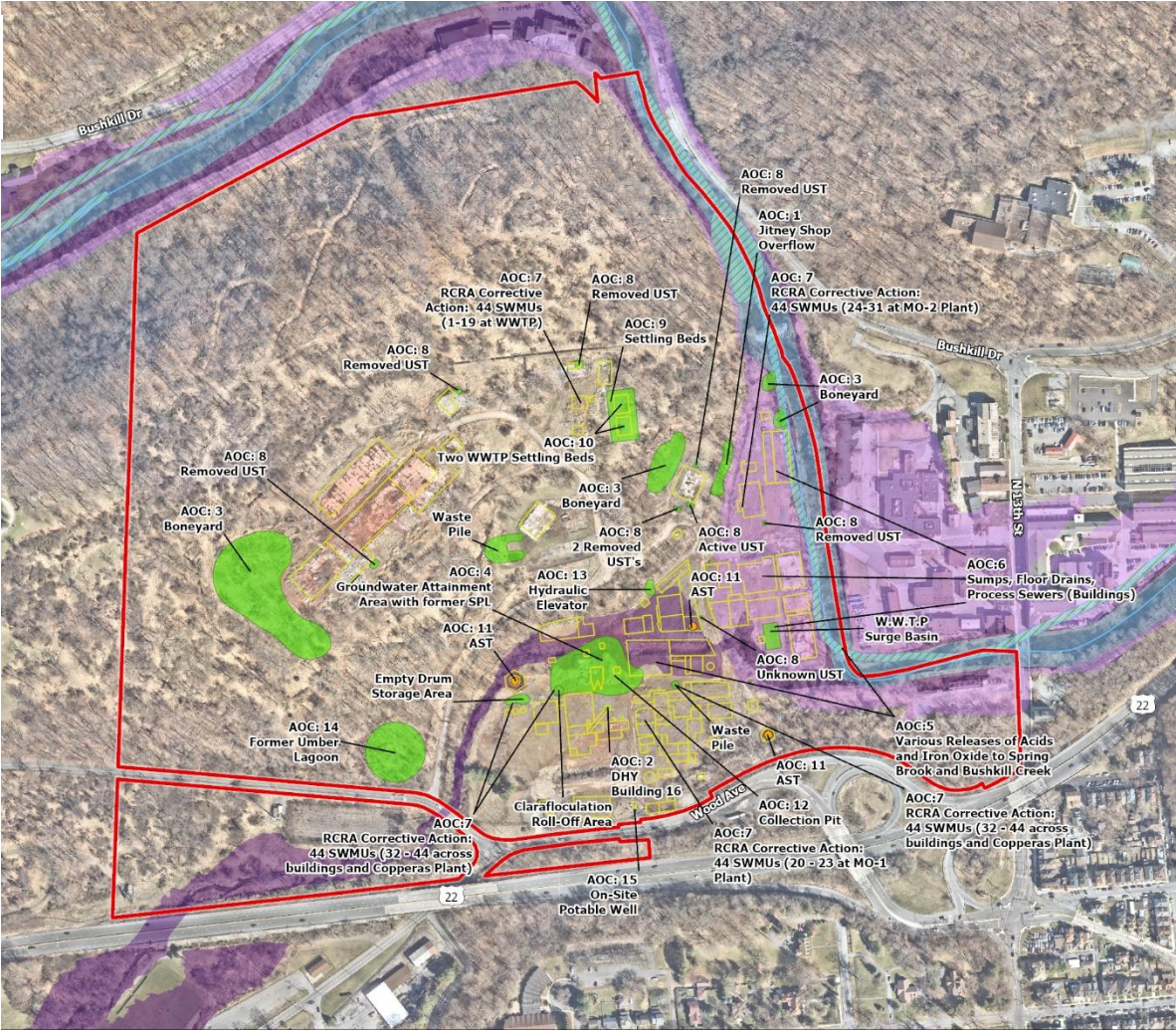
2025 – EPA RCRA Input on Clean-up Plan

ENVIRONMENTAL HISTORY

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

Legend

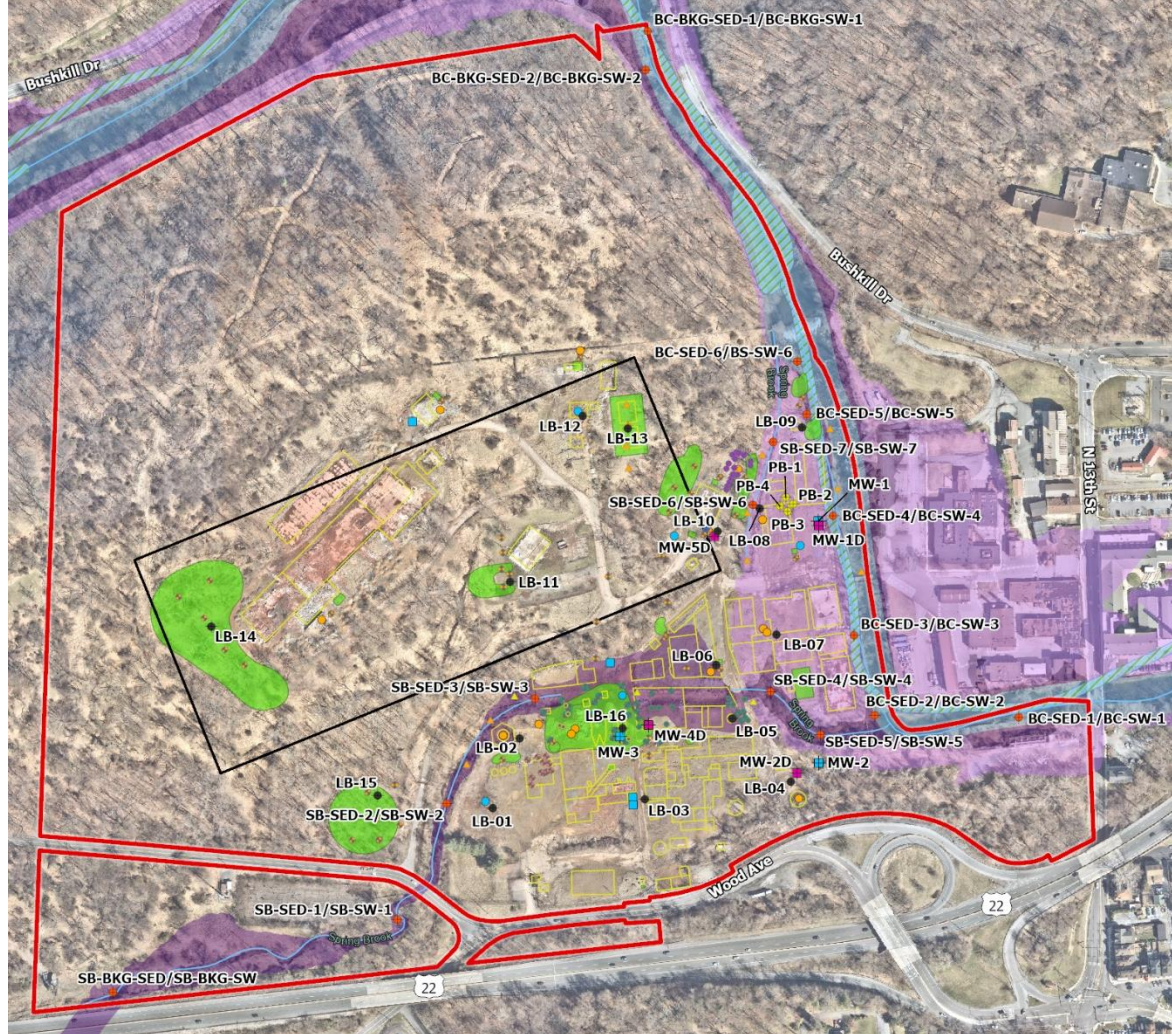
- Fuel Oil Tank
- Former Building or Site Feature
- Site Boundary
- NHD Stream
- Area of Concern
- NWI Wetland
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Regulatory Floodway



ENVIRONMENTAL INVESTIGATIONS

















Legend

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

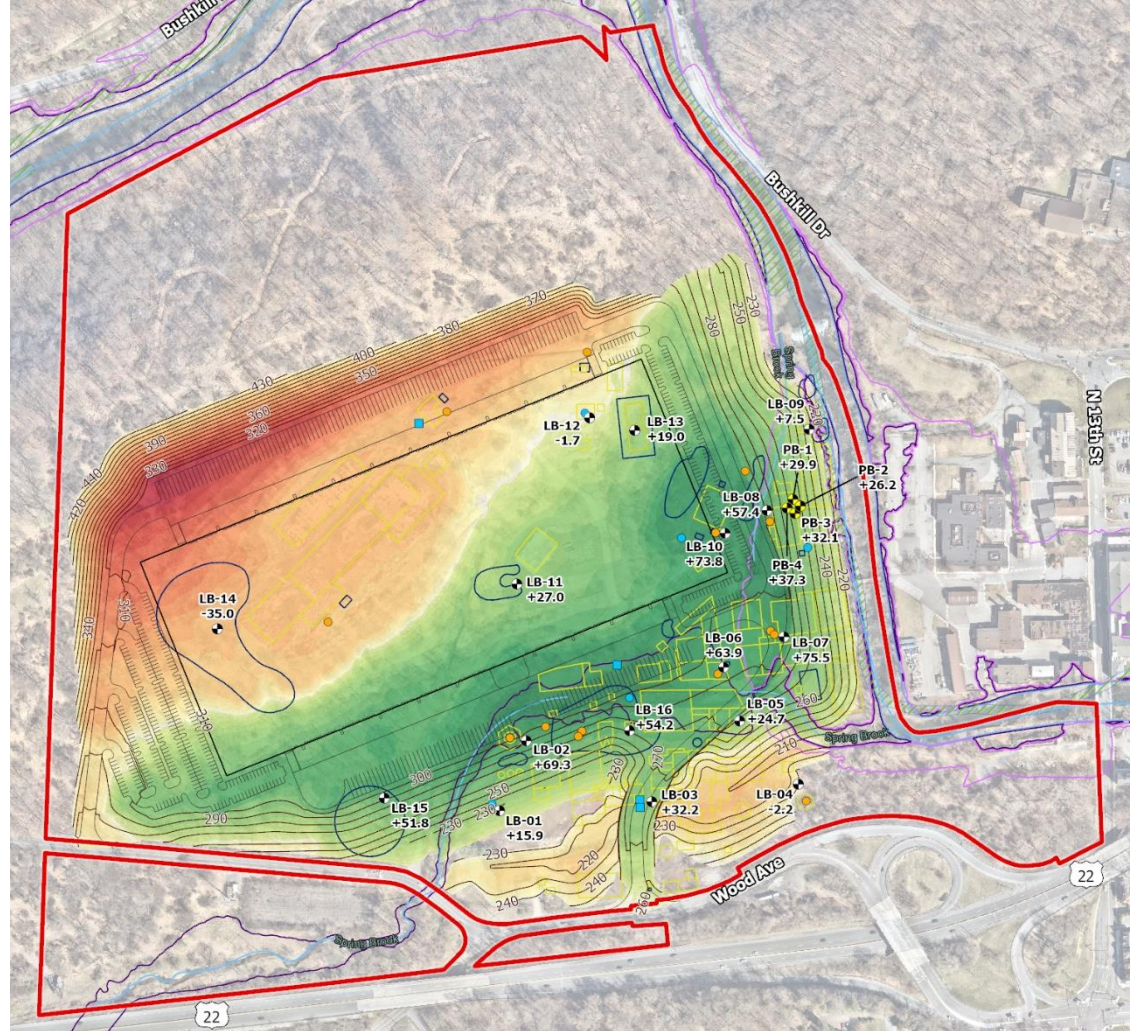
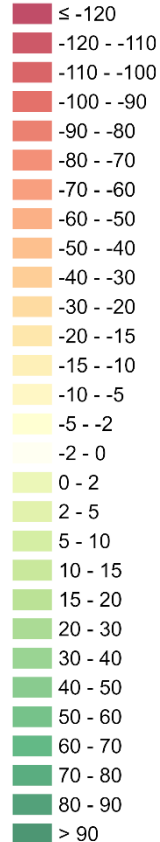


REDEVELOPMENT PLAN

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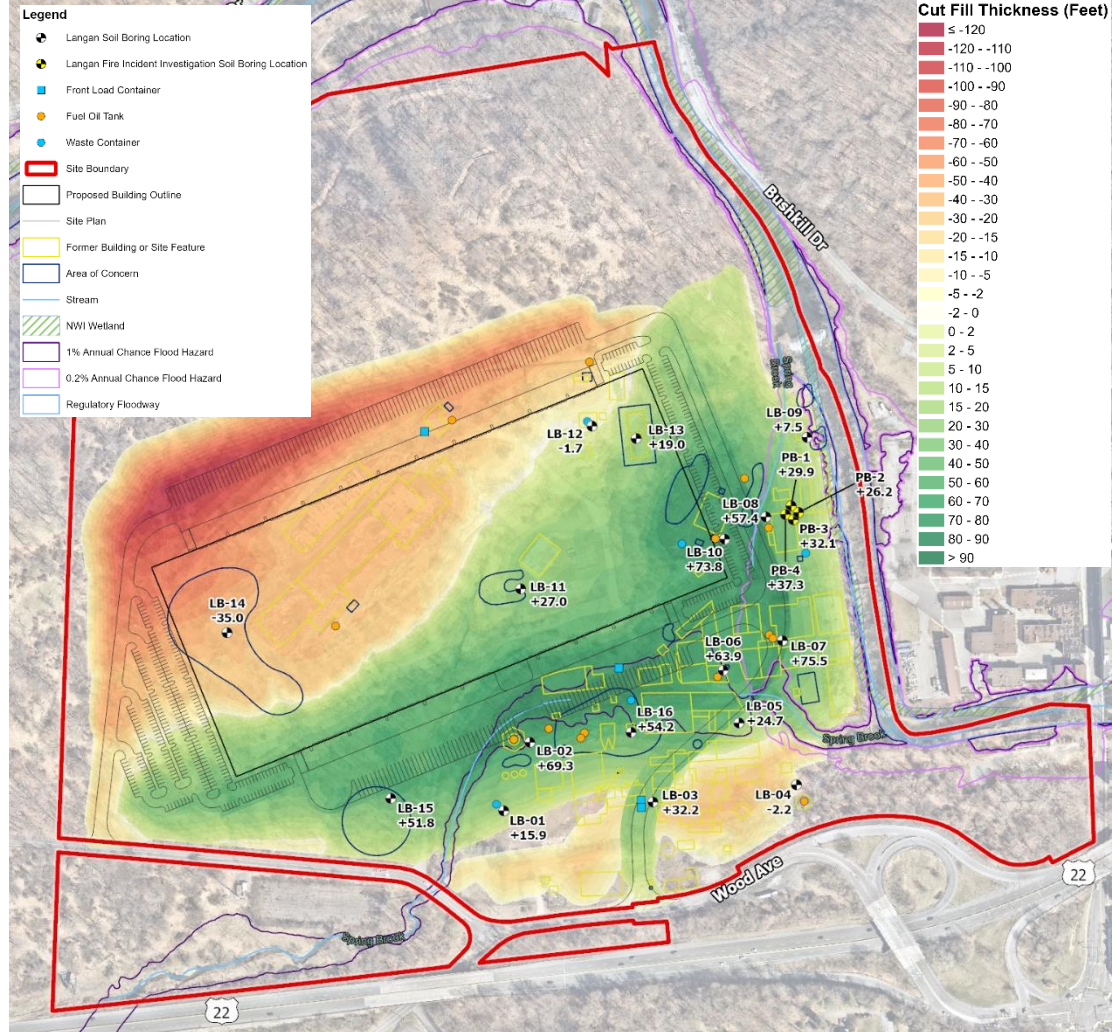
-  Langan Soil Boring Location
-  Langan Fire Incident Investigation Soil Boring Location
-  Front Load Container
-  Fuel Oil Tank
-  Waste Container
-  Site Boundary
-  Proposed Building Outline
-  Site Plan
-  10-ft. Grading Plan Contours
-  Former Building or Site Feature
-  Area of Concern
-  Stream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

Cut Fill Thickness (Feet)



PADEP ACT 2 REMEDIAL INVESTIGATION - SOIL

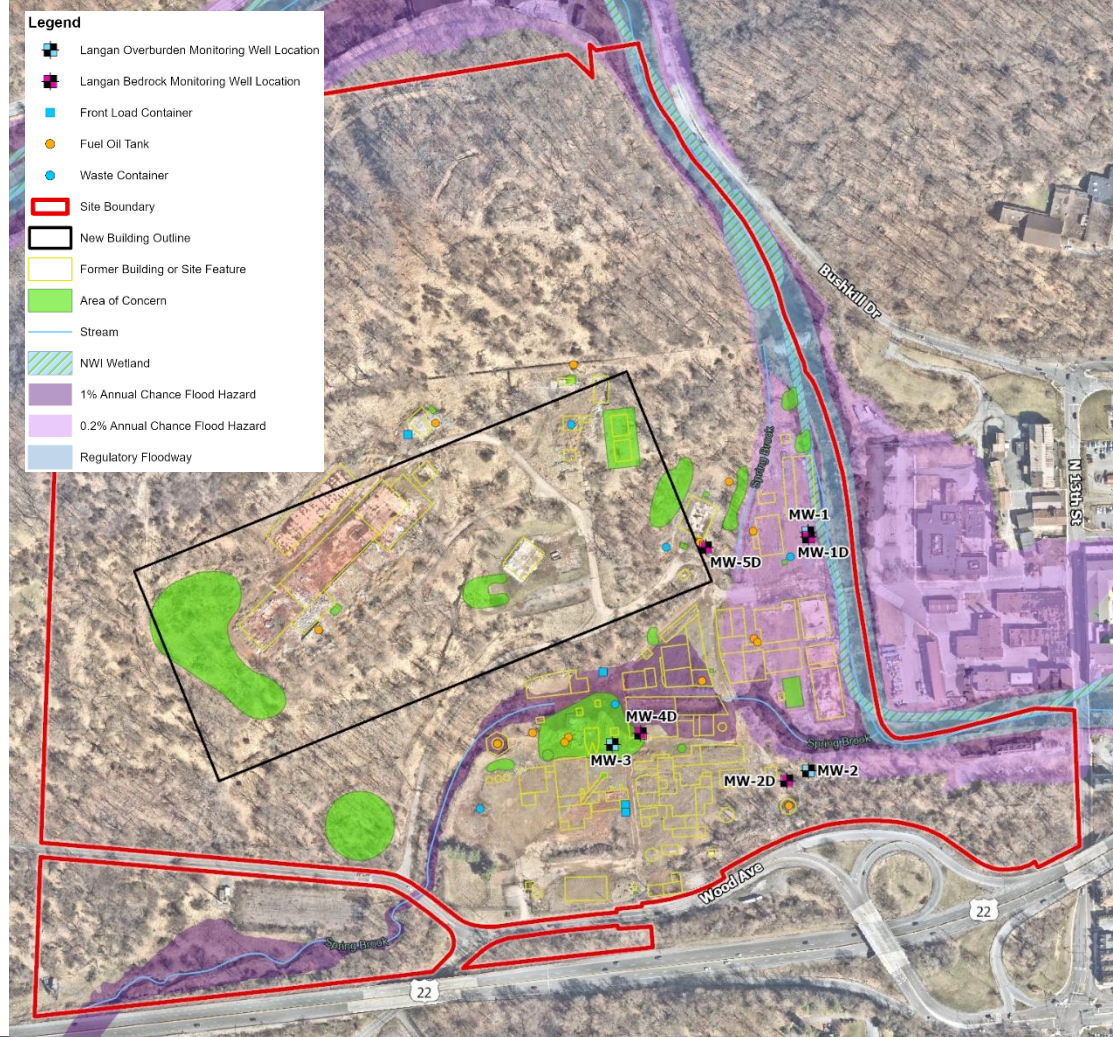
- Metals are the primary COCs, as expected
- Antimony, cobalt, nickel, lead, manganese and arsenic exceeded the applicable PADEP Soil to GW Non-Residential SHS
- Iron exceeded the applicable PADEP Soil 0-2 Direct Contact Non-Residential SHS
- PFOA, PFOS and PFBS were not detected above laboratory detection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

