

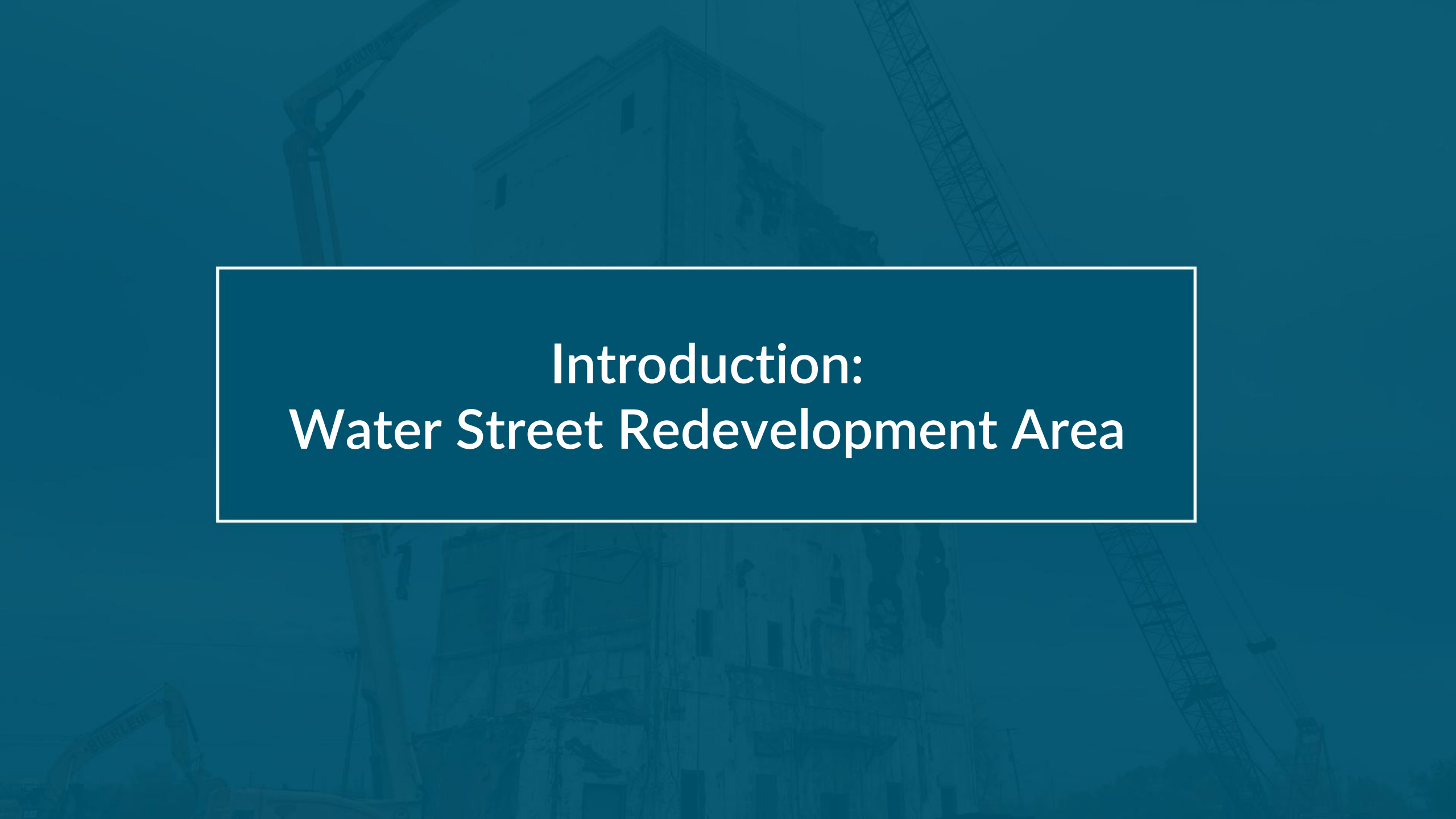
 AKT PEERLESSTM
ENVIRONMENTAL SERVICES

Case Study: Revising a Conceptual Site Model to Inform PCB Cleanup, Ypsilanti

MECC June 10, 2026

Presentation Overview

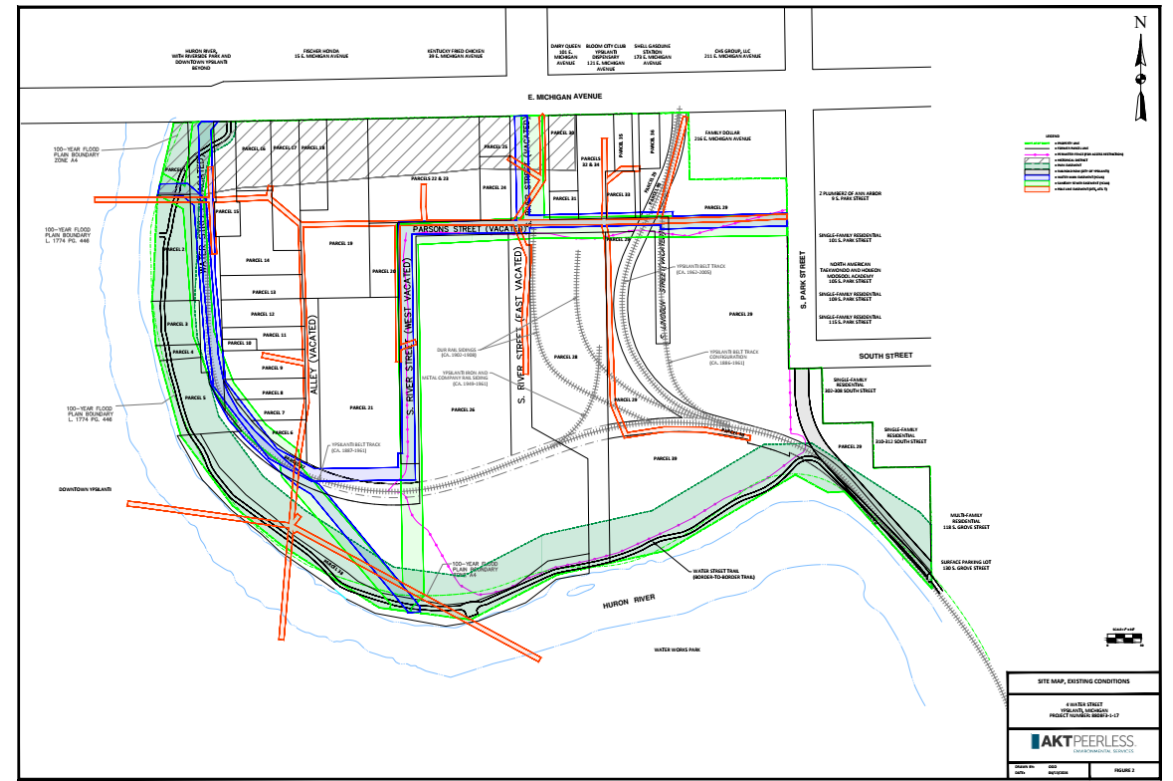
- Introduction: Water Street Redevelopment Area
- Part 1: Environmental Areas of Concern (AOCs)
- Part 2: Lead Area #3 & the PCB Area
- Part 3: PCBs > 50 ppm & TSCA Applicability
- Part 4: Site Characterization and Revised CSM
- Part 5: USEPA & Landfill Approvals, Self-Implementing Cleanup
- Conclusion & Questions/Answers



Introduction: Water Street Redevelopment Area

Water Street Redevelopment Area

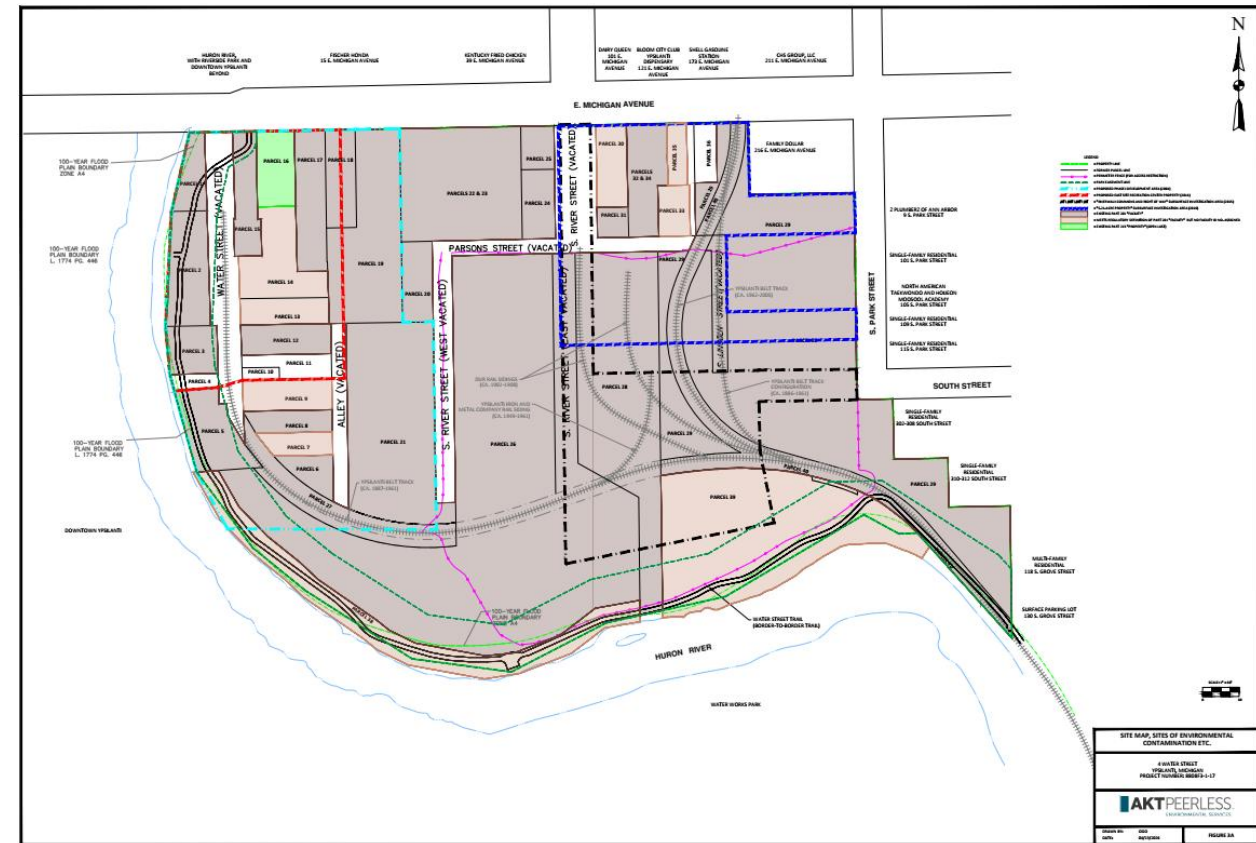
- First Master Plan: 1988.
- First Geotechnical Soil Borings: 1989.
- Environmental Real Estate Assessment: 1997.
- City's Due Diligence & Acquisition: 2000-2005 (Parcel-Specific).
- Demolition & Voluntary Environmental Cleanup Activities: 2004-2010, 2017, and 2025.

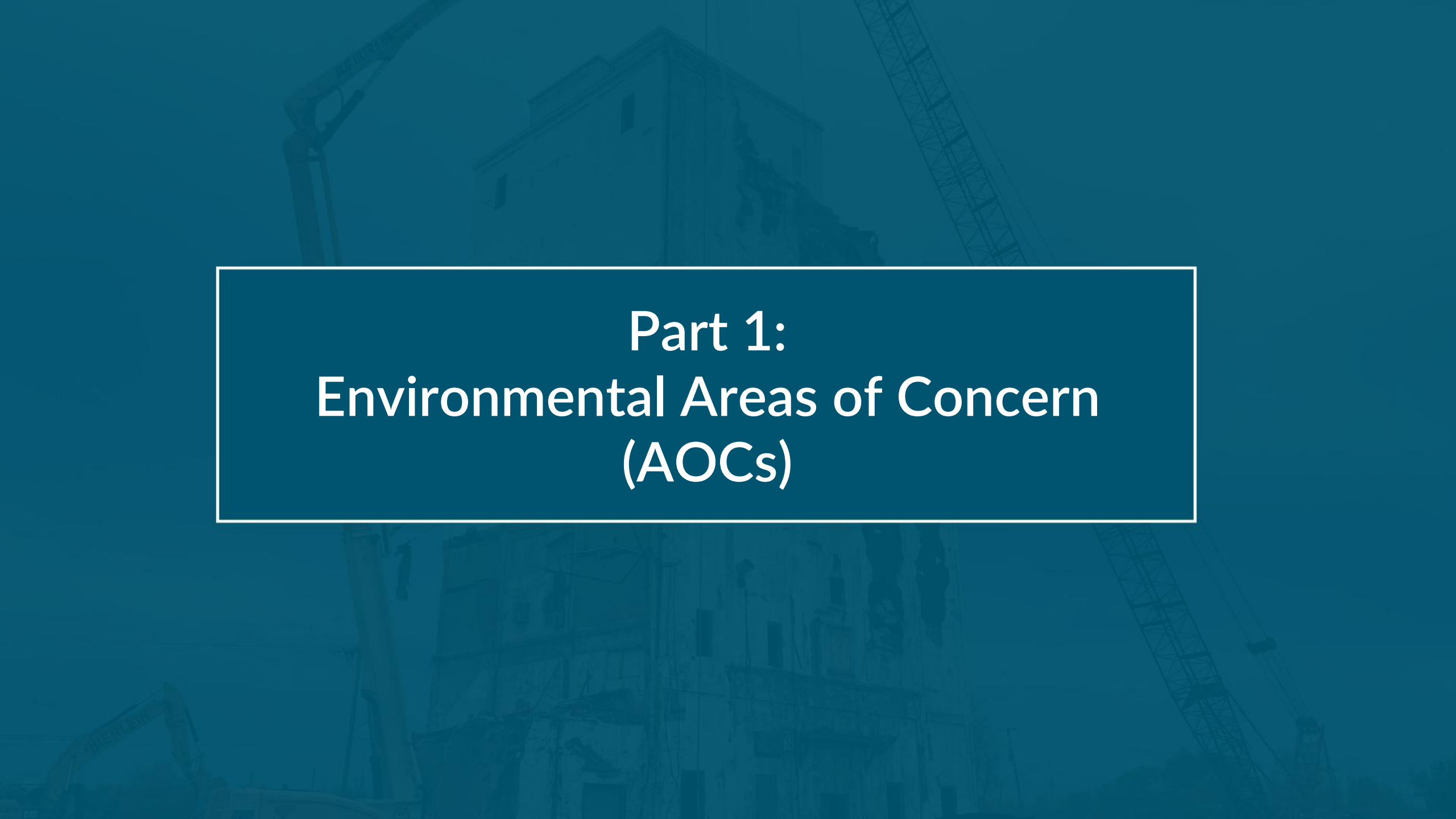


Summary of Site History

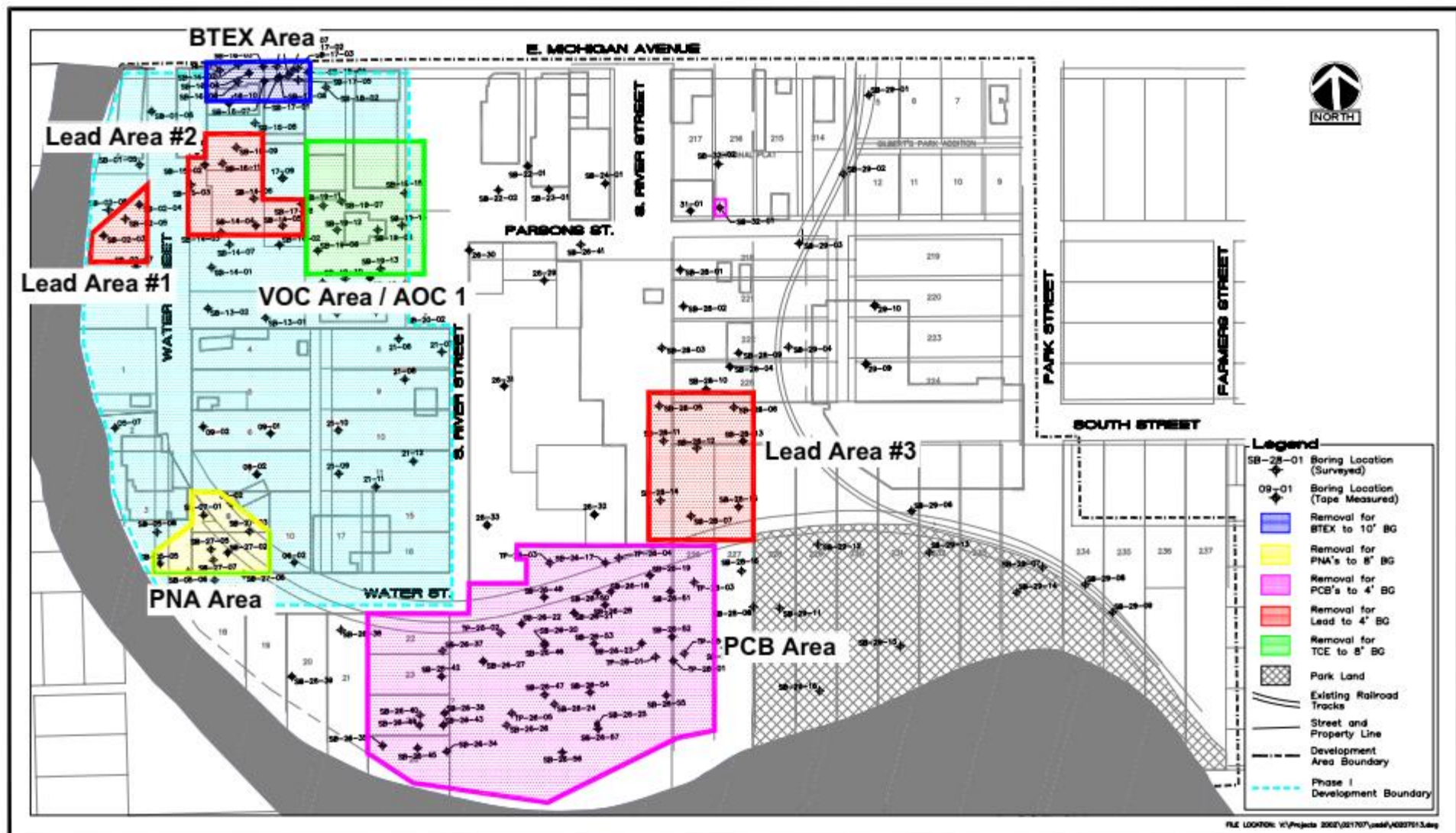
- **1886-1899:** Ypsilanti Belt track, lumber yard, planing mill, flour mill, foundry/machine shop.
- **1900-1929:** Lumber yard, planing mill, electric railway storage yard, auto service/repair garages, bulk petroleum storage, auto parts manufacturing.
- **1930-1965:** Lumber yard, auto service/repair garages, filling stations, bulk petroleum storage, auto parts and auto seat manufacturing, metal junk yard, pre-SWDA dumping. Partial removal of Ypsilanti Belt track, ca. 1962.
- **1966-2005:** Auto service/repair garages, filling stations, light manufacturing, auto junk yard, metal junk yard/fabrication, dry cleaner, printing, analytical laboratory. Final removal of Ypsilanti Belt track, ca. 2005.

- **Park Easement**
 - End use to remain recreational.
- **Redevelopment Area**
 - End use to be determined.
 - Set developer up for success with respect to soil and exposure risk management options.



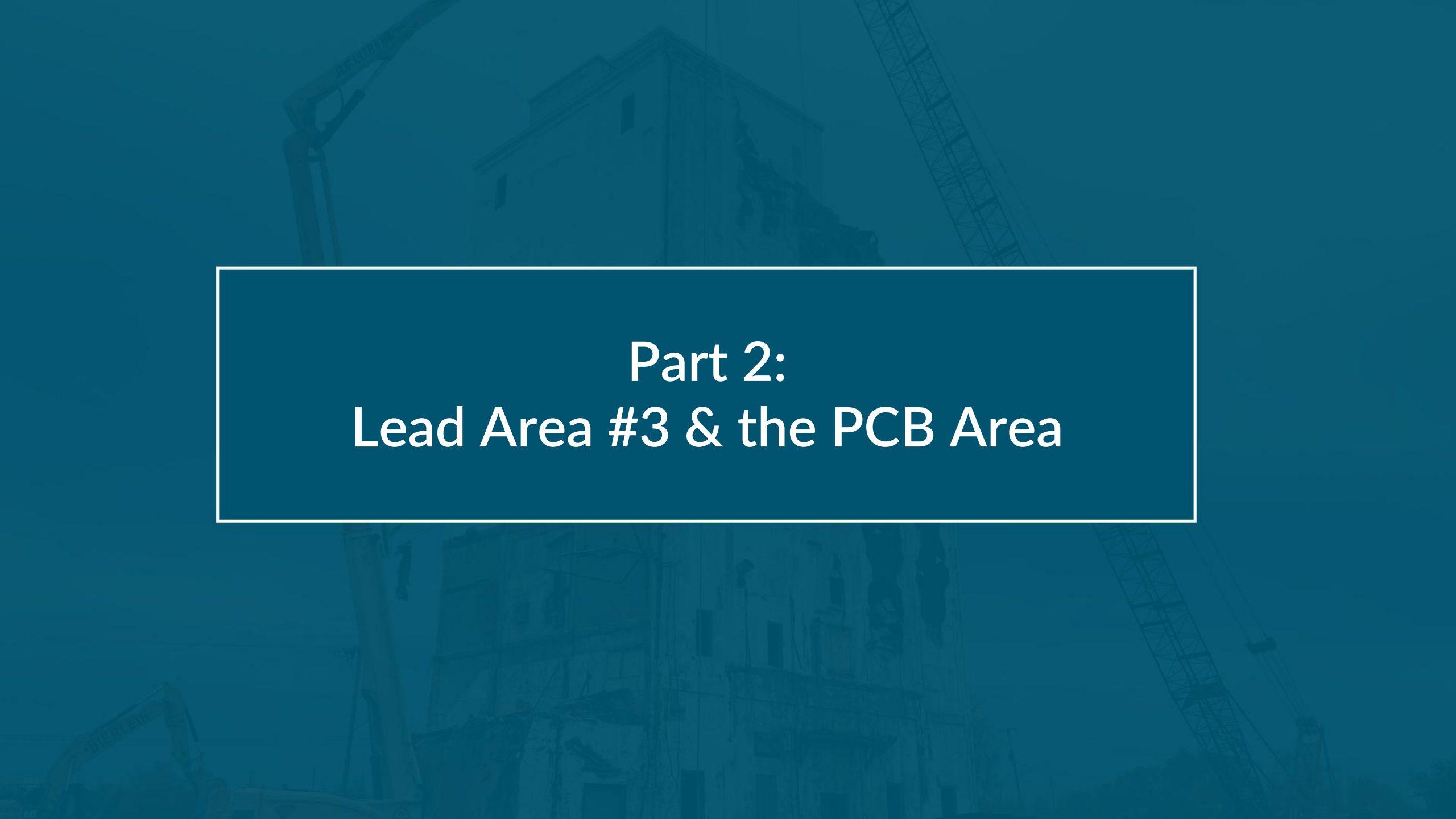


Part 1: Environmental Areas of Concern (AOCs)

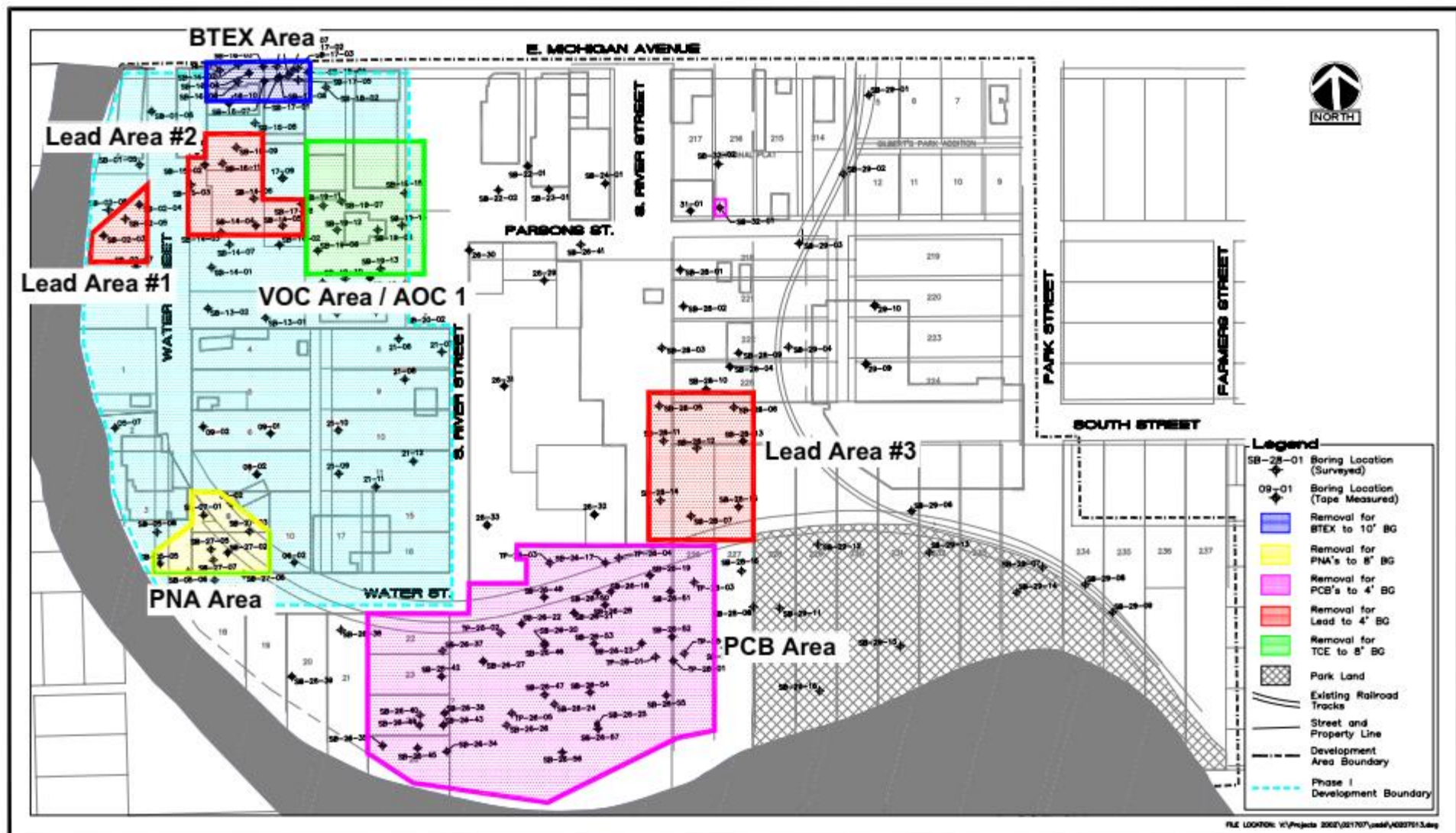


Environmental AOCs, Proposed Phase I Development Area (2004)

- **BTEX Area:** Petroleum contamination associated with filling stations, auto service/repair at Parcels 15-18 (remedial action, 2004).
- **Lead Area #1:** Heavy metal contamination associated with mill, lumber yard, welding activities at Parcel 2 (remedial action, 2004).
- **Lead Area #2:** Heavy metal contamination associated with foundry/machine shop at Parcels 14-17 (remedial action, 2004).
- **VOC Area / AOC 1:** Solvent contamination associated with auto service/repair/painting, auto parts, printing at Parcel 19 (remedial actions, 2004 & 2010).
- **PNA Area:** Petroleum contamination associated with bulk aboveground storage tank farm at Parcel 5 (remedial action 2004).



Part 2: Lead Area #3 & the PCB Area



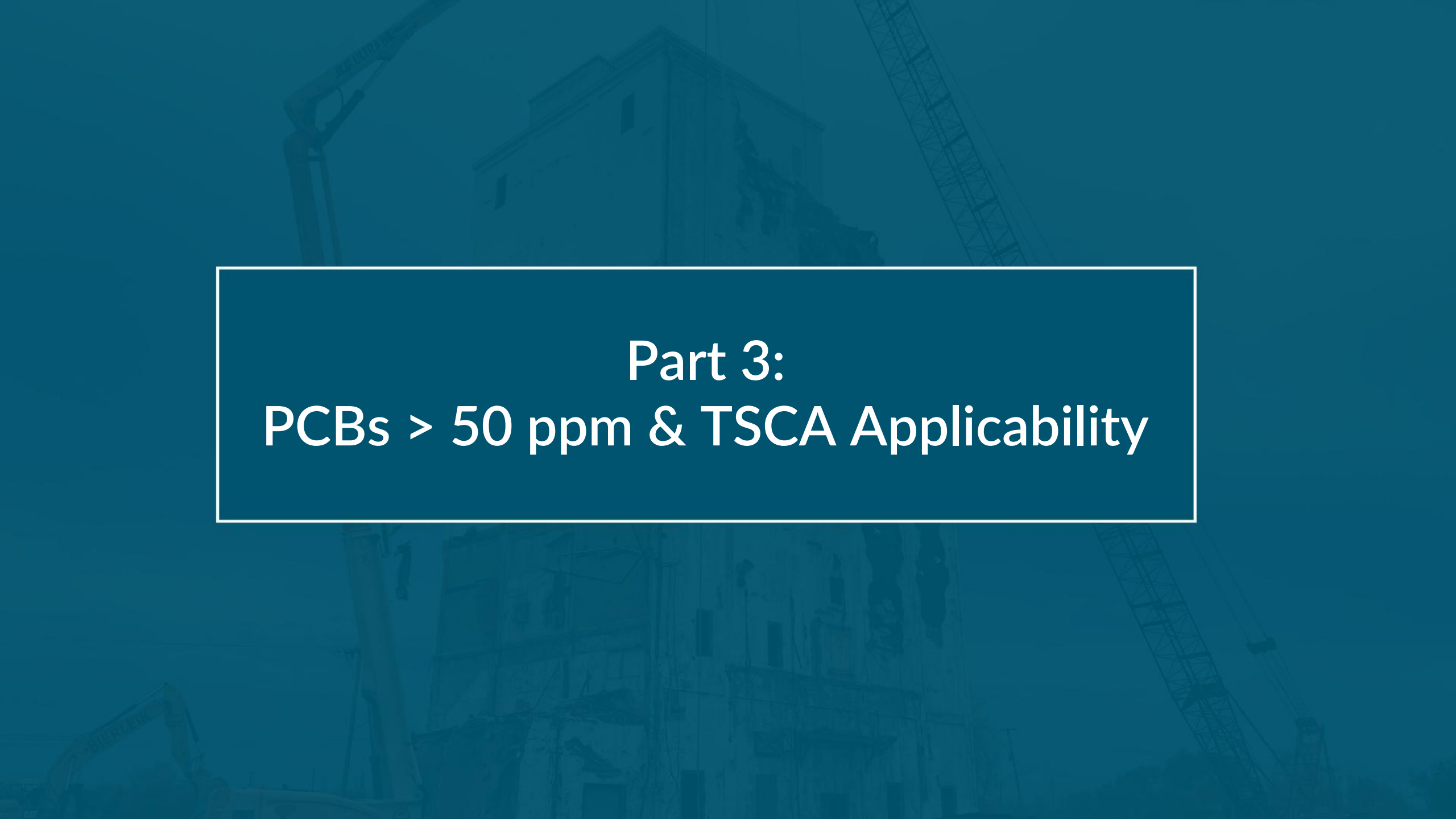
Initial Findings, ca. 2004

- Lead Area #3

- A portion of Parcel 28 comprising the southern half of a former metal junk yard.
- Maximum total lead concentration of 7,000,000 $\mu\text{g/kg}$ in soil, compared to Part 201 Direct Contact Criterion of 400,000 $\mu\text{g/kg}$.
- Heavy metals attributed to junk yard use.

- PCB Area

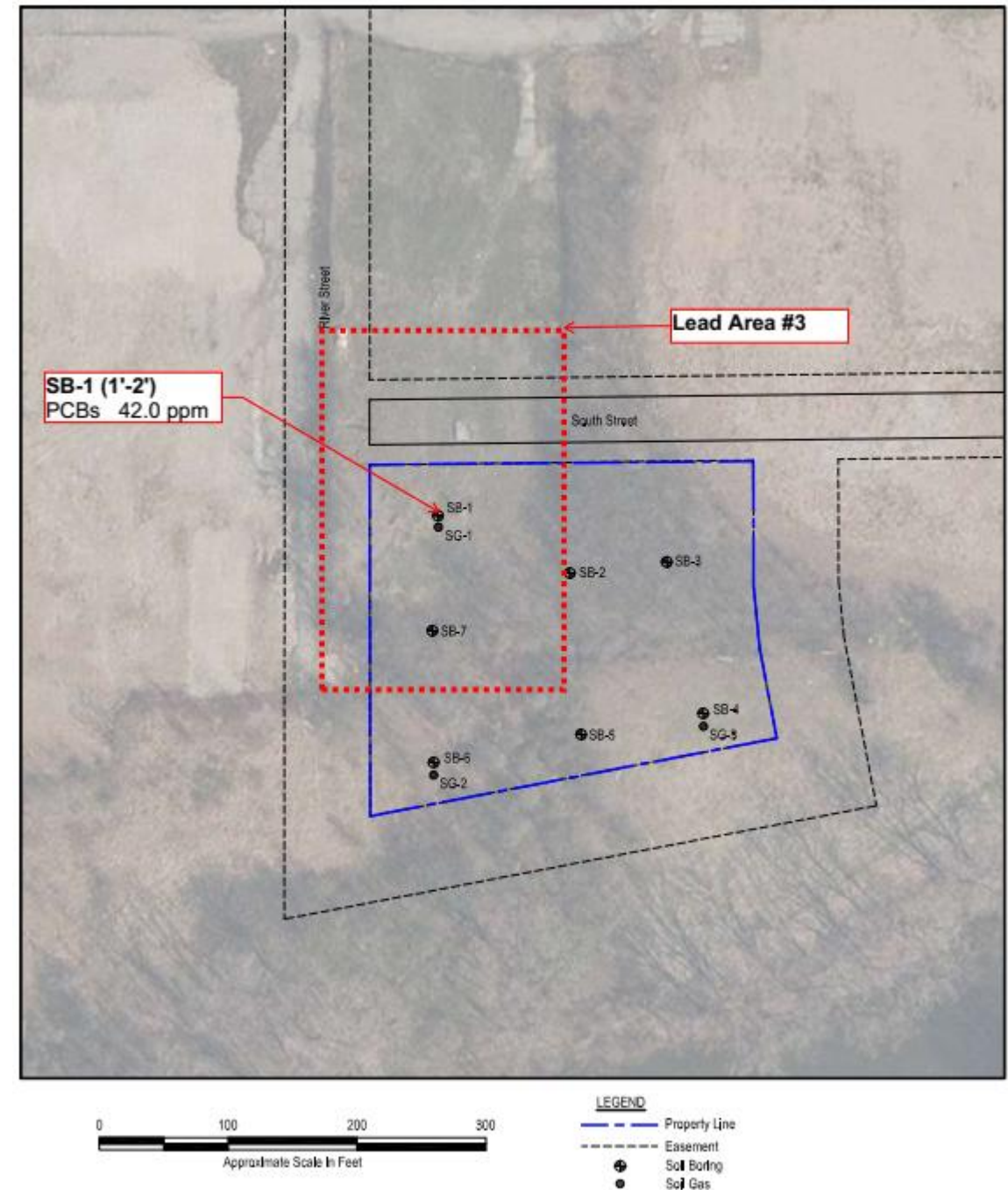
- Southeastern portion of Parcel 26, located south of the former Ypsilanti Belt track.
- Maximum PCB concentration of 3.0 ppm in soil, compared to Part 201 Direct Contact Criterion of 1.2 ppm (at that time).
- PCBs attributed to placement of fill materials.



Part 3: PCBs > 50 ppm & TSCA Applicability

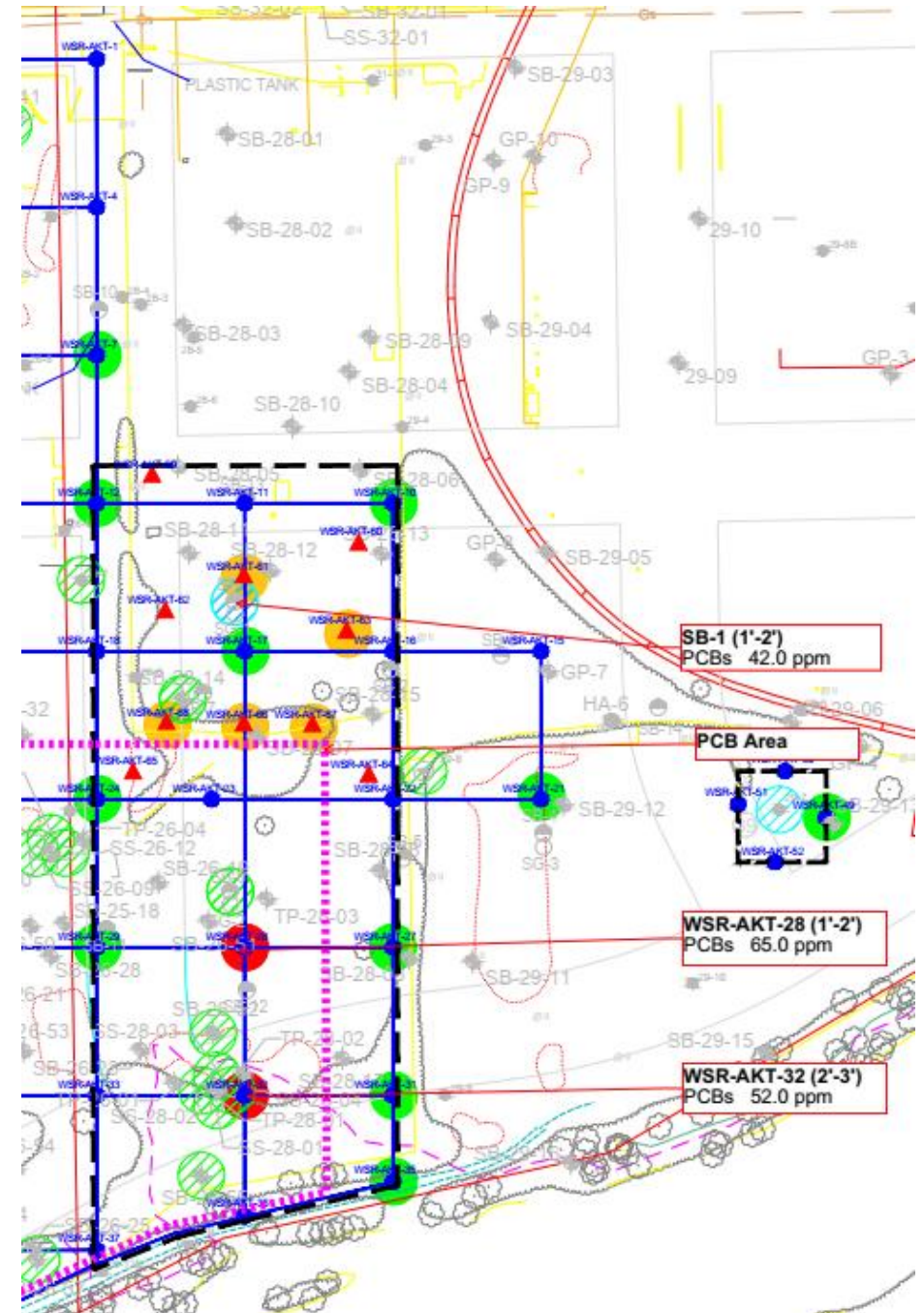
New Significant Finding, 2014

- Subsurface investigation included two soil borings within Lead Area #3.
- PCBs identified at a maximum concentration of **42.0 ppm** at SB-1 (1'-2').
- This was the highest PCB concentration detected at the Water Street Redevelopment Area to date.



New Significant Finding, 2016

- Subsurface investigation included multiple soil borings within the PCB Area.
- PCBs identified at concentrations of 65.0 ppm at WSR-AKT-28 (1'-2') and 52.0 ppm at WSR-AKT-32 (2'-3').
- As found concentrations > 50.0 ppm trigger **TSCA applicability** to soil and exposure risk management.



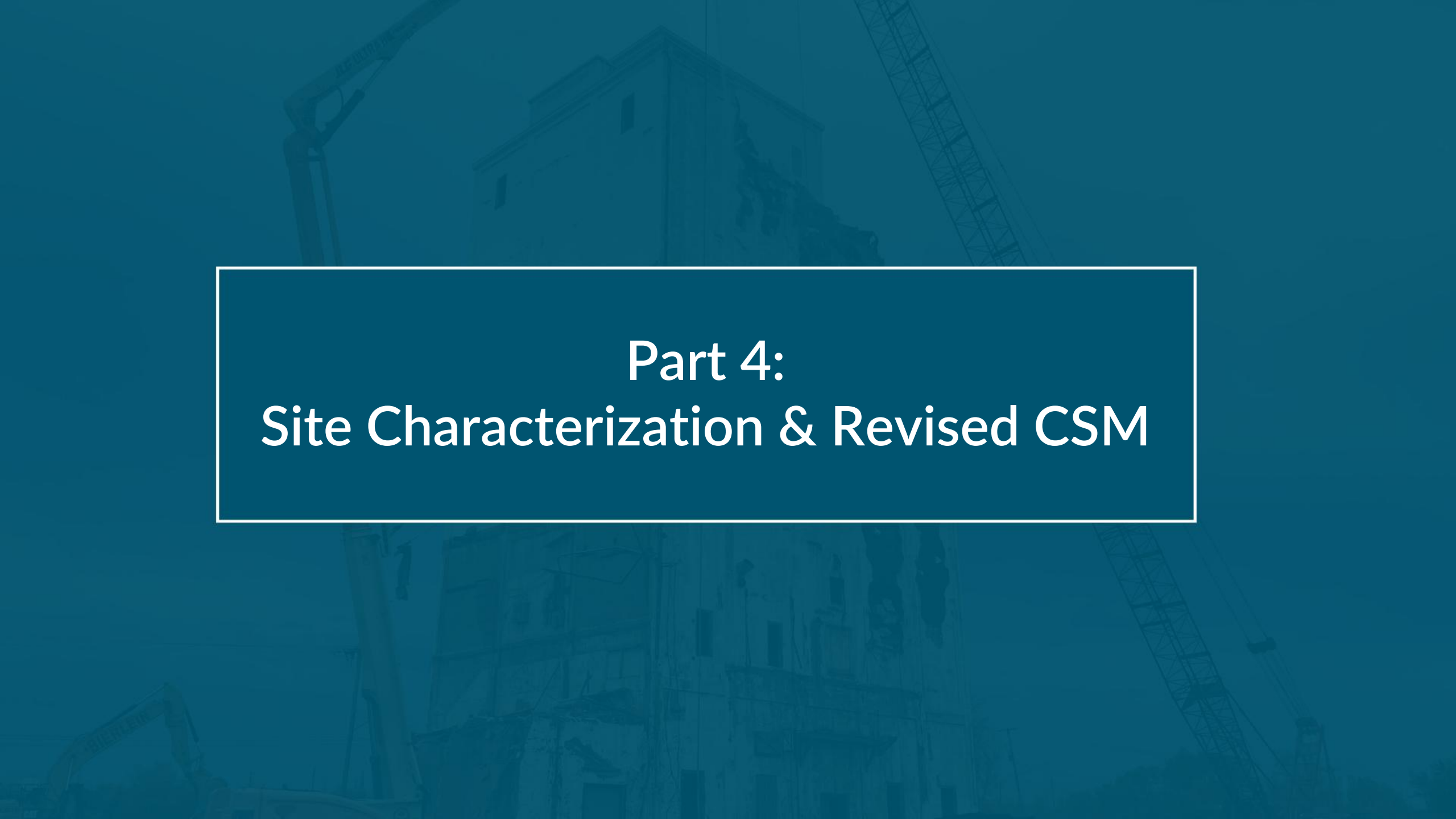
TSCA PCB Cleanup Levels and Conditions

Type of PCB Remediation Waste	Occupancy	Cleanup Level for PCBs	Condition
Bulk PCB Remediation Waste	High	≤ 1 ppm	No further conditions
	High	> 1 ppm and ≤ 10 ppm	Cap the site; deed restriction
	Low	≤ 25 ppm	Deed restriction
	Low	> 25 ppm and ≤ 50 ppm	Fence the site with signs bearing M _L mark; deed restriction
	Low	> 25 ppm and ≤ 100 ppm	Cap the site; deed restriction

High Occupancy Area: Area occupied ≥ 6.7 hours/week on average.

Low Occupancy Area: Area occupied < 6.7 hours/week on average.

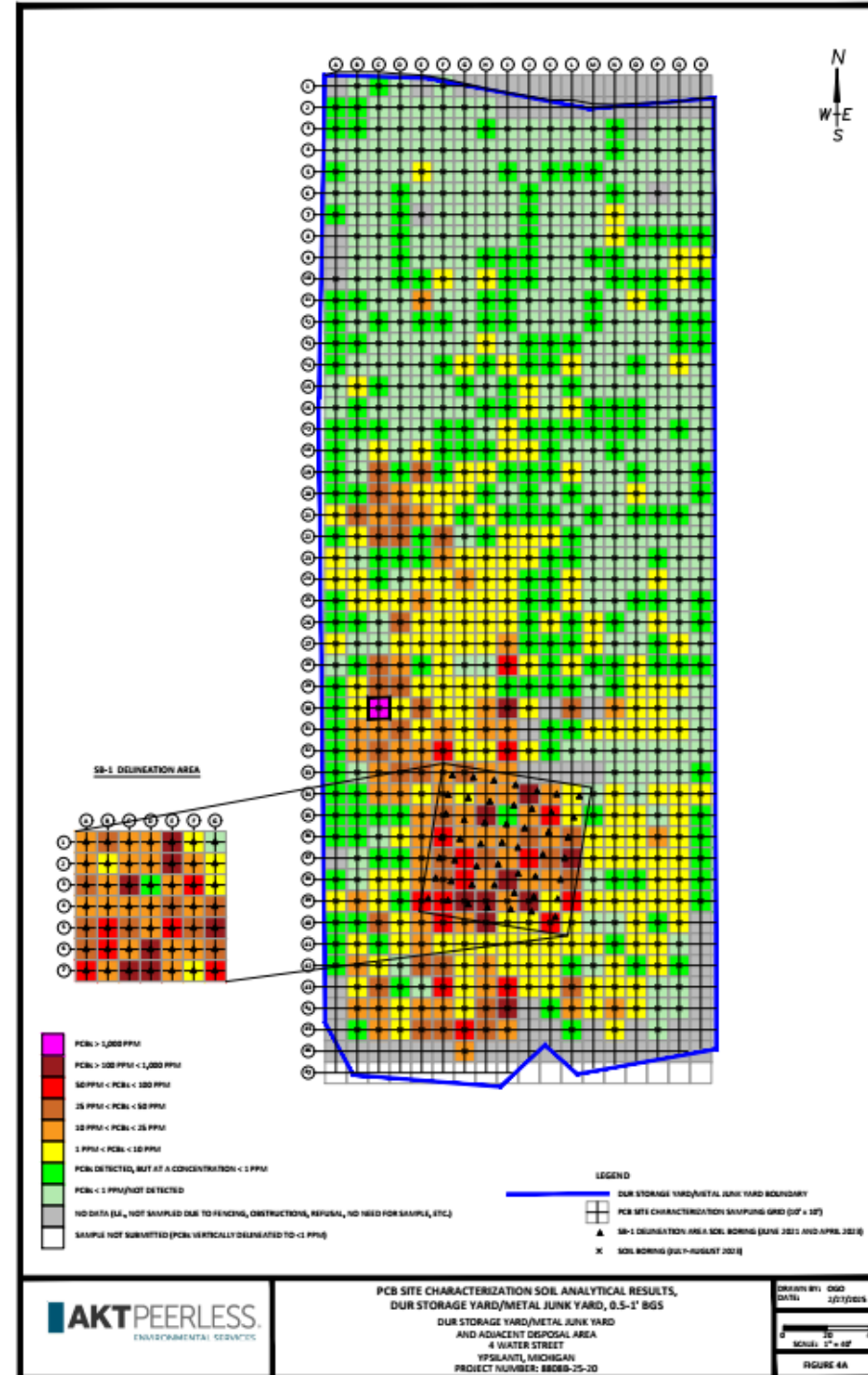
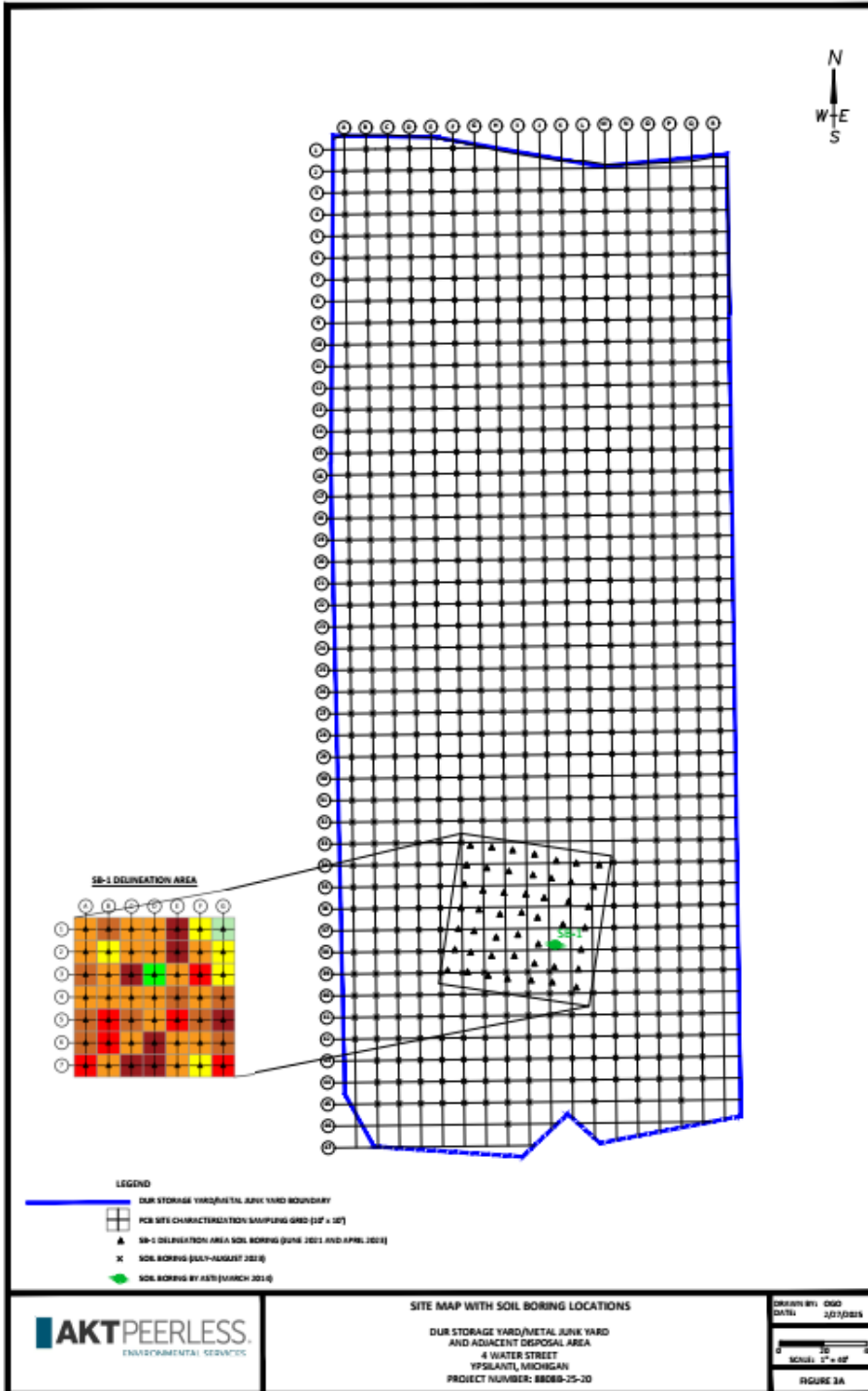
With PCBs > 50 ppm, the PCB issue was no longer a Part 201 issue, but a TSCA issue. To eliminate TSCA applicability for future developer(s), PCB cleanup to ≤ 1 ppm would be necessary. As of 2016, it appeared there were potentially three PCB hot spots, but there were not enough data to develop a cleanup plan, leaving PCB site characterization as the next step.

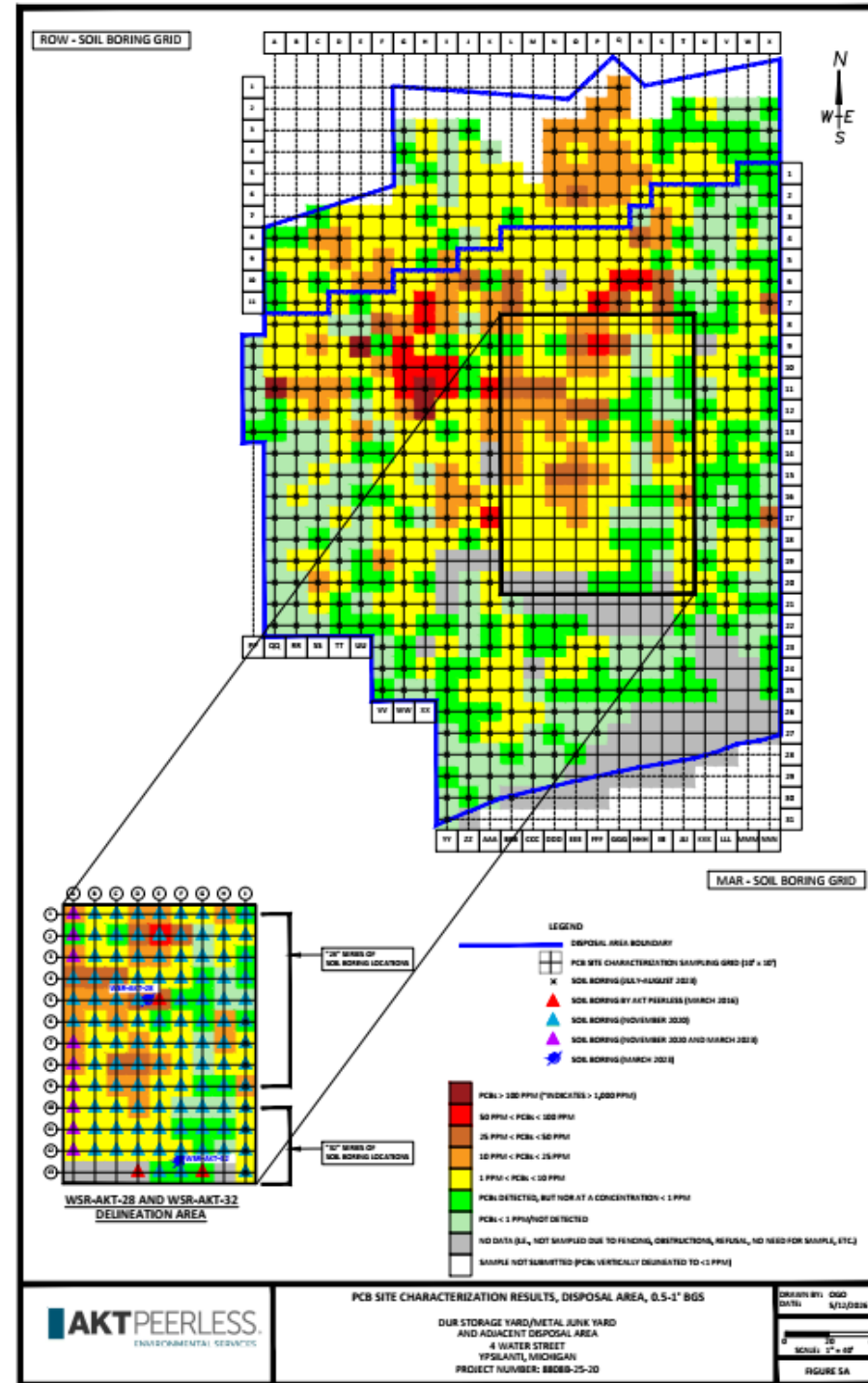
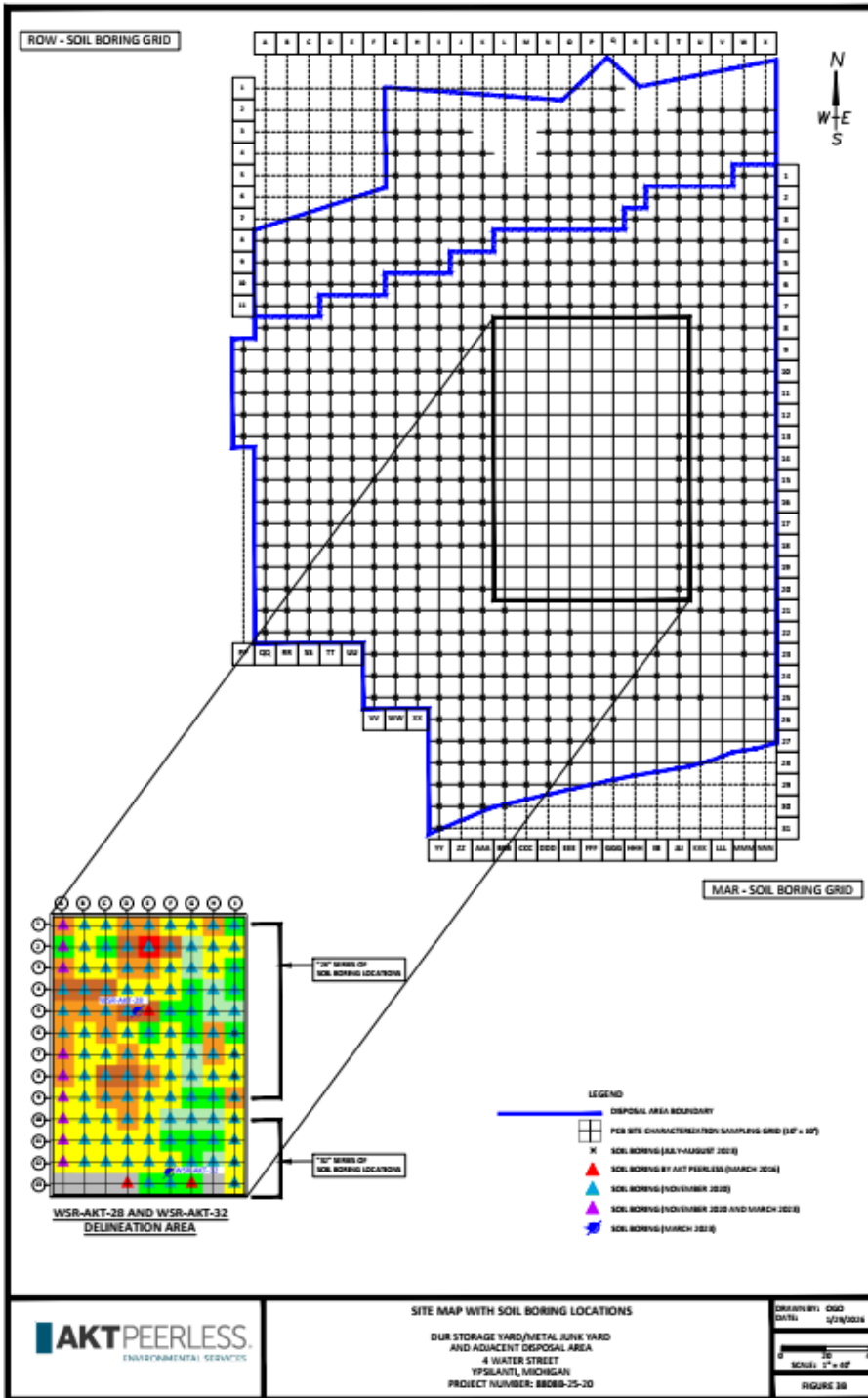
The background of the slide is a dark blue overlay on a photograph of a multi-story building under construction. Several large tower cranes are visible, their lattice structures extending upwards. The building's facade shows some structural elements and scaffolding. The overall scene is industrial and construction-related.

Part 4: Site Characterization & Revised CSM

PCB Site Characterization Summary

- PCB site characterization approach: Soil borings spaced on 10' by 10' grid; soil samples collected for every one-foot depth interval per boring.
- Delineation of potential PCB “hot spot” at SB-1 on Parcel 28.
- Delineation of potential PCB “hot spots” at WSR-AKT-28 and WSR-AKT-32 on Parcel 26.
- Preliminary results indicated that concentrated PCB contamination was more widespread than anticipated.
- PCB site characterization subsequently completed across the footprint of the junk yard (to 5' below grade) and the area south of the former Ypsilanti Belt track (to up to 9' below grade) generally coinciding with the PCB Area AOC.



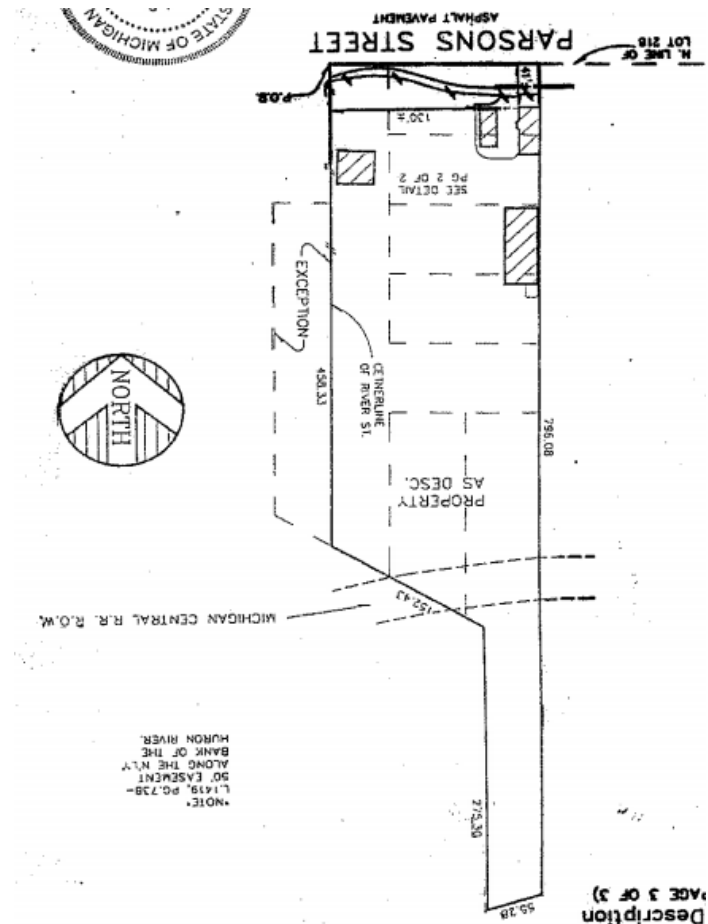




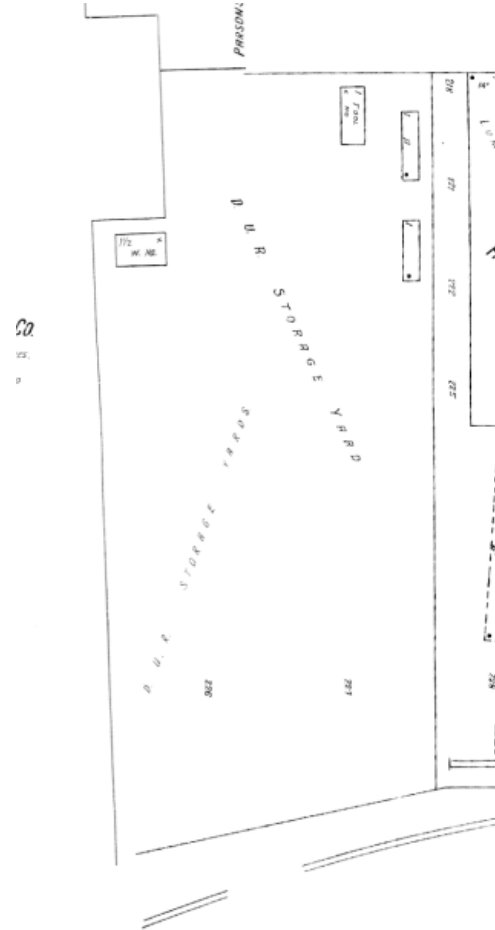
PCB Site Characterization Findings & Questions

- Junk Yard, Parcel 28
 - Highest PCB concentrations at ground surface, decreasing with depth.
- Parcel 26, south of Ypsilanti Belt Track
 - One area of concentrated PCB contamination south of junk yard, with highest PCB concentrations at variable depths.
 - PCB contamination otherwise diffuse.
- Why are PCBs concentrated on the southeastern portion of Parcel 26, but diffuse elsewhere?

Revisiting Historical Resources



Parcel 28 Survey



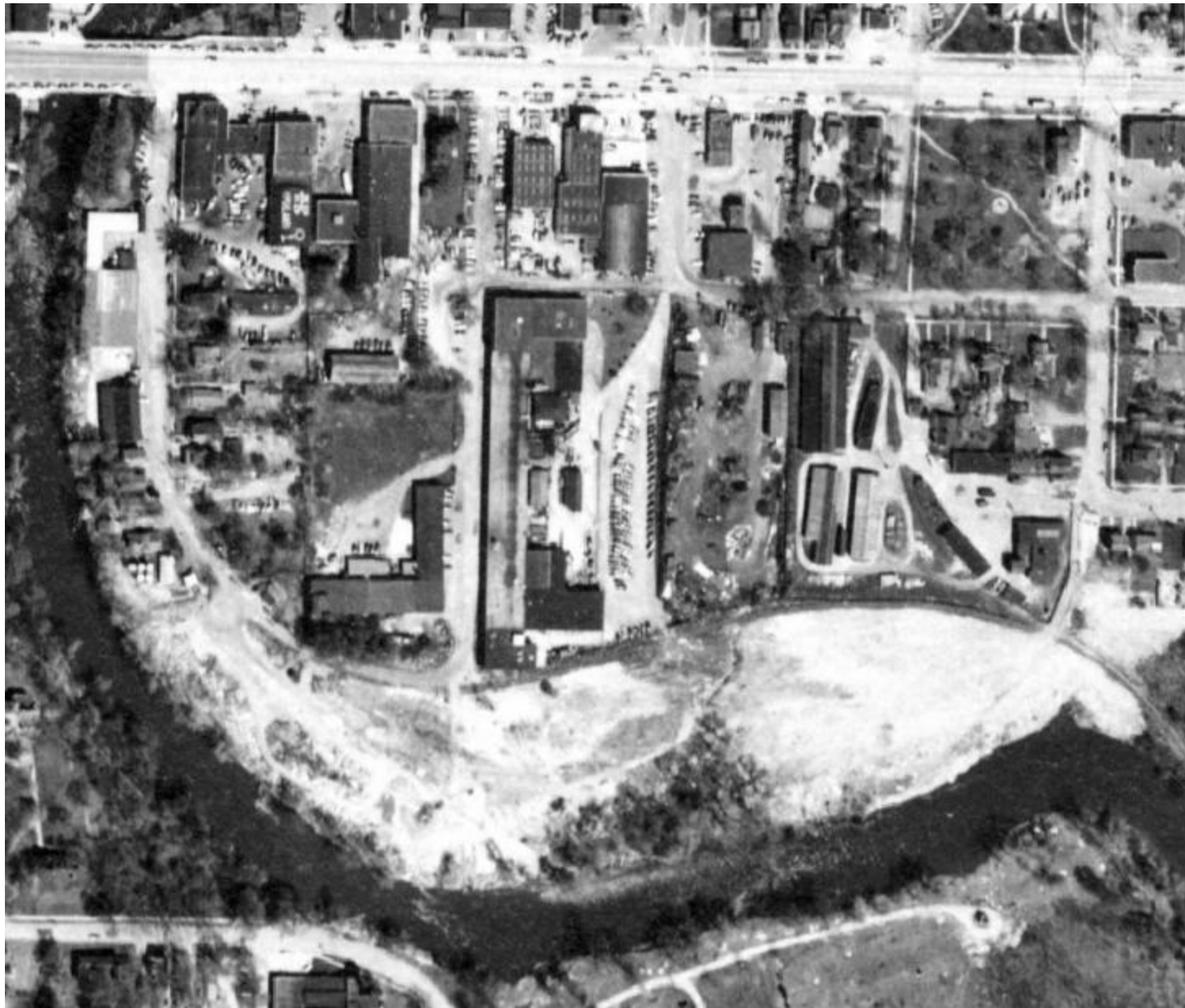
1927 Fire Insurance Map



1964 Fire Insurance Map



1940



1949

Revised CSM, 2025

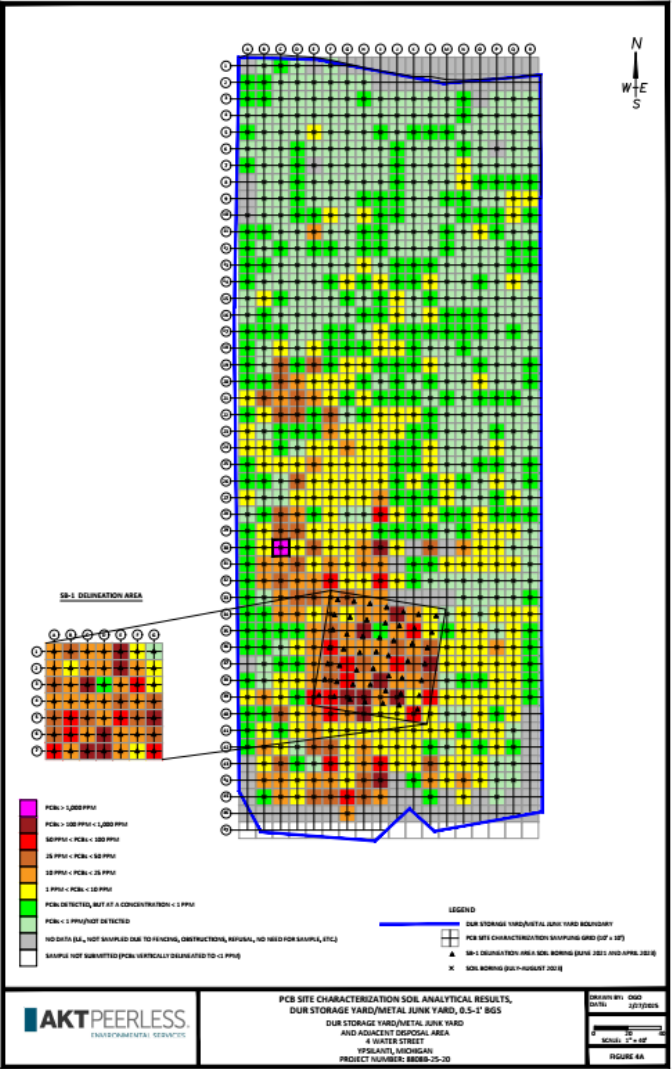
- Junk Yard, Parcel 28 (Lead Area #3)
 - Detroit United Railway (DUR) storage yard, 1901-1929.
 - Commercial manufacture of PCBs began in 1929.
 - Yard acquired by junk yard owner, 1930.
 - Western strip of junk yard sold to owner of Parcel 26, 1942, apparently cut by 1949.
 - PCB concentrations decrease with increasing depth, consistent with surface spillage.
- Junk Yard Cut Disposal Area, Parcel 26 (PCB Area)
 - Unknown use, if any, prior to 1940 (adjacent to “marsh land” between Ypsilanti Belt track and Huron River).
 - Concentrated PCB contamination likely due to disposal of spoils from junk yard cut between 1942 and 1949.
 - Diffuse PCB contamination outside the junk yard cut disposal area may be from other source(s).
 - Random vertical distribution of PCBs, consistent with filling.

Part 5:
**USEPA & Landfill Approvals,
Self-Implementing Cleanup**

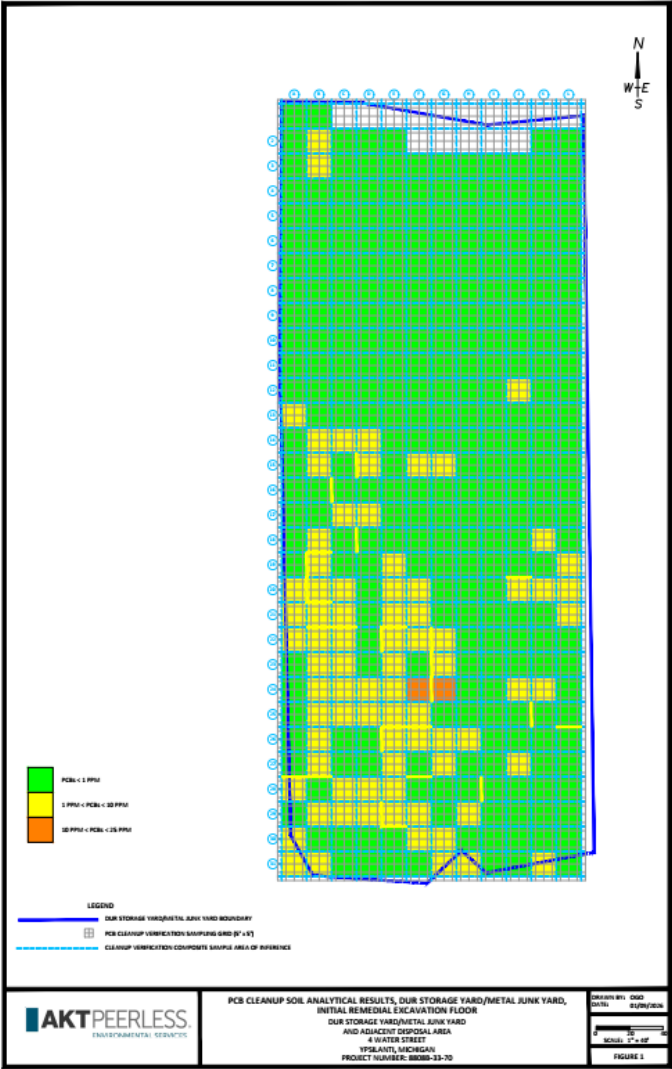
Junk Yard Cleanup Activities, 2025

- Notification of Self-Implementing Cleanup & Disposal of PCB Remediation Waste
 - PCB Cleanup Goal: < 1 ppm
 - Lead Cleanup Goal: < 400,000 µg/kg
- RCRA waste characterization to support landfill approvals
 - TSCA PCB hazardous waste
 - RCRA D008 hazardous waste
 - TSCA PCB + RCRA D008 mixed hazardous waste
 - RCRA D006 + D008 hazardous waste
 - Non-hazardous waste
- Cleanup activities implemented September-December 2025
 - PCB site characterization and RCRA waste characterization data provided a **biddable scope of work to achieve both cleanup objectives** without significant data gap risks.

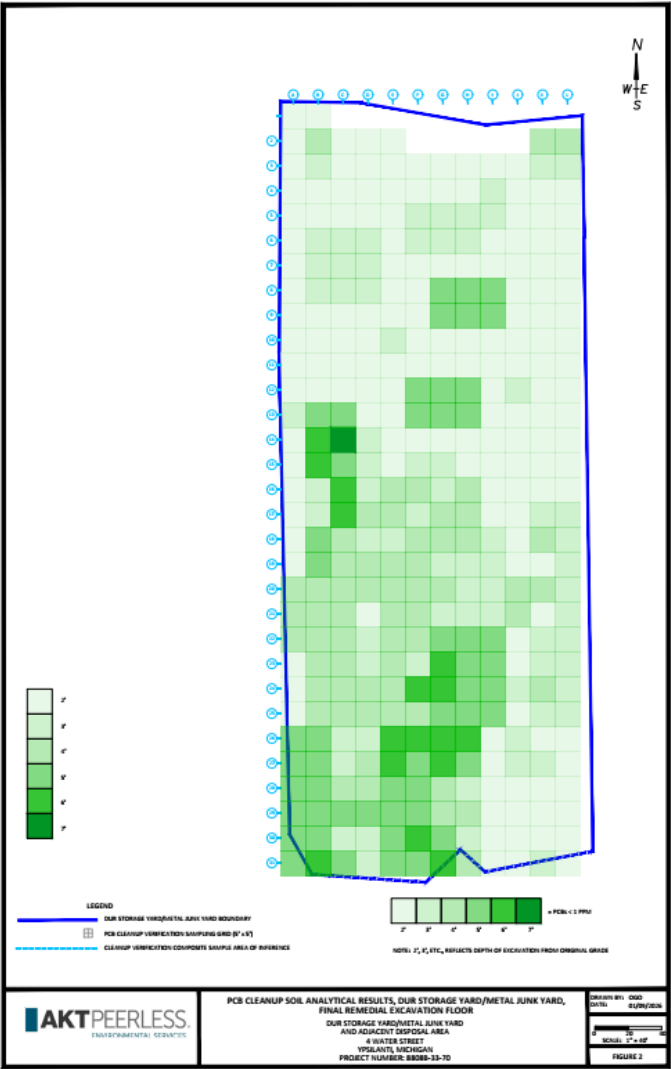
Junk Yard Cleanup Success



Before Cleanup



VSR Results After Initial Excavation



VSR Results After Final Excavation

Summary of 2025 Excavation, Transportation, Disposal and Backfill

Removal Area	Soil Type	Tonnages Removed
Hazardous Waste Area	Hazardous	4,879.69
	Non-Hazardous	1,457.68
Non-Hazardous Waste Area	Non-Hazardous	8,740.76
Total	Contaminated Soil	15,078.13
Backfill	Class II Sand	4,591.01

- **Hazardous Waste Excavation Area**
 - Exceeded estimated tonnage of 4,500 tons in ITB
 - 4 Separate Waste Streams
 - Total tonnage removed = 6,337.37
- **Non-Hazardous Waste Excavation Area**
 - Exceeded estimated tonnage of 8,250 tons in ITB
 - Total tonnage removed = 8,740.76
- **Backfill**
 - Clean (tested) Class II Sand
- **Topsoil and Seeding Recently Completed (June 2026)**



Conclusion & Questions

Conclusions

- PCBs were found to be the “common denominator” between Lead Area #3 and the PCB Area.
- TSCA PCB site characterization activities achieved meaningful horizontal and vertical delineation of the PCB release spanning these AOCs.
- The revised CSM was used to secure USEPA and landfill approvals of Self-Implementing Cleanup of the junk yard in 2025.
- ...and is being used to pursue USEPA and landfill approvals of Self-Implementing Cleanup of the junk yard cut disposal area in 2026.
- City will be releasing an RFQ for developers in the months ahead.

Questions?

- https://drive.google.com/file/d/18Pac5VY2K90_QOz8s6mCfxpVmQYUcq5u/view?usp=drive_link



A low-angle, upward-looking perspective of several modern skyscrapers. The buildings are constructed with dark frames and large glass windows, some of which reflect the sky. The perspective creates a sense of height and scale, with the buildings converging towards the top of the frame. The sky is a pale, overcast grey.

Thank you.