The Road Ahead: Redeveloping the Ford St. Louis Assembly Plant Site For the 21st Century

MWCC July 2016
Auto Manufacturing in St. Louis: A Long History
Plant Additions
Reusability: Building

- Very customized
- Additions
- Ceiling height
- Columns
- Not so much
Reusability: Property

- Acreage
- Interstate
- Rail onsite
- Airport
- Yesyesyes!
Getting Started

• Ford performed Phase I and initial master list of ‘environmental features’ (aka recognized environmental conditions).
• Ford enrolled in BVCP.
• Aviator Business Park, LLC (buyer) joined shortly after as co-voluntary party.
Environmental Features Inventory

- Main Assembly, Body Shop, Paint Dept., Material Handling areas
- Waste Storage, Paint Sludge Treatment, Wastewater Treatment Plant
- Power House, roof-mounted transformers
- Fuel and solvent ASTs and piping
- Chemical/paint/solvent storage areas
- Trenches, vaults, hydraulic lifts
- Railroad spurs
- Asbestos, lead paint, lighting, PCB materials

>> Hundreds of environmental features <<
>> All were not necessarily contaminated <<
Environmental Features

For a Detailed Listing of REC's by Number, Refer to Table 1: SUMMARY OF RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs)
For a Detailed Illustration of RECs, see Figures 5-19.
Environmental Features
Remediation Plans

- Ford (Golder) – 5 Specific/identified subsurface items
- Panattoni (ATC)
  - Building abatement/demo
  - Concrete Reuse
  - Anything else that came up: “Contingencies”
Contingency Plans

- Addressed fill, unknown pipes/pits/tanks, any unusual conditions encountered as concrete slabs removed.
- Sampling, analysis, remediation protocols.
- Allowed for site work to proceed without halting during evaluation of suspect areas.
- “On-the-fly” response was key to smooth progress through the cleanup.
- Highly dependent upon open communication.
- Aggressive sampling & cleanup - nothing missed.
What about all that concrete?

- 500,000 tons concrete and masonry
- Stained areas, pits, sumps, trenches
- Background metals content, paint/coatings
- Ford: conservative environmental standards
- Result: Concrete Reuse Plan
  - Pre-sampling and characterization
  - 4 grades from ‘squeaky clean’ to ‘landfill’
  - Met standards of all parties
Remediation

Demo

Concrete

Subsurface
Large Scale Demolition
The Floor And Beyond
Roof Top Transformers

13 Transformer Rooms

After testing
Roof Top Transformers Handling
Impacted Concrete
Paint Sludge Pit Cleanouts
Remediation: PST Lagoons
Remediation: Weather Challenges
Bird’s Eye View
Remediation By the Numbers

Building Materials
- 16,000 linear ft asbestos pipe insulation
- 21,000 sq ft vinyl asbestos flooring
- 20,000 sq ft asbestos cement exterior siding
- 100 asbestos insulated fire doors
- 71 tons buried asbestos materials
- 12,750 fluorescent tubes
- 285 PCB fluorescent light ballasts
- 172,000 lb of PCB transformers
- 61 tons high level PCB contaminated concrete, 482 tons low level
- 8100 gal PCB transformer oils

Groundwater
- Traces of contamination
- No remediation required
Remediation By the Numbers

Soil, Buried Wastes and Concrete
- 44,000 tons contaminated soil, paint sludge and concrete disposed as Special Waste in sanitary landfill
- 365 tons hazardous waste (Pb-contaminated soil) treated onsite, landfill disposed as special waste
- 395 tons railroad ties landfilled

Wastewater
- Millions of gallons sampled and discharged to sewer
- 386 tons wastewater sludge landfilled
Recycling Highlights

- 425,000 tons crushed concrete and masonry reused onsite
- 2700 tons milled asphalt reused offsite
- 50,000 tons steel recycled
- 7,500 tons copper and stainless recycled

>> 98% of Building and Pavement recycled <<
Documenting A Massive Project

• Issues
  – How to find all the records about a particular area or location?
  – Traceability of sample results
  – Addressing conditions encountered during redevelopment

• Solutions
  – Final Reports provided clear tracing methods.
  – Post Closure Contingency Plan
Ready!
Aviator Business Park
Lessons for Other Sites

• No matter what you think you know, be ready for ‘undocumented features’
• Flexibility
• Quality team = quality project
• Frequent communication
• Team effort
• Consider future owners/occupants
Special Thanks To

ATC Group Services
Aviator Business Park LLC
Essential Management Solutions
Ford Motor Company
Golder Associates
Panattoni Development Co.