

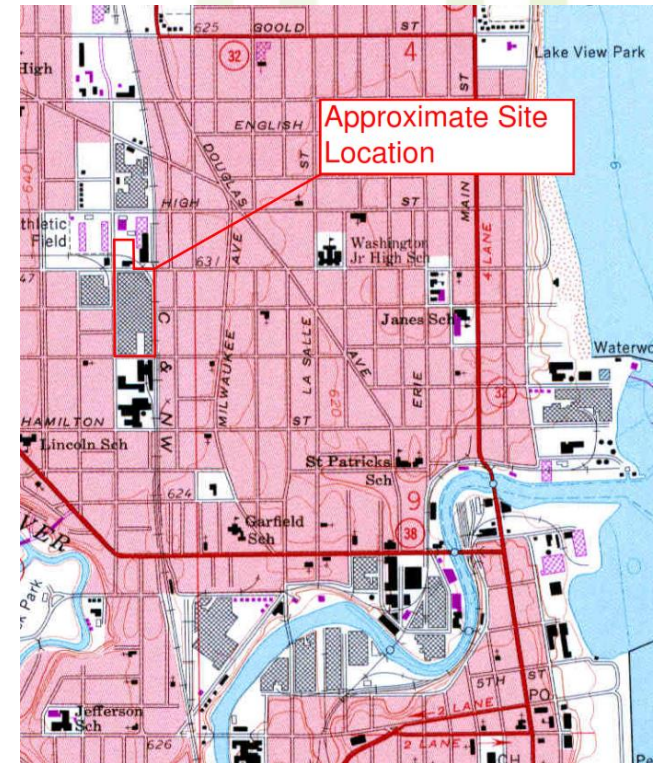
Former Racine Steel Castings – South Lot Site Remediation

1425 North Memorial Drive
Racine, WI



Site Description and Background

- 10.7 acre property
- Developed with two buildings
- Historically used as a steel foundry
- Most recently utilized for storage and salvage operations
- The City of Racine Redevelopment Authority acquired the property in 2013



Poor Management of Hazardous Substances

- Alleged dumping of waste sludge containing heavy metals, oils, paints, and foundry sand down storm sewers
- Documented spills including mineral oil, hydraulic oil, petroleum, and styrene (an industrial chemical)
- Smashing of chemical containing drums with chemicals spilling onto the ground
- Storage of PCB-containing transformers
- Discharging 1,500 gallons of core oil to the Root River via storm sewers

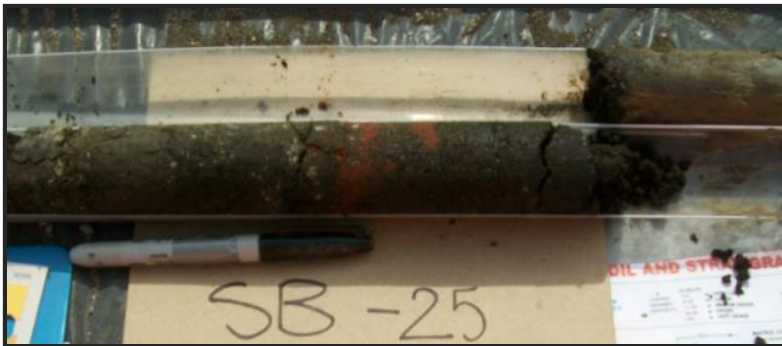
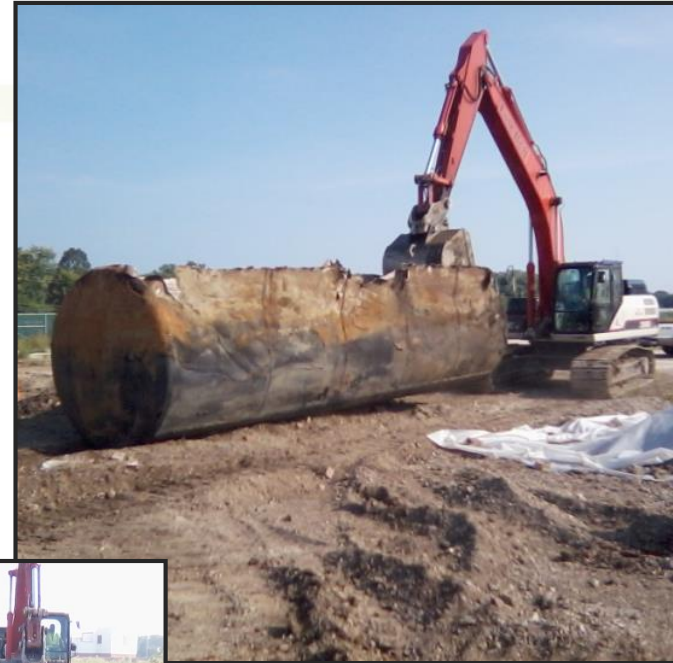


Racine Steel Castings Site Division



RSC – South Lot Site Investigation

- Objectives:
 1. Remove underground storage tanks (USTs)
 2. Investigate soil and groundwater quality
 3. Perform asbestos inspection



RSC – South Lot Site Investigation Results

- Removed 6 USTs
- Direct Contact Soil Impacts
 - Polychlorinated biphenyls (PCBs) up to 146 ppm
 - Polycyclic aromatic hydrocarbons (PAHs)
 - Lead and arsenic
- Groundwater Impacts
 - PCBs
 - PAHs
 - Arsenic and lead
- Asbestos in building and garage



VOCs PCBs
PAHs Metals

Legend

Sample Locations

Type	
Monitoring Well	— Suspected Sewer
Piezometer	— Suspected Underground Pedestrian Tunnel
Temporary Well	— Suspected Underground Process Piping
Soil Boring	— Sanitary Pipe
Surficial Soil Boring	— Stormwater Pipe
Subsurface Soil Probe	— Water Mains
Proposed Monitoring Well	— Approximate Site Boundary
Proposed Soil Boring	— VOC
Gate	— PCB
UST	— PAH
	— RCRA Metals



RSC – South Lot Remedial Options

Remedial Option	Cost	Time	Pros	Cons
<ul style="list-style-type: none"> • In-Situ Soil Stabilization (ISS) of PCBs above direct contact • Direct contact barrier across site • Monitored natural attenuation (MNA) of groundwater • Asbestos abatement 	\$1.8 million	Months	No hauling or disposal required, PCBs are solidified	All contamination remains onsite
<ul style="list-style-type: none"> • Excavation and offsite disposal of PCBs above direct contact • Direct contact barrier across site • MNA of groundwater • Asbestos abatement 	\$1.7 million	Weeks	All PCBs above regulatory limits removed	Hauling and disposal required
<ul style="list-style-type: none"> • Direct contact barrier across site • MNA of groundwater • Asbestos abatement 	\$1.6 million	Weeks	No hauling or disposal required	All contaminants remain onsite, PCBs are addressed only with barrier

Estimated Cost of RSC – South Lot Remediation

Activity	Subtotal
Excavation and Offsite Disposal of PCB-Impacted Soil to 4 feet below ground surface (~860 tons)	\$ 129,000
Concrete Removal (~250,000 ft ²), Clay Cap Installation (~21,400 yd ³), and Gravel (~192,500 ft ³)	\$ 1,268,500
Groundwater Monitored Natural Attenuation (~15 wells sampled for 8 quarters)	\$ 144,000
Asbestos Abatement of Main Building and Garage	\$ 60,000
Bid Specifications, Permit Acquisition, Construction Oversight, Confirmation Sampling, Construction Documentation Report, and Closure Request	\$ 85,000
South Lot of Property Total	\$ 1,683,500



RSC – South Lot Future Plans

- Closure through the Wisconsin Department of Natural Resources (WDNR) with institutional controls
 - Cap maintenance plan for direct contact barrier
 - Industrial land use restriction
 - PAL waivers, as appropriate
- Redevelopment with a new light industrial user
 - 8.8 acres of land
 - Ideally located adjacent to railroad

