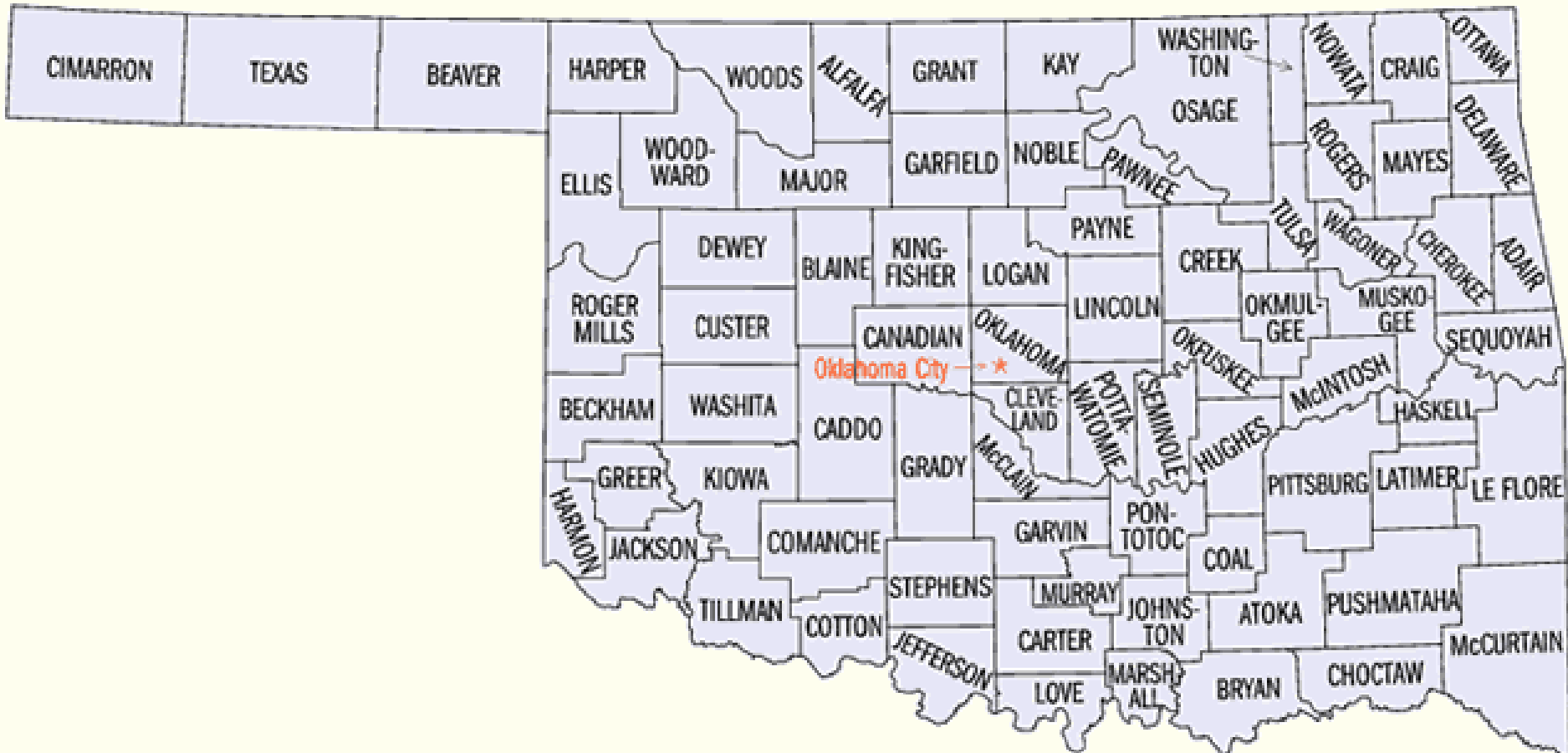




Tar Creek Superfund Site

Ottawa County, Oklahoma

Oklahoma County Map





History

- Tri State Mining District 1891-1970
- Towns of Cardin, Commerce, North Miami, Picher, Quapaw
- National Priority List in 1983
- Named after Tar Creek
- LEAD, cadmium, and zinc
- Five Operable Units (OU 1-5)



Lead and Zinc





Picher, OK 1919

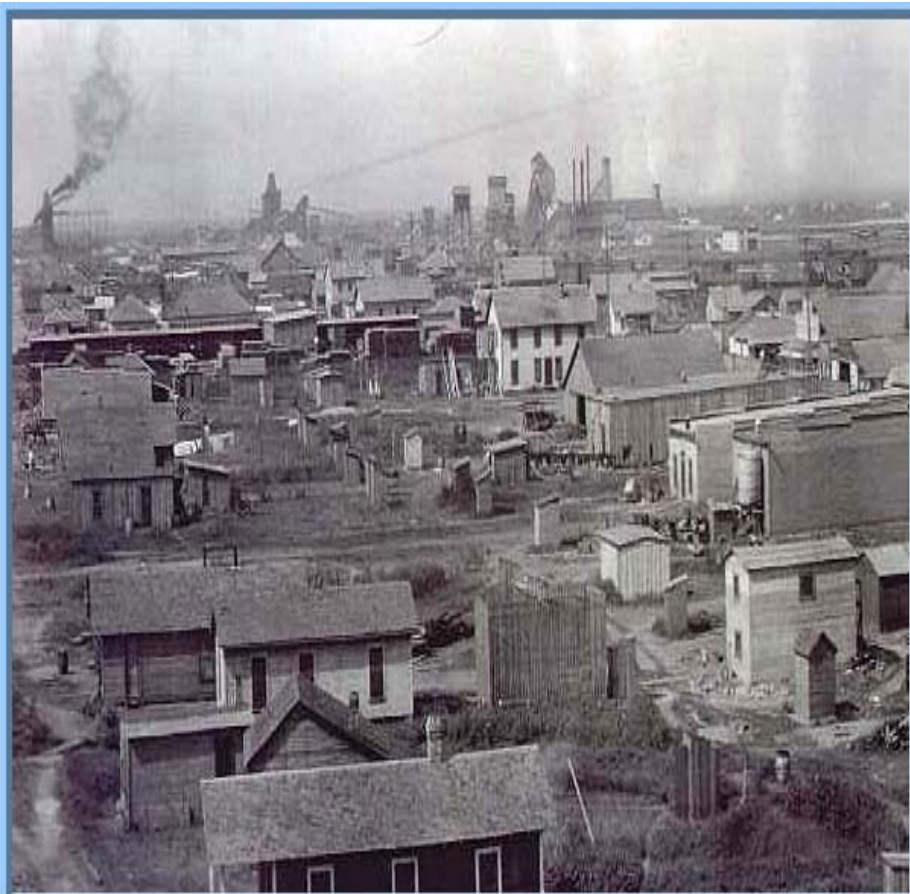




Picher, OK Main St 1920



Tar River (Cardin), OK 1923





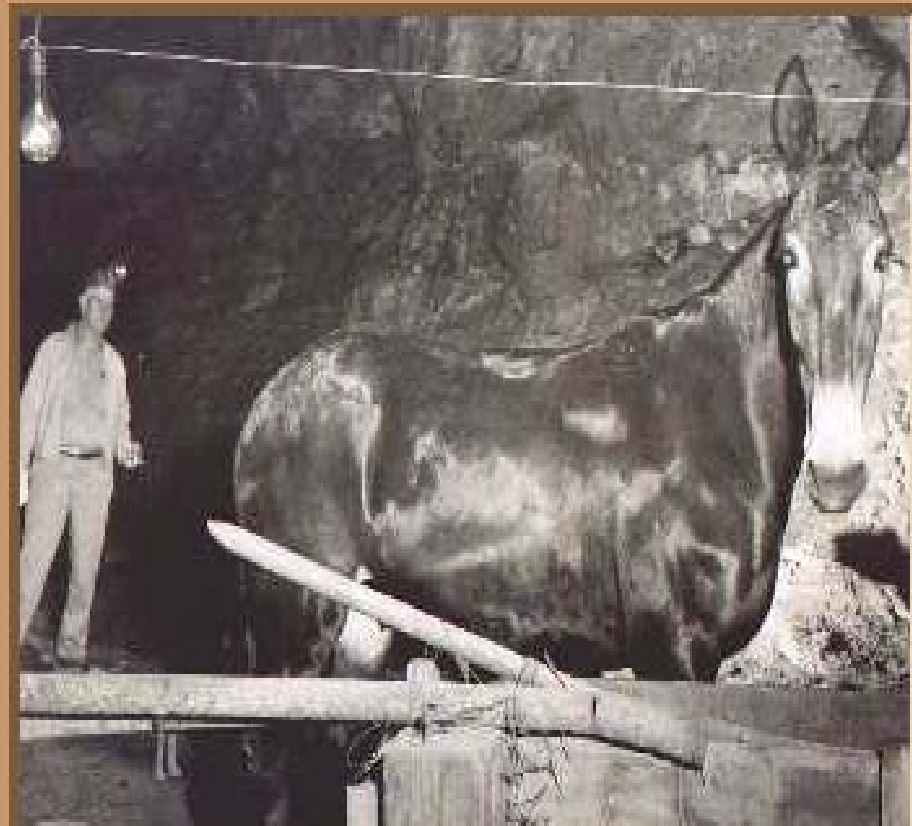
Commerce, OK 1917 Commerce Ave



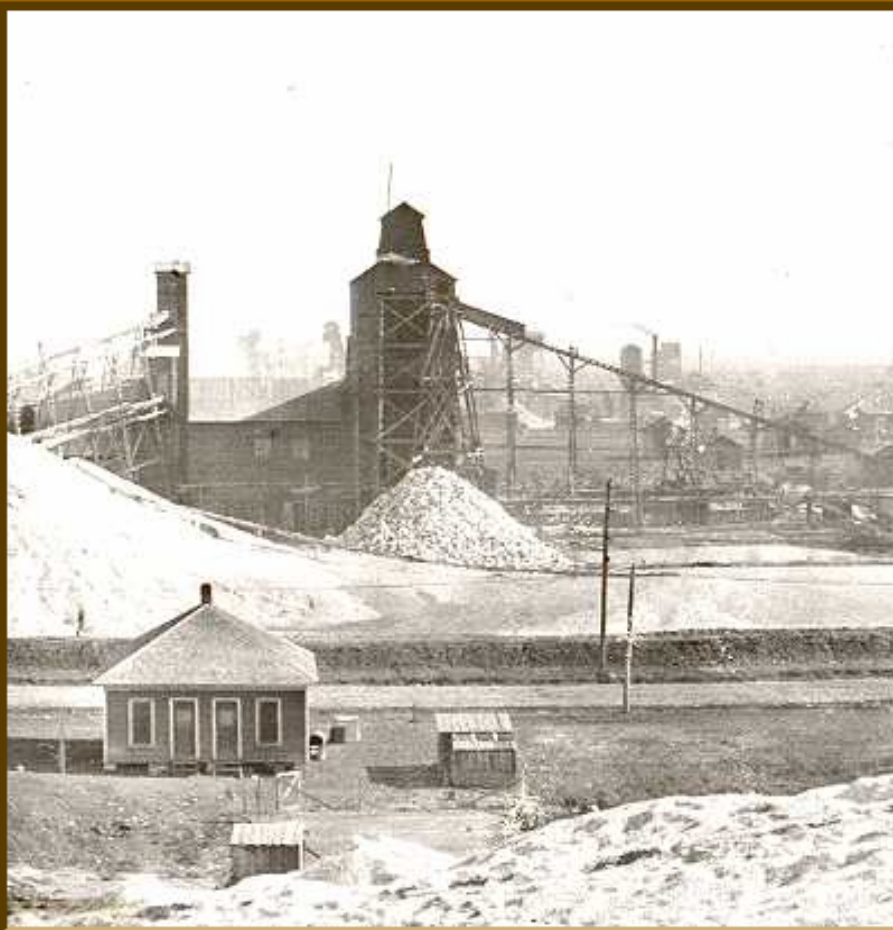
Miners



Miners

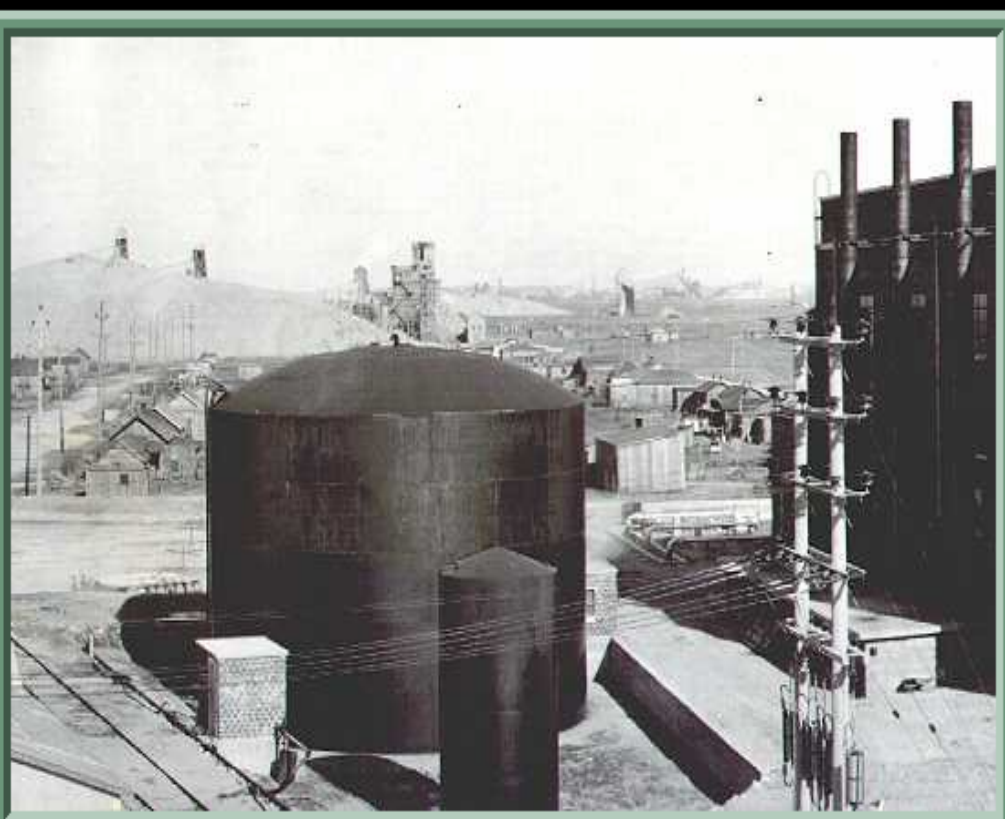


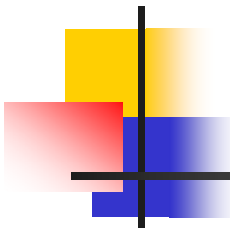
Mills





Pump Station





Operable Unit One Surface Water

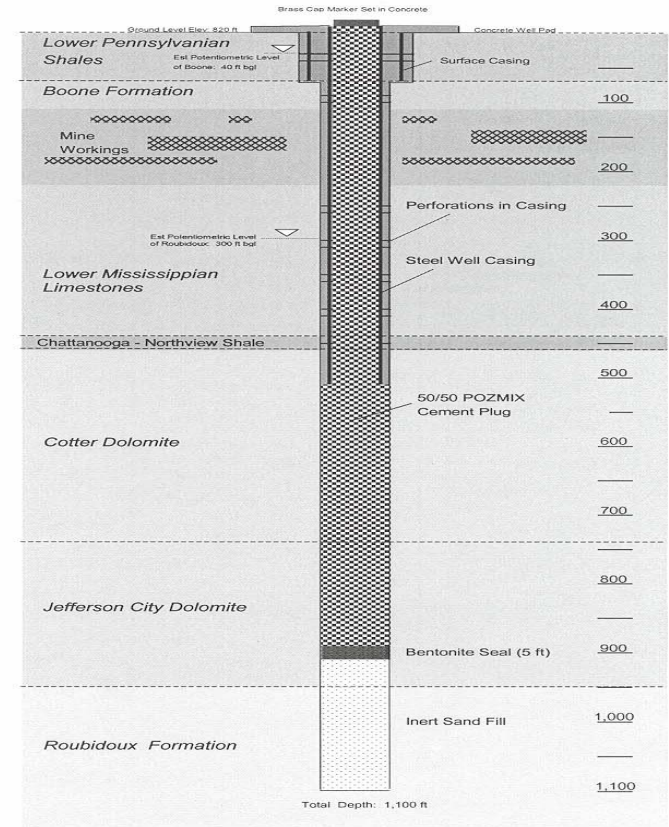
- Addressed surface water issues
- Pumps used to remove water from mines turned off in 1970
- Mine water discharge begins
- Mayer Ranch first report of surface water issues



Diversions and Dikes



Monitoring Wells





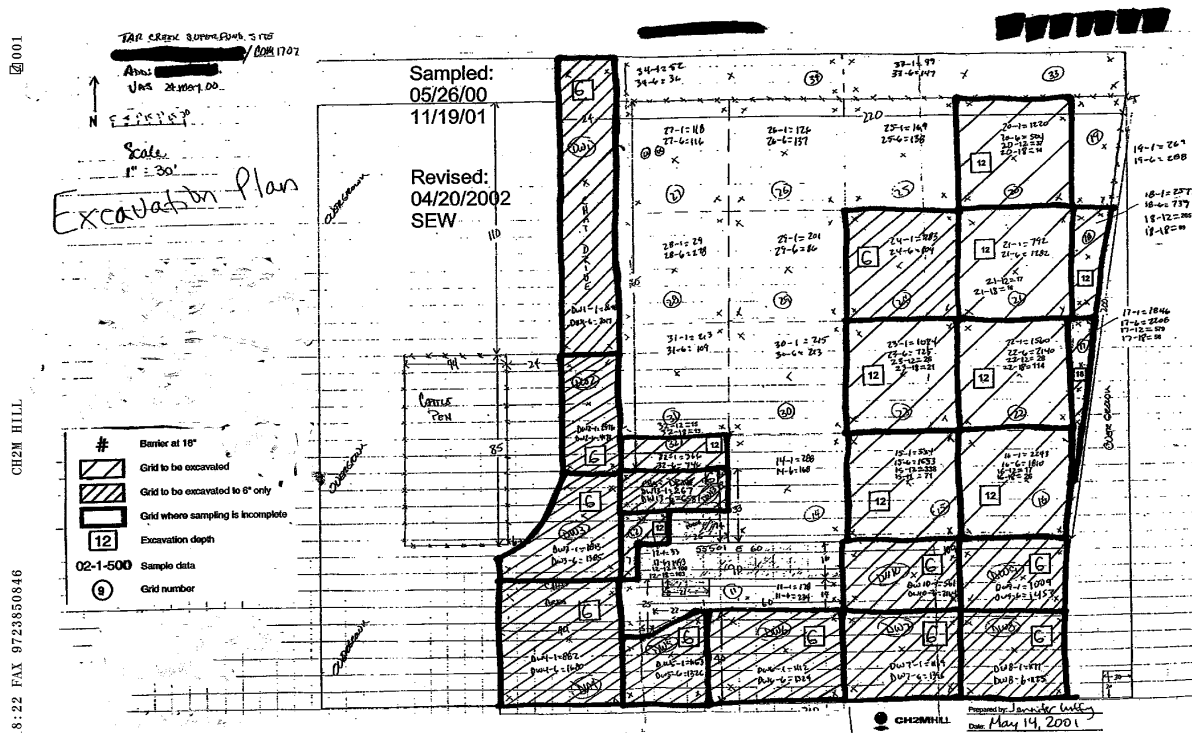
Operable Unit Two Yard Remediation

- Addressed concern of elevated blood lead levels in children
- High access areas and residential properties
- Remove soil \geq 500 ppm lead
- Dig surface to 18" deep
- Backfill with clean soil
- Place new sod

Soil Sampling

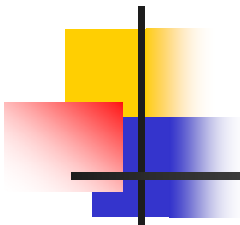


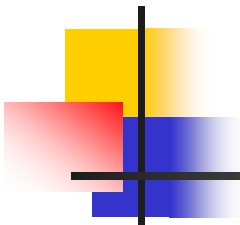
Property Grids, Excavation Plans

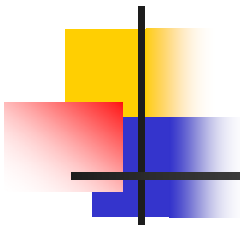


Remove Soil from the Grid





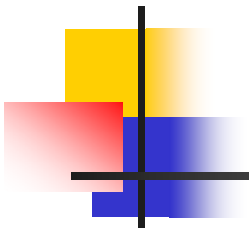


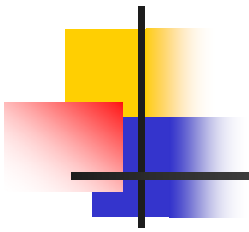




Haul Soil to Repository









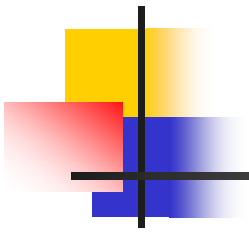
Backfill With Clean Soil



2003 4 1

Clean Borrow Source





Place Sod



Water Sod



Survey Property Grades





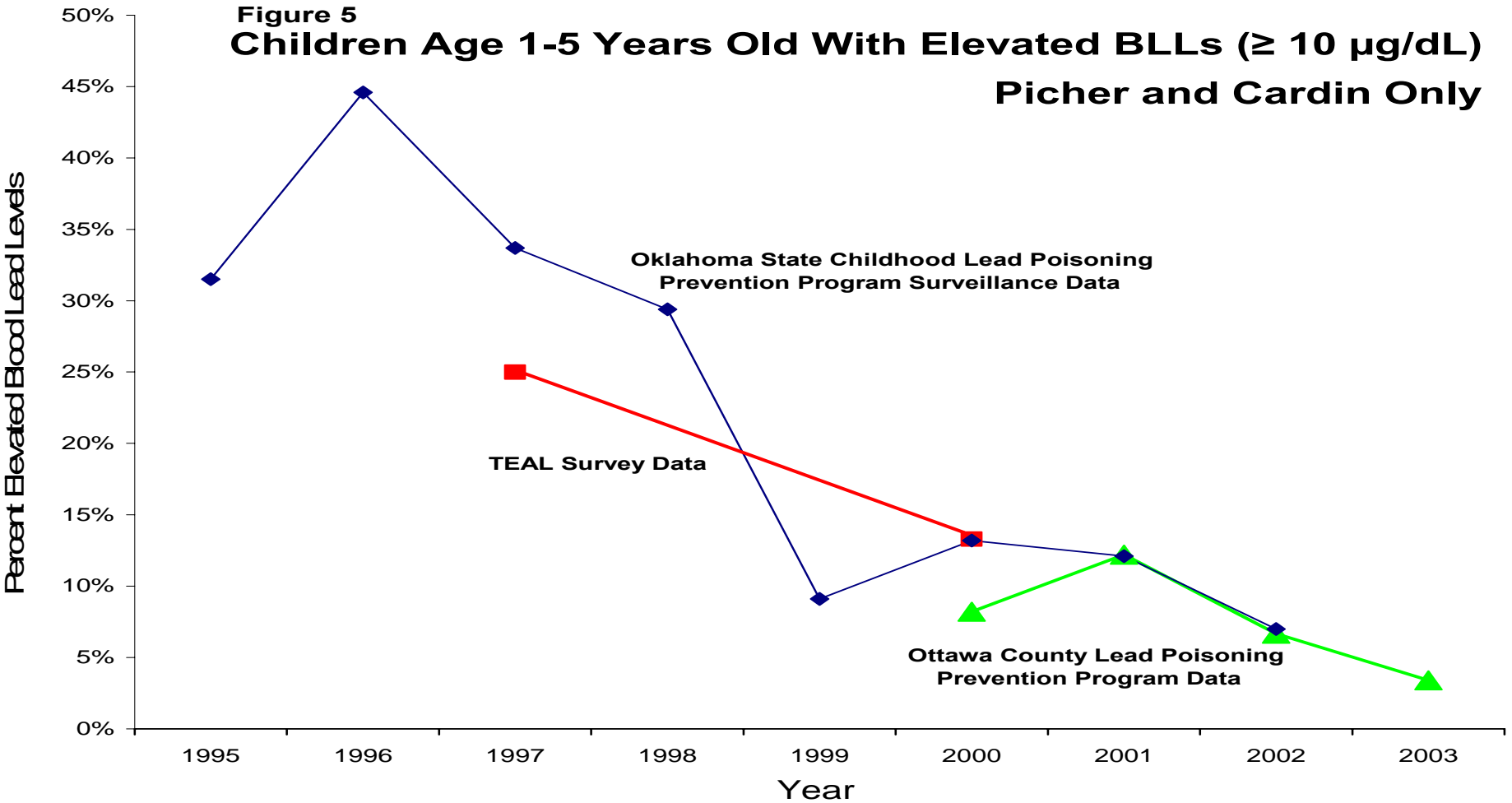
The Finished Product: A Clean Yard



2003 11 20

Children's Blood Lead Levels (ATSDR)

Figure 5
Children Age 1-5 Years Old With Elevated BLLs ($\geq 10 \mu\text{g/dL}$)
Picher and Cardin Only



Operable Unit Three: Eagle Picher Lab

- Removal action
- January 2002
- Removed laboratory chemicals





Eagle Picher Lab

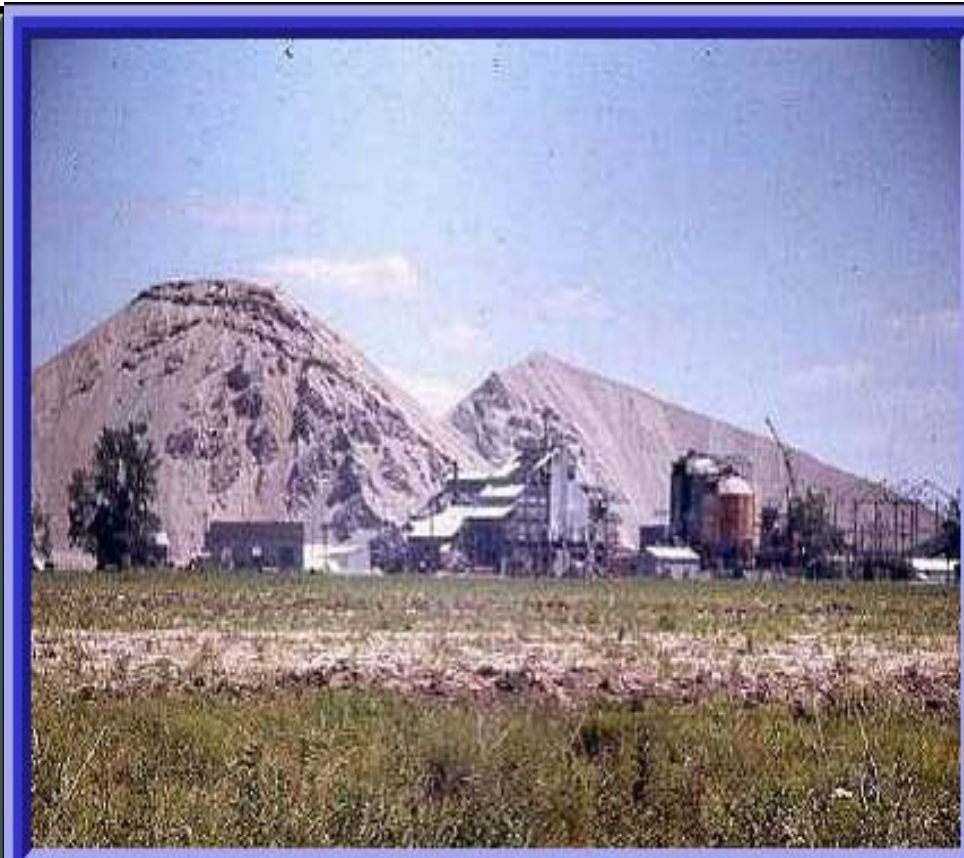
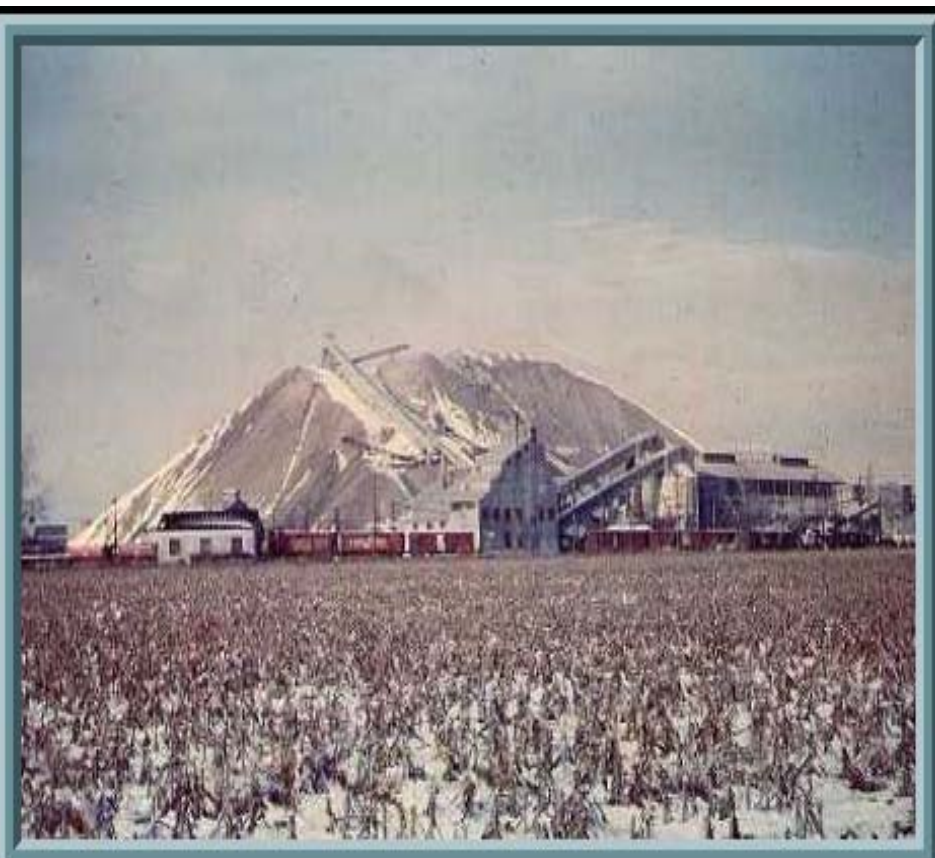




Operable Unit Four: Mining Wastes

- Addresses chat piles, mill ponds, and flotation ponds
- Currently in Remedial Investigation
- Pilot Projects

Chat Piles (Central Mill 1970)



Aerial Photo – Chat Piles





Chat Piles



Chat piles





Mill Ponds



EPA Pilot Project: Chat Injection





Operable Unit Five: Tar Creek / Neosho River

- Address downstream mining effects in the Tar Creek/Neosho River Watershed
- Joint effort with U.S. EPA R7, Oklahoma and Kansas



Tar Creek



Mine Cavern Pillar (Subsidence)





Subsidence Picher, OK 1967





Subsidence Quapaw, OK





Subsidence Hockerville, OK

