Remediation and Redevelopment of Historical Smelters

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Smelter Cleanup

- Is actually a cleanup of the entire smelter town due to the wide use of the smelter waste as fill and gravel.
- No records were kept of where the smelter waste was taken.
- We look for visible smelter waste and use extensive sampling methodologies (wet chemistry, XRF).
- Often one of the biggest issues is getting permission from the land owner to sample and/or clean up their property.
Smelters in Oklahoma

- DEQ has located 17 smelters in Oklahoma
- Some operated side by side and were acquired by a larger neighbor
- Therefore, there are only 13 smelter “sites” on which to concentrate cleanup efforts
- Early attention was given to the three longest operating smelters
  - Bartlesville
  - Blackwell
  - Henryetta
Four different cleanup programs have been used to oversee smelter cleanups

- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLIS, aka Superfund)
- The Resource Conservation and Recovery Act (RCRA, aka Hazardous Waste law)
- Voluntary Cleanup Program
- Brownfields Program
Major mining companies
- Cyprus Amax
- Phelps Dodge
- Freeport MacMoRan Gold and Copper
- ASARCo

Some small entities just closed shop
- No surviving corporation or responsible parties
Redevelopment Potential

Location, Location, Location

Metal contamination easy to contain
The single most important factor in redeveloping any contaminated site

- Access to roads, rail, ports, airports, and customers
- Developers are interested in good locations
- Developers are worried about the unknowns associated with contaminated property
  - What is hidden?
  - How much will it cost?
  - What is the liability?
Six smelter sites have been cleaned up
Two cleanups are moving forward
Two cleanups are stalled due to budgetary issues
One smelter has proven difficult to locate
One smelter is within the Tar Creek Superfund site and will be addressed during that cleanup
One smelter has been investigated but did not score high enough on the HRS to warrant Superfund action and no viable responsible party has been identified

In Oklahoma
Four Smelter Sites Have Been Redeveloped

- Two smelter sites were incorporated into the same Superfund cleanup in Henryetta, Oklahoma
  - Now a developing industrial park
- The Blackwell Smelter site was developed into an Industrial Park prior to cleanup
  - Cleanup occurred around the active businesses
- The cleanup of the Sand Springs Smelter site engendered two major developments
  - Cimarron Center
  - Keystone Corridor
Successful Because

- The project had a local “champion”
- Location – US Hwy 75 and I-40
- EPA paid for the cleanup through the Superfund Removal Program
Federated Metals
Successful Because

- Responsible Party paid for the cleanup
- Developer worked with Responsible Party and portions of the development are part of the remediation, i.e., the parking lot is the final cap to the disposal cell
- LOCATION
  - It is next to the only bridge over the Arkansas River for miles.
Across the street from Cimarron Center
Used to be a contaminated neighborhood
Yards were cleaned up as part of the Federated Metals Cleanup
Once Cimarron Center took off, this property became highly desirable for additional retail development
City acquired the property, conducted additional environmental work, and made it available for development
Several retail and services have located on the property and it continues to develop.
Most metals do not migrate under normal conditions; once placed in a disposal cell they do not move.

Often the wastes are on the surface and the soil and groundwater are relatively clean under the waste.

Only one smelter in Oklahoma has a groundwater issue.

The smelter wastes are earthen and support weight.

They are often in desirable locations.

Responsible parties may have a vested interest in cooperating with a community to clean up the property so it can be redeveloped.

The development of the property adds a comfort level that the property will be maintained.

Why Smelters Can Be Easily Redeveloped
The contamination is usually widespread and many property owners must be involved.
Costs can be high if there is no Responsible Party.
Liability
Superfund
Brownfields provides legal means of limiting a new owner’s liability.
Third Party
Time
Presumptive Remedies

- Consolidate and cap on site
- Consolidate, treat to stabilize, and cap on site
- Dig and haul
On-Site Disposal Cells

- Must be maintained forever
- Deed Restrictions on digging
- Institutional Controls
- What happens if they fail?
  - Long Term Stewardship
Questions?

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