OMAHA LEAD SUPERFUND SITE
Omaha, NE

Pauletta France-Isetts
Remedial Project Manager
OMAHA LEAD SUPERFUND SITE

- Largest Residential Lead Site in the U.S.
- City of Omaha City Council requested assistance from EPA in 1998 to address childhood lead poisoning in Omaha
- Blood testing showed 596 Douglas County children exceeded CDC standard of 10 micrograms per deciliter (10 ug/dl) in 1998
- In 1998, EPA began investigation under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
SITE DESCRIPTION

- Site consists of residential and residential-like properties that contain soil lead levels above health-based standards.
- Properties with lead concentrations below health-based standards not part of Site.
- Soil testing indicates that about 35% of the residential properties exceed a 400 ppm soil lead screening level.
- Most properties are within 2–3 miles of former smelting facilities.
SITE HISTORY

- American Smelting and Refining Company (ASARCO) operated in Omaha, NE from 1871 to 1997
- Facility located on 23-acre site at 500 Douglas Street - owned by Union Pacific until 1946
- ASARCO lead refinery processed lead bullion, recovering other trace metals and removing impurities
- Property was transferred to the City of Omaha in 1997
- Cleanup of the ASARCO facility performed by the company under a State Order
Soil lead concentrations in ordinary yard samples of Sector 15 (NNW) as a function of distance from the smelter (all samples in 0.25 km increments were averaged).
Smelters at Night, Omaha, Neb.
Former ASARCO Site
Rick’s Landing
Aeron Ferer and Sons Company constructed a secondary lead smelter and lead recycling facility during the early 1950s at 555 Farnam Street.


Douglas County purchased property, performed cleanup, and created Heartland of America County Park.
EPA RESPONSE ACTIONS

- EPA began soil cleanups in 1999 under EPA’s Superfund Emergency Response authority:
  - Residential properties with a yard quadrant exceeding 1,200 ppm
  - Residences with children with elevated blood lead levels (EBLs) with a yard quadrant exceeding 400 ppm
  - Child care facilities with a yard quadrant exceeding 400 ppm
- Between 1999 and 2004, soil cleanups completed at 711 residential properties
EPA RESPONSE ACTIONS

- Omaha Lead Superfund Site (OLS) added to the EPA National Priorities List April 2003
- Remedial Investigation (RI), Feasibility Study (FS), and Risk Assessment for the Interim Record of Decision completed during 2004
COMMUNITY INVOLVEMENT

- EPA established two Public Information Centers (PICs)
- EPA staff meets regularly with a Community Advisory Group (CAG)
- Fact Sheets are issued in both English and Spanish
- A brochure developed to explain the Superfund program (versions in English and Spanish)
- EPA funds Public Service announcements on cable TV describing the dangers of lead
INTERIM RECORD OF DECISION

- Interim ROD signed December 15, 2004
- EPA began soil cleanups in 2005 under Superfund Remedial authority
  - Residential properties exceeding 800 ppm
  - EBL residences exceeding 400 ppm
  - Child care facilities exceeding 400 ppm
  - Stabilization of lead-based exterior paint
  - Health education
EPA INTERIM REMEDIAL RESPONSE

- EPA Interim Remedial Response occurred between December 15, 2004 and May 13, 2009
- IAG with U. S. Army Corps of Engineers (COE) to perform soil work from 2005 to 2007
- Site specific contracts with small business entities to perform the soil work from 2006 to 2009
- Site specific contracts with small business entities to stabilize exterior lead-based paint (LBP) 2008 - 2009
INTERIM REMEDIAL ACTION PROGRESS

- 2005 – 1,059 residential properties remediated
- 2006 – 1,044 residential properties remediated
- 2007 – 1,000 residential properties remediated
- 2008 – 800 residential properties remediated
  1,000 LBP stabilizations
- 2009 – 70 LBP stabilizations (as of May 13)
2008 REMEDIAL INVESTIGATION

- 42,276 residential properties sampled
- Statistical analysis of soil lead data performed to define Final Focus Area; Final Focus Area boundary includes areas where fewer than 5% of properties exceed 400 ppm
- 27 square-mile Final Focus Area
- 39,764 residential properties sampled within the Final Focus Area; 2,512 residential properties sampled outside the Final Focus Area
- 2008 updated Risk Assessment
FINAL ROD

- Final ROD signed May 13, 2009
- Remedial Action Objective -- Reduced risk of lead exposure to young children such that an individual child, or group of similarly-exposed children, have no greater than 5% chance of having a blood lead concentration exceeding 10 ug/dl
- Implementation of Final Remedy
  - Excavation and soil replacement at an additional 10,466 properties
  - Exterior LBP stabilization at an additional 4,807 properties
  - Interior dust response at 1,445 properties
  - 5-10 years to complete
  - Construction cost $237 million, including possible contingencies
FINAL REMEDIAL ACTION

- **Progress during 2009**
  - 1,018 residential yards remediated
  - 1,130 LBP stabilizations by EPA contractors

- **Progress during 2010**
  - 2,567 residential yards remediated
  - 1,417 LBP stabilizations
  - 35 Health education sessions /interior sampling/vacuum delivery

- **Progress during 2011**
  - 2,127 residential yards remediated
  - 1,417 LBP stabilizations
  - 1,145 Health education sessions /interior sampling/vacuum delivery

- **Progress during 2012**
  - 1,200 residential yards remediated
  - 498 LBP stabilizations
  - 1,091 Health education sessions /interior sampling/vacuum delivery
CLEANUP PROGRESS

As of March 19, 2013, the following has been accomplished at the Omaha Lead Site:

- 41,176 Residential Properties have been sampled
- 11,402 Residential yards have been excavated and restored to address lead concentrations above 400 ppm
- 12,081 Lead-based Paint Assessments have been performed
- 5,815 Lead-based Paint Stabilizations have been performed
- 2,345 Health education visits and sampling have been conducted
DOUGLAS COUNTY HEALTH DEPARTMENT
CHILDHOOD LEAD POISONING PREVENTION PROGRAM

- 1992-1998: 27% - 42% (by zip code) of tested children living in the OLS had an EBL
- Rate of EBL children near OLS steadily decreasing since 1997
- Latest data (2007) shows 219 of 238 confirmed EBL children (92%) in Douglas County reside near site
SITE CLEANUP
REQUIRES TEAM EFFORT

Response actions at Omaha Lead Superfund Site have been ongoing since 1999
Field office established in 1999
Oversight of site specific contractors require on-site EPA presence both RPMs and OSCs – over 17 EPA staff have worked at the Omaha Lead Superfund Site
EPA partners in the cleanup effort include:
- City of Omaha
- Douglas County Health Department
- Community Advisory Group
- Army Corps of Engineers