Introductions

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- Jay Timm, Illinois EPA, community relations coordinator;
  - 217-557-4972; jay.timm@illinois.gov
- Connie Sullinger, Illinois EPA risk assessor
- Clarence Smith, Illinois EPA, Manager, Federal Sites
- Heather Nifong, Illinois EPA, Chief, Bureau of Land
- Kevin Phillips, Ecology & Environment, Inc., Illinois EPA contractor
Agenda

- Presentation of Proposed Plan
  - Description of Operable Unit 4
  - Summary of investigation findings
  - Description of cleanup alternatives and Illinois EPA preferred alternative
  - Description of cleanup goals
  - Next Steps
- Questions
- Opportunity for public comment
New Jersey Zinc Superfund Site
Superfund Process

- Remedial Investigation & Feasibility Study
- **Proposed Plan/Public Comment/Record of Decision**
  - Illinois EPA will respond to public comments in a Responsiveness Summary
  - The selected alternative will be presented in a Record of Decision
    - Community will be informed via public notice
- Remedial Design/Remedial Action
Operable Unit 4

Off-Site Soils
Pilot Study Investigation (2013)

- **Purpose**: to determine the kinds of metals present in Village soils and their concentrations
- **41 randomly selected residential properties**
- **Over 1200 samples taken from these properties**
- **Samples were analyzed for metals**: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, thallium, and zinc
Pilot Study Results

- Samples were taken to 24 inches below surface
- Some metals exceeded “screening” levels:
  - Arsenic, Cadmium, Cobalt, Lead, Manganese
    - Arsenic & Lead: Present throughout the Village, mostly in the surface to 18 inches
    - Cadmium: Less frequently detected, generally in the surface
      - In gardens: from the surface to 18 inches
    - Cobalt: Rarely, 2 samples from 2 properties, in the surface
    - Manganese: Infrequently, generally in subsurface, below 6 inches
Operable Unit 4 Proposed Remedial Action
Purpose of the Cleanup

- To prevent ingestion, inhalation, and dermal contact of soil contaminated with metals concentrations above the designated cleanup goals for resident child, adult, and construction worker.
Scope of the Action

- Residential property
- Select commercial properties
- Residential vacant lots
- Public Property: parks, alleys and the school
Scope of the Action

- Properties to be addressed:
  - 814 residential lots (including vacant lots)
  - 5 special use areas: athletic fields, school, 3 parks, about 22 acres
  - Alleys, about 16 acres
Scope of the Action

- Soil samples will be collected from properties and analyzed
- If the cleanup goals are exceeded, that soil will be removed from the property
- Site-related material used as fill will also be removed
- Excavated areas will be backfilled with clean soil
- Properties will be restored with grass and landscaping
- Estimated 55,000 cubic yards to be removed
  - 27,000 cubic yards from residences
  - 28,000 cubic yards from special use areas & alleys
Remedial Alternatives

Evaluated within Scoping Document (October 2015), including an evaluation against nine criteria, as required by law.

- Alternative 1: No Action
- Alternative 2: Excavation and Management of Soils on the Former Plant Site Area
- Alternative 3: Excavation and Off-Site Disposal
Nine Evaluation Criteria

Criteria 1 & 2

1. Overall protection of human health
2. Compliance with applicable or relevant and appropriate requirements

- If an alternative does not meet one of these requirements, it cannot be considered further
Nine Evaluation Criteria

Criteria 3-7

3. Long Term Effectiveness
4. Reduction of Toxicity, Mobility, and Volume through Treatment
5. Short Term Effectiveness
6. Implementability
7. Cost
Nine Evaluation Criteria
Criteria 8 & 9

8. Support Agency Acceptance
9. Community Acceptance
Alternative 1

No action

- Required by the Superfund law to be evaluated
- Is not considered a valid alternative for OU4 because it does not meet the first criterion: overall protection of human health and the environment
Alternative 2

Excavation and Management of Soils on the Former Plant Site Area

- Soil samples taken from yards, parks, alleys, school
- Soil above cleanup goals will be excavated from these areas
- Excavated soil and fill material will be stockpiled in the plant area for future management
  - Fill material and more highly contaminated soil will be stockpiled at the base of the slag pile
  - Less contaminated soil will be stockpiled on plant site separately
- Estimated Cost: $13.1 million
Alternative 3

Excavation and Off-Site Disposal

- Same as Alternative 2, except:
- Excavated soil and fill material will be transported and disposed off-site in a landfill
  - Assuming all soil is “non-hazardous,” estimated cost is $21.2 million
  - Assuming all soil is hazardous, estimated cost is $30.8 million
Elements of the Action

- Access agreement with property owner to allow sampling and cleanup work
- Excavated areas will be backfilled with clean soil and restored to previous condition
- Owner will receive a letter from Illinois EPA documenting sample results and activities conducted on their property
- Use of Institutional Controls may be needed on certain properties
  - Marker barrier
  - Notification, possibly through a one-call system
  - Uniform Environmental Covenant on public property
  - Construction Support Program
  - Soil Repository
## Comparative Analysis

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Alternatives</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No Action</td>
</tr>
<tr>
<td>Overall Protection of Human Health and the Environment</td>
<td>_</td>
</tr>
<tr>
<td>Compliance with ARARs</td>
<td>_</td>
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<tr>
<td>Long-Term Effectiveness and Permanence</td>
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<tr>
<td>Reduction of Toxicity, Mobility, or Volume Through Treatment</td>
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<td>Short-Term Effectiveness</td>
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<tr>
<td>Implementability</td>
<td>✓</td>
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<tr>
<td>Cost (Net Present Worth)**</td>
<td>$0</td>
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<td>Support Agency Acceptance</td>
<td>U.S. EPA support will be determined after the public comment period ends.</td>
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<tr>
<td>Community Acceptance</td>
<td>Community acceptance will be evaluated after the public comment period ends.</td>
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</table>
Preferred Alternative

Alternative 2: Excavation and management of soil on the former plant site

- Less risk to community and workers due to less truck traffic on Village streets
- Less risk to other communities from possible trucking accidents or spills
- Same level of risk reduction within the Village at lower cost
- Responsibility for soil brought back to the plant site remains with the DePue Group
Cleanup Goals
Cleanup Goals for OU4

- Cleanup goals are based on protection to the most sensitive receptor, generally the residential child.
- Exposures from OU4
  - Ingestion (soil)
  - Inhalation
  - Skin contact
  - Ingestion of garden produce grown in contaminated soil
- Exposures from OU5
  - Ingestion (sediment, surface water, soil, fish)
  - Inhalation
  - Skin contact during swimming, boating, fishing
<table>
<thead>
<tr>
<th></th>
<th>Residential (mg/kg)</th>
<th>Garden (mg/kg)</th>
<th>Construction Worker (mg/kg)</th>
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<tbody>
<tr>
<td>Antimony</td>
<td>31</td>
<td>31</td>
<td>140</td>
</tr>
<tr>
<td>Arsenic</td>
<td>21</td>
<td>21</td>
<td>140</td>
</tr>
<tr>
<td>Barium</td>
<td>15,000</td>
<td>15,000</td>
<td>66,000</td>
</tr>
<tr>
<td>Cadmium</td>
<td>70</td>
<td>24</td>
<td>280</td>
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<tr>
<td>Total Chromium</td>
<td>120,000</td>
<td>120,000</td>
<td>510,000</td>
</tr>
<tr>
<td>Cobalt</td>
<td>23</td>
<td>23</td>
<td>930</td>
</tr>
<tr>
<td>Copper</td>
<td>3,100</td>
<td>3,100</td>
<td>14,000</td>
</tr>
<tr>
<td>Lead</td>
<td>400</td>
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<td>940</td>
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<tr>
<td>Manganese</td>
<td>1,800</td>
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<td>Mercury</td>
<td>23</td>
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<tr>
<td>Thallium</td>
<td>6.3</td>
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<tr>
<td>Zinc</td>
<td>23,000</td>
<td>10,000</td>
<td>100,000</td>
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Cleanup Goal - Lead

- Risk from lead is assessed differently from other metals
- Protective levels in soil based on lead level in children’s blood
- 400 mg/kg is considered protective, based on a blood lead level of 10 µg/dL
  - This level is under review at the federal level.
  - 400 mg/kg currently being used as cleanup goal at Hegeler Zinc near Danville and proposed for Mathiessen & Hegeler in LaSalle
What’s Next
Next Steps

- Review public comments/Responsiveness Summary
  - Illinois EPA will respond to public comments
- Complete the Record of Decision Summer 2016
  - The selected alternative will be presented in the Record of Decision; community will be informed via public notice
- Remedial Design 2016
- Negotiate new consent order Fall/Winter 2016
- Begin remedial action 2017
Public Comment

- Provide oral comment today
- Provide written comment today or by midnight, July 14, 2016
- Comment period may be extended for 30 days upon request
  - Request must be received prior to July 14, 2016
Public Comment

- Comments accepted via e-mail: epa.publichearingcom@illinois.gov

- Comments accepted through US mail, to:
  - Jay Timm, Illinois EPA
    Office of Community Relations
    1021 North Grand Avenue East
    Po Box 19276
    Springfield, IL 62794

- More information available at the Selby Township Library, or Illinois EPA’s office, or Illinois EPA’s website
  - http://www.epa.illinois.gov/highlights/document-explorer
  - http://www.epa.illinois.gov/public-notices/general-notices/index
  - http://www.epa.illinois.gov/topics/community-relations/sites/new-jersey-zinc/index