



Introduction to Superfund



U.S. ENVIRONMENTAL PROTECTION AGENCY

Welcome



Introduction to Superfund



- What is Superfund?
- What happens when a polluted site is discovered?
- What steps does EPA take to select a remedy at a site?
- What happens after a remedy has been selected?



Overview





How Did this Problem Begin?



- Little attention was given to hazardous waste until three sites made national headlines in the 1970s and early 1980s
 - Love Canal, New York (1978)
 - Valley of the Drums, Kentucky (1979)
 - Times Beach, Missouri (1982)



Love Canal, New York



- Love Canal heightened public awareness of the grave and imminent perils of unregulated hazardous waste dumping in communities





Valley of the Drums , Kentucky



- One of the earliest and most serious hazardous waste sites that helped motivate Congress to develop the Superfund Law





Times Beach, Missouri



- The site is a former incorporated city whose road system was sprayed with waste oil containing high levels of dioxin in the early 1970s





What is Superfund?



- Superfund was established in 1980 by an act of Congress authorizing funds for the cleanup of polluted sites
- Supported by taxes on petroleum products and chemicals, revenue was generated and used to fund the program
- The tax expired in 1995 and the program is now paid for by general revenues



Goals of Superfund



- Protect human health and the environment by addressing polluted sites
- Involve communities in the Superfund process
- Make responsible party pay for work performed at Superfund sites
- Return sites to productive use





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Who is Responsible for Cleanup?



- Potentially Responsible Party
- State Governments - Using Superfund Money
- Federal Government - Using Superfund Money





Site Assessment

What Happens When a Polluted Site is Discovered?



Site Discovery



- Potential sites are typically reported by the community or state agencies
- EPA investigates
- All important parties are notified of the conditions at the site





Preliminary Assessment



- Review site information
- Limited scope investigation to screen sites to determine the presence of a pollution release





Site Inspection



- Builds on the information collected during the PA investigation
- May test air, water, or soil at the site





How Sites Qualify for Superfund



- EPA has criteria to evaluate and rank polluted sites
- This process determines if a site is eligible for Superfund money



Hazard Ranking System



- A standard system to score the potential risk of a hazardous substance at a site
- Sites scoring at or above a regulatory established level are proposed for the National Priorities List
- This means the site qualifies for Superfund resources



Types of Response



- There are two basic types of response that EPA uses to address polluted sites:
 - **Remedial Actions:** Used to address complex sites needing long-term response actions
 - **Removal Actions:** Used to address emergencies and immediate threats to public health and the environment



Removal Actions



- Emergency Responses
- Time-Critical Removal Actions
- Oil Responses
- NRP/Counter Terrorism Response





National Responses



1997 Ohio River Flood Response

BP Oil Spill / Enbridge, MI, Oil Spill





Time-Critical Removal Action



Abandoned Plating Facilities





Remedial Response

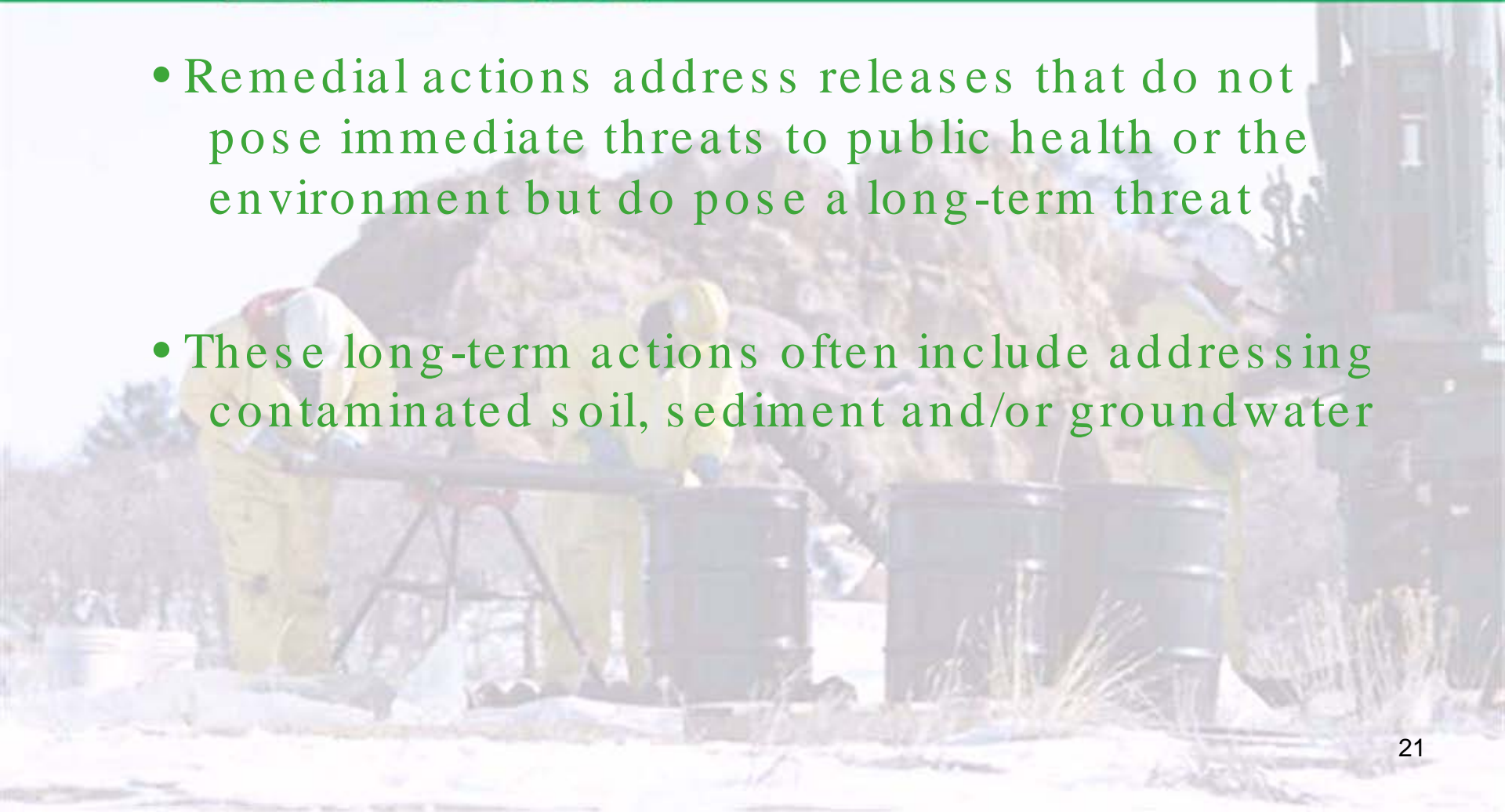




Remedial Actions Non-Emergencies



- Remedial actions address releases that do not pose immediate threats to public health or the environment but do pose a long-term threat
- These long-term actions often include addressing contaminated soil, sediment and/or groundwater





Remedial Investigation



- After a site is listed on the National Priorities List, a Remedial Investigation is conducted at the site, and provides answers to:
 - Where is the contamination?
 - How bad is the contamination?
 - Is the contamination moving?
 - Where is it going?
 - Who may be impacted?
 - What are the risks?



Remedy Selection

What Steps Does EPA Take to Select a
Remedy for a Site?



Remedy Selection - Evaluation Criteria



- EPA assesses each cleanup alternative against nine evaluation criteria.
 - Protective of human health and the environment
 - Complies with state and federal regulations
 - Long-term effectiveness
 - Treatment to the extent practicable
 - Short term effectiveness
 - Implementability
 - Cost
 - State acceptance
 - Community acceptance



Remedy Selection Proposed Plan



- A Proposed Plan does the following:
 - Summarizes alternatives in the Feasibility Study
 - Highlights proposed cleanup alternatives
 - Provides the public with an opportunity to comment in writing or in person
 - EPA provides a transcript for the administrative record



Record of Decision



- EPA's final decision on the cleanup actions, including cleanup goals, any significant changes to the proposed remedy, and a substantive summary of comments (responsiveness summary)
- Released to the public

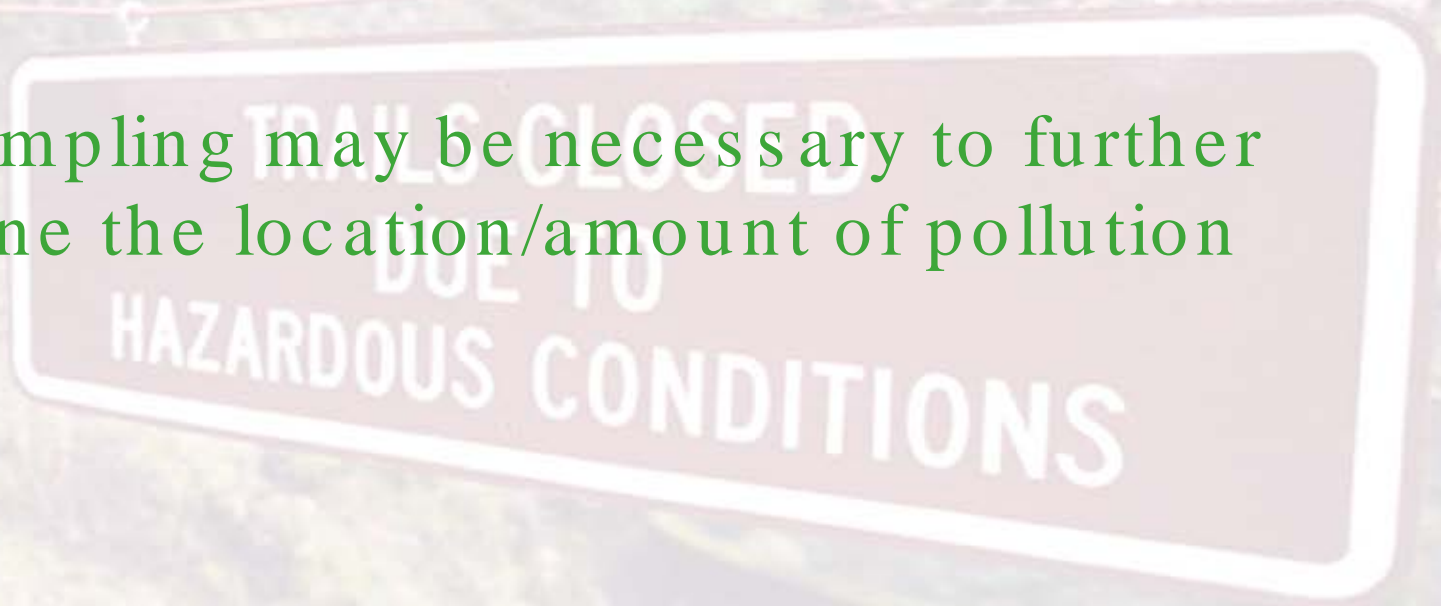


Remedial Design



- Plans and specifications for the chosen cleanup are developed

- Sampling may be necessary to further define the location/amount of pollution





Construction and Post Construction



- After all the planning at the site, the selected remedy is constructed
- Operation and Maintenance ensures that the required equipment is installed and that the remedy continues to be effective and operates as designed
 - caps, groundwater treatment systems, etc.
- Five-Year Review provides an opportunity to determine the effectiveness of the remedy selected

Contact Information

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