



700 South 1600 East PCE Plume – U.S. EPA Region 8 CERCLA NPL Site  
Salt Lake City, Utah

Community Advisory Group Meeting

# Superfund 101

July 27, 2016



**VA** Defining  
**HEALTH CARE** **EXCELLENCE**  
in the 21st Century

# Superfund 101

## Superfund History

### **What is Superfund?**

- Superfund or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) was established in 1980 by an act of Congress authorizing funds for the cleanup of polluted sites.

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## Superfund History

### **How Did This Problem Begin?**

- Little attention was given to hazardous waste until three sites made national headlines in the 1970s and early 1980s.

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## Goals of Superfund

- Protect human health & the environment by cleaning up polluted sites
- Cleanup is based on reducing a risk of potential exposure (the range is  $10E4$  to  $10E6$ )
- Involve communities in the cleanup process by providing updates on work progress, answering questions and providing draft final reports
- Make responsible parties pay for cleanups
- Return previously-polluted land to productive use

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## Who is Responsible for Cleaning up the Site?

- Potentially Responsible Parties (PRPs)
- State Governments
- Federal Government



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## Paying for the Cleanup

- Potentially Responsible Parties (PRPs) Pay
- If PRPs cannot pay or cannot be found, then the “Superfund” pays.
  - The “Superfund” is a trust fund mainly from taxes on crude oil and commercially-used chemicals

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## Site Discovery

- Potential pollution releases are reported by State agencies or the general public
- EPA and State investigates: multiple investigations are conducted including, preliminary assessment, site investigation and hazard ranking scoring before Superfund listing
- All important parties are notified

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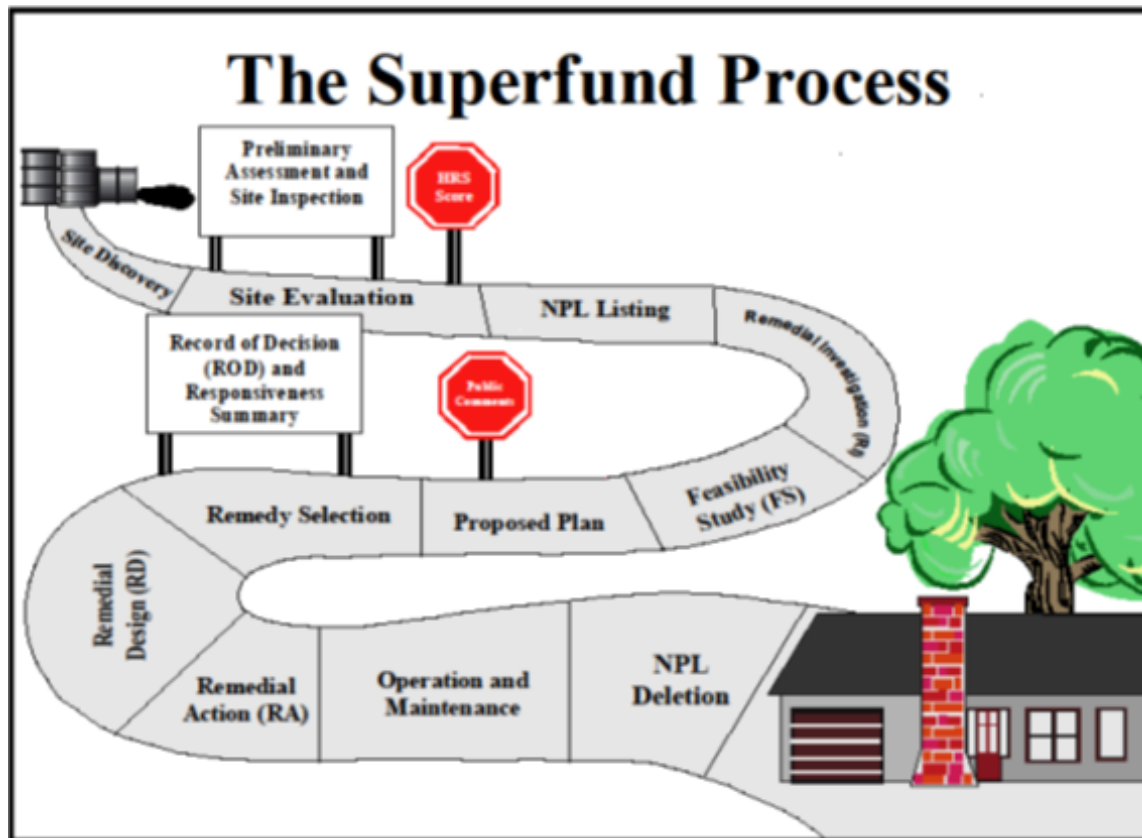
## How Sites Qualify for Superfund

- EPA has a set of criteria to identify, evaluate, and rank polluted sites based on criteria including affected populations, exposure pathways, contaminant concentrations, etc.
- This process determines if a site is a potential threat to communities or the environment



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## Superfund Process



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## Preliminary Assessment (PA)

- Review site information; site history, land use, and chemical use
- Screen site to determine risk of pollution release



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## Site Inspection (SI)

- Test air, water, or soil at the site.
- This is a very cursory look at the environmental media and usually does not include extensive testing.

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## Evaluate Risk

- Use a standard system (**Hazard Ranking System**) to score potential risk factors
  - How harmful is the substance?
  - Does it threaten the human food chain?
  - Does it threaten the air (indoor) or soil?
  - Does it threaten ground water?
  - Is the substance migrating from the source?

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## Evaluate Risk

- Sites scoring at or above an established level are proposed for the National Priorities List (NPL)
- HRS scores range from 0-100 with 28.5 being the cutoff point for listing
- This means that the site qualifies for cleanup under the Superfund Program (NPL Listing) but will require state consensus

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## Evaluate Risk

**OK... So the site is on the NPL.**

### **What Next?**

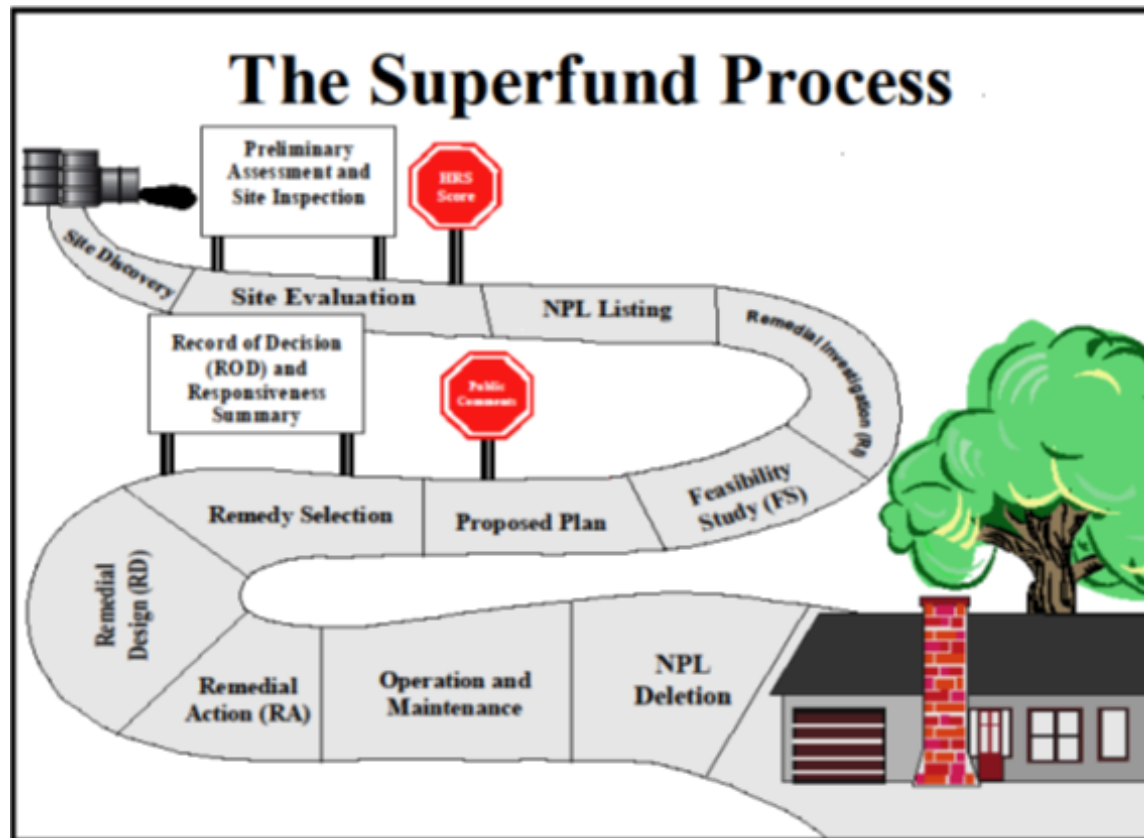
- The next steps show how EPA, States, and Potentially Responsible Parties (PRP) develop, design, and conduct cleanups at Superfund sites.





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## Superfund Process



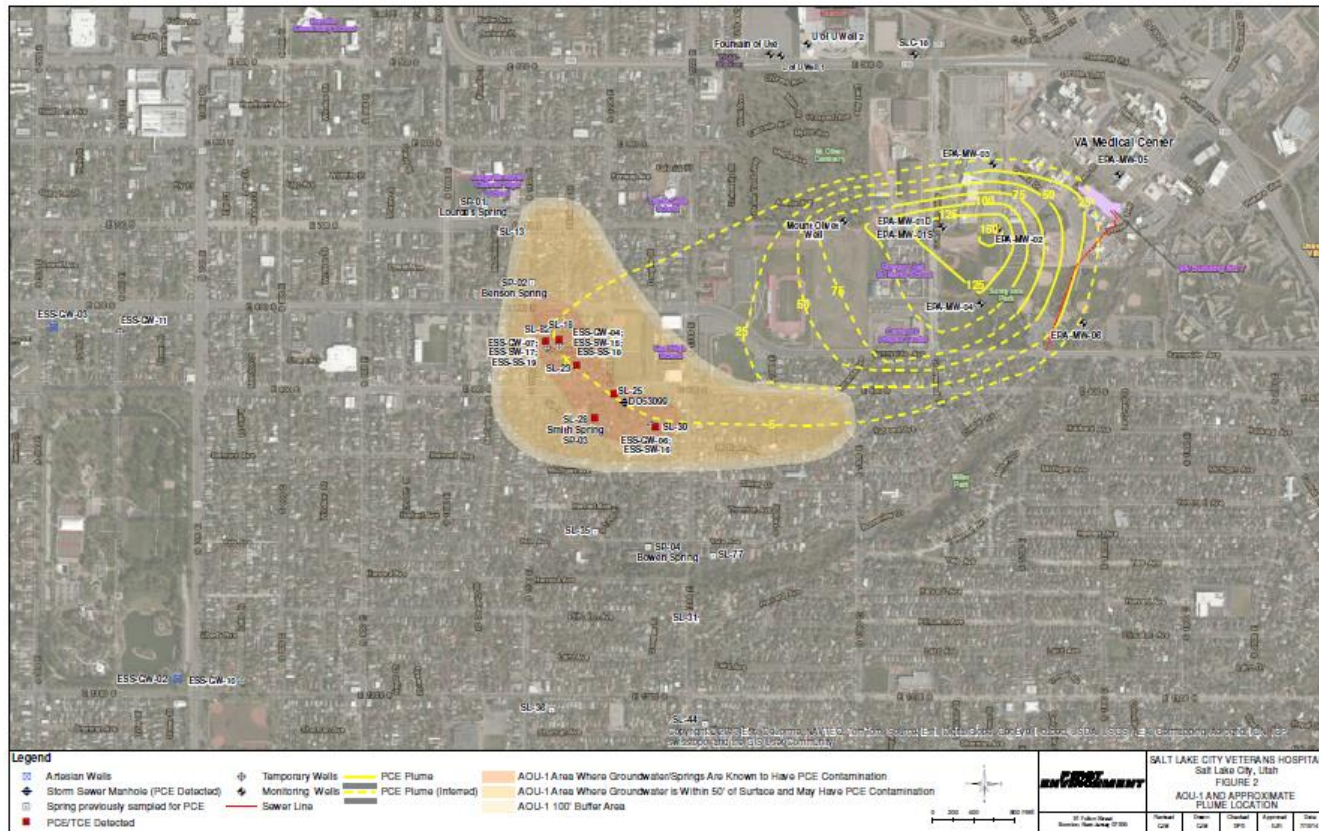
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## Operable Units

- NPL Sites can be split up into Operable Units (OU).
- Starting with the Remedial Investigation, each OU must complete every remaining step of the Superfund Process.
- Currently the 700 South 1600 East PCE Plume has two:
  - Accelerated Operable Unit 1 (AOU1): Indoor Air
  - Operable Unit 2 (OU2): Groundwater Plume

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## Operable Units



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## Remedial Investigation (RI)

- More site information helps identify what is needed for cleanup
  - Nature & Extent of contamination: types, amount, distribution, and characteristics chemicals
  - Exposure pathways (air, soil, surface water, ground water)
  - Potential Exposure levels
  - At risk populations

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## Feasibility Study (FS)

- Cleanup technologies and alternatives are identified and screened
- The best remedial alternative is chosen
- Some cleanup decisions can include monitored natural attenuation or monitoring stabilization of groundwater concentrations as part of an overall clean up evaluation
- AOU-1 focuses on vapor intrusion
- OU -2 will focus on the plume cleanup



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## Feasibility Study (FS)

### ➤ Factors in selecting the type of cleanup

1. Community Acceptance
2. Protection of human health & the environment
3. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)
4. Long-term effectiveness & permanence
5. Reduction of toxicity, mobility, & volume
6. Short-term effectiveness
7. Ability to implement
8. Cost
9. State acceptance



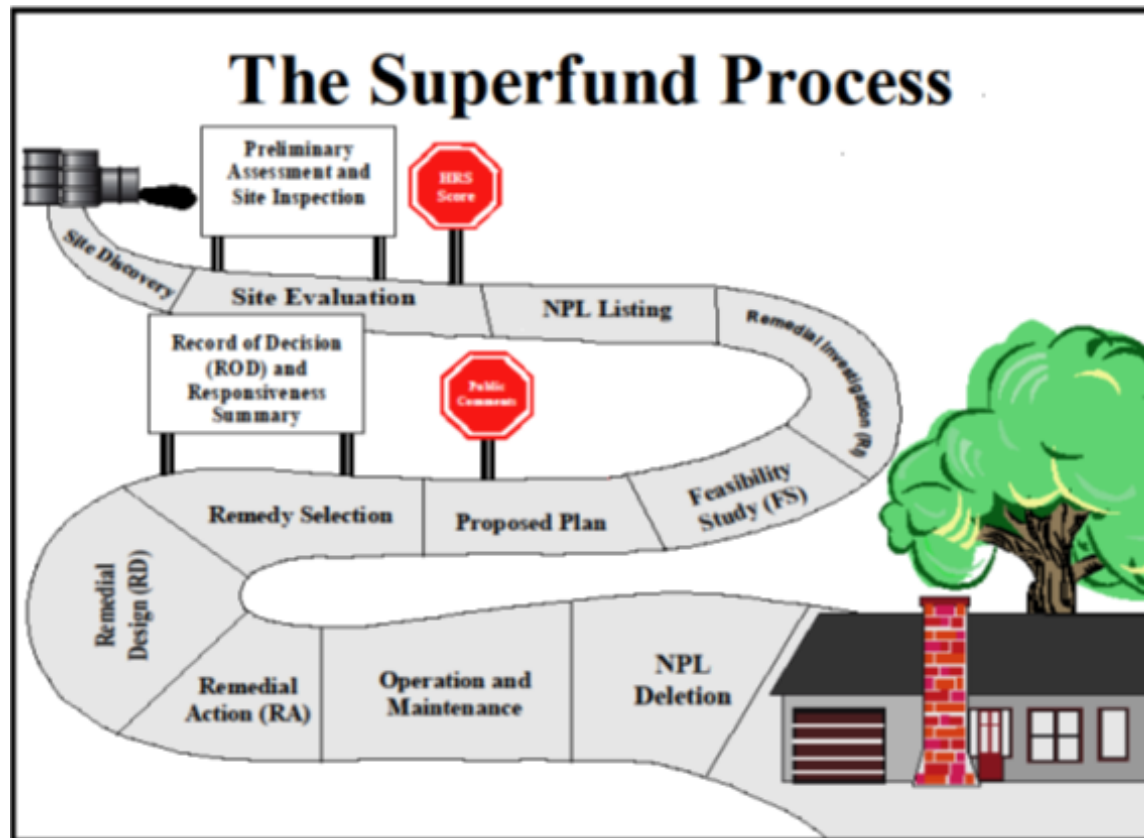
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## Selecting a Remedy

- A Proposed Plan informs the public on the preferred cleanup option
- The public reviews and comments on the Proposed Plan, either in writing or at the public meeting.
- All decision documents are maintained in the administrative record.

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## Superfund Process



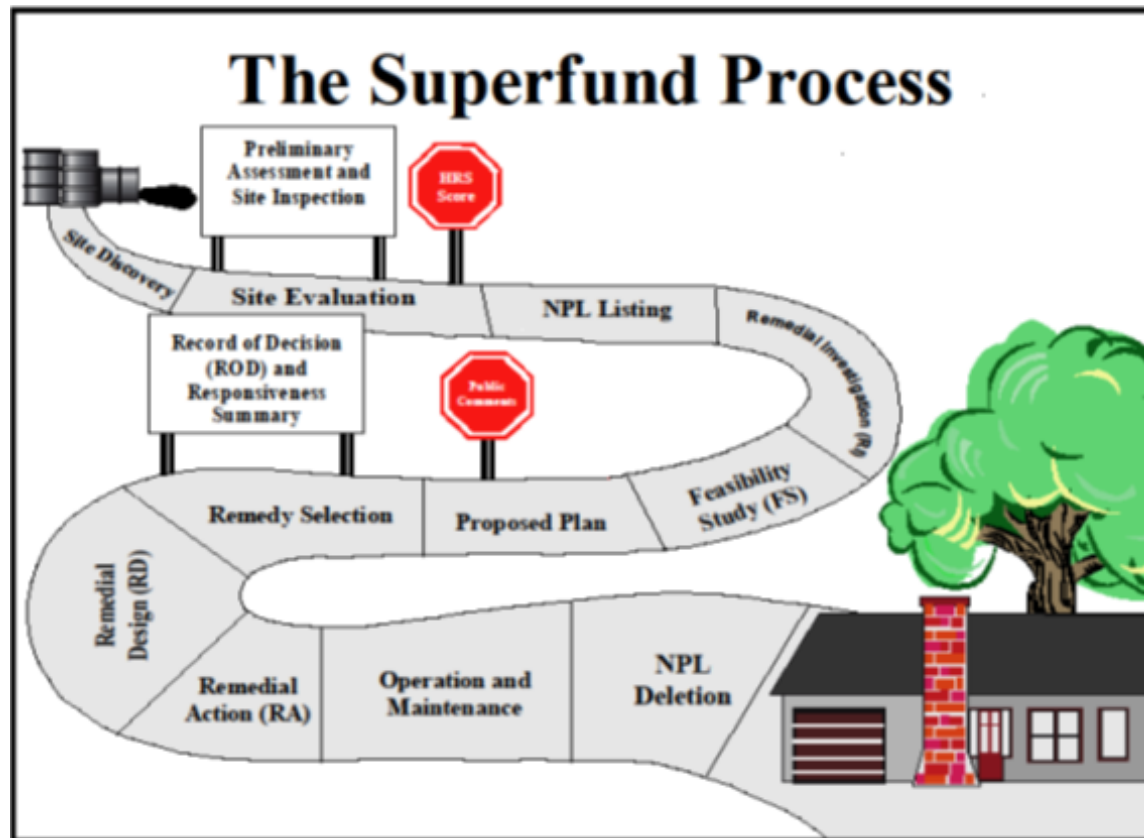
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## Record of Decision (ROD)

- A final decision on the cleanup (Record of Decision) is released, which includes cleanup goals, significant changes to the proposed remedy (if any), possible hazardous substances remaining on the site, further analysis and review, and appropriate time frame.

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## Superfund Process



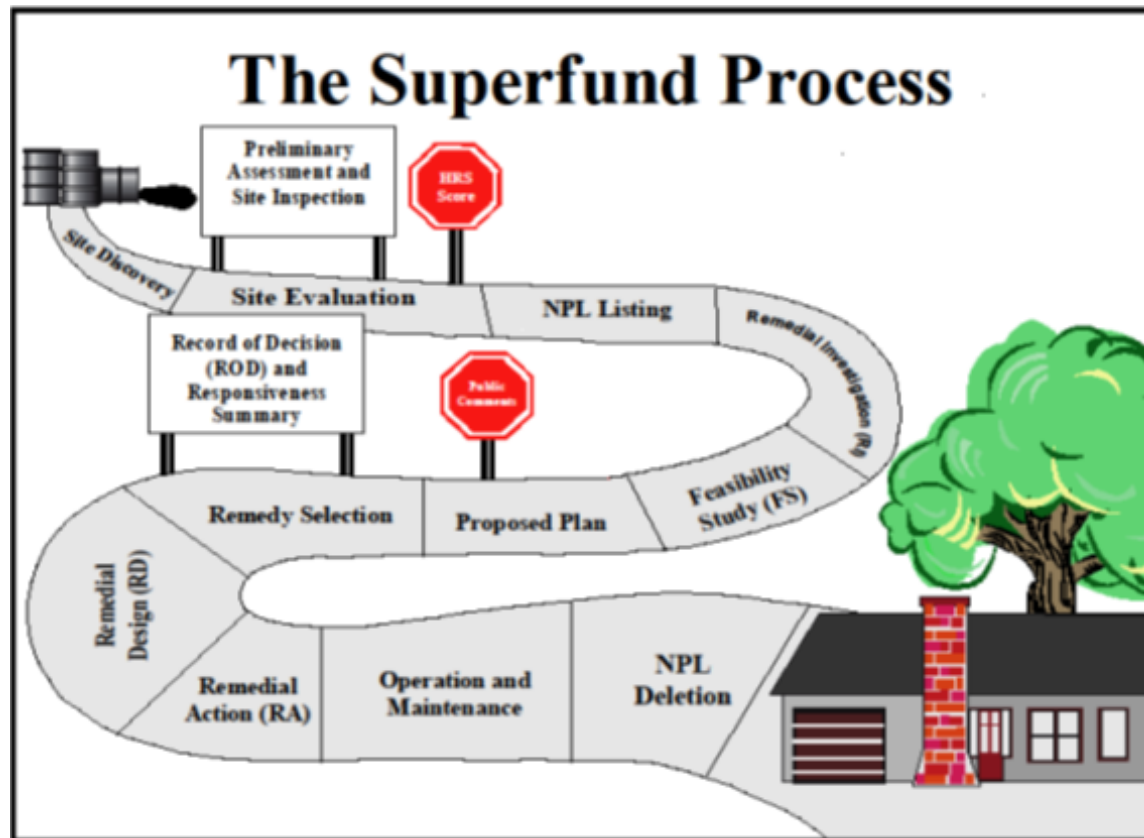
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## Remedial Design/Remedial Action

- Engineering plans and specifications for the chosen cleanup are developed, reviewed, and finalized
- After all the planning, cleanup activities at the site begin
- The selected remedy is implemented

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## Superfund Process





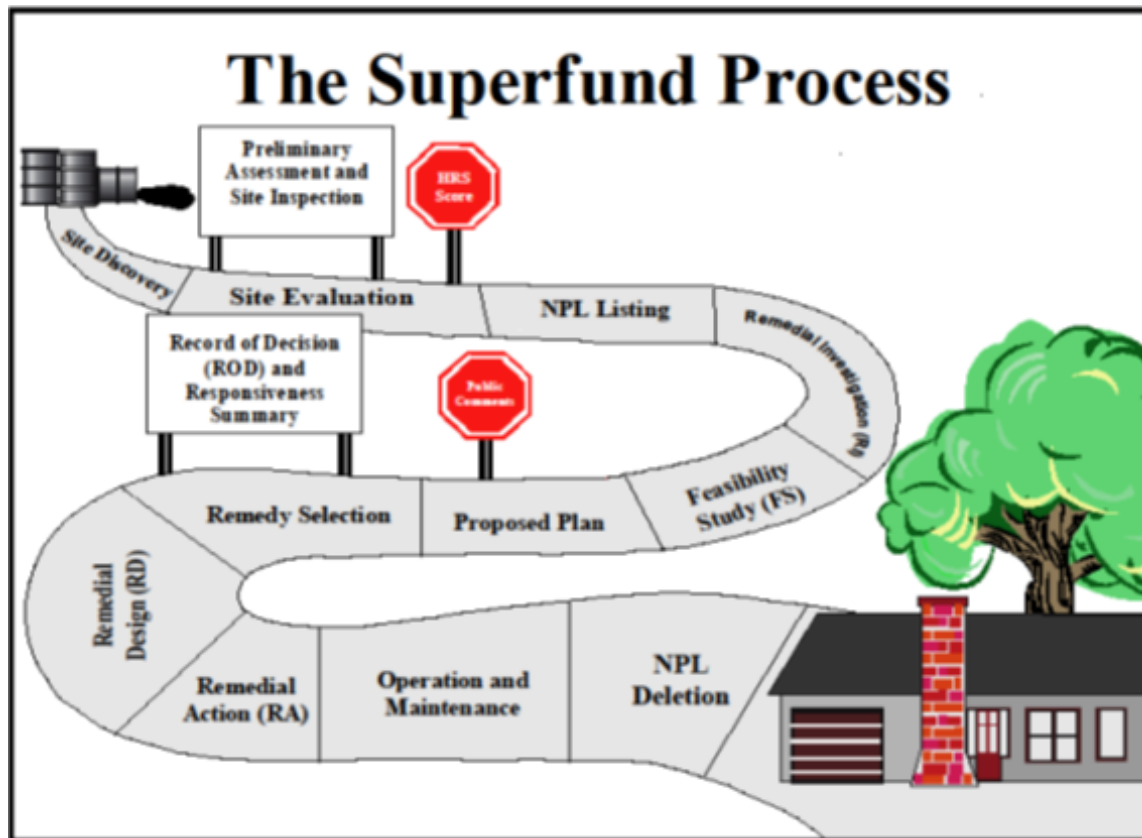
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## Construction Complete

- Once all on-site physical construction is done, the site is listed as "**Construction Complete**"
- This does not mean that cleanup is done, just that:
  - The methods & materials to do the cleanup are in place
  - All immediate threats have been addressed
  - Long-term threats are being controlled

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## Superfund Process



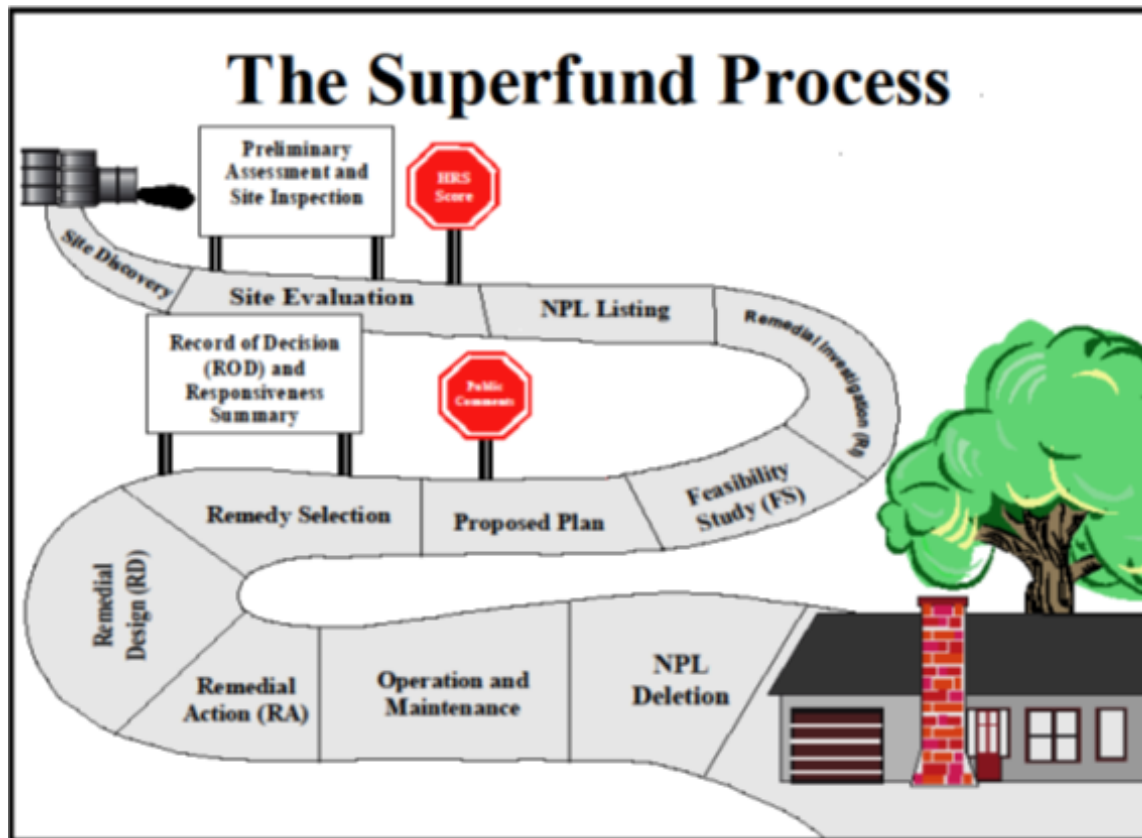
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## Post Construction Completion

- Ensure that the required equipment is installed and that the remedy is operational and functional
  - EPA monitors the site cleanup process
  - Site responsibility can transfer to the state or PRPs
  - In the case where a federal agency is the PRP, responsibility always remains with them or another federal agency

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## Superfund Process



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## NPL delisting

- When cleanup levels are met, operation & maintenance is complete.
- The site is removed from the National Priorities List

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# Questions?



# VA Salt Lake City HCS

