Proposed Cleanup Plan

US Smelter and Lead Superfund Site

East Chicago, Indiana

July 25, 2012

Agenda

- Introductions
- EPA's Proposed Plan
- Question and Answer
- Opportunity for Comments

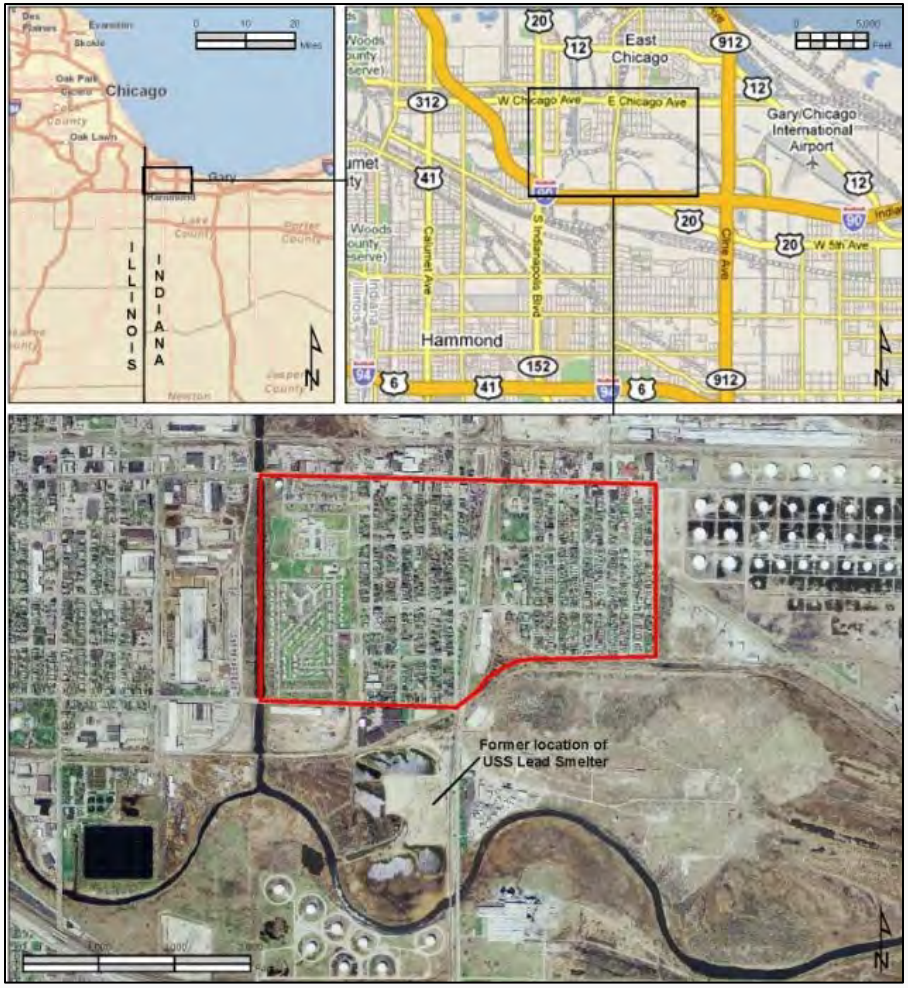
Who's who…

- **Michael Berkoff** – *EPA Project Manager*
- **Janet Pope** – *EPA Community Involvement Coordinator*
- **Steven Kaiser** – *EPA Site Attorney*
- **Rik Lantz** – *EPA Contractor (SulTRAC) Site Manager*
- **Rich Baldino** – *EPA Contractor Chemist and Assistant Site Manager (SulTRAC)*
- **Cheryl Vaccarello** – *EPA Contractor Community Relations (SulTRAC)*
- **Doug Petroff** – *Indiana Department of Environmental Management Project Manager*

EPA's Proposed Plan for Site Cleanup

- Site History and Background
- Description of Cleanup Alternatives
- EPA's Selection Criteria
- EPA's Recommended Cleanup Alternative
- Next Steps
- Public Comment Period and Resource Information
- Contact Information

US Smelter and Lead Site



US Smelter and Lead Operable Units

- Operable Unit 1
  - Residential Area
  - Includes former Anaconda Lead/International Refining
- Operable Unit 2
  - US Smelter and Lead Facility
  - Site-wide Groundwater
- DuPont Facility – EPA Oversight Cleanup

Sources of Contamination

Historical Polluters in the Area

- USS Lead
  - Smelted lead 1920 to 1985
  - Secondary smelter ~1972
- Anaconda Lead/International Refining
  - Lead processing
- DuPont
  - Lead arsenate filter cake
  - RCRA action ongoing


E Chicago Ave
Kennedy Ave
E 151st St

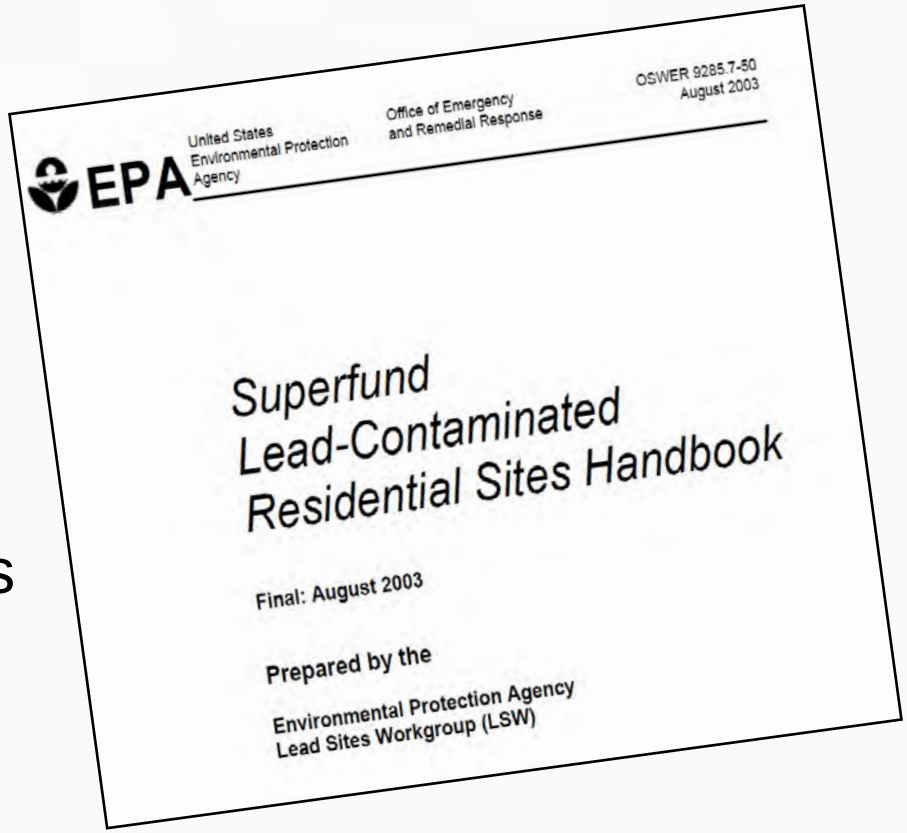
EPA Work at Site

- RCRA Corrective Action 2004
  - Addressed contamination at facility
  - Limited soil cleanup outside of facility
- Removal Actions 2008, 2011
- On NPL September 2008
  - Eligible for federal money – investigation and cleanup
- Remedial Investigation/Feasibility Study (RI/FS)
  - Nature and extent of contamination
  - Evaluation of cleanup alternatives

Residential Area Investigation (OU1)

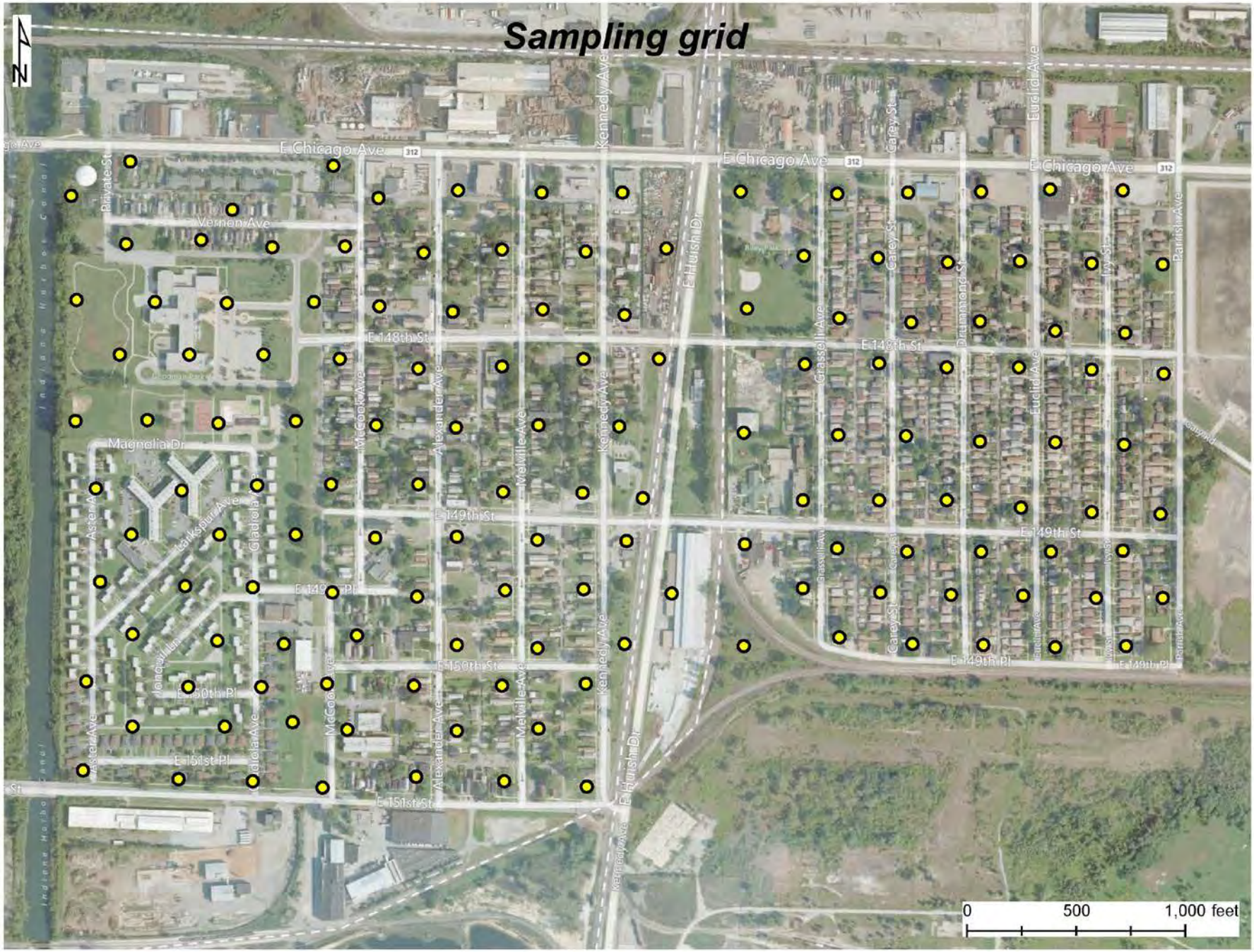
Lead-Contaminated Residential Sites Handbook

- Sampling
- Evaluation of risk
- Development of cleanup alternatives



Sampling Activities

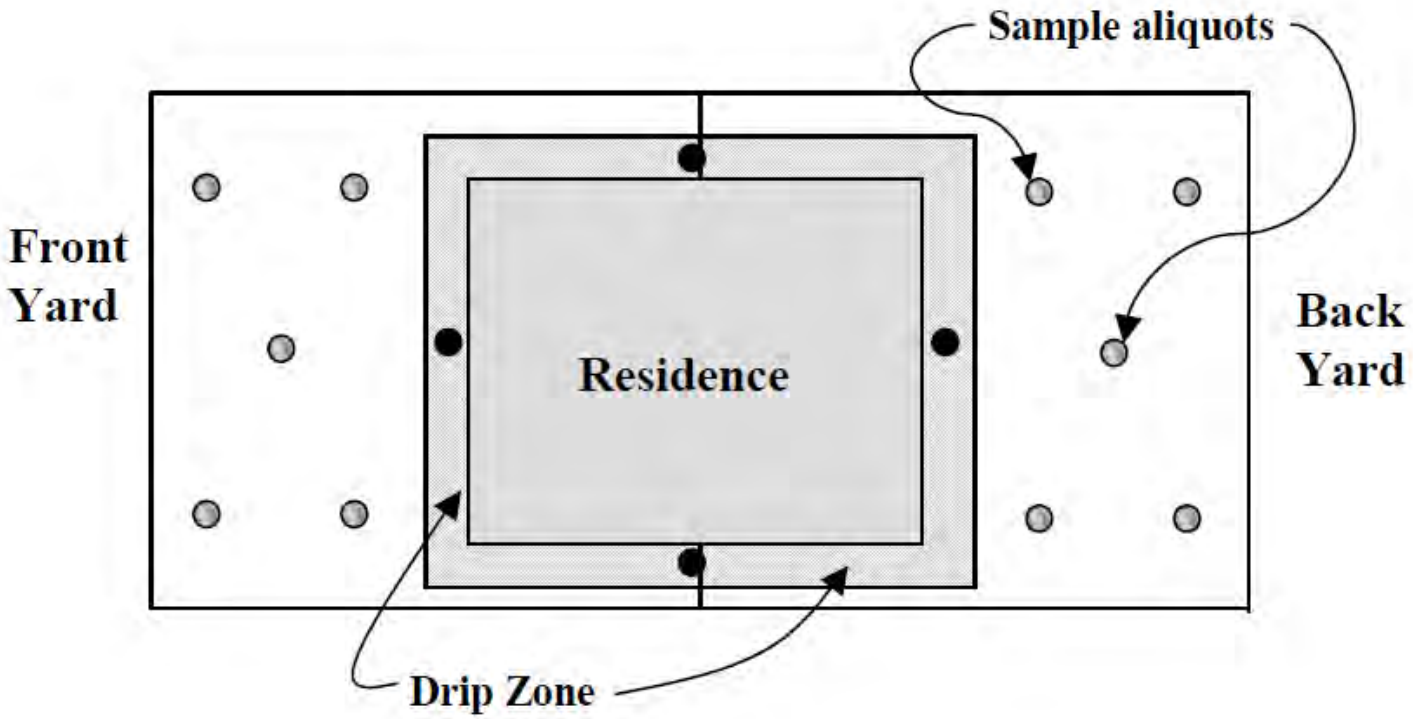
- Nature and Extent of Contamination
  - Geographic range - “coarse grid pattern” with 3 properties sampled per block
  - Depth – collected samples down to 2 ft (previous work focused on surface)
- Samples collected late 2009, Summer 2010


Sampling grid
N
E Chicago Ave
312
Kennedy Ave
Euclid Ave
Carey St
Private St
Vernon Ave
E Hurish Dr
Drummond St
Ivy St
Parrish Ave
E 148th St
McCook Ave
Alexander Ave
Melville Ave
Grasselli Ave
Magnolia Dr
Aster Ave
Larkspur Ave
Gladiola Ave
E 149th St
E 149th Pl
E 150th St
E 150th Pl
E 151st Pl
E 151st St
0
500
1,000 feet

Sampling Design

- Composite samples - front and back yards
- Individual samples - play areas and gardens
- Composite samples - drip lines (or gutter outfalls)
- Subset of properties - sampled for other contaminants besides metals

Sampling Strategy




12/14/2009


12/14/2009

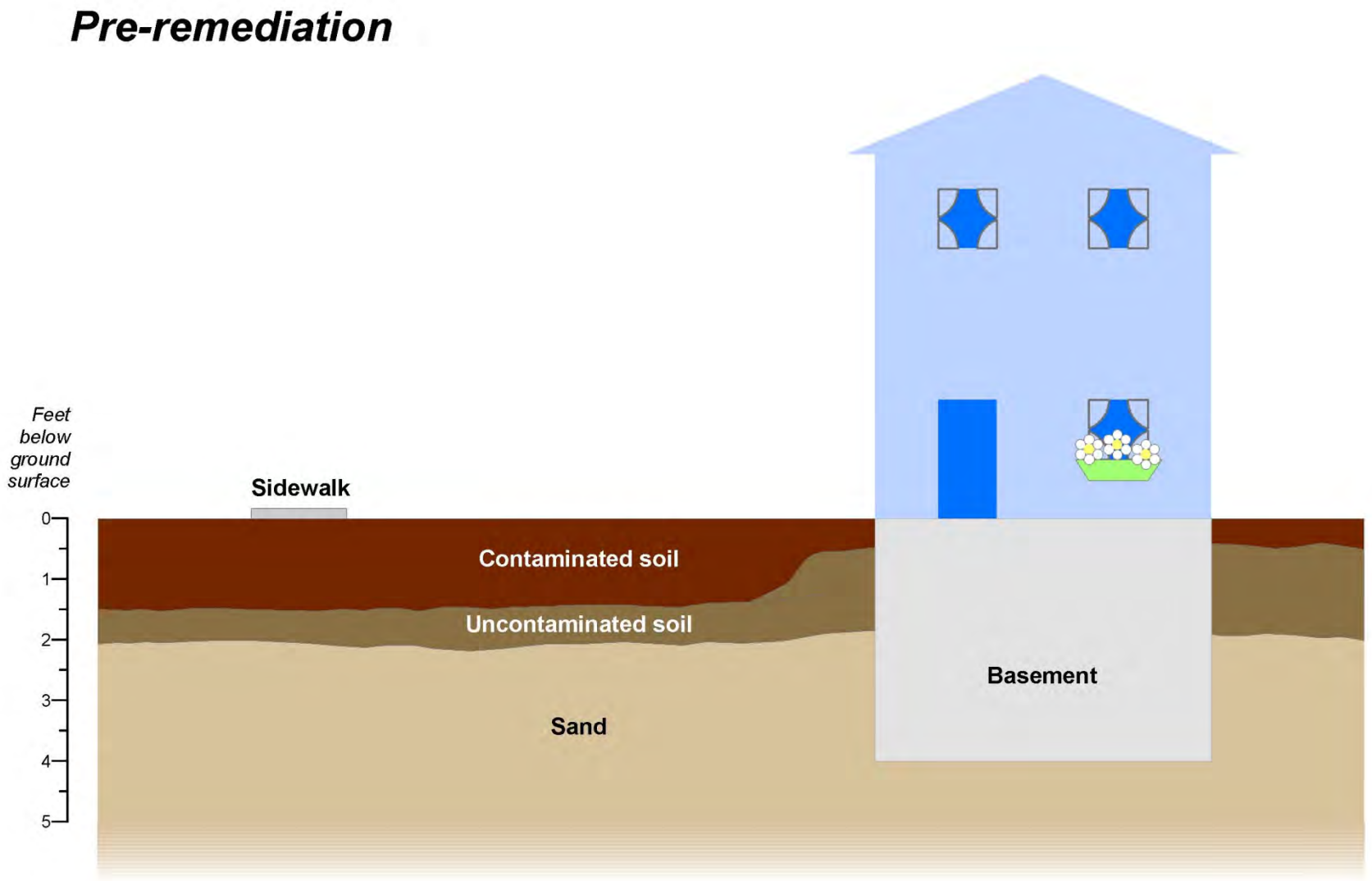
Investigation Conclusions

- Aerial deposition of lead
  - Generally, higher concentrations near surface
- Other contaminants of concern
  - Arsenic
    - largely collocated with lead
  - PAHs – not site related
- Contamination isolated to upper layer
  - Clean native sands ~2 feet bgs

Remedial Action Levels for Lead and Arsenic

Contaminant	OU1 Soil RAL
Arsenic	26 mg/kg
Lead	400 mg/kg (Residential) 800 mg/kg (Industrial)

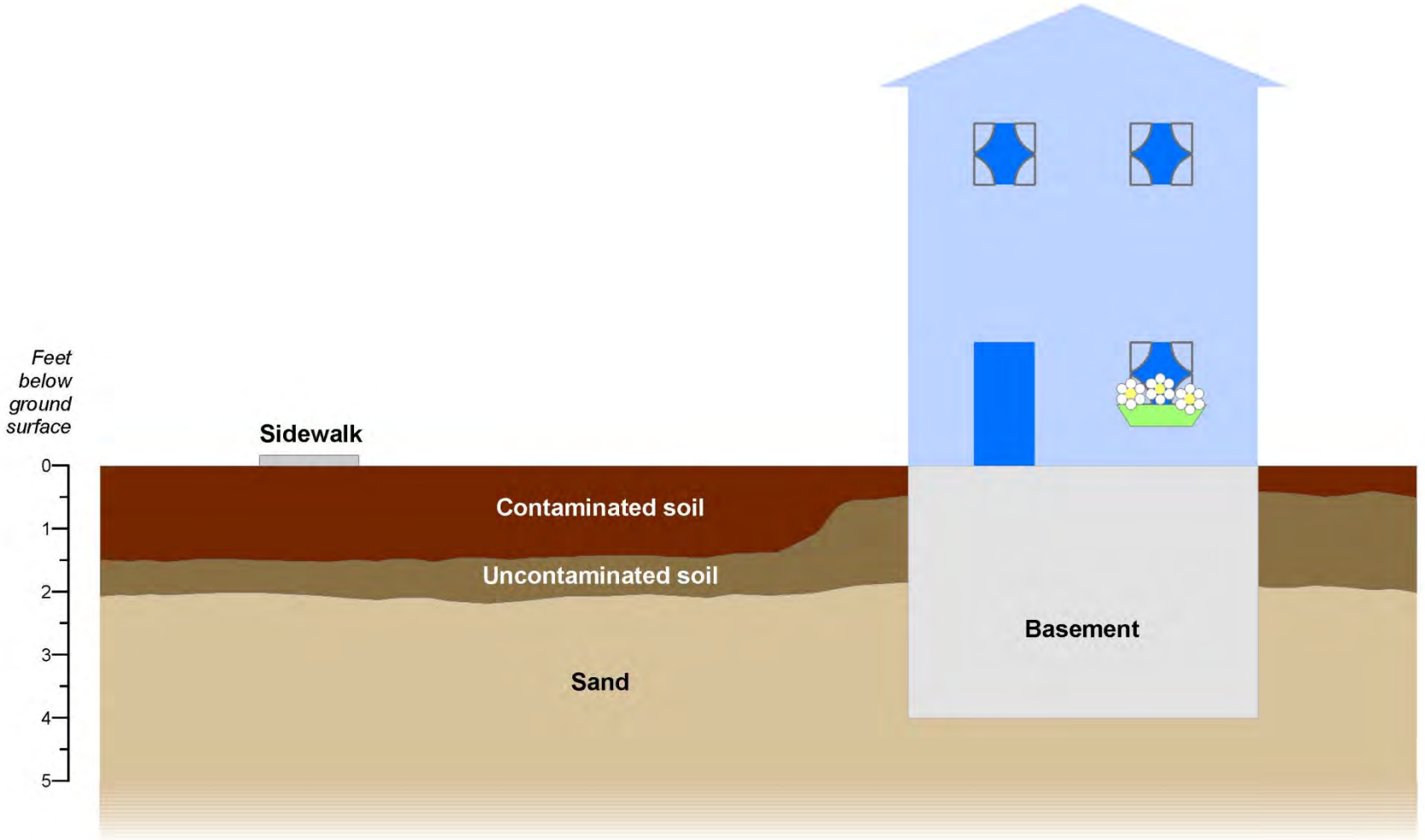
Feasibility Study



Alternative 1

- No Action
- EPA always includes a “no action” alternative for comparison
- Cost: $0

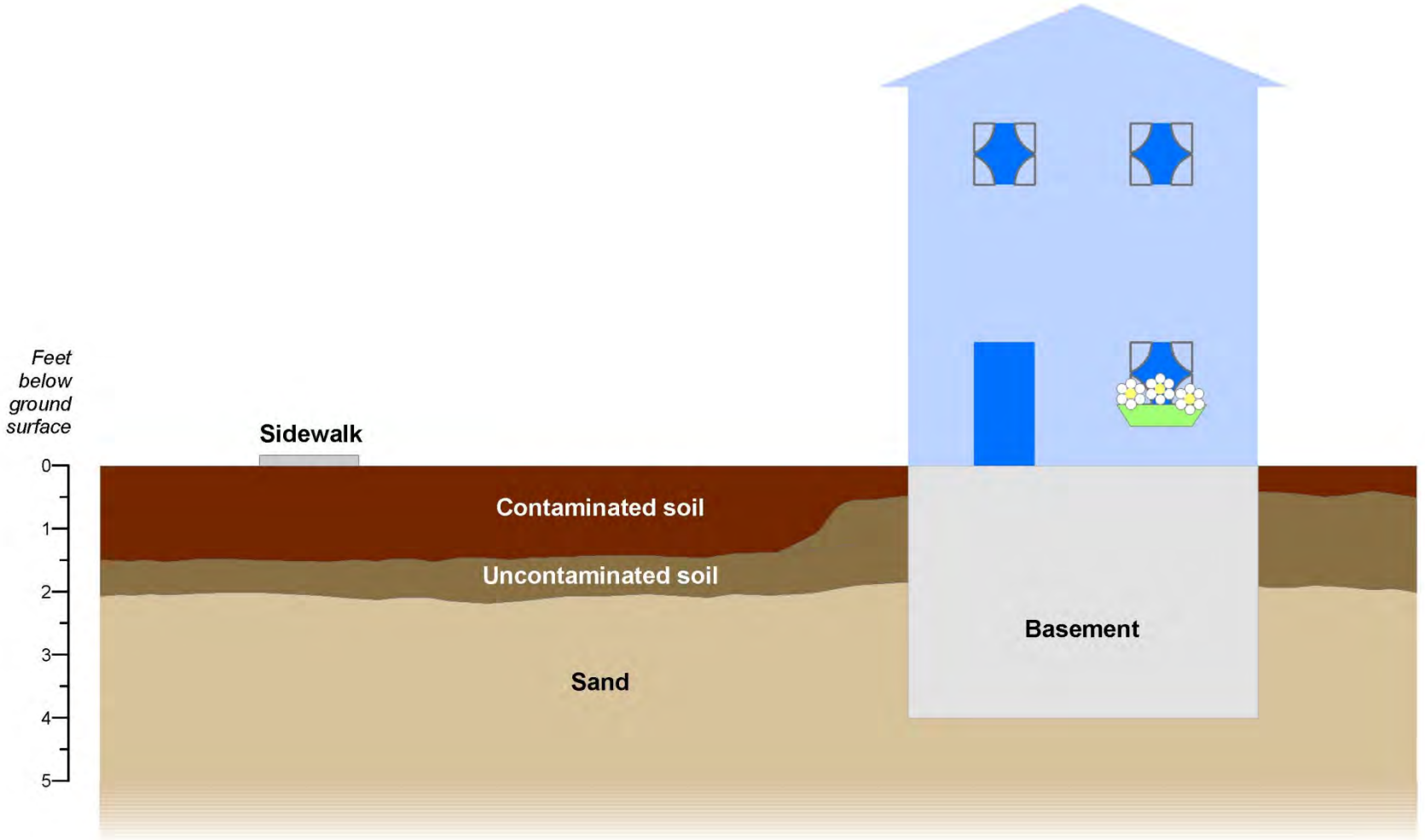
Pre-remediation



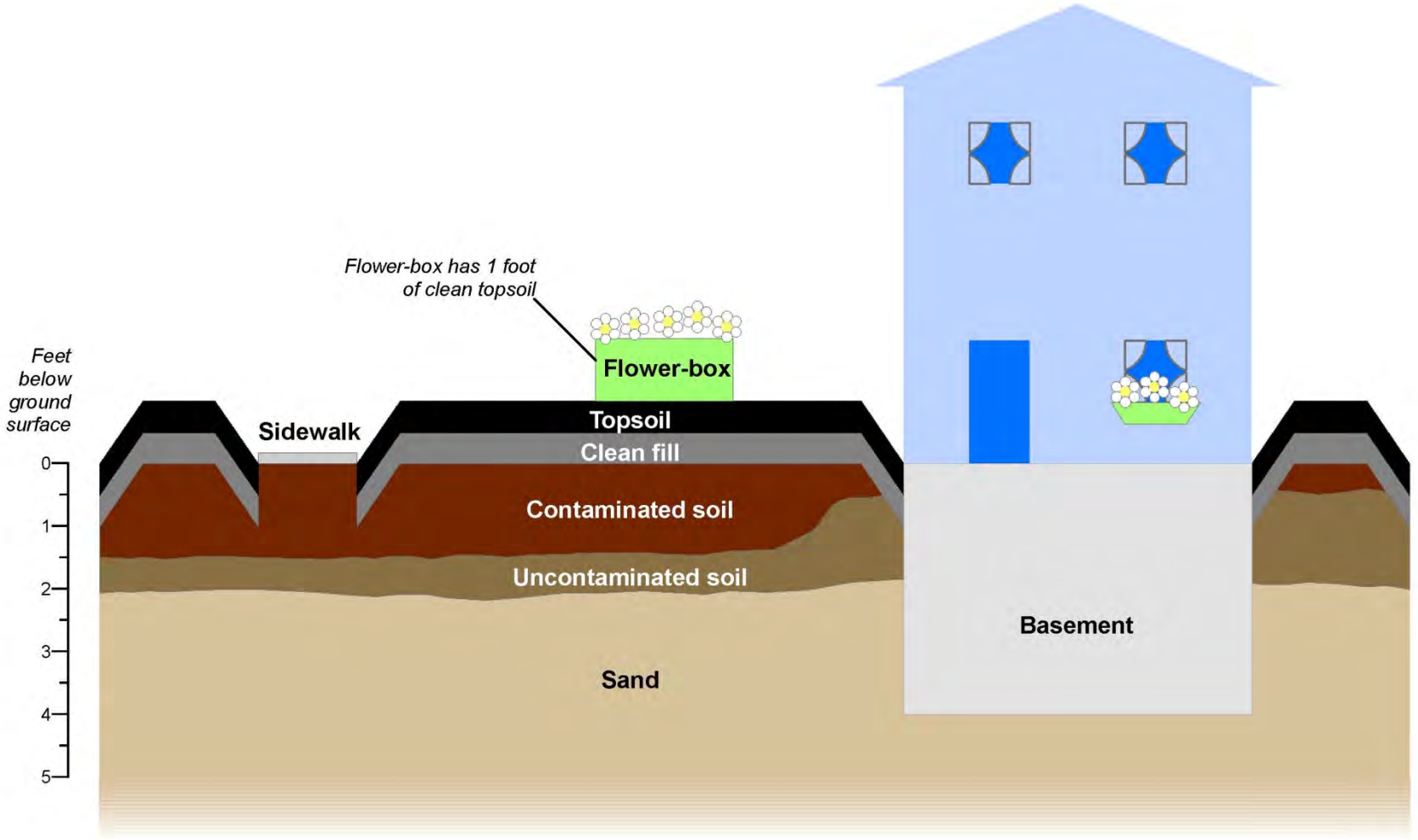
Alternative 3

- Cleanup Components
  - 1 Foot cover over contaminated soil
  - Raised flower boxes and gardens
  - 30 years of maintenance
  - Deed restrictions
- Estimated Construction Time and Costs
  - $18,200,000
  - 15 Months

Pre-remediation



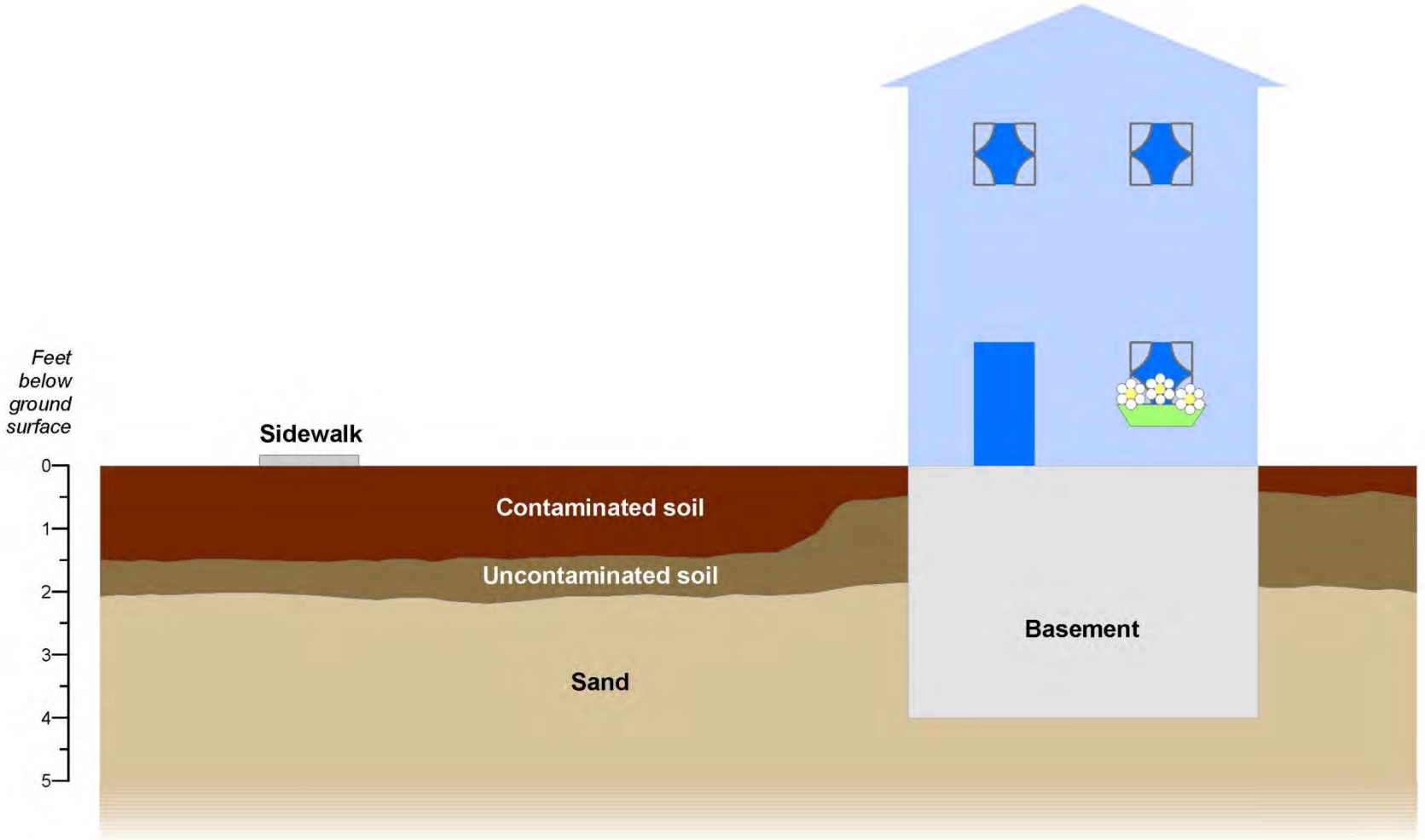
Alternative 3



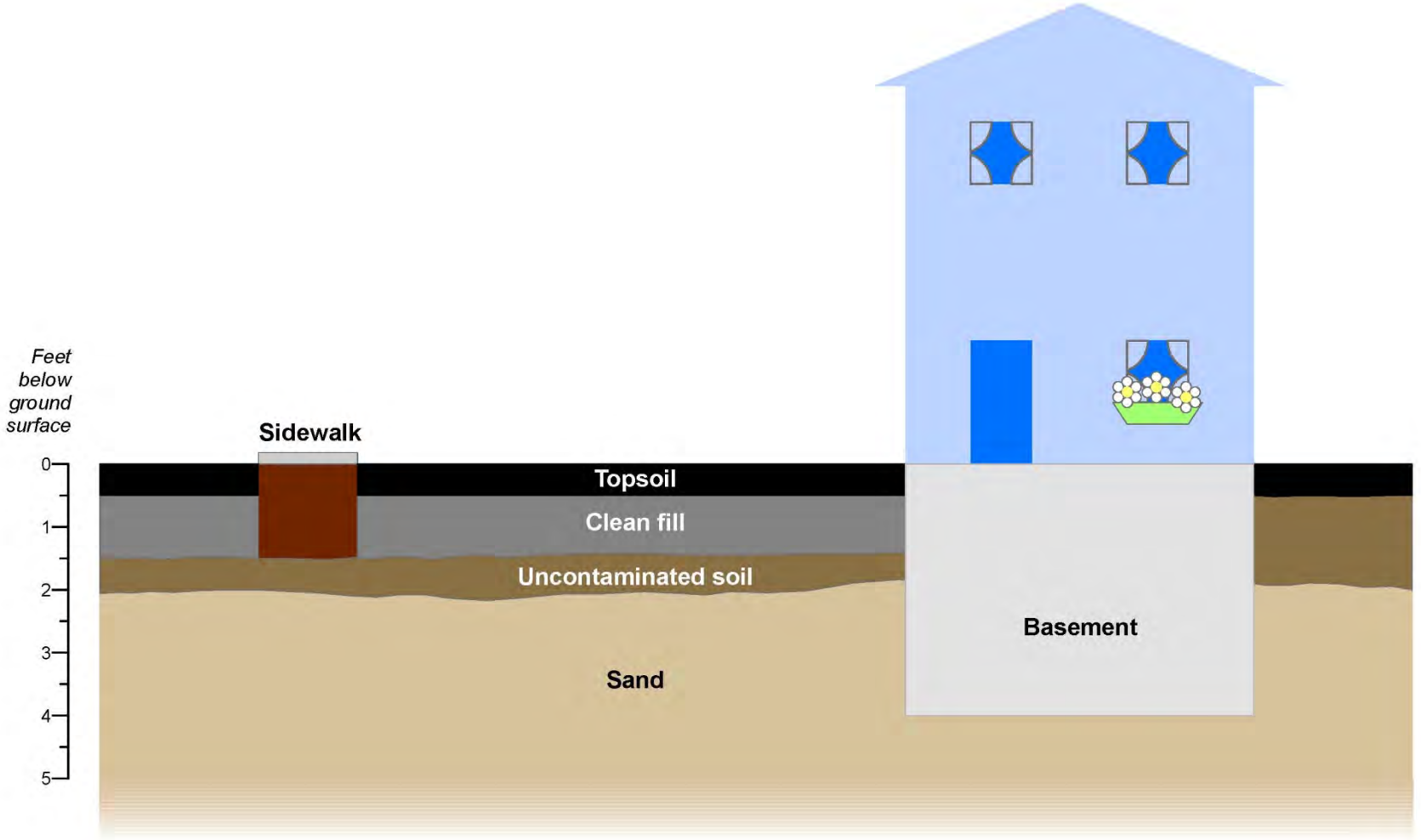
Alternative 4A

- Cleanup Components
  - Excavate soil: 400 mg/kg (lead), 26 mg/kg (arsenic)
  - Maximum depth 2 feet
  - Off-site disposal
- Estimated Construction Time and Costs
  - $28,900,000
  - 21 Months

Pre-remediation



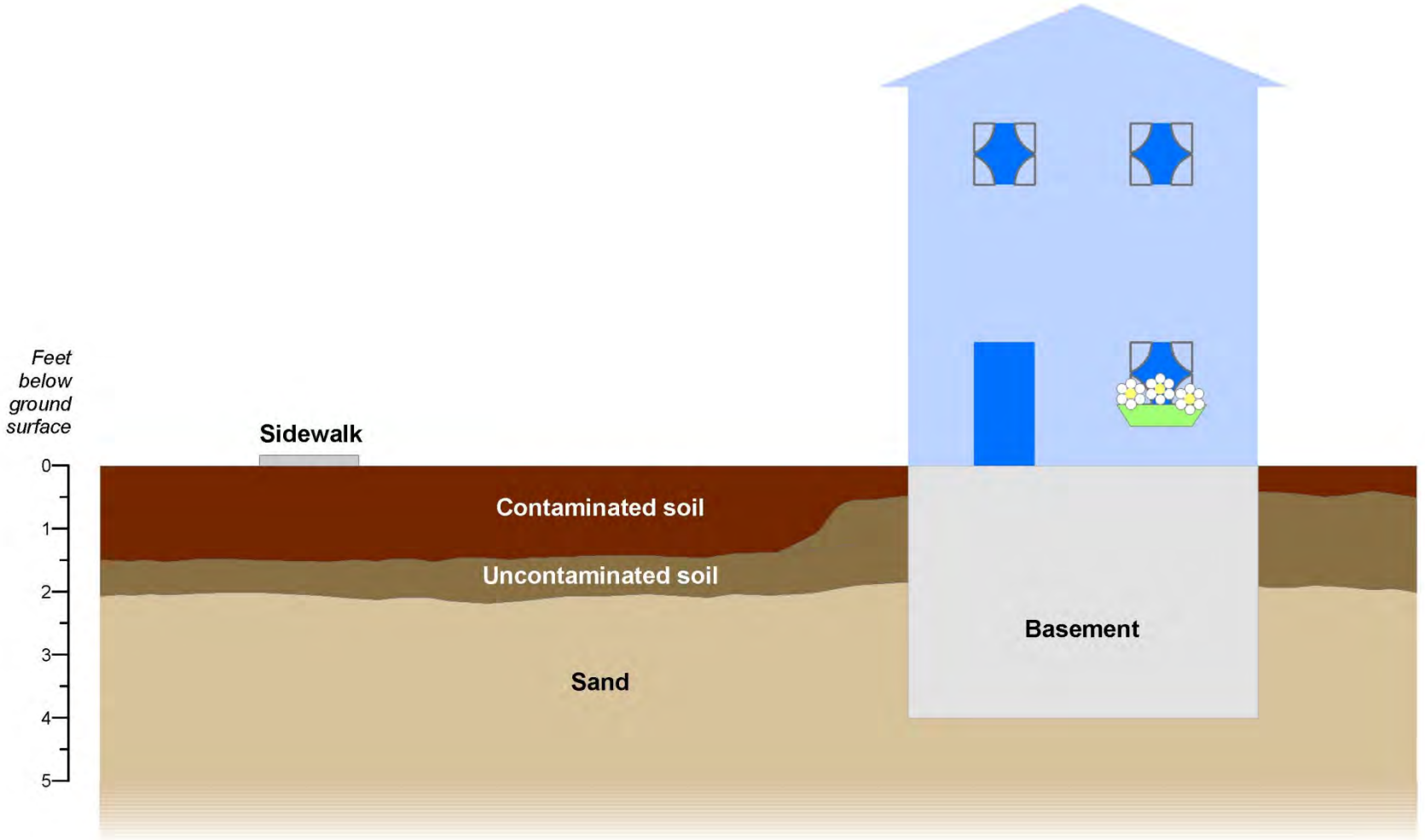
Alternative 4a



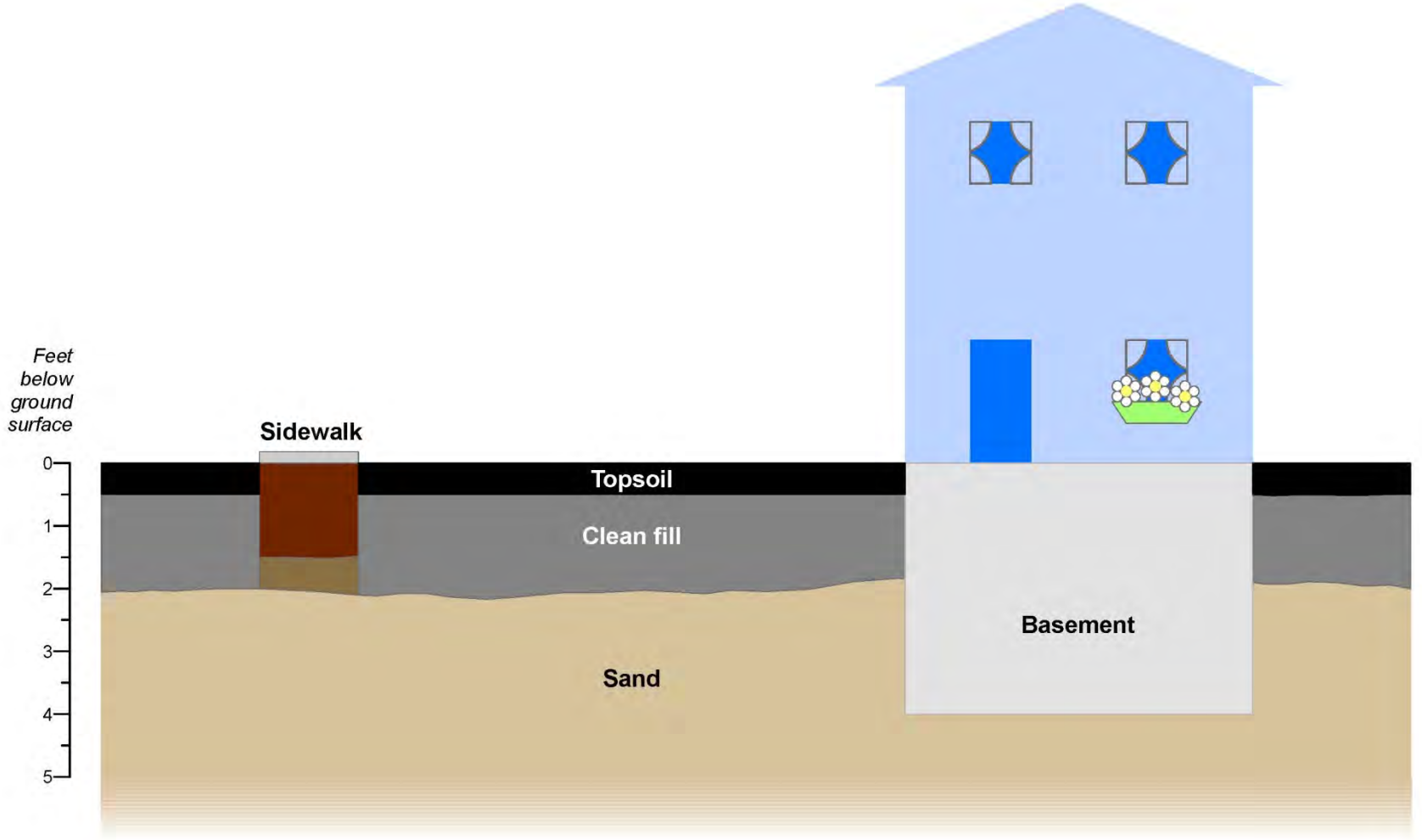
Alternative 4B

- Cleanup Components
  - Excavation to sand layer
  - Off-site disposal
- Estimated Construction Time and Costs
  - $43,800,000
  - 33 Months

Pre-remediation



Alternative 4b



Overview of Alternatives

	Alternatives			
	Alternative 1	Alternative 3	Alternative 4A	Alternative 4B
Remedy	No Action	1 Foot Cover Over Contaminated Yards	Excavation of Contaminated Soil to 2 ft. max	Excavation of Soil at Contaminated Properties to Sand Layer
Cost	$0	$18,200,000	$28,900,000	$43,800,000
Duration	0 months	15 months	21 months	33 months

Nine Superfund Remedy Selection Criteria

- Threshold Criteria
  1. Overall protection of human health and the environment
  2. Compliance with applicable or relevant and appropriate requirements (ARARs)
- Balancing Criteria
  3. Long-term effectiveness and permanence
  4. Reduction of toxicity, mobility or volume through treatment
  5. Short-term effectiveness
  6. Implementability
  7. Cost
- Modifying Criteria
  8. State Acceptance
  9. Community Acceptance

Evaluation Criteria Comparison

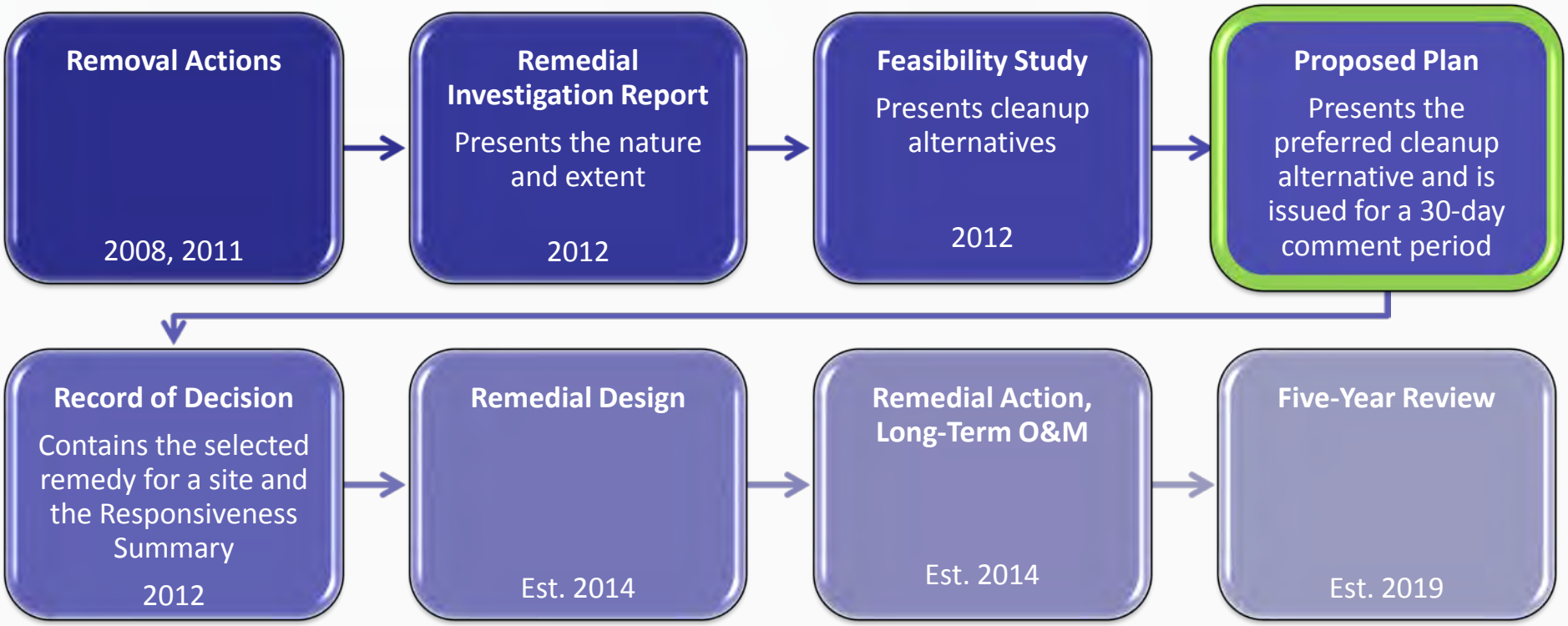
Evaluation Criterion	Alternative 1	Alternative 3	Alternative 4A	Alternative 4B
Overall Protection of Human Health and the Environment	○	●	●	●
Compliance with ARARs	○	●	●	●
Long-term Effectiveness and Permanence	○	●	●	●
Reduction of Toxicity, Mobility, or Volume through Treatment	○	○	◉	◉
Short-term Effectiveness	N/A	◉	◉	◉
Implementability	N/A	◉	●	●
Alternative Cost ($ millions)	$0	$18.2	$28.9	$43.8
State Acceptance	The State supports the recommended alternative (Alternative 4A).			
Community Acceptance	Will be evaluated after the public comment period			

● Fully meets criterion ◉ Partially meets criterion ○ Does not meet criterion

EPA's Recommended Alternative: 4A

- Is protective of human health and the environment
- Meets state and federal regulations - ARARs
- Is implementable
- Reduces contaminant mobility
- Is effective in the short- and long-term
- Is cost-effective
- Maintains current/future residential use
- Represents best balance of evaluation criteria

Next Steps


Removal Actions
2008, 2011
Remedial Investigation Report
Presents the nature and extent
2012
Feasibility Study
Presents cleanup alternatives
2012
Proposed Plan
Presents the preferred cleanup alternative and is issued for a 30-day comment period
Record of Decision
Contains the selected remedy for a site and the Responsiveness Summary
2012
Remedial Design
Est. 2014
Remedial Action, Long-Term O&M
Est. 2014
Five-Year Review
Est. 2019

Public Comment Period

- 30-day period: Started - July 12, 2012
  Ends - August 11, 2012

- Review Documents:
  - Online at: http://www.epa.gov/region5/sites/
  - East Chicago Public Library
    - 2401 E. Columbus Ave
    - 1008 W. Chicago Ave
  - Region 5 EPA office

Send Public Comments to:

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COMMENTS