Long Term Stewardship Strategies: Before and Beyond Closure

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Long-Term Stewardship

Remedy Selection
Final remedies chosen (CA400)

Construction Complete
All final remedies have been built. Sites vary in the amount of time to achieve final cleanup goals. Some achieve goals immediately, (e.g. dig and haul), some take decades of operation & maintenance (CA550)

Cleanup Complete (CA900s)

<table>
<thead>
<tr>
<th>Cleanup Complete - No Controls Needed</th>
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<tbody>
<tr>
<td>Safe for all uses. (CA900 NC)</td>
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<table>
<thead>
<tr>
<th>Cleanup Complete - Controls Required</th>
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<td>These sites have remaining contamination, &amp; often require Engineering Controls (ECs), Institutional Controls (ICs), use restrictions, and long-term stewardship. (CA900 CR)</td>
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Source: U.S. EPA
What They Are

- Legal, engineering, and administrative tools used to maintain protection of human health and the environment at sites.

- Used to:
  - Restrict site uses,
  - Modify behavior, and/or
  - Provide information to people
What They Are Not

- Chance card
- Get Out of Jail, Free
- This card can be kept until needed or sold

- Unicorn Blood necklace
- Silver bullet-like objects
Types of LTS (Institutional Controls)

1) **Government Controls** - include local laws or permits (e.g., county zoning, building permits, and Base Master Plans at military facilities);

2) **Proprietary Controls** - include property use restrictions based on private property law (e.g., easements and covenants);

3) **Enforcement Tools** - include documents that require individuals or companies to conduct or prohibit specific actions (e.g., environmental cleanup consent decrees, unilateral orders, or permits); and,

4) **Informational Devices** - include deed notices or public advisories that alert and educate people about a site.
Two “Flavors” of LTS

1. LTS starts before NFA determination.
   • Permit or enforcement action in place.
   • Responsible party “on the hook.”

2. LTS starts after NFA determination.
   • Permit or enforcement action generally not in place.
   • Responsible parties & responsibilities not adequate or well defined.
Considerations

- Regulatory Acceptance
- Appropriateness/Effectiveness of Land Use Restrictions
- Economics of Real Estate Productivity
- Liabilities posed by Residual Contamination and Liability Protections
- Funding Continuing Obligations
  - Responsible Party,
  - New Owner/Operator,
  - Regulatory Agency
Life Cycle of LTS

Planning

Implementation

Monitoring

Enforcement
Regulatory Components of LTS

- Enforce
- Verify
- Modify/Terminate
- Report
Exit Strategy

- Defining Pathway(s) to Closure (Goal)
- Tailored Remedial Action Objectives
- ARARs (Complimentary-Competing Regulations)
- Contingencies
- Risk Analysis (Regulatory, Technical, Business)
- Life-Cycle Costs
- Cost-Benefit Analysis
Limited Liability Protections

Continuing Obligations LLPs remain available.....

......so long as the landowner:

- Takes reasonable steps to stop/prevent any ongoing release;
- Provides full cooperation in connection with response actions;
- Compliant with any land use restrictions or request for information;
- Does not impede the integrity of any institutional control employed for response actions; and
- Provides legally required notices with respect to the discovery of Hazardous Substances
Benefits of a written continuing obligations plan include documenting:

- Evidence of LLP compliance to assist a User seeking liability defenses;
- A record of the “baseline” environmental site information upon which continuing obligations were based; and
- Framework for future activities intended to ensure ongoing continuing obligations compliance.

Roles and Responsibilities
POB Using Legal Description:
“Beginning on the south line of the 3.39 acre strip of land described in the deed to the City of Palmetto, recorded August 11, 1948, Book 1272, Official records, page 161, at the northwest corner of the 8.938 acre parcel...”

POB Using Geographic Description:
“26.92500 N, 82.36308 W”
Graphical Information Systems
Geospatial Documentation

http://www.epa.gov/reg3wcmd/ca/pa/kml/map_PAD002290823.kml

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The content displayed below and overlaid onto this map is provided by a third party, and Google is not responsible for it. Information you enter below may become available to the third party.

map_PAD002290823.kml

- Property_Boundary
- Former Elf Atochem PAD002290823 2375 State Rd Bensalem PA 19020 EPA fact sheet available at: http://www.epa.gov/reg3wcmd/ca/pa/
- Former Elf Atochem North America Inc PAD002290823 2375 State Rd Bensalem PA 19020 http://www.epa.gov/reg3wcmd/ca/pa/

Former Elf Atochem
PAD002290823
2375 State Rd
Bensalem PA 19020

EPA fact sheet available at:

This institutional control is an Environmental Covenant with PADEP. The Environmental Covenant includes the requirement for installation of a vapor barrier beneath all new on-site structures to prevent the migration of organic vapors from groundwater into indoor air space and Facility-wide restriction of groundwater usage for any purpose. This PDF document may be viewed in its entirety at:
Preventive Approach: One-Call System

Dig Clean provides excavators with Environmental Safety Advisories related to underground cleanup facilities or residual contaminants near planned excavations. Choose your state, enter the Ticket Number generated by the One Call Clearance Center, and press submit. Dig Clean will display Environmental Site Advisories, if any, associated with the Ticket Number you enter.

This is a pilot service being applied in several states. Dig Clean Safety Advisories will only appear if Dig Clean customers have identified Environmental Safety Boundaries near your planned excavation. The FAQ discusses limitations with the service at this time. Thank you for your participation.

Dig Clean Advisory Search

Option 1: State and Ticket Number

Select State: 
Enter Ticket:

Find Advisory

Option 2: Reference Number

Enter Reference Number:

Find Advisory

Source: Terradex
Summary

- IC/EC are an instrumental RBCA tool
- Not a fix-all
- Comes with strings attached
- Thoughtful LTS Strategies streamline effectiveness
  - RP Compliance
  - Limited Liability Protections
- Human Health and Environment Protections
Thank You

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