

US EPA ARCHIVE DOCUMENT

Institutional Controls

Melissa Franolich
U.S. EPA, HQ
(202) 564-6300

Mike Bellot
U.S. EPA, HQ
(703) 603-8905



Institutional Controls

- Definitions
- IC framework
- Categories of ICs
- EPA's expectations for IC use
- IC Strategy
 - Goals
 - Site work
 - Workplans
- Guidance update

What Is an IC?

- Institutional controls are non-engineered administrative and legal controls used to minimize exposure and protect the integrity of a remedy
 - Not fences or signs

When Are ICs Used?

- Threshold
 - Unlimited use and unrestricted exposure
- Before, during, and after cleanup
 - When contamination is first discovered to limit exposure
 - During cleanup
 - When residual contamination is left in place after site cleanup

How Do ICs Work?

- Work by:
 - Limiting land or resource use
 - Providing information to modify behavior

Regulatory Framework

- Protect human health and the environment
- Statutory preference for treatment and the use of permanent remedies
- Restore groundwater to its maximum beneficial use
- Use a combination of methods (treatment, engineering and ICs)
- Short-term and long-term management to prevent or limit exposure to hazardous waste constituents

The NCP

- Emphasizes the use of ICs
- To supplement the use of engineering controls in all phases of cleanup
- As a component of the completed remedy
- Cautions against use as a sole remedy unless active response measures are impractical

EPA Expectations for IC Use

- Combination of methods to achieve protection of human health/environment
- ICs supplement engineering controls
- Don't expect ICs will often be the sole remedial action
- Remediate contaminated soils to prevent/limit direct exposure of human and environmental receptors

EPA Expectations for IC Use (Cont.)

- ICs if the cleanup does not allow for “unrestricted use and unlimited exposure”
- ICs layered or used in series to increase reliability
 - Layering ICs means using different types of ICs at the same time
 - ICs in series is the use of ICs at different points in the investigation and remediation

Use of Mechanisms General Trend

- Most common IC Mechanism reported by category
 - Governmental controls – 370
 - Proprietary controls – 354
 - Enforcement devices – 354
 - Informational devices - 270

Individual Mechanisms General Trend (Cont.)

- Most commonly used IC mechanisms reported
 - Consent Decree - 190
 - Deed restriction (unspecified type) - 136
 - Restrictive covenant -132
 - Deed notice - 100

Why ICs?

- Most common IC objectives reported
 - Protect the integrity of the remedy – 659
 - Prohibit ingestion exposure – 638
 - Protect dermal contact – 363
 - Protect inhalation exposure – 274
 - Prohibit residential use – 254
 - Prohibit other use of groundwater – 188
 - Prohibit plume movement - 150

General Categories

- Governmental controls
 - Zoning/permits
- Proprietary controls
 - Easements/covenants
- Enforcement tools with IC
 - (CD/UAOs)
- Informational devices
 - Fishing advisories/State registries

Acquisition of Property

- CERCLA 104(j)
 - Authorizes EPA to acquire interests in real estate
 - May only use this authority if State provides assurance that it will accept transfer of the interest following completion of the remedial action
 - Solutions:
 - Third-party beneficiary
 - New state laws
 - Alternative grantee

EPA IC Strategy

- Each Region identify one program and one legal IC coordinator
 - Regional resource for IC issues, training, etc.
- Develop a management level advisory group (MAGIC)
 - Made up of one program manager from each Region and 5 Regional Counsel reps.
 - Develop a National IC Strategy
 - Develop Regional Workplans
 - Deal with national policy & workload issues
- EPA Regions populated baseline IC information on 900 construction completion sites, including deleted sites

Five Goals

- Define a nationally consistent approach for tracking and evaluating whether appropriate institutional controls have been implemented
- Using the IC Tracking System and independent evaluation
- Define a resource appropriate approach to remedy IC-related issues identified at Superfund sites

Five Goals (Cont.)

- Identify and implement pipeline business process improvements to minimize future problems
- Establish a tiered approach and appropriate time line for population, continual updates, and maintenance of the IC database

Specific Actions

- Populate ICTS with Tier I data by June 30th
- Develop Regional Workplans
- Conduct research
- Conduct QA and fill data gaps
- Need to identify potential solutions
- Undertake corrective measures
- Describe expectations for remedy changes
- Capacity building
- Internal/external coordination

Regional Workplans

- Regional workplans were in place by October 31, 2004 to:
 - Assess and initiate action at all deleted sites with IC issues identified through the IC tracking system, within one year
 - Assess and initiate necessary action addressing IC issues at all other remaining construction completion sites at the time of the regularly scheduled five year review
 - Expedite review of IC issues at those sites in either category where known factors warrant assigning a site a higher priority

Deleted Sites Reportedly Without ICs

- Deleted site considerations
 - Typically older sites – old information in the file
 - Not in compliance with current guidance
 - Typically little to no ongoing EPA involvement
 - Disproportionate Regional workload
 - Constitute highest potential workload (resources and length of time to fix)
 - Require research, IC identification, evaluation, negotiation, selection, implementation and arrangements for monitoring and enforcement

Construction Completion Sites

- Typically more recent sites
- Much larger universe of sites
- CC sites with ICs reportedly not in place is not in conflict with current guidance
- EPA typically has an ongoing involvement
- There are some actions planned but not implemented
- Likely require less time and resources than deleted sites

Five-Year Review Sites

- All other CC sites should be assessed during Five-Year Reviews.
- Region has flexibility to move up the IC review - factors include:
 1. Potential or actual breach of the IC poses significant human health risk
 2. The site is being considered for redevelopment, evidenced by contact from a developer, a land use change, or visual evidence of activity

Guidance Update

- Identifying, Evaluating and Selecting ICs - Final 2002
- Model RD/RA CD Language - Draft April 2005
- “How-To” Guidance Manual
- ICs and Communities
 - Final March 2005
- Implementation, Monitoring and Enforcement
 - Final sign-off
- Evaluating IC Effectiveness at the Five-Year Review
 - Working draft to Regional Workgroup in March 2005
- IC Implementation and Assurance Plans
 - Draft outline
- Life-Cycle Costs
 - Ongoing

Conclusion