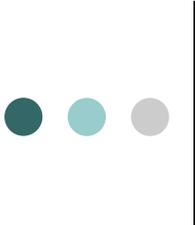


US EPA ARCHIVE DOCUMENT



Institutional Controls



Title slide



Institutional Controls (ICs)

- Non-engineered instruments such as legal and administrative tools (non-engineered) used to minimize the potential for human exposure to contamination by limiting land and resource use.
- ICs can be layered or implemented in series and with other physical controls
- Can be used during all stages of the clean up process
- Appropriate where contamination is present and the facility cannot support unlimited use and unlimited exposure



What are ICs?

Institutional controls are *actions* administrative and legal tools that do not involve construction or physically changing the site. They are designed to lower the potential for people and the environment to be exposed to contamination *ensuring appropriate land and resource use*. They are adopted when the clean up does not result in unrestricted use and unlimited exposure. Examples of remedies that leave contamination on site.... Natural Attenuation and long term groundwater pump and treat systems.

ICs are typically layered, layered means using different types of ICs at the same time to enhance protectiveness [for example to restrict land use the SM may issue and enforcement tool UAO; obtain an easement; initiate dialogue with local government to make a potential zoning change; enhance future knowledge of the restrictions by recording them in a deed notice and in a registry of contaminated sites.

Most commonly known for of ICs are Deed Restrictions - Restrictions placed within a deed that control the use of the property. Restrictions travel with the deed, and cannot generally be removed by new owners.

Another definition heard often are land use controls (LUCs) or activity and use limitations (AULs), and environmental use restrictions (EURs) all ICs.

ICs may be implemented in series to ensure both the long term and short term effectiveness of the remedy. with other used in combination with other controls (e.g., engineered controls) to limit access to site contamination. For example the enforcement tool may require an easement from an adjacent landowner to conduct groundwater sampling or implement a portion of the engineered remedy. This may not be needed for the long-term effectiveness of the remedy and may be terminated when the construction is complete.

ICs can be used during all stages of the clean up process. They can be used throughout the life cycle of a site cleanup, including when contamination is first discovered, while the cleanup work is ongoing, and after the cleanup is finished if some amount of contamination remains onsite (i.e., if the cleanup is too difficult or too costly to remove all contamination).

Are appropriate normally used when waste is left onsite and when there is a limit to the activities that can safely take place at the site (i.e., the site cannot support unlimited use).



Institutional Controls (ICs)

- Are not meant to replace remedial methods (do not reduce toxicity, mobility, or volume of contamination)
- Are considered response actions
- Fences are not ICs



ICs are rarely used alone to deal with contamination at a site. Typically, they are part of a larger cleanup solution and serve as a non-engineered layer of protection. Because they are an administrative/legal measure and not a remedial measure, they do not affect (reduce the toxicity, mobility or volume of) the contaminant mass.

They are considered limited action not no action in CERCLA. When a RCRA corrective action includes an IC either as part of an interim measure or at the end of clean up at the final corrective action, the IC is considered part of the remedy.

Institutional controls are considered “actions” though not a physical or engineered measure in the context of a ROD or RCRA Corrective Measure although they are administrative and legal, and are vital elements of response alternatives because they simultaneously influence and supplement the physical component of the remedy implemented. Although it is EPA's expectation that treatment or engineering controls be used to address principle threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs can and do play an important role in remedies.

Fences are often thought of as ICs but they are not they are physical Barriers instead of Administrative or Legal Measures.

LUCs limit human exposure by restricting limit human exposure by restricting activity, use, and access to properties with activity, use, and access to properties



Four Categories of ICs

- Governmental Controls – police power (e.g., zoning restrictions, ordinances, statutes, building permits or other provisions that restriction land or resource use at a site)
- Proprietary Controls- more reliable ICs (e.g., easements, covenants. Deed Restrictions)
- Enforcement and Permit Tools (e.g., consent decrees, administrative orders)
- Informational Devices (e.g., State Registries of contaminated sites, deed notices and advisories)



Governmental controls – use police power. Implemented and enforced by state and local authorities. Typical examples include zoning, ordinances, statutes, building permits or other provisions that restrict land or resource use at a site. Drawbacks – since police powers regulate and enforce these controls, EPA has little notice that these types of ICs are not being enforced and generally has no ability to enforce these controls since they are local. Land use restriction.

Proprietary controls have their basis in real property law and are unique in that they create legal property interests. Legal instruments placed in the chain of title of the site. For example, an easement that provides access to the property so that the facility owner or a regulatory agency may monitor and inspect a remedy. The benefit of these types of remedies is that they can be binding on subsequent purchasers of the property and transferable which make them more reliable in the long-term. Drawbacks- proprietary controls get into property law and is complicated because the property owner has many individual right regarding their property. Each individual right dependent on property common law and the state where the site is located. For example, different states deal with easements differently and convey differing rights to adjacent properties. The point is that the local property common law needs to be researched before the type of IC is selected to evaluate its enforceability in the jurisdiction.

Enforcement and Permit Tools – These tools include orders, permits, and consent decrees. EPA can enforce permits, conditions and/or issue orders under RCRA sections 3004 (a), 3004 (u) and (v), 3008 (h) and 7003. These tools often have significant shortcomings that should be thoroughly evaluated. For example, the enforcement agreements are only binding on the signatories and may not be enforceable against the next owner.

Informational Devices - Informational tools that provide information or notification that contamination remains on site. They are not enforceable. It is important to consider the purpose of this IC. This type of IC is usually used as a secondary layer IC to ensure the overall reliability of other ICs.



RCRA Institutional Controls

- Imposed by different legal mechanisms than CERCLA
- Authorized States Decision-Makers
- EPA expects that RCRA similar to CERCLA will use a combination of methods (e.g. treatment, engineering and institutional controls)
- ICs are not generally expected to be the sole remedial action



State decision makers results in a wide variety of state specific mechanisms.

If ICs are being implemented through a RCRA Permit. It is important that there is some mechanism in place to ensure long-term enforcement and that the ICs do not get lost due to property transfer or permit expiration.

Legal Mechanisms to Impose ICs under RCRA

- ICs are imposed through the permit conditions or orders under Section 3008 (h)
- Where IC is meant to carry on beyond the permit and order may be required to ensure that an IC remains in place for the long term
- Under RCRA EPA is not authorized to obtain any interests in the property



Therefore any proprietary controls such as easements will require the involvement of third parties such as the states and local governments under RCRA.

7

CERCLA versus RCRA ICs

- CERCLA:
 - Fund-lead Remedies
 - Feasibility Study (FS) and selected through a Record of Decision (ROD)
 - Evaluation criteria outlined in the National Contingency Plan (NCP)
 - EPA may acquire a property interest under CERCLA § 104(j)
- RCRA:
 - No Fund available. Trust funds may be available i.e. UST and State Trust Funds
 - Corrective Measure Study (CMS), or post-closure care responsibilities, and established through a permit, order or alternative enforcement document
 - Evaluation criteria published in the Federal Register but are not a regulation
 - RCRA does not expressly grant EPA authority to acquire property interests to conduct a cleanup
 - As a State-delegated program, States typically have primary responsibility in selecting, implementing, monitoring, and enforcing ICs.



The use of ICs in the context of RCRA is discussed in the Federal Register notice issued by EPA in 1996. This Federal Register notice provides very similar cautions to those in the NCP for the use of ICs at RCRA corrective action sites. In addition, draft guidance published in 2002 discusses various administrative issues associated with completion of corrective actions at RCRA facilities, including two types of completion determinations: “Corrective Action Complete,” and “Corrective Action Complete with Controls.” The latter of these categories include sites where ICs are required.



ICs and Risk Based Clean-ups

- Risk-based corrective action
- State Voluntary Clean up Programs
- Brownfields Redevelopment



The point here is that in many cases ICs are required as part of a risk based clean up.

In the area of site remediation, returning land and groundwater to conditions acceptable for unrestricted residential use would be ideal, but the limitations of public and private-party funds tell us that this goal can never be achieved. Through the experience in risk-based corrective action and the need for remediation that is protective of human health and the environment and cost effective, the doors have opened for the use of institutional controls.

Risk-based corrective action is a cleanup strategy that integrates exposures and risk-assessment techniques into traditional remediation processes. IC help to ensure a risk-based approach to cleanup that maintains the appropriate levels of public health and safety for the property's intended use. This report discusses the relationship of risk-based standards and institutional controls to successful brownfields cleanup and redevelopment.

To encourage states developing ICs, under the institutional control provisions of the Brownfields Law of 2002, local governments can use up to 10 percent of a grant to enforce measures. The law encourages states to create institutional control recording requirements. EPA is prohibited from taking enforcement action on site releases, provided the state maintains a public record of its cleanup sites. This creates a state incentive to establish an institutional control record for brownfields sites.

Environmental liens, easements and other property transfer restrictions are used by some states as an insurance measure to supplement relaxed cleanup standards.



State and Local IC Role

- Under RCRA the state will typically be overseeing or imposing the remedial action
- EPA must rely on third parties to establish, maintain and enforce most types of ICs
- RCRA does not specify the role of local government regarding ICs



However, local governments are often the only entity that has legal authority to implement, monitor, and enforce certain types of ICs. Ask the audience which types ? Role of local governments... determining future land use, helping to engage the public, and implement long term monitoring and enforcement.

Site Managers Responsibilities After ICs have been Selected

- Ensure that ICs are implemented, are reliable, are enforced and remain effective



Does not end once ICs are selected. Must work with local and state officials to get commitments that the ICs will be maintained. Also, ensure that the facility complies with the provisions of the enforcement tool. Evaluate ICs at the 5 year review.

Under CERCLA there are 5 year reviews to evaluate ICs, however under RCRA there is not requirement for a 5 year review unless EPA determines the need for such a review.

This lead us to the issue of tracking ICs.

Where are we with regard to IC Tracking?

- IC Tracking System (ICTS) – CERCLA
- RCRA Information Database (RCRAInfo)
- Uniform Environmental Covenants Act (UECA)
- State and Local Tracking
- Guardian Trusts



EPA created ICTS for SF and RCRA CA programs to provide a centralized information data base on the site-specific status of ICs.

The initial version of ICTS only includes Superfund construction complete sites. These are sites where physical construction of all clean up actions is complete, all intermediate threats have been addressed and all long-term threats are under control. EPA has not yet determined if ITCS will be expanded in the future into a broader range of sites and information.



RCRA Informational Database

- Corrective Action Sites
- Uses existing RCRA Database



Information to be entered into RCRAInfo includes the type of IC, the scheduled and actual dates that controls were fully implemented and effective, and the responsible agency.

ICTS and RCRAInfo Data Gaps

- Both systems track only minimal information.
- Get info from the decision document and reflects only the planned use of the controls not the actual use.
- Monitoring and enforcement information is not included in the system.



Universal Environmental Covenants Act

- Established by National Conference of Commissioners on Uniform State Laws – 2003
- Establishes a process for creating, modifying and enforcing environmental covenants
- Encourages the development of a standard approach to the documentation of clean-ups
- Promotes Brownfields development and economic growth



Since ICs are being increasingly used as part of environmental remediation which typically allow clean up to a risk based level, rather than to absolute standards, which is both ecologically and environmentally preferable in many circumstances. Residual contamination is being left behind requiring a need to insure that land use restrictions, mandated environmental monitoring requirements and a wide range of common engineering controls designed to control the environmental risk of residual contamination will be reflected on the land records and effectively enforced over time.

Secondly to assist in redeveloping and addressing the problem of blighted abandoned properties. UECA is expected to be helpful in offering a clear and objective process for creating, modifying or terminating environmental covenants and for recording these actions in recorded instruments which will be reflected in the title abstract of the property in question.

In August, 2003 the National Conference of Commissioners on Uniform State Laws (“NCCUSL”)² adopted the Uniform Environmental Covenants Act (“UECA” or the “Act”).³ UECA is important primarily because it confirms the legal validity and enforceability of recorded use restrictions negotiated in connection with so-called “risk-based clean-ups” of contaminated real estate. Further, as UECA is adopted by the various states, the Act is expected to encourage development of a single, standard approach to the documentation of such clean-ups – materially easing the present uncertainty of how to properly formalize substantive remedial decisions intended to clean up contaminated land.

Does not address:

Other important issues remain in this field that UECA does not address. Examples include: (1) the concurrent jurisdiction of state and federal regulators, and the related question of whether a state regulator has any regulatory authority on federally-owned property; (2) the absence of any statutory authority for a regulator to release potentially liable parties from future liability for additional clean-up beyond that contemplated by an environmental covenant; (3) any mechanism for a regulator to use the power of eminent domain or otherwise to impose an environmental covenant in the absence of consent by the owner of the parcel; and (4) provisions designed to provide stakeholders actual notice, as opposed to legal or constructive notice, that contamination exists on a particular parcel.

Adopted by NCCUSL in August 2003

Establishes a process for creating, modifying and enforcing environmental covenants

Clarifies or removes confusing real-estate legal issues

Promotes protective, “risk-based” clean-up of up of environmental contamination

Provides local communities a strong voice in long long-term land stewardship term

Promotes brownfields development and economic growth

● ● ● State and Local IC Tracking Systems

- Oakland, CA; Rochester, NY Permit tracking protocols
- Emeryville, CA – OSIRIS (tracking system)
- Portland, OR One-call utility notification
- Arizona Declaration of Environmental Use Restriction (DEUR)
- Florida – IC Registry
- California - CALSITES





Private Sector IC Tracking Systems

- Private firms (e.g., Private firms (e.g. Environmental Data Resources (EDR))
- Terradex
 - Land monitoring software
 - Provides alerts
 - Pilots with EPA and the State of California





Guardian Trust

- Public/private entity
- Inspection and monitoring ICs and engineering controls
- Long-term stewardship
- Pilot in Pennsylvania





5-Year Review Process

- CERCLA Requires Review of ICs.
- RCRA Five Year Reviews are not Required.



Under CERCLA, once institutional controls are in place, site managers should evaluate the administrative and legal documentation, as well as the physical site evidence, to ensure that they are fully effective. This review should be an integral part of the technical assessment performed during operation and maintenance inspections, as well as during the five-year review process. However, the GAO noted in a recent audit that relying solely on the CERCLA five year review for evaluating the adequacy of the ICs was insufficient to ensure protection of human health and the environment. In their evaluation GAO sites a clean up site with a GW use restriction where drinking water was consistently pumped after the clean up.

Monitoring of ICs at RCRA sites is even more infrequent than 5 years because there is no legal requirement to review the remedy as in CERCLA

19

EPA Plans to More Effectively Implement ICs

- Clarify Controls
- Consider all Key Factors for ICs at Remedy Selection
- Improve Monitoring
- Tracking



Clarify Controls- EPA will continue to develop guidance to clarify the roles of IC in clean ups. EPA is currently developing guidance on implementation, monitoring, and enforcement issues

Develop clean up related documentation to identify key factors in selecting ICs for the remedy.

Revise guidance to increase efficiency of IC monitoring. Require periodic evaluation and certification from a responsible party.

Tracking undertake QA to ensure information in the tracking systems reflects actual conditions.