

May 24, 2004

Ms. Ellen Manges  
Office of Solid Waste and  
Emergency Response (5101T)  
US Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Ms. <sup>Ellen</sup>Manges:

Enclosed please find the white paper, "Institutional Controls and Long Term Stewardship: Where Are We Going?". The Association of State and Territorial Solid Waste Management Officials' (ASTSWMO) CERCLA Research Center Subcommittee developed this paper with input and assistance from the Association's Federal Facilities Research Center Subcommittee, Hazardous Waste Subcommittee, Tanks Subcommittee, and Solid Waste Subcommittee.

The paper is not intended to be a statement of ASTSWMO position or policy. Instead it is a written exercise in identifying the present and future hurdles associated with institutional control use, and what State and federal programs should consider in developing policy to deal with these hurdles. We are passing the document on to you in hopes that it will be useful in the work being undertaken by the Long Term Stewardship Task Force, formed under OSWER's One Cleanup Program initiative, or in other institutional control policy development efforts within OSWER. It is ASTSWMO's hope that EPA and States can work together, using the principles identified in the white paper, to improve the long-term viability and effectiveness of State and federal institutional controls programs in protecting human health and the environment.

Please feel free to contact me with any questions at 217-782-0245, or Kris Swanson with the ASTSWMO staff at 202-624-5423.

Sincerely,

*Gary P. King*  
Gary P. King (IL), Chair / *KRS*  
CERCLA Research Center  
Subcommittee

cc: ASTSWMO Program Steering Committee  
Mike Cook, EPA/OSRTI



Matt Hale, EPA/OSW  
Phyllis Anderson, EPA/OSRTI  
Karin Koslow, EPA/OSRE  
Kirby Biggs, EPA/OSRTI

Enclosure

## **Institutional Controls and Long Term Stewardship: Where Are We Going?**

Institutional Controls (ICs) are written instruments, containing administrative or legal controls, that help minimize the potential for human exposure to contamination and protect the integrity of a remedy by limiting land or resource use. Types of institutional controls include, 1) informational: non-enforceable advisories; 2) proprietary: legal tools based in real property laws that restrict the use of property;<sup>1</sup> 3) governmental: restrictions by State or local governments; and 4) enforcement and permitting tools and controls implemented as part of the hazardous waste enforcement and permitting process. Examples include land and resource use restrictions, well drilling prohibitions and well use advisories, building permits, deed restrictions and notices, and zoning restrictions.

The two primary purposes of institutional controls are to minimize the potential for exposure and protect the integrity of the remedy. Institutional controls can be considered and used in all stages of corrective action and the remediation processes. The use of ICs can span a broad spectrum of site types and programs. Recently, there has been a trend to work toward the consistent IC use across all programs, with the realization such reliance may leave future site responsibility open ended.

In establishing a direction for long-term stewardship and institutional controls, there are two fundamental steps: 1) States and EPA need to assess the current state of institutional control use; and 2) States and EPA have to use this assessment and its required policy modifications, with recognition of the desired or ideal role for ICs, to ensure the current and future use of ICs will effectively protect human health in the long-term. This white paper looks to identify the key questions in this assessment and better identify State perspectives on the role of institutional controls in environmental response.

### **A. STATE AND EPA ASSESSMENT OF CURRENT INSTITUTIONAL CONTROL USE**

To assess present IC policy, current IC use must be characterized. If a response program has a full understanding of what the future holds when it selects an IC as a supplement to a remedy, it should be able to answer some basic policy questions with regard to its institutional control program. A question left unanswered may equate to a gap in the program's IC policy.

1. In what instances is the program using institutional controls?
2. Why are institutional controls used in these instances?
3. What types of institutional controls are used? Are they enforceable by the State and/or another entity?

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<sup>1</sup> The use of legal tools intersects areas of law with which waste and remediation managers are less familiar, e.g., property law. Fully understanding the risk protection provided by available institutional controls may require these managers to become more knowledgeable in these areas.

4. What burdens are placed on the program by selecting ICs as a portion of the remedy? What benefits?
5. What is hopefully achieved by the use of the institutional control(s)?
6. In what manner are the institutional controls implemented? By a responsible party or facility with State oversight? By the State? By another entity (e.g., private)?
7. Are the ICs being “backed-up” with other legal mechanisms (e.g., enforceable agreements to ensure compliance)? Why or why not?
8. Is the program monitoring the ICs? Why or why not?
9. What are the identified drawbacks or problems with using institutional controls? What are the benefits?
10. Is the program doing anything to address these drawbacks or problems?
11. Does the program have an overall approach or process in place for long-term stewardship? If so, what are its key concepts?
12. How (periodic inspections, certifications, etc.) will institutional controls be monitored to ensure they remain in place, continue to be effective, and remain protective of human health and the environment? By whom?
13. Who will enforce the requirements of institutional controls throughout their lifespan (federal government, State government, local government, public, property owners)? What enforcement options are available to ensure dropped controls are re-instated (penalties, forced restoration of control measures, other)?

**B. KEY ISSUES THAT MUST BE ADDRESSED IN ANY CURRENT OR FUTURE POLICY FOR THE USE OF INSTITUTIONAL CONTROLS**

A State response program that understands the policy issues elicited by the questions in Section A, i.e., “knows where it is going” in terms of future responsibilities, also should understand whether the direction headed is an appropriate one. The discussion below provides guidance on principles that are important for an effective IC program, and should be included in any institutional control or long-term stewardship policy or strategy.

**1) ICs should not be substitutes for effective cleanups.**

The goal of State and federal remediation programs is to protect human health and the environment through the remediation of contaminated sites. Though ICs can be an effective *supplement* to site remediation and corrective action, they are rarely an effective *substitute*. Without effective cleanups, threats to human health and the environment cannot be eliminated. State and federal IC programs should emphasize protection of human health and the environment through actual cleanups, using ICs to strengthen the long-term effectiveness of remedial or corrective actions.

It is important to note, however, that an effective or successful cleanup does not always equate to the complete removal of all contaminants. Remedial and corrective options that are inherently characterized by an institutional or engineered land-use control (e.g., capping) will be just as effective in many circumstances. In such cases, the IC becomes

very important in long-term limitations of exposure. Additionally, risk at some sites may be sufficiently low to allow for a successful “cleanup” with the use of an IC alone. However, with this reliance on the control, it is imperative to evaluate if the contemplated IC can be implemented rationally, both in the short and long-term.

**2) Long-term IC costs should be understood before they are used on a site.**

Given limited budget resources and other pressures on response programs, ICs often appear as enticing alternatives to full-blown remediation or corrective action with their relatively low up-front and short-term costs. However, the costs of IC oversight, maintenance and enforcement extend far into the future, in some cases indefinitely. If these costs are not understood upfront, then proper protection of human health and the environment may not be provided in the long-run.

One important aspect of this cost calculation is consideration for future administrative and monitoring costs. If State administrative and monitoring costs are not included in consideration of potential remedies, they should somehow play into the decision-making process. Particularly with small sites where the cost difference between a cleanup to full use and (for example) the use of deed notice are small, considerations of future administrative and monitoring costs may prove key in the remedy decision.

Remedial and corrective actions aimed at total removal of contamination may involve a large up-front cost, but lower costs as the site nears and reaches a definite end. With knowledge and understanding of the true long-term costs of ICs, the fiscally responsible remedial or corrective option may in fact be cleanup to full use with a reduced reliance on institutional controls. Leaving residual waste onsite will require long-term management of the property in perpetuity to ensure the property remains environmentally safe. The long-term costs of this can be significant, and it is thus imperative that the costs of ICs available at a site be understood before they are implemented.

Consideration of appropriate financial mechanisms should be clearly evaluated.

**3) Remediation and IC costs should be balanced to ensure long-term effectiveness of cleanups.**

Once true long-term IC costs are identified and understood, they can be compared and balanced with costs of total contaminant removal (i.e., remedial options not relying on ICs) and its often-higher initial expense. By truly understanding the full cost of both total contaminant removal and ICs, a remedy, control, or combinations thereof can be chosen to secure the most effective and efficient option for protection against (or, preferably, elimination of) public health risk. If too much emphasis is placed on IC use at a site, the high long-term costs and future obligations increase the odds of future failure. Similarly, the large upfront costs of cleanup to full-use place a heavy demand on short-term funding, which may or may not be available from year to year.

**4) The long-term responsibilities for ICs should be understood and effectively carried out by those who will bear the responsibilities.**

It is essential for those bearing long-term IC costs to understand their future responsibility. This is true regardless of whether this responsibility is held by public or private entities. If an IC is chosen to supplement a site's remedial or corrective action plan, knowledge and understanding of the long-term costs, obligations, and responsibilities become important in future budgeting and planning to ensure oversight, maintenance and enforcement remain in place. Should funding not be available for these activities, or action on the necessary obligation wane, the IC may become ineffective and a site's threat to human health and the environment may once again become high. Responsibilities, both financial and otherwise, can often extend beyond the immediately foreseeable future. These responsibilities may be held by property sellers providing information for due diligence or local governments limiting the impacts of changes in zoning, building permits, or certificates of occupancy on IC effectiveness. The impacts of the notification and reporting requirements for a change in ownership, contact person, or zoning designation should be understood by both the property owner and regulating agency(s).

**5) Long-term IC costs should be borne by entities with the capability and the incentive to keep the ICs in place.**

Institutional controls become ineffective as a supplement to cleanup if they are not sustained and kept in place for the long-term. But the long-term costs of (and obligations for) ICs can act as a disincentive to continue to maintain, monitor, and enforce them. For ICs to remain effective in the long-term, these responsibilities should be borne by those with not only the long-term financial capability to continue to maintain, monitor, and enforce, but with the incentive to keep doing so. Though incentives for IC effectiveness in the long-term may lie, and thus enforcement assigned elsewhere (e.g., local or State government), the financial burden should not be shifted away from responsible parties. Thus, it becomes important to evaluate the long-term financial capabilities of these parties. Securing these financial assurances at a site are vital to the long-term success and effectiveness of the control(s) in place. Under certain circumstances, a third party entity's establishment of a trust or similar mechanism may be appropriate to augment the State's system for financial assurance.

**6) ICs should have a firm legal basis that makes them enforceable by persons responsible for and capable of enforcement.**

In order for ICs to be truly effective in the long-term, they must be supported by legal authority to enforce the limitations or restrictions they impose. Differences exist between the enforcement capabilities of federal, State and local governments, and private parties. It is important to have firm legal protocols in place when planning IC use and implementation at a site. Long-term effectiveness of a control becomes difficult or impossible if the entity responsible for enforcement does not have the means or authorities by which to enforce.

Though it may not be necessary, or the best option for all State programs, one mechanism available to reach this end is the National Conference of Commissioners for Uniform State Laws' Uniform Environmental Covenants Act. However, whether or not the incorporation of the Act into current State law will address State needs should be decided on a State-by-State basis. Additionally, ensuring that resources will be available to enforce the controls will remain a long-term issue and is not addressed by the model Act.

**7) ICs should run with the land and be free from archaic common law defenses.**

Current common property law limits long-term effectiveness by attaching ICs to property ownership rather than to the property itself. Thus, as property changes hands, the intended limitation of risk may fail to pass along with it. To avoid this, mechanisms should be established which allow ICs to separate from the common law and remain in place regardless of property transfer or attempted rezoning. This may require statutory changes, additions, or clarifications in some States.

**8) Systems should be in place to ensure that ICs are recorded to run with the land.**

Current common law should be changed to all ICs to run with the land. However, with such changes, situations may arise where those involved with the IC's implementation are not present in outgoing years, leaving gaps in ensuring IC enforcement or monitoring, and even limiting future knowledge of its existence. A public record of the IC(s) in place will need to exist to ensure it is abided by and upheld as property ownership and use may change.

**9) The purpose of any IC should be clear and the obligations imposed unambiguous.**

It should be emphasized that the intention and goal of institutional controls is the outcome-based protection of human health and the environment, not the output-based action or limitation that the control itself requires. State and local "buy-in" to the selected remedy and associated IC(s) is critical to success; consultation should occur as early as possible. Additionally, the remedy document should clearly spell out the specific institutional control(s) that is in place at the site, and how it is enforceable.

**10) Systems should be in place that provide for regular IC monitoring and inspection.**

To ensure long-term effectiveness, the IC must remain viable. Monitoring and inspection will help to ensure this viability, as well as allow for any corrective actions. Of course, regular monitoring and inspection have underlying assumptions of knowing which ICs are in place and what the IC is intended to prevent and control.

**11) Systems should exist to allow for public knowledge of IC use at a site.**

An important way to ensure that an institutional control limits the public risk posed by a site is to make the public aware of the existence of the control, and thus the implied existence of risk. This is particularly important to key target audiences, i.e., those with the highest potential for risk. Ten or twenty years beyond a site's closure, the people and institutional memories associated with the site's potential risk could be long gone, leaving no knowledge of that risk or the associated control.

**12) Implementation of ICs represents the start of a long-term remedy, not the conclusion of the remediation process.**

It is important that all parties recognize, understand, and acknowledge that IC implementation at a contaminated site does NOT end the remedial process at that site, but that instead, it is the beginning of a long-term remedy that must be operated, maintained, monitored, and evaluated for effectiveness for as long as the conditions which predicated the need for the remedy exist. For example, if a land use restriction prohibiting residential use is imposed due to the presence of contaminants in the soil exceeding residential threshold values, then that property must not be used for residential purposes until the contaminants have been removed from the site. Likewise, a restriction from intrusive public access (e.g., digging or excavation) due to the suspected presence of unexploded ordinance must be maintained until the unexploded ordinance has been removed, or conclusively determined not to be present. A failure in these restrictions is a failure of the remedy.