



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 7 2005

Mr. John B. Stephenson  
Director  
Natural Resources and Environment  
Government Accountability Office  
Washington, D.C. 20548

Dear Mr. Stephenson:

Thank you for the opportunity to review and comment on the January 2005 Draft Report titled "Hazardous Waste Sites: Improved Effectiveness of Controls at Sites Could Better Protect the Public." The U.S. Environmental Protection Agency (EPA) appreciates GAO's efforts to recognize the challenges that EPA faces when implementing institutional controls (ICs). General comments and comments specific to the GAO recommendations are enclosed. Generally, EPA agrees with the recommendations and has undertaken a number of activities over the past four years to improve implementation and monitoring of appropriate ICs. These activities are summarized below.

EPA and other government agencies have used ICs at cleanup sites for nearly two decades. Over the last ten years, we have focused increased attention on understanding and overcoming the complexities and challenges associated with the use of ICs, many of which are highlighted in the Draft Report. As a result, we have made significant improvements in our approach to ICs in recent years, targeted at the full life-cycle of ICs from identification, evaluation, and selection to implementation, monitoring, and enforcement. By making these changes and more clearly defining EPA's policies and practices, we are confident that the reliability and durability of ICs at sites that have been recently cleaned up has greatly improved. We acknowledge, however, that there are sites addressed earlier in the Superfund and RCRA programs that have not benefitted from our increased understanding of ICs.

We recently undertook a comprehensive effort, beginning with the Superfund program, to improve our practices and to apply them to both old and new sites. In 2004, the Office of Superfund Remediation and Technology Innovation, the Federal Facilities Restoration and Reuse Office, and the Office of Site Remediation Enforcement, developed a comprehensive IC strategy for the Superfund program. The "EPA Strategy to Ensure Institutional Control Implementation at Superfund Sites," issued October 7, 2004 (National Superfund IC Strategy; OSWER document 9355 0-106) is focused on addressing potential IC problems at the Superfund sites that have reached the "Construction Complete" stage of the cleanup. The National Superfund IC Strategy calls for the Agency to evaluate close to 900 Construction Complete sites and determine whether

the ICs are appropriate and effective and, if not, to take the appropriate corrective measures. The baseline information on these Superfund sites is maintained in the recently developed IC Tracking System (ICTS). This state-of-the-art tracking system will serve as the cornerstone for future programmatic and trend evaluations.

For the Superfund program, we also developed a network of Regional experts on ICs to resolve emerging issues quickly and consistently across the country. Each Region in EPA has designated both a Regional IC Program Coordinator and Legal Coordinator (IC Coordinators), as well as at least one person to represent the Region on the Superfund Management Advisory Group for Institutional Controls. The IC Coordinators resolve key implementation issues on a day-to-day basis, and the Management Advisory Group provides direction on emerging national policy issues and monitors Regional implementation of the National Superfund IC Strategy.

The “Framework to Establish National Consistency for Prioritizing Institutional Controls Workload” was developed to help with implementation of the National Superfund IC Strategy. It establishes criteria and requirements for expedited reviews, to be completed by October 2005, and longer term evaluations, to be completed by October 2009. Most of the expedited reviews are of sites deleted from the National Priorities List; consistent with the GAO findings, EPA believes these sites may be the ones warranting more immediate attention. Each Region conducted a critical analysis of its site portfolio to develop Region-specific workplans for all construction complete sites and is currently implementing them, consistent with the National IC Strategy. To date, we have identified over 200 sites from our working universe of Superfund sites, as needing no additional IC evaluation or corrective measures.

EPA’s comprehensive approach under its cleanup programs includes development of numerous products to help accurately define and improve the status of ICs. For example, we have developed the following IC guidance documents to address key implementation issues: (1) *Identifying, Evaluating and Selecting ICs for Superfund, Federal Facility and RCRA Cleanups* (September 2000; OSWER 9355.0-74 FS-P); (2) *Implementing, Monitoring and Enforcing ICs at Superfund, Federal Facility, RCRA, Brownfields and UST Cleanups* (draft final; February 2003); (3) *ICs and Communities at Superfund, Federal Facility, RCRA, Brownfields and UST Cleanups* (draft); and (4) *ICs and Five-Year Reviews Guidance Supplement* (draft). In addition, we have developed and delivered several types of IC training courses nationally.

Currently, EPA is addressing some of the more challenging implementation issues with respect to ICs, including revising the Superfund Five Year Review process; improving our understanding and use of title searches; developing guidance to assist with site-specific issues that will arise when determining the appropriate corrective measures; and creating model language and documents to improve reliability and enforceability of ICs in the future. In addition, EPA is piloting some innovative projects that we hope will have transferrable “lessons learned” for ICs. Examples include: collaborating with States and DOE on IC data exchange and tracking; monitoring the successes and shortcomings of a “One-Call” approach for identifying

ICs, which links IC information to utility line information when individuals call before digging on property; and relying on private entities for long-term stewardship responsibilities.

EPA has recognized that there are areas for improvement in how it and the states have selected, implemented, monitored, and enforced ICs at contaminated properties. While the National IC Strategy is focused on Superfund sites, our training efforts and guidance documents are directed at multiple cleanup programs – designed to assist our RCRA and Superfund practitioners. Under the RCRA program, we are working closely with authorized states to ensure effective institutional controls are imposed, where needed, and are applying the lessons learned in the other cleanup programs. We have also recently revised the RCRA Info data system so that it can track imposition and implementation of ICs at RCRA facilities. EPA has also worked with the National Conference of Commissioners on Uniform State Laws in developing the Uniform Environmental Covenants Act. The Agency supports the goals of the Uniform Environmental Covenants Act in seeking to promote greater uniformity in the implementation of institutional controls.

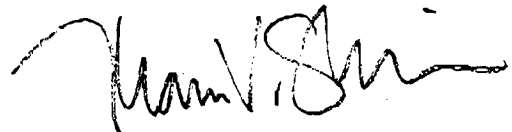
EPA is confident that our efforts will result in vast improvements to the implementation and reliability of ICs at cleanup sites. It is essential to ensure that ICs selected for a particular purpose in fact serve that purpose and remain a reliable and integral part of the remedy. As in-place management of hazardous wastes increases at sites across the Nation, the need for reliable institutional controls and vigilance in administering them increases as well. A "missing IC," as defined in the Draft Report, does not by itself necessarily represent an unacceptable human exposure or environmental risk or suggest a breach of remedy. For example, a landfill cap will still protect humans and the environment, even if no institutional controls exist to prevent digging, as long as no digging occurs and it remains intact. Conversely, a landfill cap with an institutional control preventing digging will not protect human health and the environment if digging has taken place contrary to the restriction.

EPA appreciates the efforts that GAO expended conducting this review. Thank you for the opportunity to provide comments on the Draft Report, and EPA looks forward to working collaboratively with GAO to continue to protect the public.

Sincerely,



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Acting Assistant Administrator  
Office of Solid Waste  
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Enclosure

**Enclosure**  
**EPA Comments on GAO Recommendations**

**I. General Comments**

**1. The absence of ICs should not be interpreted to necessarily mean remedies are not protective.**

One key aspect not considered in the Draft Report, but extremely germane to the findings, is the effect of ICs on the overall protectiveness of remedies. EPA agrees it is essential to ensure that ICs selected for a particular purpose in fact serve that purpose and remain a reliable and integral part of the remedy. As more sites mature into the long-term operation and maintenance phase, the need for reliable institutional controls and vigilance in administering them increases as well. However, a "missing IC," as defined in the Draft Report, does not by itself necessarily represent an unacceptable human exposure or environmental risk, or suggest a breach of remedy. For example, a landfill cap will still protect humans and the environment, even if no institutional controls exist to prevent digging, as long as no digging occurs and it remains intact. Conversely, a landfill cap with an institutional control preventing digging will not protect human health and the environment if digging has taken place contrary to the restriction. Whether a remedy continues to protect human health and the environment is not dependent on the mere presence or absence of an institutional control.

The Superfund Program conducts detailed remedy evaluations no less often than every five (5) years at sites that cannot support unlimited use and unrestricted exposure. This statutory threshold for site remedy reviews is also the policy threshold for determining whether a site requires ICs. The effect of using the same threshold for remedy reviews and ICs is that virtually all sites with ICs receive periodic reviews. The explicit purpose of the "Five-Year Review" is to critically evaluate the remedy to ensure it remains protective. During fiscal years 2003 and 2004 alone, the Superfund Program conducted over 400 Five-Year Reviews at NPL sites. Another 250 NPL sites are scheduled for evaluation in fiscal year 2005. The combined result is that almost the entire Superfund portfolio of construction completion sites will have relatively recent evaluations of whether the remedy remains protective. An analysis of Five-Year Reviews to date indicates that very few remedies have been deemed to not be protective. Further, of the very few sites with issues regarding protectiveness, the vast majority were related to an engineered remedy, rather than ICs. The important message is that the absence of an IC should not be interpreted to mean that a particular remedy results in unacceptable human exposure or environmental risk.

**2. Evaluation of a small universe of sites may overestimate the number of sites with potential IC problems.**

The second general comment involves the relatively small number of Superfund sites evaluated during the period 1991-1993 and the impact of this small universe on inferences drawn from the Draft Report. Specifically, there were four deleted Superfund sites with residual

contamination evaluated for the period 1991-1993. The Draft Report accurately states that two of the four, or 50%, of the deleted sites evaluated lack ICs. However, use of this statistic to estimate the number of older deleted sites would significantly overestimate the true number of deleted sites with residual contamination and no ICs in place for the Superfund Program. The Superfund Program conducted an evaluation of 890 Construction Complete sites in 2004, 280 of which are deleted. This research indicates that a significantly smaller percentage of deleted sites lack ICs. The Draft Report states that “results from nonprobability samples cannot be used to make inferences about a population...” – however, a more direct statement – that the use of this statistic in any other context would be misleading – is likely appropriate. The aggregated average of the universe of sites evaluated in the Draft Report indicates that approximately 17% of the deleted sites may have IC issues. This statistic is much closer to EPA’s internal analysis of the deleted sites with potential IC issues and is likely a much better measure of deleted sites with potential IC issues.

### **3. An increased use of ICs does not mean EPA advocates less treatment.**

The final general comment involves the potential for misinterpreting the finding of an increased use of ICs. An increased use of ICs should not be interpreted to mean that less treatment is occurring at Superfund cleanups or under other cleanup programs. The Superfund Program continues to clean up sites consistent with the statutory preference for treatment and permanent remedies. The RCRA program takes a similar approach. The data in this Draft Report were not evaluated for, nor do they support, any inference that an increased use of ICs results in a reduction in treatment.

## **II. Responses to Draft Report Recommendations**

### **1) Clarify Guidance on When Controls Should be Used**

EPA concurs with GAO’s recommendation to continue to develop cross-program guidance to clarify the role of ICs in EPA lead cleanups. The specific guidance documents developed or under development include:

- a) *Identifying, Evaluating and Selecting ICs for Superfund, Federal Facility and RCRA Cleanups*
- b) *Implementing, Monitoring and Enforcing ICs at Superfund, Federal Facility, RCRA, Brownfields and UST Cleanups\**
- c) *ICs and Communities at Superfund, Federal Facility, RCRA, Brownfields and UST Cleanups\**
- d) *ICs and Five-Year Reviews Guidance Supplement\*\**
- e) *IC Implementation and Assurance Plans\*\**
- f) *Regional Best Practices for ICs\*\*\**

\* currently draft final

\*\* currently draft

\*\*\* planned draft 05

The combination of these six guidance documents will add significant detail and guidance on the use of ICs.

**2) Demonstrate that, in Selecting Controls, Sufficient Consideration Was Given to All Key Factors**

EPA concurs with GAO's recommendation that sufficient consideration of all key factors should be completed at remedy selection, but we do not necessarily agree that this information should be included in the remedy decision document. The Checklist for Implementing ICs contained in the September 2000 EPA guidance on identifying, evaluating, and selecting ICs, states explicitly that key criteria should be considered during the remedy selection phase, however, the guidance does not recommend the analysis to be documented in the remedy decision. This was a considered policy decision to allow EPA to present an "enforcement neutral" remedy description.

For example, it is not always clear at the remedy decision stage whether the remedy will be EPA lead versus private party lead, and whether the remedy will be completed under a judicial Consent Decree or Administrative Order. These different leads and enforcement approaches have significantly different enforcement and monitoring responsibilities. Also, flexibility at the remedy decision phase allows for the emergence of new IC tools. For example, many States are actively considering passing legislation like the Uniform Environmental Covenants Act as a new IC tool, and remedy flexibility will allow for these situations. EPA guidance encourages an appropriate evaluation at the Remedial Investigation/Feasibility Study phase and new guidance will recommend additional detail at the remedy design phase. The scope of the GAO review included only principal decision documents rather than all supporting documents. The evaluation of key factors may have occurred in the RI/FS and/or other remedy decision documents. The list of the sites evaluated in the GAO Draft Report was not provided, so EPA was unable to determine whether sufficient consideration was given to all key factors in other documents for the sites evaluated.

In the case of RCRA cleanups, EPA notes that in many cases facilities at the remedy selection phase will be subject to ongoing regulation – for example, under a RCRA permit or interim status standards – and under the control of a viable operator. In such cases, the RCRA permit or security requirements may well provide adequate institutional controls, enforceable by EPA or the authorized states. On the other hand, the situation may be very different if property transfer or redevelopment is contemplated. Therefore, EPA is convinced that flexible approaches are needed in assuring that RCRA facilities have acceptable engineering and institutional controls during and after remedy completion.

**3) Ensure That the Frequency And Scope Of Monitoring Efforts Are Sufficient to Maintain the Effectiveness Of Controls**

EPA concurs with GAO's recommendation. As noted in the Draft Report, one of the key challenges is that monitoring is often completed by parties other than EPA and often there is little leverage to compel these other parties to action. In response to this concern, EPA's draft Revised

Operation and Maintenance (O&M) checklist identifies additional IC specific O&M requirements; the draft Implementation, Monitoring and Enforcement guidance will require periodic evaluation and certification from a responsible entity at the site that the ICs are both in place and that they remain effective; the draft guidance supplement on ICs and Five-Year Reviews will include criteria on evaluating the effectiveness of ICs; and the IC Implementation and Assurance Plan guidance will include specific roles and responsibilities for monitoring efforts.

**4) Ensure That The Information On Controls Reported In New Tracking Systems Accurately Reflects Actual Conditions**

EPA concurs with GAO's recommendation regarding IC tracking. EPA has undertaken a concerted effort to gather accurate information on the status and effectiveness of ICs throughout their life-cycle. The Superfund program has added almost 900 sites to its tracking system and regions are currently undertaking a significant quality assurance effort to ensure that the information in the system reflects actual conditions. Over the next year, expedited reviews will be conducted at approximately 80 high priority Superfund sites and reviews will be conducted at the remaining Superfund IC sites over the next five years. Further, the Superfund Program is currently considering enhancing ICTS to include tracking implementation, monitoring, and enforcement responsibilities as well as other IC issues.