

## **NOTES FROM THE FIELD: LAND USE CONTROLS TRACKING; A STATUS REPORT**

By Amy Jiron, Stephen Merrill Smith, Susan Eddy, and Keith Hagg

April 19, 2006

Published on LUCs.org

### **Contents of this Report:**

Basics: LUC Background

Basics: Types of Land Use Controls

Basics: The Uniform Environmental Covenants Act

Analysis: Use of LUCs Increasing

Analysis: The Reliability Problem

Analysis: Challenges and Complexities of LUCs Tracking

Analysis: Final Rule on All Appropriate Inquiry Includes Requirement to Search for LUCs

Analysis: CERCLA Liability Protections Require Compliance with LUCs Required

Analysis: Other EPA LUCs Efforts

Analysis: Decentralized Database Tracking

Analysis: State LUCs Tracking Efforts

Analysis: Private LUCs Tracking Efforts

Conclusion & Recommendation: Where We Are and Where We Need to Go

Appendix A: State On-line Remediation and Land Use Controls Tracking Databases

## Basics: LUCs Background

In 1980, President Jimmy Carter signed into law the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). CERCLA established cleanup authority and funding to address hazardous waste contamination caused by “responsible parties” (RPs) at thousands of contaminated sites. Under CERCLA’s strict, joint, severable, and retroactive liability scheme, RPs were held liable for the cleanup costs. Charging those responsible for hazardous waste contamination was logical given that RPs not only caused the conditions but also benefited financially from disposing hazardous wastes without the expense of taking safety measures. CERCLA’s liability scheme created incentives for proper waste disposal after 1980, however CERCLA *unintentionally* created disincentives to redevelopment of contaminated or potentially contaminated properties. These disincentives arose because, under CERCLA, purchase of such properties could lead to liability for cleanup costs. Accordingly, to avoid the threat of CERCLA liability, buyers and developers declined to purchase properties merely suspected to have hazardous substance contamination.

These underused or mothballed properties (called brownfields) grew in the United States to approximately 450,000; this contributed to urban blight. The growth of brownfields contributed to urban sprawl, as property buyers and developers sought suburban and rural areas less likely to have hazardous substance contamination. In 1993, the United States Environmental Protection Agency (EPA), Office of Solid Waste and Emergency Response created the Brownfields Economic Revitalization Initiative to address the rising number of brownfield sites. Many years later, Congress recognized this innovative pilot program and amended CERCLA to codify EPA’s Brownfields Initiative with the 2002 Small Business Liability Relief and Brownfields Revitalization Act (the Brownfields Law).<sup>1</sup>

The Brownfields Law provides federal grant opportunities to assess and cleanup brownfields.<sup>2</sup> To address the concerns associated with CERCLA’s strict liability provisions, the Brownfields Law clarified the CERCLA “innocent land-owner” liability protection<sup>3</sup> and created two additional liability protections for “contiguous property owners”<sup>4</sup> and “bona fide prospective purchasers.”<sup>5</sup> With the passage of the Brownfields Law, developers could – if they followed the law – purchase contaminated property without being held liable for the costs associated with cleanup of the contamination. Using funding opportunities under the Brownfields Law, state environmental protection agencies created programs that focused on assessment, cleanup and redevelopment of brownfields. Like CERCLA cleanup actions, state brownfields programs encourage development of contaminated sites by linking the level of cleanup with the intended future use of the site. In other words, a contaminated site that is intended to be used for industrial purposes after cleanup need only be remediated to a level appropriate for that use and the remaining contamination is contained in a certain area or unit on the site. This practice – which is known as Risk Based Corrective Action (RBCA) – reduces the time and expense associated with remedial actions by containing contamination at the site and relying upon deed restrictions to protect those containment units.

---

<sup>1</sup> Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the Brownfields Law), Pub. L. No. 107-118, 115 Stat. 2356, 42 U.S.C. § 9601 (2002) (amending the Comprehensive Environmental Response, Compensation, and Liability Act of 1980).

<sup>2</sup> CERCLA § 104(k)(2)-(3).

<sup>3</sup> CERCLA § 107(b)(3), §101(35).

<sup>4</sup> CERCLA § 107(q).

<sup>5</sup> CERCLA § 107(r) and § 101(40).

To control risks associated on-site containment units left after completion of the cleanup action, state environmental programs require implementation of land use controls (LUCs).<sup>6</sup> LUCs limit the activities and uses of property to those that are safe for the level of cleanup and that do not interfere with the on-site containment units. However, LUCs are effective only if their existence is widely known or easily ascertainable; this requires that LUCs be successfully implemented, tracked, monitored, and enforced. The focus of this paper is on the tracking systems that are needed to ensure that LUCs are an effective tool to protection human health and environment from residual contamination at sites addressed with a RBCA.

### **Basics: Types of Land Use Controls**

There are four different types of LUCs. Multiple types are often used together to ensure protection of the remedy at a site. The four types of LUCs are: governmental controls, enforcement and permit tools, informational devices, and proprietary LUCs. This paper focuses mainly upon the status and tracking problems presented by the fourth type -- proprietary LUCs. LUCs do not merely restrict the use of land. LUCs also apply to restrictions upon the use of ground water; restrictions upon the use of surface water; restrictions on fishing (i.e., fishing advisories); restrictions associated with vapor migration; and restrictions on the creation of fugitive contaminated dust.

For the purposes of this paper, LUCs are the same thing as institutional controls or ICs. EPA defines institutional controls (IC) as non-engineering measures, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or to protect the integrity of a remedy by limiting land or resource use. ICs are used when contamination is first discovered, when remedies are ongoing, and when residual contamination remains onsite at a level that does not allow for unrestricted use and unlimited exposure after cleanup.

- *Governmental Controls* include zoning restrictions and local ordinances. They are established and enforced by state or local governments. Once implemented, local and state entities often use traditional police powers to regulate and enforce the controls.
- *Enforcement and Permit Tools with LUC Components*<sup>7</sup> include consent decrees and consent orders. They can be issued or negotiated to compel the land owner (usually an RP) to limit specified activities at both federal and private sites. Similarly, EPA can enforce permits, conditions and/or issue orders under the Resource Conservation and Recovery Act (RCRA).<sup>8</sup> Most enforcement agreements are only binding on the signatories, and the property restrictions are not transferred through a property transaction.
- *Informational devices* warn the public of the risks associated with using the property because of residual contamination. Common examples include state registries of contaminated properties, deed notices, and advisories. Informational devices are most likely to be used as a secondary

---

<sup>6</sup> It is important to note that terminology for land use controls varies from state to state. For example, in Massachusetts land use controls are called activity use limitations; in Connecticut land use controls are called environmental use restrictions. Although the terminology varies from state to state, the controls are all intended to protect human health and environment from the residual contamination that remains on site following the completion of a RBCA. See Keith A. Hagg, *You Say ICs; I say LUCs. Let's Call the Whole Thing Off?*, Land Use Controls News (July 23, 2004), at <http://www.lucs.org/news.cfm?id=216>.

<sup>7</sup> CERCLA §§ 104 and 106(a).

<sup>8</sup> RCRA §§ 3004(a), 3004(u) and (v), 3008(h), or 7003.

“layer” to help ensure the overall reliability of LUCs. Yet, as will be explained below, the overall reliability of LUCs has become the proverbial Achilles heel of risk-based cleanups.

- *Proprietary LUCs* include easements, real covenants, and equitable servitudes. These controls have their basis in real proprietary LUCs. An example of this type of control is an easement that provides state environmental authorities access rights to inspect and monitor an engineered remedy (e.g., groundwater pump-and-treat system or cover system). Another example of a proprietary LUC is a restrictive covenant which the property uses and the activities that can be conducted on the property subject to the control. If implemented properly, proprietary controls are binding on subsequent purchasers. Implementation of and enforcement of proprietary controls is usually subject to common law rules that vary from state to state.

### **Basics: The Uniform Environmental Covenants Act**

Proprietary LUCs are subject to specific, albeit confusing, legal requirements stemming from years of reliance on English common law. Relying on proprietary LUCs to protect human health and the environment from residual contamination is problematic for several reasons. As will be discussed fully below, LUCs based in property law are difficult to track and monitor. Additionally, the legal rules governing the implementation of proprietary LUCs make them difficult to enforce in the case of a breach of a control.<sup>9</sup> Parties that hold interests in the property subject to proprietary LUC and laws that require termination of proprietary LUCs after a certain number of years can further complicate enforcement efforts. The enforcement issues associated with LUCs frustrated state efforts to cleanup and redevelop brownfields.

To address enforcement issues associated with proprietary LUCs, the National Conference of Commissioners on Uniform State Laws (NCCUSL) created a committee to draft model legislation. On August 6, 2003 NCCUSL unanimously approved the Uniform Environmental Covenants Act (UECA). This model legislation sets forth a process for implementing a proprietary LUC – or environmental covenant – that is designed for use at sites addressed under a RBCA.<sup>10</sup> A UECA environmental covenant is enforceable because an environmental covenant created under the Act is not subject to English common law doctrines that hinder enforcement of proprietary LUCs based in common law.<sup>11</sup> UECA also addresses other issues that presented enforcement challenges for proprietary LUCs, including marketable title acts<sup>12</sup> and the effect of prior interests in land on the enforceability of an environmental covenant.<sup>13</sup> On a more general matter, UECA presents an opportunity to have an approach for creating and implementing proprietary LUCs that consistent, or uniform, throughout the United States. Given that brownfields cleanup and redevelopment often involve entities that hold property in more than one state and national property development firms, a consistent approach for proprietary LUCs is critical for facilitating the growth of brownfields redevelopment.

---

<sup>9</sup> English common law courts viewed property restrictions as impairment on the productive use of land. Accordingly, these courts would not enforce property restrictions unless the party seeking enforcement could demonstrate that confusing technical requirements were satisfied. *See* John G. Sprankling, *Understanding Property Law* § 33.03 (2000).

<sup>10</sup> *See* Uniform Environmental Covenants Act § 4 (2003) [hereinafter UECA] (setting forth the information that must be included in an environmental covenant implemented pursuant to UECA).

<sup>11</sup> *See* UECA § 5(b)(1)-(7) (providing that an environmental covenant created under UECA is enforceable even if the environmental covenant fails to comply with common law technical rules, e.g., privity of estate).

<sup>12</sup> UECA § 9(d).

<sup>13</sup> UECA § 3(d).

As of April 19, 2006, 13 states and the District of Columbia have enacted UECA.<sup>14</sup>

### **Analysis: Use of LUCs Increasing**

LUCs are increasingly being used in cleanups. This increase in use is dramatic – 83% of Superfund sites – where controls are required in recent remedy decision documents (fiscal years 2001 through 2003). Similarly, the use of LUCs at RCRA Corrective Action sites increased from 5% (prior to fiscal year 2001) to 65% of the RCRA sites where controls are required in remedy decision documents (fiscal years 2001 through 2003).<sup>15</sup> To ensure they serve their dual purpose – to protect public health and the environment while reducing remediation costs – tracking of LUCs must address several factors to ensure that these controls will reliably prevent exposure to contamination for as long as the prevention of exposure is needed. The following discusses several of the issues surrounding LUCs.

### **Analysis: The Reliability Problem**

The overall reliability of LUCs has emerged as a national problem. Reliability of LUCs is problematic because so many RBCAs that depend upon LUCs have been completed. The safety of these RBCAs requires flawless tracking, monitoring, and enforcement of their respective LUCs. LUCs tracking, monitoring, and enforcement are, to put it nicely, in their *nascent* stage. The current inability of both the public and private sectors to implement a nationwide, robust LUCs tracking, monitoring, and enforcement program carries with it the grave potential for LUCs to fail and to harm public health and the environment.<sup>16</sup>

Several independent authors have noted the LUCs reliability problem and called for major improvements in LUCs tracking, monitoring, and enforcement.<sup>17</sup> While some authors focus on the need for a national

---

<sup>14</sup> These 13 states that have enacted UECA include Utah, Delaware, Idaho, Iowa, Kentucky, Maine, Maryland, Nebraska, Nevada, Ohio, South Dakota, Utah, and West Virginia. See *UECA News*, at <http://www.environmentalcovenants.org/ueca/UECAnews/UECAnews.htm>.

<sup>15</sup> See GAO-05-163, *supra* note 2, at 10.

<sup>16</sup> The authors note that residual contamination at the Love Canal site, one of the most appalling environmental tragedies in American history, was due to a failure in land use controls placed on the deed to a three-block tract of land on the eastern edge of Niagara Falls, New York. The LUCs were not discovered by subsequent land owners and the property was redeveloped for residential use in direct violation of the land use restrictions. In 1980, this tragedy (and others like it) motivated Congress to enact CERCLA to establish a Superfund that would clean up hazardous waste contamination with permanent remedies that could not threaten a repeat of Love Canal. See Eckardt C. Beck, *The Love Canal Tragedy*, at <http://www.epa.gov/history/topics/lovecanal/01.htm> (Jan. 1979).

<sup>17</sup> See Joseph Schilling, *Ten Years of Land Use Controls Policy Development: Starting Down the Campaign Trail*, Land Use Controls News and Events, at <http://www.lucs.org/news.cfm?id=280> (last visited Mar. 28, 2006). See also Kate Probst, *A Decade of Institutional Controls: What Has Been Accomplished?*, Land Use Controls News, at <http://www.lucs.org/news.cfm?id=251> (last visited Mar. 28, 2006); Katherine Probst and Michael McGovern, *Long-Term Stewardship and the Nuclear Weapons Complex: The Challenge Ahead*, Resources for the Future Internet Report, at <http://rff.org/rff/Documents/RFF-RPT-stewardship.pdf>. (last visited Mar. 28, 2006); Kris Wernstedt, Robert Hersh, and Katherine Probst, *Basing Superfund Cleanups on Future Land Uses: Promising Remedy or Dubious Nostrum?*, Discussion Paper 98-03, at <http://rff.org/rff/Documents/RFF-DP-98-03.pdf>. (Oct. 1997); Jan Mazurek and Robert Hersh, *Land Use and Remedy Selection: experience from the Field – The Abex Site*, Resources for the Future Discussion Paper 97-26, at: <http://rff.org/rff/Documents/RFF-DP-97-26.pdf> (July 1997); Robert Hersh, Katherine Probst, Kris Wernstedt, and Jan Mazurek, *Linking Land Use and Superfund Cleanups: Unchartered Territory*, Resources for the Future, at <http://rff.org/rff/Documents/RFF-RPT-landuse.pdf>; Robert Hersh and Kris Wernstedt, *Out of Site, Out of Mind: The Problem of Institutional Controls*, (No. 1) 8 *Race, Poverty & the Environment*, at 15-16 (2001).

campaign to encourage effective management and long term stewardship of LUCs, other authors focus on the need for regulatory revisions to the National Contingency Plan to establish a robust LUCs monitoring and enforcement program for Superfund and Brownfield cleanups (and to serve as a regulatory model for LUCs enforcement in cleanups conducted under other laws). The U.S. General Accountability Office (GAO) has also called for major changes to improve LUCs reliability. On January 28, 2005, GAO issued a report on institutional controls: *Hazardous Waste Sites: Improved Effectiveness of Controls at Sites Could Better Protect the Public*, GAO-05-163. This report found that:

- Remedy decision documents [from cleanup programs such as Superfund and RCRA Corrective Action] need to include demonstrated consideration of four key factors that are integral to ensuring long-term effectiveness of ICs. The four factors should demonstrate consideration of the objective of the ICs, the mechanism for implementing the ICs, when the controls will be implemented, and who is responsible for implementing, monitoring and enforcing the ICs.
- EPA needs to improve its IC monitoring programs. GAO's review of site remedy documents and fieldwork revealed major issues with EPA's current IC monitoring practices.
- EPA needs to improve its efforts to track ICs. While recognizing that EPA is making progress in developing IC tracking systems to improve its ability to ensure the long-term effectiveness of ICs, GAO found that EPA faces significant obstacles in implementing such systems. According to GAO, while EPA has only recently begun implementing these systems, they do not include information on long-term monitoring or enforcement of ICs, as currently configured. EPA's Institutional Control Tracking System (ICTS), a Web-based, scalable system that is the cornerstone for future programmatic and trend evaluations, does not currently include all sites that have residual contamination issues.

Meanwhile, EPA has been busy conducting their own LUCs investigations, as well as responding to the many recent LUCs-related reports. On October 11, 2005, EPA released its Long Term Stewardship (LTS) Task Force Report and made Task Force recommendations to improve LUCs reliability,<sup>18</sup> including the following:

- EPA, State, and Tribal cleanup programs and other Federal agencies should invest more time working with and building stronger relationships with local governments, and conduct more training and outreach, to help them better define and understand their potential specific LTS roles/responsibilities.
- EPA should partner with other Federal agencies and State, Tribal, and local government organizations to sponsor one or more "summits" in which representatives from Federal, State, Tribal and local agencies can share their perspectives and insights on LTS.
- EPA should work with outside organizations to explore adequate and sustainable funding sources and mechanisms at the Federal, State, and local level to monitor, oversee, and enforce LTS activities.
- EPA should continue to explore the role of the private sector in supporting the LTS of sites and foster their involvement, as appropriate.

---

<sup>18</sup> See Memorandum from Thomas P. Dunne, Acting Assistant Administrator, US EPA Office of Solid Waste and Emergency Response and Barry N. Breen, Deputy Assistant Administrator, US EPA, Office of Solid Waste and Emergency Response, *Long Term Stewardship Task Force Report and the Development of Implementation Options for the Task Force Recommendations* (Oct. 11, 2005), available at [http://www.epa.gov/landrevitalization/ltstf\\_report/memorandum.htm](http://www.epa.gov/landrevitalization/ltstf_report/memorandum.htm).

The recommendations made assume that state agencies using LUCs in state cleanups can and will establish their own LUCs tracking systems. While the Brownfields law contains mandates and some funding for states to do their own LUCs tracking<sup>19</sup>, Congress has not appropriated enough money to help each state meet its LUCs tracking responsibilities and enforcement needs.

Moreover, EPA has articulated its Post Construction Completion Strategy<sup>20</sup> and its National IC Strategy<sup>21</sup>; both of these documents contain much more detail than the LTS Task Force Report. EPA states that the National IC strategy sets forth EPA's strategy for ensuring that ICs are successfully implemented at Superfund sites, with an emphasis on evaluating ICs at sites where all construction of all remedies is complete (construction complete sites). EPA states that this strategy will serve as a roadmap for EPA regional and headquarters personnel in preparing Region specific action plans and conducting the work necessary to ensure the proper implementation of ICs at Superfund sites. This work includes gathering and entering information in the Institutional Controls Tracking System (ICTS), evaluating the data generated through ICTS, prioritizing and conducting site-specific follow-up activities, building the capacity to better manage and review IC information, and coordinating with other interested parties. EPA states that it expects to undertake the projects outlined in the strategy over approximately the next five years.

### **Analysis: Challenges and Complexities of LUCs Tracking**

Successful tracking of LUCs must address the additional challenges of funding the tracking systems, intergovernmental coordination, site monitoring, property transfers, and terminology.

*Funding for LUCs tracking must be adequate.* LUCs are an information-based form of environmental protection. Information must be gathered and tracked so that it is organized, accurate, and accessible to the right people at the right time. This requires adequate funding, about \$200,000-\$300,000 (depending upon the state) to compile an online database (or to consolidate several desktop databases into one online database), and about \$186,000 per year for maintenance, data updates, and enhancements of the tracking system.<sup>22</sup> As mentioned above, some funding is available through the Brownfields law. But, without more money or some other funding mechanism to support the long-term tracking, monitoring, and enforcement of LUCs, remediation costs may be passed onto future property owners, state and local governing authorities or expose humans to dangerous contaminants. The long-term costs associated with the successful use of LUCs should be anticipated and available funding considered before the decision to use LUCs is made. Stakeholders have suggested ways to allocate fees for the recordation of real estate documents with LUCs (such as in Arizona<sup>23</sup>), or increasing the cost of obtaining a building permit on properties with LUCs.

---

<sup>19</sup> The Brownfields law allows local governments to use up to 10 percent of federal grant dollars for monitoring and enforcement of any institutional control used to prevent human exposure to any hazardous substance from a brownfield site. See CERCLA § 104(k)(4)(C)(ii). Furthermore, the Brownfields Law mandates a public record of institutional controls used in brownfield cleanups. See CERCLA § 128(b)(1)(C).

<sup>20</sup> See: [http://www.epa.gov/superfund/action/postconstruction/pcc\\_strategy\\_final.pdf](http://www.epa.gov/superfund/action/postconstruction/pcc_strategy_final.pdf).

<sup>21</sup> See: <http://www.epa.gov/superfund/action/ic/icstrategy.pdf>.

<sup>22</sup> This figure was obtained by telephone interviews with eight state officials who have successfully established online LUCs tracking systems (notes on file with author).

<sup>23</sup> See Keith A. Hagg, "Arizona to Risk-Based Cleanups: No Pave and Wave Here!", Land Use Controls News, (Sept. 2004), at <http://www.lucs.org/news.cfm?id=218>.

*Intergovernmental and Private-Party Coordination is vital to obtaining and maintaining accurate LUCs tracking information.* Several facts make intergovernmental coordination vital to obtaining and maintaining accurate LUCs tracking information:

- Local governments are responsible for land use permitting and zoning, but generally not for environmental enforcement – especially for sites previously overseen by state or federal entities.
- Even if local governments are involved with remedial efforts, they may lack authority to enforce or fund those services necessary for long-term enforcement.<sup>24</sup>
- A city council, unaware of the health effects, can legally change or remove restrictive zoning ordinances. Similarly, local permitting authorities may ignore restrictions when they do not have access to accurate information regarding LUCs on a specific property because cleanup activities were overseen by the State.
- Complicating matters even more, contamination may overlap properties owned by separate parties or in multiple jurisdictions causing duplicate efforts and confusion over whether data are accurate, over who is responsible for ensuring accuracy, and over who is responsible for site monitoring and enforcement.

While federal, state, local agencies and private parties sometimes all have a role in the remediation of a site, they more often than not fail to coordinate among themselves regarding who will be responsible for which aspects of LUCs tracking.

*Effective tracking that limits exposure to contamination requires continual site monitoring.* Without continual (periodic and unannounced) site inspections, data collection, database updates, and public disclosure of site monitoring information, contamination once safely contained under a cap may become exposed years later without indication to the property owner or land users. A simple deed restriction may be forgotten when transfer of a contaminated site occurs without transferring the title, as with leased property, or if the owner changes the land use without referring to the deed. Planning and zoning authorities may initiate zoning changes without knowledge of existing LUCs. Effective LUCs tracking must identify to the public the LUCs that are being monitored and maintained, and if not what is being done to correct the situation.

*Property Transfers – changes in real property ownership and tenancy – is challenging to track, making it difficult to provide adequate notification to new owners and tenants of LUCs that are present.* Before implementing a land use control at a contaminated site, it is important to locate all parties who obtain an interest in the real property. Providing notice to parties with an interest in the property reduces the risk of breach and thus promotes the protection of human health and environment. Furthermore, by providing notice, interested parties are precluded for asserting insufficient notice in an enforcement action for breach of a land use control. It is important to remember that State property laws traditionally have discouraged restrictions attached to deeds and other land use restraints to encourage the free transfer of property, resulting in this challenge to LUCs tracking.<sup>25</sup>

---

<sup>24</sup> The Brownfields law allows local governments to use up to 10 percent of federal grant dollars to (i) monitoring the health of populations exposed to one or more hazardous substances from a brownfield site; and; (ii) monitoring and enforcement of any institutional control used to prevent human exposure to any hazardous substance from a brownfield site. See CERCLA § 104(k)(4)(C)(i)-(ii).

<sup>25</sup> See Keith A. Hagg, “Property Law for Dummies: the UECA; a National Approach to State and Local Enforcement of Controls”, Land Use Controls News, (Jan. 2005) at <http://www.lucs.org/news.cfm?id=227>.

*LUCs terminology is varied and confusing.* Just talking or writing about LUCs is challenging and complex. Property owners, real estate practitioners, title insurance companies, environmental consultants and other stakeholders are using LUCs without clear and concise terminology. Consider the numerous terms associated with use restrictions: activity and use limitation, institutional control, land use control, classification exception area, engineering control, environmental covenant, environmental easement, and deed restriction. The complexity of multiple terms used to describe actual land use controls, combined with changes in administrative responsibilities over time, technological advances that require excavation, and the expansion of underground utilities boggles the mind. The development of consistent, clearly articulated terms in the guidelines and other tools used for planning, implementation, recordation, tracking and enforcement of LUCS are vital for the effective collaboration between federal, state, local and private stakeholders that is necessary for LUCs to be protective.

### **Analysis: Final Rule on All Appropriate Inquiry Includes Requirement to Search for LUCs**

When Congress amended CERCLA with the Brownfields Law, it required EPA to establish standards and practices for conducting “all appropriate inquiries” into the previous ownership and uses of property.<sup>26</sup> The AAI standards and practices are important for two reasons. First, to obtain CERCLA liability protection as an innocent landowner, a contiguous property owner, or a bona fide prospective purchaser, the party seeking liability protection must conduct AAI on or before the purchase date of the property. Second, parties that receive brownfields assessment grants must perform their site assessment according to the AAI standards and practices.

Congress directed US EPA to include the following requirements in the standards and practices for conducting AAI<sup>27</sup>.

- The results of an inquiry by an environmental professional.
- Interviews with past and present owners, operators, and occupants of the facility for the purpose of gathering information regarding the potential for contamination at the facility.
- Reviews of historical sources, such as chain of title documents, aerial photographs, building department records, and land use records, to determine previous uses and occupancies of the real property since the property was first developed.
- Searches for recorded environmental cleanup liens against the facility that are filed under federal, state, or local law.
- Reviews of federal, state, and local government records, waste disposal records, underground storage tank records, and hazardous waste handling, generation, treatment, disposal, and spill records, concerning contamination at or near the facility.
- Visual inspections of the facility and of adjoining properties.
- Specialized knowledge or experience on the part of the defendant.
- The relationship of the purchase price to the value of the property, if the property was not contaminated.
- Commonly known or reasonably ascertainable information about the property.
- The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation.

---

<sup>26</sup> CERCLA § 101(33)(B)(ii).

<sup>27</sup> CERCLA § 101(35)(B)(iii).

To meet the Congressional directive established in the Brownfields Law, EPA formed a Federal Advisory Committee Act and the Negotiated Rulemaking Committee. Using the ten criteria set forth in CERCLA § 101(B)(iii), the Negotiated Rulemaking Committee on All Appropriate Inquiry (AAI Committee) developed a proposed rule for conducting AAI. On November 1, 2005, EPA published a Final Rule setting federal standards for the conduct of AAI.<sup>28</sup> This rule largely reflects the proposed rule for AAI developed by the AAI Committee. The Final Rule will be effective on November 1, 2006, one year following the date of publication. After November 1, 2006, parties seeking liability protection as an innocent landowner (ILO), contiguous property owner (CPO), or a bona fide prospective purchaser (BFPP) – and parties awarded brownfields assessment grants – must conduct an environmental site assessment according to the standards and practices set forth in the AAI Final Rule. Parties may also apply the procedures set forth in ASTM International E1527-06 Phase I Environmental Site Assessment (ESA) Process, as these processes are consistent and compliant with the Final Rule on AAI.

### **AAI Requires a Search for LUCs**

AAI is relevant to LUCs because it requires identification of institutional controls applicable to the property at the subject of the inquiry.<sup>29</sup> This requirement is broad in scope in that it requires identification of all types of LUCs. The search for LUCs should include a review of registries or publicly available lists as well as a review of the property's chain of title.<sup>30</sup> In light of the LUC search requirement set forth in the Final Rule on AAI there is an even greater need for accurate, accessible, and user friendly LUC tracking systems. Under the Brownfields Law, parties that qualify for liability protection as an ILO, CPO, or BFPP must satisfy statutorily mandated continuing obligations to maintain liability protection. This includes a requirement to complying with, and not impeding the effectiveness or integrity of LUCs. The obligation to comply with LUCs after the property is purchased is not limited to those instruments recorded in a chain of title.

### **Analysis: Other EPA LUCs Efforts**

Even before AAI was promulgated, EPA was working to develop a reliable LUCs support system – including land owners, potential property purchasers, consultants, mortgage lenders, title search insurance companies, regulators, city planners, permit writers, regulatory enforcement personnel, non-governmental organizations, utility workers, excavators, construction workers, environmental advocacy groups, expanding or re-locating businesses, and real estate developers. Although this is a diverse group, their needs are remarkably similar. They need to quickly and easily get accurate information about the existence of LUCs on a specific parcel of property, the exact limitations to land or groundwater use, and the precise area where the limitations apply. As the GAO noted in its recent report, the information stored in a LUCs tracking system should answer questions on the selection and implementation of the controls as well as their monitoring, reporting, enforcement, modification, and termination.<sup>31</sup>

The diagram on the following page illustrates the uses of a potential LUCs tracking system. A Web-based system would be available to all types of system users, with certain functions available to government officials and PRPs on a restricted basis (e.g., persons responsible for regulations, planning, permitting, and enforcement).

---

<sup>28</sup> 70 Fed. Reg. 66069 (Nov. 1, 2005).

<sup>29</sup> 40 CFR § 312.26(b)(7).

<sup>30</sup> 40 CFR § 312.24(a).

<sup>31</sup> See GAO-05-163, *supra* note 2, at 12-13.

## **DIAGRAM: PROPOSED CONFIGURATION OF A LAND USE CONTROL TRACKING SYSTEM**

Users include land owners, potential property purchasers, environmental site assessment consultants, mortgage lenders, title search insurance companies, regulators, city planners, permit writers, regulatory enforcement personnel, non-governmental organizations, utility workers, excavators, construction workers, environmental advocacy groups, expanding or re-locating businesses, and real estate developers.



### Public Information

- What restrictions have been placed on the land?
- What contaminants have been left there?
- Can the contaminants that remain hurt me?
- Where was the LUC placed and what is its status?
- Who is responsible for implementing, monitoring, and enforcing?

### Governmental Responsibilities:

- Add LUCs data from all data sources (CERCLIS, RCRA, state & local data)
- Maintain and update the data
- Ensure data quality
- Monitor and enforce the LUCs
- Provide notification of land use changes to those with the need to know
- Provide links to other databases

For the public (e.g., land owners, environmental site assessment consultants, excavation and construction firms), information would be readily available on any land use restrictions that have been placed on the land, the contaminants that have been left there, a link to potential health effects from exposure to the contaminants, the exact location where the LUCs are applicable, the status of the LUCs, and contact information regarding who has responsibility for implementing, monitoring, and enforcing the LUCs. But this begs the question of how to establish such a Web-based system.

### **Analysis: Decentralized Database Tracking**

An initial dilemma in establishing such a Web-based LUCs tracking system was to determine whether LUCs information from all cleanup programs and all levels of government should be centralized or decentralized. For instance, if there were only one national database containing *all* of the LUCs implemented in the nation (regardless of the cleanup program or the level of government that implemented the LUCs), it would be easier and more efficient to track LUCs. With a one-stop-shopping database, users would be able to find information about LUCs with more confidence and ease.

However, the compilation and maintenance of an accurate centralized database imposes costs and long-term responsibilities upon non-EPA federal agencies, state agencies, local cleanup authorities, and RPs. Many federal, state, and local agencies believe that it would be an unaffordable, unfunded mandate if EPA required them to populate and maintain a database that included and reported their cleanup programs' LUCs. Moreover, some states have already developed advanced LUC tracking capabilities and may not be willing or able to allocate additional costs towards a national system. There is an additional drawback to a centralized database; a single database covering all cleanup programs at all levels of government would by nature involve complexities that could make the database difficult to maintain and use.

In light of these problems, EPA is deploying a two-fold, decentralized approach. EPA is developing a Web Ring to provide easy navigation to Web-accessible LUCs tracking systems and EPA is finalizing its own innovative Institutional Control Tracking System (ICTS). ICTS provides a model LUC tracking system by utilizing a model commonality for the most important data elements to track and a common IC data standard.<sup>32</sup> ICTS is designed to be a system of systems that have data exchange capabilities based on

---

<sup>32</sup> The IC Data Standard is organized such that the four core components of an IC (IC Instrument, IC Objective, Location, and Engineering Control) and all auxiliary components that accompany this information (IC Affiliation, IC Resource, and IC Event) are regarded as modules on the same hierarchical level. Within these modules are the data groupings and data elements. Details about how these high-level modules are interrelated are provided in the beginning of each module within section 3.0 of the IC Data Standard. Details about how these modules relate to smaller data blocks and data elements are provided in the **Institutional Control Extensible Markup Language (XML) Schema Definition** available at <http://www.exchangenetwork.net>. The concept of most importance to the IC Data Standard is that there is no single central entity that defines an IC. A complete IC must contain at a minimum an IC instrument, an IC objective, and the location(s) to which the IC instrument and IC objective pertain. Some subsets of this information are acceptable and may be provided as information is available; however, certain details about data elements are often necessary to provide the needed context for the information being exchanged. The IC Data Standard notes that the relationships defined in the beginning of each module are written to guide users on how to provide information for a **complete** IC. The text "zero, one, or more" indicates that the relationship between the two entities is not necessary to define a complete IC. The IC Data Standard also notes that an engineering control, though an integral aspect of an IC when applicable, is not required to defining an IC. Information about an engineering control only needs to be provided if the intent of an IC instrument is to protect the integrity of that engineering control. The IC Data Standard points out that it is important to note that IC objectives and use restrictions are not the same. Although an IC objective may be met by the use restrictions of an IC instrument, the IC objective is not a property of the IC instrument and must be captured separately. For example, the objective at a location called *IC Site* could be to *protect the integrity of a landfill cap*.

the common language that was developed. Together, the Web Ring and ICTS have unique capabilities that work in tandem.

The Web Ring provides Web users with quick access to all online tracking systems by linking them with a graphic navigation tool that displays all the online tracking systems, as well as all of the other members of the Web Ring. The navigation tool is organized into sectors to group Web Ring members by the type of information that they provide. A Web Ring would give the public a “two-mouse-click” method to access to the LUCs tracking systems that are currently online. However, the Web Ring will not make the diverse set of online LUCs tracking systems easy to use or allow automated data exchange between these vastly different federal, state, local, and private databases.

The Web Ring expands opportunities to compare and contrast different LUCs databases because it puts all tracking systems within two mouse clicks of each other. The Web Ring’s navigational ease-of-view will do much to foster comparison of the different databases and how useful they are, but the Web Ring does not promote true data exchange among systems. However, ICTS promotes data exchange between systems by providing secure pipelines between ICTS and its partner online IC tracking systems. These systems will be able to set up automatic and on-demand data feeds from ICTS using the common language developed by ICTS for IC tracking data elements.

However, there remains the vexing problem of how different the federal, state, local, and privately-owned tracking systems are. They vary wildly in terms of what they track, what they look like, how they are used, how user-friendly they are, and how accurate their information is. To help solve this problem, the Web Ring was conceived of by consultants who urged EPA to consider that “emergent behavior” among the owners of the various LUCs tracking systems on the Web Ring will, over time, make necessary improvements to their tracking systems. Emergent behavior (or emergence) has many definitions. In this paper, emergent behavior is defined as the process of LUCs tracking systems self-organizing at a macro level. In other words, emergent behavior among individual, networked tracking systems within a community (e.g., the Web Ring) will cause some degree of voluntary standardization to occur naturally among tracking systems. Although EPA has never formally endorsed the theory of emergent behavior, EPA has funded the construction and population of the Web Ring as one part of EPA’s many LUCs tracking efforts.

EPA’s LUC tracking efforts have focused on partnering with numerous federal, state, local, nongovernmental, and commercial organizations. EPA has recently spearheaded a massive outreach effort to: 1) allow for collaboration on effective mechanisms to improve LUC tracking; 2) devise a common framework for LUC tracking data elements; and 3) agree upon conventions to allow for data exchange between the various LUCs databases. EPA’s outreach has consisted of numerous workshops, focus groups, and other meetings with a wide cross-section of stakeholders to share information about past and current efforts, brainstorm ideas, and determine next steps for improving the implementation, monitoring, and enforcement of LUCs.<sup>33</sup>

Currently, 38 states maintain some type of LUCs database, nine have engineering controls databases and six maintain a unified database containing records of both types of controls. EPA is working to ensure that its LUCs outreach efforts reaches stakeholders with responsibility for state online tracking systems. Based on information exchanged during the collaborative meetings and additional collaboration with the Environmental Data Standards Council, EPA has finalized an Institutional Control Data Standard that defines the elements required for describing institutional control information.<sup>34</sup> EPA is making \$25

---

<sup>33</sup> See <http://www.epa.gov/superfund/action/ic/work/index.htm>.

<sup>34</sup> See: <http://www.envdatastandards.net/content/article/detail/673>.

million available in Central Data Exchange (CDX) node grants for the 2006 grants period. Additionally, EPA has produced several detailed LUC guidance documents on proper LUC selection, intergovernmental coordination, implementation, and enforcement.<sup>35</sup>

EPA is in the process of making additional enhancements to the Institutional Controls Tracking System (or ICTS), for tracking LUCs at Superfund sites. The objectives of ICTS are to:

- Improve EPA program management responsibilities;
- Establish inter-governmental relationships (other federal agencies, along with state and local regulatory agencies);
- Improve information exchange with those who are interested in the productive use of a site after cleanup; and
- Improve existing processes that allow for notification to excavators of areas that are restricted or need protection prior to digging.

EPA began populating Superfund's ICTS baseline data in 2004, and this data is in a QA/QC phase at the time of this publication. EPA plans to release ICTS data in phases over the next three years. Additional tiers are planned to allow for the collection of additional data that establish relationships between IC objectives and IC instruments and that delineate the geospatial boundaries of the ICs. Additional functionality that enforces access controls for data management, enhances the reporting and data extraction capabilities as well as enables the exchange of data with other online tracking systems is also planned. Once the Web Ring goes live on the Internet, ICTS will be accessible through – among other routes – the Web Ring.

### **Analysis: State LUCs Tracking Efforts**

State LUC tracking efforts are inconsistent with each other because their LUCs terms, data elements, and databases are vastly divergent. However, the number of states that have some type of hazardous waste cleanup tracking systems online is increasing – most states provide some LUCs information online. Many of these databases are now, or will be soon accessible on the Web (both independently and through the Web Ring). However, none of these systems are comprehensive regarding the types of sites they track, and only a few have a complete set of data elements that describe the nature and extent of the contamination remaining on the property. Most importantly, only a few indicate where the land use controls have been placed and what land uses they restrict.

Thirty five states have implemented various online tracking mechanisms for contaminated sites and LUCs (as of April 2006). Many states make information about contaminated sites available through the Internet and/or a records search. Most often the state environmental regulatory authority or agency maintains the responsibility for coordinating, monitoring, maintaining and keeping track of information relevant to LUCs. Appendix A lists the on-line state databases and provides a link to them. Up-to-date information on the state databases may be obtained by going to the URL: <http://www.lucs.org/links.cfm?id=23>.

---

<sup>35</sup> See Office of Solid Waste and Emergency Response, *Institutional Controls: A Guide to Implementing, Monitoring and Enforcing Institutional Controls at Superfund, Brownfields, Federal Facility, UST and RCRA Corrective Action Cleanups*, (Feb. 3, 2003) available at [www.epa.gov/superfund/action/ic/guide/icgdraft.pdf](http://www.epa.gov/superfund/action/ic/guide/icgdraft.pdf)

## **Analysis: Private LUCs Tracking Efforts**

Several privately-owned efforts have achieved sophisticated LUCs tracking capabilities. Although these private efforts precede EPA's new All Appropriate Inquiry Rule (AAI), they are relevant to AAI compliance. This is because, as discussed earlier, the new AAI rule requires environmental consultants to search all publicly available lists or registries of engineering controls to a one half mile search distance (AAI Rule, Section 312.26(c)(2)(ii)) and institutional controls at the subject property only (AAI Rule, Section 312.26(b)(7)). Several private LUCs tracking efforts, designed (in part) to enable AAI compliance, and others to increase the effectiveness of LUCs, are described below.

### **Computer Sciences Corporation**

Although Computer Sciences Corporation (CSC) does not *own* a private LUC tracking system, CSC provides LUC subject matter experts and information technology specialists to build, operate, and maintain LUC tracking systems for its clients. CSC is developing an IC Tracking System (ICTS) for EPA's Office of Superfund Remediation and Technology Innovation (OSRTI). CSC provides LUCs-related Web-based services, such as the content for the Web site, <http://www.lucs.org>, and the construction of the Environmental Land Use Control Web Ring. CSC also provides legacy IC application support, data collection, analysis, and reporting. CSC has supported EPA in its partnership with the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) and the International City/County Management Association (ICMA) with planning and conducting stakeholder outreach and collaboration. To learn more about CSC, contact Stephen Merrill Smith at 703-461-2377 for policy support, or Matthew Hayduk at 703-461-2450 for IT systems and services.

### **DPRA**

DPRA, Inc. uses a group of IC specialists to offer IC tracking and related IC services. DPRA builds IC tracking systems. In addition to IC tracking systems, DPRA provides IC tracking consulting advice, as well as comprehensive IC stewardship consulting advice, to state, local, and federal government agencies. DPRA reviews agency cleanup programs, including the law, regulation, guidance, and program administration, to identify IC program strengths and weaknesses and, in turn, recommends IC program improvements. DPRA also assists with varying guidance and state regulations on IC implementation. To learn more about DPRA's IC services, and the qualifications of its staff, visit <http://www.DPRA.com>, or call them at 760-752-8342.

### **Environmental Data Resources**

EDR provides property specific searches of Institutional Control, Engineering Control, Environmental Lien, and other Land Use Control data. To search EDR's land use control databases, go to <http://www.edrnet.com>, or contact them at 800-352-0050.

### **FirstSearch Technology Corporation**

FirstSearch provides environmental database search software and reports encompassing a variety of federal, state and local hazardous waste and non-hazardous waste information. Commonly known as *Environmental FirstSearch*, the information pertains primarily to environmental due diligence as it applies to commercial real estate transactions, but also has the ability to provide environmental information for large customizable area and corridor studies. *Environmental FirstSearch* databases may be accessed online via its web page or as printed reports from its service bureau office locations. For more information, visit <http://www.efirstsearch.com> or contact them at 888-748-0400.

## **The Guardian Trust™**

The Guardian Trust is a public/private partnership dedicated to the long-term stewardship of environmentally contaminated properties. It utilizes a trust mechanism to ensure fiduciary responsibility. The activities of the Trust are supervised by independent trustees whose mission is to protect the integrity of risk-based cleanup remedies at contaminated sites. It provides land use controls, including:

- Inspection of land use records;
- Inspection and monitoring of land use and engineering controls at contaminated sites;
- Verification of state self-certification forms to owners and tenants;
- Periodic land use and engineering control notifications to owners, tenants, local zoning officials, local building and engineering departments and local land use planning agencies;
- Monitoring of construction permits, demolition permits and soil disturbance/movement permits on a daily basis;
- Breach notifications to all authorized stakeholders;
- Notifications of property transfers to all authorized stakeholders;
- Annual reporting services on all inspection activities during a given year;
- Five year reporting services aggregating all inspection activities over the five years;
- Development of land use and engineering control implementation plans;
- Development of land use and engineering control operations and maintenance plans; and
- Maintenance of a database containing all inspection records, archival information on ownership and site history, information related to historical contamination issues, regulatory documents, land use controls, engineering controls, demographic information on site area and real estate related information.

For more information on the Guardian Trust, visit the [www.theguardiantrust.org](http://www.theguardiantrust.org) and [www.mgppartners.com](http://www.mgppartners.com) or call them at 203-327-2888, x18.

## **NETRonline**

Nationwide Environmental Title Research, LLC (NETR) provides nationwide real estate research and information services. NETR produces an environmental chain of title report specifically identifying ownership history, leases, environmental liens and LUC's. By providing certain county-maintained information online, they are eliminating the need to travel to the courthouse to obtain it. In addition, their Public Records Online portal at [http://www.netronline.com/public\\_records.htm](http://www.netronline.com/public_records.htm) links every county web site, providing one-location public access to this information anywhere, at any time. For more information, call them at 480-967-6752.

## **Parasec**

Parasec is a national public records research firm that offers customized services. Parasec researchers physically visit cities, counties, courts, states and when applicable, work with the Department of Interior or Indian Affairs. Parasec offers state-specific research for liens outside of the county system to facilitate abstracting requests. Parasec also provides county recording and state filing services. Parasec's Type, File, Track system provides for the recording of institutional controls, distributing them to a group of contacts, or moving the information into a central depository such as Terradex. Parasec can retrieve entity documentation to conclude a bona fide purchaser or facilitate the paperwork to create a bona fide

purchaser entity. Parasec also provides Apostilles, Legalizations and Authentications. For more information, visit <http://www.parasec.com>, or call 800- 533-7272.

### **Terradex**

Terradex proactively alerts a landowner, regulator or other critical stakeholder when a sensitive land use occurs on or near an institutional control. A proactive alert implies that stakeholders are alerted before an unsafe land use activity occurs. Terradex aggregates land activity records including from one call excavation clearance services, real estate recording, building departments, and water well permitting agencies. Terradex screens these land use records to the boundaries and to land use limitations specified within a land use control. Terradex receives notification from an excavation clearance system of a pending excavation above an engineered control. After screening the excavation to validate that the excavation could damage the engineered control, Terradex would alert, via email or fax, the landowner (or their environmental consultant), and the excavator. If the owner or excavator fails to respond, then Terradex would alert the regulator. In addition to alerting if unsafe land uses are detected, Terradex provides its customer with documentation to show the land use record and the consistency of the land use record with the institutional control requirements. The Terradex service is available nationwide on a subscription basis. As a monitoring service, Terradex leverages the efforts of states to build land use control repositories. For more information, contact Bob Wenzlau at 650-328-6140, extension 2, or email him at [bob@terradox.com](mailto:bob@terradox.com).

### **Conclusion & Recommendation: Where We Are and Where We Need to Go**

The Environmental Law Institute estimates that as of 2003, as many as 500,000 sites were subject to land use restrictions, and expects failure at between 650 to 25,000 or more non-National Priorities List Sites.<sup>36</sup> ELI offers valuable advice for evaluating the future of LUCs: “The key evaluative criteria should include the capability of the program as a whole to prevent human and environmental exposure to the residual hazardous substances for as long as those substances are considered to present an unacceptable risk.”<sup>37</sup> So what actions need to occur to achieve this goal? The authors suggest:

- EPA’s IC Data Standard at: <http://www.envdatastandards.net/content/article/detail/673>, should be used by all tracking systems;
- Effective notice about the land use controls must be merged with one call systems;
- Tracking systems should clearly specify information about where and what the use restriction is on property, ground water, or surface water;
- Use restriction information on should be made more easily available to the public through tracking system standardization and through use of the EPA IC data standard;
- State and Federal regulations should establish robust monitoring and enforcement programs; and
- A national campaign – spearheaded by EPA – is needed to implement these recommendations.

State and local governments do not have the budget or manpower to single-handedly develop and maintain LUC tracking systems. Ideally, the authors would recommend the Federal government authorize more money for state and local governments to track, monitor, and enforce LUCs. RPs and property owners should be responsible for the annual self-reporting of LUC information. LUC information should be readily available to the public.

---

<sup>36</sup> See John Pendergrass, *Institutional Controls in the States: What is and can be done to Protect Public Health at Brownfields*, 35 Conn. L. Rev. 1303, 1311 (2003).

<sup>37</sup> *Id.*



**Appendix A**

**State On-line Remediation and Land Use Controls Tracking Databases**

**State On-line Remediation and Land Use Controls Tracking Databases<sup>38</sup>**

STATE	SCOPE OF TRACKING	LOCATION OF TRACKING DATABASE
State	Scope of Tracking	Location of Tracking Database
Alabama	The Alabama Brownfields public record will access a spreadsheet that identifies the Brownfields activities performed by Alabama Department of Environmental Management (ADEM). The public record identifies whether a brownfield site is subject to institutional controls. ADEM plans to make site specific remediation documents accessible through the public record.	<a href="http://216.226.179.150/landdivision/brownfield/128(a)_program.htm">http://216.226.179.150/landdivision/brownfield/128(a)_program.htm</a>
Alaska	The Alaska Department of Environmental Conservation Contaminated Sites Cleanup Program offers two database search applications. The Contaminated Sites database contains key information about contaminated sites (excluding Leaking Underground Storage Tanks (LUSTs) in the State of Alaska. Search results provide detailed current and historical contaminated site information. This Underground Storage Tank (UST) database contains key information for UST facilities. Search results provide current and historical information on the facility, its owner or operator, status of the tank system and leaking underground storage tank (LUST) events, if applicable, at the facility.	<a href="http://www.state.ak.us/dec/spar/csp/db_search.htm">http://www.state.ak.us/dec/spar/csp/db_search.htm</a>
Arkansas	The Arkansas Department of Environmental Quality Record of Brownfields Projects (RBP) identifies contaminated sites addressed under the state brownfields program. The RBP identifies and describes any institutional controls implemented as part of a remedial action.	<a href="http://www.adeq.state.ar.us/hazwaste/branch_inactive_sites/brownfields.htm#RecordOfArkansasBrownfieldsProjects">http://www.adeq.state.ar.us/hazwaste/branch_inactive_sites/brownfields.htm#RecordOfArkansasBrownfieldsProjects</a>

---

<sup>38</sup> <http://www.lucs.org/>

Tracking Land Use Controls

<p>Arizona</p>	<p>This utility will allow you to query the Arizona Unified Repository for Informational Tracking of the Environment (AZURITE) databases for information relating to DEURs (Declarations of Environmental Use Restriction), VEMURs (Voluntary Environmental Mitigation Use Restrictions) or other remediation. The utility will provide you with: remediation ID, program, place address, remediation start date, remediation end date, remediation level achieved, Waste Program Division (WPD)director's approval date for DEUR, DEUR or VEMUR record date, program file number, contaminants, concentrations, and depth, if available.</p>	<p><a href="http://www.adeq.state.az.us/databases/deursearch.html">http://www.adeq.state.az.us/databases/deursearch.html</a></p>
<p>California</p>	<p>California law requires that the Department of Toxic Substances Control (DTSC) notify the planning and building departments of all local governments of any recorded land use restriction. On this site, DTSC maintains a list of all land use restrictions, including street addresses or the equivalent description of location.</p> <p>The California Department of Toxic Substances Control (DTSC) maintains an automated database (known as "CalSites") that contains information on properties in California where hazardous substances have been released, or where the potential for a release exists. The listings provide a brief history of cleanup activities, contaminants of concern, and scheduled future cleanup activities.</p>	<p><a href="http://www.dtsc.ca.gov/database/Calsites/Deed_List_Name.cfm">http://www.dtsc.ca.gov/database/Calsites/Deed_List_Name.cfm</a></p> <p><a href="http://www.dtsc.ca.gov/database/Calsites/Index.cfm">http://www.dtsc.ca.gov/database/Calsites/Index.cfm</a></p>

<p>Colorado</p>	<p>The state of Colorado is required by statute to create and maintain a registry of all environmental covenants. This page is the Colorado Department of Public Health and the Environment (CDPHE), Hazardous Materials and Waste Management Division Web site with this registry.</p> <p>The Colorado Department of Public Health and Environment (CDPHE) Site Locator is an interactive, GIS mapping system for facilities regulated or remediated by the Hazardous Materials and Waste Management Division. The system includes an option to display only sites that are subject to land-use controls. The system tracks sites regulated and remediated under the Colorado Hazardous Waste Management Act and the Colorado Solid Waste Act. At present, it does not include sites addressed under the Colorado Voluntary Cleanup Program.</p>	<p><a href="http://www.cdphe.state.co.us/hm/covenant/envcovenantslist.asp">http://www.cdphe.state.co.us/hm/covenant/envcovenantslist.asp</a></p> <p><a href="http://www.cdphe.state.co.us/hm/HMSiteCover.asp">http://www.cdphe.state.co.us/hm/HMSiteCover.asp</a></p>
<p>Connecticut</p>	<p>The Connecticut Department of Environmental Protection Contaminated or Potentially Contaminated Sites List identifies active and closed sites addressed under both Connecticut and Federal remediation programs. The list includes information on institutional controls implemented as part of the remedial action.</p>	<p><a href="http://www.dep.state.ct.us/wst/remediation/sites/sites.htm">http://www.dep.state.ct.us/wst/remediation/sites/sites.htm</a></p>
<p>Delaware</p>	<p>The Delaware Department of Natural Resources and Environmental Control (DNREC) has created this database of contaminated sites in the state. The site can search for deed restrictions at these sites as well as a host of other data.</p>	<p><a href="http://www.dnrec.state.de.us/DNRECeis/">http://www.dnrec.state.de.us/DNRECeis/</a></p>
<p>Florida</p>	<p>The Web site features the Florida Department of Environmental Protection (FDEP) "Institutional Controls Registry" (ICR) that tracks all contaminated sites with an institutional or engineering control. This web site includes sites in petroleum, Brownfields, RCRA, CERCLA, voluntary cleanup, drycleaning, and enforcement cleanups.</p>	<p><a href="http://www.dep.state.fl.us/gis/wms.asp?website=dwm/icr">http://www.dep.state.fl.us/gis/wms.asp?website=dwm/icr</a></p>

Idaho	The Idaho Department of Environmental Quality (IDEQ) Site Remediation Finder database search application allows users to find information on all known IDEQ environmental sites. The application includes information on site name, location, and current site activities. Results can be restricted to sites with institutional controls. A GIS Interactive Site Mapping Tool allows users to see the exact location of sites.	<a href="http://www.deq.state.id.us/Applications/Brownfields/index.cfm?site=search.cfm">http://www.deq.state.id.us/Applications/Brownfields/index.cfm?site=search.cfm</a>
Iowa	The Iowa Department of Natural Resources Registry of Hazardous Waste or Hazardous Substance Disposal Sites provides a map of regulated sites. For each site listed in the Registry, the IDNR provides a comprehensive summary of the site conditions and remedial action. The summaries identify whether land-use controls were implemented as part of the remedial action. It is important to note that the Registry does not include all contaminated sites. IDNR plans to further develop the Registry to include all known hazardous waste or contaminated sites that exist in the state.	<a href="http://www.iowadnr.com/land/consites/hwregistry/hwindex.html">http://www.iowadnr.com/land/consites/hwregistry/hwindex.html</a>
Illinois	The Illinois Site Remediation Program database identifies the status of all voluntary remediation projects administered through the Pre-Notice Site Cleanup Program (1989 to 1995) and the Site Remediation Program (1996 to the present). Through this system, users can find the address for remediated sites and locate no further action letters and institutional control documents.	<a href="http://epadata.epa.state.il.us/land/srp/">http://epadata.epa.state.il.us/land/srp/</a>
Louisiana	The Louisiana Department of Environmental Quality provides a list of all sites addressed through the state Voluntary Remediation Program. The list identifies whether a site is subject to an institutional control and, if applicable, the type of control used to control risks associated with residual contamination.	<a href="http://www.deq.louisiana.gov/remediation/ias/vcp.htm">http://www.deq.louisiana.gov/remediation/ias/vcp.htm</a>

Tracking Land Use Controls

Maine	<p>The Maine Department of Environmental Protection (MDEP) Division of Remediation Sites List Database is the public record of information regarding closed, active, and sites that are planned to be addressed through MDEP remediation program. The Database includes sites the Voluntary Response Action Program, the Brownfields Program, the Landfill Closure Program, the Federal Facilities Program, the Superfund Program, and the Uncontrolled Sites Program. Sites are listed alphabetically by the municipality they are located in, and the database includes information regarding location, status, and if the property has institutional controls.</p>	<p><a href="http://www.state.me.us/dep/rwm/rem/lists.htm">http://www.state.me.us/dep/rwm/rem/lists.htm</a></p>
Maryland	<p>The Maryland Department of the Environment (MDE) Internet Mapping Center utilizes the latest Web-based Geographical Information System (GIS) technology to improve access to community-based environmental information. The system allows users to graphically search through the state's database for information on Brownfields, VCP, and State Mater List site. Site-specific information includes a description of deed restrictions that were part of the remedial action.</p>	<p><a href="http://textonly.mde.state.md.us/Programs/LandPrograms/ERRP_Brownfields/mapping/index.asp">http://textonly.mde.state.md.us/Programs/LandPrograms/ERRP_Brownfields/mapping/index.asp</a></p>
Massachusetts	<p>This site from the Massachusetts Department of Environmental Protection (DEP) contains a search program allows the user to retrieve information for particular reportable releases and transition sites by using any of the following fields: Release Tracking Number (RTN), Site Name/Location Aid, City, Street, Compliance Status, and Chemical Type.</p>	<p><a href="http://www.state.ma.us/dep/bwsc/sites/report.htm">http://www.state.ma.us/dep/bwsc/sites/report.htm</a></p>
Michigan	<p>The Michigan Department of Environmental Quality provides access to Brownfields and USTfields remediation information through its Brownfield or USTfield database. Search results identify the address of Brownfields and USTfield sites and the current use of the remediated properties. For some sites, a summary of the remedial action is provided.</p>	<p><a href="http://www.deq.state.mi.us/ustfields/">http://www.deq.state.mi.us/ustfields/</a></p>

Tracking Land Use Controls

Minnesota	The Minnesota Pollution Control Agency Voluntary Investigations and Cleanup Program (VIC) Site search allows users to search for a specific VIC site. The search results provide basic information about each VIC site. Users have the option of limiting search results to sites subject to institutional controls.	<a href="http://www.pca.state.mn.us/pca/srs/srsSearch.cfm">http://www.pca.state.mn.us/pca/srs/srsSearch.cfm</a>
Missouri	The Missouri Department of Natural Resources Hazardous Waste Map Gallery provides access to information on contaminated sites addressed under state and federal programs. The Map gallery consists of seven maps. Six maps display the locations of contaminated sites under a specific program. One map is devoted to the Jasper County Superfund site. The maps contain active links to site-specific remediation history.	<a href="http://www.dnr.mo.gov/alpd/hwp/geo/mapgallery.htm">http://www.dnr.mo.gov/alpd/hwp/geo/mapgallery.htm</a>
Mississippi	The Mississippi Department of Environmental Quality has posted an online “CERCLA Uncontrolled Sites File List,” which provides limited information on ICs as they pertain to Superfund sites in Mississippi.	<a href="http://www.deq.state.ms.us/MDEQ.nsf/pdf/HW_filelist/\$File/Filelist.xls?OpenElement">http://www.deq.state.ms.us/MDEQ.nsf/pdf/HW_filelist/\$File/Filelist.xls?OpenElement</a>
Montana	The Montana Department of Environmental Quality, Remediation Division and the Montana State Library, Natural Resource Information System (NRIS) are cooperatively providing DEQ Remediation Division database information via the NRIS Digital Atlas interactive mapper. DEQ Remediation data layers available for display and reporting purposes on the Digital Atlas include: Active and Inactive Regulated Underground Storage Tank sites, Abandoned/Inactive Mine sites, Active and Inactive Leaking Underground Storage Tank sites, State and Federal Superfund sites (including CERCLA, CECRA, WQA, ACGP, CALA, and VCRA), and Petroleum Tank Release Compensation Board sites.	<a href="http://maps2.nris.state.mt.us/mapper/index.html">http://maps2.nris.state.mt.us/mapper/index.html</a>

Tracking Land Use Controls

<p>New Hampshire</p>	<p>To make environmental information more readily accessible and understandable to the public, the Department of Environmental Services has linked its internal programs together to form the OneStop Database. Through the OneStop Database, the public can access site specific information on properties addressed under the a host of NHDES environmental cleanup programs including the Underground and Aboveground Storage Tank Program, the Site Remediation Program, and the Solid Waste Sites Program.</p>	<p><a href="http://www.des.state.nh.us/OneStop.htm">http://www.des.state.nh.us/OneStop.htm</a></p>
<p>New Jersey</p>	<p>The New Jersey Department of Environmental Protection (NJ DEP) has developed i-MapNJ - an environmental mapping tool that enables users to view and perform basic GIS analyses on regulated sites in New Jersey from data residing in NJDEP's New Jersey Environmental Management System (NJEMS). i-MapNJ provides users the ability to perform both NJEMS and GIS data queries and display the spatial relationships of NJEMS sites with respect to each other and in relation to other GIS mapped data layers.</p>	<p><a href="http://www.state.nj.us/dep/gis/depsplash.htm">http://www.state.nj.us/dep/gis/depsplash.htm</a></p>
<p>New York</p>	<p>The New York Department of Environmental Conservation (NDEC), Environmental Remediation Database webpage provides access to the Spill Incidents database and the Inactive Hazardous Waste Disposal Site database. The Spill Incidents database contains records of chemical and petroleum spill incidents. The Hazardous Waste Disposal Site database contains records of the sites known to have been used for the long-term storage or final placement of hazardous waste without a permit or other Department authorization for such disposal.</p>	<p><a href="http://www.dec.state.ny.us/cfm/extapps/derfoil/index.cfm">http://www.dec.state.ny.us/cfm/extapps/derfoil/index.cfm</a></p>
<p>North Carolina</p>	<p>The North Carolina Brownfields Inventory lists all active and finalized brownfields sites in the state of North Carolina. The inventory also lists sites that are pending eligibility determinations for cleanup through the North Carolina Brownfields program. The inventory identifies the site by name and address and provides a brief description of the site environmental issues.</p>	<p><a href="http://www.ncbrownfields.org/nws/project_inventory.htm">http://www.ncbrownfields.org/nws/project_inventory.htm</a></p>

Tracking Land Use Controls

<p>Oregon</p>	<p>The Oregon Department of Ecology’s (ODEQ) Environmental Cleanup Site Information Database (ECIS) tracks sites in Oregon with known or potential contamination from hazardous substances and documents sites where ODEQ has determined that no further action is required. Each ECIS entry contains basic data such as site name and location. For most sites, ECSI also indicates how and when the site became contaminated, qualitative risks the contamination may pose to human health or the environment, investigative and cleanup actions that have occurred, and prioritized further actions, if any, that are required. Users can restrict results to sites with institutional controls and engineering controls.</p>	<p><a href="http://www.deq.state.or.us/wmc/cleanup/databases.htm">http://www.deq.state.or.us/wmc/cleanup/databases.htm</a></p>
<p>Pennsylvania</p>	<p>Pennsylvania’s nationally recognized Land Recycling Program is helping to transform vacant brownfields into bustling job-producing sites, while still protecting our environment. More than 15,000 people now are working on old industrial sites in the Commonwealth. Many more opportunities for redevelopment still exist for those who want to turn abandoned industrial sites into safe, productive assets that contribute to Pennsylvania’s economic growth and environmental health. This web site contains information on voluntary compliance with post remediation care responsibilities and provides municipalities and interested persons with access to information on sites approved with controls.</p>	<p><a href="http://www.depweb.state.pa.us/landrecwaste/cwp/view.asp?A=1241&amp;Q=455465">http://www.depweb.state.pa.us/landrecwaste/cwp/view.asp?A=1241&amp;Q=455465</a></p>
<p>Rhode Island</p>	<p>The Rhode Island Public Record of Brownfields Sites contains general information on sites addressed through state brownfields program. The Public Record is comprised of two documents: one for sites where remedial action is complete, the other for sites where remedial action is planned. Both documents identify whether the sites is, or will be, subject to an institutional control.</p>	<p><a href="http://204.139.0.230/brownfields/documents/">http://204.139.0.230/brownfields/documents/</a></p>

Tracking Land Use Controls

<p>South Carolina</p>	<p>The South Carolina Department of Health and Environmental Control's Brownfields Public Record site provides another form of notice of cleanup activity, to communities and can assist those seeking to redevelop brownfield properties within South Carolina. Users can search the Public Record by Site Name, Address, City, County, District, Project Completed, or any combination of these. Searching without entering anything provides a listing of all of the sites in the Public Record. Clicking on the site's name allows users to obtain the site's address, city, zip, impacted media and nature of contamination, location information, land use controls, and status information. The Department was required to meet this element as mandated in the Brownfields Revitalization and Environmental Restoration Act of 2001 otherwise known as 128a funding or Brownfields legislation.</p>	<p><a href="http://www.scdhec.gov/eqc/lwm/html/public_record.html">http://www.scdhec.gov/eqc/lwm/html/public_record.html</a></p>
<p>Texas</p>	<p>The Texas Voluntary Cleanup Program (VCP) Database provides general information on contaminated sites addressed under the Texas VCP. The VCP database identifies whether a site is subject to an institutional control.</p>	<p><a href="http://www.tnrcc.state.tx.us/permitting/remed/vcp/#Database">http://www.tnrcc.state.tx.us/permitting/remed/vcp/#Database</a></p>
<p>Utah</p>	<p>The Utah Department of Environmental Quality (UDEQ) Environmental Maps system displays all sites regulated by the UDEQ Division of Environmental Remediation and Response. Through the Environmental Maps system, users can click on sites for general environmental remediation history.</p>	<p><a href="http://www.deq.state.ut.us/references/maps/maps.htm">http://www.deq.state.ut.us/references/maps/maps.htm</a></p>
<p>Virginia</p>	<p>The Virginia Voluntary Remediation Program (VRP) Public Record list VRP sites that have been issued certificates (completed sites) and VRP sites that are currently enrolled in the program (planned sites). For completed sites, if the site is not suitable for unrestricted use, the institutional control that is relied upon in the remedy is identified.</p>	<p><a href="http://www.deq.state.va.us/vrp/pubrecord.html">http://www.deq.state.va.us/vrp/pubrecord.html</a></p>

Tracking Land Use Controls

West Virginia	The West Virginia Voluntary Remediation and Redevelopment Act (VRRRA) Public Record lists all active and closed sites addressed under the West Virginia VRRRA. For each site the record identifies the site address, latitude and longitude, completion date, and the project manager. The record also identifies whether a site is subject to an institutional control.	<a href="http://www.wvdep.org/item.cfm?ssid=18">http://www.wvdep.org/item.cfm?ssid=18</a>
---------------	--	---

<p>Wisconsin</p>	<p>The Wisconsin Department of Commerce's Brownfields Location Information System (BLIS) provides a free online resource that enables potential redevelopers to work in conjunction with government in the remediation and redevelopment of properties that may be tax-delinquent, abandoned, blighted or hazardous. BLIS utilizes a map and query system that locates the sites best suited to the needs and selected criteria of the user. BLIS is designed to help commercial, industrial and retail business locate reusable land while simultaneously assisting landowners market their sites. Information is listed on each brownfield's zoning restrictions.</p> <p>The Wisconsin Department of Natural Resources' (DNR's) Bureau for Remediation and Redevelopment Tracking System (BRRTS) contains information on all contaminated sites in the state. The database has information on activities that contaminated soil or groundwater, including spills, leaks, other cleanups and sites where no action was needed. The site has search capability that allows you to find these sites using several different key words, including the county, city or specific address of the site.</p> <p>The Wisconsin Department of Natural Resources (DNR) uses the on-line GIS Registry of Closed Remediation Sites to notify well drillers and others about soil and groundwater contamination that remains after a contaminated site cleanup has been completed. Information is provided on properties affected by migration from a source property. These affected properties are known as "off-source" properties, and include rights-of-way (ROW) and specific parcels (deeded). After you locate a specific site, the address will be shown for off-source deeded properties, but not for ROWs. The off-source properties are displayed as red circles on a GIS map.</p> <p>This comprehensive Web site has the latest research on efforts to clean up and restore brownfields in Wisconsin. The Wisconsin Department of Natural Resources and the University of Wisconsin-Milwaukee's Brownfields Research Consortium have teamed up to create one of the nation's first comprehensive Web sites for brownfields research. State and local government officials, researchers, developers, and anyone interested in brownfields can access the most recent research available on this Web site.</p>	<p><a href="http://gis.commerce.state.wi.us/wiscomp/blis_start.htm">http://gis.commerce.state.wi.us/wiscomp/blis_start.htm</a></p> <p><a href="http://botw.dnr.state.wi.us/botw/Welcome.do">http://botw.dnr.state.wi.us/botw/Welcome.do</a></p> <p><a href="http://maps.dnr.state.wi.us/imf/dnrimf.jsp?site=brrts">http://maps.dnr.state.wi.us/imf/dnrimf.jsp?site=brrts</a></p> <p><a href="http://www.uwm.edu/MilwaukeeIdea/CEO/brownfields/index.html">http://www.uwm.edu/MilwaukeeIdea/CEO/brownfields/index.html</a></p>
------------------	--	---

Tracking Land Use Controls

Wyoming	The Wyoming Department of Environmental Quality List of Voluntary Remediation Program Sites (VRP) lists active and closed VRP sites. The list includes information on institutional controls implemented as part of remedial actions at VRP sites.	<a href="http://deq.state.wy.us/volremedi/index.asp">http://deq.state.wy.us/volremedi/index.asp</a>
---------	--	---