

# Institutional Controls and Contaminated Property Valuation

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**E**nvironmental agencies are adopting more site- and risk-specific approaches to the remediation of contaminated properties. One increasingly used technique to achieve site closure involves the implementation of institutional controls.<sup>1</sup> Institutional controls to some extent may limit the use of the property during cleanup or may limit the future use of the property subsequent to cleanup. Real estate appraisers and others may encounter these controls on use where contaminated properties have been remediated. They also may encounter these controls where contaminated properties are undergoing remediation with an approved cleanup plan premised on the implementation of institutional controls to facilitate the remediation objectives. Thus, appraisers who are involved in assignments concerning the estimation of the value, or impacts on value, for contaminated properties during or after cleanup should be aware of these restrictions and the ways in which they might affect market value.

## Types of Institutional Controls

The U.S. Environmental Protection Agency (EPA) and state environmental agencies authorize the use of institutional controls as part of overall site cleanup strategies. Institutional controls exist widely throughout the states at numerous cleanup sites. Indeed, nearly thirty-five states maintain an information management system to track institutional controls.<sup>2</sup> The EPA is in the process of constructing an institutional control tracking system to track the use of institutional controls at the nation's most

contaminated sites—the sites listed on EPA's National Priorities List.<sup>3</sup>

After site cleanup has occurred, institutional controls keep residual site contamination from human contact. In turn, the protections of institutional controls allow environmental contamination to remain in place after cleanup. Because of this, institutional controls often make cleanups technically feasible or more affordable and, thus, enable cleanups to proceed that otherwise might not.

## Institutional Controls and Engineered Controls

The EPA defines *institutional controls* as follows:

Institutional Controls are non-engineered instruments, such as administrative and/or legal controls intended to minimize the potential for human exposure to contamination by limiting land or resource use.<sup>4</sup>

Institutional controls do not include engineered controls, such as fences, landfill caps, rain barriers, or other physical components that contain contamination or prevent exposure to it. The EPA separately defines *engineered controls*.

Physical or "engineered" controls are the engineered physical barriers or structures designed to monitor and prevent or limit exposure to the contamination.<sup>5</sup>

When engineered controls exist, institutional controls must also exist in order to provide mechanisms to assure that the engineered controls remain intact and operational.

The EPA, ASTM International,<sup>6</sup> and most practitioners divide institutional controls into four cat-

1. In the context of environmental remediation and regulation, site closure means that the remediation or cleanup has been completed and the site is closed with respect to further regulatory requirements.

2. See the LUCs Web site, <http://www.lucs.org>, describing and providing links to state institutional controls tracking systems.

3. Michael Bellot, Institutional Control Program Manager, Office of Superfund Remediation and Technology Innovation, U.S. Environmental Protection Agency.

4. U.S. EPA Office of Solid Waste and Emergency Response, EPA 500-R-05-001, *Long-Term Stewardship: Ensuring Environmental Site Cleanups Remain Protective Over Time, Challenges and Opportunities Facing EPA's Cleanup Programs* (Sept. 2005).

5. U.S. EPA, *Long-Term Stewardship*.

6. Originally known as the American Society of Testing and Materials, ASTM International is an international standard-setting organization, see <http://www.astm.org>.

egories:<sup>7</sup> proprietary controls; government controls; information devices; and agency-issued enforcement orders or agreements.

### **Proprietary Controls**

The first category of institutional controls includes proprietary, or private, controls. Proprietary controls include private agreements between a landowner and another person or entity, often an environmental agency, that restrict the type of use or activity that can occur at a property. Proprietary controls are recorded in a property's chain of title, along with all the other encumbrances that may affect the title, such as mortgages and utility-line easements. Environmental covenants are probably the most common type of proprietary controls. Other proprietary controls include restrictive covenants (a generalized form of an environmental covenant) and negative easements (a property interest that, like a covenant, restricts the use of land).

The Uniform Environmental Covenants Act (UECA), a recently published model act, improves the legal force and otherwise strengthens the ability of environmental covenants to impose future restrictions.<sup>8</sup> In many states, the enforceability of environmental covenants, and other proprietary controls, remained stymied or at least uncertain because of common law rules that disfavored these types of restrictions—property use restrictions that would not directly benefit neighboring land but, instead, were held “in gross” by an entity (a state agency) far removed from the restricted property. The UECA supersedes these common law impediments and clearly authorizes the enforcement of environmental covenants. Fifteen states have enacted the UECA.<sup>9</sup> In addition to these fifteen states, other states maintain pre-UECA laws that similarly supersede common law impediments.

### **Government Controls**

The second category of institutional controls, government controls, refers to local ordinances or state statutes (usually local ordinances) that restrict or condition land use. Zoning ordinances; groundwater well installation ordinances (or laws); water use and withdrawal rules; and local health and safety rules are some common examples of government controls.

Government controls are no different than any other type of law or regulation that affects land use. A government control becomes an institutional control when an environmental oversight agency—whether local, state, or federal—affirmatively relies on the local ordinance as a future tool to protect persons from a cleanup's residual contamination. Some environmental agencies only allow government controls to operate as institutional controls if the agency first preapproves their use, or where the local government promises to enforce the control and, in turn, notify the environmental agency of any amendments to it. Some states flatly prohibit the use of government controls as institutional controls.

### **Information Devices**

The third category of institutional controls includes information devices. Information devices simply provide notice of residual contamination and, in some cases, notice that certain future land uses should not occur. They may include notices in the chain of title (commonly known by environmental practitioners as deed notices), Web site registries, outreach efforts, or other similar means to provide notice. These tools intend to put others on notice that residual contamination and land use restrictions exist. They do not, however, actually restrict land use. But even though they do not directly restrict land, environmental cleanup laws may impose future liabilities on people who ignore these notices.

### **Enforceable Orders, Agreements, and Letters of Completion**

The fourth and final category of institutional controls involves environmental agency-issued enforcement orders and agreements concerning cleanup. This category includes enforcement orders or agreements entered into by or between an environmental agency and a property owner (usually the party responsible for causing contamination), as well as consensual agreements entered into between buyers and sellers of contaminated property. For example, state environmental agencies often memorialize site closure with either a certificate of completion or, as many jurisdictions call it, a no further action (NFA) letter.

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7. U.S. EPA, *Long-Term Stewardship*; and ASTM International, E 2091-00, *Standard Guide for Use of Activity and Use Limitations, Including Institutional and Engineering Controls* (2000).

8. National Conference of Commissioners on Uniform State Laws, *Uniform Environmental Covenants Act*, §§ 2 & 5, available at <http://www.EnvironmentalCovenants.org>.

9. *Ibid.*; this Web site also provides a copy of the model act.

These letters, for instance, frequently inform gas station owners that cleanup of their gasoline spill is complete—even though residual contamination exists. The letters routinely advise the recipient that the NFA status is expressly conditioned on the existing use remaining the same. This type of closure letter could be premised on conditions, such as a restriction on excavation below fifteen feet. Enforcement orders and agreements, such as closure letters, are not typically recorded against title or recorded with the local or regional agency required to keep the record of land ownership and encumbrances.

Institutional controls widely exist throughout the states. In many cases, they exist as legal encumbrances recorded in a property's chain of title. In others, they exist as orders or contract agreements issued by or between environmental agencies and property owners. And in some cases, institutional controls simply leverage existing local or state laws and rules. In any event, the presence of an institutional control limits the future use that may occur at a property. This, in turn, might impact property value.

### **Institutional Controls and Property Values**

As set forth in Advisory Opinion 9 (AO-9), "The Appraisal of Real Property That May Be Impacted by Environmental Contamination," there are three possible property value effects from contamination:

- **Cost effects**, or deductions for costs to remediate a contaminated property
- **Use effects**, or impacts on the utility of the site as a result of the contamination
- **Risk effects**, as derived from the market's perception of increased risk and uncertainty.<sup>10</sup>

This is illustrated in the following formula:

$$\begin{aligned} \text{Impaired Value} &= \text{Unimpaired Value} \\ &\quad - \text{Cost Effects} \\ &\quad \quad (\text{Remediation \& Related Costs}) \\ &\quad - \text{Use Effects} \\ &\quad \quad (\text{Effects on Site Usability}) \\ &\quad - \text{Risk Effects} \\ &\quad \quad (\text{Environmental Risk/Stigma}) \end{aligned}$$

Institutional controls can mitigate, or in some cases

exacerbate, the extent to which the three contamination-related effects may impact property values.

### **Institutional Controls and Cost Effects**

As explained in AO-9 and elsewhere,<sup>11</sup> cost effects are deductions from an impacted property's unimpaired value for costs necessary to remediate the property to the appropriate regulatory standards. These costs are appropriate deductions if and only if they are to be borne by the buyer of the property. In this way, they are conceptually similar to capital expenditures made immediately after sale, as discussed in *The Appraisal of Real Estate*, 12th edition.<sup>12</sup> Remediation costs that have been paid or will be paid by the seller or a third party should not be deducted from the unimpaired value. Risks or uncertainties concerning payments of future costs to be paid by an entity other than the buyer are more properly reflected in risk effects.

Nevertheless, since these costs and their effects on property values are directly related to the level and type of remediation, they could be influenced by the use of institutional controls in determining remediation requirements. For example, in a situation with groundwater contamination, a more extensive and costly cleanup to a higher level (lower concentrations of the chemical constituents of concern) based on residential drinking water standards could have greater cost effect implications than a cleanup to industrial standards with perhaps a future restriction on the use of groundwater for drinking water purposes. In this way, the use of institutional controls also could reduce cost effects and any diminution in value.

### **Institutional Controls and Use Effects**

As noted, the second category of contamination-related property value effects is due to limitations on the use of the property during and after remediation. Use effects are the category of impacts most susceptible to being adversely affected by institutional controls. Adverse use effects on market value would generally be due to limitations on the highest and best use of the property, as discussed next. Other use effects could be related to reductions in income during remediation for income-producing properties. Such reductions may result from remedial

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10. Appraisal Standards Board, Advisory Opinion 9, "The Appraisal of Real Property That May Be Impacted by Environmental Contamination," *Uniform Standards of Professional Appraisal Practice*, 2006 ed. (Washington, DC: The Appraisal Foundation, Washington, 2006).  
 11. Thomas O. Jackson, "Appraisal Standards and Contaminated Property Valuation," *The Appraisal Journal* (April 2003): 127-133.  
 12. Appraisal Institute, *The Appraisal of Real Estate*, 12th ed. (Chicago: Appraisal Institute, 2001), 434.

activities that limit the use and income production of certain parts of the property, such as a section in a shopping center or office building that is not rentable for a period of time due to remedial activities underway there.

**Highest and Best Use.** The highest and best use of a property is determined on the basis of four criteria: (1) what uses are physically possible; (2) what uses are legally permissible; (3) what uses are financially feasible; and (4) of those uses that meet all of the other criteria, which use produces the highest value, also known as the maximally productive use.<sup>13</sup> In order to evaluate the effects of environmental contamination and institutional controls on the highest and best use of a property, these criteria must be considered. The key consideration is whether the contamination and its remediation would limit the highest and best use of the property to a use with a lower value than what it would be without the contamination and its remediation. While potential value impacts due to use limitations could occur with any of the four criteria, the most likely impact with respect to institutional controls would involve the legally permissible criterion. As noted, remediation with institutional controls would typically include some type of limitation on the future use of the property, and in some cases this limitation would be set forth in a recorded deed restriction that would then bear on future interests in the property. However, the real issue is whether the institutional control does in fact limit the highest and best use to something less than it would be without the control.

For example, if a future land use restriction limits a property's use to industrial when its highest and best use would be industrial even without the restriction, then the restriction would have no impact on the property's highest and best use and would not reduce its value through a use effect deduction from its unimpaired value. Likewise, limitations on the use of groundwater as drinking water (potable water) when the groundwater will not be used for this purpose regardless of the contamination would not limit the property's highest and best use, and would not result in an adverse use effect on value.

On the other hand, if remediation with an institutional control were to limit a property's use for

redevelopment or conversion to a use with a higher value—when such conversion is warranted after consideration of redevelopment costs and the financial feasibility criterion<sup>14</sup> or not otherwise limited by the other criteria—then the control would have an adverse effect on the value of the property.

### **Institutional Controls and Risk Effects**

The third effect on property values related to environmental contamination and its remediation is termed environmental risk, or stigma. This effect is derived from the relevant market's perception of

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13. *Ibid.*, see *The Appraisal of Real Estate*, 12th ed. for a more complete discussion of these criteria.

14. A redevelopment use can only be the highest and best use if the increase in value following redevelopment (over the existing use's value) exceeds the cost of redevelopment. Otherwise, the use would not be financially feasible, the third highest and best use criteria.

increased risks related to the property's environmental condition, including risks related to remediation requirements; unknown or uncertain costs; and other factors. In this regard, institutional controls can have a beneficial effect on the property's value. In some situations, the use of institutional controls helps facilitate remediation and the achievement of closure where remediation and/or closure may not be possible or feasible without the controls.

Research has demonstrated that environmental risk varies significantly over the remediation lifecycle, with the highest risk (and most adverse value impacts) before cleanup; less risk and value impacts during cleanup (with an approved remediation plan); and the least or no risk-related effects

after cleanup and the achievement of a no further action status.<sup>15</sup> Accordingly, if institutional controls can facilitate the movement of the property and its environmental condition across the lifecycle, from the before cleanup stage to the during cleanup stage, or from the during cleanup stage to the after cleanup stage, then the use of institutional controls will reduce environmental risk and stigma impacts on property values. If, absent the controls, the property remains in an earlier stage, then the adverse property value effect due to environmental risk will not be reduced. Therefore, this positive market effect of institutional controls may be their most significant contribution toward facilitating brownfield redevelopment.

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15. Thomas O. Jackson, "Environmental Contamination and Industrial Real Estate Prices," *Journal of Real Estate Research* 23, no. 1/2 (2002): 179-199; Thomas O. Jackson, "Environmental Risk Perceptions of Commercial and Industrial Real Estate Lenders," *Journal of Real Estate Research* 22, no. 3 (2001): 271-288.