



Department of Energy
Washington, DC

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Sharon Frey
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Dear Ms. Frey:

The Department of Energy (DOE) appreciates the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) Draft *Institutional Controls: A Reference Manual*. The information contained in the guide is useful and timely. As the Department continues to accelerate its environmental restoration program and moves from site characterization and assessment to remedy selection, design, and implementation, the consideration of various types of institutional controls (ICs) will become an integral part of the remedial alternatives analysis for many DOE sites. While the Department believes that the use of institutional controls will, to at least some degree, be a necessary and appropriate component of many cleanup strategies, to date most sites have been focused on the early stages of the restoration process. Consequently, the core-team of decision-makers at DOE sites (DOE, EPA Regions, State regulators) generally have not yet begun to address the issues and complexities associated with identifying and implementing these measures. This document not only provides information that will help decision-makers understand and apply ICs, but also, identifies issues that are likely to arise and makes many worthwhile recommendations on how to address them.

Please note that your reference manual was distributed to DOE Headquarters and Field Elements, and that this submission represents a compilation of comments received by this Office from those organizations. Any questions regarding our comments should be directed to Rich Dailey of my staff, who can be reached at 202-586-7117 or richard.dailey@eh.doe.gov.

Sincerely,

Thomas T. Traceski
Director, RCRA/CERCLA Division
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Enclosure

**U.S. Department of Energy (DOE)
Comments on “Institutional Controls: A Reference Manual”**

I. Document Organization/Reaching Additional Audiences

The Department believes that the guide contains information that is valuable and necessary for selecting and implementing institutional controls. The information will need to be used not only by the intended audience (i.e., regional counsel), but also by those who must identify, evaluate, and select institutional controls (e.g., remedial project managers); regulators that oversee cleanups and must approve selected remedial approaches; and the public, who will be asked to participate in reviewing remedial approaches at DOE sites, including the selection and use of institutional controls.

In order to reach these additional audiences, DOE believes that the information should be organized in a manner that will facilitate both comprehension and easy retrieval of the material. The following suggestions relate to revising the organization of the guide to better communicate its contents to all audiences.

1. Much of the information presented in the manual is amenable to summarization in a table or diagram. By providing the information in tabular format, EPA would enhance the reader’s ability not only to locate particular information, but also to compare and contrast different types of institutional controls. This summarized material, which a reader could reference throughout the document, would generally make the document easier to read. Several matrices would be of particular benefit to a reader:
 - A matrix, which could supplement the text in Section V, summarizing the different types of institutional controls. The Department recommends that this matrix detail the:
 - Definition of each institutional control
 - Benefits of using that type of control
 - Limitations
 - Enforceability
 - Reference pages with additional information

An example of this type of matrix is included as Attachment A.

- A matrix or decision diagram outlining the relationship between length of time the institutional control will be needed and the overall effectiveness, summarizing information contained in Section VI, Part 1. An example is included as Attachment B.
2. The text does a good job of defining and explaining the various controls; however, it is difficult for the reader to quickly retrieve information from the document because of the way it is organized. For example, Section V currently is laid out as follows:

V. Tools for Creating Institutional Controls

A. Proprietary Controls

1. What is a proprietary control?

B. Governmental Controls

1. Types of governmental controls

Parallel organization (e.g., consistent sections and subsections) would not only make the information easily retrievable, it would allow the reader to more easily understand and compare different types of institutional controls. An outline that DOE believes would address this comment, as well as the following bulleted comments on document organization, is included as Attachment B.

- Information from Sections VI, VII, VIII, IX, X, and XI could be rolled in with the Section V to make a single, more comprehensive section focused on the various types of controls. This organization would allow the reader to have a more complete understanding of each type of institutional control that could be easily referenced, as needed.
 - Section III “The role of institutional controls in remedies” could be included in the introduction; this text provides the context for why consideration of institutional controls is so important (i.e., the purpose and need for this guide).
3. A glossary of key terms (perhaps with references to the pages where each institutional control is discussed in greater detail) would provide the reader, particularly members of the public, with information that would help clarify the first sections of the manual (i.e., Section I – Section IV). During these first sections, the manual uses a number of terms prior to giving a definition. For example, “proprietary controls” are referred to at the top of page 4 before the term has actually been defined. The glossary of key terms also would be a valuable tool reference tool for remedial project managers during evaluation of likely response actions. Again, the ability of the reader to easily retrieve information will be paramount to the effectiveness of the reference guide.
 4. The Department supports the recommendations presented by the workgroup, particularly the recommendations that:
 - Institutional controls should be evaluated carefully as part of remedy selection;
 - The goals of institutional controls should be described clearly in the remedial decision document; and
 - State and local agencies have a vital role in developing, establishing and maintaining effective and enforceable institutional controls.

EPA could reinforce the importance of these and other recommendations by continuing to stress and highlight their importance throughout the document, particularly in sections pertaining to selection, implementation, and enforcement of various types of institutional controls. In addition, by linking the recommendations (provided on pages 6-10) with the information presented in the remainder of the document, the reader will better understand how these concepts should be integrated into the selection and implementation of remedies that rely upon institutional controls.

5. The concern of project managers conducting environmental restoration activities will be how to *implement* the recommendations provided in the guide; however, there is little implementation guidance provided. Guidance could be incorporated into the document in several places:
 - On page 53, where uncertainties associated with institutional controls are discussed, suggestions for managing these uncertainties would be beneficial; and
 - As part of the discussion about layering institutional controls, guidance on how to combine institutional controls in a manner that will improve their overall effectiveness would be beneficial (rather than just layering ICs that may have similar weaknesses).

6. The section discussing “Choosing amongst institutional controls” could include a table to highlight key “philosophies” that should be considered. Examples of these philosophies are included below:
 - Institutional controls are not mutually exclusive; one or more can be applied a single site.
 - Layering of institutional controls can provide additional protection.
 - Institutional controls are extremely flexible and can serve a variety of purposes.
 - Evaluation of institutional controls should be done in the planning stages; institutional controls should not be considered an automatic “add-on” or afterthought.
 - The performance objective of the institutional control(s) should be defined in decision documents; however, it is generally desirable to retain flexibility in decision documents as to the precise type of institutional controls to be implemented.
 - Creative evaluation of institutional controls may identify innovative ways of using these legal devices to accomplish remedial objectives.
 - The ROD should focus on the goals to be achieved by institutional controls, rather than specifying the precise type of institutional control to be implemented. This focus will provide appropriate flexibility after the ROD is signed.
 - The focus should be on drafting an agreement that clearly states the intent of the parties. How that document is labeled is secondary.

Highlighting these points will emphasize to the reader the manner in which the workgroup is recommending the use of institutional controls.

7. The series of questions in Section VI (as well as considerations at bottom of page 20) are an effective means to identify key decisions to assist decision-makers in identifying appropriate institutional controls. The reader would benefit from further structure in the discussion of relative performance of controls given these key considerations. Attachment C is an example matrix that summarizes of how key decisions or considerations related to institutional controls can be identified, organized and evaluated. Project personnel may use this matrix to prioritize various control measures depending on the key considerations. The example priority is based on

interpretation of the text in the reference guide; however, the example matrix is not intended to represent an absolute with respect to control preferences. Rather, it is intended to be a simple means to identify and rank appropriate controls which will assist the project personnel in identifying single control measures, or more likely, identify appropriate layers of measures such that all key considerations are adequately addressed.

The key considerations included in the matrix (Attachment C) were gleaned from the text in Section VI as well as other discussions throughout the guide. Based on our review, these considerations were interpreted to be key in discriminating between different control options.

8. As stated in the text of the guide, consideration of institutional controls should occur as early as possible and continue throughout the life of the project. Timing for the key considerations in the matrix (Attachment C), should therefore be defined. Based on our experience, the following is the likely timing to consider these key decisions:

Is the Duration of Control Short? The expected duration should be considered as early as possible, but will likely not be well defined until the response action is selected. At that point, depending on the scope of the action, the initial controls and associated duration should be defined. It should be noted that the type and duration of control would be based on the specific threats being mitigated. For instance, a groundwater pump and treat response will require controls that will likely change after the response has been completed. Therefore, the long-term controls for any residuals will not be adequately defined until the final performance of the response action is assessed. Additionally, a long-term response action (i.e., pump and treat for 15 years) warrants a delay in defining the final long-term control as many socioeconomic factors (i.e., preferences of local governments) may change over that time period.

Are There Many Separate Parcels to Consider? The number of parcels impacted should be able to be well-defined during project scoping. This of course will be subject to change as the investigations continue. Accordingly, the parcels should be defined initially, and then continually updated as new information is collected.

Are Property Owners Predominantly PRPs? This consideration should be made during scoping and, like the number of parcels, is subject to change over time as more information is collected. This consideration should be well defined by the time the response action is selected.

Will Local Government Support Monitoring and Enforcement? This consideration will not be finalized until the final controls are selected; however involvement of the local government is imperative throughout the project. At scoping the local government should be informed of the expected nature of the problem to be addressed and the associated control options. As the site conditions are better defined and the range of control options are developed, the local government should become more involved as the scope of their involvement directly impacts the range of likely control options. Once final actions are selected and residual conditions defined, the local government should provide input as to their ability to monitor and enforce controls.

Will Controls Run With the Land? This will be dependent on the residual threats at the site;

therefore, serious consideration should begin during response selection, and then be refined upon response completion. The degree of modification over time will be dependent upon the scope of the response action. For instance, application and maintenance of a cap will change little over time, where a groundwater pump and treat system may result in significant changes in site conditions. The nature of the residual threat will ultimately dictate whether or not future land owners/ users need to be protected.

Is Future Property Transfer Likely? This should be considered at the onset, but likely will not become definite until the investigation is complete and the nature of the threats are defined. Transfer will be dependent upon whether or not the site will have continuing operations by the current owners (e.g., DOE site or commercial nuclear reactor). If it is known early on that the property will continue to support operations, then property transfer will be considered unlikely. However, as is the case with many federal facilities, the objective of the cleanup is generally to support future, non-federal, beneficial uses. Given this, property transfer is likely, and long-term protection of alternate future users is a key consideration in the development and selection of controls.

Will Controls Need to be Modified to Accommodate Changing Conditions? Depending on the nature of the problem (i.e., persistent, or naturally attenuating) and the scope of the response action (i.e., treatment), the type and extent of controls may change over time. Therefore after the threats are defined (i.e., post-investigation), and throughout response selection and implementation, it will be beneficial to maintain flexibility for modification of control measures. This should not be a significant consideration during scoping as the problem and associated response action are likely not well defined.

9. Section IV, Integrating institutional controls into the remedy selection process; A graphic of the RI/FS process identifying the level of IC consideration at each “stage” would be another beneficial tool. An example RI/FS framework diagram is provide as Attachment D.
10. Key definitions (e.g., institutional controls on Page 3) should be italicized to emphasize the information.
11. On page 4, the types of institutional controls presented in Paragraph 1 could be better highlighted through the use of bullets.

II. Federal Facilities

The Department was particularly interested in the information contained in the Federal Facilities section. This section served the purpose of highlighting issues that affect only Federal Facility sites. In general, however, DOE believes that the information might be more useful if provided throughout the document. Organized in this manner, readers would immediately understand the limitations of certain types of institutional controls and which were applicable at their sites. Although the information in the Federal Facilities section of the draft manual was generally helpful, the Department has some concerns with recommendations that the workgroup provided. These concerns, as well as additional comments on this section, are provided below.

1. The Department disagrees with the manual’s recommendation that EPA personnel seek

greater specificity in Federal Facility RODs than in RODs for other sites. This differential treatment seems in direct contradiction to both the clear language of CERCLA section 120, as well as that section's intent as evidenced by its legislative history. That is, that Federal Facilities should be treated fundamentally the same as private sector sites. Additionally, and more importantly, this differential treatment of federal facilities limits the flexibility recognized and recommended by the workgroup in their second general recommendation (page 6): "goals of institutional controls should be described clearly in the remedial decision document". By setting objective performance standards, DOE sites will retain flexibility in the precise type of institutional controls to be implemented, thus allowing the site to respond appropriately as cleanup progresses and final site conditions are better understood. In addition, this flexibility will allow Federal Facility sites to work with local agencies and the public to ensure the effectiveness of controls *as* environmental restoration activities are conducted. Because cleanup generally will not begin until a ROD is signed, requiring Federal Facility to have greater specificity about institutional controls in their RODs could result in delays in cleanups at Federal Facilities as the precise details and legal terms under which institutional controls must be implemented and enforced are defined.

Regulatory agencies do have an opportunity for involvement of the development and approval of close-out documentation (e.g. close-out report, on-scene coordinator report). At this point in the cleanup process, regulatory agencies will have the opportunity to ensure that adequate controls are in place to ensure protection of human health and the environment. Further, there are situations where maintaining a degree of flexibility is advantageous, if not necessary. For example, the following are situations where flexibility in the type and extent of institutional controls should be maintained after the decision document (e.g., record of decision, action memorandum):

When site specific conditions (e.g., nature and extent of contamination) are subject to change over time due to ongoing treatment or natural attenuation. In this instance short-term controls may be appropriate to define; however, long-term controls may not because the nature and extent of residual contamination will not be known until the treatment actions are complete.

When duration of action is long and the local governmental situation is subject to change. Because local governmental involvement and support is paramount to long-term success of control measures, it may be ineffective to agree on long-term controls early in the remedial process. Politics and economics play a significant role in the ability of local government to monitor and enforce controls. Therefore, controls should be defined close to the point that they will be implemented. In the case of a long-term pump and treat action, the final institutional controls would not be defined until at or near completion of treatment when the nature and extent of residual contamination is more certain.

When a performance based response decision is made. There is increased interest in developing performance based decision documents where specific criteria are established, but the design of the remedy is left flexible for design purposes. Until the design and implementation components are better defined, the nature and extent of necessary institutional controls may also be uncertain.

Where final land use and future users are not well defined. At many federal facilities, future land use decisions are still being considered. In this situation, the uncertainty in future exposure scenarios is problematic to the development of specific institutional control measures. Where final land use is

uncertain, the decision makers may have to consider only short-term controls assuming federal ownership of land and maintenance of response actions (e.g., caps). When the long-term land use decisions are made, the nature and extent of controls would be reconsidered and modified as necessary. Additionally, the final end use options may be subject to the performance of the response. For example, depending on how well the treatment technology performs, the final end use may or may not have some restrictions.

2. Page 83, first full paragraph: The statement is made that beyond the ROD, there is no further implementing step where the institutional controls will be specified. While all Federal Facilities may not specify remedial design/remedial action documentation as primary decision documents, the common practice is that the regulatory agencies provide review and comment on these activities. As it is stated throughout the document, “performance standards” should be specified at a minimum; however, this paragraph implies that federal facilities need to be more specific with respect to “the control of choice”. This may be too strongly stated; depending on the project situation, flexibility in final control selection may be necessary beyond the ROD.
3. The “post FFA” timeframe at federal facilities, when the federal government is no longer involved, is a primary concern of sites. It would be helpful to have additional discussion of how to work with regulators and stakeholders to address this potential issue. There is a common concern that controls will be “lost” after the federal government exits a site. Reference materials such as this guide may provide an opportunity to explain that long-term exposures can be protected by existing legal mechanisms.
4. Page 90, number 4, State’s Roles and Responsibilities: Many federal facilities have tri-party agreements” where the state is one of the key decision making authorities. These agreements may provide the opportunity to explore designating long-term O&M as a State-lead function.
5. The federal facilities section is written differently than the rest of the manual in that reference information is combined with recommendations. By combining information in this way, it is difficult for the reader to decipher factual differences between the use of institutional controls at federal and non-federal facilities. In keeping with the spirit of the rest of the manual, the options and issues arising from differences between the application of institutional controls at federal and non-federal sites should be objectively analyzed, identifying principles, discussing the spectrum of options, and presenting issues that may arise. If recommendations specific to federal facilities are needed, they should be included in Section II or dealt with as a separate subsection within Section XI.
6. The Introduction (page 2) acknowledges that many parts of the manual are not applicable to federal facilities, but it would be useful if more information/discussion was provided regarding the differences. For instance, when choosing institutional controls for federal facilities, it is important to consider that the site will oftentimes remain under federal control. In such cases more active controls than those

contemplated in Section I of the manual might be appropriate. EPA could point this out in Section I, Section VI, or in the discussion on federal facilities in Section XI.

7. The manual emphasizes the need to consider the full, long-term cost of institutional controls at all sites (not just at federal facilities). This is not an appropriate issue for this section because, as previously discussed, DOE believes that there should be no difference between federal and non-federal facilities. The considerations affecting remedy selection, including the role of cost, should be uniform for all cleanups under CERCLA.
8. In several places in Section XI, the manual refers to non-NPL federal facilities in such a way that it appears EPA intends the entire section apply equally to NPL and non-NPL sites. However, because EPA's role is different at each and the manual focuses much attention on enforcement, the manual should clarify this matter.
9. In discussing deed restrictions (page 83), the manual encourages the reader to pursue "ways the Federal agenc[y] can do business differently." Existing mechanisms are not addressed until later in the section. The manual should first address these existing options and their specific weaknesses before discussing reforms.

III. Principles of Environmental Restoration

DOE and EPA have developed and are jointly sponsoring the "*Principles of Environmental Restoration*" training course. The philosophies in this course directly apply to implementation of institutional controls, and EPA could reference available resources for additional information about these principles. To some degree the principles are already discussed in the document. For example, the workgroup suggests in its third general recommendation (page 7) that sites identify those agencies that will have a strong interest in actions that affect land use and ensure that their concerns and opinions are considered in the evaluation of institutional controls. In other words, the workgroup is advocating the use of a team approach with state and local agencies that have a role in developing, establishing, and maintaining effective and enforceable institutional controls. This follows the first principle of EPA and DOE's training course (i.e., build an effective core team). Similarly, the workgroup emphasizes the importance of evaluating and identifying the appropriate institutional controls as early in the cleanup process as possible; this is the third principle of the training course (i.e., early identification of likely response actions). The principle of uncertainty management is also applicable to institutional controls, as evidenced in the manual's discussions of the need to: 1) evaluate the limitations of institutional controls and barriers to implementation, 2) set performance-based goals, and 3) identify future contingencies. Because there are a number of uncertain factors to consider in selecting appropriate institutional controls (e.g., if ownership of land will change, if local government will have the funds to continue enforcement over the entire required time period), a reference to the available information about the principles of environmental restoration would be beneficial.

The Department suggests emphasizing the importance of problem identification and definition in addition to the other factors mentioned on Page 6, number 1. In order for a project team to identify, evaluate and select an appropriate control, the problem to be addressed (e.g., offsite migration of groundwater) should be explicitly defined. This definition will not only assist in the evaluation, it also will provide a solid basis for rationalizing the preferred institutional control to stakeholders. Again, a reference should be provided to the “*Principles of Environmental Restoration*” course; problem identification and definition is discussed in detail as the second principle.

IV. Other General Comments

1. Adequacy of long-term funding is an important issue for many types of institutional controls, especially for federal sites that can be subject to the budgetary constraints of a non-local government. The only place this issue is raised is in Section IV.C. (page 17); this issue should be given greater visibility in the manual.
2. More detailed examples of institutional control scenarios could be provided by real-life case studies or theoretical examples. Federal facilities would benefit from an example that outlines a scenario where a control is implemented at year 0, government control exists until year 100, and ultimately the property is transferred to a local municipality for recreational uses. By expanding on this example, EPA could demonstrate what types of controls are applicable at different times and show how the type and extent of controls may change as ownership and access to the site changes. This scenario is prevalent in the DOE arena where sites are conducting remedial activities now with the expectation that non-governmental land uses will be finalized in the future.
3. There is very little discussion on the role the public plays in determining appropriate institutional controls for a site. At least for federal facilities, their role is significant. EPA may want to consider including discussion / guidance on how to successfully involve the public in IC decisions. The manual generally looks at institutional controls from the perspective of their enforceability by EPA rather than their overall reliability. For example, at the end of Section I.A. (“What are institutional controls?”), the manual states that “these tools should ... be viewed as part of the measures the agency uses to enforce restrictions.” While the opportunity for a federal agency to “enforce restrictions” can increase reliability of a control measure, enforceability should be viewed as a redundant measure available in case others fail. A control is most effective when it empowers those with the greatest interest in its efficacy to ensure it endures.
4. EPA should clarify what it means when it states that the manual “is primarily intended as a reference tool.” Does this imply that it is also intended to set policy or advance enforcement strategies?

V. Specific Comments

1. On page 5, the guide states that “soil may be decontaminated enough to allow for continued residential use, but certain activities such as gardening may result in unacceptable exposures”. EPA should clarify that institutional controls should not be used to prohibit human activities if these restrictions are likely to be unreliable and difficult to enforce. In the stated example, it might be best to restrict residential occupancy. Activities such as gardening are probably better controlled by engineering methods (use of pavement or development that renders gardening virtually impossible, such as high-density development).
2. On page 6, number 1, paragraph 1: “Detailed and complete” may be interpreted incorrectly at the project level. Often, statements such as this result in argument over defining completeness. It might be better stated that information should be collected and evaluated in “sufficient detail to support remedial decision making”. The level of detail will vary from project to project. Similarly, on page 15, paragraph 4, the guide recommends that the proposed plan and ROD “clearly and fully describe” the goals to be attained by institutional controls. This language may result in program managers and stakeholders disputing if the goals have been “clearly and fully described” rather than establishing and identifying the goals themselves.
3. On page 10, paragraph 2: The workgroup “strongly recommends that separate documents explicitly conveying a real estate interest be drafted and filed.” It is not clear what type of documents should be filed; examples would clarify the workgroup’s recommendation.
4. On page 10, paragraph 1 (and again on page 31): The guide states that recording a deed notice has little or no effect on a property owner’s legal rights regarding the future use of the property. At this point in the guide, however, there has been no discussion of which controls are legally enforceable or how to select or identify them. At a minimum, it would be beneficial to the reader to reference where in the document this information is provided.
5. On page 16 the manual states that “a mechanism for enforcement of the controls is critical”. Again, the reader would benefit from a reference to where in the document enforcement of controls are discussed.
6. On page 45 the manual discusses disadvantages of governmental controls. An additional disadvantage is that the long-term effectiveness of these types of controls is subject to the changes in political power; as economic and political preferences change, zoning restrictions may also change.
7. In its discussion of administrative orders as land use controls (Section V.C.1, page 46), the manual describes at length the benefits of this control measure. The manual does not, however, mention that many of these benefits are at the expense of public involvement or property owners’ rights or that they can be costly to all parties. The only mention of cost is at the very end of the subsection where cost is generally

referred to as a “consideration”. The manual should acknowledge that other parties might be at odds with the use of administrative orders. (Note: This is not a DOE issue because EPA must receive Department of Justice concurrence on the use of such orders which has not previously been obtained.)

Attachment A: Example Summary Matrix for the Manual

Type of Institutional Control	Definition	Benefits of Use	Limitations	Enforceability	References
PROPRIETARY CONTROLS	A private contractual mechanism contained in the deed or other document transferring the property.	Proprietary controls are based on generally applicable property law and thus can be implemented without the intervention of any federal, state, or local regulatory authority.	Development, implementation, and enforceability of proprietary institutional controls is almost always a function of state law. State law varies on the application and enforcement of such restrictions.	Documentation that clearly states the parties' intentions with regard to key issues will likely be enforced according to its terms. However, counsel should become familiar with the kinds of problems that common law doctrines can present.	Pages 18-36
1. Easements	A property right conveyed by a landowner to another party, which gives the second party rights with regard to the first party's land. An easement allows the holder to use the land of another, or to restrict the uses of the land.	Most useful in situations where a single parcel of land is involved and the current owner of the land is subject to regulation under CERCLA or RCRA.	Less useful where a large number of parcels are involved and the owners are not PRPs. As a third party, EPA may not have the right to enforce the easement.	If the owner violates the easement, the holder may bring suit to restrain the owner. To ensure adequate implementation and enforcement, it is important to consider who will hold the easement.	See page 35 for other considerations in implementing easements.
<ul style="list-style-type: none"> <i>Affirmative easement</i> 	Allows the holder to enter upon or use another's property for a particular purpose.				Page 21
<ul style="list-style-type: none"> <i>Negative easement</i> 	Imposes limits on how the landowner can use				Page 21

Attachment A: Example Summary Matrix for the Manual

Type of Institutional Control	Definition	Benefits of Use	Limitations	Enforceability	References
	his or her own property.				
<ul style="list-style-type: none"> <i>Easements that are appurtenant</i> 	An easement that is created to benefit an adjacent parcel of land, and is held by the owner of that land.	May be used, for example, to prevent a particular adjoining parcel from being threatened by migration of contaminants. (considered appurtenant only if held by owner of that parcel)			Page 21-22 Note that the legal implications of appurtenant vs. in gross are becoming less crucial.
<ul style="list-style-type: none"> <i>Easements that are in gross</i> 	An easement is created “in gross” if the benefit is not related to any property owned by the holder of the easement.	For the purposes of institutional controls, easements will usually be “in gross” because the restrictions are generally not for the benefit of any particular neighboring parcel owned by the holder of the easement.	Long term usefulness of in gross easements may be limited because traditional common law doctrine does not consider the easement transferable.	Traditional common law did not consider the right to enforce the easement transferable. If this doctrine were applied to an easement acquired by EPA, it would prevent EPA from transferring the easement to a third party (e.g., to a state).	Page 21-22 Note that the legal implications of appurtenant vs. in gross are becoming less crucial.
2. Covenants	A covenant is a promise that certain actions have been taken, will be taken, or may not be taken, made in connection with a conveyance of property.	It is generally preferable to frame the documents establishing institutional controls as easements because they traditionally have had set, formal requirements.		Binding to subsequent owners of land if: (1) notice given to the subsequent landowner, (2) clear statement of intent to bind future owners, (3) the agreement “touches &	Page 23-24

Attachment A: Example Summary Matrix for the Manual

Type of Institutional Control	Definition	Benefits of Use	Limitations	Enforceability	References
				concerns” the land, (4) “vertical privity” and “horizontal privity” must be met.	
3. Equitable Servitude	An equitable servitude is similar to a covenant, except all of the preconditions for establishing a real covenant have not been met.	Enforceable even without “vertical privity” and “horizontal privity.”	Most likely to have value as an institutional control where a party responsibly for cleanup expects to own neighboring property for a long period of time.	Agreement can run with the land as long as: (1) notice is given to the subsequent landowner, (2) there is a clear statement of intent to bind future owners, and (3) the agreement “touches and concerns” the land and it meets.	Page 24
4. Reversionary Interest	A reversionary interest is created when a landowner deeds property to another, but the deed specifies that the property will revert to the original owner under specified conditions. It places a condition on the transferee's right to own and occupy the land. If the condition is violated, the property is returned to the original owner or the owner's successors.	Binding upon any subsequent purchasers.	A reversionary interest is most useful where it can be assumed that the original owner will be available over a long time period to conduct any further response that is necessary.	Each owner in the chain of title must comply with conditions placed on the property. If a condition is violated the property can revert to the original owner, even if there have been several transfers in the chain of title.	Page 25

Attachment A: Example Summary Matrix for the Manual

Type of Institutional Control	Definition	Benefits of Use	Limitations	Enforceability	References
5. Conservation Easements	Conservation easements effect a conveyance of a property right from one party to another, allowing the latter to control the former's use of property in some respect. The purposes for which a conservation easement may be established are specific (e.g., maintaining or enhancing air or water quality).	Not subject to some of the traditional requirements under the common law of easements and covenants.	May only be used for a narrow range of possible purposes.	Conservation easements would allow the EPA to create an institutional control restriction land use that resembles either an easement or a covenant without the risks about validity or future enforcement that would arise under common law.	See page 29 for more information the traditional differences between conservation easements and easements or covenants. See page 29 for the purposes for which a conservation easement may be established.
6. Informational Devices	Efforts to provide better public information about risks from contamination (e.g., deed notices).	May effectively discourage inappropriate land users from acquiring the property. Also, informational devices are easier to implement than other institutional controls because they do not require a conveyance to be negotiated.	Has little or no effect on a property owner's legal rights regarding the future use of the property. Also, if not drafted well, informational devices may discourage even appropriate development of land.	Not legally enforceable	Page 30-32

Attachment A: Example Summary Matrix for the Manual

Type of Institutional Control	Definition	Benefits of Use	Limitations	Enforceability	References
GOVERNMENTAL CONTROLS					
1. Zoning					
2. Local Permits					
3. “Miss Utility” Systems					
4. Tailored Ordinances					
5. Groundwater Use Restrictions					
6. Advisories					
7. State Registries of Hazardous Waste Sites					
8. Condemnation of Property					

Attachment B: Suggested Revision To Document Organization

1.0 INTRODUCTION

1.1 Purpose and Scope:

As many environmental restoration projects move to implementation and completion of response actions, long-term institutional control issues are of utmost importance, especially where residual contamination will be left in place. Because evaluation and implementation of effective institutional controls is critical to the long-term protection of human health and the environment, it is necessary that the type and extent of available institutional control vehicles be defined and discussed. Accordingly, this reference guide has the following objectives:

1. Identify legal and other vehicles that can serve as institutional controls;
2. Discuss the legal and practical considerations of such controls during response evaluation and implementation;
3. Introduce the role of such controls in applicable program guidance and regulations.

While this reference guide is not intended to be a “how to” manual for evaluating, selecting, and implementing institutional controls (these truly are site specific efforts), it does provide a comprehensive discussion of what these controls are as well as what issues are important to consider. The scope of this guide includes both RCRA and CERCLA regulatory frameworks at both private and federal facilities. Throughout this guidance, fund-lead and PRP-lead scenarios are discussed.

1.2 Reference Guide Organization:

This reference guide is organized in a manner that facilitates easy identification and retrieval of key information. As mentioned earlier, this guide was developed as a result of a national working group; therefore, the recommendations of the working group are provided at the beginning of the document to provide necessary perspective on the scope and role of institutional controls. The types and extent of available institutional controls are presented next to provide a comprehensive definition of the various controls. Included with this discussion are the issues, benefits, and challenges associated with each type of control given different regulatory and enforcement scenarios. Finally, a discussion of how to better incorporate the evaluation, selection, and implementation of institutional controls during a “typical” remedial project is provided. This discussion is intended to assist the remedial project managers in ensuring that institutional controls are considered early in the process.

2.0 WORK GROUP RECOMMENDATIONS

3.0 TYPES OF INSTITUTIONAL CONTROLS

3.1 Proprietary Controls (Define in General)

3.1.1 Easements (Define Specifically)

Key topic organization: Implementability; Effectiveness; Enforcement; Roles and Responsibilities (State, Federal, Local, Current Owner, Future Owner, PRP); RCRA Considerations; Federal Facility Considerations; Advantages/Disadvantages.

3.1.2 Covenants

Same key topic organization as above

3.1.3 Equitable Servitude

Same key topic organization as above

3.1.4 Reversionary Interest

Same key topic organization as above

3.1.5 Conservation Easements

Same key topic organization as above

3.1.6 Informational Devices

Same key topic organization as above

3.2 Governmental Controls (Defined In General)

3.2.1 Zoning (General and Specialized)

Key topic organization: Implementability; Effectiveness; Enforcement; Roles and Responsibilities (State, Federal, Local, Current Owner, Future Owner, PRP); RCRA Considerations; Federal Facility Considerations; Advantages/Disadvantages.

3.2.2 Local Permits

Same key topic organization as above

3.2.3 “Miss Utility” systems

Same key topic organization as above

3.2.4 Tailored Ordinances

Same key topic organization as above

3.2.5 Groundwater Use Restrictions

Same key topic organization as above

3.2.6 Advisories

Same key topic organization as above

3.2.7 State Registries of Hazardous Waste Sites

Same key topic organization as above

3.2.8 Condemnation of Property

Same key topic organization as above

3.3 Enforcement Authorities

3.3.1 Administrative Orders

3.3.2 Consent Decrees

4.0 INTEGRATING INSTITUTIONAL CONTROLS INTO THE REMEDY SELECTION PROCESS

5.0 SELECTING AMONG TYPES OF INSTITUTIONAL CONTROLS

Attachment C: Institutional Controls Preference Matrix

The Institutional Controls Preference Matrix is a summary of key considerations related to institutional controls. Based on the answers to these key questions, the effectiveness of each type of institutional control is prioritized from 1 (most effective) to 4 (least effective). The effectiveness rating included in the matrix is based on interpretation of the text in the reference guide; it is not intended to dictate a specific type of control to use. Rather, it is intended to be a simple means to assist project personnel in identifying single control measures, or more likely, appropriate layers of measures such that all key considerations are adequately addressed. It is important to note that although informational institutional controls are unenforceable, and consequently are rated least effective under each key consideration, this control type may be a valuable component to ensuring that site restrictions are adequately communicated to the public and other stakeholders.

Key Consideration	Type of Institutional Control			
	Proprietary	Governmental	Enforcement	Informational
<i>Is The Duration of Control Short (e.g., during remediation only)?</i>				
Yes	2	3	1	4
No	1	1	2	3
<i>Are There Many Separate Parcels to Consider?</i>				
Yes	2	1	3	4
No	1	2	3	4
<i>Are Property Owners Predominantly PRPs?</i>				
Yes	2	3	1	4
No	2	1	3	4
<i>Will Local Gov't Support Monitoring and Enforcement?</i>				
Yes	2	1	3	4
No	1	2	3	4
<i>Will Controls "Run With the Land"?</i>				
Yes	1	2	3	4
No	2	3	1	4
<i>Is Future Property Transfer Likely?</i>				
Yes	2	1	3	4
No	3	2	1	4
<i>Will controls need to be modified to accommodate changing conditions?</i>				
Yes	2	3	1	4
No	2	1	3	4

Attachment D: Example Process Flow Diagram of the Environmental Restoration Process

