LAND USE CONTROLS AT ACTIVE INSTALLATIONS

Military installations are in many ways like small cities. Their infrastructure comprises residential housing, roads, utilities, and office buildings. Just as with private sector industries and business in many communities, past practices at military installations created pockets of environmentally contaminated sites that DoD must clean up. DoD is committed to addressing these sites in manner that is protective of human health and the environment. Today, DoD runs one of the largest environmental restoration programs in the world, following established environmental laws and regulations created by Federal, state, and local governments.

In fact, in many military installations across the country, DoD is utilizing various mechanisms that facilitate cleanup to risk-based levels while maintaining crucial protections for human health and the environment. Land use controls (LUCs) are one such mechanism. LUCs are physical, legal, or administrative mechanisms that restrict or limit access to contaminated property. LUCs memorialize the use restriction that results from the conclusion of the environmental process. LUCs are common land use-planning tools widely used by local governments to protect public health and safety and improve the community's quality of life. DoD has taken and applied these tools to active installations nationwide. The following fact sheet describes LUCs and provides examples of how they are implemented and managed at active installations.

LAND USE CONTROLS TOOLS

Listed here are common tools used by a city/county and DoD installations for incorporating and documenting LUCs into existing planning and land use management processes.

CITY/COUNTY

- Fences
- Signs
- City Master Plans
- GIS mapping
- Groundwater restrictions
- Siting restrictions
- Ordinances
- Zoning
- Covenants/deeds restrictions
- Easements
- Development permit application process

ACTIVE INSTALLATION

- Fences
- Signs
- Installation Master Plans
- GIS mapping
- Groundwater restrictions
- Siting process/restrictions
- Institutional Regulations/Policy
- Internal notices
- Inspections
- Environmental self-audits
- Five-year reviews
- Memorandum of Agreements
- Trainings

City of Chicago, IL

Aberdeen Proving Ground, MD

WHAT IS DOD DOING TO IMPLEMENT AND MANAGE LUCS AT ACTIVE INSTALLATIONS?

Ensuring that DoD property is environmentally safe for military and civilian personnel, contractors, and visitors at active installations is an important goal of DoD's environmental restoration program. Like many cities and counties, DoD implements and manages LUCs by incorporating and documenting LUCs in existing planning and land use management processes. By using existing processes, each installation has the flexibility to tailor controls to its needs and manage them according to current installation practices—ensuring that LUCs remain protective.

HOW DO ACTIVE INSTALLATIONS IMPLEMENT LUCS?

Once an environmental restoration decision has been made, the environmental office should consult with the supporting land use planning or management office to determine the need for a LUC. If a LUC is chosen as a tool to manage use restrictions, DoD requires that each installation develop a LUC implementation plan. The implementation plan is an internal installation management tool that explains how LUCs will be established and documented and who will maintain and manage them. The implementation plan should be incorporated into the installation's master plan, much in the same way as land use plans are incorporated into a city's master plan. At a minimum, the LUC implementation plan should include the following:

- The location of land subject to the LUC
- An explanation/description of the LUC and the prohibited uses
- The duration of the LUC
- Information on how to modify the LUC as site conditions change
- The frequency and requirements of LUC inspections and an indication of who is responsible for the inspection.

The effective implementation of LUCs requires a highly coordinated effort. Every measure should be taken to ensure that an interdisciplinary group of installation personnel responsible for maintaining resources such as construction, land use, or groundwater protection are involved in the LUCs implementation process.

WHAT ARE LAND USE CONTROLS?

LUCs include any type of physical, legal, or administrative mechanism that restricts the use of, or limits access to, real property to prevent exposure to contaminants above permissable levels. The intent of using these controls is to protect human health, the environment, and the integrity of an engineering remedy by limiting the activities that may occur at a particular contaminated site. The three types of LUCs are described below.

- Physical Mechanisms include a variety of engineered remedies to contain or reduce contamination, and/or physical barriers intended to limit access to property such as fences and signs.
- Legal Mechanisms include restrictive covenants, negative easements, equitable servitudes, and deed notices that are meant to ensure the continued effectiveness of land use restrictions imposed as part of a remedial decision.
- Administrative Mechanisms include notices, adopted local land use plans and ordinances, construction permitting or other existing land use management systems that may be used to ensure compliance with use restrictions.

WHAT TOOLS DO ACTIVE INSTALLATIONS USE TO MANAGE LUCS?

Active installations are committed to maintaining the integrity of LUCs. In order to manage LUCs properly, active installations document and incorporate LUCs into existing land use planning and management systems routinely used for construction and planning activities. Below is a list of documentation and management tools that allows installation personnel to keep track of LUCs and/or inform others of their existence.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)/OVERLAY MAPS - Installations can often include LUCs in GIS maps which depict an installation's resources such as historic structures, nature areas, and utility systems. In GIS, each of these resources is illustrated in mapping layers and show where LUCs are located in relation to other land uses. GIS maps are an important tool for installation planners for ensuring compatible land uses and designations of LUCs. It is a tool heavily used in city planning to track land uses and other city functions.

INSTALLATION MASTER PLAN – The Installation Master Plan (sometimes called the Comprehensive Plan or General Plan) contains the land use and planning designations for the installation. Like cities, active installations often incorporate LUCs into the master plan to ensure that LUCs are considered in land use and planning decisions.

INSTALLATION PLANNING OFFICES - Similar to planning and real estate offices in most cities, installations document LUCs at installation offices that manage real estate, building and grounds, utility systems, and construction. Installation planning offices serve a vital role in informing other installation personnel or the public of a LUC's existence or prevent incompatible land uses.

SITE APPROVAL PROCESS - Similar to the development permit application process in most cities, the installation's site approval processes allows installation personnel to review and approve excavation and construction projects, as well as other land use changes at installations. Installation personnel can incorporate LUCs into this process to secure LUCs and prevent violations.

MARKERS - Local governments and installation personnel identify areas of restricted use by placing permanent markers around the perimeter of the restricted area such as fences and signs. The offices (and/or contractor personnel) responsible for grounds maintenance, construction, and safety are notified of the existence of these markers, instructed as to their purpose, and directed to inform appropriate officials if the markers are displaced or unauthorized use occurs. Markers are an important tool for preventing LUCs from being compromised.

INSPECTIONS - Installations incorporate the inspection of LUCs into existing inspections conducted at the installation, such as building integrity and pollution prevention inspections. The integration of these inspections can save time and money and verify the integrity and effectiveness of the LUCs.

ENVIRONMENTAL SELF-AUDITS - Installations include LUCs in their environmental audit and self-inspection program. These installation compliance programs produce an annual self-audit checklist and a required report that ensure that LUCs are evaluated and verified annually.

TRAINING - Installations provide training to their personnel, such as grounds, maintenance, real estate/real property, and contract personnel, regarding the physical

locations of LUCs and how to care for property of LUCs. Training ensures that key personnel are well informed about the location of LUCs and their various uses and are able to accurately convey this information to the public.

INTERNAL OFFICE – The relevant installation office (e.g., Planning, Facilities, Engineering) periodically sends out a notice to other affected offices to serve as a reminder of the existence of LUCs.

FIVE-YEAR REVIEWS AND REMEDIAL ACTIONS – Installations have utilized the CERCLA, five-year reviews and long-term monitoring of environmental restoration sites as an opportunity to not only assess the effectiveness of the remedy but also to review LUCs.

CONCLUSION

LUCs have been used as a land use-planning tool for generations, dating back to English common law. LUCs have been used successfully by cities and counties to promote beneficial land uses and to protect public health and the environment. Similar to cities and counties, DoD's use of LUCs is very much in keeping with common practice. Active installations nationwide are using these tools in innovative ways to protect human health and the environment.

We welcome and invite your comments on this fact sheet as we seek to improve the information provided.

Please send comments to:
Office of the Assistant Deputy Under Secretary
of Defense for Environment/Cleanup
3400 Defense Pentagon
Washington, DC 20301-3400

You can find this fact sheet and other information on DoD's Environmental Cleanup Office Web site:
http://www.dtic.mil/envirodod

INNOVATIVE TECHNOLOGY DOCUMENTS AND MANAGES LUCS

In May 1999, Camp Lejeune was one of the first military installations in the country to sign a Memorandum of Agreement for LUCs, enabling the protection of human health and the environment by using remedial solutions according to land use categories. To help manage their LUCs, Camp Lejeune used a Geographic Information System (GIS) to help installation personnel identify installation restoration and underground storage tank sites. Camp Lejeune created GIS coverages of waste sites, soil and groundwater contamination concentrations, groundwater protection areas, and areas of concern characterized during investigations. The GIS coverages were tied to an environmental data management system so that installation personnel can document and determine what conditions or problems were present at each site. GIS was also used to delineate sites with LUCs. These GIS layers with LUCs designations act as flags to facility planners by clearly displaying contaminated areas with LUCs. GIS has proved to be a powerful tool for installation planners—assisting with long-term planning and allowing for proper development of installation property.