

# Choosing an Environmentally "Safe" Site



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT



# Choosing An Environmentally "Safe" Site

## I. Purpose

This Guidance\* is designed to assist all HUD program participants, grant recipients, and responsible entities considering sites and structures that could have environmental risks. The mere confirmation of contamination or the preliminary indication of contamination may be sufficient for the purposes of many users to select an alternative site. This Guidance addresses the most common, but not all, environmental site contamination problems:

- n Toxic/Hazardous Waste
- n Underground Storage Tanks
- n Asbestos
- n Lead

This guide does not replace HUD\*\* required Environmental Assessments (EA); environmental review or analysis; or Phase 1 (ASTM) or Phase 2 assessments. It is a complementary/supplementary analysis that enables the user before entering into a contract for sale, option agreement, or considering the acquisition of a site or structure to understand more fully the possible risks and costs associated with acquiring a contaminated site.

## II. Background

There has been a rise in the number of incidences where program participants optioned and/or acquired property which was later discovered to be contaminated. It is essential that potential grantee applicant and other HUD program participants become familiar with the potential environmental issues involving property **before** optioning and/or acquiring the property. Unknowing individuals or parties that acquire the property with good intentions

could face inordinate costs, indefinite delays in using the property, termination of HUD's funding commitment and/or defaults. In addition, there is the bureaucratic maze of local, State, and Federal environmental agencies to confront, as each will become involved in overseeing the clean-up.

Decisions about contaminated property are not made purely on a technical basis. There are several variables: regulatory, commercial, financial, legal, and social factors, which also affect how a particular site



should be dealt with. This means that decisions about contaminated land can be complex, costly, and time consuming. Therefore, it is essential that potential contamination issues concerning a site/property under consideration are identified early, prior to entering into a contract for sale or option agreement for purchase and **before** a site is acquired.

\*This Guidance, "Choosing An Environmentally "Safe" Site" was designed for and is still applicable to sponsors/owners participating in the Section 202 and Section 811 Programs.

\*\*See page 17.

## A. Environmental Legislation - Federal Superfund Statute

The legislation that has the most serious impact on persons involved in real estate and transactions undertaken in connection with the purchase and sale of real property is the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended by the Superfund Amendments and Reauthorization Act) or more commonly known as "CERCLA". CERCLA was enacted to establish a trust fund, referred to as the "Superfund", for the Government cleanup of hazardous waste sites. Although Federal and State Governments may finance the cleanup actions from the Superfund, they may also attempt to reclaim the CERCLA expenditures from the parties deemed responsible for contaminating the site. Additionally there are comparable state laws which should be considered.

## B. Innocent Landowner Defense

There was an innocent landowner defense provision added to CERCLA in order to provide some relief from liability under CERCLA to those "innocent" landowners who unknowingly purchased contaminated properties. However, under the innocent landowner defense, it must be adequately documented and proved that the purchaser of the contaminated property could not have known that the disposal of hazardous substances had taken place on the land and that the landowner undertook all appropriate inquiries into the previous ownership and uses of the property in accordance with good commercial and customary practice. Accordingly, if you, the purchaser, do not make all of the appropriate inquiries about the property, it could be very difficult to prove that you had no reason to know of the contamination if it is later discovered that such contamination exists. Consultation of local, state requirements and protection from potential liability should be included as part of your overall planning.

## III. The Types of Environmental Audits/Assessments

The environmental audit refers to reviews of compliance of "existing" regulated facilities that are required

to maintain ongoing, monitoring reporting of their operations. The environmental site assessment is an inspection or examination technique designed to screen real estate for environmental problems. The assessment is performed in several stages and when completed it will provide a detailed description of the environmental condition of the property. However, its benefits can only be realized if the assessment is performed **before** your organization closes/settles on any offer to purchase a site or property.

- NOTE THAT -

ASTM (American Society for Testing and Materials) established a framework for employing good commercial and customary practices in conducting Phase I and Phase II environmental site assessment (ESA) of a parcel of property with respect to the potential presence of a range of contaminants which are within the scope of CERCLA as well as petroleum products. The ASTM ESA standard practices are intended to provide practical procedural guidance.

### A. Step 1: ASTM Phase I Environmental Site Assessment (ESA)

This is mostly a "paper chase." The Phase I assessment is intended to help Owners satisfy the requirements to qualify for the innocent landowner defense to CERCLA liability. Upon its completion, you should be able to meet the definition of an "appropriate" inquiry for purposes of the CERCLA's innocent landowner defense. This covers three general areas regarding the environmental condition of the property:

- <sup>n</sup> Conducting an historical research into the previous ownership and uses of the property, such as -
  - <sup>n</sup> reviewing recorded title chain and other documents (i.e., deeds, easements, leases, restrictions, and covenants for at least a 50-year period;
  - <sup>n</sup> reviewing aerial photographs reflecting prior uses; and

- determining the existence of recorded environmental liens.
- Making a comprehensive government records review at the Federal, State, and local levels.
- Making a critical visual site inspection of the subject property and of the immediate adjacent properties, including a look for any chemical uses, storages, treatment and disposal operations on the property.
- Identify any Recognized Environmental Conditions (REC) associated with the site and its adjacent surrounds.

- NOTE THAT -

In the Phase I assessment, no samples are taken and no tests are made of any materials (i.e., no air, water, soil, or site substances are tested or analyzed).

## B. Step 2: The Phase II Environmental Site Assessment (ESA)

The Phase II assessment is best described as a quantitative assessment. It involves the actual testing for specific hazards, which have been indicated from the Phase I assessment, such as soil sampling (soil boring), water analysis, on-site substances, and direct testing of the property – RECs (Recognized Environmental Conditions). RECs are identified during Phase I ESA.

Sample collection and testing is done independent of a Phase I Assessment.

The primary objectives of conducting a Phase II ESA are: (a) to evaluate the recognized environmental conditions identified in the Phase I ESA process for the purpose of providing sufficient information regarding the nature and extent of contamination; (b) to assist in making informed business decisions about the property; and (c) where applicable, to provide the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA. At the completion of a Phase II ESA, the program

participant, grant recipient, responsible entities, and sponsors or owners should understand and know that either:

1. there is no reasonable basis to suspect the presence of hazardous substances or petroleum products at the property associated with the recognized environmental conditions under assessment, OR
2. the ESA has confirmed the presence of hazardous substances or petroleum products at the property under conditions that indicate disposal or release.

Depending upon the work scope, the professional conducting the ESA may be able to provide guidance on the nature and extent of the contamination. Knowledge and understanding of the extent of contamination should assist the potential user in making a decision about the property. If the information developed in the ESA is insufficient to reach either of these conclusions, additional iterations of an environmental site assessment may be warranted.



However, if unconfirmed hazardous substances or petroleum releases remain but further assessment is not warranted, such conclusions should be accompanied by a written explanation, by the professional conducting the assessment.

### C. Step 3: Management

Step Three is a management action stage. It involves an assessment of the seriousness of the hazard(s) and extent of contamination, cost estimates, and recommendations. Based on the findings of these reports, what further corrective action is determined. The action may include:

- n The removal, along with the appropriate transport and disposal, of any contaminants or hazardous materials; AND
- n Clean-up of any contaminated materials on the site; O R
- n The development of a plan to manage and control the hazard.

## IV. Different Programs, Different Requirements

### A. Section 202 and Section 811 Programs

To help Sponsors focus on this important issue, HUD now requires applicants that are planning on submitting an Application for a Section 202 and/or Section 811 Fund Reservation to conduct an environmental review/assessment of their proposed sites by completing a Phase I Environmental Site Assessment and, if required based on the findings of REC, a Phase II Environmental Site Assessment. In the Section 811 program, this requirement applies only to applications with evidence of site control. Sponsors of Section 811 applications with identified sites must fulfill this requirement once they obtain control of their sites. The environmental assessments are to be done in accordance with the American Society for Testing and Material (ASTM), Standard E 1527-93, as amended. Your consultant, architect, attorney, or engineer should be able to provide you a copy of the ASTM standards. Also, to obtain these materials, you may write ASTM directly at the following address: ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 Fax: (610) 832-9555.

- n All Section 202 Sponsors and Section 811 Sponsors with site control must complete and submit to the local HUD Office a Phase I Environmental Site Assessment. **This must be submitted to the local HUD Office with the Application for a Fund Reservation.**
- n If the Phase I Environmental Assessment indicates the possible presence of contamination and/or hazards, the Sponsor must decide whether to continue with the original site or choose another site.
- n If the Sponsor chooses another site, another environmental site assessment (the Phase I Assessment) must be completed for the new site and submitted to the local HUD Office with the Application for a Fund Reservation.
- n If the Sponsor chooses to continue with the original site, a detailed Phase II Environmental Site Assessment by an appropriate recognized professional(s) will have to be completed and submitted to the local HUD Office by the deadline date specified in the current Section 202 and Section 811 Notices of Fund Availability (NOFA).

- NOTE -

The Phase II Assessment could be an expensive undertaking. All costs associated with the environmental assessments described in this section must be borne by the Sponsor if the application is not selected. Although the cost of the study can be paid out of the capital advance amount, if the project is selected, the cost of any clean-up and/or remediations must be borne by the Sponsor/Owner.

- n If the Phase II Environmental Assessment reveals site contamination, the extent of the contamination and a plan for clean-up of the site also must be submitted to the local HUD Office by the deadline date identified in the NOFA.
- n The plan for clean-up must include a contract for remediation of the problem(s) and an approval letter from the applicable Federal, State, and/or local agency with jurisdiction over the site.

## B. Other HUD Program Participants and Grant Recipients

1. Phase I Environmental Site Assessments (ESA) **are required** for all HUD/FHA Multifamily housing mortgage insurance programs.
2. Phase I Environmental Site Assessments (ESA) may apply to:
  - Others, including all responsible entities, and potential program participants and applicants that are required to comply with either 24CFR Part 50 or 24CFR Part 58 are encouraged to use "Choosing an Environmentally Safe Site" to augment their environmental analysis.
  - Nonprofit organizations, especially those acquiring property or sites for housing assistance (under the McKinney Act) or special needs assistance are particularly vulnerable to acquiring properties that could be contaminated.

## V. Be Suspicious of a "Good" Deal

Some grant recipients of HUD assistance, like Section 202 and Section 811 Sponsors, are nonprofits and organized for charitable purposes. Sponsors, nonprofits, as well as others are not only looking for the "right" site and location but a good deal on the purchase price. It is not unusual for potential grant recipients to:

- Be offered and accept donated property (including existing structures and land or both);
- Target blighted neighborhood structures or land for housing or economic redevelopment; or
- Obtain properties at bargain basement prices, low-interest loans and grants, or through "special deals" with federal or local government housing or community development agencies or programs, or private sector offerings.

In spite of good intentions, donated property and property acquired based on special deals are no longer the clear-cut benefit they once were. If the property you acquired contains toxic (or hazardous) wastes, underground storage tanks, asbestos, or lead, mere ownership of a contaminated site can be enough to make your organization or you liable for all clean-up costs.

– BEWARE THAT –

Even if you can demonstrate and legally prove that you, the most recent one to acquire the property, "did not" contaminate or contribute (transfer, store, or dispose of) wastes to the property, and the previous owners/operators of the property can be found and are solvent, you, should be prepared to face a legal battle. Meanwhile, the development of the property may be suspended indefinitely, or at least until the issue is resolved.

## VI. Steps Toward Obtaining a "Clean" Site

In searching for the perfect site and location, before you invest in securing a site, there are certain things you can do or consider which will aid you in determining the possible presence of hazardous substances or contamination.



## A. Take Care in Choosing the Site/Location for Your Proposed Project

For example, sites that were previously used as or near agricultural/farming operations could have environmental problems because of the storage of pesticides (or insecticides) on the site. Sites that were used as tanneries also could present a health hazard because of the potential for spreading contagious diseases. Properties once belonging to the military or in older industrial areas should be assessed for environmental problems.

## B. Make a Visual Inspection of the Site for Signs of –

### n Distressed Vegetation

This could be an indication of soil contamination.

### n Vent or Fill Pipes

This could be a sign of current or previous existence of underground storage tanks.

### n Storage/Oil Tanks or Questionable Containers

These are most often used to store heating fuels, chemicals, and petroleum products.

### n Pits, Ponds or Lagoons

These have the potential for holding liquids or sludge containing hazardous substances or petroleum products. The potential is increased if there also exist (1) water discoloration; (2) distressed vegetation; and (3) wastewater discharge.

### n Stained Soil or Pavement (other than water stains)

This could mean that the soil is contaminated and could be a sign of current or previous leakage of piping and liquid storage containers.

### n Pungent, Foul or Noxious Odors

This could indicate leaks of hazardous substances or petroleum products or contaminants.

### n Dumped Material or Soil, Mounds of Dirt, Rubble, etc. Fill

## C. Inquire About the Past Uses of the Site

If the land is currently vacant, ask the owner about previous site usage. Some states/localities require the transferee to disclose specific information about the

'environmental' condition of the site. If your state/locality has no such requirement, negotiate such a disclosure with the owner. Certain uses (past and present) of the site should signal concerns about the possibility of contamination, in particular the following operations:

- n Gasoline stations
- n Vehicle repair shops
- n Car dealerships
- n Garages
- n Depots
- n Warehouses
- n Commercial printing facilities
- n Industrial or commercial warehouses
- n Dry cleaners
- n Photo developing laboratories
- n Hospitals
- n Junkyard or landfills
- n Waste treatment, storage, disposal, processing or recycling facilities
- n Agricultural/Farming Operations (including hog and poultry operations)
- n Tanneries

– NOTE THAT –

Many of these facilities involve the use of hazardous substances, petroleum products, or pose a potential health hazard. If the site was used for these purposes, a further and more detailed review is required to determine the possible release of any hazardous substances.

## D. Identify Adjoining Properties/ Surrounding Area for Evidence of Any Facilities as Described Above

A site that may be considered free and clear of any hazardous substances may still be contaminated as a result from toxic and hazardous waste produced by neighboring facilities. Take notice of adjacent and surrounding property uses, especially those which may have spill-over contamination affects.

## E. Research Federal, State and Local Records About Possible Toxins and Hazards at the Site

Check Sanborn Maps, consult fire department records, and operations permits. Also check local historic land use and zoning records and maps.

## VII. Reducing Your Vulnerability and Liability

### A. Demand the Seller/Donor to Make Full Disclosures About the Environmental Conditions of the Property

1. Insist on having language included in the site contract documents that address liability for environmental problems. Consult with an attorney, if necessary. Include protective language that:
  - a. Addresses who has financial obligation and responsibilities for removal, transport, disposal, clean-up or abatement action;
  - b. Allows for property Phase I Assessments before acquisition;
  - c. Allows cancellation of the contract if the Phase I or disclosures reveal problems;
  - d. Addresses seller warranties of conditions; and
  - e. Addresses seller indemnification.
2. Use state or local "Property Transfer" statutes, if available. These statutes often contain provisions for disclosure of environmental problems.

### B. Beware of the Overanxious Seller/Donor. Be Alert To -

1. Property being sold "as-is"
2. Seller/Donor's reluctance to allow an environmental inspection.
3. Seller/Donor's reluctance to accept contingency clauses.
4. Seller/Donor's unwillingness to disclose information about the property.
5. Any unexplained concessions in price to speed up the real estate transaction.

## C. Consider An Alternate Site

Particularly if the findings of the Phase I Assessment, or an environmental professional provide sufficient evidence that the property has recognized environmental concerns (REC). Always keep in mind the related abatement, cost, time, and clean-up action that would be your responsibility.



### D. Become Familiar with Environmental Laws/Regulations Seek Professionals who are Experienced and Can Interpret these Laws and Regulations for You.

1. Federal "Superfund" Statutes, CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by SARA (Superfund Amendments and Reauthorization Act)).
  - a. Identifies Owner of hazardous waste sites.
  - a. Assigns liability - Parties involved in the real estate transaction may find themselves strictly and jointly and severally liable for clean-up costs.

- " Establishes defenses -
  - Bequests
  - Landowners' relief for innocent purchasers
  - Third party provisions
- 2. Resource Conservation and Recovery Act, as amended aka RCRA.
  - " Contains special provisions concerning Underground Storage Tanks and enforced by -
    - State or Municipal Environmental Protection Agency - Leaking Underground Storage Tanks Program
    - State Fire Marshal - Registry and Financial Responsibility
    - Fire Marshal - Inspection and Permitting
    - State or Municipal Emergency Services and Disaster Agency
    - Defines and regulates Treatment, Storage or Disposal Facilities (TSD) of hazardous wastes - EPA maintains a TSD Facilities List.
- 3. Asbestos Regulations. Contact the U.S. Environmental Protection Agency (EPA) to obtain a copy of the Asbestos Demolition/Renovation Regulations.
- 4. Lead Toxicity Risk Assessment. Published in the Federal Register by EPA. Contact EPA or the local HUD Office to obtain a copy of this document.
- 5. Environmental Justice.
  - " Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".
    - Directs select federal agencies (identified in the Executive Order) to incorporate environmental justice as part of their overall mission. HUD is included among those listed.

" Its purpose is to assure fair environmental protection so that no segment of the population, regardless of race, ethnicity, culture, or income bears a disproportionate burden of the consequences of environmental pollution (i.e., to ensure that no one part of the population, primarily minority and low-income, receives inequitable treatment in the location of housing designed for their needs).

- NOTE -

**Take care in choosing the site/location for your project. The site you choose should never raise an environmental justice concern.**

- 6. EPA Program Hotline Telephone Numbers. A list of the EPA program hotline telephone numbers is attached to this guide for your reference.

## VIII. Getting Acquainted with Certain Potential Environmental Problems

### A. Toxic and Hazardous Substances

Toxic and hazardous substances can be described as the "spoils" and byproducts (or residuals) of industrial and some agricultural operations. This category of wastes include solids, liquids, or gases that threaten the environment and human health. However it is important to note that hazardous and toxic materials are used also in the manufacture and production processes. As a result such substances are not always "wastes", byproducts or residuals. Toxic and hazardous substances may be ignitable, corrosive, reactive, and contain high concentrations of metals, pesticides, chemicals, etc. that when released, contaminate soils, ground and surface water, and air. Toxic agents are classified as such, because of their carcinogenic, mutagenic (gene-changing), or teratogenic (causing fetal abnormalities/birth defects) characteristics.

It is possible for a site to have multiple toxic and hazardous substances - in contaminated soils, sitting in tanks (above and below ground), impounded in buildings, and dumped into wells, adjacent to, or onto open space surrounding the building. In this case, the material might be buried improperly in pits where their leaking can contaminate surface and ground water and soils.

- REMEMBER -

A site that appears to be free of toxic and/or hazardous waste could be contaminated as a result of current or previous operations of adjoining or neighboring facilities.

## B. Underground Storage Tanks (USTs)

USTs, by themselves, are not dangerous. It is their contents and propensity to leak that presents the potential contamination. Until recently, most USTs were constructed of material that rusted, corroded, and had no leak detection or protection devices. Consequently, once rusted, the tank's contents easily contaminated surrounding soil and groundwater. Groundwater contamination can cause significant cleanup problems. According to the Environmental Protection Agency, a single gallon of gasoline can render as much as one million gallons of water undrinkable.

USTs were and are used most often by the petroleum industry, as well as other commercial facilities, where processing requires on-site application. For example, dry cleaning operations normally store chemicals on-site in USTs. This results in storage of large amounts of chemicals. To reduce the risk of fires and explosions, chemicals and petroleum products are stored underground in USTs.

Many residential properties also have USTs for heating oil and other uses. Because it is cheaper to place these tanks above ground, the tanks for some residential properties are located above ground.

- NOTE THAT -

- n If you acquire a site with an UST, you may be responsible for the cost of removing it, as well as, cleaning up the site if it later is found to have been contaminated.
- n If you acquire a site that had USTs or the USTs were removed prior to you acquiring the site, but without any further testing for contamination, you still could be financially liable for cleanup costs and any costs of compensating other people for bodily injury and property damage.



- REMEMBER -

Be suspicious if the site either has or had, but not limited to, the following operations -

- n Gasoline stations
- n Vehicle repair shops
- n Car dealerships
- n Garages
- n Depots

- n Warehouses
- n Commercial printing facilities
- n Dry cleaners
- n Photo developing laboratories
- n Hospitals
- n Junkyards or landfills
- n Waste treatment, storage, disposal, processing or recycling facilities
- n Agricultural/farming operations
- n Tanneries
- n Paint manufacturer or supplies

## RESOURCES TO HELP YOU IDENTIFY SUSPECT PROPERTIES

Knowing what sites to avoid may be difficult if the land use for the site changed over time. The following aids can help you assess probable location by land use or the presence of USTs:

- n **Sanborn Fire Insurance Maps\***  
These are many times contained in Phase I's prepared by professionals.
  - n Aid fire insurance companies in evaluating risk
  - n Designate gasoline stations
  - n Identify other land uses on a block-by-block basis
  - n Dated to the late 19th Century (for some parts of the U.S.) making it possible to trace uses of a land parcel from the 1880's to the present day
- n **Registry of USTs**
  - n EPA requires each state to develop an UST regulatory program
  - n Many states/localities maintain public records in the State Fire Marshal's Office or its equivalent, Groundwater Management Division, or State Emergency Planning and Management Agency

- n Some states/localities developed their own UST regulatory programs and you will have to contact the responsible office that oversees the program
- n **U.S. Environmental Protection Agency (EPA)**
  - n If all else fails and you are still uncertain, contact the EPA's Underground Storage Tank Office.
  - n The local HUD Office can provide you with the appropriate EPA Office or you can contact EPA directly at the appropriate hotline telephone number which is attached to this guide.

## C. Asbestos (Projects Requiring Rehabilitation or Demolition of Existing Structures)

Asbestos is a generic term that refers to a family of mineral silicates - six naturally occurring fibrous minerals found in certain types of rock formations. Of the six minerals, three - chrysolite, amosite, crocidolite - have been most commonly used in the building products. When processed, asbestos separate into thin but extremely strong fibers.

Because of its unique characteristics - resilience, weightlessness, corrosion-resistance nature, low conductivity, and, more importantly, its inability to burn, asbestos was used in many buildings and commercial products - floor tiles, roofing and sound roofing, ceilings, sealants, cement pipe, decoration, paper products, textiles, appliances, and pipe and boiler insulation, among things - beginning early in this century and up until the mid-1980's. Asbestos is not biodegradable or easily destroyed.

Asbestos or asbestos-containing-material (ACM) - i.e., any material or product that contains more than one percent asbestos - can be grouped into two broad categories -

- n **Friable:**  
Materials and products which, when dry, can be crumbled, pulverized, disturbed, punctured or otherwise easily reduced to powder by mere hand pressure.

\*Sanborn Fire Insurance Maps and early city, county, or other land use maps may be helpful in identifying other previous land-uses, not just the presence of underground storage tanks.

When friable ACM is disturbed, microscopic asbestos fiber dust is released into the air.

Friable asbestos and ACM emit fibers easily into the air when disturbed and once emitted, asbestos fibers are easily inhaled in the lungs. When inhaled in sufficient quantities, asbestos and ACM can cause serious health problems. Asbestos-caused symptoms and diseases can take as long as 20 or more years before being diagnosed.

**n Nonfriable:**

Asbestos fibers that are bound and contained within a hard or solid matrix, such as roofing, siding, or flooring and are not prone to escape or emit fibers under ordinary use.

Once disturbed in either renovation, demolition, or rehabilitation construction activities, nonfriable materials also will release asbestos fibers into the air.

**- REMEMBER -**

When asbestos fibers become airborne, they pose their greatest human health threat and air quality containment. When contained asbestos fibers hazardous potential is reduced.

**HOW TO DETERMINE THE EXISTENCE OF ASBESTOS IN A BUILDING THAT YOU ARE CONSIDERING ACQUIRING**

**n Step 1**

**One Quick and Inexpensive Method.**

1. Collect information about the construction materials in the building directly from the product manufacturer (if accessible and available).

**- NOTE -**

EPA has published in Volume 55 of the Federal Register, dated February 13, 1990, (beginning on page 5144), *Asbestos; Publication of Identifying Information; Notice*, which summarizes the information submitted by manufacturers and processors of certain asbestos products with an explanation of how individuals may obtain additional information.



2. Request a visual inspection by people in the building trades, particularly heating and plumbing contractors, to ascertain the presence of asbestos. However the accuracy of visual inspections can vary considerably. A Phase I should recommend that a Phase II testing etc. would need to be done.

**Step 2**

**More Expensive, but More Conclusive (Phase II)**

1. Hire a licensed or certified specialist from the asbestos abatement industry to inspect the property. (A certified environmental engineer or auditor should also be able to do this job.)
2. Collect and submit sample materials to a laboratory qualified to conduct asbestos testing.

- NOTE -

To assure quality laboratory testing, EPA maintains a national listing of approved laboratories that test samples for their asbestos contents. Contact EPA to obtain this information. Refer to the EPA program hotline telephone numbers which are attached to this guide.

**ABATING ASBESTOS**

**Federal/State Requirements**

This removal of asbestos is expensive. At the State and local level, a wide variety of asbestos regulations and guidelines have been established. Many States have either adopted the Federal rules or created something comparable or more stringent. As with other hazards, there are both federal regulations, and in most instances, comparable state requirements that regulate:

- Licensing of contractors, inspectors, laboratories, project safety monitors and asbestos abatement actions.
- Worker exposure to asbestos.
- Procedures for abating asbestos when building undergoes renovation or demolition.
- Disposal (transport, storage and disposal) of asbestos-contained materials.

The Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) have been concerned with the potential health hazards associated with exposures to asbestos since the early 1970s. They have major responsibility for Federal regulatory control over exposure to asbestos. The EPA regulates asbestos procedures for renovation (modernization and other actions that require removal of ACM) or demolition (including partial demolition) actions under the Clean Air Act and require notification and strict work practices for asbestos handling, removal, storage and transport under 40 CFR Part 61, Subpart M and 40 CFR Part 763.

**Options for Minimizing the Risk of Asbestos Exposure**

- Maintenance
- Encapsulation
- Enclosure
- Removal

**Choose the option based on the type of asbestos or ACM and in accordance with federal, state, and local requirements.**

For example:

1. Removal -
  - EPA requires the **removal** of all friable asbestos before any other demolition, renovation, or rehabilitation take place.
  - This is the most expensive, complicated and strictly regulated option.

All demolition activities require EPA notification, including those that do not involve ACM. Also, EPA has developed special guidance on how to avoid the asbestos Clean Air Act requirements by taking specialized measures during ACM removal activities (such as for removing asbestos containing floor tiles).

A significant quantity of asbestos-containing waste may be generated during removal of friable asbestos material from buildings. The EPA regulations address removal of friable asbestos material prior to the demolition or renovation of buildings. Removal should be considered for materials that may potentially become friable during demolition/rehabilitation activities.

## 2. Maintenance, Encapsulation and Enclosure –

- Under these options, the asbestos and ACM remains in place.
- These options are not as costly as the removal option, but available guidelines still must be followed.

## 3. All ACM left in place is subject to an Operations and Maintenance Plan (O&M Plan) being prepared and instituted.

### – NOTE THAT –

Regardless of the option you choose, it would be in your organization's best interest to hire a qualified asbestos contractor.

Program participants can be cited for violations of the EPA and the OSHA regulations at the Federal level which carry fines for asbestos violations. Depending on the State and local requirements, there may also be State/local fines where "illegal" asbestos abatement is occurring.

The responsibility for knowing about and complying with Federal, State and local asbestos abatement requirements rests with the **HUD program participant**.

## D. Lead-Based Paint (Existing Structures for Families Where Children Under 6 Years of Age May be Expected to Reside)

### What are lead-based paint hazards?

"Lead-based paint hazards" include deteriorated lead-based paint; lead-based paint on friction surfaces, impact surfaces and accessible (chewable) surfaces; and dust and soil that is contaminated with lead above specified standards. Surfaces that show signs of paint abrasion, damage or teeth marks are also considered lead-based paint hazards. Lead-based paint that is intact and in good condition is usually not considered a hazard. Lead poisoning is a result of exposure to lead-based paint hazards.

Lead poisoning is one of the most common health hazards to humans. Although anyone can contract lead poisoning, children and women of childbearing age are at the greatest risk. Childhood lead poisoning is considered a major health problem because of its extremely damaging and irreversible effects. The exposure to lead in children (including pregnant women) can cause brain damage, liver and kidney disorders, behavioral problems, blindness, permanent learning disabilities, and even death.



Congress mandated reduction of lead-based paint hazards in federally owned residential property and housing receiving federal assistance in 1992. On September 15, 2000, HUD promulgated a final rule applying advances in the scientific understanding of childhood lead poisoning. The new HUD regulation significantly increases the quantity of testing and home maintenance, repair, or rehabilitation work that must be performed in a lead-safe manner.

Buildings and homes constructed before 1978 could have lead based paint. The primary source of lead is from the chipping and peeling of lead-based paint and paint dust. It is more commonly found on exterior and interior walls, but also may be on baseboards, door and window trimmings and heating units. Lead poisoning also can be obtained from lead in the air, dust, soil, food, certain commercial products (e.g., automotive and industrial batteries), and even water. Frequently, in the case of the latter, it's the use of lead soldered pipes in older structures is responsible for lead getting into the water.

- NOTE THAT -

The risk of the presence of lead in older buildings that you plan on acquiring may result in an expensive acquisition. Consider the health risk to the occupants and the possible costs of civil liability and criminal penalties if lead is present, but neither detected or removed. Also, the cost of lead removal or abatement, by itself, may be significant.

## DETERMINING THE PRESENCE OF LEAD

Inspections determine whether or not lead-based paint is present and, if it is, where it is located, regardless of whether or not it is currently a hazard. Risk assessments determine whether or not lead-based paint **hazards** exist and, if they do, where they are located.

Two methods may assist you in determining whether lead is present in the property you plan on acquiring –

### <sup>n</sup> Method 1

Scoring the Building Based on Risk Factors

- <sup>n</sup> Use the **Lead Toxicity Risk Assessment** developed by EPA as a guide to help you detect potential lead problems.
  - This is not scientific, but less costly, and can help establish the likelihood of lead problems.
  - A copy of the **Lead Toxicity Risk Assessment** may be obtained from EPA.

### <sup>n</sup> Method 2

Testing

- <sup>n</sup> There are two testing methods that produce accurate lead readings:
  - XRF-X-Ray Fluorescence Detector – This is the newest testing technology which is also available in portable form. The XRF portable is capable of measuring between 30-50 samples in three hours and provide immediate results.

- Laboratory Testing – Laboratory testing of samples physically collected and removed from the property is a method of obtaining lead readings. However, unlike the newer technology of XRF, it is more time-consuming and the results are not immediately available.

## ABATING AND CONTROLLING LEAD

Two of the more common sets of hazard evaluation and control requirements that apply to HUD program participants are:

1. One set of hazard control requirements that applies to several HUD programs is:
  - <sup>n</sup> Stabilization of any deteriorated paint, including correction of any moisture leaks or other obvious causes of paint deterioration, as well as repainting (paint stabilization is not required if the paint is tested and found not to be lead-based paint);
  - <sup>n</sup> "Clearance" following paint stabilization to ensure that there has been satisfactory cleanup of dust, paint chips and other debris (clearance includes scientific testing of settled dust for lead); and
  - <sup>n</sup> Ongoing maintenance of the paint to ensure that the housing remains lead safe.
2. Another set of requirements found in the regulation is:
  - <sup>n</sup> a risk assessment to identify lead-based paint hazards,
  - <sup>n</sup> interim control measures to eliminate any hazards that are identified,
  - <sup>n</sup> clearance, and
  - <sup>n</sup> ongoing maintenance and periodic reevaluation to ensure that lead-based paint hazards do not reappear.
- <sup>n</sup> Hire certified lead abatement contractors only for the removal or other lead abatement remedies. They are most familiar with applicable federal and state requirements for removal and disposal.

- NOTE -

Do not assign this task to general contractors, volunteers or occupants.

- <sup>n</sup> Find out what state and local programs exist regarding lead blood screening for children that may affect your organization, particularly Section 811 Sponsors proposing existing housing (with or without rehabilitation) for persons and families with disabilities.
- <sup>n</sup> You can obtain HUD's "Lead Paint Safety: A Field Guide for Painting, Home Maintenance, and Renovation Work" from the National Lead Information Clearinghouse, at 1-800-424-LEAD, or by downloading from [www.hud.gov/lea](http://www.hud.gov/lea). You can also obtain the EPA's "Reducing Lead Hazards When Remodeling Your Home" from the Clearinghouse or by downloading from [www.epa.gov/opptintr/lead](http://www.epa.gov/opptintr/lead). Finally, you can obtain HUD's comprehensive document, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, by downloading from [www.hud.gov/lea](http://www.hud.gov/lea) or by mail from HUD USER at 1-800-245-2691.

- NOTE -

Some states have mandatory lead blood screening for children, such as Illinois.

- <sup>n</sup> For additional information -
  - <sup>n</sup> Get a copy of the EPA-HUD and CPSC (Consumer Product Safety Commission) brochure entitled "**Protect Your Family From Lead in Your Home**";
  - <sup>n</sup> Contact your local Health Department; or
  - <sup>n</sup> You can call the National Lead Information Clearinghouse, at 1-800-424-LEAD for publications or answers to specific lead-related questions. The Clearinghouse provides infor-

mation in English and Spanish. For technical information, you can call the HUD Office of Lead Hazard Control, at (202) 755-1785, ext. 104; or you can e-mail HUD at [lead\\_regulations@hud.gov](mailto:lead_regulations@hud.gov). You can obtain the regulation, including its "preamble" (an explanation of issues and policies), by downloading from the Internet at [www.hud.gov/lea](http://www.hud.gov/lea), or by mail from the National Lead Information Center at 1-800-424-LEAD.

On September 15, 2000 HUD's Regulation on Controlling Lead-Based Paint Hazards in Housing Receiving Federal Assistance and Federally Owned Housing Being Sold took effect. You can obtain copies of that issue by downloading from the Federal Register web site, [www.access.gpo.gov/nara](http://www.access.gpo.gov/nara), or by mail, for a fee, from the Government Printing Office at 1-202-512-1800 (this is a toll call). There is no difference between the copies available from the HUD web site, the National Lead Information Center, the Federal Register web site, or the Government Printing Office.

It is important to note that an occurrence of heightened lead blood levels may result in your organization becoming liable for remediation activity. In many localities, a doctor who identifies the heightened lead blood levels may be required to report such a finding to the local health authorities who, in turn, may have the power to require lead abatement for the child's living environment.

- REMEMBER -

The Owner of a building occupied by a child with an elevated/heightened lead blood level may, at a minimum, face a court hearing or a court order to clean-up the property along with fines. Ignoring a potential lead problem, as with the other possible hazards can be costly.

## ORGANIZATIONS WEB PAGE AND PHONE NUMBER

SITE

SAFE

ENVIRONMENTALLY

AN

CHOOSING

- **Office of Pollution Prevention and Toxics**  
[www.epa.gov/opptintr](http://www.epa.gov/opptintr)  
(202) 260-2983
- **Chemical Emergency Preparedness and Prevention Office**  
[www.epa.gov/ceppo](http://www.epa.gov/ceppo)  
(202) 260-7938
- **Recycling Hotline**  
[www.recycle.net/recycle](http://www.recycle.net/recycle)  
(800) 253-2697
- **National Lead Information Clearinghouse**  
[www.nsc.org/ehc/lead.htm](http://www.nsc.org/ehc/lead.htm)  
(800) 424-5323
- **National Response Center for Substance Release Reporting Oil Spills and Hazardous**  
[www.nrc.uscg.mil](http://www.nrc.uscg.mil)  
(800) 424-8802
- **Department of Energy (DOE) National Alternative Fuels Hotline**  
[www.afdc.nrel.gov](http://www.afdc.nrel.gov)  
(800) 423-1363
- **DOT, Transportatoin of Hazardous Materials**  
<http://hazmat.dot.gov>  
(800) 467-4922
- **U.S. EPA RCRA, Superfund and Underground Storage Tanks Hotline**  
[www.epa.gov//epaoswer/hotline](http://www.epa.gov//epaoswer/hotline)  
(800) 424-9346
- **Ocupational Safety and Health Administration (OSHA)**  
[www.osha.gov](http://www.osha.gov)  
(800) 321-6742
- **National Insititute of Occupational Safety and Health**  
[www.cdc.gov/niosh/homepage.html](http://www.cdc.gov/niosh/homepage.html)  
(800) 356-4674
- **National Center for Environmental Publications**  
[www.epa.gov/ncepihom/index.html](http://www.epa.gov/ncepihom/index.html)  
(800) 490-9198
- **Indoor Air Quality Information Clearinghouse**  
[www.epa.gov/iaq](http://www.epa.gov/iaq)  
(800) 438-4318
- **Radon**  
[www.epa.gov/iaq/radon](http://www.epa.gov/iaq/radon)  
(800) 767-7236
- **Clean Air Technical Center**  
[www.epa.gov/ttn/catc](http://www.epa.gov/ttn/catc)  
(919) 541-0800
- **Stratospheric Ozone Information**  
[www.epa.gov/ozone](http://www.epa.gov/ozone)  
(800) 296-1996
- **Safe Drinking Water Hotline**  
[www.epa.gov/safewater](http://www.epa.gov/safewater)  
(800) 426-4791
- **Pollution Prevention Information Clearinghouse**  
[www.epa.gov/opptintr.library/libppic.htm](http://www.epa.gov/opptintr.library/libppic.htm)  
(202) 260-1023
- **Emergency Planning and Community Right to Know Title III (EPCRA)**  
(800) 535-0202
- **Toxic Substance Control Act (TSCA) and Asbestos Information Service**  
(202) 554-1404
- **National Pesticide Telecommunications Network**  
<http://ace.orst.edu/info/nptn>  
(800) 858-7378
- **EPA Waste Wise/Waste Reduction**  
[www.epa.gov/wastewise](http://www.epa.gov/wastewise)  
(800) 372-9473

# U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

## I Environmental Compliance Rules and Regulations

These are the HUD-issued environmental rules which determine the scope and content requirements of environmental assessments for actions receiving HUD assistance. <http://www.hud.gov/cpd/cpdenvir.html>

### A. 24 CFR Part 50: Protection and Enhancement of Environmental Quality

Used By: HUD Staff. This is the Department's basic regulation that implements the National Environmental Policy Act (NEPA), the regulations of the Council on environmental Quality (CEQ), and other related Federal environmental laws and authorities. HUD Form 4128 (including the Sample Field Notes Checklist) is also used by HUD staff to document compliance with this regulation.

### B. 24 CFR Part 58: Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities

Used By: State, local and Native American governments. The procedures outlined in this regulation are used by entities that assume HUD's environmental review responsibilities in determining program compliance with the intent of the National Environmental Policy Act (NEPA) and other related statutes. Applicable HUD programs under this regulation include only those in which a specific statutory allows governing entities to assume the Federal responsibility.

### C. 24 CFR Part 51: Environmental Criteria and Standards

Used By: HUD Staff and State, local and Native American governments. This regulation provides environmental standards for determining project acceptability and necessary measures to insure that activities assisted by HUD achieve the goal of a suitable living environment.

- Subpart B - Noise Abatement and Control
- Subpart C - Siting of HUD-Assisted Projects Near Hazardous Operations Handling Conventional Fuels or Chemicals of an Explosive or Flammable Nature
- Subpart D - Siting of HUD Assisted Projects in Runway Clear Zones at Civil Airports and Clear Zones and Accident Potential Zones at Military Airfields

The environmental criteria include noise abatement and control and the siting of HUD-assisted projects near hazardous operations including explosives, flammables, runway clear zones at civil airports, and accident potential zones at military airfields.

### D. 24 CFR Part 55: Floodplain Management

Used by: State, local and Native American governments. This regulation implements executive order on development in floodplains.

### E. 36 CFR Part 800: Protection of Historic Properties

Used by: HUD Staff, State, local and Native American governments. The Advisory Commission on Historic Preservation Rules, used by HUD for all HUD projects.

## II. Healthy Communities Environmental Mapping

HUD E-MAPS <http://www.hud.gov/emaps> is a free Internet tool created in partnership with EPA that provides location, type and performance of HUD-funded activities in every neighborhood across the country, and select EPA information on brownfields, hazardous wastes, air pollution and waste water discharges.