

Release - Domestic Violence Bill

ALL CONTRACTS AND COVERINGS, PAINT REMOVALS AND STRIPINGS

Advance Notice: Manufacturers of Paint Removal Systems, Coating Systems and Surface Covering Systems for the elimination of Existing Walls, Ceilings and other Surfaces of Residential Units.

Firms and concerned individuals and organizations are invited to submit their qualifications.

The systems will be used to demonstrate methods for the elimination of the lead paint poisoning hazard in existing dwelling units either by removal of the lead-based paint and providing a serviceable non-hazardous finish or by providing a serviceable non-hazardous barrier to the existing paint.

The implementation of the demonstration in residences will be for the purpose of 1) development of improved methods for lead paint hazard elimination, 2) comparing methods, materials and systems in "real world" environments, 3) exhibiting "in-field" procedures and products for educational purposes, 4) providing detailed cost/time analyses and defining types of skills needed so that the most effective and economical methods may be judged, and 5) observing performance and occupant reaction.

Interested organizations and individuals will, on request, be supplied with an Information/Questionnaire Document. The Document will provide an opportunity for the respondent to provide a general statement of interest and willingness to participate in the demonstration program in one or more living units; to supply technical information and performance data on their proposed system along with samples of proposed materials. Responses will be selected based on technical and economical evaluations of submittals and on suitability for use in available demonstration units. Requests for the Document should be sent no later than October 1, 1972 to the address below:

Lead Paint Poisoning Project
Office of Housing Technology
Center for Building Technology
National Bureau of Standards
Washington, D.C. 20234
Attn: Harvey W. Berger

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INFORMATION AND QUESTIONING DOCUMENT

Lead Paint Poisoning
Demonstration Program

Statement of Work

1. Background

The Lead-Based Paint Poisoning Prevention Act, PL 91-501 gave the Department of Housing and Urban Development (HUD) responsibility for developing and carrying out a research and demonstration program to evaluate methods by which the lead paint poisoning hazard could most effectively be eliminated. The National Bureau of Standards (NBS) is providing technical assistance to the Department of Housing and Urban Development in the performance of this mission.

Recent estimates made at NBS indicate that approximately 30 million dwelling units, currently standing, have been coated with lead paint. Total cost of eliminating the hazard range from \$2 billion to \$14 billion.

Since most of the presently known cases of childhood lead poisoning can be traced to lead paint ingestion, it is desirable to make this paint inaccessible to children. Methods such as paint removal by sanding and/or scraping, and covering up with materials such as gypsum board, plywood, and fabric are presently being used for this purpose in those cities having active detoxification programs. It is expected that in the near future large scale programs to remove the causes of this childhood affliction which affects hundreds of thousands of children each year will be undertaken.

A need exists to evaluate innovative materials and techniques for the detoxification and rehabilitation of deteriorated housing containing lead paint.

2. Objective

The demonstration of the hazard elimination technology program as stated in Sec. 301 under Title III, PL 91-695, Federal Demonstration and Research Program, is:

"The Secretary of Housing and Urban Development, in consultation with the Secretary of Health,

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Education, and, where, still needed, and carry out a demonstration and research program to determine the nature and extent of the problem of lead-based paint poisoning in the United States, particularly in urban areas, and the methods by which lead-based paint can most effectively be removed from interior surfaces, part 25, and exterior surfaces to which children are so commonly exposed, of residential housing"

The implementation of the above law in actual residences will be to:

- 1) Encourage development of improved methods for lead paint hazard elimination.
- 2) Compare methods, materials and systems in a "real world" environment.
- 3) Exhibit "in-field" procedures and products for educational purposes.
- 4) Provide detailed cost/time analyses and the type of skills needed so that the most effective and economical methods may be judged.
- 4) Obtain performance in use and occupant reaction.

3. Scope of Work

This Document invites responses from Trade Associations, Manufacturers, Suppliers of Building Materials, Suppliers of Services, Trade Unions, Labor Organizations and Community Organizations to demonstrate the removal and/or rendering hazardous lead-based paint inaccessible to children. To provide a serviceable coating or covering that is suitable for residential dwellings and is not or will not become hazardous to the safety and health of the occupants.

a. Systems to be Delead

The systems that may require deleading include lead-based paint on: wallpaper, plaster, wood, metal, masonry, and gypsum board.

Elements that may be involved in the deleading process include structural, intermediate and surface components, as defined in Table 1.

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Table I
Definition of Housing Components

Component	
Structural	Joists, studs, masonry walls, floors.
Intermediate	Lath, plaster, gypsum board, wood, masonry, wallpaper, metal.
Surface	Paint

Guidelines for the states of possible disrepair of the above components are described in Table II.

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Table II
Housing Component Condition

Component	Poor	Fair	Good
SURFACE Paint	Peeling, Cracked, Alligatored	Chalked	Tightly Adhered
INTERMEDIATE Plaster Board Gypsum Board Wood Masonry Metal	Crumbled, Powdered, Buckled Crumbled, Powdered, Buckled Rotted, Split, Delaminated Cracked, Spalled, Powdered Rusted Through	Minor Voids Minor Voids Cracked, Minor Voids Minor Voids Heavy Rust	Rigid & Firm Rigid & Firm Rigid & Firm Minor Cracks Slight Rust, Physically Sound
Lath Wood Gypsum Steel	Rotted, Split, Delaminated Crumbled, Powdered, Buckled Rusted Through	Cracked Minor Voids Heavy Rust	Rigid & Firm Rigid & Firm Slight Rust
STRUCTURAL Wood Sills/Joints Masonry Walls Floors	Split, Rotted Cracked, Spalled, Powdered See Above for Wood and Masonry	Cracked, Warped Minor Voids	Physically Sound Minor Crack

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3. Performance Attributes

The primary attribute required of a decontamination method is that it render the hazardous material inaccessible. Success in doing this is the primary consideration, but the extent to which it is achieved is dependent on the extent to which it is implemented.

The many secondary properties that are inherent parts of specific decontaminating procedures should be considered very carefully when selecting methods to eliminate the plumbism problem. These characteristics include factors such as the health and safety of both the occupant and decontaminating workers, the degree of rehabilitation attained, the potential for recurrence of the problem, etc. A more detailed description of the above attributes follows.

Cost factors can be assigned to many of these considerations since they involve both time and labor.

Attributes that should be considered include:

Hazard Inaccessibility

Accessibility to residual leaded material is related to both the degree of hazard elimination and the decontaminating method used. The methods presently in use provide varying degrees of solution. In deciding how high to remove or cover up the lead, one must consider the accessibility of the remaining hazard and its potential danger to children.

Special Preconditions

Certain conditions are required before many hazard removal techniques can be implemented. For example: if a facing is to be put up with adhesive, all loose material should be removed from the surface to be covered and the surface must be free of moisture, oil, dirt, etc. If rigid boards are to be applied there are certain support requirements for the boards, degree of planarity, support spacings, etc.

Installation Health and Safety

Many of the available hazard removal techniques have health problems associated with them. For example:

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removing leaded paints by sanding creates a fine leaded dust, softening leaded paint with an open flame can give rise to lead fumes in addition to presenting a fire hazard, cutting various board materials can give rise to a fine dust that can be injurious, etc.

Ancillary Work

Certain deleading procedures may require additional work to be done in conjunction with implementation of the technique. For example: putting up wall board may require the relocation of plumbing, electrical and heating fixtures.

Waste Disposal

Care should be taken to ensure that leaded wastes are disposed of in a manner that will render them inaccessible to children. Other waste materials should be disposed of in a manner such that they do not present a hazard.

Community Involvement

Community involvement is the degree to which a method allows the utilization of skills, either available or potential, that can be found in a community. Factors such as health and safety, cost, and/or level of training required will determine the extent to which a method lends itself to community participation.

Since limited funds are available for deleading, and cost savings can be realized by utilization of "self-help" labor, certain advantages can be gained by selecting hazard removal methods that lend themselves to the use of semi-skilled and unskilled labor. A secondary spin-off from using this type of labor is the training given in the course of carrying out a community action program. The skills gained can give the people involved a chance to improve their lot in life.

Occupant Involvement

Occupant involvement is a measure of the amount of inconvenience that the occupant of a dwelling unit is exposed to in the

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course of deterioration of its resistance. Into
defending communities will require the removal of
occupants from a residence. This is a difficult
task, because of the nature of the problem. Other
methods require more dislocation from a room.

Degree of Finish

Many deterioration techniques are available
in a crude unfinished state unless the work
is done. Other methods provide a finished
surface in the course of carrying out the method;
i.e., prefabricated panels.

In-Use Performance

In general, consideration of performance properties
is only applicable to finished surfaces since individual
components, such as gypsum board, were not designed for
use without the application of a protective surface
coating.

Occupant Health and Safety

Attributes to be considered include:

- a. Fire Resistance
- b. Toxicity
- c. Anthropometric Fit
- d. Vermin Resistance
- e. Mold Growth Resistance
- f. Dirt Collection Resistance

Durability and Stability

Properties to be taken account of include:

- a. Structural Integrity
- b. Scratch Resistance
- c. Impact Resistance
- d. Abrasion Resistance
- e. Moisture Resistance

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- f. Vibration Resistance
- g. Colorfastness
- h. Aging Resistance

Acceptability

Several factors in addition to those which affect health and the structural integrity of a residence, including the following should be considered.

- a. Washability of the Surface
- b. Maintainability of the Surface
- c. Acoustic Properties
- d. Color
- e. Reflectance
- f. Attachment Capability
- g. Appearance

4. Proposer's Response

- a. The proposer shall state in detail, following the format of the outline questionnaire below, conditions and limitations, if applicable, of his proposal method:

Check one or more of the items when applicable.
Further elaboration on any response to any question may be submitted if desired.

- 1. What is the intended purpose of your system?
 - ☐ a. to remove lead paint and thus make it inaccessible.
 - ☐ b. to provide an effective rigid board type barrier to the lead paint.
 - ☒ c. to provide an effective membrane type (fabric or film) barrier to the lead paint.
 - ☐ d. to prevent further deterioration of tightly adhered lead paint on interior surfaces.
 - ☐ e. other (specify) _____

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2. Where is your method applicable?

- ☒ a. walls
- ☒ b. ceilings
- ☒ c. trim
- ☐ d. windows
- ☒ e. doors
- ☐ f. wet areas

3. Under what conditions is your system applicable?

- ☐ a. on deteriorated surfaces
- ☒ b. only on solid substrates in good repair.
- ☐ c. to structural members after existing surfaces are removed

4. What is the attachment mechanism used?

- ☐ a. mechanical fasteners
- ☐ b. adhesive bonded
- ☒ c. self adhering (paints, cements, etc.)

5. What would happen if the lead paint and/or plaster underneath the covering material should come loose at a later date?

- ☐ a. there would be no effect
- ☐ b. the covering system would fail
- ☒ c. the covering system would delaminate but still maintain its integrity as a barrier.

6. Health hazards created during hazard elimination:

- ☐ a. toxic solvents used
- ☐ b. flammable solvents used
- ☐ c. considerable toxic dust generated
- ☐ d. considerable nontoxic dust generated
- ☐ e. open flame techniques used
- ☒ f. other (specify) _____

Comments 1/24.

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7. Is movement and/or relocation of fixtures normally required?

	None	Minor	Major
☐ a. plumbing	☒		
☐ b. electrical	☒		
☐ c. heating			
i. Hot air	☒		
ii. Hot water or steam	☒		

8. Are large amounts of waste generated by using your method?

☐ yes,
☒ no.

If yes,

☐ leaded,
☐ nonleaded.

9. What is the degree of skill required to carry out your method?

☒ a. skilled labor only
☐ b. semi-skilled labor with skilled supervision
☐ c. semi-skilled labor with minimal supervision
☐ d. unskilled labor

10. What degree of occupant inconvenience occurs when your method is used?

☐ a. occupants and furniture must be removed from the dwelling
☒ b. occupants should be removed from the room where work is being done
☐ c. the work can be done while occupants are in the work area

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11. What is the degree of finish provided by your system?
- ☒ a. patching and repair of surfaces is required
 - ☐ b. painting is required
 - ☐ with priming,
 - ☐ with sealing.
 - ☒ c. the method provides a final finish with no further work required.
12. In your opinion, under which of the following conditions would your system be effective in reflecting lead paint inaccessible to children?
- ☐ a. in areas within the reach of children where the system can be damaged by their actions.
 - ☒ b. in areas outside the reach of children that are not exposed to occupant damage.
 - ☐ c. in none of the above areas.
13. List the physical properties of your system* as applicable. Attach additional pertinent data if desired.

Property	Value	Test Method
Tear (or Burst) Strength		
Tensile Strength		
Flexural Strength		
Impact Strength		
Moisture Resistance		
Fire		
Permeability		
Adhesion		
Ease of Cleaning		

*Some of these physical properties are a function of the as-installed system.

14. Identify first, second and third choices of cities in which you would prefer to demonstrate the implementation of your system.

☐ Wash. D.C.	☐ Phil. Pa.	☐ Other
☐ Balt. Md.	☐ N.Y., N.Y.	☐ Other
☐ Boston, Mass.	☐ St. Louis, Mo.	☐ Other

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b. The respondent shall provide additional general information as stated below:

1. List typical costs on materials and installation. Data for work done on deteriorated housing should be supplied, if available.
2. Give a brief history of proposed material and/or systems, i.e. experimental, innovative for housing or in common use, etc. Includes test reports, acceptance history in building code jurisdictions in which proposed product has been used or considered.
3. Provide statement as to availability of materials to be used, i.e. available, limited availability, or special order, along with any special considerations regards shipment, handling and storage.
4. Define the conditions of deterioration under which the proposed system will be effective in eliminating the problem. (See Table II)
5. Provide general statement as to willingness to participate in this demonstration program for evaluation of lead paint removal and detoxification methods. If applicable, state capability and willingness to provide technical reports on laboratory and on-field performance of proposed method and cost/time analyses of demonstration as stated in the following tasks:

To become familiar with the specific problems that are associated with lead paint hazard elimination.

To supply technical information about the proposed material or system. Information requested on the above NBS Hazard Elimination Method Questionnaire should be provided together with any other supportive data that is thought to be pertinent.

To cooperate with NBS on a physical testing and evaluation program to further define the attributes of the proposed system.

To assist NBS in selecting actual sites where the materials or systems will be demonstrated.

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To contract for the actual demonstration and coordinate their efforts with NBS personnel, to obtain the maximum benefit possible from said demonstration specifically to assist in the observation of installation problems and in obtaining valid cost data.

To aid NBS in the preparation of educational materials including written installation instructions, films, actual small scale demonstrations, etc.

To assist NBS in evaluating the performance of the as-installed system in terms of properties that define said performance.

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