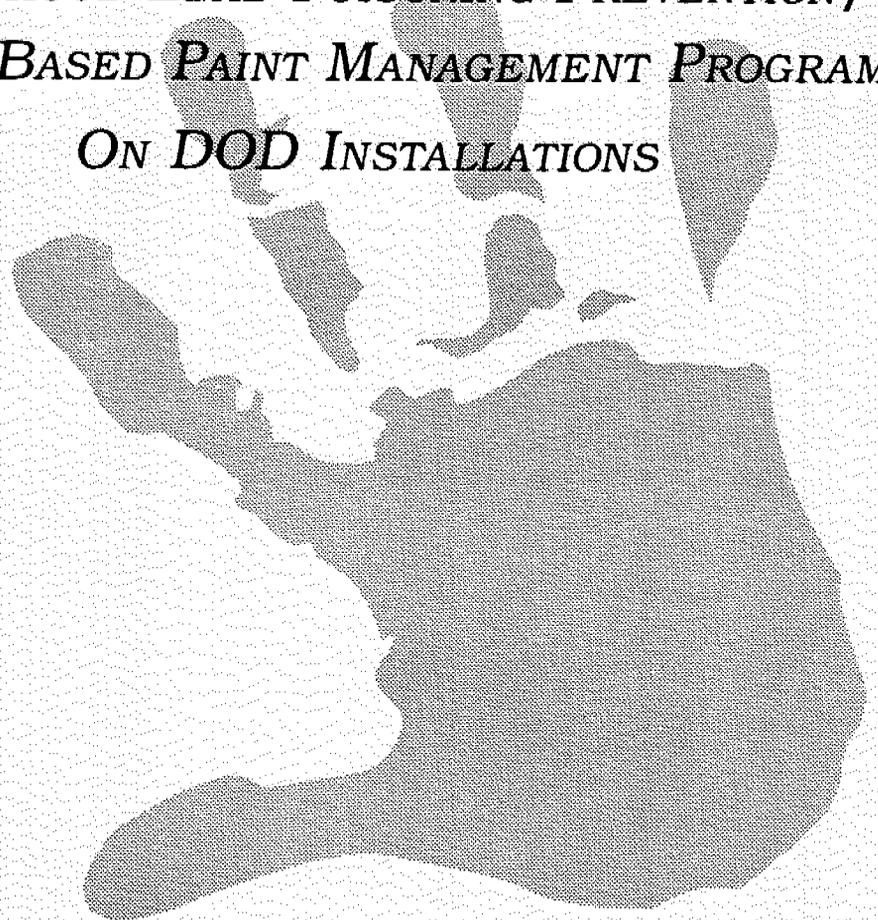


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A COMMANDER'S GUIDE TO

*CHILDHOOD LEAD POISONING PREVENTION/
LEAD-BASED PAINT MANAGEMENT PROGRAM
ON DOD INSTALLATIONS*



*U.S. Army Environmental Hygiene Agency
Aberdeen Proving Ground, Maryland 21010-5422*

Approved for public release; distribution unlimited.

*Developed through the DOD Interagency Committee on
Lead-Based Paint in Military Housing*

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USAEHA TECHNICAL GUIDE NO. 198

**A COMMANDER'S GUIDE TO CHILDHOOD LEAD POISONING
PREVENTION/LEAD-BASED PAINT MANAGEMENT PROGRAM
ON DOD INSTALLATIONS****Purpose**

Provide current information and guidance for commanders to establish a Childhood Lead Poisoning Prevention (CLPP)/Lead-Based Paint Management (LBPM) Program on their installations.

Introduction

DOD installation commanders must take a proactive role in developing a CLPP/LBPM Program by:

- Appointing a multidisciplinary core of people on the installation to develop an overall program of lead risk reduction
- Explaining how to develop the installation program
- Incorporating guidance as it becomes available from DOD

Background

Lead poisoning one of the most common and preventable pediatric health problems today.

Environmental exposure to even low dosage levels of lead increases a child's risk of developing:

- Permanent learning disabilities
- Reduced concentration and attentiveness
- Behavior problems

These problems may persist and adversely affect the child's chances for success in school and life.

Children get lead poisoning primarily by ingesting lead.

The most significant sources of environmental lead are:

- Deteriorated lead-based paint (LBP) in housing
- House dust contaminated by lead
- Soil contaminated by lead

Other sources of lead include:

- Lead used in consumer products
- Lead in drinking water
- Lead in ambient air

Sometimes children are poisoned by chewing or sucking on lead painted surfaces or by eating paint chips. But the most common cause of poisoning is ingestion of lead dust and soil through normal hand-to-mouth activities, such as thumb-sucking or mouthing toys. Inhalation of airborne lead is considered a minor exposure pathway for individual children.

If a child is living in a residential dwelling with high levels of lead in dust, it is possible that the child may become lead poisoned.

Lead dust is invisible. It settles from the air and sticks to surfaces where it can be picked up on children's hands and later ingested. The most significant sources of lead dust are:

- Deteriorated LBP that is chalking, chipping, peeling, or flaking
- LBP on surfaces subject to chewing, friction, or impact, such as window sashes, doors, or painted floors
- Exposed soil with high levels of lead contamination

Blood lead level screening programs on some DOD installations have been initiated.

A handful of children with elevated blood lead levels have been discovered. Following confirmation of the blood lead levels, investigations have not been able to establish the exact pathway of lead exposure for these children. Also unknown is where the exposure may have occurred. What is known, however, is that:

LBP has been used on many residential dwellings and buildings on DOD installations.

Directives

House Report 102-95 accompanying the Defense Appropriations Act of 1992, directed DOD to:

- Take a more active role to ensure military dependent children are not affected by LBP
- Establish a screening program for all dependent children (six years old or younger) for lead uptake

Public Law 102-550--"The Residential Lead-based Paint Hazard Reduction Act of 1992"--states that DOD must comply with all federal, state, interstate, and local requirements with respect to LBP, LBP activities, and LBP hazards, including:

- Certification
- Licensing
- Recordkeeping
- Payment of reasonable service charges
- Performing risk assessment, etc., according to HUD guidance scheduled for publication in late 1993

DOD Memorandum, 24 November 1992, subject: Risk Assessment, Associated Health Risk in Children, and Control of Hazards in DOD Housing and Related Structures, establishes a policy of shared responsibility for:

- Assessment of the health risk from LBP
- Control of LBP hazards in DOD housing and related structures:
 - Child Development Centers/Family Child Care homes
 - Schools
 - Other facilities frequented by children six years old and younger
 - Playground areas and equipment

Discussion

Community-level prevention of lead poisoning in children is the goal of a CLPP/LBPM Program. However, as DOD implements blood lead screening programs, *case management* of lead poisoned children may occur first. Emphasis will then shift to community-level intervention and efforts to prevent cases of lead poisoning by prudent and affordable identification and hazard reduction of environmental sources of lead, including LBP in dwellings.

The shift from case management to community-level intervention requires a fundamental shift in perspective from the individual child to the population of children at risk and the environment in which they live.

The purpose of community-level intervention is to identify and respond to *sources*, not cases, of lead poisoning.

Program Development

The most effective way for an installation commander to address the multitude of issues that surround the CLPP/LBPM Program is to:

Establish a Lead Hazard Management Team (LHMT)

whose chair has direct access to the commander. Team members should include representatives from:

- Engineering and Housing/Public Works
- Medical
- Safety
- Public Affairs
- Legal
- Section 6 or DOD Dependent Schools and Child Development Services

Within the specific disciplines, multiple representation may be required. For example, medical services may be represented by the preventive medicine/public health physician, family practitioner, pediatrician, industrial hygienist, environmental science officer, laboratory officer, CHAMPUS coordinator, and community health nurse. The purpose of the LHMT is to:

- Clarify and commit each area of responsibility in the CLPP/LBPM Program
- Develop a strategy to administer the program
- Estimate the program cost (e.g., implementing, training, allocating manpower, administering, contracting services, etc.)

The coordinated team approach is a prerequisite for program success because all of the issues regarding lead poisoning prevention and LBP within DOD are not clearly defined.

Community-level Intervention

Successful community-level intervention involves at least four elements:

- *Outreach, education and training.* Reduce lead exposure through risk communication by (1) informing the public about the hazards of LBP exposure, and (2) alerting healthcare providers and other professionals of the hazards associated with exposure to LBP and preparing them to deal with the public's concern and requests.

- **Hazard assessment and integrated prevention planning.**
Assess the extent of the lead problem and develop a coordinated effort to develop a lead poisoning prevention plan.
- **Screening, surveillance, and medical case management.**
Identify high-risk populations and areas by (1) screening children to determine their blood lead level, (2) conducting environmental surveys to determine the source of lead exposure, and (3) collecting demographic data. Conduct medical case management of children with elevated blood lead levels.
- **Hazard reduction.** Reduce the risk of exposure to LBP hazards and lead in dust and soil. Emphasize in-place management practices (hereinafter referred to as interim controls) to reduce excessive exposures to lead prior to abatement.

Outreach, Education, and Training

The outreach education effort is most meaningful when it receives the support of the installation commander.

Provide outreach and education during all phases of activity from pre-screening to post-hazard reduction. Among the most important targets for outreach and educational programs are:

- Healthcare providers
- Parents
- Child Development Center personnel
- Family Child Care providers
- Early childhood educators
- Housing managers
- Facilities engineering/public works personnel
- Safety officers

Provide multifaceted outreach education programs through the use of:

- Pamphlets (e.g., EPA's "Lead Poisoning and Your Children")
- Other written materials
- Local news media
- Public meetings
- School programs
- Staff in-service programs

Educate and provide in-service training for the in-house and contractor engineering or facilities engineering/public works personnel.

Train and certify personnel responsible for an installation's CLPP/LBPM Program with an accredited EPA lead training course. EPA is developing role-specific courses to serve as models for training abatement workers, inspectors, and supervisors. DOD is working with EPA to develop DOD-specific courses.

Hazard Assessment and Integrated Prevention Planning

To determine the extent of the lead problem on an installation, preventive medicine/public health personnel and facilities engineering/public works personnel on the installation should:

- *Use all information at their disposal:*
 - Blood screening results
 - Environmental survey data
 - Demographic information (e.g., age of housing, number of preschool children, etc.)
- *Create the most accurate picture of the installation lead hazards, including:*
 - Sources of lead
 - Exposure patterns
 - High-risk populations
- *Identify specific sources of concern such as:*
 - Drinking water in houses with lead-soldered plumbing
 - Specific houses identified with LBP in deteriorated condition

Screening, Surveillance, and Medical Case Management

The lead hazard management team must analyze and interpret the information obtained from screening and surveillance efforts to make joint decisions when:

- Cases of elevated blood lead occur
- High-risk hazard reduction actions are taken

Identifying and quantifying the risk of childhood lead poisoning on the installation is dependent on combining data on:

- Blood lead levels
- Environmental sources of lead
- Community demographics

Generally, the population of greatest concern is children six years of age and younger.

The only true test of whether a childhood lead poisoning problem exists is through near-universal screening of children for blood lead levels.

DOD policy requires instituting blood lead screening programs where identified high-risk environmental conditions exist.

Environmental surveys identify possible sources and pathways of childhood lead exposure. Environmental surveys do not, however, negate the need for measurement of children's blood lead levels. The sources of lead that can be assessed in environmental surveys include:

- Lead-based paint
- Lead in dust and soil
- Lead in drinking water

- Lead from industrial sources and wastes
- Lead from atypical sources such as folk medicines, ceramic-ware, bullet or sinker casting, pottery kilns, or stained glass framing

Environmental surveys should test for lead in dust, soil, and paint. When screening for LBP and lead in soil and dust in housing, inspectors should follow hazard assessment procedures as recommended in the Housing and Urban Development (HUD) Interim Guidelines until more definitive guidance emerges.

Protocols for environmental sampling are currently being reviewed for application DOD-wide. In order to ensure that the most appropriate protocol is adopted, installation personnel assigned the task of environmental sampling should coordinate their testing procedures with their appropriate headquarters.

Additionally, the lead hazard management team must determine if the environmental sampling can be handled in-house or whether the effort should be contracted out. To support the contracting of environmental sampling, standardized contract specifications that can be modified for application at the installation are being developed. The installation will still be responsible for contract oversight even if the environmental sampling is contracted out. Guidance for in-house testing is also being developed.

Hazard Reduction

The goal of the DOD LBP Management Program is to systematically eliminate all lead hazards from installations.

This may involve many activities, such as corrosion control to reduce the amount of lead in drinking water and covering or removing lead-contaminated soil in parks and playgrounds. In many cases, the primary risk will be LBP and the primary form of hazard reduction will be interim controls--maintenance actions that are taken before any children have been poisoned.

Before any hazard reducing actions begin, the lead hazard management team must decide which lead hazards to target and then select appropriate procedures. Information gathered during hazard assessments should be used to ensure that the installation resources are directed where the highest risks exist:

- Child Development Centers/Family Child Care (FCC) homes
- Military family housing
- Grade schools and related facilities

Commanders have two options to manage LBP:

- Control the hazard through *interim controls*

Interim controls are a set of measures designated to temporarily reduce human exposure or likely exposure to lead-based paint and other lead hazards to include:

- Cleaning
- Repairs
- Maintenance
- Painting
- Temporary containment
- Ongoing monitoring of LBP hazards or other potential lead hazards
- Establishment and operation of management and resident education programs

Interim controls:

- Attempt to prevent exposure of lead in dust resulting from chalking, chipping, cracking, or peeling LBP
- Require periodic monitoring, cleaning, repairing, or encapsulation of surfaces containing or suspected to contain LBP

- Eliminate the hazard by *abatement*

Abatement is the permanent elimination of LBP hazards and includes:

- Removal of LBP and lead-contaminated dust
- Permanent containment or encapsulation of LBP
- Replacement of lead-painted surfaces or fixtures
- Removal or covering of lead contaminated soil
- All preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures

DOD prefers to equate abatement with removal of LBP and lead-contaminated dust and soil. Concerns have been raised with associating the term abatement with "permanent" containment or encapsulation because of environmental restoration work required under base closure actions.

Currently, greater emphasis is placed on *interim controls*, rather than abatement.

When interim controls are no longer effective due to uncontrollable release of lead dust into the environment from deteriorated LBP, the safety of occupants and maintenance workers must be maintained through removal of the LBP. During LBP removal operations, the facility must be unoccupied. Applicable regulatory requirements established by OSHA, EPA, and other federal, state, and local agencies must be followed when:

- Removing LBP
- Protecting workers
- Cleaning up sites
- Disposing of lead-contaminated waste

References

U.S. Department of Housing and Urban Development, *Comprehensive and Workable Plan for the Abatement of Lead-based Paint in Privately Owned Housing: A Report to Congress* (December 1990)

U.S. Department of Housing and Urban Development, *Lead-Based Paint: Interim Guidelines for Hazards Identification and Abatement in Public and Indian Housing* (September 1990)

Centers for Disease Control, *Strategic Plan for the Elimination of Childhood lead Poisoning* (February 1991)

Centers for Disease Control, *Preventing Lead Poisoning in Young Children* (October 1991)

U.S. Environmental Protection Agency, *Strategy for Reducing Lead Exposures* (February 1990)

Public Law 102-550, "The Residential Lead-based Paint Hazard Reduction Act of 1992" (November 1992)

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June 1993



USAEHA TG No. 198



OFFICE OF THE SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

24 NOV 1992

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (FORCE MANAGEMENT AND PERSONNEL)
 ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)
 ASSISTANT SECRETARY OF THE ARMY (MANPOWER AND RESERVE AFFAIRS)
 ASSISTANT SECRETARY OF THE NAVY (MANPOWER AND RESERVE AFFAIRS)
 ASSISTANT SECRETARY OF THE NAVY (INSTALLATIONS, AND ENVIRONMENT)
 ASSISTANT SECRETARY OF THE AIR FORCE (MANPOWER, RESERVE AFFAIRS, INSTALLATIONS AND ENVIRONMENT)
 DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Lead-Based Paint (LBP) - Risk Assessment, Associated Health Risk in Children, and Control of Hazards in DoD Housing and Related Structures

This memorandum is to establish DoD policy for: (1) assessment of health risk from LBP, and (2) control of LBP hazards in DoD housing and related structures (child care centers, family child care homes, schools, playground equipment, and other facilities frequented by children six years old or younger).

Lead poisoning is the number one environmental hazard to American children, affecting one out of six children under the age of six. Lead can cause a variety of serious adverse health effects. Recent studies have indicated that exposure to lead is even more dangerous than originally believed. In recognition of this, the DoD LBP policy is provided in Attachments 1-4.

This policy memorandum is effective immediately and will be converted into a DoD Instruction. Please furnish to us copies of your documents to implement this memorandum within 60 days.

Colin McMillan
 Assistant Secretary of Defense
 (Production and Logistics)

Enrique Mendez, Jr., M.D.
 Assistant Secretary of Defense
 (Health Affairs)

Attachments:
 As Stated

cc: DASD (I)

atc 1

SUBJECT: Lead-Based Paint (LBP) - Risk Assessment, Associated Health Risks in Children, and Control of Hazards in DoD Housing and Related Structures

REFERENCES: (a) Public Law 91-965, 84 Stat. 2078, approved January 13, 1971, As Amended

(b) Centers for Disease Control, Preventing Lead Poisoning in Young Children, October 1991

PURPOSE: To establish policy for: (1) assessment of the health risk from LBP, and (2) control of LBP hazards in DoD housing and related structures (child care centers, family child care homes, schools, other facilities frequented by children six years old or younger, and playground equipment).

BACKGROUND: Lead can cause a variety of serious adverse health effects. Recent studies have indicated that exposure to lead is even more dangerous than originally believed. For example, the amount of lead found to cause learning disabilities in children is much lower than previously thought. It also takes little lead to cause lead poisoning in children. To help protect children, the Lead-Based Paint Poison Prevention Act (LBPPA), reference (a), was enacted.

POLICY: DoD policy is to provide occupants of DoD housing and related structures (to include leased) a safe and healthful environment. DoD will assess and correct all recognized health-hazards in DoD housing and related structures and will negotiate for assessment and control of LBP in DoD-leased facilities.

REQUIRED ACTIONS: DoD Components will develop a LBP risk assessment, screening, and control program. The program must include the following elements:

- Assessment of Health Risk to Children:
 - .. Screen children in accordance with the recommendations contained in Attachment 2 and reference b.
 - .. All occupants six years or younger of all buildings rated as "medium" or "high" LBP risk must be referred to medical personnel for evaluation and measurement of their blood lead levels. If the blood lead test is elevated, the families will be moved, at DoD expense, to a suitable and safe alternate facility until IPM or abatement can be accomplished.
 - .. Preventive medicine or public health personnel (in conjunction with the engineers/housing/facilities personnel) will investigate all cases of elevated blood-lead in children or pregnant occupants.

SCREENING OF CHILDREN FOR POSSIBLE LEAD EXPOSURE

Ref: (a) Centers for Disease Control, Preventing Lead Poisoning in Young Children, October, 1991

- Encl: (1) Lead Exposure Risk Assessment Questionnaire
(2) Indications for Confirmation of Blood Lead Levels
(3) Classification and Recommended Actions Based On Confirmed Blood Lead Levels
(4) Department of Defense Blood Lead Level Reporting Form

I. Screening Recommendations for Detection of Lead Exposure

A. The Centers for Disease Control (CDC) recommends that all children 6 years of age and younger be evaluated for lead exposure and tested for blood lead levels when appropriate. In accordance with CDC guidelines, DoD will phase in this screening over the next five years.

B. Assessment of possible exposure to environmental lead shall be obtained during routine well-child visits based on the clinical evaluation of the child and from the review of information contained in the Lead Exposure Risk Assessment Questionnaire (enclosure (1)).

1. The questionnaire shall be completed by the child's parent or guardian and reviewed by a health care provider. The questionnaire shall first be administered at the 12 month well-baby visit (which varies between 8 to 18 months for each Military Department) and be updated annually or during subsequent pediatric care visits.
2. Based on answers to the questionnaire, any child with all "no" answers is classified "low risk", and any child with at least one "yes" answer is classified "high risk" for lead exposure and shall receive additional screening as determined by the appropriate health care provider.
3. The questionnaire shall be placed in the child's health record as a part of the well-child visit record.

C. In accordance with reference (a) all children shall have a direct blood level screening test at the time of the 12 month well-baby visit. This requirement shall be phased in over a five year period. Of all babies seen for the 12 month well baby visits, 20% shall have blood

lead levels drawn the first program year and increasing 20% each year thereafter. (This group is randomly established, e.g. every fifth baby seen for the 12 month well baby visit will receive a blood lead level screen). In addition to this randomly drawn group, there will be babies in for the 12 month visit who are not randomly drawn, but are classified as "high risk" according to the questionnaire and must also have their lead levels tested. All other children 6 years of age or younger shall have their blood lead level tested when indicated for clinical reasons or when they are determined to be "high risk" per the information obtained from enclosure (1). One source for "high risk" determination is the Services' inspection of DoD housing for the presence of lead-based paint. Children living in house rated by DoD inspectors as being at medium to high risk shall be referred for blood-lead levels.

1. The only acceptable screening test is the direct measurement of lead in whole blood. Either a venous or capillary blood sample may be used. Capillary or finger-stick samples are preferred because they are less traumatic; however, the specific blood specimen required shall be dictated by the laboratory capabilities of the facility.
 2. The erythrocyte protoporphyrin screening tests used in the past are inadequate for detecting blood lead levels at the new lower levels of concern contained in reference (a).
 3. The screening blood lead level measurement shall be recorded in the child's health record in an easily identifiable location.
- D. If elevated blood lead levels are found on capillary blood specimens, confirmatory blood lead levels should be done on venous specimens in accordance with enclosure (2).
- E. Recommended actions based on a confirmed venous blood lead level are provided in enclosure (3). The single, all-purpose definition of childhood lead poisoning has been replaced with a multi-tier approach described in enclosure (3).

II. Reporting Requirements:

- A. Each Military Department shall develop reporting methods and maintain records of children screened for possible lead poisoning.

1. These records shall be maintained by DoD medical treatment facilities and managed health care systems.
 2. At a minimum, each Military Department shall report on the number of children screened by catchment area, by age category, by lead level, and by type of housing; i.e., on-or-off base as shown in enclosure (4). The first report to DoD (ASD(HA)) will be one year from the date on this policy memorandum and annually thereafter. Enclosure (4), "Defense Blood Lead Level Reporting Form", has been assigned Report Control Symbol (RCS) DD-HA(A)1899
- B. All Military Departments shall also comply with appropriate state guidelines for reporting diagnosed cases of lead poisoning.

III. Reevaluation and Modification of the Screening Program

- A. The CDC (reference (a)) recommends universal screening, except in communities where large numbers or percentages of children have been screened and found not to have lead poisoning.
 - B. Each Military Department shall periodically reevaluate records and reports of pediatric lead screening and modify their programs to meet the specific needs of their communities. Communities that have large percentages of children without lead poisoning can suspend universal screening.
- IV. This section on blood-lead level screening is meant to set minimally acceptable standards. Nothing contained in these standards is meant to limit a physician's clinical judgment in the care rendered to a patient.

LEAD EXPOSURE RISK ASSESSMENT QUESTIONNAIRE

Child's Name _____

Child's Age _____ Child's Date of Birth _____

Sponsor's SSN _____

Does child live in (circle answer) on-base or off-base housing?

RISK QUESTIONS

Does your child . . .

1. Have a brother, sister, housemate or playmate with a confirmed blood lead?	YES NO DON'T KNOW
2. Live in or regularly visit a house, day care center, family child care home, or preschool that was built before 1960 which has chipping or peeling paint, or has had recent or ongoing renovation?	YES NO DON'T KNOW
3. Live near an active lead smelter, battery recycling plant or any industry you know that releases lead?	YES NO DON'T KNOW
4. Live with an adult whose job or hobby involves exposure to lead.	YES NO DON'T KNOW
5. Live in or regularly visit a house, day care center, family child care home, or preschool classified at medium risk or higher for lead-based paint as identified by a building inspection team?	YES NO DON'T KNOW

* DON'T KNOW answers will require a more detailed discussion of the question(s) with the parent(s)!!

Treatment Catchment Area _____

Completed by _____

Date _____

Reviewed by _____

Date _____

**Indications for Obtaining Confirmatory
Venous Blood Lead Measurements**

Capillary Blood Lead * (µg/dl)	Timing of Confirmatory Venous Blood Lead Determination
** ≤ 10	Not Applicable
10 - 19	Within 1 month
20 - 44	Within 1 week
45 - 69	Within 48 hours
** ≥ 70	Immediately

* µg/dl = micrograms per deciliter

** < = "less than"

** ≥ = "greater than or equal to"

**Classification and Recommended Actions Based On
Confirmed Venous Blood Lead Measurements**

Class	Blood Lead ($\mu\text{g}/\text{dl}$)	Action
I	≤ 9	- "low risk" ¹ : No specific follow-up - "high risk" ¹ : Consider rescreen in 6 months
II	10 - 19	- Reassess risk factors for exposure - Provide education concerning diet and personal hygiene - If levels persist, initiate individual case management, environmental investigation, and lead hazard abatement - Rescreen every 3 months ²
III	20 - 44	- Complete medical evaluation - Thorough environmental assessment with remediation - Rescreen as indicated by treatment plan
IV	45 - 69	- Begin expeditious medical treatment - Lab must notify responsible physician immediately - Thorough and expeditious environmental assessment with remediation
V	≥ 70	- Initiate medical treatment immediately - Lab must notify responsible physician immediately - Thorough and expeditious environmental assessment with remediation

¹ "Risk" is assessed via clinical judgement and the information provided by the screening questionnaire (Encl 1).

² If 3 consecutive measurements are 10-19 $\mu\text{g}/\text{dl}$, increase interval of measurement to every 6 months.

Encl (3)

RCS DD-HA(A)1899

Department of Defense Blood Lead Level Reporting Form

REPORTING PERIOD: _____

CATCHMENT AREA _____

HOUSING	AGE	LEAD LEVEL				
		<10	10-19	20-44	45-69	>70
ON BASE						
	0-2					
	2-4					
	4-6					
	>6					
OFF BASE						
	0-2					
	2-4					
	4-6					
	>6					

NOTE: If a child turns either 2, 4, or 6 years old on the day of testing, the child is counted in the older category; i.e., a child turning 2 on the day of testing is counted in the 2-4 category.

INSTALLATION SAMPLING STRATEGY

Number of Units or Buildings	Number of Units or Buildings to be Tested
≤ 20	All
≤ 40	31
≤ 60	38
≤ 80	42
≤ 100	45
≤ 200	51
≤ 300	54
≤ 400	55
≤ 600	56
≤ 1000*	57

* When the total number of units exceed 1000, test 58 of the units.

Note: Initially, priority will be given to family housing, child care centers, family child care homes, schools, and hospital areas with children six years old and younger. The remaining units chosen should be selected randomly so they represent accurately the total population of units or buildings being considered for possible abatement.

NOTE: When all samples are found to be negative for lead, then no further testing is necessary. However, if one sample is positive for lead then follow the guidance in the control of LBP section of this policy.

1. Enclosed is a copy of the following information:

a. Title X-Public Law 102-550 - Residential Lead-Based Paint Hazard Reduction Act of 1992

b. 24 CFR Subtitle A (4-1-92 Edition) Part 35 Lead-Based Paint Poisoning Prevention in Certain Residential Structures

c. Lead-Based Paint Risk Assessment Protocol (U.S. Department of Housing and Urban Development) Sept 1992

d. Lead-Based Paint Policy Guidance signed by Assistant Secretary of Army (Installations, Logistics & Environment) dated 28 April 93 (Lead Based Paint - Risk Assessment, Associated Health Risk in Children, and Control of Hazards in DOD Housing and Related Structures - Information Memorandum dated 10 Feb 93 signed by MG Thomas R. Tempel, Acting Deputy Surgeon General.)

e. Resources for Childhood Lead Poisoning Prevention (POC's)

f. "The Do's and Don'ts of Lead Poisoning", Coalition to Prevent Lead Poisoning

PART I
DEVELOPMENT DATA FORM

Development Name

HUD Project Number

Contact Information

Housing Authority (PHA/IHA)

Housing Authority Contact for this
Development

Risk Assessment Firm

Date Document Completed by Housing
Authority

PART I: DEVELOPMENT DATA FORM

To Be Prepared By The Housing Authority

SECTION I: REQUESTED DEVELOPMENT INFORMATION

INTRODUCTION

Development background information provides the Risk Assessor with data for the purpose of identifying those units, common areas, community facilities, and site areas that should be tested and inspected. Brackets ([]) explain how requested information will be used by the risk assessor.

The housing authority should submit or make available to the risk assessor the following information and documents for review for each development to be assessed.

NOTE: When a development consists of more than one site, the above information must be provided for each site which contains family units that were constructed prior to 1980.

1. An 8" x 10" schematic site plan of each development and a typical building plan showing all unit types. [Plans are needed to develop an appropriate sampling strategy for each development.]
2. A list of the addresses of all units by bedroom size and all community service structures in the development. [Addresses are also needed to develop an appropriate sampling strategy.]
3. A list of all addresses and areas in the development which are used on a regular basis for day care and for activities in which children under age seven (7) participate. Include licenses of day care facilities/units and any reports of lead-based paint inspections for those areas. [Addresses are also needed to develop an appropriate sampling strategy.]
4. If lead-based paint testing has been performed at this development, provide a copy of the Scope of Work from the contract and the final Test Results Report. [These documents are needed to determine if enough units were tested, whether or not all painted surfaces were tested, and the quality of testing.] **OPTIONAL SUBMISSION:** The housing authority has the option not to submit the Scope of Work from the testing contract and the final Test Results Report.
5. One copy of any reports of elevated blood lead (EBL) levels for residents in this development or a written certification from the housing authority that the appropriate public health agency has been contacted and that there is no record of EBLs at the development. [EBLs are an obvious risk factor.]

6. Make available any health, safety, or building code inspections and citations received in the past year and the most recent HUD Maintenance Audit findings relative to physical conditions of the development. [Health, safety, or building code violations assist in determining the likely condition of substrates and the quality of building maintenance practiced by the housing authority.]
7. If design consultants (architects, engineers, etc.) have been retained for current modernization or substantial maintenance work at the development, provide:
 - a. A summary of the designer's Scope of Work; or
 - b. The section of the A/E contract which outlines the designer's Scope of Work.

[Design consultant activity is reviewed to determine if lead paint considerations are in their scope of work. If not, then modernization work could result in significant lead dust generation, especially, in those instances where modernization work is done in occupied units, or where clean up is insufficient prior to reoccupancy.]

8. Provide or make available a copy of HUD Form 52825 (Comprehensive Assessment/Program Budget, Part II, Supporting Pages) for modernization work (renovations, additions, or replacement work which may have created leaded dust) completed after the date of the original construction. [Previous modernization work is reviewed to determine whether any substantial disturbances of lead (e.g., sandblasting, sanding, scraping, etc.) took place. It is also helpful in determining which surfaces are unlikely to be a problem (e.g., window replacement in 1980.)]

9. Development Profile

Building Characteristics

Authority: _____ Development Name: _____
 Development Address: _____
 No. Units: _____ No. Buildings: _____ No. Stories in Tallest Building: _____
 Construction Date: _____ Major Modernization: _____ No, or _____ Yes, in _____ (Year)
 Short Summary of Modernization Work: _____

	Single Family Detach	Duplex 1 Story	Duplex Town House	Garden House Units =>3	Town House Units =>3	Walkup Flat	Elevator Flat	Other	Total
0 BR									
1 BR									
2 BR									
3 BR									
4 BR									
5 BR									
6 BR									
Total									

Exterior:
 (Check all that Apply)

- ___ Brick
- ___ Other Masonry
- ___ Wood or Hardboard
- ___ Metal Siding
- ___ Vinyl Siding:
 - ___ Over Paint
 - ___ Not Over Paint

- ___ Stucco
- ___ Synthetic Stucco (drivit, etc.)
- ___ Other: _____
- _____
- _____
- _____

Interior Wall/Ceiling Finishes:
 (Check all that apply)

- ___ Gypsum Wall Board
- ___ Plaster
- ___ Brick
- ___ Concrete
- ___ Wood Paneling
- ___ Vinyl/Fabric
- ___ Other: _____
- _____
- _____

Building Characteristics (continued)

Name/Location of Public Spaces	Approximate Sq. Ft.	Use (Be sure to note all child care and other facilities used by children under 7)

10. Are original drawings and specifications or records for this development available for review?

yes _____ no _____

If yes, do the records or specifications (as-built drawings, purchasing records, specifications) call for the use of lead-based paint?

yes _____ no _____

[This information enables the risk assessor to focus attention on those areas/surfaces most likely to present a hazard.]

11. Probable LBP Surfaces: In this development, how does the housing authority rate the paint on like surfaces (i.e., interior window wells, door frames, etc. which were originally painted before 1980 even if subsequently repainted) and the overall condition of the surfaces to which the paint is applied?

Rate conditions as follows:

- A. Good - Intact; less than five years since the last paint job.
- B. Fair - Intact but worn, more than five years since last paint job; minor chips from normal wear and tear, but no adhesion or substrate problems.
- C. Poor - Non-intact; severely worn or weathered, no longer adhering (peeling, flaking, cracking, etc.), or substrate deteriorating.

[Response to this question will begin the process of making it clear how well maintenance of intact painted surfaces is addressed and will assist the risk assessor in making recommendations for in-place management.]

See Inventory of Painted Surfaces next page.

INVENTORY OF PAINTED SURFACES

Painted Prior To 1980	Surface Name	Substrate (Check all that apply)					Condition		
		Wood	Metal	Plaster/ Gypsum	Masonry/ Concrete	Other (List)	Good	Fair	Poor
	Interior Walls/Ceilings								
	Interior Doors								
	Interior Door Frames								
	Exterior Doors								
	Windows								
	Window Frame Trim								
	Cabinets								
	Closet/Pantry Shelves and Brackets								
	Stairs (Treads, Stringers, and Risers)								
	Other Interior Trim (Base, Crown, Chair Rail, Etc.)								
	Other Interior Metals (Handrails, Painted Hardware, Medicine Cabinet)								
	Exterior Wall Surfaces								
	Exterior Trim (Facia, Soffitt, Rakes, Etc.)								
	Exterior Metals (Columns, Posts, Handrails, Etc.)								
	Painted Appliances								
	Others (Please List)								

12. **Substantial Maintenance:** Provide available documents or briefly describe any substantial (non-routine) maintenance projects conducted at this development. Indicate in the last column if substantial maintenance work was completed for part of the development or for the entire development.

YEAR COMPLETED	SCOPE OF WORK	PARTIAL OR COMPLETE
Example: 1973	Scraped and painted all exterior siding and trim	PARTIAL: 43 out of 123 units

[Previous substantial maintenance work is reviewed to determine whether any substantial disturbances of lead (e.g., sandblasting, sanding, scraping, etc.) took place. It is also helpful in determining which surfaces are unlikely to be a problem (e.g., window replacement in 1980.)]

13. **Lead-based Paint Abatement:** Has the housing authority conducted any systematic lead-based paint abatement at this development?

yes _____ no _____

If yes, describe briefly or make available documents which outline the Scope of Work.

Was previous systematic LBP abatement completed?

yes _____

no _____

If no, please describe remaining work to be completed?

Did abatement include clearance dust sampling?

yes _____

no _____

[This information will help to focus attention on those surfaces that have not yet been abated.]

14. Overcrowded Units: Does this development have a problem with overcrowded units?

yes _____

no _____

If yes, what percent of the units in the development are occupied by families which exceed the housing authority's occupancy standards, i.e., overcrowding?

____%

List up to 5 units, by bedroom size, which exceed the housing authority's occupancy standards.

Address/Unit Number	Number of Bedrooms	Number of Occupants

[Overcrowded units are more likely to have abused or overused painted surfaces and may also indicate areas where more children are exposed.]

15. Turnover: How many units were vacated in the development in the past 12 months?

How many of these units have been reoccupied?

[Turnover procedure is examined to determine if lead dust is generated during unit preparation and whether or not defective paint is repaired prior to occupancy.]

16. Number of Children: Estimate the number of children in the following categories residing in this development.

0-7 _____

8-17 _____

[The more children, the greater the potential risk if lead paint is present.]

17. Please provide the name of a contact person most familiar with the above for supplemental information.

18. If any of the above information or documents are not available, please explain why below:

PART I: DEVELOPMENT DATA FORM

To Be Prepared By The Housing Authority

SECTION II: HOUSING AUTHORITY-WIDE MAINTENANCE AND MANAGEMENT

INTRODUCTION

A review of the housing authority's existing management and maintenance practices, including individual development use and occupancy information, will provide an indication of the degree of lead-based paint hazards faced by the housing authority and how well the authority will be able to respond to in-place management activities.

NOTE: Questions relating to the Public Housing Management Assessment Program (PHMAP) have been included in this Section. Definitions of the specific component indicators have been provided where applicable. PHMAP questions are not applicable to Indian Housing Authorities.

1. One copy of any reports on elevated blood lead levels for housing authority maintenance staff. [Elevated blood lead levels are an indication of hazards.]
2. A copy of the housing authority's approved Five-Year Funding Request Plan (FRP) (HUD Form 52824) or, for Comprehensive Grant Program participants, the Five Year Action Plan, Annual Statement and Performance Evaluation Report (HUD Form 52837) including budgets, schedules, and staffing program. Include all backup information applicable to the developments where LBP risk assessments will be conducted. [The FRP provides information on how abatement needs can be integrated into modernization work and how long in-place management will be necessary.]
3. Provide or make available a list of housing authority budgeted positions (maintenance and management). [The list of budget positions will help determine how in-place management work will be accomplished.]
4. Work Order System: What is the housing authority's grade for Indicator #6 (Work Order System) under the Public Housing Management Assessment Program? [Grades less than "C" indicate the need for improvement. To achieve a grade "C" at least 95% of the housing authority's emergency items were corrected with 24 hours or emergency status was abated, and the number of non-emergency work orders outstanding at the end of the authorities' immediate past fiscal year is greater than 8% and less than or equal to 10% of the total number of work orders received during the immediate past fiscal year, excluding cyclical work orders.] **THIS QUESTION IS NOT APPLICABLE TO INDIAN HOUSING AUTHORITIES.**

Grade _____

Does the current work order system:

- a. Allow for the identification of units where lead-based paint is present?

yes _____ no _____

- b. Prioritize in any way those units where lead-based paint is a problem?

yes _____ no _____

[Workers should know where potential lead paint hazards exist so that proper precautions can be taken.]

Does the housing authority have an official maintenance manual? If yes, provide a copy.

yes _____ no _____

If yes, does the maintenance manual adequately address lead-based paint to inform maintenance workers of the appropriate protection and cleanup measures to take when dealing with possible lead paint surfaces? Please make available a copy of the applicable sections.

yes _____ no _____

[Standard operating procedures should be in place informing workers on how to protect themselves, residents, and the housing environment when dealing with lead-based paint surfaces.]

5. Repainting Policy: Does the housing authority have a repainting policy? If yes, please provide a copy of the policy.

yes _____ no _____

If yes, does the policy address lead-based paint?

yes _____ no _____

Does the housing authority have a repainting program for occupied units?

yes _____ no _____

Does the housing authority provide paint to residents and encourage them to repaint their own units?

yes _____ no _____

Are defective paint surfaces repaired prior to repainting?

yes _____ no _____

If the housing authority does have a repainting program, how often is repainting undertaken?

_____ years

[The repainting policy is examined to determine if scraping and other surface preparation may be releasing significant levels of lead dust. Additionally, more frequent repainting usually means that painted surfaces are more likely to be intact (with less dust generated).]

6. Turnover Procedure: What is the housing authority's grade for Indicator #5 (Unit Turnaround) under the Public Housing Management Assessment Program? Grades less than "C" indicate the need for improvement. To achieve a grade "C" the housing authority must have an established system to track:

- the duration of vacancies
- that the average number of calendar days for vacant units to be prepared for re-rental and for a new lease to take effect is greater than 25 calendar days and less than or equal to 30 calendar days (during the HA's immediate past fiscal year). **THIS QUESTION IS NOT APPLICABLE TO INDIAN HOUSING AUTHORITIES.**

Grade _____

Does the housing authority have a unit turnover policy?

yes _____ no _____

Does the policy address lead-based paint in units to be turned over for reoccupancy?
If yes, provide a copy of the policy.

yes _____ no _____

Does the housing authority repair chipping, peeling paint when preparing a vacant unit for reoccupancy?

yes _____ no _____

Are any precautions taken regarding lead when turning over units?

yes _____ no _____

Does the housing authority repaint units prior to reoccupancy?

yes _____ no _____

For each development to be assessed, how many units were vacated in the development in the past 12 months?

How many of these units have been reoccupied?

[Turnover procedure is examined to determine if lead dust is generated during unit preparation and whether or not defective paint is repaired prior to occupancy.]

7. Trash Removal: Does the housing authority have special procedures to handle construction debris? If yes, do the procedures address lead-based paint? [Trash removal is examined to determine whether lead debris is disposed of properly and whether children could be exposed to lead by getting into trash.]

yes _____ no _____

8. Hazardous Substance Training: Does the housing authority maintain Material Safety Data Sheets (MSDS) relating to:

Asbestos ____

Lead ____

Does the housing authority have a Right to Know Program?

yes ____ no ____

[The conducting of Hazardous Substance Training indicates if the authority addresses environmental and occupational health hazards.]

9. Commercial/Industrial Uses: To your knowledge are there facilities (radiator repair shop, automobile battery plant, or large renovation project) that may use, distribute, or process products containing lead within one-half mile of the development? Are there any environmental hazards near the development such as a Superfund Site, chemical storage facility, unregulated salvage and scrap yards, or polluted soil or water sites? [Nearby lead sources may have an important impact on soil lead levels and sampling design.]

yes ____ no ____

PART II

RISK ASSESSMENT REPORT FORM

NOTE: The information contained in Part II, Section I and Section II, should be prepared by the risk assessor as a result of information submitted by the Housing Authority for review and sample development.

PART II
RISK ASSESSMENT REPORT FORM

Development Name

HUD Project Number

Contact Information

Housing Authority (PHA/IHA)

Housing Authority Contact for this
Development

Risk Assessment Firm

Date Document Completed by Housing
Authority

B. Housing Development History

1. Probable Lead-Based Paint (LBP) Surfaces: (See Item 11 in Part I, Section I)
Was the housing authority's list complete? Note surfaces which were not included. Discuss the accuracy of the housing authority's ratings (good, fair, and poor) of the overall conditions of painted surfaces. (Good = intact; Fair = intact but worn, minor chips from wear and tear but no adhesion or substrate problems; Poor = severely worn or no longer adhering or substrate deteriorating, i.e., peeling, flaking, cracking, etc.)

2. Is the overall condition of probable LBP surfaces uniform? Are there surfaces which were observed in exceptionally good or poor condition?

3. Lead-based Paint Abatement: (See Item 13 in Part I, Section I)

Has any systematic lead-based paint abatement taken place in this development?

yes _____ no _____

If yes, describe the extent to which lead-based paint was abated.

- a. Was abatement part of a systematic plan or in response to an EBL?
- b. Was the decision to abate based on reliable test results?
- c. Is there evidence that lead-based paint hazards remain in the housing environment after abatement? (Example: window replaced but not the sill)

d. Has any clearance testing been performed? If yes, describe protocol used.

4. Substantial Maintenance: (See Item 12 in Part I, Section I)

Have any previous substantial maintenance projects resulted in the abatement of lead-based paint? Please describe.

Is it likely that any of the previous substantial maintenance work resulted in a substantial increase of lead available in the housing environment, e.g., recent scraping of exterior siding? Please describe.

C. Development Use and Occupancy

1. Overcrowded Units: (See Item 14 in Part I, Section I)

What percent of the development's units are overcrowded?

_____ %

2. Child Care: (See Item 3 in Part I, Section I)

If known, what percent of the units are used on a regular basis for day care of children?

_____%

3. Number of Children: (See Item 16 in Part I, Section I)

Calculate the average number of children aged 0-7 per unit.

_____/unit

4. Turnover Rate: (See Item 15 in Part I, Section I)

For this development calculate the percentage of units vacated in the past 12 months.

_____%

What is the housing authority's explanation of its turnover rate if it is over 20%?

D. Elevated Blood Lead Level Cases

1. Based on your interviews and discussions, is there a local blood screening program?

4. Is the housing authority in compliance with HUD's regulation regarding children with an EBL?

5. Based on interviews, does the housing authority have a lead-based paint resident education policy for this development, including encouragement to have children screened for lead poisoning, specific information on the location of lead paint hazards, and housekeeping and cleaning information regarding reducing lead dust levels?

E. Review of Previous Testing: **(THE HOUSING AUTHORITY HAS THE OPTION OF NOT SUBMITTING THIS INFORMATION FOR REVIEW.)**

Please report on the following if this information is provided by the housing authority in the requested submittals.

4. Quality Control: Describe the measures taken to ensure the accuracy of XRF testing.

a. Substrate correction:

b. Averaging multiple readings:

c. XRF calibration check:

d. Other:

5. Confirmation by Laboratory Analysis:

Were inconclusive XRF readings confirmed by laboratory analysis?

6. Sample Collection Procedures:

How were the laboratory samples collected?

7. HUD Guidelines: Was testing performed in conformance with the recommendations outlined in the HUD Interim LBP Guidelines? If not, specifically describe non-conforming items.

PART II: RISK ASSESSMENT REPORT FORM

To Be Completed By The Risk Assessor

**SECTION II: CLARIFICATION OF HOUSING AUTHORITY'S MAINTENANCE,
MANAGEMENT, AND STAFFING INFORMATION**

NOTE: The Risk Assessor should respond to each maintenance, management, and staffing question in relationship to how the housing authority's policies address lead-based paint.

A. Maintenance

1. Based on your interviews and observations:

Is the housing authority maintaining its paint surfaces in good condition?

Are these surfaces maintained in a non-defective condition?

2. Based on your interviews and observations:

Are there extraordinary or chronic maintenance items (e.g., roofs, leaky plumbing) that need attention?

Do any of these items affect the condition of painted surfaces?

3. Work Order System: (See Item 4 in Part I, Section II)

Did your discussion, inspection, or review of required submissions indicate that work orders were being completed in a timely and effective manner? [Timely and effective manner means that at least 95% of the housing authority's emergency items were corrected within 24 hours or emergency status was abated, and the number of non-emergency work orders outstanding at the end of the authority's immediate past fiscal year is greater than 8% and less than or equal to 10% of the total number of work orders received during the immediate past fiscal year, excluding cyclical work orders.] **THIS QUESTION IS NOT APPLICABLE TO INDIAN HOUSING AUTHORITIES.**

Is the work order system adequate to address LBP issues, e.g., identifying units with lead-based paint, prioritizing maintenance of those units with lead-based paint?

4. Repainting Policy: (See Item 5 in Part I, Section II)

Summarize the housing authority's repainting policy.

Discuss how this policy addresses lead-based paint and the overall condition of painted surfaces in the development.

B. Management

1. Turnover Procedure: (See Item 6 in Part I, Section II)

Summarize the housing authority's unit turnover policy as it relates to the routine preparation of units for reoccupancy.

Approximately, how many units were prepared for reoccupancy in the past 12 months?

2. Modernization: (See Item 8 in Part I, and Item 2 in Part I, Section II)

Evaluate the housing authority's modernization plans for adequacy of LBP abatement for the development.

3. What is the schedule for modernization?

Is the schedule consistent with the presence of lead-based paint hazards (immediate and potential)?

4. At what stage is the housing authority in the implementation of the modernization program for the development?

4. Does it appear that the housing authority is deploying its maintenance staff properly to handle lead-based paint hazards? Explain.

Yes _____

No _____

PART III

SAMPLING AND INSPECTION GUIDELINES

PART III: SAMPLING AND INSPECTION GUIDELINES

INTRODUCTION

The sampling and inspection guidelines are to assist risk assessors in selecting the apartments, common areas, community facilities, and site areas to be inspected and tested for the presence of lead-based paint hazards. Dust is one of the most immediately accessible sources of lead exposure for children as well as adults.

The objective is to find places that are most likely to have the highest loadings of dust lead in a given development, not to take a representative sample of all units or common areas. This method of sampling, sometimes called "worst case" sampling, saves money while achieving the goal of determining the likely risk of lead exposure in a development.

Dust lead loadings are expressed in terms of micrograms of lead per square foot. This is a good way of measuring the amount of dust lead that might be accessible to children, but it is, of course, strongly associated with the amount of dust on the surface being sampled as well as the concentration of lead in the dust.

Experience indicates that it is important to take dust samples in the following places, if possible.

- Inside apartment units in which a child with an elevated blood lead level resides
- Inside units which the housing authority or risk assessor suspects are in poor condition or are randomly selected, and therefore are most likely to contain lead hazards

Within units and common spaces, dust samples should be taken on floors and window wells—where the sash rests against the sill—or window sills if the wells are not accessible. In survey after survey, it has been found that window wells have higher dust lead loadings than any other interior dust sampling location, probably because window wells are rarely cleaned and because they can catch exterior as well as interior sources of lead.

In developing the following sampling and inspection guidelines, HUD considered cost as well as the objective of determining risks. The following recommendations provide the minimum number of units or spaces to be inspected and the minimum number of samples to be taken.

OBJECTIVE

These guidelines are to assist risk assessors in evaluating paint condition and dust/soil lead levels in the apartment units, community facilities, and other areas. These guidelines are minimum requirements. In addition to the required samples and inspections discussed below, samples should be collected in any other areas which the housing authority or risk assessor has reason to believe may represent hazards for residents.

These guidelines indicate that samples should be collected in two types of units. The first is those units in which a child has been identified as having an elevated blood lead level. The second are "worst case" units—those units which the housing authority or risk assessor suspects are most likely to contain lead hazards. Such "worst case" units will usually be units in poor condition and/or those which are randomly selected by the risk assessor. These units should provide a sense of the dust lead levels and condition of a typical unit.

SECTION I. INSPECTIONS AND DUST SAMPLES TO BE COLLECTED IN APARTMENT UNITS

A. Required Number of Units to Be Inspected and Samples Collected

1. All units in which an elevated blood lead level (EBL) child has been identified should be inspected (and condition of paint recorded on the attached data collection form) and dust samples should be collected as described below. Such units do not count toward the unit inspection/sampling requirement described in the table below.
2. For scattered site units (units in which the housing authority cannot establish that the buildings/units were constructed at the same time, by the same builder, and have similar paint histories), each unit shall be inspected and samples collected.
3. The number of units to be inspected/sampled (in addition to EBL units) is in proportion to the number of units in the development, as indicated in the following table.

NUMBER OF UNITS IN DEVELOPMENT	NUMBER OF UNITS TO INSPECT AND COLLECT SAMPLES
1 - 4	all
5 - 74	5
75 - 124	6
125 - 174	7
175 - 224	10
225 - 299	12
300 - 399	15
400 - 499	18
500+	20 per 500 units, plus 1 for each additional increment of 50 units

B. Unit Selection Criteria

1. All units with an EBL child must be tested.
2. If possible, only housing units designated for families with children (i.e., with three or more bedrooms or, if necessary, two bedrooms) should be sampled. The number of required units to be sampled according to the above table should be divided as follows:
 - a. Worst Case Units: A worst case unit is a unit that the housing authority or risk assessor believes is most likely to have lead hazards accessible to children. These units will be in poor condition. In particular, priority should be given first to those units that have housing code violations and second to those units in poor condition (i.e., with peeling paint and poor housekeeping). Another source for a worst case unit is one in which renovation was recently conducted or other work that has disturbed paint and created dust. Worst case units should represent 50%-60% of the units required in the sample table.
 - b. Randomly Selected Units: The risk assessor should randomly select 40%-50% of the units required in the sampling table.

C. Required Sample Collection Within Units

As a rule, the housing authority and residents should receive notice of intent to perform sampling in advance and in compliance with requirements of the lease agreement. This notice should be the shortest time that will allow the housing authority to comply with requirements of the lease on giving notice. The housing authority and residents must be instructed not to perform any special cleanings prior

to sample collection and inspection so as to assume an accurate sample of existing hazards.

1. Rooms To Be Sampled: Within each unit the living room, kitchen, and two child bedrooms should be sampled and inspected. (One child bedroom and one adult bedroom should be sampled and inspected if two child bedrooms are not possible.)
2. Number and Location of Samples: In each selected room, samples should be obtained from one window well (or, if not possible, window sill) and one floor area. The square footage of the window area sampled must be measured and recorded. A one square foot area of floor should be sampled.
 - a. Window Wells (or Sills): In EBL units and units selected as "worst case" units, select those windows that are in poor condition or that are opened and closed most frequently. In randomly selected units, randomly select the windows to be tested.
 - b. Floors: In EBL units and units selected as "worst case," sample floors in areas likely to have high concentrations of lead dust, e.g., under peeling paint, under windows, near entryways, corners. In units that were randomly selected, split the samples in the unit between those collected near entryways, corners, and those collected under windows. If the floor cannot be sampled (e.g., because of carpeting), collect an additional window sample. **NOTE: Carpeting is not an eligible HA purchase item and therefore has not been installed by the PHA.**

D. Required Inspection of Units

In each unit from which samples are taken, inspect all surfaces in all rooms for defective paint conditions and record results on the attached data collection form.

SECTION II. COMMON AREAS

A. Inspect and collect dust samples as follows:

1. **COMMON HALLWAYS AND STAIRWAYS (1-2 levels):** Collect samples from the following minimum number of common halls/stairs. (All halls/stairs that are connected to an EBL unit shall be inspected and have samples collected. These shall not be counted in the overall sample totals otherwise required.)

a. **LOW-RISE AND MID-RISE BUILDINGS (up to 3 levels):** For buildings in low-rise and mid-rise developments, inspect and sample a common hall/stair connected to the unit to be inspected/sampled. Collect two dust wipe samples, one at the entry area and one from the first level landing.

b. **HIGH-RISE BUILDINGS (4 or more levels):** Inspect and collect samples in "high traffic" areas as follows:

(1) **4-6 LEVEL BUILDINGS**

■ **Corridors:** Collect samples from floor areas and window wells (if present).

Levels	Number of Floor Sample Locations	Number of Window Sample Locations
Ground	2	1
3 or 4	1	1
TOP	1	1
TOTAL	4	3

■ **Stairwell:** Collect samples from floors at landing areas and window wells (if present).

Levels	Number of Stair/Tread Landing Sample Locations	Number of Window Sample Locations*
Ground	1	1
3 or 4	1	1
TOP	1	1
TOTAL	3	3

(2) 7-12 LEVEL BUILDINGS

- Corridors: Collect samples from floor areas and window wells (if present).

Levels	Number of Floor Sample Locations*	Number of Window Sample Locations*
Street	2	1
3 or 4	1	1
7, 8, 9	1	1
TOP	1	0
TOTAL	5	3

- Stairwells: Collect samples from floors at landing area and at window wells (if present).

Levels	Number of Stair/Tread Sample Locations	Number of Window Sample Locations
Street	1	1
3 or 4	1	1
7, 8, 9	1	1
TOP	1	0
TOTAL	4	3

* Select "worse case" areas where there is visible accumulation of dirt and dust if possible.

(3) 13-20 LEVEL BUILDINGS

- 13-20 levels: Follow the procedure for floors 7, 8, and 9. Collect one sample from corridor floor and one sample from window well (if present). Collect one sample from floors at landing area and one from window well (if present).
- 20+ levels: Repeat procedures as above for floors 13-20, at every ten-level interval.

2. Location for Inspection of Corridors/Stairwells: Inspect and record on attached data form the conditions of all painted surfaces at all locations where samples are collected.
 - a. For high-rise buildings inspect painted surfaces at levels from which samples are collected.
 - b. For low and mid-rise buildings inspect the entire hall/stair.

**SECTION III. COMMUNITY BUILDINGS, DAY CARE, HEALTH CARE,
RECREATIONAL, OTHER PROGRAM SPACES
ACCESSIBLE TO CHILDREN, AND MANAGEMENT
OFFICES**

Collect Samples as follows:

A. Spaces Up to 2000 Square Feet:

1. Floors: Collect two samples from widely separated locations in "high traffic" areas regularly used or accessible to children.
2. Window Wells/Sill: Collect two "worst case" samples, preferably from window wells.

B. Spaces Over 2000 Square Feet:

1. Floors: Collect one additional sample for each increment of 2000 square feet.
2. Window Sills/Wells: Collect one additional sample for each additional increment of 2000 square feet.

C. Management Office:

1. Collect one sample from the floor of the resident waiting area; two if area is more than 400 square feet.

D. Inspection Requirements:

Inspect and record on the attached data collection form the condition of all painted surfaces in the areas in the community facilities and management offices which are accessible to children. Inspect interior and exterior areas.

SECTION IV. SOIL SAMPLE COLLECTION

(See F. Below for Sample Technique)

- A. Buildings: Collect one 50 ml composite sample (8-10 small scoops at 10-20 foot spacing) at 0-3 feet away from building and one composite sample at 10-20 feet away from building. Collect samples in bare areas near suspect surfaces (older paint). If paint chips are present and could be accessible to children, include them in composite sample.
1. Low-Rise Building: Collect soil samples at exterior of each building sampled/inspected.
 2. Mid-Rise Building: Collect soil samples at an exterior area near each common hallway sampled/inspected.
 3. High-Rise Building: Collect one composite soil sample at each building face greater than 30 ft. in length, maximum of six samples per building.
 4. Scattered Site Housing Units: Collect soil samples at exterior of each unit sampled/inspected.
- B. Play Areas: Collect a composite sample at each play area. Collect at areas most likely to be used by children, e.g., at bottom of slide, under swings, in sand play area, etc.
- C. Parking Lots: Collect a composite sample from the perimeter of the parking lots which have a capacity of 30 cars or more.
- D. Main Roadways: If "high traffic" roadways abut or intersect the site, collect a composite sample at edge of roadway.
- E. Inspection: Inspect painted surfaces in areas where samples have been collected.
- F. Soil Collection Technique: Composite samples should be obtained by using a 50 ml plastic centrifuge tube to scoop up 8-10 separate portions of approximately 5 ml each. Scoops should be taken from bare areas to minimize organic materials in sample. If bare areas do not exist, use the tube or other means to expose soil for each area to be scooped and include miscellaneous organic material in sample. Do not try to remove extraneous material in the field. Samples will be screened and sieved in the laboratory. Wet and frozen soil can be included in samples. NOTE: Avoid using tools to collect soil since they may cross-contaminate samples unless completely cleaned between samples.

SECTION V: PAINT CHIP SAMPLES

Collect a paint chip sample at any area where paint is in poor condition and readily accessible to children. If there are many such similar areas, collect a few samples from representative areas. For example, if all window wells are in poor condition, collect paint chips from two to three window wells to verify presence of lead-based paint.

SECTION VI: PROCEDURES FOR COLLECTING DUST SAMPLES

A. Supplies Needed for Dust Sample Collection

1. Diaper wipes
 - a. Do not use the thick kind
 - b. Wetting agent should not be alcohol-based
2. Tape measure
3. Pencil

Do not use a permanent marker
4. Disposable gloves - not sterilized

For example, Fisher Scientific No. 11-394-36B
5. Polyethylene centrifuge tubes - not sterilized (50 ml size)

For example, Fisher Scientific No. 05-500-20C
6. Stainless steel knife
7. Field Sampling Forms
8. Template (optional)

Guard against sampling contamination
9. Camera and film (optional)

B. Dust Wipe Sampling Procedure

1. Identify area to be wiped but do not measure it yet. Avoid walking on or touching the surface.
2. Remove first wipe and throw it away.
3. Put disposable glove on one hand. Use a new glove for each sample.
4. Remove second wipe and insert aseptically into centrifuge tube. Label it with a unique identifier as the first blank.
5. Remove wipe with gloved hand, shake open, and place it flat at one corner of the surface to be wiped.
6. If the surface is a square (e.g., a floor), proceed to wipe with an "S" motion over the entire surface in a north-south direction, pressing firmly with the palm. If the surface is a rectangle (e.g., window well or window sill), wipe in a straight motion. Attempt to remove all visible dust from the surface.
7. Fold the wipe in half with the contaminated side facing inward. Repeat the wipe motion in an east-west direction. Attempt to include all visible dust.
8. Fold the wipe again with the contaminated side facing inward, and insert aseptically into a centrifuge tube. If visible dust remains on the surface from the area wiped, use another wipe and insert it into the same tube.
9. Seal the tube and label it with a unique identifier.
10. Measure the surface area wiped. Record location, condition of surface, area, etc., on the field sampling form.
11. Remove glove. Put all contaminated gloves for the sampled area into a container. Do not throw away gloves inside the housing unit.
12. At the conclusion of the sampling period, obtain another blank sample and label with identifier.
13. At the end of the sampling exercise, wash hands and face thoroughly with plenty of soap and water before getting into car.
14. Before shipping containers to laboratory, confirm all sample container identifiers with lab submittal sheets.

Section VII: Data Entry Forms

Unit Inspection/Data Entry Form

Development #: _____ Development Name: _____ Building #: _____ Apartment #: _____
 Street Address: _____ Inspected By: _____ Date: _____

Selection Criteria/Conditions:
 EBL Child: ___ Yes or ___ No Reoccupied within 12 months: ___ Yes or ___ No
 Worst Case: ___ or Random Sample: ___ Housekeeping: ___ (G)ood ___ (F)air or ___ (P)oor
 Code Citations: ___ Yes or ___ No

	Surf. Loc. Code	Substrate Code*	(G)ood, (F)air, (P)oor, (N)one		Sample Dimensions In Inches	Field Sample No.	Lab Sample No.	Notes:
			Substrate Condition	Paint Condition				
Living Room								
Window well #1 (LR)	1				"x "			
Window sill if no well #1 (LR)	2				"x "			
Floor - Under Window (LR)	3				"x "			
Floor - Other (LR) **	4				"x "			

Kitchen								
Window well #1 (Kitchen)	5				"x "			
Window sill if no well #1 (Kitchen)	6				"x "			
Floor - Under Window (Kitchen)	7				"x "			
Floor - Other (Kitchen) **	8				"x "			

Bedrooms (1st priority is bedrooms with children.)

Bedroom #1								
Window well #1 (BR 1)	9				"x "			
Window sill if no well #1 (BR 1)	10				"x "			
Floor - Under Window (BR 1)	11				"x "			
Floor - Other (BR 1) **	12				"x "			

Bedroom #2								
Window well #1 (BR 2)	13				"x "			
Window sill if no well #1 (BR 2)	14				"x "			
Floor - Under Window (BR 2)	15				"x "			
Floor - Other (BR 2) **	16				"x "			

Soil Samples - Bare soil preferred. Record soil samples from scattered sites only, as defined in instructions.

Soil <3' from foundation	17							
Soil 10'-20' from foundation	18							
Soil near primary entry	19							
Soil Other (See instructions)	20							

Notes:

*Substrate Codes: 1. Wood 2. Bare Metal 3. Painted Metal 4. Marble/Synthetic Marble/Plastic Laminate 5. Brick or Block Masonry
 6. Bare Concrete 7. Painted Concrete 8. Soft Vinyl Tile or Rubber 9. Ceramic or Quarry Tile 10. Terrazzo 11. Carpet
 **Take "Floor - Other" sample from corner, main entry or under paint in poor condition. Indicate location in notes.

Community Space Inspection/Data Entry Form

Development #: _____ Development Name: _____ Street Address: _____
 Building Number _____ and/or Name: _____
 Inspected by: _____ Date: _____

Community Space #1	Surf. Loc. Code	Substrate Code*	(G)ood, (F)air, (P)oor, (N)one		Sample Dimensions In Inches	Field Sample Number	Lab Sample Number	Notes (record the use of community spaces I.e. Day Care Center, Recreation Room, Well Baby Clinic, etc.)
			Substrate Condition	Paint Condition				
Waiting Area > 400 Sq.Ft. - #1	21				" x "			
Waiting Area > 400 Sq.Ft. - #2	22				" x "			
Comm.Sp.<2000'--Floor #1	23				" x "			
Comm.Sp.<2000'--Floor #2	24				" x "			
Comm.Sp.<2000'--Window #1	25				" x "			
Comm.Sp.<2000'--Window #1	26				" x "			

(Add one sample of each type for each additional 2000 sq.ft.)

Comm.Sp>2000'--Floor #1	27				" x "			
Comm.Sp>2000'--Floor #2	28				" x "			
Comm.Sp>2000'--Window #1	29				" x "			
Comm.Sp>2000'--Window #2	30				" x "			

Community Space #2

Comm.Sp.<2000'--Floor #1	31				" x "			
Comm.Sp.<2000'--Floor #2	32				" x "			
Comm.Sp.<2000'--Window #1	33				" x "			
Comm.Sp.<2000'--Window #1	34				" x "			

(Add one sample of each type for each additional 2000 sq.ft.)

Comm.Sp>2000'--Floor #1	35				" x "			
Comm.Sp>2000'--Floor #2	36				" x "			
Comm.Sp>2000'--Window #1	37				" x "			
Comm.Sp>2000'--Window #2	38				" x "			

Community Space #3

Comm.Sp.<2000'--Floor #1	39				" x "			
Comm.Sp.<2000'--Floor #2	40				" x "			
Comm.Sp.<2000'--Window #1	41				" x "			
Comm.Sp.<2000'--Window #1	42				" x "			

(Add one sample of each type for each additional 2000 sq.ft.)

Comm.Sp>2000'--Floor #1	43				" x "			
Comm.Sp>2000'--Floor #2	44				" x "			
Comm.Sp>2000'--Floor #3	45				" x "			
Comm.Sp>2000'--Floor #4	46				" x "			
Comm.Sp>2000'--Floor #5	47				" x "			
Comm.Sp>2000'--Window #1	48				" x "			
Comm.Sp>2000'--Window #2	49				" x "			
Comm.Sp>2000'--Window #3	50				" x "			
Comm.Sp>2000'--Window #4	51				" x "			
Comm.Sp>2000'--Window #5	52				" x "			

*Substrate Codes: 1. Wood 2. Bare Metal 3. Painted Metal 4. Marble/Synthetic Marble/Plastic Laminate 5. Brick or Block Masonry
 6. Bare Concrete 7. Painted Concrete 8. Soft Vinyl Tile or Rubber 9. Ceramic or Quarry Tile 10. Terrazzo 11. Carpet

Corridor and Stairwell Inspection/Data Entry Form

Development #:	Development Name:	Street Address:
Building Number	and/or Name:	Date:
Inspected by:		

	Surf. Loc.	Sub- strate Code*	(G)ood, (F)air, (P)oor, (N)one		Sample Dimensions In Inches	Field Sample Number	Lab. Sample Number	Notes
			Substrate Condition	Paint Condition				
Ground Floor (all building types)								
Corridor Floor – Ground Level – #1	53				"x "			
Corridor Floor – Ground Level – #2	54				"x "			
Corridor Window – Ground Level	55				"x "			
Stairwell Landing – Ground Level	56				"x "			
Stairwell Window – Ground Level	57				"x "			

Levels 3 – 6								
Corridor Floor – (3rd or 4th)	58				"x "			
Corridor Window – (3rd or 4th)	59				"x "			
Stairwell Landing – (3rd or 4th)	60				"x "			
Stairwell Window – (3rd or 4th)	61				"x "			

Levels 7 – 12								
Corridor Floor – (7th, 8th or 9th)	62				"x "			
Corridor Window – (7th, 8th, or 9th)	63				"x "			
Stairwell Landing – (7th, 8th, or 9th)	64				"x "			
Stairwell Window – (7th, 8th, or 9th)	65				"x "			

Levels 13 – 20								
Corridor Floor – (13th – 19th)	66				"x "			
Corridor Window – (13th – 19th)	67				"x "			
Stairwell Landing – (13th – 19th)	68				"x "			
Stairwell Window – (13th – 19th)	69				"x "			

Levels 21 – 30								
Corridor Floor – (21st – 29th)	70				"x "			
Corridor Window – (21st – 29th)	71				"x "			
Stairwell Landing – (21st – 29th)	72				"x "			
Stairwell Window – (21st – 29th)	73				"x "			

Levels 31 – 40								
Corridor Floor – (31st – 39th)	74				"x "			
Corridor Window – (31st – 39th)	75				"x "			
Stairwell Landing – (31st – 39th)	76				"x "			
Stairwell Window – (31st – 39th)	77				"x "			

Top Floor (All Buildings with four or more levels)								
Corridor Floor – (Top)	78				"x "			
Corridor Window – (Top)	79				"x "			
Stairwell Landing – (Top)	80				"x "			
Stairwell Window – (Top)	81				"x "			

*Substrate Codes: 1. Wood 2. Bare Metal 3. Painted Metal 4. Marble/Synthetic Marble/Plastic Laminate 5. Brick or Block Masonry
 6. Bare Concrete 7. Painted Concrete 8. Soft Vinyl Tile or Rubber 9. Ceramic or Quarry Tile 10. Terrazzo 11. Carpet

Soil Sample Data Entry Form

Development #:	Development Name:		
Street Address:	Inspected by:	Date:	

	Surface Location Code	Field Sample Number	Lab Sample Number	Notes
Soil from playgrounds/lot lots				
Soil from play area #1	82			
Soil from play area #2	83			
Soil from play area #3	84			
Soil from play area #4	85			

Soil at curbside of highest traffic roadway accessible to children				
Soil at roadway	86			

Soil samples from Building # _____, Located at (street address) _____				
Soil < 3' from foundation-side #1	87			
Soil < 3' from foundation-side #2	88			
Soil < 3' from foundation-side #3	89			
Soil < 3' from foundation-side #4	90			
Soil 10'-20' from foundation-side #1	91			
Soil 10'-20' from foundation-side #2	92			

Soil samples from Building # _____, Located at (street address) _____				
Soil < 3' from foundation-side #1	93			
Soil < 3' from foundation-side #2	94			
Soil < 3' from foundation-side #3	95			
Soil < 3' from foundation-side #4	96			
Soil 10'-20' from foundation-side #1	97			
Soil 10'-20' from foundation-side #2	98			

Soil samples from Building # _____, Located at (street address) _____				
Soil < 3' from foundation-side #1	99			
Soil < 3' from foundation-side #2	100			
Soil < 3' from foundation-side #3	101			
Soil < 3' from foundation-side #4	102			
Soil 10'-20' from foundation-side #1	103			
Soil 10'-20' from foundation-side #2	104			

Soil samples from Building # _____, Located at (street address) _____				
Soil < 3' from foundation-side #1	105			
Soil < 3' from foundation-side #2	106			
Soil < 3' from foundation-side #3	107			
Soil < 3' from foundation-side #4	108			
Soil 10'-20' from foundation-side #1	109			
Soil 10'-20' from foundation-side #2	110			

SECTION VIII: INTERPRETATION OF RESULTS

The decision of whether to do further testing or to cleanup (including the correction of defective paint surfaces in all units) depends on the costs of cleanup versus more testing AND the pattern of testing results. In addition to evaluating whether dust lead levels exceed the clearance standard, one should consider by how much the levels exceed the standard.

Typically, one would expect higher dust lead levels and worse inspection reports from "worst case" and EBL units.

If these units and those that are randomly selected all have dust lead levels below the clearance standards and any deteriorating paint does not contain lead, the housing authority can be reasonably confident that this development is likely to not be posing a lead hazard at this time.

If the "worst case" units or components in these units exceed the clearance standards and the randomly selected units do not, the housing authority should consider further testing to identify those units requiring cleanup.

If the randomly selected units exceed the clearance standard and the "worst case" ones do not, it indicates that the housing authority has not identified true "worst case" units, further testing should be considered.

If all the units or components in units exceed the clearance standards, consideration should be given to the cleanup of all units without further testing.

PART IV

**RECOMMENDATIONS TO CONTROL
LEAD-BASED PAINT HAZARDS**

PART IV: RECOMMENDATIONS TO CONTROL LEAD-BASED PAINT HAZARDS

To Be Prepared by the Risk Assessor

INTRODUCTION

Risk assessments are designed to determine whether lead-based paint hazards exist and, if they do, to provide recommendations for reducing such hazards and in-place management strategies for managing such hazards. Risk assessments also provide recommendations for managing lead-based paint hazards as these hazards relate to a housing authority's maintenance and management practices.

INSTRUCTIONS TO THE RISK ASSESSOR

Risk assessments should measure and characterize, as precisely as possible, the existence of lead-based paint hazards accessible to residents and workers in a particular housing development. The report to the housing authority should include recommendations for action by the housing authority to control such hazards. The recommendations on the following page should be used, at a minimum, to complete your report.

When a housing authority has more than one development assessed, risk management recommendations should be broken out into: a) those which apply to authority-wide maintenance and management policies and practices and b) those which are specific to a particular development.

Every assessment should evaluate what the housing authority is doing with regard to:

- resident education and blood lead level screening
- comprehensive testing
- employee training
- modification of maintenance practices to address lead paint hazards.

Where necessary, the assessment should provide recommendations in these areas for changes in authority-wide policy and practices.

At a particular development, the recommendations should address the adequacy of maintenance as it relates to lead-based paint, the condition of painted surfaces, and, most importantly, the presence of unacceptable levels of lead.

Where lead levels exceed acceptable limits, the recommendations should call for immediate action in all units and areas where children under seven and pregnant women are exposed.

RECOMMENDATIONS

1. Identify all interior and exterior areas where lead levels exceed standards. Specify cleanup procedures to treat these conditions.
2. Specify scope of work and scheduling for post-treatment dust sampling.
3. List all suspect paint and surfaces in fair or poor condition. What in-place management measures should be implemented? Give an estimated unit cost for proposed in-place management.
4. What aspects of existing maintenance systems should be modified to address lead-based paint hazards to workers and residents?
5. What aspects of existing management systems should be modified to address lead-based paint issues?
6. Identify key housing authority management and maintenance personnel who should receive training in lead-based paint in-place management procedures. Include all personnel supervising the management and maintenance of the development.
7. For resident education and to encourage blood testing, provide the educational guides which describe known and suspect lead-based paint risks, housekeeping and cleaning procedures for reducing lead dust levels, and health and dietary information.
8. Additional Risk Assessor comments.

PART V

IN-PLACE MANAGEMENT GUIDE

PART V: IN-PLACE MANAGEMENT

INTRODUCTION

"In-place management" is the term used to refer to a broad range of strategies and methods for controlling exposures and preventing poisonings from lead in paint and other media pending permanent abatement. In-place management should be an integral part of most housing authorities' overall programs for preventing lead poisoning, complimenting the other measures, described briefly below, aimed at identifying and reducing lead poisoning hazards.

Inspections are conducted on a surface-by-surface basis to determine the condition of paint on the surface. Abatement permanently corrects and eliminates lead-based paint hazards. Because of the high number of older dwelling units with lead-based paint, it will take years to complete the abatement process. In many cases, permanent abatement of lead paint hazards will not be done until a dwelling unit undergoes substantial or comprehensive modernization. In the meantime, housing authorities have a responsibility to protect residents, their children, and workers from lead hazards. **For those painted surfaces that have not been tested, it should be assumed that the paint contains lead.**

Risk Assessments are conducted to identify existing or likely lead exposures that may present poisoning hazards in units not scheduled for modernization or abatement in the near future. In-place Management strategies are normally instituted subsequent to (and often in response to) risk assessments and should continue until abatement is completed. The objective of in-place management is to reduce excessive exposures to lead and protect occupants from lead poisoning in units pending abatement.

PREVENTING AND REDUCING EXPOSURES TO LEAD

Children get lead poisoning by ingesting lead. Sometimes children are poisoned by chewing on lead painted surfaces or by eating paint chips. But the most common cause of poisoning is the ingestion of dust lead through normal hand-to-mouth activities, such as thumb-sucking or mouthing toys. If a child is living in a dwelling with high levels of lead in dust on surfaces, there is a high likelihood that the child may become lead poisoned. Dust lead is invisible. It settles from the air and sticks to surfaces, where it can be picked up on children's hands and later ingested.

The fundamental objective of all in-place management strategies is to reduce levels of dust lead and lead paint chips to which a child may be exposed. In most cases, the most significant sources of lead dust are:

- Deteriorating lead-based paint which is chalking, chipping, peeling, or flaking
- Lead-based paint on surfaces subject to friction or impact, such as window sashes, doors or painted floors
- Exposed soil with high levels of lead contamination.

IN-PLACE MANAGEMENT'S MULTIPLE ROLES

It is important to understand that in-place management measures meet different needs in three general situations.

First, in-place management measures should be instituted to clean up lead paint and dust lead hazards identified through the course of risk assessments (for dwelling units where full lead abatement actions are not possible in the near future). In this scenario, in-place management amounts to corrective measures—specifically designed to clean up excessive exposures of lead paint chips and dust which have been found. In addition to cleaning up chipping and peeling paint and high dust lead levels, in-place management involves taking steps to stabilize the situation to prevent continuing or future lead exposures.

Second, in-place management means preventing acceptable situations from deteriorating to create excessive lead exposures in the future. In this sense, in-place management amounts to preventive maintenance and periodic cleaning. Surfaces known or suspected to be painted with leaded paint should be monitored. If it is suspected that lead dust levels may be increasing, periodic cleanups should be done to keep dust lead from accumulating to dangerous levels on accessible surfaces such as window sills (stools) and floors.

Third, in-place management requires that precautions be taken to avoid inadvertently disturbing lead-based paint or otherwise creating dust lead hazards in the course of other maintenance, repair, or modernization work. Any work disturbing lead-based paint has the potential for generating dust lead. Obviously, the level of risk is a function of the scale of the work and the amount of dust generated, but it does not take much dust lead to poison a child or an adult. All maintenance, repair, or modernization work encountering paint should be carried out with attention to the potential for creating lead hazards. At a minimum, in-place management will include a rigorous cleanup at the conclusion of any repair project which disturbs lead-based paint.

FUNDING CORRECTIVE MEASURES UNDER THE COMPREHENSIVE IMPROVEMENT ASSISTANCE PROGRAM

Section 14 (a)(5) of the United States Housing Act of 1937, as amended by the Appropriations Act, provides that effective interim measures (in-place management) to reduce and contain the risks of lead-based paint poisoning recommended as a result of a professionally administered risk assessment are eligible modernization costs. In-place management includes cleaning and re-painting, education of residents, training and equipping of employees, regular monitoring of painted surfaces, and modifications to existing maintenance and management practices.

IN-PLACE MANAGEMENT PRINCIPLES AND SAFEGUARDS

1. Sound Maintenance Program and Practices

The success of in-place management strategies for controlling lead-based paint and dust exposures is directly affected by a housing authority's overall maintenance program and management practices. A number of the questions included in the Risk Assessment Protocol are intended to highlight weaknesses in a housing authority's maintenance and management practices—the more "NO" answers, the more serious the problem or potential problems. If the risk assessment suggests problems, housing authorities are encouraged to retain a consultant to evaluate and modify maintenance and work practices. Industrial engineers normally perform this type of consultation. An engineer familiar with public housing operations and funding mechanisms is recommended.

2. Worker Protection and Training

It is essential that all housing authority staff and others directly involved with reducing lead-based paint hazards have instruction provided by qualified trainers to make them aware of the hazards of lead, proper procedures and work practices, and the need for protective equipment and proper hygiene. Great care must be exercised to protect workers from excess lead exposures and to prevent them from taking lead dust home on their clothing or belongings which could then poison their children.

Corrective Actions. Common sense must be used in selecting the worker protection appropriate to the task at hand. Workers conducting in-place management projects to correct hazards found during risk assessments (either chipping and peeling lead-based paint or elevated lead dust levels) should wear the full protective gear recommended for abatement work in the "Interim Guidelines." This includes:

- coveralls (preferably disposable)
- shoe coverings
- hair covering
- gloves
- safety goggles
- a properly fitted, negative-pressure half-face mask respirator with a HEPA filter.

Workers on projects to correct hazards identified through risk assessments (and other projects which could disturb lead-based paint and generate significant dust) must not eat, drink, or smoke on the job. Hands and face must be washed before breaks and at the end of the work day. Breaks should be taken away from the work areas. Work clothes should not be worn home. Workers should wear protective work clothes instead of street clothes or they should wear protective garments over their street clothes. Work clothes should be disposed of or laundered. If shower facilities are not available on-site or at the housing authority's maintenance shops, workers should shower and wash their hair immediately upon returning to their homes.

Preventive Maintenance and Repairs. Activities related to preventive maintenance, such as normal repainting, and routine cleaning may be carried out with lesser protection, depending on the scale of the project and the potential for exposure. At the same time, it is important that workers understand the need for proper hand washing and personal hygiene when working with painted surfaces that may contain lead.

Workers engaged in other renovation or repair projects which may encounter lead-based paint must be protected from exposures and must take the necessary precautions to control, contain, and clean up lead dust. The level of protection and controls should be keyed to the scale of the project and its potential for dust generation. At one extreme, a light switch or a door handle can be replaced without great concern over lead dust generation. At another level, a kitchen renovation or window replacement project may well create tremendous exposures, tantamount to a full-scale abatement project. In any event, surrounding surfaces should be protected to capture any dust or paint chips generated during any work.

It is the responsibility of the housing authority's maintenance supervisor to assure that workers engaged in in-place management corrective actions, preventive maintenance, and repair projects are properly protected. Workers engaged in in-place management activities to correct hazards identified in risk assessments should be subject to medical monitoring procedures outlined in the HUD Interim Lead-Based Paint Guidelines. Briefly, this means preplacement medical examinations, periodic medical examinations, and blood lead monitoring.

3. Protection of Residents

Corrective Action. Housing residents should not be permitted in the unit or in the vicinity of the job while corrective actions are being carried out. Residents' belongings should be protected from possible exposure to lead-based dust released during the project. In most cases in which more than a single work day is required to complete the job, it will be cost effective to permit residents to return to their dwellings each night. In these cases, a complete cleanup will be required at the end of each work day before residents are permitted to return to the space or room.

Preventive Maintenance and Repairs. In most cases, it may be possible to conduct preventive maintenance and repair projects while residents remain in their homes. Care should be exercised to keep residents and their children away from the work area and to protect their belongings from possible dust lead contamination.

4. Preparation of Work Area

For any corrective action, maintenance, or repair work involving lead-based paint, it is important that steps be taken in advance of the actual work to contain lead dust and make cleanup easier. Detailed instructions are included in the following section dealing with specific hazard situations. As a general rule, plastic sheeting should be put down to prevent lead-based paint chips and dust from contaminating the ground, the dwelling unit, or residents' belongings.

5. Cleanup Procedures

Cleanup is one of the most important components of any in-place management project. Unless great care is taken to clean up debris, paint chips, and dust lead, the dwelling may be more hazardous after treatment than it was before. Dust lead is invisible, sticky, and hard to cleanup.

Corrective Actions. At the end of each day, dust and debris should be cleaned up and removed so as not to be further tracked around. Debris should be misted with water prior to sweeping and then placed in double 4-mil or 6-mil plastic bags. A HEPA vacuum should be used to pick up remaining dust.

At the end of a corrective action work (or repair work which generates significant amounts of dust lead), cleanup consists of a three-step process.

- a. A HEPA vacuum should be used to remove all surface dust and small debris.
- b. A wet washing should follow using TSP detergent. Care should be taken each time the cleaning mixture is exchanged to ensure that dirty water is not allowed to contaminate surfaces. The use of a two-bucket system works well: one bucket contains the phosphate/water wash and the second contains clear water for mop/rag washing.

- c. Finally, a final HEPA vacuuming.

Cleaning equipment should be cleaned before use in another dwelling. Rags and mops used for cleanup in projects involving lead-based paint and dust should not be used for other purposes.

Preventive Maintenance and Repair Projects. The intensity of the cleanup should be based on the scale of the maintenance or repair project and the amount of dust lead generated. If a repair project generates extensive dust lead, the full cleanup procedures recommended above for corrective actions should be followed. In other cases, traditional cleanup procedures can be used, with additional emphasis for dust lead. Wet mopping or wet wiping with TSP detergent should be a routine clean up procedure for projects which generate even small amounts of dust lead.

6. Disposal of Debris

It is important for housing authorities to develop a practice of minimizing waste production and preventing waste products from entering the environment. Because of the limited scope and nature of most in-place management activities, the accumulation of hazardous waste should be minimal. Unless contaminated components are removed for replacement, waste will typically be limited to paint chips, dust containing lead, contaminated cleaning supplies, disposable cleaning equipment and clothing, plastic films used as protective coverings and/or catchments, and filter products.

Certain wastes from an in-place management project, either solid or liquid, may be classified as hazardous. If so, they will have to be treated as such and handled by a licensed transporter or treatment firm.

All debris from a project, whether classified as hazardous or not, must be contained and transported in such a way as to prevent the dispersal of lead-bearing dust, chips, or contaminated liquid into the environment. Lead debris should never be sent to a solid waste incinerator, a disposal method that disperses lead into the air. Any lead-containing by-products should be considered as hazardous and should be disposed of in strict accordance with State and local requirements for disposal of limited quantities of lead waste.

7. Clearance Testing

Corrective Actions. After the cleanup is completed for all corrective actions, the unit or work area should be tested to assure that hazardous amounts of lead dust are not left behind.

a. Clearance Standard

Several states have adopted a post-abatement dust standard which has been included in the HUD Interim Guidelines. The abatement clearance standard was based on a health-based study on dust lead and modified slightly based upon experience of what is practical and possible. The standard applied to post in-place management clearance is similar. The in-place management clearance standard allows the following maximum levels of lead in dust ("ug/sq ft" stands for micrograms per square foot):

Floors:	200 ug/sq ft
Window Sills (Stools):	500 ug/sq ft
Window Wells:	800 ug/sq ft

b. Dust Sampling and Laboratory Measurements

Persons collecting dust samples and laboratories measuring dust lead levels should be thoroughly familiar with the recommended sampling and analysis protocols for dust contained in the HUD Interim Guidelines as they are to be followed for testing in connection with in-place management.

c. Interpretation of Test Results

Dust readings in excess of 200 micrograms per square foot on floors, 500 on window sills/stools, or 800 ug/sq ft on window wells are considered positive readings. In any housing development, if a component has one or more positive readings, the housing authority has the option of either testing all occurrences of the component in question, or implementing in-place management actions for all of the components in question. The exact nature of the actions depends upon factors such as whether or not lead-based paint is known to be present.

d. Repeating the Final Cleanup

Following any failure to clear the first clearance test, the housing authority should verify that the cleanup procedures followed were in conformance with the prescribed cleanup procedures. A second clearance failure probably suggests that the source of the lead may be severe enough to warrant the full abatement of lead hazards in the dwelling.

Preventive Maintenance and Repair Projects. Clearance testing is typically not indicated for preventive maintenance and repair projects unless a substantial amounts of lead dust is generated.

8. Follow-on Monitoring

Dwelling units and public spaces covered by in-place management should be reinspected periodically to:

- a. Verify that previously restored surfaces remain in sound condition
- b. Identify the occurrence and extent of additional painted surface failures
- c. Check for the presence or recurrence of excessive dust and assess the quality of housekeeping. This could occur as a part of the annual inspection or when a dwelling is prepared to be reoccupied.

At a minimum, walk-through visual inspections should be performed on a yearly basis by personnel who are knowledgeable about lead hazards and in-place management activities. Public spaces should also be inspected on a regular basis.

Residents should be encouraged to report cracked, peeling paint as it occurs.

9. Resident Education

It is the responsibility of the housing authority to provide all residents with young children an educational guide developed by HUD. This guide makes clear that parents also have an important role to play in protecting their children from lead poisoning. The guide stresses the importance of wet mopping and wet wiping to control lead dust levels. It also emphasizes the importance of washing children's hands and providing a good diet. Residents should be encouraged to call to the attention of the housing authority any chipping or peeling paint. Finally, the housing authority should encourage residents to have their children under age six given a blood-lead test.

SPECIFIC IN-PLACE MANAGEMENT CORRECTIVE ACTION STRATEGIES

1. Deteriorating Exterior Paint

Deteriorated exterior surfaces with cracked, peeling, flaking, dusting paint may be releasing lead paint chips and dust lead. The resulting dust lead frequently finds its way into dwellings.

Recommended Action

Deteriorated exterior surfaces are to be repaired to obtain a smooth surface which can be repainted. This will require corrective work that will require the removal of loose paint and dust, cleaning the surface, and resealing the surface by painting. The purpose is to restore the integrity of the paint film on the exterior surface and control further deterioration of the paint.

For the removal of loose paint or painted material, "wet scraping" is to be employed. This means that both the painted surface and the scraping tool are to be kept wet with water during the scraping process to minimize the release of lead dust and the dispersal of lead paint chips.

Because of the possibility of releasing and dispersing hazardous debris and dust during the corrective work, residents should not be permitted in the vicinity of the work during repair activities. Access should be restricted until thorough cleanup activities have been completed following the work. (It may be necessary to fence or cordon off the immediate work area to prevent unauthorized access or, if possible, to identify an alternate building entrance for residents' use during the work.)

Sequence of Steps

- a. Planning the Corrective Action: Residents are expected to have access to their residences during the period of exterior corrective work. Work activities that require more than one day for completion should be scheduled so that each day's work (including cleanup) can be accomplished within the housing authority's normal work day.
- b. Area Protection: Cover all area(s) immediately adjacent to and below the work with a 6-mil polyethylene film to protect the ground and shrubbery and to retain wet debris and dust that will be created during the surface treatment. This covering should extend out horizontally from the base of the wall for a distance that is equal to half the height of the wall surface being treated.

Although 6-mil film is reasonably tough, avoid unnecessary traffic over the film to reduce chance of puncturing. In addition, if the ground surface is rough, it may be necessary to double the film to minimize the occurrence of punctures. Joints or tears in the polyethylene film should be sealed with duct tape. Any tears that occur in coverings during the work should be repaired immediately.

- c. Surface Preparation: The building surfaces to be corrected should be moistened with a fine spray of water from a garden sprayer or atomizing bottle. Care should be taken to assure that electricity is shut off to exterior outlets and switches in the immediate vicinity of anticipated work before any moisture is applied to surfaces.
- d. Wet Scraping: Loose, peeling, flaking material should be removed from the surface(s) by wet scraping the surface(s) to obtain a smooth cleanable surface that can be repainted. The scraping tool should have a soft pliable blade of plastic or rubber that will not damage or gouge the material. The blade should be rigid enough, however, to remove rough jagged edges of the broken paint surface. The resulting surface should be free of jagged, rough edges or snags that would interfere with the paint or coating's ability to bridge any remaining gaps. The rubber blade squeegee that is used for cleaning automobile

windshields may be satisfactory. (One style has a fabric covered foam or sponge on the back of the blade for wetting the surface.) Commercially available plastic scraping pads that are for use with liquid or chemical paint strippers may also be effective for wet scraping and the smoothing of roughened surfaces.

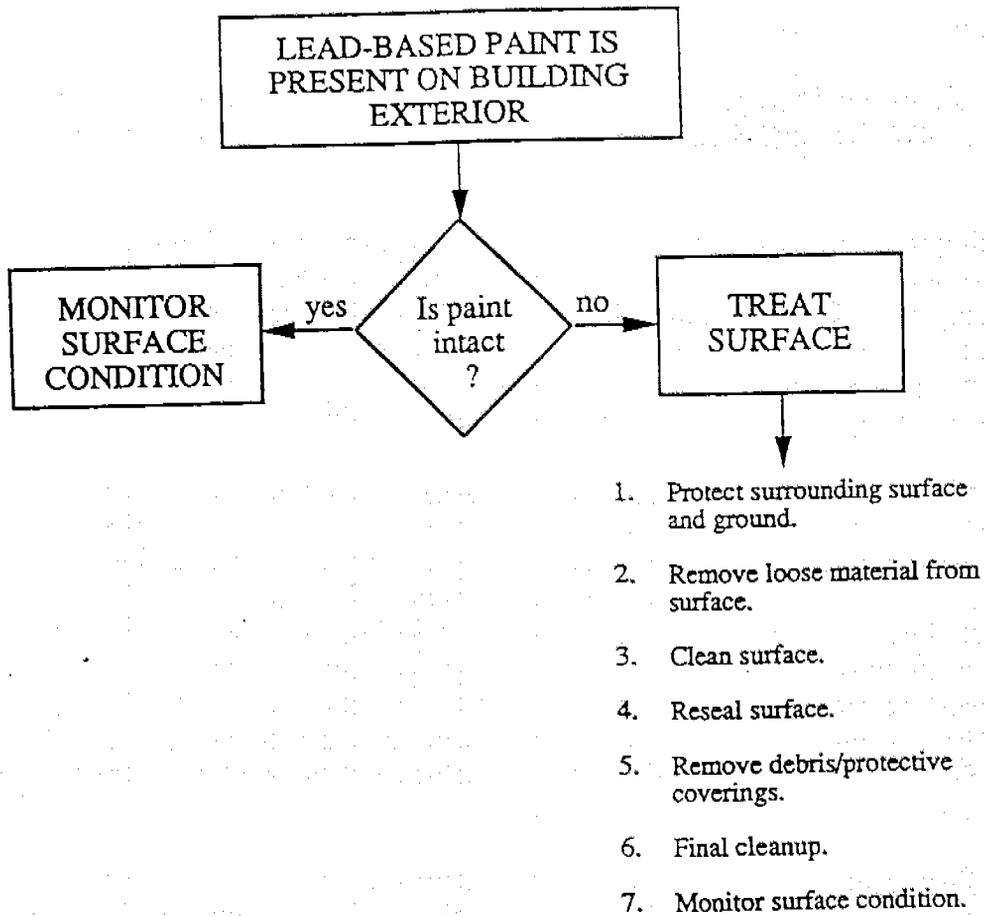
During the course of wet scraping, the debris should be gathered with a wet/dry vacuum often as necessary to minimize its being carried away by the wind. At a minimum, this should be done at the end of each work day.

It may be necessary to spray or re-wet fallen debris to prevent its being scattered or blown off the protective covering.

Workers should be cautioned about the hazards of walking on polyethylene film which is extremely slippery when it is wet. Care should be taken to prevent the tracking of debris off the protective covering. Workers should clean or remove shoe coverings before leaving the area of the work.

- e. Cleaning Surfaces: Following wet scraping, the surface(s) should be cleaned with a damp sponge to remove small particles and dust. It may be necessary to "degloss" the surface before resealing. Cleaning with tri-sodium phosphate (TSP) followed by a clean water wash will degloss as well as clean. The surface should be permitted to dry thoroughly in preparation for repainting or resealing.
- f. Surface Sealing: The "clean" dry surface(s) are to be sealed with an enamel paint or coating material that results in a smooth cleanable surface. The paint or coating should be applied in accordance with the manufacturer's instructions.
- g. Removal of Protective Coverings: At conclusion of the corrective work (or at the end of the work day on multi-day activities when the work area cannot be secured from access by residents), the protective polyethylene coverings should be carefully removed, retaining any remaining debris/dust. The coverings and debris should be disposed of in accordance with local disposal practices/regulations. Previously used plastic covering material should not be used again within dwellings. Cleaning of the equipment, including ladders and scaffolding, while on the protective covering may simplify the collection of debris and liquid waste.
- h. Disposal of Waste and Debris: All retained liquid waste should be poured through a filter cloth to remove paint chips and other debris prior to disposal. Filtered materials should be placed in plastic bags and stored in a secure area pending disposal in accordance with State and/or local requirements.

BUILDING EXTERIORS



2. Deteriorating Interior Lead-Based Paint

The procedures for treating deteriorating interior paint are similar to those discussed above for exterior paint. However, greater attention must be given to controlling, testing, and cleaning up dust lead as well as protecting residents' belongings.

Sequence of Steps

If the area of deteriorated interior paint to be treated exceeds one square foot or it is likely that dust will be created during the work, the procedures described below shall be followed:

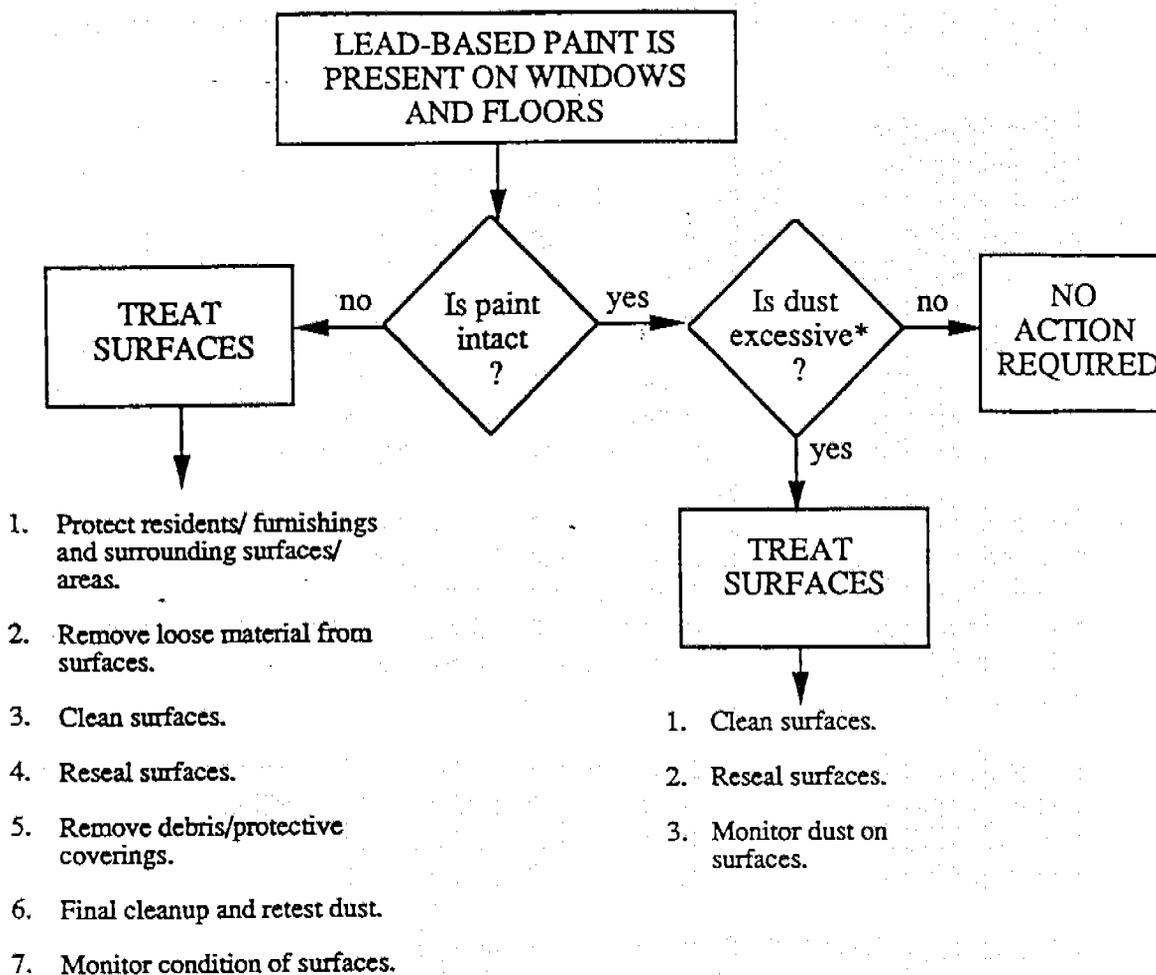
- a. Planning the Corrective Action: Because residents are expected to return to their residences for the night, corrective work that requires more than one day for completion should be scheduled so that each day's work, and subsequent cleanup, can be carried out within the housing authority's standard work day. Each room or space in which corrective action occurs is to be cleaned at the end of the work day so that residents can return for the night.
- b. Protection of Residents and Personal Belongings: Residents (and, to the extent practicable, furnishings and personal belongings) are required to be removed from the room or space in which actual corrective work is being conducted. Furnishings and personal belongings that remain in the room or space are to be protected with duct tape sealed polyethylene covering. All floors in the work areas must be covered. All ductwork and registers, and all cabinets, drawers, etc., must be sealed. The work area should be sealed from the rest of the residence. Residents' entry to the room/space/work area is to be prevented until cleanup has been completed at the conclusion of the work or at the end of the work day, whichever occurs sooner.
- c. Area Protection: Cover all area(s) immediately adjacent to the work with a 6-mil polyethylene film to contain the wet debris and dust that may be dislodged during the corrective work. All joints and edges of the polyethylene covering should be sealed with duct tape.
- d. Surface Preparation: The surfaces to be corrected should be moistened (but not flushed) with water from a sprayer or atomizing spray bottle. Care should be taken to assure that electricity to outlets, switches, and appliances in the immediate vicinity of the work is turned off before any moisture is introduced to surfaces.
- e. Wet Scraping: Loose, peeling, flaking material should be removed from the surface(s) by wet scraping the surface(s) with the objective of obtaining a smooth cleanable surface. The scraping tool should have a soft pliable blade of plastic or rubber that will not gouge the surface. It should be rigid enough, however, to remove the rough jagged edges of paint. The rubber blade squeegee that is used

for cleaning automobile windshields may be satisfactory. (One style has a fabric covered rubber sponge on the back of the blade for introducing water to the surface.) Commercially available plastic scraping pads for use with liquid or wet chemical paint strippers may also be effective for wet scraping roughened surfaces.

During the wet scraping, the debris should be collected frequently with a wet/dry vacuum to minimize tracking or spreading the removed material throughout the room or space.

- f. Cleaning Surfaces: The wet scraped surface(s) should be cleaned with a damp sponge and permitted to dry in preparation for repainting or resealing, which should be done in accordance with the coating/paint manufacturer's instructions. Surface preparation often requires "deglossing" as well as cleaning. In that case, cleaning with TSP followed by a clean water wash will degloss as well as clean.
- g. Surface Sealing: The "wet scraped," dried surface(s) are to be sealed with a paint or coating that yields a smooth surface—one from which future dust can be easily cleaned with a damp sponge or cloth without causing further damage to the surface. The sealed surface should be free of jagged rough edges or snags.
- h. Remove Protective Coverings: At the conclusion of the corrective work or at the end of the work-day on multi-day activities, protective polyethylene coverings should be carefully removed to contain any debris/dust, bagged in plastic, and stored in a secure place outside the dwelling for eventual disposal in accordance with local disposal practices/regulations. Polyethylene coverings should not be reused in dwelling units.
- i. Cleanup: A final clean up of the corrected surfaces and surrounding work area, room, or space is to be conducted at the end of each work day with a HEPA vacuum, a high phosphate wash, followed by a final HEPA vacuuming. See separate discussion in this guide under "Cleanup Procedures."
- j. Dust Testing: Dust testing is to be done in accordance with the protocols listed in the HUD Interim Guidelines and summarized in this guide under "Clearance Testing."

BUILDING INTERIORS-PAINT



* Excessive dust level factors:

Windows: sill/stool >500 ug/sq ft.
 well > 800 ug/sq ft
Floors > 200 ug/sq ft

3. Excessive Lead Dust in Units Without Deteriorating Paint

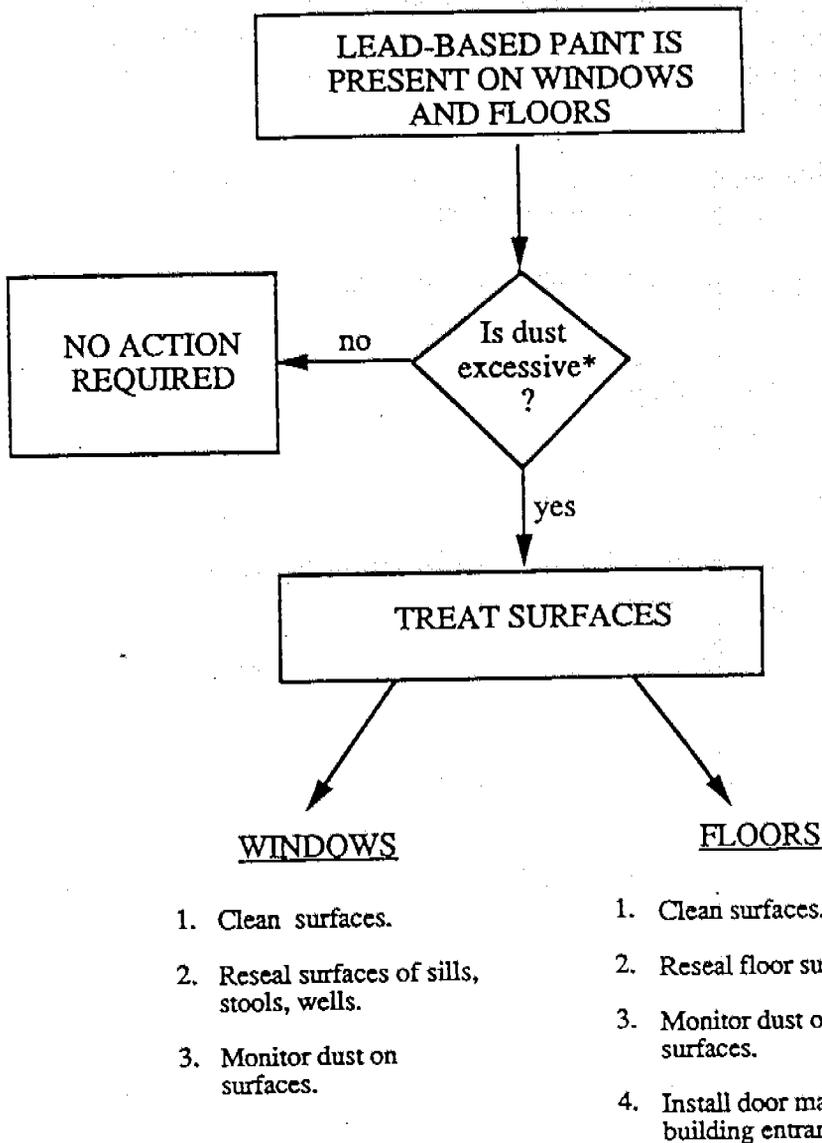
Ingesting and inhaling dust lead is the most common way that children are exposed to lead. Dust lead is created as lead-based paint "chalks" or ages. It is created at friction points through opening and closing of windows with frames painted with lead-based paint. Soil in urban areas is often tainted with lead from years of use of leaded gasoline and from industrial processes such as smelting. Much of the dust lead in a dwelling is tracked in on shoes or blows in through open windows. It is estimated that 85% of the dust in a dwelling is tracked in from outdoors.

If dust lead levels above the prescribed clearance levels persist within the dwelling, the housing authority should implement measures such as these.

- a. On a regular basis, wash down exterior walkways, stairs and landings where dust lead may accumulate.
- b. Locate door mats at building and dwelling entrances to reduce the tracking of dust lead into the unit on shoes.
- c. Reiterate to residents:
 - the importance of good housekeeping measures, including frequent wet-wiping/wet-mopping of interior surfaces.
 - the importance of frequent washing of children's hands and toys.

BUILDING INTERIORS-DUST

Without Deteriorated Paint



* Excessive dust level factors:

Windows: sill/stool > 500 ug/sq ft
well > 800 ug/sq ft

Floors > 200 ug/sq ft

GLOSSARY

GLOSSARY

ABATEMENT - any set of measures designed to permanently correct and eliminate lead-based paint hazards. Abatement includes the removal of lead-based paint and lead-contaminated dust, the permanent containment or encapsulation of lead-based paint, the replacement of lead-painted surfaces or fixtures, and the removal or covering of lead-contaminated soil. Abatement also includes all preparation, cleanup, worker protection, disposal, and post-abatement clearance testing activities associated with such measures.

ACCESSIBLE SURFACE - an interior or exterior surface that is accessible for a young child to mouth or chew.

COMMON AREAS - a room or area that is accessible to all residents in a building or development (e.g., hallway, vestibule).

COMPREHENSIVE TESTING - the systematic inspection of a housing development for the presence of lead-based paint using x-ray fluorescence (XRF) equipment to screen building components and laboratory analysis of paint samples where XRF readings are inconclusive.

DEFECTIVE PAINT SURFACE - paint which is cracking, flaking, chipping, or peeling from a building component (e.g., window sill, door, or door frame, etc.).

FAMILY DEVELOPMENT - a development assisted under the U.S. Housing Act of 1937 (other than Sections 8 or 17 of the Act) which is not an elderly project. For this purpose, an elderly project is one which was designated for occupancy by the elderly at its inception (and has retained that character) or, although not so designated, for which the PHA gives preference in resident selection (with Department of Housing and Urban Development approval for all units in the development to elderly families). A building within a mixed-use development which meets these qualifications shall, for purposes of this document, be excluded from any family development.

HIGH EFFICIENCY PARTICLE AIR (HEPA) FILTER - a filter capable of filtering out particles of 0.3 microns or greater from a body of air at 99.97% efficiency or greater.

IN-PLACE MANAGEMENT - a process in which a housing authority will take steps to reduce excessive exposures to lead and protect occupants from lead poisoning in units pending abatement.

INSPECTION - determines the condition of paint on a surface and the condition of the painted surface.

LEAD-BASED PAINT HAZARD - paint or other surface coatings that contain lead in excess of limits established by the Department of Housing and Urban Development.

LEAD IN DUST - interior house surface dust that contains an area mass concentration of lead which may pose a threat of adverse health effects in pregnant women or young children.

LEAD IN SOIL - accessible soil on residential real property that contains lead in excess of the level determined to be safe by the appropriate Federal agency.

MULTI-UNIT STRUCTURES - residential buildings/dwelling units within a development which have a similar style of construction and similar paint history. Factors that contribute to similar paint history are common ownership from time of construction, similar occupancy patterns since construction, similar configuration and construction materials, and are conterminous (having a common boundary).

RANDOM TESTING - a surface-by-surface investigation of intact and non-intact interior and exterior painted surfaces in selected housing units for lead-based paint using an approved x-ray fluorescence analyzer or comparable approved sampling or testing technique.

RISK ASSESSMENT - an on-site investigation, including sampling in housing constructed prior to 1978, to determine the existence and extent of lead-based paint hazards and physical conditions that could potentially affect the integrity of painted surfaces.

SCATTERED SITE HOUSING - residential buildings/dwelling units which have different styles of construction and unknown and unmanaged paint histories. Factors that contribute to unknown and unmanaged paint histories are multiple ownerships from time of construction, multiple occupancy patterns since construction, different configurations and construction materials, and are not conterminous (having no common boundary).

VISUAL INSPECTION - a surface-by-surface investigation of intact and non-intact interior and exterior painted surfaces.

WINDOW SILL - the building component forming the lower side (bottom) of a window opening.

WINDOW STOOL - the flat horizontal molding fitted over the sill, on the window interior, between jambs, which comes in contact with the bottom rail of the (lower) operating sash and the window sill.

WINDOW WELL - the horizontal area of the window sill that comes in contact with the bottom rail of the operating sash (when closed) and the window stool.

WORST CASE - units, common areas, and exteriors which are suspected to contain lead-based paint. Worst case units, common areas, and exteriors surfaces are usually in poor physical condition and poorly maintained. In this document, worst case also means units, common areas, and exteriors which are randomly selected for testing and inspection.

ACKNOWLEDGEMENT

ACKNOWLEDGEMENT

The Department wishes to acknowledge the members of the LBP Risk Assessment Working Group for their contributions to the development of this LBP Risk Assessment Protocol:

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The Lead-Based Paint Risk Assessment Protocol contained herein includes some material produced by the Housing Authority Risk Retention Group, Inc., of Cheshire, Connecticut and its technical services arm, Housing Environmental Services, Inc., of Cambridge, Massachusetts.

The Department wishes to extend its appreciation to the Housing Authority Risk Retention Group, Inc., and Housing Environmental Services, Inc., for sharing the materials they use in performing their risk assessments. Those materials were useful to the Department in the development of this risk assessment protocol which is being provided to you.



April 28, 1993

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Lead-Based Paint Policy Guidance

Reference:

a. Office of the Secretary of Defense Policy Memorandum, subject: Lead-Based Paint (LBP) - Risk Assessment, Associated Health Risk in Children, and Control of Hazards in DoD Housing and Related Structures, dated November 24, 1992.

b. U.S. Army Engineering and Housing Support Center Technical Note 420-70-2, Lead-Based Paint (LBP): Hazard Identification and Abatement, dated September 3, 1991.

The purpose of this memorandum is to implement reference a. and to provide Army guidance for lead-based paint inspection, risk assessment, management, removal and disposal. Guidance is applicable for Government-owned or leased family housing, child development centers, family child care homes, schools, playgrounds and similar facilities constructed prior to 1978, which are used regularly by children six years old or younger or by pregnant women. This guidance is effective immediately and supersedes previous guidance issued under reference b.

Army policy is to provide a healthful living and working environment. Prevention of lead poisoning is an integral part of this policy. The proper management of lead hazards requires a major effort by occupational health and public works/engineering elements, supported by housing, safety, legal, public affairs, and environmental offices. Policies for the health aspects of lead-based paint management are at enclosure 1. Policies for inspection, assessment, management and removal of lead-based paint are at enclosure 2. Policy guidance for the environmental aspects of the disposal of lead-contaminated waste are also at enclosure 2.

Major command and installation commanders are responsible for implementing the policy guidance to eliminate lead-based paint health hazards. Army points of contact for health, public works/engineering and environmental aspects of this guidance are at enclosure 3.



Michael W. Owen
Acting Assistant Secretary of the Army
(Installations, Logistics & Environment)

Enclosures

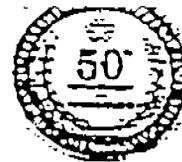
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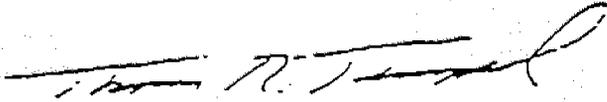
MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, LOGISTICS AND ENVIRONMENT)

ASSISTANT SECRETARY OF THE ARMY
(MANPOWER AND RESERVE AFFAIRS)

SUBJECT: Lead Based Paint (LBP) - Risk Assessment, Associated Health Risk in Children, and Control of Hazards in DOD Housing and Related Structures--~~INFORMATION~~ MEMORANDUM

1. This is an interim response to ASD(HA) and ASD(P&L) memorandum, 24 Nov 92, SAB.
2. Implementation guidance to Army Medical Treatment Facilities has been developed and provided to the field in draft format. Official policy is being coordinated with SAILE to ensure that the Army implements a fully coordinated policy.
3. Childhood blood lead screening programs are already in place at numerous Army installations with the rest scheduled to be in place by the end of the fiscal year. Overall, the number of positive children found in screening has been under two percent; no clinically significant elevations have been found in children who did not have other history or clinical reasons for concern. The one current certified laboratory at Dwight David Eisenhower Army Medical Center will be augmented by four more by the end of the fiscal year.
4. All Army medical facilities programs include questionnaires, blood lead testing, clinical evaluation, parental education, treatment or referral, as needed, for children with significantly elevated blood leads, support of installation lead reduction and abatement programs, and coordination with state and local public health departments.
5. A copy of the final guidance will be provided to your office as part of the integrated Department of the Army program. My point of contact for this office is LTC Holly L. Doyme, Occupational Medicine Consultant, (703) 756-0133.

FOR THE SURGEON GENERAL:


THOMAS R. TEMPEL
Major General, DC
Acting Deputy Surgeon General

Enclosure 1

**Lead-Based Paint Identification, Assessment,
In-Place Management, Removal, and Disposal Program**

1. PURPOSE. To establish responsibilities and standards for identification and control of lead-based paint and lead-contaminated dust in target facilities.

2. BACKGROUND. The Lead-Based Paint Poisoning Prevention Act of 1971, as amended, and the Residential Lead-Based Paint Hazard Reduction Act of 1992 direct the Department of Housing and Urban Development to develop guidance and policy for Federally funded residential structures. In addition, the Department of Defense, under direction of Congress, has published tri-service policy and guidance to protect young children from lead poisoning.

3. DEFINITIONS.

a. Lead-Based Paint.

(1) Paint in liquid form. Lead-based paint is any paint that contains more than six one-hundredths of one percent (0.06%) lead by weight (calculated as lead metal) in the total nonvolatile content of the liquid paint.

(2) Paint already applied (*in situ*). When testing existing paint on surfaces, lead-based paint is any paint which tests equal to or greater than 1.0 milligram/cm² when using the X-Ray Fluorescence analyzer or 0.5% by weight when using Atomic Absorption Spectroscopic analysis.

b. Lead-Contaminated Dust.

Floors:	> 200 micrograms per ft ² .
Window Sills:	> 500 micrograms per ft ² .
Window Wells:	> 800 micrograms per ft ² .

c. Target Facilities. Target facilities are Government owned or leased facilities constructed prior to 1978 which are used regularly by children six years old or younger or by pregnant women as family housing, child development centers, family child care homes, schools, playgrounds, and similar facilities. Facilities constructed or included in whole-house revitalization or similar major rehabilitation projects since 1978 are considered free of lead-based paint if all paint coatings were removed or replaced.

4. POLICY. Commanders are subject to and must comply with all Federal, state, interstate, and local requirements, both substantive and procedural, respecting lead-based paint, lead-based paint activities, and lead-based paint hazards.

Lead-Based Paint Identification, Assessment, In-Place Management, Removal, and Disposal Program

a. Occupants of target facilities will be provided with a healthful living environment free of hazard from lead-based paint.

b. In target facilities, lead-based paint will be identified and managed in place or removed and lead-contaminated dust will be identified and removed.

c. Congress has mandated that a Federal program be established by 1 Jan 95 to provide for appropriate measures to conduct risk assessments, inspections, interim controls, and elimination of lead-based paint hazards. This program will require that initial assessments be completed by 1 Jan 96 for target facilities constructed prior to 1960. Further, initial assessments for twenty-five percent of target facilities constructed between 1960 and 1978 must be performed by 1 Jan 98, fifty percent by 1 Jan 2000, and the remainder by 1 Jan 2002.

d. The Army goal is to inspect and assess all target facilities by the end of 1994.

e. Installations may perform lead-based paint inspections using trained in-house resources or by contract with qualified firms employing certified personnel. Installations will maintain in-house or contract X-ray fluorescence capability to provide quick response to one-time requirements such as requests from occupants, investigation for presence of lead-based paint during development of project designs, and certification of family housing units as family child care homes.

5. REQUIRED ACTIONS. Identification and management of lead-based paint and lead-contaminated dust consist of determining and prioritizing groupings of facilities, conducting inspections, assessing risk, and taking actions to manage or remove lead-based paint and lead-contaminated dust. Personnel performing management or execution functions must be trained and certified.

a. *Determine Groupings.* For facilities constructed prior to 1978, determine groupings by type and year of construction and maintenance history.

b. *Prioritize Groupings.* Prioritize groupings for lead-based paint inspection on a worst-first basis according to age and condition. This prioritization will not require significant cost or effort and will be based upon real property records, paint records, and/or local knowledge and experience.

Lead-Based Paint Identification, Assessment, In-Place Management, Removal, and Disposal Program

c. *Conduct Inspections.* Inspect groupings in priority order to identify lead-based paint and lead-contaminated dust. Testing for lead-based paint and lead-contaminated dust is performed during inspections and includes use of X-ray Fluorescence or Atomic Absorption Spectroscopic analysis and wipe testing.

Attachment 1, *Lead-based Paint Sampling Strategy*, provides information on the sampling strategy for inspections. Attachment 2, *Surface Testing Sites*, identifies areas where lead-based paint and lead-contaminated dust testing is to be performed.

d. *Assess Risk.* Assessed risks are either Low or High.

(1) Attachment 3, *Lead Exposure Risk Assessment*, will be used to assess the level of risk of exposure to lead-based paint and lead-contaminated dust. Priority for in-place management or removal, certification of family housing dwelling units as family child care homes, and the requirement for medical testing for lead in blood are directly linked to the assessed risk.

(2) Notify occupants of family housing and related facilities of the results of risk assessments. Installations and Headquarters, MACOMs, will adopt a policy of full disclosure of assessed risk. Disclosure will include a summary of known health hazards associated with lead exposure.

e. *In-Place Manage Lead-Based Paint or Remove Lead-Based Paint and Lead-Contaminated Dust.*

(1) Attachment 4, *In-Place Management*, describes an in-place management program. Lead-contaminated dust will be removed. High Risk facilities will be changed to Low Risk by removal of lead-based paint or treatment of surfaces, as appropriate. Lead-based paint should be removed when: in-place management is not effective; such removal is more cost effective than in-place management; or during whole-house revitalization or major rehabilitation projects. Specific in-place management strategies are shown in Attachment 5, *In-Place Management of Building Exteriors*, and Attachment 6, *In-Place Management of Building Interiors*.

(2) Priority for control of lead-based paint is directly linked to the assessed risk. Family housing units, child care centers, family child care homes, medical areas, and schools with children six years old and younger should receive priority for in-place management and removal actions.

6. FUNDING. Program funding will remain an installation/MACOM responsibility.

Lead-Based Paint Identification, Assessment, In-Place Management, Removal, and Disposal Program

7. DISPOSAL. The following interim guidance is provided concerning identification and disposal of lead-contaminated waste. The Office of the Director of Environmental Programs will issue more definitive policy and guidance in June 1993.

a. Commanders must comply with all Federal, state, and local laws and regulations respecting disposal of lead-contaminated hazardous materials.

b. Wide variations exist in the way that states and local governments treat the disposal of lead-contaminated hazardous waste. Costs and legal requirements/liabilities associated with such disposal are of great concern to the Army.

c. Both testing and disposal of hazardous waste are costly. The waste from each lead-based paint project should be tested unless the quantity is so small that testing is more costly than disposing of as hazardous waste or previous tests have determined what the results will be.

d. The installation Environmental Coordinator must be involved early in evaluating management strategies that generate waste. The Environmental Coordinator will provide insight into the types of waste that may be generated by a particular removal strategy and can provide insight into disposal costs.

e. At the beginning of management planning when the removal strategy is selected, the Environmental Coordinator will assist in developing an economic analysis and a plan to ensure proper characterization, collection, storage, transportation, and disposal of lead-contaminated waste.

f. The following actions may be funded with environmental funds and will be estimated and documented in the installation's RCS 1383 Report:

(1) Cost of sampling and analyzing the waste stream to determine if it must be managed as a hazardous waste.

(2) Costs of hazardous waste disposal from lead-removal projects.

g. A recommended guide for characterization of building demolition debris and buildings painted with lead-based paint is the Sampling Protocol, published by the US Army Environmental Hygiene Agency. The Point of Contact for characterization and disposal of lead-contaminated waste is Ms. Veronique Hauschild, U.S. Army Environmental Hygiene Agency, HSHB-ME-SR, Aberdeen Proving Ground, MD 21010-5422, (410) 671-3652, DSN 584-3652.

LEAD-BASED PAINT SAMPLING STRATEGY

1. GENERAL. The Army will use a valid sampling strategy for inspections of target facilities to locate and quantify lead-based paint and lead-contaminated dust. The sampling strategy incorporates protocols based on nationally recognized strategies developed by the Department of Housing and Urban Development and is explained below.

2. PROCEDURES.

a. The installation will select statistically representative groupings of facilities for inspection. Prioritize groupings for lead-based paint inspection on a worst-first basis according to age and condition.

b. The number of facilities inspected in each grouping will be based on the table below. This sample size will provide 95% confidence that testing results can be applied to all Units or Buildings in the grouping.

Number of Units or Buildings in Grouping	Number of Units or Buildings to be Inspected
20	All
40	31
60	38
80	42
100	45
200	51
300	54
400	55
600	56
1000	57
> 1000	58

SURFACE TESTING SITES

Interior

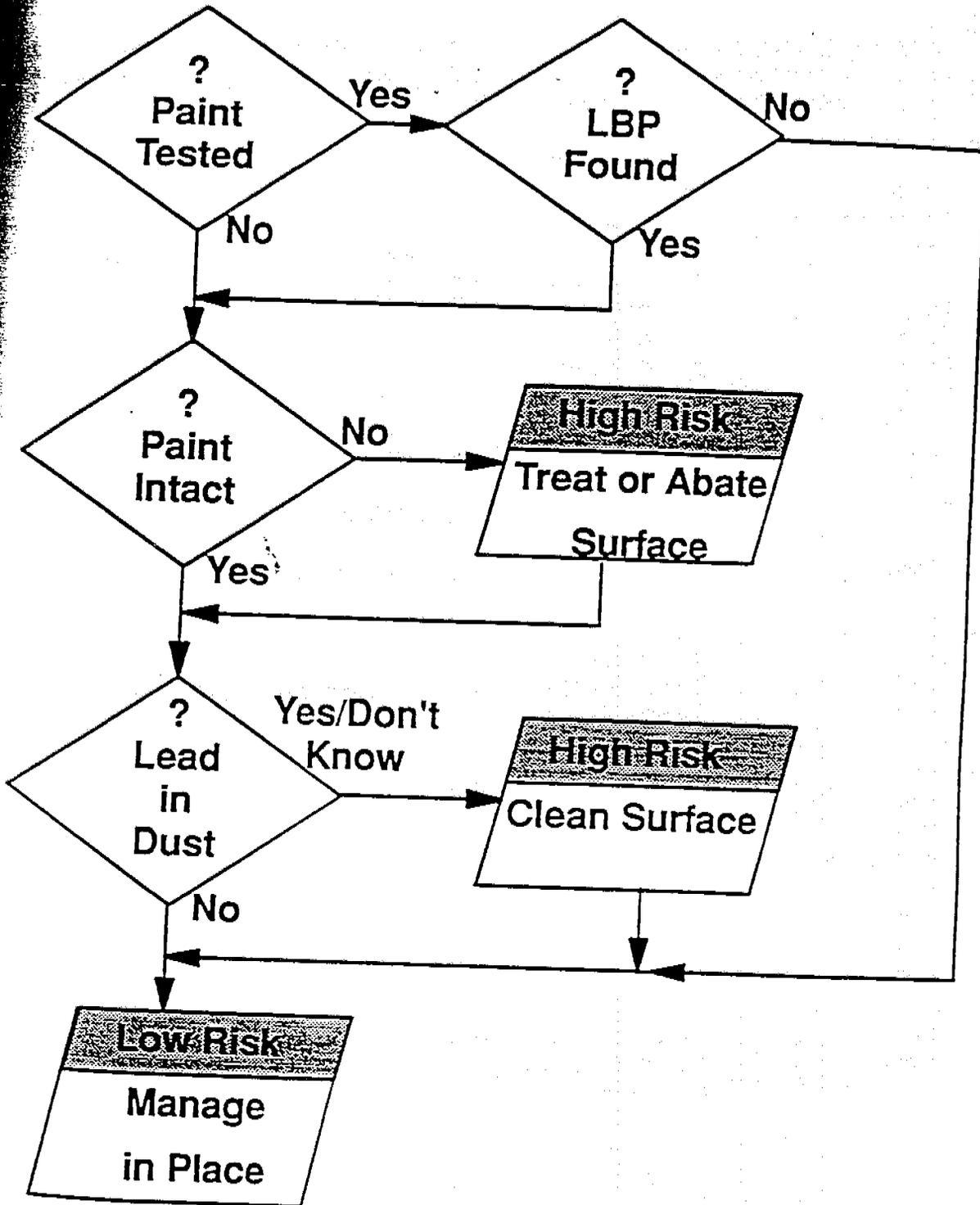
In each area (each room, closet, pantry, hall, part of a divided room, such as the dining area of a kitchen/dining room, etc.), the following painted surfaces or horizontal surfaces below painted surfaces will be tested:

Baseboard	1 in each area
Ceiling	in each area
Crown molding	1 in each area
Door	surface of door and one side of the frame on a representative interior door in each area
Fireplace	1 if present
Floor	1 in each area
Radiator	1 in each area
Shelf	1 in each area
Shelf support	in each area
Stairs	1 each of riser, tread, stringer, newel post, railing cap, balustrade
Wall	1 each of upper wall, lower wall, and chair rail (if applicable) in each area
Window	1 each of sash, casing, and sill on a representative window

Exterior

Ceiling	1 in each area
Door	1 of each surface of door and door casing
Fence	1 each
Floor	1 each
Joist	1 each
Lattice	1 each
Railing	1 each
Painted roofs	1 each
Porch	1 each
Railing cap	1 each
Siding	1 each
Stairs	1 each of tread, riser, and handrail
Support column	1 each
Trim	1 each of upper and lower
Window	1 each of sill, casing, sash, and well on a representative window (also cellar window unit)

LEAD EXPOSURE RISK ASSESSMENT



IN-PLACE MANAGEMENT

1. INTRODUCTION

a. "In-place management" is the term used to refer to a broad range of strategies and methods for controlling exposures and preventing poisonings from lead in paint pending permanent removal of lead-based paint. In-place management will be an integral part of Headquarters, MACOM and installation programs for preventing lead poisoning, complimenting other measures described below, to identify and reduce lead poisoning hazards.

b. Inspections are conducted on a surface-by-surface basis to determine the condition and composition of paint on each surface. The goal of the Army program is to eventually eliminate lead-based paint hazards. Because of the high number of older dwelling units with lead-based paint, it will take years to complete the removal process. In many cases, removal of lead-based paint hazards will not be done until a dwelling unit undergoes substantial or comprehensive modernization. In the meantime, installations have a responsibility to protect residents and their children and workers from lead hazards. In target facilities, it should be assumed that those painted surfaces that have not been tested are lead-based.

c. Risk assessments identify existing or likely lead exposures that may present poisoning hazards in facilities not scheduled for revitalization or major renovation in the near future. In-place management strategies are normally instituted subsequent to (and often in response to) risk assessments and should continue until removal is completed. The objective of in-place management is to reduce excessive exposure to lead and protect occupants from lead poisoning in facilities pending total removal of lead-based paint.

2. PREVENTING AND REDUCING EXPOSURES TO LEAD.

a. Children get lead poisoning by ingesting lead. Sometimes children are poisoned by chewing on lead-painted surfaces or by eating chips of lead-based paint. The most common cause of poisoning is ingestion of lead through normal hand-to-mouth activities such as thumb-sucking or mouthing toys. If a child is exposed to high levels of lead in dust (lead-contaminated dust) on surfaces, there is a high likelihood that the child may become lead poisoned. Lead in dust is invisible. It settles from the air and sticks to surfaces where it can be picked up on children's hands and later ingested.

b. The fundamental objective of all in-place management strategies is to protect children from exposure to chips of lead-based paint and lead-contaminated dust. In most cases, the most significant sources of lead-contaminated dust are:

IN-PLACE MANAGEMENT

- (1) Lead-based paint which is not intact (chalking, chipping, peeling, or flaking).
- (2) Lead-based paint on surfaces subject to friction or impact, such as window sashes, doors, or painted floors.
- (3) Exposed soil with high levels of lead contamination.

3. IN-PLACE MANAGEMENT'S MULTIPLE ROLES. It is important to understand that in-place management measures meet different needs in three general situations.

a. In-place management measures should be instituted to treat damaged lead-based paint and lead-contaminated dust hazards identified through the course of facility inspections. In this sense, in-place management amounts to corrective measures--specifically designed to eliminate exposure to lead by treating lead-based paint surfaces and cleaning up lead-contaminated dust. In addition to cleaning up chipping and peeling paint and lead-contaminated dust, in-place management involves taking steps to stabilize the situation to prevent continuing or future lead exposure.

b. In-place management means preventing Low Risk conditions from deteriorating to create High Risk conditions in the future. In this sense, in-place management amounts to preventive maintenance and periodic cleaning. Surfaces known or suspected to be painted with lead-based paint should be monitored. If it is suspected that lead levels in dust may be increasing, periodic clean ups should be done to keep lead from accumulating to dangerous levels on accessible surfaces such as windows sills and floors.

c. In-place management requires that precautions be taken to avoid inadvertently disturbing lead-based paint or otherwise creating lead-contaminated dust hazards in the course of other maintenance, repair, or revitalization work. Any work disturbing lead-based paint has the potential for generating lead dust. Obviously, the level of risk is a function of the scale of the work and the amount of dust generated, but it does not take much lead dust to poison a child or adult. All maintenance, repair, or revitalization work encountering paint should be carried out with attention to the potential for creating lead hazards. At a minimum, in-place management will include a rigorous clean up at the conclusion of any repair project which disturbs lead-based paint.

IN-PLACE MANAGEMENT

4. IN-PLACE MANAGEMENT PRINCIPLES AND SAFEGUARDS

a. *Sound Maintenance Program and Practices.* The success of in-place management strategies for controlling lead-based paint and exposure to lead-contaminated dust is directly affected by the overall quality of the installation housing maintenance program and management practices.

b. *Worker Protection and Training.* It is essential that persons directly involved with reducing lead-based paint hazards have instruction provided by qualified trainers to make them aware of the hazards of lead, proper procedures and work practices, and the need for protective equipment and proper hygiene. Great care must be exercised to protect workers from excess lead exposures and to prevent them from taking lead dust home on their clothing or belongings which could then poison their children.

(1) *Corrective Actions.* Common sense must be used in selecting the worker protection appropriate to the task at hand.

(a) Workers conducting in-place management projects to correct hazards found during risk assessments (either chipping and peeling lead-based paint or elevated lead dust levels) should wear the full protective gear recommended by the Department of Housing and Urban Development Interim Guidelines for Public and Indian Housing, Federal Register, 18 Apr 90, amended Sep 90. This includes coveralls (preferably disposable), shoe coverings, hair coverings, gloves, safety goggles, and a properly fitted, negative-pressure half-face mask respirator with a high efficiency particle air filter.

(b) Workers on projects to correct hazards identified through risk assessments (and other projects which could disturb lead-based paint and generate significant dust) must not eat, drink, or smoke on the job; hands and face must be washed before breaks and at the end of the workday. Breaks should be taken away from the work areas. Work clothes should not be worn home. Workers should wear protective work clothes instead of street clothes or they should wear protective garments over their street clothes. Work clothes should be disposed of or laundered. If shower facilities are not available on-site or at the maintenance shops, workers should shower and wash their hair immediately upon returning to their homes.

IN-PLACE MANAGEMENT

(2) Preventive Maintenance and Repairs.

(a) Activities related to preventive maintenance, such as normal repainting and routine cleaning, may be carried out with lesser protection, depending on the scale of the project and the potential for exposure. At the same time, it is important that workers understand the need for proper hand washing and personal hygiene when working with painted surfaces that may contain lead.

(b) Workers engaged in other renovation or repair projects which may encounter lead-based paint must be protected from exposure and must take the necessary precautions to control, contain, and clean up lead dust. The level of protection and controls should be keyed to the scale of the project and its potential for dust generation. At one extreme, a light switch or a door handle can be replaced without great concern over lead dust generation. At another level, a kitchen renovation or window replacement project may well create tremendous exposures, tantamount to a full-scale removal project. In any event, surrounding surfaces should be protected to capture any dust or paint chips generated during any work.

(c) It is the responsibility of installation maintenance supervisors to assure that workers performing in-place management corrective actions, preventive maintenance, and repair projects are properly protected. Workers performing in-place management activities to correct hazards identified in risk assessments should be subject to medical monitoring procedures outlined in the Department of Housing and Urban Development Interim Guidelines for Public and Indian Housing, Federal Register, 18 Apr 90, amended Sep 90. Briefly, this means pre-placement medical examinations, periodic medical examinations, and blood lead monitoring.

5. PROTECTION OF RESIDENTS.

a. *Corrective Action.* Housing residents should not be permitted in the unit or in the vicinity of the job while corrective actions are being carried out. Residents' belongings should be protected from possible exposure to lead dust released during the project. If residents are permitted to return to their dwellings each night, a complete cleanup will be required at the end of each workday.

IN-PLACE MANAGEMENT

b. *Preventive Maintenance and Repairs.* In most cases, it may be possible to conduct preventive maintenance and repair projects while residents remain in their homes. Care should be exercised to keep residents and their children away from the work area and to protect their belongings from possible lead dust contamination.

6. PREPARATION OF WORK AREA. For any corrective action, maintenance, or repair work involving lead-based paint, it is important that steps be taken in advance of the actual work to contain lead dust and to make cleanup easier. Detailed instructions are included in the following section dealing with specific hazard situations. As a general rule, plastic sheeting should be put down to prevent lead-based paint chips and dust from contaminating the ground, the dwelling unit, or residents' belongings.

7. CLEAN UP PROCEDURES. Cleanup is one of the most important components of any in-place management project. Unless great care is taken to clean up debris, paint chips, and lead dust, the dwelling may be more hazardous after treatment than it was before. Dust lead is invisible, sticky, and hard to clean up.

a. *Corrective Actions.* At the end of each day, dust and debris should be cleaned up and removed so as not to be further tracked around. Debris should be misted with water prior to sweeping and then placed in double 4-mil or 6-mil plastic bags. A high efficiency particle air vacuum should be used to pick up remaining dust. At the end of corrective action work (or repair work which generates significant amounts of lead dust), clean-up consists of a three-step process:

(1) A high efficiency particle air vacuum should be used to remove all surface dust and small debris.

(2) A wet washing should follow using tri-sodium phosphate or other acceptable detergent. Care should be taken each time the cleaning mixture is exchanged to ensure that dirty water does not contaminate surfaces. The use of a two-bucket system works well: one bucket contains the detergent/water waste and the second contains clear water for mop/rag washing.

(3) A final high efficiency particle air vacuuming.

b. *Preventive Maintenance and Repair Projects.* The intensity of the clean up should be based on the scale of the maintenance or repair project and the amount of lead dust generated. If a repair project generates extensive lead dust, the full clean up procedures recommended above for corrective

IN-PLACE MANAGEMENT

actions should be followed. In other cases, traditional cleanup procedures can be used with additional emphasis for lead in dust. Wet mopping or wet wiping with tri-sodium phosphate or other acceptable detergent should be routine clean up procedure for projects which generate even small amounts of lead dust.

8. DISPOSAL OF DEBRIS.

a. It is important to develop a practice of minimizing waste production and preventing waste products from entering the environment. Because of the limited scope and nature of most in-place management activities, the accumulation of hazardous waste should be minimal.

b. Unless contaminated components are removed for replacement, waste will typically be limited to paint chips, dust containing lead, contaminated cleaning supplies, disposable cleaning equipment and clothing, plastic films used as protective coverings and/or catchments, and filter products.

c. Certain wastes from an in-place management project, either solid or liquid, may be classified as hazardous. If so, they will have to be treated as such and handled by a licensed transporter or treatment firm. All debris from a project, whether classified as hazardous or not, must be contained and transported in such a way as to prevent the dispersal of lead bearing dust, chips, or contaminated liquid into the environment. Lead debris should never be sent to a solid waste incinerator, a disposal method that disperses lead into the air.

d. Any lead-containing by-products should be considered as hazardous and should be disposed of in strict accordance with state and local requirements for disposal of limited quantities of lead waste.

9. CLEARANCE TESTING.

a. *Corrective Actions.* After the clean up is completed for all corrective actions, the work area should be tested to assure that hazardous amounts of lead dust are not left behind.

b. *Clearance Standard.* Several states have adopted a post-removal dust standard which has been included in the Department of Housing and Urban Development Interim Guidelines for Public and Indian Housing, Federal Register, 18 Apr 90, amended Sep 90. The clearance standard was based on a health-based study on lead dust and modified slightly based upon experience of what is

IN-PLACE MANAGEMENT

practical and possible. The standard applied to post in-place management clearance is similar. The in-place management clearance standard allows the following maximum levels of lead in dust:

- (1) Floors: 200 micrograms per square foot.
- (2) Window Sills (Stools): 500 micrograms per square foot.
- (3) Window Wells: 800 micrograms per square foot.

c. *Dust Sampling and Laboratory Measurements.* Persons collecting dust samples and laboratories measuring lead levels in dust should be thoroughly familiar with the recommended sampling and analysis protocols for dust contained in the Department of Housing and Urban Development Interim Guidelines for Public and Indian Housing, Federal Register, 18 Apr 90, amended Sep 90, as they are to be followed for testing in connection with in-place management.

d. *Interpretation of Test Results.* Dust readings in excess of 200 micrograms per square foot on floors, 500 micrograms per square foot on window sills/stools, or 800 micrograms per square foot on window wells are considered positive readings. In any grouping of housing units, if a component has one or more positive readings, the installation has the option of either testing all occurrences of the component in question, or implementing in-place management actions for all of the components in question. The exact nature of the actions depends upon factors such as whether or not lead-based paint is known or assumed to be present.

e. *Repeating the Final Clean Up.* Following any failure to pass the first clearance test, the installation should verify that the clean up procedures followed were in conformance with the prescribed clean up procedure. In the case of partial removal or repair of lead-based paint, a second clearance failure following correct clean up procedures will require full removal of lead hazards from the facility.

f. *Preventive Maintenance and Repair Projects.* Clearance testing is typically not indicated for preventive maintenance and repair projects unless a substantial amount of lead dust is generated.

10. FOLLOW-ON MONITORING.

a. During cyclic inspections or when a dwelling unit is prepared to be reoccupied, facilities should be reinspected to:

IN-PLACE MANAGEMENT

(1) Verify that previously treated/repainted lead-based paint surfaces remain in sound condition.

(2) Identify the occurrence and extent of additional lead-based paint surface failures.

(3) Check for the presence or reoccurrence of excessive dust.

b. At a minimum, walk-through visual inspections should be performed on a yearly basis by personnel who are knowledgeable about lead hazards and in-place management activities. Common use spaces should also be inspected on a regular basis.

c. Residents should be provided with a component listing of surfaces containing lead-based paint and should be encouraged to report cracked, peeling lead-based paint as it occurs.

11. TENANT EDUCATION. It is the responsibility of the installation commander to ensure that occupants with young children receive information on protecting their children from lead poisoning. The importance of wet mopping or wet wiping with tri-sodium phosphate or other acceptable detergent to control lead dust levels and of washing children's hands must be stressed. Occupants should be encouraged to call to the attention of the housing management office any chipping or peeling paint. Finally, an installation medical program of monitoring the blood-lead levels of children must be established.

IN-PLACE MANAGEMENT OF BUILDING EXTERIORS

1. INTRODUCTION.

a. This enclosure identifies specific corrective action strategies for in-place management of building exteriors. A summary flow chart is shown on page 4 of this enclosure.

b. Deteriorated exterior surfaces with cracked/peeling/flaking/dusting/chipping paint may release lead paint chips and lead dust. This dust frequently finds its way into dwellings.

2. RECOMMENDED ACTION.

a. Deteriorated exterior surfaces are to be repaired to obtain a smooth surface which can be repainted. This will require corrective work that will involve the removal of loose paint and dust, cleaning the surface, and resealing the surface by painting. The purpose is to restore the integrity of the paint film on the exterior surface and control further deterioration of the paint.

b. For the removal of loose paint or painted material, "wet scraping" is to be employed. This means that both the painted surface and the scraping tool are to be kept wet with water during the scraping process to minimize the release of lead dust and the dispersal of lead paint chips.

c. Because of the possibility of releasing and dispersing hazardous debris and dust during the corrective work, residents should not be permitted in the vicinity of the work during repair activities. Access should be restricted until thorough cleanup activities have been completed following the work. (It may be necessary to fence or cordon-off the immediate work area to prevent unauthorized access, or if possible, identify an alternate building entrance for residents' use during the work.)

3. SEQUENCE OF STEPS.

a. *Planning the Corrective Action.* Residents are expected to have access to their residences during the period of exterior corrective work. Work activities that require more than one day for completion should be scheduled so that each day's work (including cleanup) can be accomplished within the installation's normal duty day.

b. *Area Protection.* Protect all area(s) immediately adjacent to and below the work with a 6-mil polyethylene film to protect the ground and shrubbery and to retain wet debris and dust that will be created during the surface treatment. This covering should extend out horizontally from the base of the

IN-PLACE MANAGEMENT OF BUILDING EXTERIORS

wall for a distance that is equal to half the height of the wall surface being treated. (Though reasonably tough, avoid unnecessary traffic over 6-mil film to reduce chance of puncturing. In addition, if the ground surface is rough, it may be necessary to double the film to minimize the occurrence of punctures.) Joints or tears in the polyethylene film should be sealed with duct tape. Any tears that occur in coverings during the work should be repaired immediately.

c. *Surface Preparations.* The building surfaces to be corrected should be moistened with a fine spray of water from a garden sprayer or atomizing bottle. Care should be taken to assure that electricity is shut off to exterior outlets and switches in the immediate vicinity of anticipated work before any moisture is applied to surfaces.

d. *Wet Scraping.* Loose, peeling/flaking material shall be removed from the surface(s) by wet scraping to obtain a smooth cleanable surface that can be repainted. The scraping tool should have a soft pliable blade of plastic or rubber that will not damage or gouge the material. The blade should be rigid enough, however, to remove rough jagged edges of the broken paint surface. The resulting surface should be free of jagged, rough edges, or snags that would interfere with the paint or coating's ability to bridge any remaining gaps. The rubber blade squeegee that is used for cleaning automobile windshields may be satisfactory. (One style has a fabric covered foam or sponge on the back of the blade for wetting the surface.) Commercially available plastic scraping pads that are for use with liquid or chemical paint strippers may also be effective for wet-scraping and the smoothing of roughened surfaces.

e. *Control of Debris.* During the course of wet scraping, the debris should be gathered with a wet/dry vacuum as often as necessary to minimize its being carried away by the wind. At a minimum, this should be done at the end of each work day. It may be necessary to spray or re-wet fallen debris to prevent its being scattered or blown off the protective covering. Workers should be cautioned about the hazards of walking on polyethylene film which is extremely slippery when it is wet. Care should be taken to prevent the tracking of debris off the protective covering. Workers should clean or remove shoe coverings before leaving the area of the work.

f. *Cleaning Surfaces.* Following wet-scraping, the surface(s) should be cleaned with a damp sponge to remove small particles and dust. It may be necessary to "de-gloss" the surface before resealing. Cleaning with tri-sodium phosphate

IN-PLACE MANAGEMENT OF BUILDING EXTERIORS

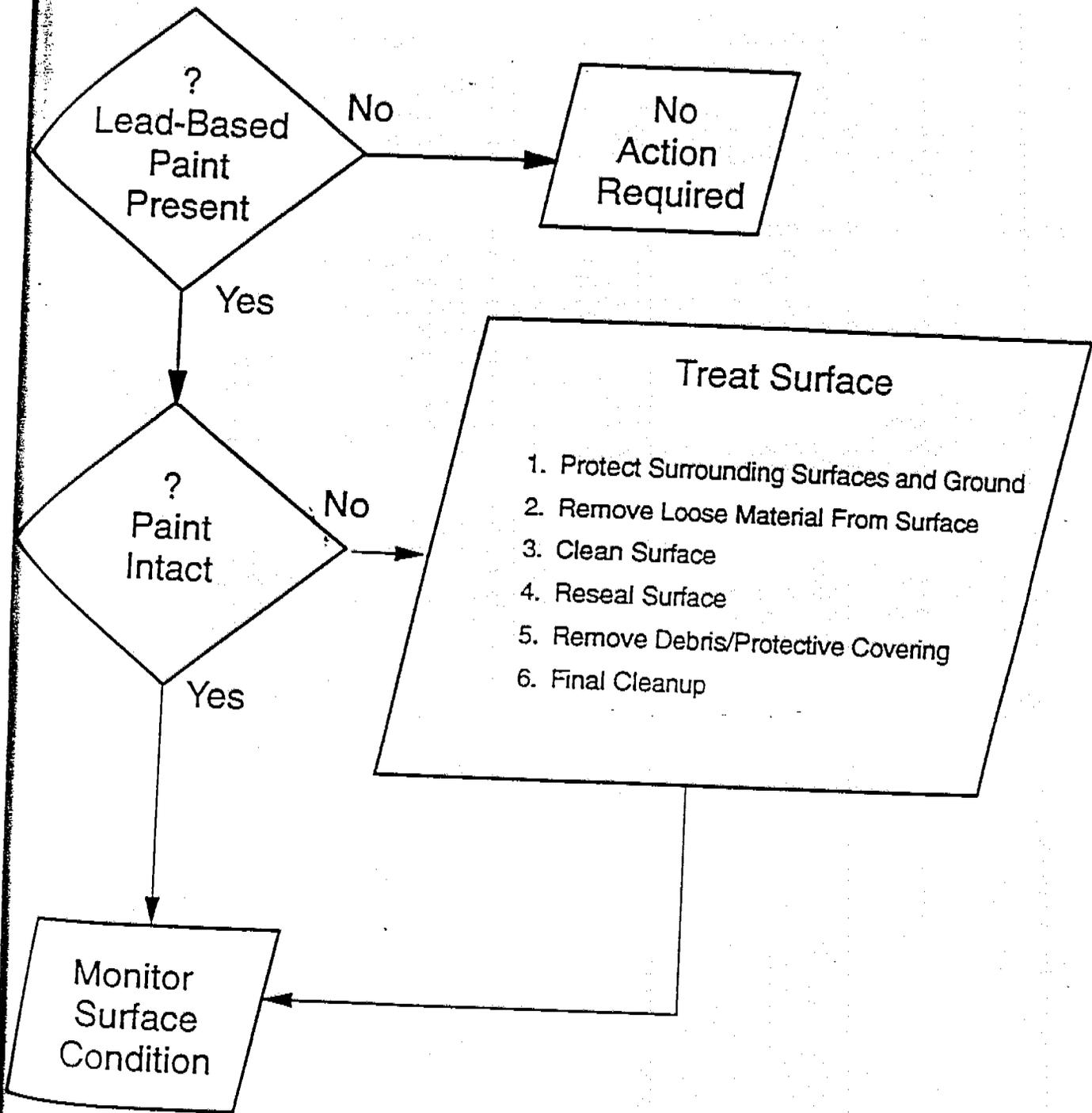
or other acceptable detergent followed by a clean water wash will de-gloss as well as clean. The surface should be permitted to dry thoroughly in preparation for repainting or resealing.

g. *Surface Sealing.* The "clean" dry surface(s) are to be sealed with an exterior grade enamel paint or coating material that results in a smooth, cleanable surface. The paint or coating should be applied in accordance with the manufacturer's instructions.

h. *Removal of Protective Coverings.* At the conclusion of the corrective work, (or at the end of the work-day on multi-day activities when the work area cannot be secured from access by residents) the protective polyethylene coverings should be carefully removed, retaining any remaining debris/dust. The coverings and debris should be disposed of in accordance with local disposal practices/regulations. Previously used plastic covering material should not be re-used. (Cleaning of the equipment, including ladders and scaffolding while on the protective covering may simplify the collection of debris and liquid waste.)

i. *Disposal of Waste and Debris.* All retained liquid waste should be poured through a filter cloth to remove paint chips and other debris prior to disposal. Filtered materials should be placed in plastic bags and stored in a secure area pending disposal in accordance with state and/or local requirements.

MANAGEMENT OF BUILDING EXTERIORS



IN-PLACE MANAGEMENT OF BUILDING INTERIORS

1. INTRODUCTION. This enclosure identifies specific corrective action strategies for in-place management of deteriorated lead-based paint on building interiors and excessive amounts of lead in household dust. A summary flow chart is shown on page 4 of this enclosure.

2. RECOMMENDED ACTION. The procedures for treating deteriorating interior paint are similar to those for in-place management of building exteriors. However, greater attention must be given to controlling, testing, and cleaning up lead dust as well as protecting residents' belongings.

3. SEQUENCE OF STEPS. If the area of deteriorated interior paint to be treated exceeds one square foot, or it is likely that dust will be created during the work, the procedures described below shall be followed:

a. *Planning the Corrective Action*. Because residents are expected to return to their residences for the night, corrective work that requires more than one day for completion should be planned and scheduled so that each day's work and subsequent clean up can be carried out within the installation's standard duty day. Each room or space in which corrective action occurs is to be cleaned at the end of the day so that residents can return for the night.

b. *Protection of Residents and Personal Belongings*. Residents (and to the extent practicable furnishings/personal belongings) are required to be removed from the room or space in which actual corrective work is being conducted. Furnishings and personal belongings that remain in the room or space are to be protected with duct-tape sealed polyethylene covering. All floors in the work areas must be covered. All duct work and registers and all cabinets, drawers, etc., must be sealed. The work area should be sealed from the rest of the residence. Entry of residents to the room/space/work area is to be prevented until cleanup has been completed at the conclusion of the work or, at the end of the work day, whichever occurs sooner.

c. *Area Protection*. Cover all area(s) immediately adjacent to the work with a 6-mil polyethylene film to contain the wet debris and dust that may be dislodged during the corrective work. All joints and edges of the polyethylene covering should be sealed with duct tape.

IN-PLACE MANAGEMENT OF BUILDING INTERIORS

d. *Surface Preparation.* The surfaces to be corrected should be moistened (but not flushed) with water from a sprayer or atomizing spray bottle. (Care should be taken to assure that electricity to outlets, switches, and appliances in the immediate vicinity of the work is turned off before any moisture is introduced to surfaces.)

e. *Wet Scraping.* Loose, peeling/flaking material should be removed from the surface(s) with the objective of obtaining a smooth cleanable surface. The scraping tool should have a soft, pliable blade of plastic or rubber that will not gouge the surface. It should be rigid enough, however, to remove the rough, jagged edges of paint. The rubber blade squeegee that is used for cleaning automobile windshields may be satisfactory. (One style has a fabric covered rubber sponge on the back of the blade for introducing water to the surface.) Commercially available plastic scraping pads for use with liquid or wet chemical paint strippers may also be effective for wet scraping roughened surfaces.

f. *Control of Debris.* During the wet scraping, the debris should be collected frequently with a wet/dry vacuum to minimize tracking or spreading the removed material throughout the room or space.

g. *Cleaning Surfaces.* The wet-scraped surface(s) should be cleaned with a damp sponge and permitted to dry in preparation for repainting or resealing, which should be done in accordance with the coating/paint manufacturer's instructions. Surface preparation often requires "de-glossing" as well as cleaning. In that case, cleaning with Tri-sodium Phosphate or other acceptable detergent followed by a clean water wash will de-gloss as well as clean.

h. *Surface Sealing.* The "wet-scraped," dried surface(s) are to be sealed with a paint or coating that yields a smooth surface--one from which future dust can be easily cleaned with a damp sponge or cloth, without causing further damage to the surface. The sealed surface should be free of jagged, rough edges, or snags.

i. *Remove Protective Coverings.* At conclusion of the corrective work, or at the end of the work day on multi-day activities, protective polyethylene coverings containing any debris/dust should be carefully removed, bagged in plastic, and stored in a secure place outside the dwelling for eventual disposal in accordance with local disposal practices and regulations. Polyethylene coverings should not be reused in dwelling units.

IN-PLACE MANAGEMENT OF BUILDING INTERIORS

j. *Clean up.* A final clean up of the corrected surfaces and surrounding work area, room or space is to be conducted at the end of each work day with a high efficiency particle air vacuum, a high phosphate wash, followed by a final high efficiency particle air vacuuming. See separate discussion in this guide under "Clean-up procedures".

k. *Testing for Dust.* Dust testing is to be done in accordance with the protocols listed in the Department of Housing and Urban Development Interim Guidelines for Public and Indian Housing, Federal Register, 18 Apr 90, amended Sep 90 and summarized in Enclosure 4, In-Place Management, paragraph 9, Clearance Testing.

1. *Excessive Lead Dust in Units Without Deteriorating Paint.*

(1) Ingesting and inhaling dust lead is the most common way that children are exposed to lead. Soil in urban areas is often tainted with lead from years of use of leaded gasoline and from industrial processes such as smelting. Much of the lead dust in a dwelling is tracked in on shoes or blows in through open windows. It is estimated that 85% of the lead dust in a dwelling is tracked in from outdoors.

(2) If lead dust levels above the prescribed clearance levels persist within the dwelling, the installation should implement measures such as:

(a) On a regular basis, wash down exterior walkways, stairs and landings where dust lead may accumulate.

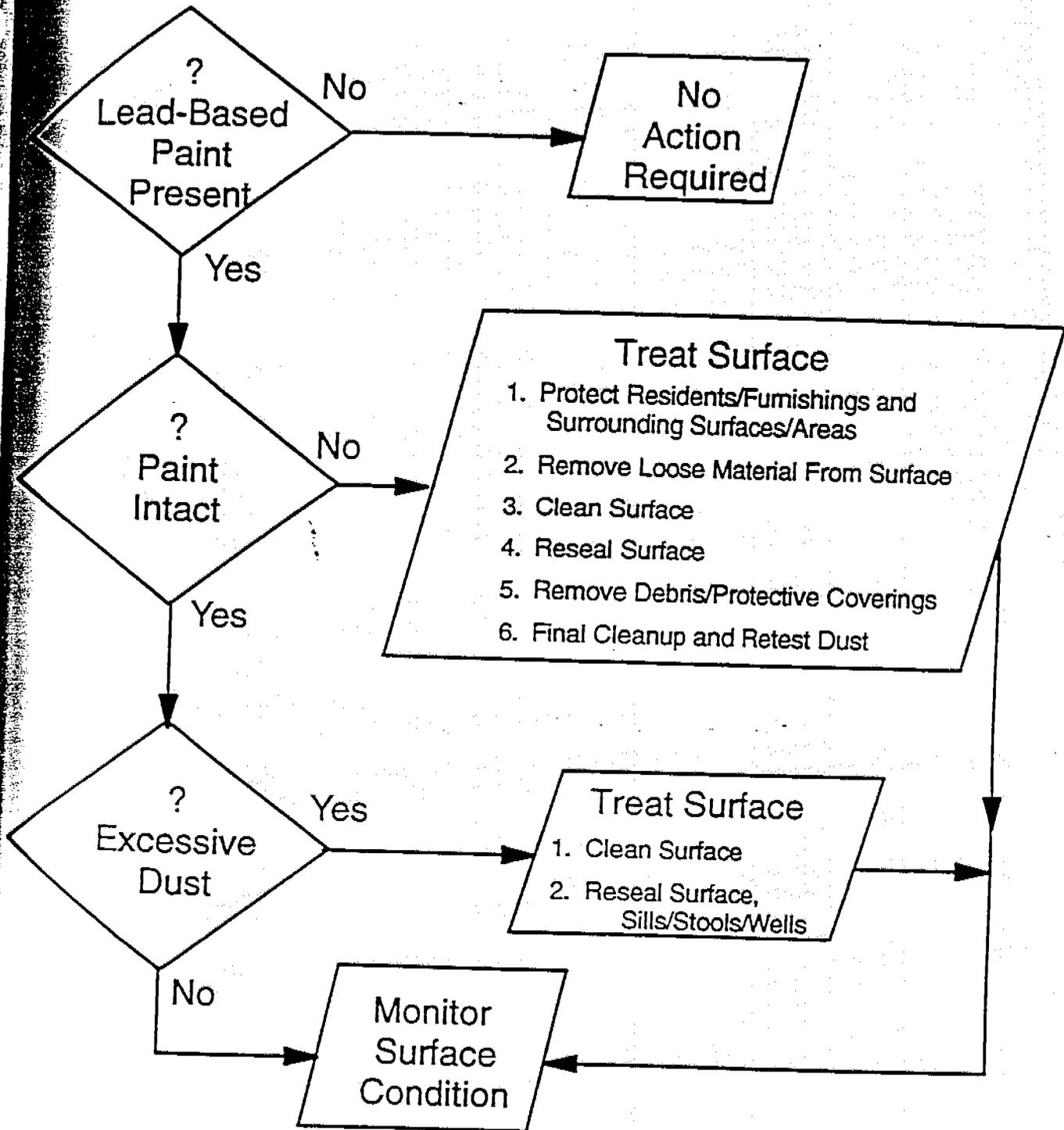
(b) Locate door mats at building and dwelling entrances to reduce the tracking of dust lead into the unit on shoes.

(3) Reiterate to residents:

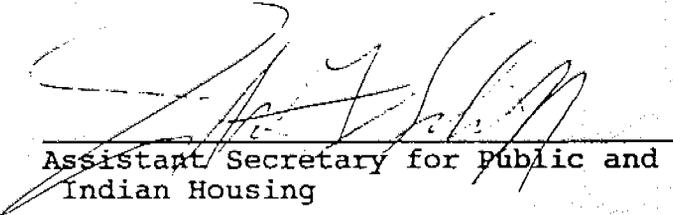
(a) The importance of good housekeeping measures, including frequent wet-wiping/wet-mopping of interior surfaces.

(b) The importance of frequent washing of children's hands and toys.

OF BUILDING INTERIORS

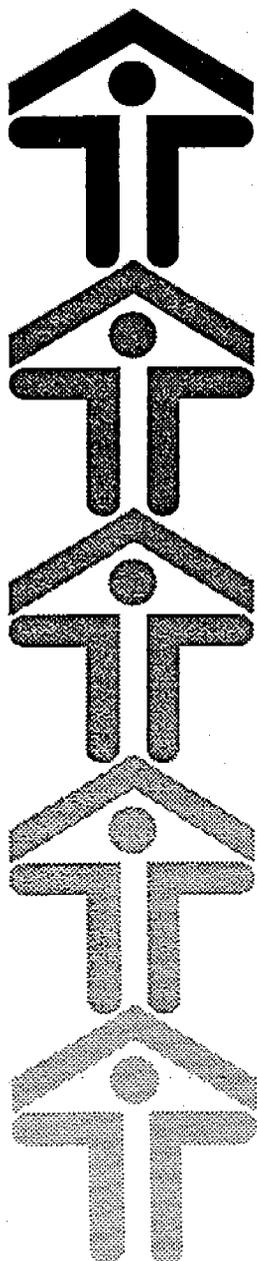


3. Background. The FY 1992 Appropriations Act amended Section 14(a) of the United States Housing Act of 1937, to add language that states that modernization funds may be provided to ". . . assess the risks of lead-based paint through the use of professional risk assessments that include dust and soil sampling and laboratory analysis in all projects constructed before 1980 that are, or will be, occupied by families; . . .". In response to this language and to assist HAS in addressing it, the Department has developed the Risk Assessment Protocol. The goal of the risk assessment protocol is to enable an HA to identify whether LBP hazards exist, and if so, provide solutions on reducing and managing such hazards until abatement can be fully undertaken.



Assistant Secretary for Public and
Indian Housing

Attachment



Lead-Based Paint Risk Assessment Protocol

**LEAD-BASED PAINT
RISK ASSESSMENT PROTOCOL**

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INTRODUCTION

PURPOSE

This document sets forth the steps to be taken when conducting a lead-based paint risk assessment to determine whether lead-based paint hazards exist and, if so, provide solutions on reducing and managing such hazards (In-Place Management of Lead-based Paint Hazards in Public and Indian Housing) until complete abatement takes place. It also provides guidance on managing lead-based paint hazards as these hazards relate to housing authority maintenance and management practices.

LEGISLATIVE BACKGROUND

The Departments of Veterans Affairs and Housing and Urban Development, and the Independent Agencies Appropriations Act, 1992 (the Appropriations Act), provides for a set-aside of \$25 million for Public Housing Agencies (PHAs) and Indian Housing Authorities (IHAs), hereafter referred to as housing authorities (HAs), "to assess the risks of lead-based paint poisoning through the use of professional sampling and laboratory analysis in all projects constructed before 1980 that are, or will be, occupied by families." Section 14 (a)(5) of the United States Housing Act of 1937, as amended by the Appropriations Act, provides that "effective interim measures to reduce and contain the risks of lead-based paint poisoning recommended in such professional risk assessments" are eligible modernization costs. While HAs are not required to conduct a lead-based paint risk assessment, the Department strongly encourages that they do so. When a housing authority receives funding under the set-aside, at a minimum, the attached risk assessment protocol shall be used.

OBJECTIVE

The Lead-Based Paint Poisoning Prevention Act, as amended, requires that all pre-1978 family developments be randomly sampled for the presence of lead by December 6, 1994. (The 1980 date cited above applies to the conduct of lead-based paint risk assessments only.) Positive test results are used to develop abatement plans in conjunction with the rehabilitation and modernization of housing developments. While abatement is underway in many housing authority developments, it is clear that complete abatement of all lead paint surfaces in housing developments will take a period of time. Unless housing authorities adopt short-term measures, many children and workers may become poisoned unnecessarily.

The lead-based paint risk assessment process is a critical supplement to the comprehensive approach of lead-based paint testing, and subsequent abatement, which many housing authorities are now conducting. The "professionally administered" risk assessment is designed to determine whether lead-based paint hazards (contaminated defective paint, interior dust and exterior soil) are present and to assess whether existing management and maintenance programs are adequate to handle lead-based paint hazards during routine maintenance prior to complete abatement. The basic premise of this process is the review of existing maintenance and management practices and the collection of dust and soil samples to determine where and how much lead is present in the housing environment. If lead is found, the process will provide information on how to reduce and manage lead-based paint hazards.

Positive results from a lead-based paint risk assessment will lead to an in-place management program for those housing developments where abatement activities are not possible in the near future. HAs are required to implement short-term, immediate response measures (in-place management) to prevent lead poisoning of resident children and maintenance personnel who may disturb lead-based paint surfaces in the course of their normal activities. In-place management activities are not eligible funding activities under the set-aside; however, they are eligible modernization expenses. In-place management includes cleaning and re-painting, education of residents, training and equipping of employees, and regular monitoring of painted surfaces. Additionally, risk assessments can result in modifications to existing maintenance and management practices.

While the Department is requiring that HAs test soil for lead contamination as a part of risk assessment, a level of hazard for lead in soil has not been set, since that issue is currently being examined by the Environmental Protection Agency (EPA). Accordingly, soil test results will be gathered by the Department and provided to EPA. We will defer to EPA for the establishment of a hazard level determination and for guidance to housing authorities for action where such levels are exceeded. However, where States or local laws have established lead in soil standards and require action, HAs shall abide by the State or local requirements.

HEALTH PERSPECTIVE

With the publication of the Centers for Disease Control (CDC), Department of Health and Human Resources' revised guidelines entitled Preventing Lead Poisoning in Young Children, October 1991, it is anticipated that many more children may be identified as having an elevated blood lead level and may be classified as being poisoned. CDC states that "childhood lead poisoning is one of the most common and preventable pediatric health problems today." Efforts need to be increasingly focused on preventing lead poisoning before it occurs. In some neighborhoods, we know that lead poisoning

can affect over half of all children. Studies indicate that children with elevated blood lead levels are more likely to have:

- lower intelligence and IQ scores;
- learning and reading disabilities;
- increased high school drop out rates;
- reduced reflexes; and,
- a variety of other adverse health effects.

Lead poisoning incidents among construction and maintenance workers have also been reported with increasing frequency.

The major source of lead poisoning is now known to originate largely from contaminated deteriorated house paint and soil. Most children are poisoned by inadvertent ingestion of dust and soil. Additionally, some children are occasionally poisoned by actually eating paint chips.

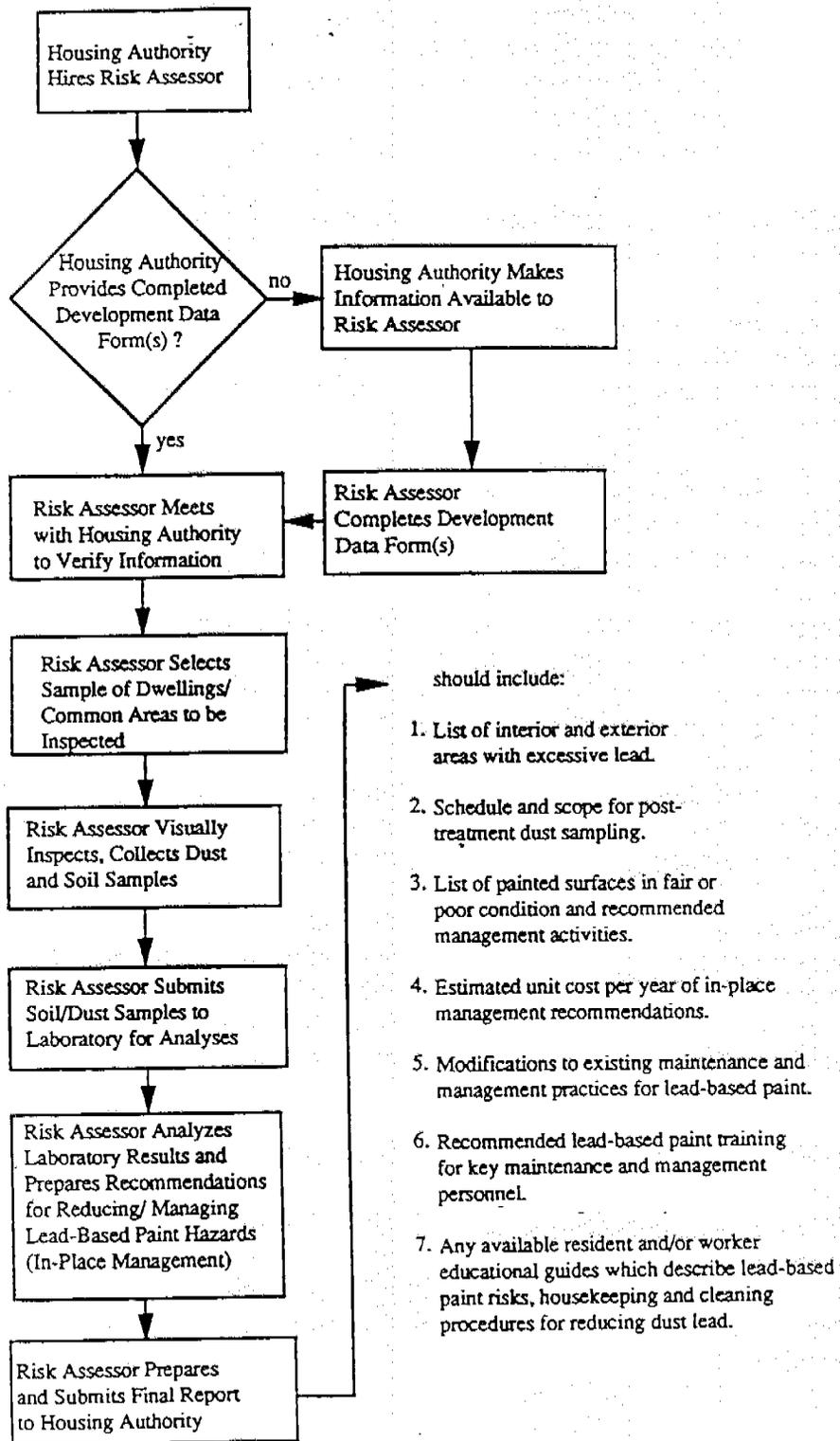
Intact lead-based paint that is covered by a number of layers of non-lead paint presents a hazard if it is disturbed or it deteriorates and contributes lead to house dust or soil. Contaminated house dust and soil which exceed established levels determined to be hazardous (note previous discussion of soil) present a hazard because it is readily available to the child. As long as lead paint is intact and not subject to abrasion, damage or disturbance, it presents no current risk to humans. However, the mere opening and closing of windows may create a hazard. Children are poisoned as a result of being exposed to lead—sometimes by peeling paint chips, but much more commonly by lead dust. Lead dust is invisible, sticky, and hard to clean up. It gets on children's hands (and then into their mouths) through normal behavior. It does not take much lead dust to poison a child. Identifying and controlling these hazards are the focus of the risk assessment and in-place management processes.

Conducting risk assessments and implementing effective in-place management are not substitutes for complying with legal requirements to test and abate. However, these measures do provide a way to deal with lead-based paint (LBP) hazards responsibly and cost-effectively, until long term action can be taken. **HAs must evaluate on a case-by-case basis the cost of in-place management versus speeding up complete lead abatement.**

USERS OF THE RISK ASSESSMENT PROTOCOL

The enclosed document is for use by both HAs and the risk assessment firm that is under contract with an HA to perform this service. The Department believes that an HA's use of this document will be highly beneficial because it will provide insight for formalizing the authority's lead-based paint program and assist in making the best use of available funds.

RISK ASSESSMENT PROTOCOL



SOLICITING THE SERVICES OF A RISK ASSESSOR

To solicit the services of a Risk Assessor, housing authorities should develop a Request for Proposal that includes the following information:

1. A copy of the Risk Assessment Protocol
2. Scope of services
 - a. Housing authority size
 - b. Development(s) to be assessed
 - c. Name of the Development(s)
 - d. Number of units in the Development(s)
 - e. Location of units which are considered a part of the development
 - d. Construction date of buildings contained in the development
3. Proposal submission requirements
4. Required contractor qualifications
5. Date and time of pre-bid conference
6. Factors for award

PART I

DEVELOPMENT DATA FORM

NOTE: The following document and information requests contained in Part I Section I and Section II, should be prepared by the Housing Authority and submitted to the risk assessor for review and sample development; or they should be made available to the risk assessor on site for review and sample development.



Special Attention of:

Notice PIH 92-44 (PHA)

Regional Administrators;
Regional Public Housing Directors;
Field Office Managers; HM Division
Directors; OPIH Managers; RCs/RMCs;
Regional FHEO Directors;
FHEO Division Directors;
PHAs/IHAs; Directors, Public
Housing Divisions

Issued: September 30, 1992
Expires: September 30, 1993

Cross References: Notice 92-25
(PHA); FY 1992 Notice of
Funding Availability for
LBP Risk Assessments; FY
1992 Appropriations Act.

Subject:

Lead-Based Paint (LBP) Risk Assessment Protocol

1. Purpose. This Notice transmits a copy of the LBP Risk Assessment Protocol which was contained in the LBP Risk Assessment NOFA published in the Federal Register on June 29, 1992.

This Notice also acknowledges the fact that the Lead-Based Paint Risk Assessment Protocol was developed through the use of a working group which utilized and modified material provided by the Housing Authority Risk Retention Group, Inc. (HARRG), and its technical arm, Housing Environmental Services, Inc. (HES).

The Lead-Based Paint Risk Assessment Protocol contains some material produced by the Housing Authority Risk Retention Group, Inc., of Cheshire, Connecticut and its technical services arm, Housing Environmental Services, Inc., of Cambridge, Massachusetts. The Department wishes to extend its appreciation to the HARRG, Inc., and HES, Inc., for sharing the materials they use in performing their risk assessments. Those materials were useful to the Department in the development of this risk assessment protocol which is being provided herein.

The attached Protocol incorporates acknowledgements of all the individuals that contributed to its development.

2. Applicability. Public housing agencies and Indian housing authorities (hereinafter referred to as HAS) that are funded under the FY 1992 LBP Risk Assessment NOFA are required, at a minimum, to use the attached Protocol. While risk assessments are not mandatory, HAS are strongly encouraged to conduct them. Risk assessments are eligible work items under the Comprehensive Grant Program (CGP) and the Comprehensive Improvement Assistance Program (CIAP). In no instance shall conducting a risk assessment satisfy the HA's obligation to test for and abate LBP hazards.

PCM : Distribution: W-3-1, W-2(H), R-1, R-3-1(PIH), R-3-2, R-6, R-6-1, R-6-2, R-7, R-7-1
R-7-2, R-9, R-9-1, 138-2, 138-7, RMC-2



file
" Pb Risk assessment protocol

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Director, HUD USER

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24 CFR Subtitle A (4-1-92 Edition)

Sec.

Subpart E—Elimination of Lead-Based Paint Hazards in Federally-Owned Properties Prior to Sale for Residential Habitation

- 35.50 Purpose and scope.
- 35.52 Applicability.
- 35.54 Definitions.
- 35.56 Requirements.

Subpart F—Prohibition Against the Use of Lead-Based Paint in Federal and Federally-Assisted Construction or Rehabilitation of Residential Structures

- 35.60 Scope.
- 35.61 Definitions.
- 35.62 Federal construction; prohibition against use of lead-based paint.
- 35.63 Federally assisted construction; prohibition against use of lead-based paint.
- 35.64 Reports to the Secretary.
- 35.65 Authority for Subpart B of these regulations.

Subpart G—Waivers

- 35.70 Basic authority.

AUTHORITY: Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4821-4846); sec. 7(d), Department of Housing and Urban Development Act (42 U.S.C. 3535(d)).

SOURCE: 41 FR 28878, July 13, 1976, unless otherwise noted.

PART 35—LEAD-BASED PAINT POISONING PREVENTION IN CERTAIN RESIDENTIAL STRUCTURES

Subpart A—Notifications to Purchasers and Tenants of HUD-Associated Housing Constructed Prior to 1978 of the Hazards of Lead-Based Paint Poisoning

Sec.

- 35.1 Purpose and scope.
- 35.3 Definitions.
- 35.5 Requirements.

Subpart B—Prohibition Against the Use of Lead-Based Paint in HUD-Associated Housing

- 35.10 Purpose and scope.
- 35.12 Definitions.
- 35.14 Requirements.

Subpart C—Elimination of Lead-Based Paint Hazards in HUD-Associated Housing

- 35.20 Purpose and scope.
- 35.22 Definitions.
- 35.24 Requirements.

Subpart D—Local Codes and Regulations

- 35.40 Compliance with local laws.
- 35.42 Requirements.

Subpart A—Notification to Purchasers and Tenants of HUD-Associated Housing Constructed Prior to 1978 of the Hazards of Lead-Based Paint Poisoning

§ 35.1 Purpose and scope.

This subpart A establishes procedures to assure that purchasers and tenants of all HUD-associated housing constructed prior to 1978 are notified of the hazards of lead-based paint which may exist in such housing, of the symptoms and treatment of lead-based paint poisoning, and of the importance and availability of maintenance and removal techniques for eliminating such hazards.

[51 FR 27787, Aug. 1, 1986]

§ 35.3 Definitions.

Act. The Lead-Based Paint Poisoning Prevention Act, Pub. L. 91-695, 84 Stat. 2078, as amended by Pub. L. 93-

151 and Pub. L. 94-317 (42 U.S.C. 4821-4846).

Assistant Secretaries. The Assistant Secretaries in the Department of Housing and Urban Development.

Department of HUD. The U.S. Department of Housing and Urban Development.

HUD-associated housing. Any residential structure that is the subject of an application for mortgage insurance under the National Housing Act or is proposed for the receipt of housing assistance payments under a program administered by the Secretary. For purposes of this subpart A, *HUD-associated housing* also includes any existing residential structure—

(1) Acquired by the Secretary pursuant to any provision of law which, prior to such acquisition, was insured under the National Housing Act or was subject to a loan under section 312 of the Housing Act of 1964.

(2) Sold by the Secretary following any such acquisition and subject to any requirements regarding its use or operation under an agreement with, or condition imposed by, the Secretary, or

(3) That is currently covered by mortgage insurance or a contract for housing assistance payments.

Residential structure. Any house, apartment or structure intended for human habitation, including any non-dwelling facility operated by the owner and commonly used by children under seven years of age, such as a child care center.

Secretary. The Secretary of Housing and Urban Development or a HUD official delegated the Secretary's authority with respect to the Act.

[51 FR 27787, Aug. 1, 1986]

35.5 Requirements.

(a) Purchasers and tenants of HUD-associated housing constructed prior to 1978 shall be notified:

(1) That the property was constructed prior to 1978;

(2) That the property may contain lead-based paint;

(3) Of the hazards of lead-based paint;

(4) Of the symptoms and treatment of lead-based paint poisoning; and

(5) Of the precautions to be taken to avoid lead-based paint poisoning (including maintenance and removal techniques for eliminating such hazards).

Prospective purchasers or renters shall receive the above notifications prior to purchase or rental.

(b) Each Assistant Secretary shall take necessary actions to implement the requirements of paragraph (a) of this section with respect to the HUD programs within his/her administrative jurisdiction. Such actions shall include providing the required notification (prepared by the Secretary after consultation with the National Institute of Building Sciences) and establishing procedures to:

(1) Provide evidence that the required notification has been received by purchasers and tenants of HUD-associated housing constructed prior to 1978, and

(2) Require the inclusion of appropriate provisions in contracts of sale, rental or management of HUD-associated housing to assure that purchasers and tenants receive the required notification.

(c) Any requirement of this section, except use of the required notification, shall be deemed superseded by a regulation promulgated by an Assistant Secretary with respect to any program under his or her jurisdiction which states expressly that it is promulgated pursuant to the authorization granted in this section and supersedes, with respect to programs within its defined scope, the notification requirements prescribed by this section. *Sec. e.g., 24 CFR 570.680(b) (Community Development Block Grants).*

[51 FR 27787, Aug. 1, 1986, as amended at 53 FR 20798, June 6, 1988]

Subpart B—Prohibition Against the Use of Lead-Based Paint in HUD-Associated Housing

§ 35.10 Purpose and scope.

This subpart implements the provisions of 42 CFR part 90 issued by the Secretary of Health and Human Services pursuant to section 401 of the Act which are applicable to Federal agen-

tive agencies and instrumentalities of the United States, including corporations in which all or substantially all of the stock is beneficially owned by the United States or by any of the foregoing departments, establishments, agencies or instrumentalities.

Federally-owned properties. Any properties owned by a federal agency as defined in this section.

Use for residential habitation. The use of a property as a residential structure as defined in § 35.3.

[51 FR 27788, Aug. 1, 1986]

§ 35.56 Requirements.

(a) Prior to occupancy of a federally-owned property where its use subsequent to sale is intended for residential habitation, the Federal agency selling the property shall assure that the following steps are taken:

(1) All applicable surfaces of residential structures constructed prior to 1978 shall be inspected to determine whether defective paint surfaces exist. For this purpose all defective paint surfaces shall be assumed to be immediate hazards; and

(2) Treatment necessary to eliminate hazards of lead-based paint shall consist of covering or removal of defective paint surfaces. Covering may be accomplished by such means as adding a layer of wallboard to the wall surface. Depending on the wall condition, wall-coverings which are permanently attached may be used. Covering or replacing trim surfaces is also permitted. Paint removal may be accomplished by such methods as scraping, heat treatment (infra-red or coil type heat guns) or chemicals. Machine sanding and use of propane or gasoline torches (open-flame methods) are not permitted. Washing and repainting without thorough removal or covering does not constitute adequate treatment. In the case of defective paint spots, scraping and repainting the defective area is considered adequate treatment.

(3) Prospective purchasers are provided all notifications described in § 35.5(a).

(b) The provisions of this subpart E shall be binding upon all Federal agencies as provided by section 302 of the Act; however, nothing contained in this part 35 shall preclude any Federal

agency from promulgating such other procedures or additional requirements as may be necessary to implement the provisions of the Act.

[41 FR 28878, July 13, 1976, as amended at 51 FR 27789, Aug. 1, 1986; 52 FR 1891, Jan. 15, 1987; 53 FR 20799, June 6, 1988]

§ 35.12

cies and which prohibit the use of lead-based paint on applicable surfaces of residential structures constructed or rehabilitated by the Federal Government or with Federal assistance and establishes procedures to prohibit the use of lead-based paint on applicable surfaces in all HUD-associated housing.

[41 FR 28876, July 13, 1976, as amended at 50 FR 9269, Mar. 7, 1985]

§ 35.12 Definitions.

The definitions contained in § 35.3 of subpart A of this part shall apply to this subpart B and in addition the following definition is applicable to this subpart B:

(a) *Lead-based paint* as defined in section 501(3) of the Act as amended by Pub. L. 94-317 (42 U.S.C. 4801, et seq), the National Consumer Information and Health Promotion Act of 1976, means: (1) Any paint containing more than five-tenths of 1 per centum lead by weight (calculated as lead metal in the total non-volatile content of the paint or the equivalent measure of lead in the dried film of paint already applied or both; or (2) with respect to paint which is manufactured after June 22, 1977 lead-based paint means any paint containing more than six one-hundredths of 1 per centum lead by weight (calculated as lead metal) in the total nonvolatile content of the paint or the equivalent measure of lead in the dried film of paint already applied.

[41 FR 28876, July 13, 1976, as amended at 42 FR 5043, Jan. 27, 1977]

§ 35.14 Requirements.

(a) No office of the Department shall use or permit the use of lead-based paint on applicable surfaces of HUD-associated housing.

(b) Each Assistant Secretary shall implement the requirements of paragraph (a) of this section with respect to the HUD programs within his/her administrative jurisdiction. Implementation shall include the establishment of procedures to require the inclusion of appropriate provisions in contracts and subcontracts involving HUD-associated housing prohibiting the use of lead-based paint on applicable surfaces

24 CFR Subtitle A (4-1-92 Edition)

of such HUD-associated housing and shall include provisions necessary for enforcement of the prohibition.

Subpart C—Elimination of Lead-Based Paint Hazards in HUD-Associated Housing

§ 35.20 Purpose and scope.

This subpart C implements the provisions of section 302 of the Act with respect to establishing procedures to eliminate as far as practicable the hazards of lead-based paint poisoning with respect to any existing HUD-associated housing which may present such hazards.

[51 FR 27787, Aug. 1, 1986]

§ 35.22 Definitions.

As used in this subpart:

Applicable surface means all intact and nonintact interior and exterior painted surfaces of a residential structure.

Defective paint surface means an applicable surface on which the paint is cracking, scaling, chipping, peeling, or loose.

HUD-associated housing shall have the meaning ascribed in § 35.3.

Residential structure shall have the meaning ascribed in § 35.3.

[51 FR 27787, Aug. 1, 1986, as amended at 53 FR 20798, June 6, 1988]

§ 35.24 Requirements.

(a) Each Assistant Secretary shall establish procedures with respect to programs involving HUD-associated housing within his or her administrative jurisdiction to eliminate as far as practicable the hazards of lead-based paint poisoning with respect to housing that may present such hazards.

(b) Subject to the provisions of separate regulations promulgated with respect to any program by the Assistant Secretary having jurisdiction over that program, the following minimum requirements shall apply to all programs:

(1) All applicable surfaces of HUD-associated housing constructed prior to 1978 shall be inspected to determine whether defective paint surfaces exist.

(2)(i) Treatment necessary to eliminate immediate hazards shall, at a minimum, consist of the covering or removal of defective paint surfaces found in HUD-associated housing constructed prior to 1978.

(ii) Covering may be accomplished by such means as adding a layer of wallboard to the wall surface. Depending on the wall condition, wallcoverings which are permanently attached may be used. Covering or replacing trim surfaces is also permitted. Paint removal may be accomplished by such methods as scraping, heat treatment (infra-red or coil type heat guns) or chemicals. Machine sanding and use of propane or gasoline torches (open-flame methods) are not permitted. Washing and repainting without thorough removal or covering does not constitute adequate treatment. In the case of defective paint spots, scraping and repainting the defective area is considered adequate treatment.

(3) Appropriate provisions for the inspection of applicable surfaces and elimination of hazards shall be included in contracts and subcontracts involving HUD-associated housing to which such requirements may apply.

(4) Any requirements of this section shall be deemed superseded by a regulation promulgated by an Assistant Secretary with respect to any program under his or her jurisdiction which states expressly that it is promulgated under the authorization granted in this section and supersedes, with respect to programs within its defined scope, the requirements prescribed by this section. *See, e.g.*, 24 CFR part 200, subpart O (Mortgage Insurance and Property Disposition); § 570.608 (Community Development Block Grant); § 882.109(i) (Section 8 Existing Housing); part 965, subpart H (Public Housing); part 905, subpart K (Indian Housing).

[52 FR 1890, Jan. 15, 1987, as amended at 53 FR 20798, June 6, 1988; 56 FR 920, Jan. 9, 1991; 56 FR 15172, Apr. 15, 1991]

Subpart D—Local Codes and Regulations

§ 35.40 Compliance with local laws.

(a) HUD, as owner of federally-owned housing, will comply with State

or local laws, ordinances, codes, or regulations governing lead-based paint hazard abatement.

(b) Nothing in this part 35 is intended to relieve an owner or tenant of HUD-associated housing of any responsibility for compliance with State or local laws, ordinances, codes, or regulations governing lead-based paint hazard abatement.

(c) HUD does not assume any responsibility with respect to inspection, enforcement, interpretation or determination of compliance with such State or local requirements, except that the Federal standard for lead content in paint supersedes any State or local requirement, prohibition, or standard, as provided in section 506 of the Act.

§ 35.42 Requirements.

Each Assistant Secretary shall take necessary actions to implement the intent of § 35.40.

Subpart E—Elimination of Lead-Based Paint Hazards in Federally-Owned Properties Prior to Sale for Residential Habitation

§ 35.50 Purpose and scope.

This subpart E implements the provisions of section 302 of the Act which directs the Secretary to establish and implement procedures to eliminate the hazards of lead-based paint poisoning in all federally-owned properties prior to the sale of such properties when their use is intended for residential habitation.

§ 35.52 Applicability.

The requirements established by this subpart E are applicable to all federally-owned properties prior to their sale by a Federal agency when their use is intended for residential habitation.

§ 35.54 Definitions.

The definitions contained in §§ 35.3 and 35.22 shall apply to this subpart E. The following definitions are also applicable to this subpart E:

Federal agency. The United States or any executive departments, independent establishments, administra-

TITLE X—RESIDENTIAL LEAD-BASED PAINT HAZARD REDUCTION ACT OF 1992

Residential
Lead-Based
Paint Hazard
Reduction Act of
1992.

SEC. 1001. SHORT TITLE.

This title may be cited as the "Residential Lead-Based Paint Hazard Reduction Act of 1992".

42 USC 4851
note.

SEC. 1002. FINDINGS.

42 USC 4851.

The Congress finds that—

(1) low-level lead poisoning is widespread among American children, afflicting as many as 3,000,000 children under age 6, with minority and low-income communities disproportionately affected;

(2) at low levels, lead poisoning in children causes intelligence quotient deficiencies, reading and learning disabilities, impaired hearing, reduced attention span, hyperactivity, and behavior problems;

(3) pre-1980 American housing stock contains more than 3,000,000 tons of lead in the form of lead-based paint, with the vast majority of homes built before 1950 containing substantial amounts of lead-based paint;

(4) the ingestion of household dust containing lead from deteriorating or abraded lead-based paint is the most common cause of lead poisoning in children;

(5) the health and development of children living in as many as 3,800,000 American homes is endangered by chipping or peeling lead paint, or excessive amounts of lead-contaminated dust in their homes;

(6) the danger posed by lead-based paint hazards can be reduced by abating lead-based paint or by taking interim measures to prevent paint deterioration and limit children's exposure to lead dust and chips;

(7) despite the enactment of laws in the early 1970's requiring the Federal Government to eliminate as far as practicable lead-based paint hazards in federally owned, assisted, and insured housing, the Federal response to this national crisis remains severely limited; and

(8) the Federal Government must take a leadership role in building the infrastructure—including an informed public; State and local delivery systems, certified inspectors, contractors, and laboratories, trained workers, and available financing and insurance—necessary to ensure that the national goal of eliminating lead-based paint hazards in housing can be achieved as expeditiously as possible.

SEC. 1003. PURPOSES.

42 USC 4851a.

The purposes of this Act are—

(1) to develop a national strategy to build the infrastructure necessary to eliminate lead-based paint hazards in all housing as expeditiously as possible;

(2) to reorient the national approach to the presence of lead-based paint in housing to implement, on a priority basis, a broad program to evaluate and reduce lead-based paint hazards in the Nation's housing stock;

(3) to encourage effective action to prevent childhood lead poisoning by establishing a workable framework for lead-based paint hazard evaluation and reduction and by ending the current confusion over reasonable standards of care;

(4) to ensure that the existence of lead-based paint hazards is taken into account in the development of Government housing policies and in the sale, rental, and renovation of homes and apartments;

(5) to mobilize national resources expeditiously, through a partnership among all levels of government and the private sector, to develop the most promising, cost-effective methods for evaluating and reducing lead-based paint hazards;

(6) to reduce the threat of childhood lead poisoning in housing owned, assisted, or transferred by the Federal Government; and

(7) to educate the public concerning the hazards and sources of lead-based paint poisoning and steps to reduce and eliminate such hazards.

1b. SEC. 1004. DEFINITIONS.

For the purposes of this Act, the following definitions shall apply:

(1) **ABATEMENT.**—The term “abatement” means any set of measures designed to permanently eliminate lead-based paint hazards in accordance with standards established by appropriate Federal agencies. Such term includes—

(A) the removal of lead-based paint and lead-contaminated dust, the permanent containment or encapsulation of lead-based paint, the replacement of lead-painted surfaces or fixtures, and the removal or covering of lead contaminated soil; and

(B) all preparation, cleanup, disposal, and postabatement clearance testing activities associated with such measures.

(2) **ACCESSIBLE SURFACE.**—The term “accessible surface” means an interior or exterior surface painted with lead-based paint that is accessible for a young child to mouth or chew.

(3) **CERTIFIED CONTRACTOR.**—The term “certified contractor” means—

(A) a contractor, inspector, or supervisor who has completed a training program certified by the appropriate Federal agency and has met any other requirements for certification or licensure established by such agency or who has been certified by any State through a program which has been found by such Federal agency to be at least as rigorous as the Federal certification program; and

(B) workers or designers who have fully met training requirements established by the appropriate Federal agency.

(4) **CONTRACT FOR THE PURCHASE AND SALE OF RESIDENTIAL REAL PROPERTY.**—The term “contract for the purchase and sale of residential real property” means any contract or agreement in which one party agrees to purchase an interest in real

property on which there is situated 1 or more residential dwellings used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of 1 or more persons.

(5) **DETERIORATED PAINT.**—The term “deteriorated paint” means any interior or exterior paint that is peeling, chipping, chalking or cracking or any paint located on an interior or exterior surface or fixture that is damaged or deteriorated.

(6) **EVALUATION.**—The term “evaluation” means risk assessment, inspection, or risk assessment and inspection.

(7) **FEDERALLY ASSISTED HOUSING.**—The term “federally assisted housing” means residential dwellings receiving project-based assistance under programs including—

(A) section 221(d)(3) or 236 of the National Housing Act;

(B) section 1 of the Housing and Urban Development Act of 1965;

(C) section 8 of the United States Housing Act of 1937; or

(D) sections 502(a), 504, 514, 515, 516 and 533 of the Housing Act of 1949.

(8) **FEDERALLY OWNED HOUSING.**—The term “federally owned housing” means residential dwellings owned or managed by a Federal agency, or for which a Federal agency is a trustee or conservator. For the purpose of this paragraph, the term “Federal agency” includes the Department of Housing and Urban Development, the Farmers Home Administration, the Resolution Trust Corporation, the Federal Deposit Insurance Corporation, the General Services Administration, the Department of Defense, the Department of Veterans Affairs, the Department of the Interior, the Department of Transportation, and any other Federal agency.

(9) **FEDERALLY SUPPORTED WORK.**—The term “federally supported work” means any lead hazard evaluation or reduction activities conducted in federally owned or assisted housing or funded in whole or in part through any financial assistance program of the Department of Housing and Urban Development, the Farmers Home Administration, or the Department of Veterans Affairs.

(10) **FRICTION SURFACE.**—The term “friction surface” means an interior or exterior surface that is subject to abrasion or friction, including certain window, floor, and stair surfaces.

(11) **IMPACT SURFACE.**—The term “impact surface” means an interior or exterior surface that is subject to damage by repeated impacts, for example, certain parts of door frames.

(12) **INSPECTION.**—The term “inspection” means a surface-by-surface investigation to determine the presence of lead-based paint as provided in section 302(c) of the Lead-Based Paint Poisoning Prevention Act and the provision of a report explaining the results of the investigation.

(13) **INTERIM CONTROLS.**—The term “interim controls” means a set of measures designed to reduce temporarily human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs.

(14) LEAD-BASED PAINT.—The term “lead-based paint” means paint or other surface coatings that contain lead in excess of limits established under section 302(c) of the Lead-Based Paint Poisoning Prevention Act.

(15) LEAD-BASED PAINT HAZARD.—The term “lead-based paint hazard” means any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, lead-contaminated paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects as established by the appropriate Federal agency.

(16) LEAD-CONTAMINATED DUST.—The term “lead-contaminated dust” means surface dust in residential dwellings that contains an area or mass concentration of lead in excess of levels determined by the appropriate Federal agency to pose a threat of adverse health effects in pregnant women or young children.

(17) LEAD-CONTAMINATED SOIL.—The term “lead-contaminated soil” means bare soil on residential real property that contains lead at or in excess of the levels determined to be hazardous to human health by the appropriate Federal agency.

(18) MORTGAGE LOAN.—The term “mortgage loan” includes any loan (other than temporary financing such as a construction loan) that—

(A) is secured by a first lien on any interest in residential real property; and

(B) either—

(i) is insured, guaranteed, made, or assisted by the Department of Housing and Urban Development, the Department of Veterans Affairs, or the Farmers Home Administration, or by any other agency of the Federal Government; or

(ii) is intended to be sold by each originating mortgage institution to any federally chartered secondary mortgage market institution.

(19) ORIGINATING MORTGAGE INSTITUTION.—The term “originating mortgage institution” means a lender that provides mortgage loans.

(20) PRIORITY HOUSING.—The term “priority housing” means target housing that qualifies as affordable housing under section 215 of the Cranston-Gonzalez National Affordable Housing Act (42 U.S.C. 12745), including housing that receives assistance under subsection (b) or (c) of section 8 of the United States Housing Act of 1937 (42 U.S.C. 1437f(b) or (c)).

(21) PUBLIC HOUSING.—The term “public housing” has the same meaning given the term in section 3(b) of the United States Housing Act of 1937 (42 U.S.C. 1437a(b)(1)).

(22) REDUCTION.—The term “reduction” means measures designed to reduce or eliminate human exposure to lead-based paint hazards through methods including interim controls and abatement.

(23) RESIDENTIAL DWELLING.—The term “residential dwelling” means—

(A) a single-family dwelling, including attached structures such as porches and stoops; or

(B) a single-family dwelling unit in a structure that contains more than 1 separate residential dwelling unit,

Resources for Childhood Lead Poisoning Prevention

U.S. Department of Housing and Urban Development:

file "pb poc's"

Office of Lead-Based Paint Abatement and Poisoning Prevention _____ (202) 755-1822
451 7th Street SW
Room B-133
Contact: Ellis Goldman

Washington, DC 20410

Lead-based paint abatement grants to cities, counties, and states.

HUD Field Offices _____

Have copies of additional resources available for review by CHAS preparers. Contact your local HUD field office for more information.

Lead Poisoning Prevention Branch _____

(404) 488-7330

Centers for Disease Control and Prevention

Contact: Dave Forney

4770 Buford Highway NE

Building 101, Mail Stop 742

Atlanta, GA 30341

Lead poisoning prevention grants to health departments. Additional publications are available.

Environmental Protection Agency:

Toxic Substances Control Hotline _____

(202) 554-1404

For a copy of Strategy for Reducing Lead Exposures, February 1992.

Safe Drinking Water Hotline _____

(800) 426-4791

Staff will answer questions about lead in drinking water, including public water supply and lead pipes/lead solder in private or public dwellings. Free informational brochures and state lists of labs approved to test lead in water are available.

National Lead Information Center

1019 19th Street NW

Suite 401

Washington, DC 20036

Lead Hotline _____

(800) LEAD-FYI (532-3394)

Provides general information to the public. Callers will be mailed a basic information package on lead containing an EPA brochure and three fact sheets on "Home Repairs and Renovations," "Testing your Home for Lead," "Questions Parents Ask About Lead Poisoning," and referrals to local sources of additional information. One copy available to individuals at no charge; multiple copies are available at cost. Operated by the National Safety Council.

Clearinghouse _____

(800) 424-LEAD (424-5323)

Provides a staffed phone line and more technical information for professionals. Staff will provide specific information on request. Operated by the National Safety Council.

National Center for Lead-Safe Housing _____ (410) 992-0712

205 American City Building

Columbia, MD 21044

Mission is to help sharply reduce childhood lead poisoning while preserving the nation's stock of affordable housing. The Center works with state and local governments that are developing and carrying out cost-effective strategies to reduce lead hazards primarily in older housing occupied by low- and moderate income households, sponsors practical research projects, evaluates demonstration lead-based paint hazard abatement programs, and develops guidelines for dealing with correcting lead-based paint hazards in federally-supported housing. Technical Assistance Bulletins available.

Alliance To End Childhood Lead Poisoning _____ (202) 543-1147

227 Massachusetts Avenue NE

Suite 200

Washington, DC 20002

A national, non-profit organization focused exclusively on preventing childhood lead poisoning. Its goal is to launch an effective national prevention program through education, policy, and advocacy efforts. Publishes a bi-monthly newsletter, the Alliance Alert, a federal legislative summary, and publications. Modest contributions are requested.

Regional Lead Training Centers _____ (202) 659-3130

The National University Continuing Education Association Program

Contact: Ryan Lordos

One Dupont Circle

Suite 615

Washington, DC 20036

Information on the national availability of contractor, worker, or inspector training and Regional Lead Training Centers.

National Conference of State Legislatures _____ (303) 830-2200

1560 Broadway

Contact: Douglas Farquhar

Suite 700

Denver, CO 80202

Publications available.

HUD USER _____ (800) 245-2691 or (301) 251-5154

PO Box 6091

Rockville, MD 20850

Centralized source of publications produced by the U.S. Department of Housing and Urban Development. Publications available at cost.

The Do's and Don'ts of Lead Poisoning

Prevention is the only way to protect young children from lead poisoning. There is no cure. By taking some simple steps, you can reduce the danger in your home.

Paint

- ☞ Cover damaged painted surfaces, like windows and doors, with cloth tape or contact paper.
- ☞ Move cribs and playpens away from damaged paint.
- ☞ Block damaged paint with furniture.
- ☞ Have your paint tested before any renovation. If it contains lead, STOP! See the "Abatement" section on the back side of this flyer.

Dust

- ☞ Lead from paint can fall into the dust. Wet mop and wash floors, windowsills and baseboards with a high phosphate solution (like TSP in water) at least weekly.
- ☞ Wet sweep only. Dry sweeping can stir up leaded dust.

Carpets

- ☞ Cover carpets with a washable blanket or sheet. Wash the blanket often.
- ☞ Wet vacuum with a canister type vacuum. Lead particles can pass through filters in regular vacuums.

Furniture

- ☞ Cover furniture with a washable blanket or sheet for children to play on. Wash the blanket often.
- ☞ Cover painted furniture with cloth tape.

Soil

- ☞ Plant and maintain ground cover or grass outside as a barrier between lead in the soil and your child.
- ☞ Plant bushes near the house to protect children from the higher risk areas near the house, where paint falls in invisible particles.

Water

- ☞ Water may contain lead if leaded solder was used on pipes. Run water until it is as cool as it will get before using for food preparation or drinking. Hot water or water that sits in pipes absorbs more lead.
- ☞ Don't boil water longer than necessary when making baby formula. Boiling concentrates lead.
- ☞ Beware of water filters. Most filters, especially carbon or sand, do not remove lead.
- ☞ Don't use lead solder for plumbing repair.

Diet

- ☞ A healthy diet slows down the body's absorption of lead. Feed children plenty of iron: lean meats, spinach, liver, tuna, beans, fortified cereals, eggs, and greens.
- ☞ Feed children plenty of calcium: milk, yogurt, cheese, cooked greens, and tofu.
- ☞ Feed children several meals a day. Children absorb more lead on an empty stomach.

Ceramics

- ☞ Beware of dishware and pottery. Brightly colored, handmade, or imported disware may have lead.
- ☞ Don't store food—especially acidic foods like tomatoes or orange juice—in ceramics.
- ☞ Call the Environmental Defense Fund at (510) 658-8008 for more information on lead in ceramics.

Cans

- ☞ Store food in glass or plastic containers, not in open cans.
- ☞ Avoid buying cans with wide, dented side seams and visible solder. Buy cans without side seams, or with narrow seams and blue black paint lines.

Work

- ☞ If your work exposes you to lead, leave your clothes at work and shower before coming home. Wash these clothes separately from the rest of the laundry.

Folk Remedies

- ☞ Never take or use the following folk remedies which contain lead: Alarcon, Alkohl, Azarcon, Bala Goli, Coral, Ghasard, Greta, Kandou, Kohl, Luiga, Maria Luisa, Pay-Loo-Ah, Rueda.

Health and Hygiene

- ☞ Wash children's faces and hands before each meal, snack and bedtime.
- ☞ Try to stop children from putting their hands or toys in their mouths.
- ☞ Wash your hands before preparing or serving food.
- ☞ Wash toys and pacifiers frequently.
- ☞ Don't use painted toys from countries other than the U.S.
- ☞ Have your children tested for lead. The Child Health and Disability Prevention program (CHDP) provides free lead testing and other health services to eligible children. Call (415) 554-9950.

Important Phone Numbers

San Francisco Department of Public Health	(415) 554-2733
Child Health and Disability Prevention	(415) 554-9950
Coalition to Prevent Lead Poisoning	(415) 777-9635

What is "Abatement"?

"Abatement" is the process of reducing lead hazards. *Proper abatement by trained professionals is the only safe way to eliminate the danger of lead poisoning from your home.* Fixing up or remodeling a house without using the right procedures increases the danger of lead poisoning, since scraping, sanding or burning paint can stir up hidden lead and move it into the dust and air.

No one in California regulates or certifies contractors in lead abatement. If you are considering abatement, question your contractor carefully about the procedures he or she will use. Generally, you should ask how the contractor will: isolate the family from the work area; gather and dispose of the paint chips and dust (high efficiency particle vacuums and wet mopping methods should be used); and test the home for lead both before and after abatement. Contact the San Francisco Department of Public Health at (415) 554-2733 for more information.

What Else Can I Do?

Test your children for lead poisoning.

Children should be tested at 12 and 24 months, and then screened regularly to decide if they need more testing. Most children can be tested free as part of a city program.

Call 415-554-9950.

Spread the word about lead poisoning.

Work with the PTA, local community groups, childcare providers, and others. Pass this fact sheet on. Lead poisoning can happen to anyone's child.

Test your home for lead.

Contact the Public Health Department (415-554-2733) for a list of Bay Area laboratories providing testing services for water, soil, and paint. (*Beware of home testing kits. These kits often detect only very high levels of lead. Test results may say that paint doesn't have lead, when the paint may have a low, but still dangerous amount of lead.*)

Support the Coalition to Prevent Lead Poisoning.

Your tax-deductible contribution helps us distribute our materials free of charge to groups or individuals who cannot afford to pay for them.

Volunteer for the Coalition to Prevent Lead Poisoning.

We need help in education, outreach, and organizing. Call the Coalition at 415-777-9635 (10AM-3PM) or 415-777-9456 (Voice/TDD).

Coalition to Prevent Lead Poisoning

A Project of Consumer Action
116 New Montgomery St., Suite 233
San Francisco, CA 94105
(415) 777-9635