

## Lead Based Paint Inspection and Lead Risk Assessment Report

INSERT PICTURE OF SIDE A OF PROPERTY HERE



Performed at:  
Private Residence  
[Street Address]  
[City, State ZIP]  
[County]

Estimated Date of Construction: [Enter year]

Property Owner Information:  
[Property Owner Name(s)]  
[Street Address]  
[City, State ZIP]  
[Phone number]

Prepared By:  
[RA Name]  
[Company Name]  
[Lead Inspector/Risk Assessor Certification #]  
[Street Address]  
[City, State ZIP]  
[Phone number]  
[Fax number]

Signature: \_\_\_\_\_

Date of Assessment: [Choose date]  
Date of Report: [Choose date]

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## DISCLOSURE REQUIREMENTS FOR RESIDENTIAL UNITS

Ohio law (section 5302.30 of the Revised Code) requires every person who intends to transfer any residential real property by sale, land installment contract, lease with option to purchase, exchange, or lease for a term of ninety-nine years and renewable forever, to complete and provide a copy to the prospective transferee of the applicable property disclosure forms, disclosing known hazardous conditions of the property, including lead-based paint hazards.

Federal law (24 CFR part 35 and 40 CFR part 745) requires sellers and lessors of residential units constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six years of age resides or is expected to reside in such housing) or any zero-bedroom dwelling to disclose and provide a copy of this report to new purchasers or lessees before they become obligated under a lease or sales contract. Property owners and sellers are also required to distribute an educational pamphlet approved by the United States environmental protection agency and include standard warning language in sales contracts or in or attached to lease contracts to ensure that parents have the information they need to protect children from lead-based paint hazards.

## BACKGROUND INFORMATION

Building description- e.g. The dwelling is a two-story, single family home built in 1910. The exterior had aluminum siding, new asphalt shingles.

If no lead hazards found, please include this statement before description of the house.

**No lead hazards were identified at this dwelling.** The painted surfaces that were tested were found to be free of lead-based paint or in a non-hazardous condition (intact). Dust wipe samples results did not indicate lead in the dust. Soil and water sample results were negative.

## EXECUTIVE SUMMARY

Pursuant to sections 3742.35 and 3742.36 of the Ohio Revised Code, on [choose date] a lead inspection and lead risk assessment was conducted at [Street, City, State ZIP]. As a result of the lead based paint inspection and lead hazard risk assessment (to be referred to as "Assessment") conducted on [choose date], it was found that lead based paint and lead based paint hazards [choose one] present on the subject property as of the date of the Assessment. The assessment consisted of the following activities:

- ✓ Completion of a questionnaire to determine possible sources of lead.
- ✓ Visual inspection of paint condition.
- ✓ Use of a portable X-ray fluorescence (XRF) analyzer to test for lead in paint.
- ✓ Collection of environmental lead samples.

Include only those activities performed during the lead inspection/risk assessment.

Following is a report of the information collected during this Assessment.

## IDENTIFYING INFORMATION AND PURPOSE OF ASSESSMENT

An Assessment was conducted at [Street, City, State ZIP] on [choose date]. The Assessment was conducted by [insert RA name], a licensed Lead Inspector and Risk Assessor ([insert state certificate and #]). The purpose of the Assessment was to identify the presence of lead hazards on surfaces inside and outside the residence and attached or unattached structures located within the same lot line as the residential unit.

**INSERT ONLY IF IN GRANT AREA.** The U.S. Department of Housing and Urban Development has provided funds to the [insert grant program name] to perform a lead hazard control project in this community. The Assessment was conducted for this unit to determine eligibility for the grant program listed above. The LBP hazards identified in this

report will remain valid for up to one year to qualify this unit for OHHLHC program grant funds for Lead Hazard Control. Based upon details provided by the Owner and the [insert grant program name], to the knowledge of this Assessor, there has not been any previous LBP testing at this home.

## IDENTIFIED LEAD PAINT HAZARDS

The building and its paint was [describe overall building and paint condition] during the Assessment, the XRF results from the paint that was tested showed that LBP hazards [choose one], as defined in the Residential LBP Hazard Reduction Act of 1992 (Title X) and as defined by the Environmental Protection Agency (EPA) regulation published in the January 5, 2001 Federal Register. The XRF results indicate that lead levels above EPA and/or US Department of Housing and Urban Development (HUD) criteria exist in the following locations:

## SUMMARY OF EXISTING LEAD BASED PAINT AND LEAD HAZARDS IDENTIFIED

The following areas are coated with Lead-Based Paint (LBP) that is *deteriorated* and currently present existing lead-based paint hazards. All component substrates are primarily wood unless otherwise noted in sample collection notes. Long-term and Temporary control options are provided for each paint hazard identified.

### Exterior Lead-Based Paint Hazards

Lead Hazard (Side/Component)	Long-term Control Option(s)	Temporary Control Option(s)

### Interior Lead-Based Paint Hazards

Lead Hazard (Wall/Component)	Long-term Control Option(s)	Temporary Control Option(s)

**Other:** Include mini-blinds here, delete if no other

Hazard control options for the components identified as containing lead-based paint and that represent current lead-based paint hazards are included. In an effort to aid in the interpretation of the listed findings a glossary of terms and a list of publications and resources addressing lead hazards and their health effects are included at the end of this report.

A listing of environmental sampling locations and their associated lead contamination levels can be found in the sections addressing the analytical laboratory results for paint, dust, soil, paint chip and water.

## EXCLUDED COMPONENTS

The following table lists those components and areas which the lead risk assessor was not able to test and the reason for which it was not tested. It is recommended for the safety of the occupants of this unit that components and areas listed as inaccessible be tested so as to determine the presence of lead based paint as soon as possible. Components listed as inaccessible are not eligible to be defined as presenting Lead Based Paint Hazards due to the inability to complete inspection-required testing by the Risk Assessor. It is highly recommended that any future disturbance of these component surface coatings be treated with caution and safety measures taken. Lead Safe Work Practices are always recommended.

## EXCLUDED COMPONENTS LIST

[illegible]

**KEY:**

UNC – UNCOATED

INA – INACCESSIBLE

ENCL – ENCLOSED

NEW – POST-1978 COMPONENT

## ONGOING MONITORING

On-going monitoring will be necessary in this property since lead based paint (LBP) is present. When LBP is present, the potential exists for LBP hazards to develop. Hazards can develop by means such as, but not limited to: the failure of lead hazard control measures; previously intact LBP becoming deteriorated; dangerous levels of lead-in-dust (dust lead) re-accumulating through friction, impact, and deterioration of paint; or, through the introduction of contaminated exterior dust and soil into the interior of the structure. Ongoing monitoring typically includes two different activities: re-evaluation and annual visual assessments. A re-evaluation is a risk assessment that includes limited soil and dust sampling and a visual evaluation of paint films and any existing lead hazard controls. Re-evaluations are supplemented with visual assessments by the property owner, which should be conducted at least once a year, when the property owner or its management agent (if the housing is rented in the future) receives complaints from residents about deteriorated paint or other potential lead hazards, when the residence (or if, in the future, the house will have more than one dwelling unit, any unit that turns over or becomes vacant), or when significant damage occurs that could affect the integrity of hazard control treatments (e.g., flooding, vandalism, fire). The visual assessment should cover the dwelling unit (if, in the future, the housing will have more than one dwelling unit, each unit and each common area used by residents), exterior painted surfaces, and ground cover (if control of soil-lead hazards is required or recommended). Visual assessments should confirm that all paint with known LBP is not deteriorating, that lead hazard control methods have not failed, and that structural problems do not threaten the integrity of any remaining known or suspected LBP.

Visual assessments do not replace the need for professional re-evaluations by a certified risk assessor. The re-evaluation should include:

1. A review of prior reports to determine where lead-based paint and lead-based paint hazards have been found, what controls were done, and when these findings and controls happened.
2. A visual assessment to identify deteriorated paint, failures of previous hazard controls, visible dust and debris, and bare soil.
3. Environmental testing for lead in dust, newly deteriorated paint, and newly bare soil.
4. A report describing the findings of the reevaluation, including the location of any lead-based paint hazards, the location of any failures of previous hazard controls, and, as needed, acceptable options for the control of hazards, the repair of previous controls, and modification of monitoring and maintenance practices.

The first reevaluation should be conducted no later than two years after completion of hazard controls, or, if specific controls or treatments are not conducted, two years from the beginning of ongoing lead-based paint monitoring and maintenance activities. Subsequent reevaluations should be conducted at intervals of two years, plus or minus 60 days. If two consecutive reevaluations are conducted two years apart without finding a lead-based paint hazard, reevaluation may be discontinued.

Please refer to your community development agency, housing authority, or other applicable agency for additional local/regional regulations and guidelines governing re-evaluation activities.

## DISCLOSURE REGULATIONS

A copy of this complete report must be made available to new lessees (tenants) and must be provided to purchasers of this property under Federal law before they become obligated under any future lease or sales contract transactions (Section 1018 of Title X – found in 24 CFR Part 35 and 40 CFR Part 745), until the demolition of this property. Landlords (Lessors) and/or sellers are also required to distribute an educational pamphlet developed by the EPA entitled “*Protect Your Family From Lead in Your Home*” and include standard warning language in their leases or sales contracts to ensure that parents have the information they need to protect their children from LBP hazards.

## CONDITIONS & LIMITATIONS

Staff of [insert health department name] has performed the tasks listed above in a thorough and professional manner consistent with commonly accepted standard industry practices, using state of the art practices and best available known technology, as of the date of the assessment. [Insert health department name] cannot guarantee and does not warrant that this Assessment has identified all adverse environmental factors and/or conditions affecting the subject property on the date of the Assessment. [Insert health department name] cannot and will not warrant that the Assessment will satisfy the dictates of, or provide a legal defense in connection with, any environmental laws or regulations. It is the responsibility of property owner of the property subject to this assessment to know and abide by all applicable laws, regulations, and standards, including EPA's Renovation, Repair and Painting regulation.

The results reported and conclusions reached by [insert health department name] are solely for the benefit of the owner. The results and opinions in this report, based solely upon the conditions found on the property as of the date of the Assessment, will be valid only as of the date of the Assessment. [Insert health department name] assumes no obligation to advise the owner of any changes in any real or potential lead hazards at this residence and on attached and unattached structures located within the same lot line as the residence that may or may not be later brought to our attention. Further conditions and limitations to this contracted report are included in the general terms and conditions supplied to the owner with the contract for services.

## SITE INFORMATION AND FIELD TESTING

### PAINT SAMPLING AND TESTING

LBP testing, conforming with the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing [INSERT ONLY IN LHC GRANT AREAS: "and the OHHLHC Lead Based Paint Hazard Control Program guidelines"], was completed at this residence. [DELETE IF INCORRECT:] No paint chip samples were taken. On [choose date], a total of [XRF reading total minus calibration readings and any tests of personal property] tests (assays) were taken on surfaces inside and outside of the residence and on attached and unattached structures located within the same lot line of the residence using an x-ray fluorescence analyzer. Lead concentrations that meet or exceed the HUD published levels identified as being potentially dangerous (e.g., greater than or equal to 1.0 milligrams per centimeter square  $\geq 1.0 \text{ mg/cm}^2$ ) were encountered.

Some of the remaining test locations exhibited lead levels below the EPA/HUD limits, but in great enough quantities to be detectable by our XRF analyzer. These components will have a NEGATIVE notation in the XRF report results but may read **>0 mg/cm<sup>2</sup>**. It should be noted that lead concentrations (in paint) that are less than the levels that identify a surface coating as LBP still have the potential of causing lead poisoning. Should these LBP painted components and/or surfaces be disturbed in any manner that generates dust, extreme care must be taken to limit its spread. Lead Safe Work Practices are always recommended.

### Equipment Information

**XRF Manufacturer:** [enter manufacturer]

**Model:** [enter model #]

**Serial Number:** [enter serial #]

**Mode of Operation:** [enter mode]

**Date of Radioactive Source:** [enter source date]

## XRF Calibration Checks

Reading	Mode of Operation	Standard Used	Result (mg/cm <sup>2</sup> )
		NIST Lead Paint Film Standard, SRM 2579 Blank, <0.0001 mg/cm <sup>2</sup> <b>OR</b> NIST Lead Paint Film Standard, SRM 2579 Level III, 1.02 mg/cm <sup>2</sup>	
		NIST Lead Paint Film Standard, SRM 2579 Blank, <0.0001 mg/cm <sup>2</sup> <b>OR</b> NIST Lead Paint Film Standard, SRM 2579 Level III, 1.02 mg/cm <sup>2</sup>	
		NIST Lead Paint Film Standard, SRM 2579 Blank, <0.0001 mg/cm <sup>2</sup> <b>OR</b> NIST Lead Paint Film Standard, SRM 2579 Level III, 1.02 mg/cm <sup>2</sup>	

## XRF Lead-Based Paint Testing Results

Full XRF results can be found in *Appendix A – XRF Sample Analytical Data*.

## INTERIOR DUST SAMPLING

Dust samples must be collected from a windowsill and floor area in all rooms of the housing unit where young children will come into contact with dust. A sample at the principle entryway must also be collected. A minimum of nine (9) samples should be collected. A total of [choose one or type in] dust wipe samples were collected in an effort to help to determine the levels of lead-containing dust on the interior windowsills and floors. These samples were collected from areas most likely to be lead contaminated if lead-in-dust is present. These samples were collected in accordance with the requirements of ASTM Standard E-1728, Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques. In accordance with this standard, a field blank was also collected (sample [insert sample number and label]).

EPA, HUD and State of Ohio regulations define the following as hazardous levels for lead dust in residences: floors –  $\geq 40 \mu\text{g}/\text{ft}^2$  (micrograms per square foot); interior windowsills –  $\geq 250 \mu\text{g}/\text{ft}^2$ . There is no EPA dust-lead hazard standard for window troughs. Please refer to *Appendix B – Dust Wipe Analytical Data* for the laboratory reports and to *Appendix L – Additional Lead and Lead Safety Resource Data* for a list of publications and resources addressing lead hazards and their health effects; both are located at the end of this report. As indicated below, a hazardous level of leaded dust, as defined by EPA and HUD, was detected in [insert number of samples] sample(s). Testing data in **bold** indicates dust lead levels at or above the EPA Hazardous Levels of Lead regulations that were published on January 5, 2001.



Sample	Location	Component	Sample Area (ft <sup>2</sup> )	Results (µg/ft <sup>2</sup> )	Control Option(s)

### Laboratory Information

Laboratory	[Laboratory name]
	[Street address]
	[City, State ZIP]
Dust Wipe Analysis Protocol:	EPA Method [XX000, 0000], implementing [describe any protocol variants]
Dust Wipe Medium Used:	[Insert brand name], ASTM # [insert ASTM number]
National Lead Laboratory Accreditation Program Serial Number:	#[Obtain NLLAP # from lab]

### SOIL SAMPLING AND LABORATORY INFORMATION

[Choose one or type in] soil samples were collected at this residence in accordance with the requirements of ASTM Standard E-1727, Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques. The samples were collected from bare soil areas only. See the following table for a summary of the soil sampling results. Please refer to *Appendix C – Soil Sample Analytical Data* for the detailed analytical reports. Testing data in **bold** indicates soil lead levels at or above the EPA Hazardous Levels of Lead regulations that were published on January 5, 2001.

Sample	Location	Play area? (Y or N)	Results (ppm)	Control option(s)

## Laboratory Information

Laboratory	[Laboratory name]
	[Street address]
	[City, State ZIP]
Soil Analysis Protocol:	EPA Method [XX000, 0000], implementing [describe any protocol variants]
National Lead Laboratory Accreditation Program Serial Number:	#[Obtain NLLAP # from lab]

## WATER SAMPLING AND LABORATORY INFORMATION [include only if applicable]

Since the property has a private well used for drinking water, water samples were collected. These were collected in accordance with US EPA recommendations for testing lead in drinking water. The EPA has set recommended lead limits for public service lines ( $\leq 15$  ppb). EPA recommends that first draw and flushed water samples from residential taps also contain  $\leq 15$  ppb lead, and the State of Ohio has adopted this as the state water lead hazard limit. See the following table for a summary of the water sampling results. Please refer to *Appendix D – Water Sample Analytical Data* for the detailed analytical reports. Testing results in bold indicate water lead levels at or above the Ohio water lead hazard limit.

Sample	Description	Results (ppb)	Control Option(s)
	[i.e., “First draw”, “Flushed”, tap location]		

## Laboratory Information

Laboratory	[Laboratory name]
	[Street address]
	[City, State ZIP]
Water Analysis Protocol:	EPA Method [XX000, 0000], implementing [describe any protocol variants]
Ohio EPA Certification Number:	#[Obtain certification # from lab]

## PAINT CHIP SAMPLING AND LABORATORY INFORMATION [include only if applicable]

Paint chip samples were collected at this residence in accordance with the requirements of ASTM Standard E-1729, Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination. These paint chip samples were collected only from areas with deteriorating paint suspected to contain lead. The EPA and HUD define lead-based paint as paint containing at least 0.5% lead by mass analysis. See the following table for a summary of the paint chip sampling results. Please refer to *Appendix E – Paint Chip Sample Analytical Results* for the detailed analytical reports. Testing results in **bold** indicate locations that present lead-based paint hazards.

Sample	Location	Results (mass %)	Control Option(s)

### Laboratory Information

Laboratory	[Laboratory name]
	[Street address]
	[City, State ZIP]
Paint Chip Analysis Protocol:	EPA Method [XX000, 0000], implementing [describe any protocol variants]
National Lead Laboratory Accreditation Program Serial Number:	#[Obtain NLLAP # from lab]

### LEAD HAZARD CONTROL OPTIONS

Lead abatement, interim controls, lead-safe work practices and worker/occupant protection practices complying with current EPA, HUD and OSHA standards will be necessary to safely complete all work involving the disturbance of LBP coated surfaces and components. In addition, any work considered lead hazard control will enlist the use of interim control (temporary) methods and/or abatement (permanent) methods. It should be noted that all lead hazard control activities have the potential of creating additional hazards or hazards that were not present before. Properly trained and certified persons, as well as properly licensed firms (as mandated) should accomplish all abatement/interim control activities conducted at this residence.

Details for the listed lead hazard control options and issues surrounding occupant/worker protection practices can be found in the publication entitled: *Guidelines for the Evaluation and Control of LBP Hazards in Housing* published by HUD, the Environmental Protection Agency (EPA) lead-based paint regulations, and the Occupational Safety and Health Administration (OSHA) regulations found in its Lead in Construction Industry Standard. Further recommendations for temporary or long-term control have been provided in each section above.

**Interim controls**, as defined by HUD, means a set of measures designed to temporarily reduce human exposure to LBP hazards and/or lead containing materials. These activities include, but are not limited to: component and/or substrate stabilization, paint and varnish stabilization, and tilling and placement of appropriate ground cover over bare soil areas.

**Abatement**, as defined by HUD, means any set of measures designed to permanently eliminate LBP and/or LBP hazards. The product manufacturer and/or contractor must warrant abatement methods to last a minimum of twenty (20) years, or these methods must have a design life of at least twenty (20) years. These activities include, but are not necessarily limited to: the removal of LBP from substrates and components; the replacement of lead based paint components; the permanent enclosure of LBP with construction materials; the encapsulation of LBP with approved products; and the removal or permanent covering (concrete or asphalt) of soil-lead hazards.

## APPENDICES

### APPENDIX A XRF SAMPLE ANALYTICAL DATA

**INSERT XRF data here.**

**OR, if inserting separate printout, use this text:** Full XRF data is included on the following pages.

## APPENDIX B DUST WIPE SAMPLE ANALYTICAL DATA

INSERT Laboratory Sample results here.

## APPENDIX C SOIL SAMPLE ANALYTICAL DATA

INSERT Laboratory soil sample results here.

**APPENDIX D WATER SAMPLE ANALYTICAL DATA (IF APPLICABLE—REMOVE IF NOT;  
APPENDICES WILL RE-NUMBER THEMSELVES ON DOCUMENT SAVE OR PRINT.)**

**INSERT water sample analytical data here, if applicable, otherwise DELETE this section.**

**APPENDIX E PAINT CHIP SAMPLE ANALYTICAL DATA (IF APPLICABLE—REMOVE IF NOT;  
APPENDICES WILL RE-NUMBER THEMSELVES ON DOCUMENT SAVE OR PRINT.)**

**INSERT paint chip sample analytical data here, if applicable, otherwise DELETE this section.**



## APPENDIX F SITE AND FLOOR PLAN

**INSERT site and floor plans indicating the locations of XRF testing, soil lead and dust lead sampling performed at this property. (Should include directional reference and a legend for any notations made with the sketch.)**

## APPENDIX G BUILDING CONDITIONS SURVEY – FORM 5.1

**INSERT the visual inspection form.**

## APPENDIX H COPY OF RISK ASSESSOR'S LICENSE/CERTIFICATION

Copy of Risk Assessor's License/Certification

**INSERT copy of State/EPA Risk Assessor license/certification.**

## **APPENDIX J COPY OF XRF TRAINING CERTIFICATE AND XRF PERFORMANCE CHARACTERISTIC SHEET**

**Copy of XRF Training Certificate**

**and**

**XRF Performance Characteristic Sheet**

**INSERT copy of XRF training certificate.**

**INSERT PCS. (If more than one XRF model was used, insert the PCS for each.)**

## APPENDIX K “LEAD SPEAK:” A BRIEF GLOSSARY

**Abatement:** A measure or set of measures designed to permanently eliminate lead-based paint hazards or lead-based paint. Abatement strategies include the removal of lead-based paint, enclosure, encapsulation, replacement of building components coated with lead-based paint, removal of lead contaminated dust, and removal of lead contaminated soil or overlaying of soil with a durable covering such as asphalt (grass and sod are considered interim control measures). All of these strategies require preparation; cleanup; waste disposal; post-abatement clearance testing; recordkeeping; and, if applicable, monitoring. (For full EPA definition, see 40 CFR 745.223).

**Bare soil:** Soil not covered with grass, sod, some other similar vegetation, or paving, including the sand in sandboxes.

**Chewable surface:** An interior or exterior surface painted with lead-based paint that a young child can mouth or chew. A chewable surface is the same as an “accessible surface” as defined in 42 U.S.C. 4851b(2). Hard metal substrates and other materials that cannot be dented by the bite of a young child are not considered chewable.

**Deteriorated paint:** Any paint coating on a damaged or deteriorated surface or fixture, or any interior or exterior lead-based paint that is peeling, chipping, blistering, flaking, worn, chalking, alligating, cracking, or otherwise becoming separated from the substrate.

**Drip line/foundation area:** The area within three feet out from the building wall and surrounding the perimeter of a building.

**Dust-lead hazard:** Surface dust in residences that contains an area or mass concentration of lead equal to or in excess of the standard established by the EPA under Title IV of the Toxic Substances Control Act. EPA standards for dust-lead hazards, which are based on wipe samples, are published at 40 CFR 745.65(b); as of the publication of this edition of these *Guidelines*, these are 40 µg/ft<sup>2</sup> on floors and 250 µg/ft<sup>2</sup> on interior windowsills. Also called lead-contaminated dust.

**Friction surface:** Any interior or exterior surface, such as a window or stair tread, subject to abrasion or friction.

**Garden area:** An area where plants are cultivated for human consumption or for decorative purposes.

**Impact surface:** An interior or exterior surface (such as surfaces on doors) subject to damage by repeated impact or contact.

**Interim controls:** A set of measures designed to temporarily reduce human exposure or possible exposure to lead-based paint hazards. Such measures include, but are not limited to, specialized cleaning, repairs, maintenance, painting, temporary containment, and the establishment and operation of management and resident education programs. Monitoring, conducted by owners, and reevaluations, conducted by professionals, are integral elements of interim control. Interim controls include dust removal; paint film stabilization; treatment of friction and impact surfaces; installation of soil coverings, such as grass or sod; and land use controls. Interim controls that disturb painted surfaces are renovation activities under EPA's Renovation, Repair and Painting Rule.

**Lead-based paint:** Any paint, varnish, shellac, or other coating that contains lead equal to or greater than 1.0 mg/cm<sup>2</sup> as measured by XRF or laboratory analysis, or 0.5 percent by weight (5000 mg/g, 5000 ppm, or 5000 mg/kg) as measured by laboratory analysis. (Local definitions may vary.)

**Lead-based paint hazard:** A condition in which exposure to lead from lead contaminated dust, lead contaminated soil, or deteriorated lead-based paint would have an adverse effect on human health (as established by the EPA at 40 CFR 745.65, under Title IV of the Toxic Substances Control Act). Lead-based paint hazards include, for example, **paint-lead hazards, dust-lead hazards, and soil-lead hazards.**

**Paint-lead hazard:** Lead-based paint on a friction surface that is subject to abrasion and where a dust-lead hazard is present on the nearest horizontal surface underneath the friction surface (e.g., the windowsill, or floor); damaged or otherwise deteriorated lead-based paint on an impact surface that is caused by impact from a related building component; a chewable lead-based painted surface on which there is evidence of teeth marks; or any other deteriorated lead-based paint in any residential building or child-occupied facility or on the exterior of any residential building or child-occupied facility.

**Play area:** An area of frequent soil contact by children of under age six as indicated by, but not limited to, such factors including the following: the presence of outdoor play equipment (e.g., sandboxes, swing sets, and sliding boards), toys, or other children's possessions, observations of play patterns, or information provided by parents, residents, care givers, or property owners.

**Soil-lead hazard:** Bare soil on residential property that contains lead in excess of the standard established by the EPA under Title IV of the Toxic Substances Control Act. EPA standards for soil-lead hazards, published at 40 CFR 745.65(c), as of the publication of this edition of these *Guidelines*, is 400 µg/g in play areas and 1,200 µg/g in the rest of the yard. Also called lead-contaminated soil.

## APPENDIX L ADDITIONAL LEAD AND LEAD SAFETY RESOURCE DATA

### Key Units of Measurement

**Gram (g or gm):** A unit of mass in the metric system. A nickel weighs about 1 gram, as does a cube of water 1 centimeter on each side. A gram is equal to about 35/1000 (thirty-five thousandths of an ounce). Another way to think of this is that about 28.4 grams equal 1 ounce.

**µg (microgram):** A microgram is 1/1000<sup>th</sup> of a milligram. To put this into perspective, a penny weighs 2 grams. To get a microgram, you would need to divide the penny into two million pieces. A microgram is one of those two million pieces.

**µg/dL (microgram per deciliter):** used to measure the level of lead in children's and worker's blood to establish whether intervention is needed. A deciliter is a little less than a half a cup.

**µg/ft<sup>2</sup> (micrograms per square foot):** the unit used to express levels of lead in dust samples. All reports should report levels of lead in dust in µg/ft<sup>2</sup>.

**mg/cm<sup>2</sup> (milligrams per square centimeter):** used to report levels of lead in paint thru XRF testing.

**ppm (parts per million):** Typically used to express the concentrations of lead in soil. Can also be used to express the amount of lead in a surface coating on a mass concentration basis. This measurement can also be shown as: µg/g, mg/kg or mg/l.

**ppb (parts per billion):** Typically used to express the amount of lead found in drinking water. This measurement is also sometimes expressed as: µg/L (micrograms per liter).

### EPA/HUD Lead-Based Paint and Lead-Based Paint Hazard Standards

**Lead-Based Paint** (may be determined in either of two ways).

- Surface concentration (mass of lead per area). 1.0 µg/cm<sup>2</sup>
- Bulk concentration (mass of lead per volume). 0.5%, 5000 µg/g, or 5000 ppm

#### Dust-thresholds for Lead-Contamination

- Floors. 40 µg/ft<sup>2</sup>
- Interior Windowsills. 250 µg/ft<sup>2</sup>
- Window Troughs (clearance examination only). 400 µg/ft<sup>2</sup>

#### Soil-thresholds for Lead Contamination

- Play areas used by children under age six. 400 µg/g, or 400 ppm
- Other areas. 1200 µg/g, or 1200 ppm

## **APPENDIX M RESOURCES FOR ADDITIONAL INFORMATION ON LEAD-BASED PAINT AND LEAD-BASED**

### **PAINT HAZARDS**

National Lead Information Center & Clearinghouse:

1-800-424 LEAD

[www.epa.gov/lead/pubs/nlic.htm](http://www.epa.gov/lead/pubs/nlic.htm)

Centers for Disease Control and Prevention Lead Program:

[www.cdc.gov/lead](http://www.cdc.gov/lead)

Toll-free CDC Contact Center: 800-CDC-INFO (800-232-4636); TTY 888-232-6348

Consumer Product Safety Commission

[www.cpsc.gov](http://www.cpsc.gov)

Toll-free consumer hotline: 1-800-638-2772; TTY 301-595-7054

Environmental Protection Agency Lead Program:

<https://epa.gov/lead>

202-566-0500

HUD Office of Healthy Homes and Lead Hazard Control:

<https://hud.govlead>

202-402-7698

Hearing- or speech-challenged individuals may access the federal agency numbers above through TTY by calling the toll-free Federal Relay Service at 800-877-8339; see also <http://www.federalrelay.us/tty>.