Environmental Investigation Checklist

Environmental Investigation (EI) is the process of determining the source of lead exposure for a child under the age of 6 with an Elevated Blood Lead Level (EBLL), consisting of administration of a questionnaire, comprehensive environmental sampling, case management, and other measures, in accordance with Chapter 16 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (Guidelines) and the Lead Safe Housing Rule.

Process Checklist[1]

Step	Completed?
EI was performed by an EPA or State certified risk assessor	
EI was completed within fifteen (15) calendar days of receiving the report of a child under age six (6) in the unit with an EBLL	
EI was performed during a visit to the child's current dwelling unit and other sites where the child spends a significant amount of time (childcare center, previous residence, other exterior play areas)	
Assessor collected information about the year of the building's construction from tax assessor records or other city housing records	
Parents or guardians were interviewed regarding all possible lead sources and risk factors (See questionnaire below)	
Testing included the following: • House dust • Paint/coatings that are not intact or is subject to friction • Bare soil, especially in play areas • Other items as appropriate (including glazed tableware or ceramic cookware)	
Drinking water was tested* if one of the following applies: • Community drinking water is known to be at risk • Family's home is served by a private well • History suggests contamination *Optional, not required by LSHR	
Assessor report included options to temporarily and permanently treat all identified lead hazards	
Results are only released to parents or guardians and appropriate government authorities. • Confidential information about the child or family should not be revealed to any other individual without the informed consent of the child's parents or guardians. • Information concerning building and site hazards, and options for control of those hazards should be reported to both the owner and occupant.	

[1] Assessor may work with the child's case manager and local health officials to complete some of the steps in the proccess as necessary.

See Chapter 16 of the Guidelines for additional information.

Testing Checklist

Lead hazards are identified through the administration and evaluation of a questionnaire and through environmental sampling. Sampling procedures are addressed in Chapters 5 and 7 and Appendices 13.1, 13.2 and 13.3 of the HUD Guidelines. The questionnaire should always be completed prior to sampling. Testing should include the following samples at a minimum:

Test	**Standard***	**Completed?**
X-ray fluorescence (XRF) or laboratory paint chip analysis of: • All defective paint or coatings on the child's residence including furniture, play structures, and on buildings frequented by the child. All • impact and friction surfaces and surfaces that appear to have been chewed, including windowsills.	Existing paint in structures built prior to 1978, i.e., lead-based paint: 1 mg/cm^2 or 0.5% New paint: 90 ppm (parts per million) in dried paint film	
Dust samples from: • Areas frequented by the child, including play areas, porches, kitchens, bedrooms, and living and dining rooms. • Other surfaces (e.g. shoes, boots, cars) for which there are no standards; the information may be helpful in identifying other sources of exposure.	Floors: 10 micrograms per square foot ($\mu g/ft^2$) Interior windowsills: 100 $\mu g/ft^2$ Window troughs: 400 $\mu g/ft^2$	
Soil samples from: • Bare soil areas, particularly child play areas (areas near the foundation of the house and areas from the yard). • Other areas like a park or public play area where the child spends significant time, unless the area has already been sampled.	Bare play area soil: 400 ppm All other soil: 1200 ppm	
Where water testing is indicated, first drawn and flushed water samples from the tap most commonly used for drinking water, infant formula, or food preparation.	First draw from tap (stagnant sample): 15 ppb	
Where applicable, other items as appropriate including glazed tableware or ceramic cookware likely to contain lead.		

* If your local standards are more protective, use the most protective standards.

Resident Questionnaire for Investigation of Children with EBLL

General Information

1. Where do you think the child is exposed to the lead?

_____

2. Do you rent or own your home? ❑ rent ❑ own
   If rented, are there any rent subsidies? ❑ yes ❑ no
   ❑ Public housing authority ❑ Section 8 ❑ Federal
   If yes, what type: Rent Subsidy
   ❑ Other (specify)
   _____

Landlord information (or Rent Collector Agent)

Name: _____

Address: _____

Phone: _____

3. When did you/your family move into this home?
   (month/year)_____

Complete the following for all addresses where the child has lived during the past 12 months, including this home.

Dates of Residency	Address Include City and State	Approximate Year Built	General Condition of Dwelling: Any renovation or deteriorated paint?

4. Is the child cared for away from the home? (This includes preschool and/or child care at a center, dedicated home, or with a friend or relative.) If yes, complete the following table.

Type of Care	Location of care Contact name, address and phone	No. hours/wk at location	General Condition of Dwelling: Any renovation or deteriorated paint?

Lead-Based Paint and Lead-Contaminated Dust Hazards

1. Has this dwelling been tested for lead-based paint or lead-contaminated dust? ❑yes ❑ no

   If yes, when?_____

   Where can this information be obtained? _____

2. Approximately what year was the dwelling built? _____

   a. If unknown, was it before 1950? ❑ yes ❑ no

3. Has there been any recent repainting, remodeling, renovation, window replacement, sanding or scraping of painted surfaces inside or outside this dwelling unit? If yes, describe activities, time and duration of work.

_____

_____

_____

_____

4. Has any lead abatement or other lead hazard control work been conducted at this dwelling recently?

   ❑ yes ❑ no

5. Where does the child like to play, hide, or frequent? (Include rooms, closets, porches & outbuildings) _____

Use the table below.

Areas where the child likes to play, hide, or frequent	Paint condition* (intact, not intact, or not present)	Location of painted component with visible bite marks

** Paint condition: Note location and extent of any visible chips and/or dust in window wells, on window sills, or on the floor directly beneath windows. If you see peeling, chipping, chalking, flaking, or deteriorated paint, make sure you include the locations and extend of deterioration.*

Assessment - Probable: ❑ lead-based paint hazard ❑ lead-dust hazard ❑ no lead hazard

Actions:

❑ Obtain records of previous environmental testing noted above.

❑ XRF inspection of dwelling (check one) ❑ limited ❑ complete

❑ Paint testing of deteriorated paint: add to Form 5.3.

❑ Leaded dust sampling of home: add additional areas to Form 5.4 list of rooms to be sampled

❑ Other sampling (specify):

Water Lead Hazards

Determine whether the dwelling is located in a jurisdiction known to have lead in drinking water in either public municipal or well water. Consult with state/local public health authorities for details.

Check one: ❑ at risk ❑ not at risk

1. What is the source of drinking water for the family? ❑ Municipal water ❑ Private well

❑ Other (specify): _____

(This information will be used to help determine responsibility and methods of controlling lead exposures from water.)

If tap water is used for drinking, answer questions 2 through 6. If not, go to Lead in Soil Hazards.

2. From which faucets do you obtain drinking water? (Sample the main drinking water faucet.)

_____

_____

3. Do you use the water immediately? ❑ yes ❑ no
   Do you let the water run for a while first? ❑ yes ❑ no

   (If water-lead levels are elevated in the first draw, but low in the flushed sample, recommend flushing the water if it has not been used for more than 6 hours before drinking.)

4. Is tap water used to prepare infant formula, powdered, milk, or juices for the children?
   ❑ yes ❑ no
   If yes, do you use hot or cold tap water? ❑ hot ❑ cold

   If no, from what source do you obtain water for the children?

   _____

5. Has new plumbing been installed within the last 5 years? ❑ yes ❑ no
   If yes, identify location(s).

   _____

   Did you do any of this work yourself? ❑ yes ❑ no
   If yes, specify.

   _____

Assessment: ❑ water lead hazard risk ❑ no water lead hazard risk

Actions:

❑ Test water (first draw and flush samples).

❑ Other testing (specify):

_____

❑ Counsel family (specify):

_____

Lead in Soil Hazards

Use the following information to determine where soil samples should be collected.

1. Where outside does the child like to play?

2. Where outside does the child like to hide?

3. Is this dwelling near a lead-producing industry (such as a battery plant, smelter, radiator repair shop, boat keel manufacturer, electronics plant, or soldering plant)? ❑ yes ❑ no

4. Is the dwelling located within two blocks of a major roadway, freeway, elevated highway, or other transportation structure? ❑ yes ❑ no

5. Are buildings or structures on the property or nearby being renovated, repainted, or demolished: ❑ yes ❑ no
   If no: Has any of this kind of work been done recently: ❑ yes ❑ no

6. Is there deteriorated paint on outside fences, garages, play structures, railings, building siding, windows, trims, or mailboxes: ❑ yes ❑ no

7. Were gasoline or other solvents ever used to clean parts or disposed of at the property: ❑ yes ❑ no

8. Are there any visible paint chips near the perimeter of the house, fences, garages, or play structures? ❑yes ❑ no
   If yes, note location(s)._____

9. Has soil ever been tested for lead: ❑ yes ❑ no
   If yes, when and where can this information be obtained?

10. Have you burned painted wood in a woodstove or fireplace? ❑ yes ❑ no
    If yes, have you emptied ashes onto soil? ❑ yes ❑ no
    If yes, where?

    _____

Assessment: ❑ probable soil lead hazard ❑ no soil lead hazard risk

Actions:

❑ Test soil (single samples of bare soil where children play). Complete Form 5.5 for Field Sampling.

❑ Advise family to obtain washable doormats for entrances to the dwelling

❑ Counsel family to keep children away from bare soil areas thought to be at risk (specify).

❑ Counsel family to cover bare soil areas with mulch or other material.

❑ Counsel family to remove the cause of lead contamination.

Additional Notes:

_____

_____

_____

Occupational and Hobby Lead Hazards

Use the information in this section to determine if the child may be exposed to lead due to the work environment or hobby of parents, siblings, or other adults. Occupations that may cause exposure include:

Paint removal (e.g., sandblasting, scraping, sanding, abrasive blasting, using heat guns or torches)	**Remodeling, repairing, or renovating dwellings or buildings, or demolition (tearing down buildings or metal structures like bridges)**
Chemical Strippers	Working at a firing range
Plumbing	Making batteries
Repairing radiators	Making paint or pigments
Melting metal for reuse (smelting)	Painting
Welding, burning, cutting or torch work	Salvaging metal or batteries
Pouring molten metals (foundries)	Making or splicing cable or wire
Auto body repair work	Creating explosives or ammunition
Making or repairing jewelry	Making pottery
Building, repairing or painting ships	Working in a chemical plant, glass factory, oil refinery, or any other work involving lead
Soldering electrical connections	Working in a chemical plant, glass factory, oil refinery, or any other work involving lead

Answer the following questions.

1. Where does anyone in the household and any frequent visitors work? (Include parents, older siblings, and other adults)

Name	**Place of Employment**	**Occupation**	**Probable Exposure**
			❑ yes ❑ no
			❑ yes ❑ no
			❑ yes ❑ no
			❑ yes ❑ no
			❑ yes ❑ no

2. Are work clothes separated from other laundry?
   ❑ yes ❑ no
3. Has anyone in the household removed paint or varnish while in the dwelling?
   ❑ yes ❑ no

4. (This includes paint removal from woodwork, furniture, cars, bicycles, boats, etc.)
   ❑ yes ❑ no
5. Has anyone in the household soldered electric parts while at home?
   ❑ yes ❑ no
6. Does anyone in the household apply glaze to ceramic or pottery objects?
   ❑ yes ❑ no
7. Does anyone in the household work with stained glass?
   ❑ yes ❑ no
8. Does anyone in the household use artist's paints to paint pictures or jewelry?
   ❑ yes ❑ no
9. Does anyone in the household reload bullets, target shoot, or hunt?
   ❑ yes ❑ no
10. Does anyone in the household melt to make bullets, fishing sinkers, or toys?
    ❑ yes ❑ no
11. Does anyone in the household work on auto body repair at home or in the yard:
    ❑ yes ❑ no
12. Is there evidence of take-home work exposures or hobby exposures in the dwelling?
    ❑ yes ❑ no

Assessment Probable:

❑ occupational related lead exposure ❑ hobby related lead exposure ❑ neither

Actions:

❑ Counsel family (specify)

_____

❑ Refer to (specify):

_____

Child Behavior Risk Factors (Evaluate each child under age 6.)

1. Does the child suck his/her fingers? ❑ yes ❑ no
2. Does child put painted objects in the mouth? ❑ yes ❑ no

   If yes, specify: _____

3. Does child chew on painted surfaces, such as old painted cribs, windowsills, furniture edges, railings, door molding, or broom handles? ❑yes ❑ no

   If yes, specify: _____

4. Does the child chew on putty around windows? ❑ yes ❑ no

5. Does the child put soft metal objects in the mouth? ❑ yes ❑ no

   These may include lead and pewter toys and toy soldiers, jewelry, gunshot, bullets, beads, fishing sinkers, or items containing solder (e.g., electronics).

6. Does the child chew or eat paint chips or pick at painted surfaces? ❑ yes ❑ no

7. Is the paint intact in the child's play areas? ❑ yes ❑ no

8. Does the child put foreign, printed material (newspapers, magazines) in the mouth? ❑ yes ❑ no

9. Does the child put matches in the mouth? (may contain lead acetate) ❑ yes ❑ no

10. Does the child play with cosmetics, hair preparations, or talcum power or put them in the mouth? ❑ yes ❑ no
    If yes, are any of these products foreign made? ❑ yes ❑ no

11. Does the child have a favorite: cup? ❑ yes ❑ no Eating utensil? ❑ yes ❑ no
    If yes, are either of them handmade or ceramic? ❑ yes ❑ no

12. Does the child have a dog, cat, or other pet that could track in contaminated soil or dust from outside?
    ❑ yes ❑ no If yes, where does the pet sleep?

13. Where does the child obtain drinking water?

14. If a child is present, note the extent of hand-to-mouth behavior observed.

Assessment if Child is at Risk:

Hand-to-mouth behavior

Mouthing probable lead-containing source

Other behavior (specify)

No observed at-risk behavior

Actions:

❑ Counsel family to limit access to use of (specify):_____

❑ Other (specify)

Other Household Risk Factors

1. Are imported cosmetics, such as Kohl™, Surma™, or Ceruse™, used in the home? ❑ yes ❑ no
2. Does the family ever use any home remedies or herbal treatments? ❑ yes ❑ no
   If yes, what type: _____
3. Are any liquids stored in metal, pewter, or crystal containers? ❑ yes ❑ no
4. What containers are used to prepare, serve, and store the child's food? ❑ yes ❑ no
   Are any of the imported potteries, metal, soldered, or glazed? ❑ yes ❑ no
   Does the family cook with a ceramic bean pot? ❑ yes ❑ no
5. Does the family use imported canned items regularly? ❑ yes ❑ no
6. Does the child play in, live in, or have access to any areas where the following materials are kept: shellacs, lacquers, driers, coloring pigments, epoxy resins, pipe sealants, putty, dyes, industrial crayons or markers, paints, pesticides, fungicides, gear oil, detergents, old batteries, battery casings, fishing sinkers, lead pellets, solder, or drapery weights? ❑ yes ❑ no
7. Does the child take baths in an old bathtub with deteriorated or nonexistent glazing? ❑ yes ❑ no
8. Does the home contain vinyl mini-blinds made overseas and/or purchased before 1997? ❑ yes ❑ no

Assessment if Child is at Risk:

❑ Increased risk of lead exposure due to:

_____

❑ No observed risk

Actions:

❑ Counsel family to limit access to use of (specify):

_____

❑ Other (specify): _____

Assessment for Likely Success of Temporary Hazard Control Measures

1. What cleaning equipment does the family have in the dwelling?
   broom ❑ mop & bucket ❑ vacuum that works ❑ sponge & rags
2. How often does the family:
   Sweep the floors? _____
   Wet mop the floors? _____
   Vacuum the floors? _____
   Wash the windowsills? _____
   Wash the window troughs? _____

3. What type of floor coverings are found in the dwelling? (check all that apply)

❑ vinyl/linoleum ❑carpeting ❑wood ❑other (specify): _____

4. Are floor coverings smooth and cleanable? ❑ yes ❑ no

5. Cleanliness of dwelling (check one using table below)

❑ appears clean ❑ some evidence of housecleaning ❑ no evidence of housecleaning

Appears Clean	Some evidence of housecleaning	No evidence of housecleaning
No visible dust on most surfaces	Slight dust buildup in corners	Heavy dust buildup in corners
Evidence of recent vacuuming	Slight dust buildup on furniture	Heavy dust buildup on furniture
No matted or soiled carpeting	Slightly matted and/or soiled carpeting	Matted and/or soiled carpeting
No debris or food scattered about	Some debris or food scattered about	Debris or food scattered about
Few visible cobwebs	Some visible cobwebs	Visible cobwebs
Clean kitchen floor	Slightly soiled kitchen floor	Heavily soiled kitchen floor
Clean door jambs	Slightly soiled door jambs	Heavily soiled door jambs

Assessment if Child is at Risk:

❑ Cleaning equipment inadequate

❑ Cleaning routine inadequate

❑ Floor coverings inadequate to maintain clean environment

❑ No observed risk

Actions:

❑ Counsel family to limit access or use (specify room and location): _____

❑ Provide cleaning equipment

❑ Instruct family on special cleaning methods

❑ Demonstrate special cleaning methods

❑ Flooring treatments needed (specify rooms): _____

❑ Other (specify): _____