Lead Inspection & Role/Responsibilities of a Lead Inspector

Lead-Based Paint Inspection

* **Components of a comprehensive lead inspection** - paint, dust, soil, and water

* **Epidemiological Investigation** - done in response to an EBLL (≥20 µg/dL), includes a comprehensive lead inspection and epidemiological form

  * Comprehensive Lead Inspection - done in response to an EBLL (≥15 µg/dL but less than 20 µg/dL-2 tests taken 3 or more months apart)
    * Effective 1/1/09

* A Comprehensive Lead Inspection determines the presence, location, condition of lead

Lead Inspection

Must be conducted by:

* Trained code enforcement official
* Certified private sector lead inspector

Lead Inspector's Role & Responsibilities

* Understands/conveys background info on lead and adverse health effects
* Interprets Federal, State, and local regulations pertaining to lead-based paint activities
* Develops plan for sampling dust, soil, water
* Selects proper methodologies for testing
* Conducts comprehensive lead-based paint inspection

Lead Inspector's Role & Responsibilities

* Conducts final visual inspection & dust wipe clearance testing
* Prepares final inspection report on Lead Inspection Report Form (LIRF)
* Copies to appropriate parties within mandated timelines
  * Property owner(s)
  * Local health director
  * DPH Commissioner
* Complies with recordkeeping of local, state, and federal agencies

Options for Performing a Lead Inspection

* LHDs can:
  * Use a trained local code enforcement official employed by their department
  * Use a trained local code enforcement official employed by another local health department (must have written agreement)
  * Adopt a local ordinance requiring homeowner have the inspection performed by a private sector certified lead inspector working for a licensed lead consultant
  * Hire private sector certified lead inspector
    * Note: The LHD must still perform the epidemiological investigation (EBLL), conduct abatement plan review & approval and provide administrative oversight of the case including enforcement when necessary!

Preparation

- Prior to conducting a comprehensive lead inspection:
  - XRF Loaner Program (RMD LPA-1 XRF)
    - Make sure instrument in good working order!
      - Review operation and use guide
      - Review field manual and performance characteristic sheet
      - Check battery-charge if needed
      - Geiger counter-take readings before and after use & log on sheet (.1-1.0 millirems/hr acceptable)
      - Personal dosimeter-wear when using XRF

Preparation (continued)

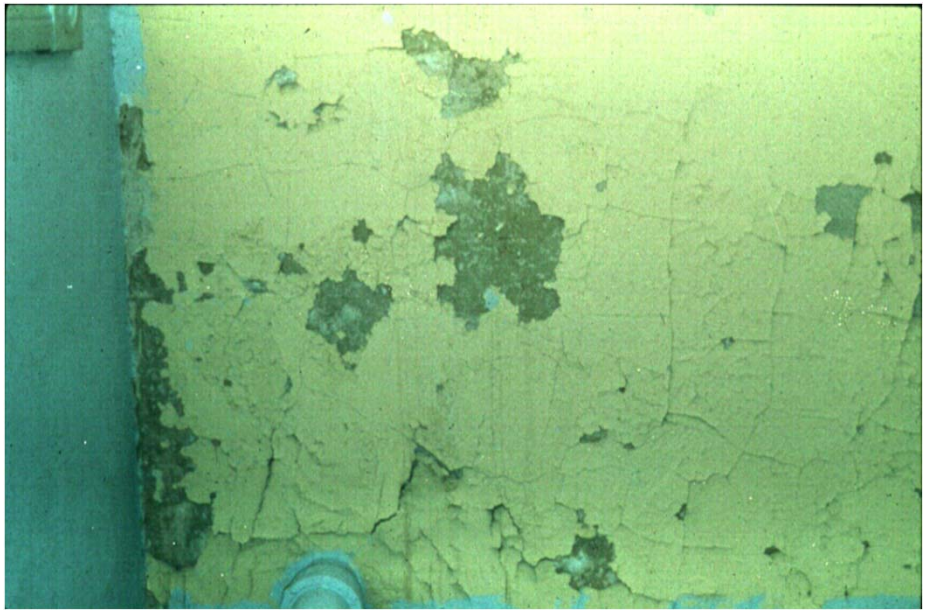
* Additionally you'll need:
  * Field Kit - dust wipes ("ghost" wipes preferred), baggies, hard shell containers, water sample bottles, disposable gloves, plastic spoons, garbage bags, labels, markers…
  * RMD note pads in XRF case (when using DPH XRFs)
  * Lab submittal forms

Interior Lead Inspection

* Conduct visual inspection of interior
* Sketch layout of dwelling; label rooms using A, B, C, D orientation
  * A roadside
  * B side of house to the left (clockwise)
  * C rear of the house
  * D side of house to the right
  * Proceed room to room in systematic, orderly fashion

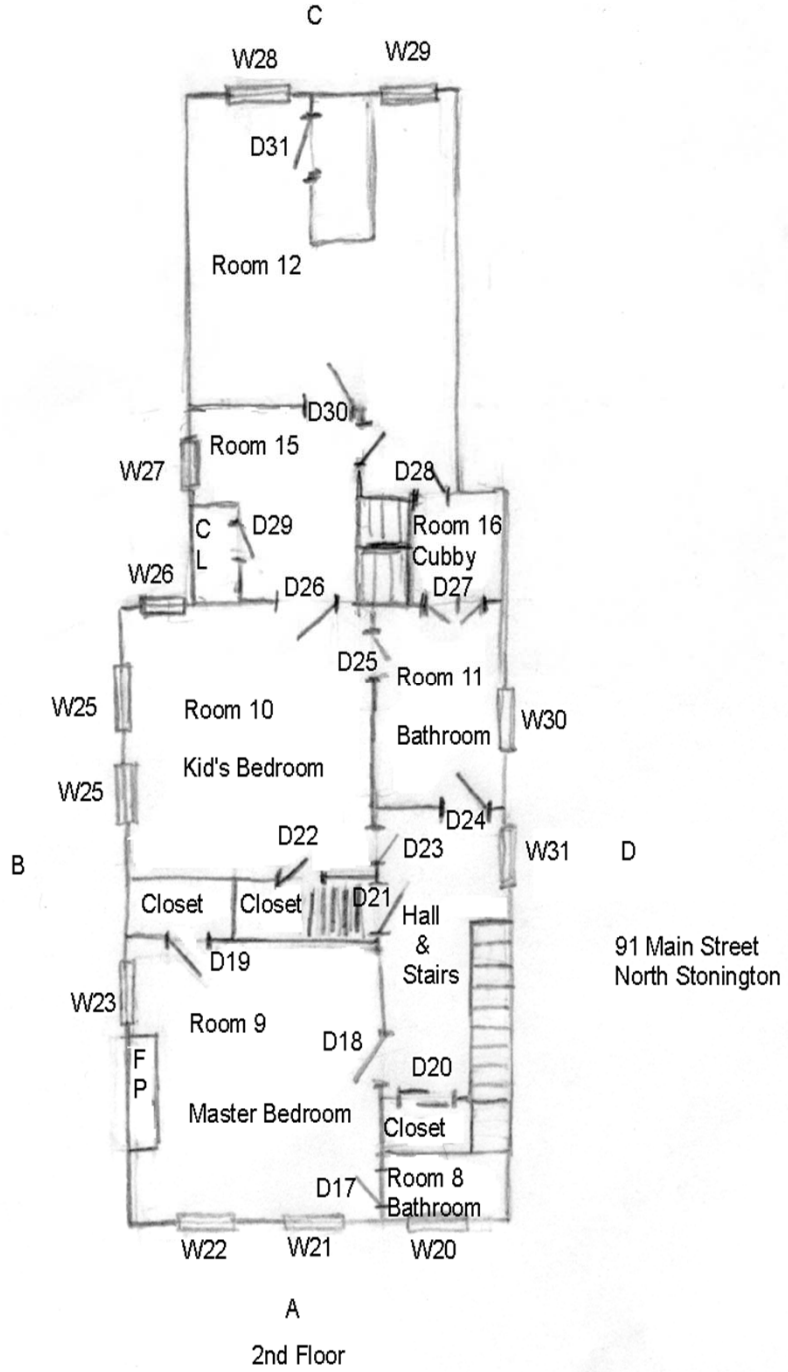
Visual Assessment

* Note condition of paint & substrate
* Document cause of damage



Sketch The Dwelling

* Note locations of doors, windows, closets, stairs
* Show orientation of sides of rooms and structure (A, B, C, D)
* Number and title rooms/areas



Interior Lead Inspection

* Take initial dust wipes: assess the lead dust hazard
  * Floors and window sills in room(s) where children spend time
* Collect 2 water samples from cold water kitchen tap
  * Initial (First draw after 6 hrs standing water)
  * Post flush (Second draw-2 minutes after initial draw)

Interior Lead Inspection

* **XRF Use and Operation (RMD specific)**
  * Choose a job number (new unit)
  * Set abatement level (1.0 mg/sq.cm)
  * Calibration: In "Time Corrected" mode (select mode)
    * measure standard sample calibration block (1.0 mg/sq.cm.) 3 times
    * record on data form (.7-1.3 acceptable)
    * measure blank side (0.0 mg/sq.cm.) 3 times for reference
  * Go to "Quick" mode (select mode) - complete all measurements
  * Repeat calibration step at end of job and/or every 4 hours

Interior Lead Inspection

* Record readings on XRF note pads - take good notes!
  * All 4 walls, upper and lower
  * Each surface or representative component
  * Note substrate, color and surface condition
  * Intact or defective
  * Practice radiation safety (no one in room or on sides of operator)
* Collect paint chip sample(s) if XRF shows inconclusive readings **(RMDs do not have inconclusive readings in Quick mode).**

Chip Sampling Methodology

* If XRF results are inconclusive paint chips will need to be taken.
* Materials:
  * Disposable gloves
  * Labels
  * Hard-shell containers
  * Cutting device
* Note defective paint; document/describe location
* Cut and collect 1-4 sq. inches of paint (sample all layers)
* Place in labeled container and submit to lab

Common Areas

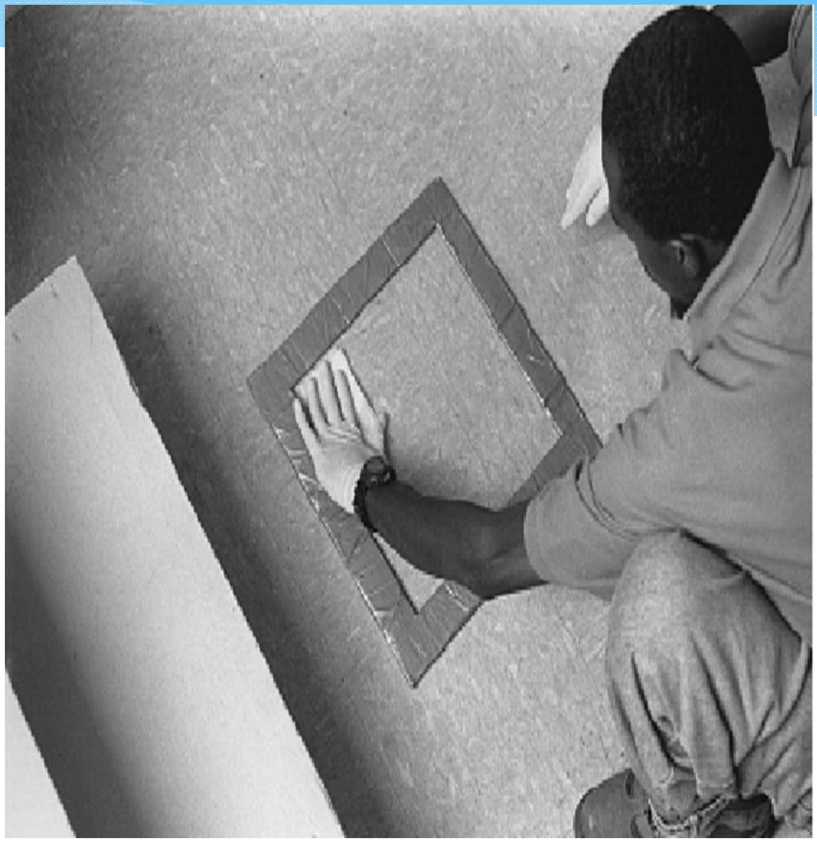
1. Identify areas:
   * use A,B,C,D orientation
   * i.e., hallways, stairwells, porches,etc.
2. Take XRF readings and record on proper forms.

Exterior Lead Inspection

1. Use A,B,C,D orientation
2. XRF readings on all painted surfaces;
   * All sides of house, cellar hatchway, window components, pipes, porches, garage, stairs, and any outbuildings
3. Collect soil samples
   * Bare soil areas if accessible
   * Sketch locations where soil was taken
   * Document soil sampling methodology

Dust Wipe Sampling Methodology

- Initial Dust Wipe Sampling:
  - Purpose: **assess lead dust hazard**
  - Materials
    - Disposable gloves
    - Wipes – "ghost wipes" preferred
    - Hard shell containers
    - Labels
    - Lab forms
    - 1 sq/ft. template or ruler
    - Masking tape



Dust Wipe Sampling Methodology

- Sampling procedure
  - Location (sample in rooms where children spend the most time)
    - Label containers
  - Floor
    - Measure 1 sq. ft, use "S" motion twice (once side-to-side, once top-to-bottom, fold in between), fold, put in container
  - Window sill
    - Label container
    - Record dimensions of sill*
    - Wipe entire horizontal area-place wipe in container

Dust Wipe Sample Submission Instructions

* Contact DPH Lab at **(860) 509-8501** for dust wipe collection kit(s)
* Collect sample per Standard Operating Procedure
* Cap tube, label, and submit to lab
* Submit lab forms and blank with each set of 10 dust wipe samples.

Soil Sampling Methodology

- Soil Sampling
  - Purpose: **assess soil hazard**
  - Materials
    - Wide mouth plastic or glass jars
    - Plastic spoon or coring device
  - Procedure
    - Identify sampling locations-bare soil, children's play areas
    - Determine collection points (do not composite samples from different sides of the home)
    - Sketch areas to be sampled
    - Label containers

Soil Sampling Methodology

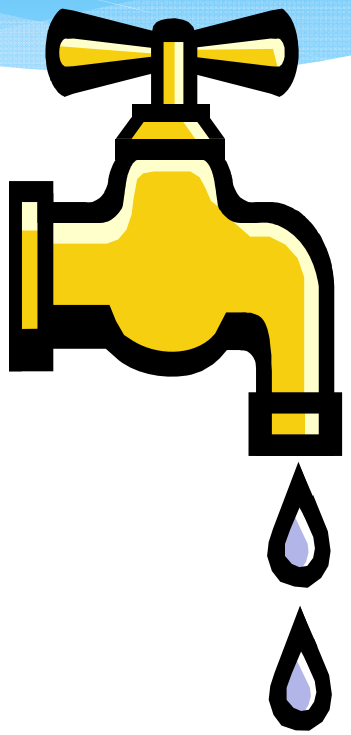
* Grab sampling:
  * Take individual grab sample in an area
  * Use core tool or plastic spoon
  * Go to ½ inch deep
  * Include paint chips if present

Soil Sampling Methodology

* Composite soil sampling:
  * Take multiple grab samples equidistant over an area
  * Combine grab samples from one side of the home into one composite for analysis
  * Use core tool or plastic spoon
  * Go to ½ inch deep
  * Include paint chips if present
  * No more than 10 grabs per composite

Water Sampling Methodology

- Water Sample:
  - Obtain proper sampling bottles from DPH lab
  - Label bottles
  - Take two samples per dwelling
    - First draw from cold water kitchen tap (6 hrs standing)
    - Second draw after 2 minutes of flushing



Now comes the fun part……

* Lead Inspection Report generation
  * Must use Lead Inspection Report Form
  * Attach XRF, dust wipe, soil, water, paint chip results
  * Clear, concise field notes & XRF readings
  * XRF readings can be hand written **but**
  * DPH recommends using download function of LPA-1 XRF
    * LPA-1 software needs to be installed on your pc
  * Report submission:
    * Forms the basis of the lead abatement order
    * Is a legal document

This will happen next (In a Perfect World)…

* Abatement order issued by LHD (if lead hazards identified)
* LHD receives, reviews, approves/disapproves abatement plan
* Abatement work will be performed after approval from LHD
* Once the abatement work is completed the next step is…
* **CLEARANCE TESTING**

Reinspection

* Visual inspection to confirm abatement complete and according to plan
* Results of visual inspection and final dust wipe clearance sent to owner, LHD, and DPH….this is the **Post Abatement Reinspection Report/Letter of Compliance**

Clearance Dust Wipe Sampling

* Perform clearance dust wipe sampling in each room where abatement occurred.
* Follow same procedure as initial dust wipe sampling except add window wells.
  * Floors 40 µg/sq. ft.
  * Window sills 250 µg/sq. ft.
  * Window wells 400 µg/sq. ft.
* If abatement in portion of dwelling, in addition to the floors, window sills and window wells, take a floor dust wipe sample within 10 feet of the abatement area entrance.

Waste Disposal

* In CT, a homeowner can dispose of up to 10 cubic years yards of waste during abatement. Any waste greater than 10 cubic yards must be evaluated
  * Careful handling of all LBP waste is important whether exempt or not
* TCLP (Toxic Characteristic Leachate Procedure) is the test normally used to determine if waste is hazardous (5 mg/kg, 5 mg/liter or 5 PPM of leachable lead)

Program Contact Information

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