

RISK ASSESSMENT & ROLE/RESPONSIBILITIES OF A RISK ASSESSOR

DEFINITION OF LEAD RISK ASSESSMENT

- On site investigation to determine existence, nature, severity, location of LBP hazards
- Report explaining the results of the investigation and options for reducing LBP hazards

COMPONENTS

- On-site investigation
- Identification/description of LBP hazards
- Determine/report LBP hazards
- Options for correction of hazards identified
- Options for LBP hazard management

INITIATION OF THE RISK ASSESSMENT PROCESS

- Owner contacts risk assessor
- Types of assessments
 - Full Risk Assessment
 - Lead Hazard Screen
 - Reevaluation
 - Combination: R.A./LBP Inspection
- Scope of work developed
- Cost estimates
- Owner submits info on type/condition of building
- Collect residence information – building age, number of rooms, occupants ages and general health, use of structure



SINGLE FAMILY/OWNER OCCUPIED

- Test all dwellings
 - Example: # row houses
- Visual assessment
 - Building conditions
 - Paint conditions
- Environmental sampling:
 - Dust
 - Soil
 - Water
 - Paint

MULTIFAMILY

Select targeted dwelling units

- # Units to be tested
 - ◆ <20.....all
 - ◆ 100-117.....45 (from HUD Chapter 7)
- Visual assessment:
 - Building conditions
 - Paint conditions
- Environmental sampling:
 - Dust
 - Soil
 - Water
 - Paint

LHD RISK ASSESSMENT ACTIVITIES

- Complaint investigations
- Day Care inspections
 - sample defective paint
- Housing inspections
- HUD funded municipal projects
- CDBG funded rehab projects

RISK ASSESSOR

- Schedule/conduct evaluation
 - Visual assessment/paint conditions
 - Environmental sampling & testing
 - Select sampling locations based on use patterns & visual observations
- Determine actual hazards
- Identify options for reduction/elimination of hazards
- Prepare written report
- Risk assessor must be trained/certified

VISUAL INSPECTION



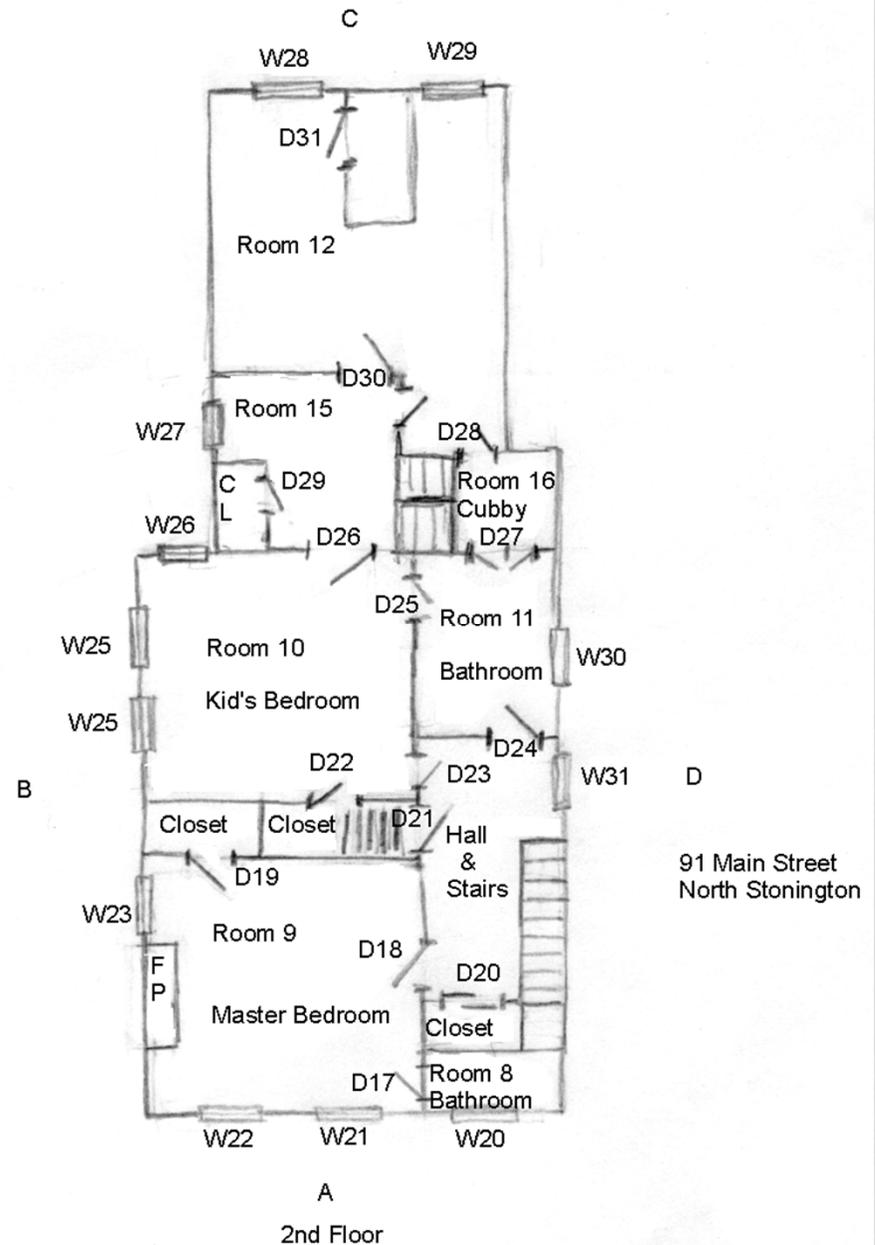
- Initial walk-thru
- Prepare a sketch of building/unit to be inspected
- Evaluate conditions of paint and substrate
 - Intact
 - Fair
 - Poor (defective)
- Identify interior problems
 - Dust accumulation
- Identify exterior problems
 - Bare soil areas
 - Damaged paint
 - Accumulation of paint chips on ground, porch surfaces, etc
- Consider taking digital pictures

VISUAL ASSESSMENT

- Pay particular attention to friction surfaces such as windows & doors
- Also impact surfaces such as steps, floors, baseboards and chair rails

SKETCH THE UNIT

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



ENVIRONMENTAL TESTING



The Environmental Quality Institute conducts research on environmental issues through the University of North Carolina at Asheville

- Test defective painted surfaces:
 - XRF
 - paint chip sampling
- Collect paint chip samples
- Perform dust sampling
- Sample bare soil areas
- Collect water samples
- Test other items:
 - glazed pottery
 - furniture
 - vinyl miniblinds

CONDUCT DUST WIPE SAMPLING

- Locations based on use patterns/visual observations
 - Entryway
 - Common spaces
 - Kitchen
 - Living room
 - Child's bedroom
 - Playroom
- Floors, window sills, and window wells of each room



Dust Sampling – First Pass



Dust Sampling – Second Pass



CONDUCT SOIL SAMPLING

- Bare soil
- Play areas
- Drip line
- Gardens
- Other areas in yard where bare soil might exist)

* Make sketch and note locations

SOIL SAMPLING



SOIL SAMPLING



CONDUCT PAINT TESTING

- XRF Analysis
 - toxic level is 1.0 mg/sq.cm or greater
- Paint Chip Analysis
 - toxic level is .5% or greater lead by weight
 - sample defective paint (all layers)

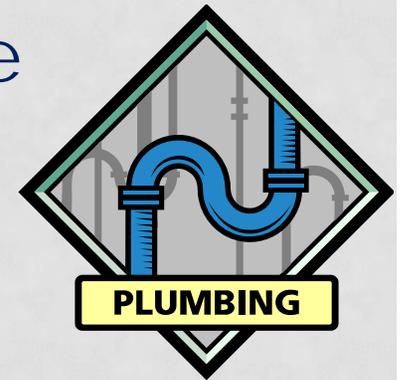


XRF TESTING



COLLECT WATER SAMPLES

- Evaluate lead exposures that can be corrected by owner
 - lead water service lines
 - fixtures
- Notify local water authority if problems beyond owner's service line
- Not recommended for routine R.A. of LBP hazards (EPA has a program)
- 15 ppb-action level

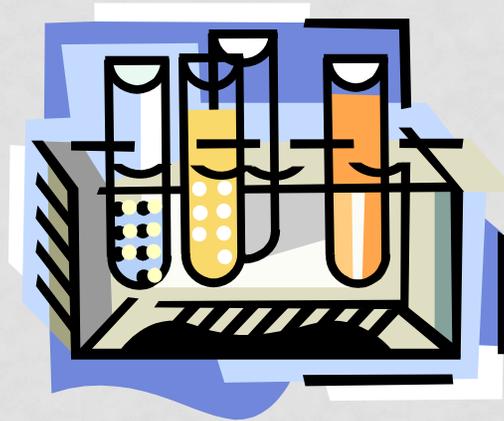


COLLECT WATER SAMPLES

- Lead is rarely found in source water, but enters tap water through corrosion of plumbing materials. Homes built before 1986 are more likely to have lead pipes, fixtures and solder. However, new homes are also at risk: even legally “lead-free” plumbing may contain up to 8 percent lead. The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

INTERPRET LAB RESULTS

- Integrate lab analysis results (paint, dust, soil) with visual assessment to determine presence or absence of LBP hazards



INTERPRETING LAB RESULTS

- Paint samples
 - $\geq 0.5\%$ lead by weight
- Soil samples
 - EPA 403 Standards/Lead Soil Hazard
 - ≥ 400 ppm bare soil- child play areas
- Dust wipe samples
 - Floors ≥ 40 $\mu\text{g}/\text{sq. ft}$
 - Window sills ≥ 250 $\mu\text{g}/\text{sq. ft}$
 - Window wells ≥ 400 $\mu\text{g}/\text{sq. ft}$



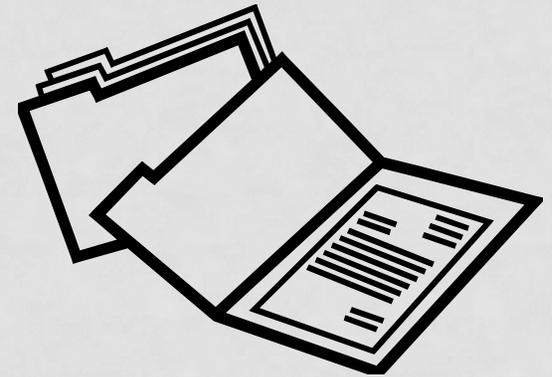
DISCUSS OPTIONS

- Safe & effective lead hazard control options
- Determine most feasible options for specific situation



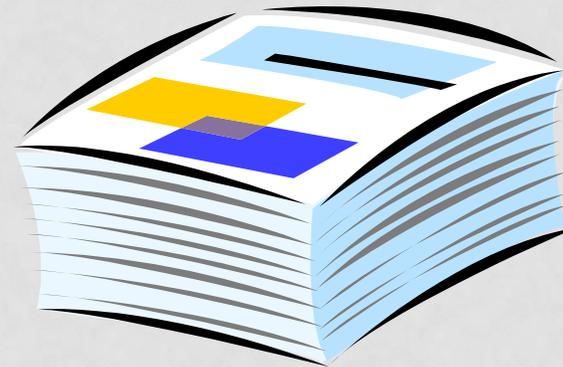
DEVELOP HAZARD CONTROL PLAN

- Written report should include
 - Hazards identified
 - Acceptable control measures
 - Interim controls
 - Abatement options
 - Control method of choice that owner has chosen



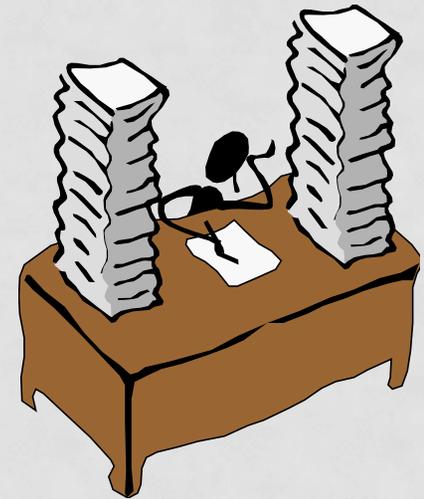
DEVELOP HAZARD CONTROL PLAN

- Written report should include (cont.)
 - Cost estimates
 - relocation
 - interior abatement
 - exterior abatement
 - preparation
 - cleaning
 - renovation
 - waste disposal



REPORT

- Summarize results where the hazards found
- Range of LBP hazard control options
- Include raw data & identifying info
- May become legal document
- Must keep for 3 years
- Subject to HUD Sec.1018 Disclosure



FINAL STEPS

- Lead hazard control work completed
- Clearance
- Statement of compliance
- Ongoing monitoring



ONGOING MONITORING

- Ensure dwelling free of LBP hazards (and remains that way!)
- LBP present, but no LBP hazards exist
- Re-evaluation by certified risk assessor
- Annual visual survey by owner

COMPARISON: RA/LBPI/EBLL

LBP Inspection

- measures lead in paint surface by surface
- identifies presence of LBP only
- allows owner to treat all LBP surfaces

Risk Assessment

- measures lead in deteriorated paint, dust, exposed soil, water
- Identifies location of all LBP hazards
- allows owner to treat all identified LBP hazards

EBLL Investigation

- comprehensive lead inspection
 - **test, identify all surfaces for lead**
 - evaluate all exposure pathways (dust,soil,water)
- abate and/or manage per regulations

• Risk Assessment

- identifies LBP hazards
- focus on LBP hazards only (defective paint, exposed soil, and dust)
- flexibility in controlling identified lead hazards

• EBLI Investigation

- identifies potential source(s) of lead poisoning
- focus on all sources of lead in child's environment
- LHD order LBP hazard controls based on state/local laws

SUMMARY OF ROLE/RESPONSIBILITIES

- Collects background info to perform risk assessment
- Investigates properties for potential sources of lead contamination
 - defective paint
 - impact/friction surfaces
 - dust
 - soil
 - water

SUMMARY OF ROLE/RESPONSIBILITIES

- Conducts visual inspection to identify lead-based paint hazards
- Samples for other sources of lead exposure
- Interprets sampling and lab results
- Develops hazard control options, role of interim controls, and o/m activities to reduce lead-based paint hazards
- Prepares final risk assessment report