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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Maine Solid Waste Management Rules

CHAPTER 424

LEAD MANAGEMENT REGULATIONS

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Chapter 424: LEAD MANAGEMENT REGULATIONS

SUMMARY: This Chapter contains procedures and requirements for the certification and licensing of persons engaged in residential lead-based paint activities, work practice standards for performing such activities, licensing of lead training providers and accreditation of lead training programs. This Chapter requires that in residential dwelling units and child-occupied facilities, except as specifically exempted, all lead inspections, risk assessments, lead abatement designs, lead abatement activities, and other services related to lead-based paint such as lead-based paint hazard screens, and lead determinations shall be performed by individuals and firms certified or licensed pursuant to this Chapter. This Chapter also sets standards and procedures for establishing the lead-safe status of residential dwelling units and child-occupied facilities.

1. Definitions

- A. Abatement.** “Abatement” means any measure or set of measures designed to permanently eliminate lead-based paint hazards and lead hazards. Abatement includes, the removal of lead-based paint and lead-contaminated dust, the permanent enclosure or encapsulation of lead-based paint, the replacement of lead-painted surfaces or fixtures and the removal or covering of lead-contaminated soil; when lead-based paint hazards and lead hazards are present in such paint, dust or soil; and “permanently” means for at least 20 years.
- (1) All preparation, cleanup, disposal, and post-abatement clearance testing activities associated with such measures;
 - (2) Specifically, abatement includes:
 - (a) Projects for which there is a written contract or other documentation, which provides that an individual or firm will be conducting activities in or to a residential dwelling unit or child-occupied facility that:
 - (i) Shall result in the permanent elimination of lead-based paint hazards and lead hazards; or
 - (ii) Are designed to permanently eliminate lead-based paint hazards and lead hazards as described in paragraphs (1) and (2) of this definition.
 - (b) Projects resulting in the permanent elimination of lead-based paint hazards and lead hazards, conducted by firms or individuals certified in accordance with these rules, unless such projects are covered by paragraph (3) of this definition;
 - (c) Projects resulting in the permanent elimination of lead-based paint hazards and lead hazards, conducted by firms or individuals who, through their company name or promotional literature, represent, advertise, or hold themselves out to be in the business of performing lead-based paint activities as identified and defined by this section, unless such projects are covered by paragraph (3) of this definition; or

- (d) Projects resulting in the permanent elimination of lead-based paint hazards and lead hazards, that are conducted in response to State or local abatement orders.
- (3) Abatement does not include renovation, remodeling, landscaping or other activities, when such activities are not designed to permanently eliminate lead-based paint hazards and lead hazards, but, instead, are designed to repair, restore, or remodel a given structure or dwelling unit, even though these activities may incidentally result in a reduction or elimination of lead-based paint hazards and lead hazards. Furthermore, abatement does not include interim controls, operations and maintenance activities, or other measures and activities designed to temporarily, but not permanently, reduce lead-based paint hazards and lead hazards.
- B. Abrasive blasting.** “Abrasive blasting” means the procedure of removing paint from a surface by using forcefully propelled abrasive material, such as sand, grit, or other similar material, to the painted surface.
- C. ASTM.** “ASTM” means the American Society of Testing and Materials.
- D. Blue suit procedures.** “Blue suit procedures” means a decontamination procedure whereby clean coveralls are left immediately outside the work area(s) when certified lead professionals first enter the work area wearing personal protective coveralls and respiratory protection and following abatement activities proceed to a remote decontamination unit by placing clean personal protective coveralls over the contaminated coveralls.
- E. Business entity.** “Business entity” means a partnership, firm, association, corporation, sole proprietorship, or other business concern.
- F. Certificate.** “Certificate” means a document issued to an individual by the Commissioner affirming that the individual has successfully completed the training and other requirements set forth in this Chapter to qualify as and engage in the activities of a lead professional.
- G. Certified renovator.** “Certified renovator” means a person who either performs or directs workers who perform renovation and remodeling activities in residential and/or child-occupied facilities, and who has successfully completed a renovator course accredited by EPA and has completed the application process with the EPA to become a certified renovator as required by the EPA Lead-Based Paint, Renovation, Repair and Painting Rule (RRP). 40 C.F.R. Part 745, subpart E, as amended up to July 1, 2020.
- H. Child-occupied facility.** “Child-occupied facility” means a pre-1978 building or portion of a building visited regularly by the same child, up to 6 years of age, on at least 2 different days within any week, provided that each day's visit lasts at least 3 hours, the combined weekly visit lasts at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day-care centers, preschools, and kindergarten classrooms.

Note: Child-occupied facilities may be located in pre-1978 housing or in public or commercial buildings. With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.

- I. Clean room.** “Clean room” means the section of the decontamination unit that is connected to the hand/face wash station or shower room where clean clothes and clean personal protective coveralls are kept. Clean room shall be of sufficient size for their intended use but shall be at a minimum of three (3) by three (3) feet.
- J. Clearance examination.** “Clearance examination” means the process whereby a lead risk assessor or inspector documents that all lead abatement methods were properly completed as specified in abatement documents such as a project design, work plan or risk assessment report. It also includes a visual assessment of the work area to document that the work area is visually free of dust and debris so that clearance sampling can be initiated.
- K. Clearance sampling.** “Clearance sampling” means dust sampling, soil sampling and/or water sampling for the purpose of ascertaining that no lead-based paint hazard or lead hazards exist at the conclusion of a lead abatement project.

Note: In projects where both lead abatement and interim control measures are being used in the same work area, the more stringent lead abatement clearance standards apply to the entire work area. In lead projects where there are specific work areas where only interim control measures are being used, then the clearance protocols of the EPA RRP rule or HUD’s “Lead-Based Paint Poisoning Prevention in Certain Residential Structures,” 24 C.F.R. Part 35, as amended up to July 1, 2020, apply as applicable, unless required otherwise by contract.

- L. Commissioner.** “Commissioner” means the Commissioner of the Department of Environmental Protection.
- M. Component or building component.** “Component” or “building component” means specific design or structural elements or fixtures of a residential dwelling unit or child-occupied facility that are distinguished from each other by form, function, and location. These include, but are not limited to, interior components such as: ceilings, crown molding, walls, chair rails, door units, floors, fireplaces, radiators and other heating units, shelves, shelf supports, stair treads, stair risers, stair stringers, newel posts, railing caps, balustrades, window units, built in cabinets, columns, beams, bathroom fixtures, plumbing, counter tops, and air conditioners; and exterior components such as: painted roofing, chimneys, flashing, gutters and downspouts, ceilings, soffits, facias, rake boards, corner boards, bulkheads, door units, fences, floors, joists, lattice work, railings and railing caps, siding, handrails, stair risers and treads, stair stringers, columns, balustrades, window units, and air conditioners.
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- N. Conditions of paint.** “Conditions of paint” means one of the three classifications as described below as applied to lead-based paint on each individual component or side of a building or room:
- (1) Intact;
 - (2) Fair condition; or
 - (3) Poor condition.
- O. Containment.** “Containment” means the physical measures taken to ensure that dust and debris created or released during lead-based paint hazard reduction are not spread, blown, or tracked from inside to outside of the work area.
- P. Containment area.** “Containment area” means a specific area that include measures designated for lead abatement activities. Activities that have been implemented to control the release of the lead-contaminated dust and debris created during an abatement and to limit personnel access to the area.
- Q. Decontamination unit.** “Decontamination unit” means a 6-mil poly self-contained area between the work area and outside clean area that is used for decontamination of personnel, and a clean room for changing. The decontamination unit is adjacent and connected to the work area and its design and operation prevents personnel clothing and equipment that has become contaminated with lead in the work area from contaminating areas beyond the decontamination unit.
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- Note:** A shower facility, where feasible, is required by OSHA 29 C.F.R. §1926.62, as amended up to July 1, 2020, whenever the OSHA permissible exposure level (PEL) is exceeded.
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- R. Department.** “Department” means the Department of Environmental Protection.
- S. Design consultant.** “Design consultant” means an individual who prepares abatement project designs, occupant protection plans and abatement reports. These activities include advising owners, contractors, inspectors, risk assessors and project supervisors regarding lead abatement activities such as abatement project designs and occupant protection plans.
- T. Deteriorated.** “Deteriorated” means any paint coating on a damaged surface or fixture, or any interior or exterior lead-based paint that is peeling, chipping, blistering, flaking, worn, or alligator-like cracking, or otherwise becoming separated from the substrate.
- U. Discipline.** “Discipline” means a specific area of professional expertise certifiable under the provisions of Chapter 424, including lead abatement worker, project supervisor, lead inspector, risk assessor, and design consultant.
- V. Door unit.** “Door unit” means a door and associated trim. A door unit is comprised of some or all of the following parts: door (includes the door stiles, panels, and edge); door jamb (includes frame and stops); door casing and door threshold.

- W. Employee.** “Employee” means an individual who may be permitted, required, or directed by an employer, in consideration of direct or indirect gain or profit, to engage in any activity.
- X. Encapsulation.** “Encapsulation” means the application of any covering or coating specifically formulated for use on lead-based paint that acts as a barrier between the lead-based paint and the environment and that relies, for its durability, on adhesion between the encapsulant and the painted surface, and on the integrity of the existing bonds between paint layers, and between the paint and the substrate.
- Y. Enclosure.** “Enclosure” or “enclosure system” mean the use of rigid durable construction materials, such as laminate or vinyl siding mechanically fastened to the substrate, which act as a barrier between the lead-based paint and the environment.
- Z. EPA.** “EPA” means the United States Environmental Protection Agency.
- AA. Essential maintenance practices.** “Essential maintenance practices” means a prescribed program of routine maintenance activities, including worker training and lead-safe work practice designed to prevent the creation or development of lead-based paint hazards or lead hazards.
- BB. Fair condition.** “Fair condition” means deteriorated paint in amounts that do not exceed 20 square feet on exterior surfaces, 2 square feet in any one interior room or space, or 10 percent of the total surface area on an interior or exterior component type with a small surface area (such as window sills, baseboards, or trim). Paint in fair condition may also be referred to as “Deteriorated paint in *de minimis* amounts.”

Note: “Deteriorated paint in *de minimis* amounts” refer to specific thresholds in HUD and EPA regulations that dictate how control or repair must be performed. According to HUD, all deteriorated lead-based paint must be controlled or abated, regardless of the amount of paint present. Amounts of paint below the *de minimis* threshold do not require the use of trained or certified workers, lead-safe work practices, including occupant protection, clearance and notice to residents (if required). However, HUD does recommend that lead-safe work practices, including occupant protection, clearance and notice to residents be implemented whenever known or presumed lead-based paint in *de-minimis* amounts is disturbed.

- CC. First-draw sample.** "First-draw sample" means a sample of tap water that has been standing undisturbed in the plumbing pipes at least 6 hours and is collected without prior flushing of the pipes.
- DD. Friction surface.** “Friction surface” means a surface that is subject to abrasion or rubbing including, window, door, floor, and stair surfaces.
- EE. Flushed sample.** "Flushed sample" means a sample of tap water collected after the tap has been allowed to run at its maximum flow rate for a minimum of 5 minutes before the sample is collected.

FF. Hand/face wash station or shower facility. “Hand/face wash station” means the section of the decontamination unit that is connected to the work area and to the clean room and is used for personal decontamination whenever persons exit from the work area.

Note: A shower facility, where feasible, is required by OSHA 29 C.F.R. §1926.62, as amended up to July 1, 2020 whenever the OSHA permissible exposure level (PEL) is exceeded.

GG. HEPA filtration. “HEPA filtration” means high-efficiency particulate air filtration used in respirators and vacuum systems, capable of removing all particles as measured at 0.3 microns in diameter or greater from the air with 99.97% efficiency or greater.

HH. HEPA vacuum. “HEPA vacuum” means a vacuum cleaner equipped with HEPA filtration.

II. Household hazardous waste. “Household hazardous waste” means any household waste material excluded from identification as a hazardous waste by 06-096 C.M.R. Chapter 850 § 3(A)(4)(a)(vii).

JJ. HUD. “HUD” means the United States Department of Housing and Urban Development.

KK. Impact surface. “Impact surface” means a surface that is subject to damage by repeated sudden force, such as certain parts of door frames.

LL. Intact. “Intact” means paint that is entirely undamaged and undisturbed.

MM. Interim controls. “Interim controls” means a set of non-abatement measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards or lead hazards, including specialized cleaning, repairs, maintenance, paint stabilization, temporary containment, ongoing monitoring of potential lead-based paint hazards or lead hazards and the establishment and operation of management and resident education programs. Interim controls also include shrubbery or bushes that are sufficiently dense to prevent ready access to lead contaminated soil.

Note: All interim controls in residential dwelling unit or child-occupied facilities subject to the EPA Lead-Based Paint, Renovation, Repair and Painting Rule (RRP), 40 C.F.R. Part 745, subpart E, as amended up to July 1, 2020, or HUD’s rule, “Lead-Based Paint Poisoning Prevention in Certain Residential Structures,” 24 C.F.R. Part 35, as amended up to July 1, 2020 must be conducted in accordance with the applicable federal regulations.

NN. Lead abatement activities. “Lead abatement activities” means the act of paint removal, encapsulating lead-based paint, enclosing lead-based paint, component removal of lead-based paint hazards or lead hazards, the removal of contaminated lead-based paint hazards or lead hazards and the removal or capping of lead contaminated soil.

OO. Lead consultant. “Lead consultant” means a business entity licensed by the Department that engages in or intends to engage in lead paint activities for lead inspection, lead risk assessment, design consulting, lead determinations and lead screening as a business service and employs the appropriately certified individuals to conduct the services provided as applicable.

- PP. Lead abatement contractor.** “Lead abatement contractor” means a business entity that engages in or intends to engage in lead abatement activities as a business service and employs or involves one or more project supervisors for lead abatement activities.
- QQ. Lead abatement worker.** “Lead abatement worker” means an individual engaging in any lead abatement activity for a licensed lead abatement contractor.
- RR. Lead-based paint.** “Lead-based paint” means paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or equal to or in excess of 0.5% by weight or 5,000 ppm.
- SS. Lead-based paint activities.** “Lead-based paint activities” means lead inspection, risk assessment, lead abatement design, lead abatement and services related to lead-based paint such as lead-based paint hazard screens, lead determinations, and providing lead abatement training.
- TT. Lead-based paint waste.** “Lead-based paint waste” means any waste, debris, or material containing lead-based paint that is intended for disposal, including, chips, dust, soil, sludges, concentrated lead wastes, architectural components, and disposable equipment and clothing used during abatement, rehabilitation, renovation or remodeling activities.
- UU. Lead-contaminated dust.** “Lead-contaminated dust” means surface dust that contains a mass per area concentration of lead equal to or exceeding 10ug/ft² on floors and carpets, 100 ug/ft² on interior windowsills, or 100 ug/ft² for window wells based on wipe samples.
- VV. Lead-contaminated soil.** “Lead-contaminated soil” means soil that contains an amount of lead that is equal to or exceeding 100 ppm in bare soil in play areas or is equal to or exceeding 900 ppm from bare soil in building perimeters areas that are not play areas.
- WW. Lead-contaminated water.** “Lead-contaminated water” means water containing measurable amounts of lead. Lead-contaminated water containing equal to or greater than 15 ppb lead is a lead hazard.

Note: Contact the Maine Center for Disease Control and Prevention, Division of Environmental Health, Drinking Water Program (207-287-2070) for assistance with lead-contaminated water including a listing of water quality professionals familiar with options for mitigating lead-contaminated water.

- XX. Lead determination.** “Lead determination” means an assessment of a residential dwelling unit or child-occupied facility, or a limited portion of these, for the purpose of identifying the presence of lead-based paint hazards and lead hazards.
- YY. Lead hazard.** “Lead hazard” means conditions that may cause exposure to lead-contaminated dust attributed to lead-contaminated paint, lead-contaminated soil, and lead-contaminated water. Lead hazards include: drinking water containing equal to or greater than 15 ppb lead, bare soil in play areas containing greater than or equal to 100 ppm lead; bare soil in building perimeter areas other than play areas containing greater than or equal to 900 ppm lead.

- ZZ.** **Lead-based paint hazard.** “Lead-based paint hazard” means lead-based paint that is in poor condition.
- AAA.** **Lead hazard screen.** “Lead hazard screen” means a limited risk assessment conducted only in dwelling units where the paint is in intact condition and where the probability of finding lead-based paint hazards and lead hazards is low.
- BBB.** **Lead inspection.** “Lead inspection” means a surface-by-surface assessment to determine the presence and condition of lead-based paint and lead dust, lead-contaminated soil, and lead-contaminated drinking water and the provision of a written report.
- CCC.** **Lead inspector.** “Lead inspector” means an individual who conducts lead inspections, lead determinations, clearance examinations and lead-safe evaluations.
- DDD.** **Lead poisoned.** “Lead poisoned” means having a confirmed elevated level of blood lead that is injurious, as defined in *Rules Relating to the Lead Poisoning Control Act*, 10-144 C.M.R. Chapter 292.
- EEE.** **Lead professional.** “Lead professional” means an individual who performs lead-based paint activities including a lead abatement worker, a project supervisor, a lead inspector, a risk assessor, or a design consultant.
- FFF.** **Lead-safe.** “Lead-safe” means a premises that contains no lead-based paint hazards or lead hazards. A lead-safe condition may persist provided no additional lead-based substances are introduced into the residential dwelling unit or child-occupied facility or the condition of the existing lead-based substances does not deteriorate.
- GGG.** **Lead training provider.** "Lead training provider" means a business entity that offers accredited lead training courses in the State of Maine.
- HHH.** **License.** “License” means a document issued by the Commissioner to a business entity or public entity, including a lead abatement contractor, a lead consulting entity or a lead training provider, affirming that the business entity has met the requirements set forth in this Chapter to engage in lead-based paint activities.
- III.** **Limited lead-safe certificate.** “Limited lead-safe certificate” means a certificate issued to an owner when a lead inspector or risk assessor has determined that no lead-based paint, lead dust hazards, lead-contaminated soil, or lead-contaminated drinking water exists at a residential or child-occupied facility or portion thereof.
- JJJ.** **Mini-enclosure system.** “Mini-enclosure system” means a small lead dust containment system constructed around a component. Constructed with wood or other rigid framing, covered with 6-mil poly sheeting on the walls (typically 2 to 3 sides, ceiling, and floor) with an air-flap entry. The entire system must effectively contain lead dust and debris. The mini-enclosure must be affixed securely to the wall such that there are no gaps between the mini-enclosure and the wall. The mini enclosure defines the work area. The mini enclosure must remain in place until clearances are achieved.

- KKK. Minor maintenance activity.** “Minor maintenance activity” means an interim control measure in residential and child-occupied facilities that is not subject to the requirements of the EPA Lead-Based Paint, Renovation, Repair and Painting Rule, 40 C.F.R. Part 745, subpart E, as amended up to July 1, 2020, or the HUD rule, “Lead-Based Paint Poisoning Prevention in Certain Residential Structures,” 24 C.F.R. Part 35, as amended up to July 1, 2020.
- LLL. NIOSH.** “NIOSH” means the National Institute for Occupational Safety and Health.
- MMM. NLLAP.** “NLLAP” means the National Lead Laboratory Accreditation Program.
- NNN. Occupant.** “Occupant” means a person who resides in a residential dwelling unit or resides in or uses a child-occupied facility.
- OOO. Operator.** “Operator” means a person who leases, operates, controls, or supervises a lead abatement activity within a building, structure, or facility.
- PPP. OSHA.** “OSHA” means the Occupational Safety and Health Administration of the United States Department of Labor.
- QQQ. Property owner.** “Property owner” means a person, firm, corporation, guardian, conservator, trustee legal representative or registered agent who alone or jointly and severally with others owns, holds or controls the whole or any part of the freehold or leasehold interest to any property, with or without actual possession.
- RRR. Paint.** “Paint” means any substance applied to a surface as a coating, including household paints, varnishes, and stains.
- SSS. Paint removal.** “Paint removal” means an abatement method where all lead-based paint is removed from a building component. Removing paint from only the friction or impact surfaces of a component does not constitute abatement.
- TTT. Person.** “Person” means any individual, business entity, governmental body or other public or private organization.
- UUU. Polyethylene (6 mil).** “6-mil poly” means a plastic film made of polyethylene that is at least 6/1000 (.006) of an inch thick.
- VVV. Play area.** “Play area” means an area of frequent soil contact by children of less than 6 years of age, as indicated by the presence of play equipment (e.g., sandboxes, swing sets, sliding boards) or toys or other children's possessions, observations of play patterns, or information provided by parents, residents or property owners.
- WWW. Poor condition.** “Poor condition” means all deteriorated paint that is not identified as paint in Fair or Intact condition. Paint in poor condition may be referred to as deteriorated paint.

- XXX. Project.** "Project" means lead abatement activities that occur at a location during a discrete and finite time period and with a lapse in abatement activity of no more than 10 working days.
- YYY. Project design.** "Project design" means a project-specific abatement plan or any related set of directions, work orders, bid documents or specifications developed by a design consultant for the removal, enclosure or encapsulation of any lead-based paint or lead-based paint hazards or lead hazards in accordance with Section 6(C).
- ZZZ. Project supervisor.** "Project supervisor" means an individual with responsibility for lead abatement project activities for a licensed lead abatement contractor. This includes preparing occupant protection plans, selecting abatement work practices and work site preparation activities.
- AAAA. Remote decontamination unit.** "Remote decontamination unit" means a decontamination unit that is not contiguous with the work area.
- BBBB. Renovation and remodeling.** "Renovation and remodeling" means the replacement or reconstruction of any part of a residence or residential dwelling unit in which the primary intent is not to abate lead, but rather to repair, restore, or remodel a given structure, which may incidentally result in the reduction of lead-based paint.
- CCCC. Residential dwelling unit.** "Residential dwelling unit" means a room or group of rooms that form a single independent habitable unit for occupation by one or more individuals that has facilities with permanent provisions for living, sleeping, eating, cooking and sanitation, including common areas and appurtenant structures, which is used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons, including children's homes as defined in 22 M.R.S. § 8101.
- DDDD. Risk assessment.** "Risk assessment" means an on-site assessment to determine the existence, nature, severity, and location of lead-based paint hazards and lead hazards, and a written report by an individual or firm conducting the risk assessment explaining the results of the assessment and the options for reducing lead-based paint hazards and lead hazards.
- EEEE. Risk assessor.** "Risk assessor" means an individual who has been trained to conduct risk assessments as well as lead inspections, lead determinations, clearance examinations and lead-safe evaluations.
- FFFF. Room equivalent.** "Room equivalent" means an identifiable part of a residential dwelling unit or child-occupied facility that has the same renovation and painting history such as a room, a house exterior, a foyer, staircase, hallway or an exterior area (exterior areas contain items such as play areas). Closets or other similar areas adjoining rooms are not considered as separate room equivalents unless they are obviously dissimilar from the adjoining room equivalent. An individual side of an exterior is not considered to be a separate room equivalent unless there is visual or other evidence that its paint history is different from that of the other sides. All sides of a building are treated as a single room equivalent if the paint history appears to be similar. For multi-family developments or

apartment buildings, common areas and exterior sites are treated as separate types of dwelling unit not as room equivalents.

- GGGG. State investigator.** “State investigator” means a certified risk assessor who is employed or authorized by the Maine Department of Health and Human Services to conduct environmental lead investigations.
- HHHH. Substrate.** "Substrate" means the material underneath the paint that is classified into one of six types: brick, concrete, drywall, metal, plaster, or wood.
- IIII. Targeted risk assessment.** “Targeted risk assessment” means an on-site risk assessment of a limited portion of a residential dwelling unit or child-occupied facility, to determine the existence, nature, severity, and location of lead-based paint hazards and lead hazards in that portion of the building, and the written report explaining the results of the assessment and the options for reducing or eliminating the lead-based paint hazards or lead hazards in the targeted area.
- JJJJ. TCLP.** “TCLP” means the “Toxicity Characteristic Leaching Procedure” as described in EPA SW-846.
- KKKK. Testing combination.** "Testing combination" means a unique combination of room equivalent, building component type, and substrate.
- LLLL. Training manager.** “Training manager” means the individual responsible for administering a training program and monitoring the performance of principal instructors and guest instructors.
- MMMM. Training provider.** “Training provider” means a person providing training that is necessary to fulfill certification or licensing requirements under this Chapter.
- NNNN. Wet cleaning.** “Wet cleaning” means a process of eliminating lead contamination from surfaces and objects, including, floors, walls, windows, and window wells by washing with a solution of water and a lead-specific cleaning agent or an all-purpose household cleaner and rinsing with clean water.
- OOOO. Wet vacuuming.** “Wet vacuuming” means a process of cleaning using a vacuum cleaner that entraps debris in a liquid medium.
- PPPP. Window unit.** “Window unit” means a window and associated trim. A window unit is comprised of the following parts: window sash (includes mullions); window casing (includes header and apron); windowsill; window jamb (includes parting bead and stops); and window well (also called trough).
- QQQQ. Work area.** “Work area” means an interior or exterior area where a lead abatement activity takes place. There may be more than one work area within a residential dwelling unit or child-occupied facility or within individual rooms. When used, a mini enclosure system constitutes the work area.

RRRR. XRF. “XRF” means an x-ray fluorescence direct read or spectrum analyzer used to determine lead concentration in paint.

2. General Provisions

- A. Applicability.** This Chapter applies to any person who engages in lead-based paint activities in residential dwelling units and child-occupied facilities in Maine.
- B. Right of entry.** Employees and agents of the Department may enter any property at reasonable hours and enter any building with the consent of the owner, occupant or agent, or pursuant to an administrative search warrant, in order to inspect the property or structure, take samples, conduct tests, or review records as appropriate to determine compliance with any lead laws and regulations administered by the Department or the terms and conditions of any order, license, permit, approval, or decision of the Commissioner or the Board.
- C. Prohibition.** No person shall engage in any lead-based paint activity at any residential dwelling unit or child-occupied facility unless the person is licensed or certified to do so by the Department. Unless exempted in Subsection E below. No person shall offer lead training courses in the State of Maine unless the lead training courses are accredited, and that person is licensed by the Department to offer the lead training courses.
- D. One-year term.** A license, certification, or accreditation issued by the Department under this Chapter expires one year after the date of issue. An existing license, certification, or accreditation will expire unless the licensee submits a complete application for renewal to the Department prior to the expiration date of that license, certificate, or accreditation. An expired license, certification, or accreditation may be renewed if the application for renewal is received no later than 2 years following expiration of the previously issued license, certification, or accreditation.
- E. Exemptions.**
- (1) A person 18 years of age or older who owns and personally occupies a residential dwelling unit as their primary or seasonal residence is exempt from these rules when performing lead abatement activities within that residential dwelling unit, so long as a child residing in the residential dwelling unit has not been identified as lead-poisoned.
 - (2) Owners and occupants assessing for the presence of lead in paint in their own property or residence using home test kits or paint chip sampling are exempt from these regulations. Owners and occupants may also collect dust samples to evaluate their residences.

Note: Federal law requires property owners to disclose to lessees or potential buyers any knowledge of lead-based paint including results from homeowner-collected paint and dust samples as well as test results from paint testing conducted by EPA-certified renovators and/or any known lead-based paint hazards.

- (3) EPA certified renovators may test for the presence of lead in paint in residential dwelling units or child-occupied facilities using EPA-approved test kits or paint chip sampling when the testing is performed in order to comply with EPA's Lead-Based Paint, Renovation, Repair and Painting Rule. 40 C.F.R. Part 745, subpart E, as amended up to July 1, 2020.
- (4) Any person performing interim controls is exempt from these regulations.
- (5) Any person or contractor addressing only lead water hazards in residential dwelling units or child-occupied facilities is exempt from these regulations.

Note: Contact the Maine Center for Disease Control and Prevention, Division of Environmental Health, Drinking Water Program (207-287-2070) for assistance with lead-contaminated water including a listing of water quality professionals familiar with options for mitigating lead-contaminated water.

F. Conflict of interest.

- (1) **Financial interest.** No lead inspector or risk assessor shall have any financial interest in residential dwelling units or child-occupied facilities where a lead-safe certificate is issued by that lead inspector or risk assessor.
- (2) **Employment.** A lead abatement contractor shall utilize an independent 3rd party to perform a lead inspection, risk assessment, lead determination, clearance sampling or lead-safe evaluation in residential dwelling units or child-occupied facilities at which the lead abatement contractor is an owner and is or has performed abatement activities.
- (3) **Close relationship.** No lead abatement contractor shall employ or hire a lead inspector or risk assessor that is closely related to the contractor to perform clearance sampling in a residential dwelling unit or child-occupied facilities where the contractor performed abatement activities. Close relations are:
 - (a) A lead abatement contractor's sibling(s), spouse, lineal ascendant(s) and descendant(s), aunt(s), uncle(s), half-sibling(s), first cousin(s), cohabiting partner(s), and business entities owned, controlled, or operated by these individuals. An individual related through adoption, marriage, civil partnership (e.g., step-relations or in-law relations), or relations of cohabitating partners equivalent to those listed above shall be treated as having a close relationship; and
 - (b) The lead abatement contractor's parent company, or subsidiary company.

G. Denial of application, suspension, and revocation of license.

- (1) The Department may deny an initial or renewal application, or seek suspension or revocation of any license, certification or accreditation issued under this Chapter on the basis of any of the grounds listed in 38 M.R.S. §342(11-B) or for violation of any of the following standards of conduct:

- (a) Failing to comply with the notification requirements of this Chapter or to maintain required records and logs;
- (b) Lending the use of the name of a licensed lead training provider, licensed lead abatement contractor, certified project supervisor, certified lead abatement worker, certified lead design consultant, certified lead inspector, or certified risk assessor to an unlicensed person;
- (c) Reporting fictitious results or reports not based on test performance or work done, or falsifying reports or records;
- (d) False representation of credentials as a licensed lead training provider, licensed lead abatement contractor, certified project supervisor, certified lead abatement worker, certified lead design consultant, certified lead inspector, or certified risk assessor, or misrepresenting the scope of services that can be provided under any license or certification category.
- (e) Engaging in activities that present a conflict of interest as described in Section 2(F);
- (f) Failure to submit documentation demonstrating ability to comply fully with applicable requirements, procedures, and standards set forth in this Chapter;
- (g) Employees' or agents' history of incompetence or negligence as determined by the Department based on previous compliance inspection(s), review of operating record(s), or other documents;
- (h) Submission of false information on an application; or
- (i) Past violation(s) of State or federal laws or regulations pertaining to lead-based paint activities.

Note: Violations of this Chapter may be subject to criminal prosecution pursuant to 38 M.R.S. §§348(1), 349(1), and 349(3).

- (2) **Procedure for suspension or revocation of license.** Procedures for revocation or suspension of a license or certificate shall conform to the requirements of 38 M.R.S. §342(11-B).

H. Licensing and certification fees. Until superseded by statutory changes, an application for a license or certification (including renewal) must be accompanied by a non-refundable fee paid in full by a cashier's, certified, company check (made payable to the Treasurer, State of Maine) or other payment options deemed appropriate by the Department, as follows:

Lead Abatement Worker	\$75
Lead Abatement Project Supervisor	\$125

Lead Inspector	\$200
Lead Design Consultant	\$250
Lead Risk Assessor	\$250
Lead Abatement Contractor	\$275
Lead Consulting Firm	\$275
Lead Training Provider	\$500

Multiple certifications. Any individual applying for certification for more than one discipline shall pay the fee for the highest discipline plus \$50 for each additional discipline.

Reissuance of a certificate or Photo ID card \$50

Note: If there are not sufficient funds to cover the check or credit card transaction, an insufficient funds fee of \$20.00 will be assessed by the Department in accordance with State of Maine laws and policies. Until that insufficiency is resolved (by money order or bank check only), the Department will not accept any additional checks or credit card transactions from the party including checks associated with licensing and/or certifications.

- I. Reciprocity.** The Department may develop reciprocity agreements with other states and with federally recognized tribes when the states and tribes have established licensing, certification and accreditation requirements that are at least as stringent as those set forth in this Chapter.

3. Notification Requirements

- A. Initial notification procedure.** Any person, owner or operator intending to engage in a lead abatement project at a residential dwelling unit or child-occupied facility must submit a written notification to the Department at least five (5) working days prior to commencement of the abatement project, including set-up or on-site preparation activities. Delivery of the notice by U.S. Postal Service, commercial delivery service, hand delivery, e-mail or other methods as approved by the Department is acceptable.

Note: Section 6(B) requires the lead abatement contractor to ensure that the notification is received by the Department; it is the responsibility of the contractor to retain record of delivery to demonstrate it has met this requirement.

- B. Notification information.** The following information must be included in full on a Department approved notification form:

- (1) A clear statement of whether the notification is the original or a revised notification;
- (2) The name, address, and telephone number of the following:

- (a) The owner; and
 - (b) The operator of the lead abatement activity.
- (3) A listing of abatement methods for interior or exterior project(s) that will be utilized (e.g., complete paint removal, component removal, encapsulation, window removal, soil abatement);
 - (4) The facility address, including building name (if applicable), number, and floor, unit, or room number of the work area in which the lead abatement activity will take place;

Note: A separate project code in the written notification is required for each unit within the multi-family dwelling unit.

- (5) Scheduled starting and ending dates of the lead abatement activities (encompassing set-up, abatement, and clearance dates);
- (6) Scheduled lead abatement project work hours for each lead abatement project by dwelling unit, if applicable, including planned shift work. A weekly updated schedule for each lead abatement project by dwelling unit, if applicable, shall be emailed to the Department each Monday morning until the lead abatement project is complete;
- (7) The name and Maine certification number of the design consultant or project supervisor who prepared the occupant protection plan, and if applicable, the name and Maine certification number of the design consultant who prepared the project design; and
- (8) The name and location of the licensed waste disposal site(s) at which the lead-based paint wastes will be disposed.

C. Notification revision procedure. Any person, owner or operator intending to engage in a lead abatement project at a residential dwelling unit or child-occupied facility must submit notification of changes from the initial notification as follows:

- (1) If the activity will begin on a date earlier than the original start date, the person, or operator must submit to the Department a new or revised notification that meets the requirements of this Section, including ensuring notification is received by the Department at least five working days prior to commencement of abatement activities. Approved methods of communication such as e-mail delivery of a written notification revision is also acceptable.
- (2) If the activity will begin later, or end earlier or later, than the dates set forth in the original notification, the person, or operator must notify the Department by U.S. Postal Service, commercial delivery service, hand delivery, e-mail or other method approved by the Department of the new start or end date as soon as possible before, but not later than 24 hours prior to, the original start or end date, as applicable.

- (3) If the activity will not occur on any of the dates set forth in the original or most recent notification revision, the operator must notify the Department no later than 24 hours prior to the start date in the original or most recent notification revision.
- (4) Notification Timeframe Waiver. Notification for lead abatement for which the Department approves a notification period less than that required in Section 2(A) of this Chapter must be received by the Department as soon as possible, but no later than 24 hours prior to commencement of the lead abatement project, including set-up or on-site preparation activities. Delivery of the notification by U.S. Postal Service, commercial delivery service, hand delivery, e-mail, or other method as approved by the Department is acceptable. To be eligible for this provision, the person, or operator must demonstrate that reasonable planning and foresight could not have predicted the circumstances that rendered the notification procedure outlined in these rules insufficient to protect public health and the environment had it been properly executed. Examples include, but are not limited to, a public health threat exists or will develop if the project is not initiated within a very limited timeframe.

A work practice waiver not previously requested while conducting a lead abatement activity necessitated by an unforeseeable circumstance.

4. License Requirements for Contractors and Consulting Firms

- A. Application requirements for contractors.** In order to obtain a license as a lead abatement contractor or to renew an existing lead abatement contractor license, a business entity must submit a complete application to the Department on a form approved by the Department. The application must demonstrate that the applicant meets all applicable standards and requirements, including Section 2(F), and must include the following:
- (1) Evidence that the business entity:
 - (a) Employs a Maine certified project supervisor; and
 - (b) Has an up-to-date written worker protection program that conforms with the following OSHA standards: the standard for Respiratory Protection, 29 C.F.R. §1910.134, as amended up to July 1, 2020 and the standard for Lead in Construction, 29 C.F.R. §1926.62, as amended up to July 1, 2020.
 - (2) A list of all lead associated citations and notices of violation received in the United States during the past year. This list must include the name of the issuing agency or department and the final disposition of such citation or notice. If any of the applicant's principals or officers, or persons with a controlling interest in the business have received a lead associated citation or notice while owning or operating another company in the previous year, the application must include a list of those violations, including the name of the issuing agency or department and the final disposition of such citation or notice;

- (3) A list of states in which the applicant holds a license, certification, accreditation, or any other approval for lead abatement activity and description of the licensed activity;
- (4) A list of the names of the applicant's principals or officers, and any persons with a controlling interest in the business;
- (5) A list of all other entities that perform lead abatement activities of which the applicant or its principals or officers, or persons with a controlling interest, is a principal or officer, or person with a controlling interest;
- (6) A list of all names and acronyms by which the applicant's firm is known or under which it does or has done business;
- (7) A statement certifying that all the information provided in support of the application is true and complete; and
- (8) The appropriate license fee as listed in Section 2(H).

B. Personnel requirements.

- (1) A lead abatement project supervisor must always be present at the work area during abatement activities.
- (2) Employees of lead abatement contractors who engage in lead abatement activities must be certified pursuant to Section 5.

C. Work practice and record-keeping requirements. A lead abatement contractor must comply with all the work practice and record-keeping requirements in Section 6.

D. Application requirements for consulting firms. In order to obtain a license as a lead consulting firm or to renew an existing lead consulting firm license, a business entity must submit a complete application to the Department on a form approved by the Department. The application must demonstrate that the applicant meets all applicable standards and requirements, including Section 2(F), and must include the following:

- (1) The lead consulting firm must have a lead inspector, lead risk assessor or lead design consultant on staff at all times, as applicable for the type(s) of services for which they are licensed;
- (2) A list of all lead associated citations and notices of violation received in the United States during the past year. This list must include the name of the issuing agency or department and the final disposition of such citation or notice. If any of the applicant's principals or officers, or persons with a controlling interest in the business has received a lead associated citation or notice while owning or operating another company in the previous year, the application must include a list of those violations, including the name of the issuing agency or department and the final disposition of such citation or notice;

- (3) A list of states in which the applicant holds a license, certification, accreditation, or any other approval for lead consultant activity and description of the licensed activity;
- (4) A list of the names of the applicant's principals or officers, and any persons with a controlling interest in the business;
- (5) A list of all other entities that perform lead consulting activities of which the applicant or its principals or officers, or persons with a controlling interest, is a principal or officer, or person with a controlling interest;
- (6) A list of all names and acronyms by which the applicant's firm is known or under which it does or has done business;
- (7) A statement certifying that all the information provided in support of the application is true and complete;
- (8) A statement attesting that the firm shall employ only duly lead-certified employees or lead-certified subcontractor personnel to conduct lead-based paint activities, and that the firm and its employees and lead-certified subcontractors will follow the work practice standards in Sections 6 and 7, as applicable of this Chapter; and
- (9) The appropriate license fee as listed in Section 2(H).

5. Certification Requirements for Lead Professionals

A. Initial application requirements.

To obtain initial certification or to renew an existing certification to perform lead-based paint activities, an individual must submit a complete application to the Department on a form approved by the Department. The application must demonstrate that the applicant meets all applicable standards and requirements, including the Section 2(F) and must include the following:

- (1) Name, address, telephone number, and date of birth of the applicant;
- (2) Documentation demonstrating that the applicant meets the minimum education and experience standards for the specific discipline as listed in Section 5(D) below;
- (3) A copy of the training certificate demonstrating successful completion of the discipline specific training course(s) required as delineated in Section 5(E) below, and accompanying documentation of final test score(s) for the courses;
- (4) Documentation that the applicant has achieved a score of 70% or higher on the Maine Lead Services Examination, and has demonstrated proficiency in the hands-on skills assessment, as required by Section 5(F) below;

- (5) A statement certifying that the applicant's certification or other authorization to perform lead-based paint activities has not been suspended or revoked by any other jurisdiction and that no enforcement actions by any local, county, state or federal agency are pending against the applicant;
- (6) A statement attesting that the applicant will follow work practice standards and other applicable requirements of this Chapter;
- (7) The appropriate certification application fees listed in Section 2(H); and
- (8) One current color passport or passport-size photograph.

B. Standards of conduct. Certified lead professionals must comply with all state and federal laws and regulations pertaining to lead abatement activities, including the conflict of interest provisions of Section 2(F) of this Chapter.

- (1) Failure to comply with this rule may result in suspension or revocation of a certificate, and/or other enforcement action deemed appropriate by the Department.
- (2) Failure to comply with this rule may result in the denial of an application for renewal, and/or other enforcement action deemed appropriate by the Department.
- (3) A certified individual must perform their activities in a manner that is:
 - (a) In compliance with state-of-the art professional services generally recognized as acceptable by the lead consulting and abatement industries, lead professional associations, and government agencies; and
 - (b) Consistent with current rules and practices taught by Department-approved training providers.

C. Renewal application requirements.

To obtain renewal of a current certification to perform lead-based paint activities, an individual must submit a complete application to the Department on a form provided by the Department. The application must include the following:

- (1) Name, address, telephone number, and date of birth, and most recent certification number of the applicant;
- (2) Documentation demonstrating successful completion of a discipline-appropriate refresher course or attendance at discipline-relevant programs as required in Section 5(G);
- (3) A statement certifying that the applicant's certification or other authorization to perform lead-based paint activities has not been suspended or revoked by the State of Maine or any other jurisdiction and that no enforcement actions by any local, county, state or federal agency are pending against the applicant;

- (4) A statement attesting that the applicant will follow work practice standards and other applicable requirements of this Chapter;
- (5) The appropriate certification application fee as listed in Section 2(H); and
- (6) One current color passport or passport-sized photograph.

D. Education and experience standards. The minimum education and experience requirements for initial certification in each discipline are as follows. Relevancy of education or experience in a related field shall be determined by the Department.

- (1) Lead abatement worker: None.
- (2) Project supervisor: one year as a lead abatement worker or two years' experience in building trades, asbestos abatement, environmental technician or related field.
- (3) Lead inspector: High school diploma or G.E.D.
- (4) Risk assessor: Any combination of education and experience as follows is acceptable.
 - (a) Certified industrial hygienist, professional engineer, registered architect, or related scientific field, plus one-year experience as a certified lead inspector including a minimum of 20 lead inspections;
 - (b) Bachelor's degree and at least one year of experience in a related field, such as asbestos or radon, code enforcement, building construction, or residential energy auditing, plus one-year experience as a certified lead inspector including a minimum of 20 lead inspections; or
 - (c) High school diploma or G.E.D. with a combination of education and experience equivalent to the educational requirements in (b) above (six months experience is equal to one year of college for purposes of this requirement); plus one year experience as a certified lead inspector, including a minimum of 20 lead inspections, or 40 lead determinations that included the use of an XRF to take at least 30 readings as part of each determination, characterization of lead-painted surfaces, and the production of a report meeting the standards for lead inspection reports.
- (5) In lieu of the experience requirements listed above, an applicant may pass a Department-designed field assessment to demonstrate their ability to appropriately implement risk assessment procedures. This field assessment will consist of an evaluation of sampling protocols and data gathering techniques; assessment of paint condition; appropriate instrument use; identification of lead-based paint hazards and lead hazards and any underlying causes; recommendation of appropriate hazard management strategies; risk communication; and completeness, accuracy, and readability of reports.
- (6) Design consultant: Any combination of education and experience as follows:

- (a) Bachelor's degree in engineering, architecture, or a related profession plus one-year experience in building construction and design or a related field; or
- (b) High school diploma or G.E.D. plus four years of experience in building construction and design or a related field.

E. Training requirements. To meet the training requirement for initial certification, the applicant's training courses must be accredited or otherwise approved under the provisions of Section 8(B) by the Department.

- (1) Lead abatement worker - Successful completion of a lead worker course.
- (2) Project supervisor - Successful completion of a project supervisor course.
- (3) Lead inspector - Successful completion of a project supervisor course and lead inspector course.
- (4) Risk assessor - Successful completion of a lead supervisor, lead inspector and lead assessor course.
- (5) Design consultant - Successful completion of a project supervisor course; and design consultant course.

F. Examination requirements for initial certification. To receive initial certification applicants must attain a score of 70% or higher on the Maine Lead Services Examination, or other third-party exam as approved under the provisions of Section 8(G) by the Department, in the discipline for which they are requesting certification. Except for design consultant candidates, applicants must also demonstrate proficiency in a hands-on skills assessment which is given during the discipline-specific training course.

- (1) Failure to pass the final examination (score of less than 70%) results in the following:
 - (a) After a single examination failure, the applicant takes a different version of the course examination once.
 - (b) After a second examination failure, an applicant must attend 8 hours of remedial training approved by the Department prior to retaking the course examination.
 - (c) After a third examination failure, an applicant must take the initial training course again along with the initial training course examination.
- (2) Failure to demonstrate proficiency during the hands-on assessment requires that the applicant undergo reassessment by the training provider until proficiency can be demonstrated or the training provider determines that proficiency cannot be attained.

- G. Annual refresher requirement.** A certified lead professional shall maintain proficiency by annually attending a discipline-specific Department-accredited 8-hour refresher course. All refresher courses other than for design consultant must have a minimum of 30 minutes of discipline-specific hands-on training and documentation must be provided of this training. Notwithstanding, the foregoing the lead design consultant refresher course is 4 hours and no hands-on training is required.
- H. Certification in more than one discipline.** Certification at a higher level qualifies an individual to function in a lower discipline as follows:
- (1) A project supervisor may function as a lead abatement worker.
 - (2) A design consultant may function as a project supervisor.
 - (3) A risk assessor may function as a lead inspector.

6. Lead Abatement Work Practices

A. General provisions

- (1) **Compliance with lead abatement work practices.** All lead abatement contractors and lead professionals who engage in lead abatement activities shall comply with the work practices in this Section.
- (2) **State and federal regulations.** Lead abatement contractors and lead professionals are subject to all applicable occupational health and safety regulations of the Maine Bureau of Labor Standards, OSHA, the Department, and the U. S. Department of Transportation. The OSHA regulations include but are not limited to 29 C.F.R. §§1926.62, 1910.134, 1910.1020, and 1926.59, as amended up to July 1, 2020 (lead construction, respiratory protection, access to exposure and medical monitoring records, and hazard communication standards).
- (3) **Prohibition.** No on-site work for any lead abatement project shall be conducted unless at least one certified lead abatement project supervisor employed by the lead abatement contractor is physically present at the project site.
- (4) **Personal protective equipment.** All individuals engaged in lead abatement activities or individuals who enter into a work area containment where lead abatement activities are occurring, must wear appropriate respiratory protection in accordance with the requirements of 29 C.F.R. §1910.134, as amended up to July 1, 2020, and personal protective clothing and other protective equipment in accordance with the requirements of 29 C.F.R. §1926.62, as amended up to July 1, 2020 and must use this equipment in the manner for which it was designed. At a minimum all individuals that enter the work area containment when lead abatement methods are being used must be provided with and wear a painter's hat, disposable coveralls or a disposable coverall with attached hood and foot covers or rubber boots and a R-100, P-100 or disposable N-100 respirator. The hat, disposable coveralls and the N-100 respirator shall be disposed of at the end of each work shift. All other respirators shall be cleaned as part of the

decontamination procedure daily in accordance with manufacturer's recommendations.

Note: All building code and fire code requirements for access to a residential dwelling unit or child-occupied facility must be maintained.

B. Pre-abatement requirements.

- (1) **Notifications.** The lead abatement contractor shall notify the Department in conformance with Section 3 at least five (5) working days before beginning any lead abatement activity. The lead abatement contractor shall be responsible for ensuring that notification has been received by the Department.
- (2) **Lead abatement project warning signs.** The lead abatement contractor shall also post lead abatement project warning signs in accordance with the work area containment requirements under Section 6. The sign(s) must be at least 8.5 by 11 inches. The abatement project sign(s) shall use wording from 29 C.F.R. §1926.62(m)(1)(I), as amended up to July 1, 2020. When the use of respiratory protection and disposable suits are required the wording of the project signs shall reflect that requirement in order to notify certified lead professionals and qualified Department staff that protective gear is mandated. The abatement project warning sign(s) must not be removed until the visual assessment evidences that all lead-based paint hazard(s) or lead hazard(s) have been abated successfully and the post-abatement dust wipe clearance samples, as applicable, do not exceed the clearance levels as specified in Section 6(L)(1).
- (3) **Written occupant protection plan.** A certified project supervisor or design consultant shall develop a written occupant protection plan prior to initiating the abatement activity. The occupant protection plan shall be unique to each residential dwelling unit or child-occupied facility. The occupant protection plan shall describe the measures and management procedures that will be taken during the abatement to protect the building occupants from exposure to lead. Whenever the occupant protection plan is prepared by a lead design consultant, the design consultant shall provide the lead abatement contractor with the occupant protection plan and all documents related to other aspects of the project design prior to the start of the abatement project. The occupant protection plan shall be provided to the building occupants 5 days in advance of the project and by posting 8.5 by 11-inch signs at all common entrances into the residential dwelling unit or child-occupied facility. This notice must include the following:
 - (a) Scheduled dates and work hours for lead abatement activities;
 - (b) Identification of work area(s); and
 - (c) Whenever a lead abatement activity is being conducted in a common area of a residential dwelling unit containing two (2) or more dwelling units, the occupant protection plan shall indicate alternative entrances and exits that do not require passing through the common area(s), or the lead abatement contractor shall create an uncontaminated passageway

through the common area(s) for use as an entry into uncontaminated residential dwelling units or child-occupied facilities.

Note: A lead hazard warning sign is posted by the Department of Health and Human Services whenever a lead hazard is identified by a state lead investigator. The lead hazard warning sign does not replace the notification required by this Section. This warning sign is posted at all entrances to the residential dwelling unit, or child-occupied facility before the state investigator leaves the premises. The lead hazard warning sign states that a lead hazard has been identified and that a lead abatement activity will be ordered. This warning sign must not be removed until the post-abatement dust wipe clearance samples do not exceed the clearance levels as specified in Section 6(L) and the visual assessment evidences that all lead hazards have been abated successfully. The lead hazard warning sign may only be removed when the property owner receives notification from the Department of Health and Human Services stating that the sign may be removed.

- (4) **Lead abatement project design or project work plan.** A certified design consultant shall develop a project design, or a certified project supervisor shall develop a project workplan prior to initiating abatement activities. The lead abatement project design or work plan shall include a room and/or work area narrative and/or drawing(s) showing, at a minimum:
- (a) The components to be abated;
 - (b) The abatement method for each component, minimally in a chart format which corresponds to the drawing;
 - (c) Delineation of the work area where critical barriers are to be located including barrier tape for exteriors and project warning signs;
 - (d) The location of the decontamination unit; and
 - (e) A description of the work area preparation.

Note: Building codes generally require that there be two egresses available to occupants.

C. Abatement methods.

- (1) **General.** Abatement shall permanently remove, enclose, or encapsulate any lead-based paint hazards or lead hazards in accordance with the requirements of this Chapter. Acceptable methods of abatement are listed below.
- (a) **Factory prime coating.** Abatement of intact, factory applied prime coatings of lead-based paint on metal surfaces and of intact, factory applied vinyl coatings is not required. Finish coatings on such surfaces shall be abated if required to complete abatement of lead hazards.

(2) **Paint removal.**

- (a) **Prohibited methods of paint removal.** The following paint removal methods shall not be used to remove lead-based paint:
- (i) Open flame burning or torching;
 - (ii) Machine sanding or grinding without a HEPA exhaust control;
 - (iii) Uncontained hydro-blasting or high-pressure wash;
 - (iv) Abrasive blasting or sandblasting without HEPA exhaust control;
 - (v) Heat guns operating above 1,100 degrees Fahrenheit;
 - (vi) Chemical paint strippers containing methylene chloride except as noted in Section 6(C)(2)(b)(ii) below; and
 - (vii) Dry scraping or dry sanding, except in conjunction with heat guns or around electrical outlets.
- (b) **Allowable removal methods.** The following methods may be used for removing lead-based paint from a substrate.
- (i) **Manual or mechanical paint removal methods.**
 - a. Wet hand scraping, followed by light "feather" sanding; or
 - b. Dry hand scraping in conjunction with a heat gun which produces a temperature not exceeding 1,100 degrees Fahrenheit and is used in accordance with manufacturer's instructions and recommendations; or
 - c. Machine sanding equipped with HEPA filter vacuum.
 - d. In exterior locations only, abrasive blasting with HEPA exhaust control. The intent to use this method of paint removal requires the submission of a non-standard variance in accordance with Section 6(O).
 - (ii) **Chemical methods.** Non-flammable chemical strippers which do not contain methylene chloride may be used in interior work areas. Chemical strippers shall be used in accordance with the manufacturer's instructions and safety data sheets. Strippers containing methylene chloride may be used on exterior painted surfaces and for localized "touch-up" on interior work areas.

Architectural components may be sent off-site for removal in dip-tanks.

- (iii) **Hydro-blasting with containment system.** In exterior locations only, hydro-blasting with containment system may be used. The intent to use this method of paint removal requires the submission of a non-standard variance request in accordance with Section 6(O).

Note: On masonry components, sealing may be required after chemical stripping due to surface porosity.

(3) **Encapsulation.**

- (a) Subject to Subsection 6(C)(3)(b) below, encapsulation treatments used in accordance with the following requirements constitute an acceptable method of abatement:
- (i) The encapsulating product or system, meeting current ASTM Standards E 1795-17, 1796-03 (2016) and 1797-12 (2017) e1, shall be guaranteed by the manufacturer to perform for a minimum of 20 years as a durable barrier between the lead-based paint and the environment in the type of application planned.
 - (ii) The encapsulating products or systems shall be used in a manner consistent with the manufacturer's instructions and recommendations.
- (b) Encapsulating coatings shall not be used on friction, impact surfaces.

(4) **Enclosure.** Enclosure systems that will prevent the escape of lead particles for at least 20 years may be used as abatement when they meet the following standards:

- (a) Enclosure systems shall be of rigid durable construction materials, and mechanically fastened to the substrate.
- (b) All seams must be caulked to prevent the migration of lead dust from the enclosure system, except that caulking seams is not required for vinyl or aluminum siding enclosure applications where extruded polystyrene foam insulation, with a minimum thickness of ¼-inch is installed over lead paint siding using cap nails and seams taped with contractor tape just prior to vinyl or aluminum siding application.
 - (i) When a lead abatement contractor installs the rigid foam insulation and meets clearance standards, person(s) not subject to the requirements of this Chapter may install the vinyl or aluminum siding.

- (ii) The application of a house wraps breathable vapor barrier such as Typar® or similar product may not be substituted for the rigid foam. In these cases, installation of vinyl or aluminum siding must be part of the abatement activity.
- (5) **Component removal.** Component removal consisting of removal of lead-contaminated components may be used as a lead abatement method by certified abatement workers or supervisors provided:
 - (a) The component shall be misted with water prior to impact;
 - (b) Prior to removal of the component, paint (if any) shall be scored with a utility blade between the component and material staying to prevent chipping of additional painted surfaces during removal;
 - (a) As the component is being removed the back side of the component shall be misted with water to prevent the spreading of lead contaminated dust;
 - (b) The component will be containerized in either a 6-mil poly bag, 6-mil poly sheeting with all seams taped, or in other leak proof containers prior to leaving the abatement work area and shipped off-site to a facility licensed to handle the waste; and
 - (c) If replacement of a component occurs, the replacement components shall have no lead-based paint on them.
- (6) **Carpet abatement.** Lead-contaminated rugs, carpets or other fabric surfaces may be abated by steam cleaning or by removal and disposal. A person removing lead-contaminated rugs, carpet or fabric shall, at a minimum, employ the following work practices:
 - (a) Carpet shall be HEPA vacuumed prior to removal;
 - (b) Carpet will then be completely misted with water;
 - (c) As the carpet is removed either in sections or whole the backing shall be misted with water; and
 - (d) Carpet shall be containerized in 6-mil poly bag or 6-mil poly sheeting with all seams taped or in other leak proof containers prior to leaving the abatement work area and shipped off-site to a facility licensed to handle the waste.
- (7) **Soil abatement.** The following methods may be used to abate lead contaminated soil. All disturbances of lead-contaminated soil shall be performed while the soil is wet or damp and shall utilize techniques that minimize creation of dust.

- (a) **Capping contaminated soil.** Soil may be capped in place provided the soil posing a lead hazard is completely covered with concrete or asphalt to a depth of at least two inches.
 - (b) **Excavation.** Complete excavation to a depth of at least 4 inches, removal and replacement of the lead-contaminated soil with soil that is not lead-contaminated soil posing a lead hazard and disposal at a facility licensed to handle the waste as detailed in Subsection 6(K).
- D. Work site preparation.** An abatement worker or project supervisor shall prepare the work site prior to abatement, in accordance with the following standards.
- (1) **General requirements.** The work area shall be prepared to prevent the release of lead-contaminated debris. The work area preparation shall ensure that lead-contaminated dust, lead-based paint chips and other debris from abatement activities are contained within the work area until they can be safely removed. Only certified lead professionals and qualified Department staff may enter a lead abatement work area until it is established that the work area has met the final clearance requirements set forth in Sections 6(E)(10), 6(F)(9), 6(G)(11), 6(H)(11), 6(I)(13) or 6(J)(8,9) whichever applies. Work area preparation shall be determined by the project supervisor or design consultant.
 - (2) **Decontamination units.** Decontamination units are required for all abatement work.
 - (a) **Design.** The decontamination unit must be a separate, polyethylene-enclosed structure formed by partition or framing or by covering walls, ceiling, and floor with a minimum of 1 layer of 6-mil poly sheeting. The decontamination unit must be adjacent and connected to the work area, and consist of, at a minimum, a hand/face wash station or shower facility, and a clean room. It shall include two overlapping layers of 6-mil poly flaps between the work area and the hand/face wash station or shower facility, between the hand/face wash station or shower facility and the clean room, and at the entry into the clean room. The outer most flaps for the entrance and exit shall be sufficiently weighted to keep flaps closed. The hand/face wash station shall be sufficiently equipped to enable workers to remove lead effectively from their hands and face. A shower facility, when used, must be equipped with continuous running, adjustable, hot and cold water, soap, and a mechanism for containing/collecting and discharging shower water. The hand/face wash station or shower facility must be equipped with clean towels in sufficient quantity so that all individuals may dry themselves off after personal decontamination is completed.
 - (b) **Operations.** Workers shall enter and exit the work areas through the decontamination unit and where applicable remote decontamination unit. Respirators, when required, shall only be put on in the clean room and shall only be taken off after the exterior of the mask has been cleaned in the hand/face wash chamber. All tools and equipment that were taken

into the work area shall be decontaminated prior to leaving the area by means of wet wiping and/or HEPA vacuuming. If a remote decontamination unit is utilized the tools and equipment shall be containerized in the work area and brought to the decontamination unit to be cleaned.

- (3) **Warning signs.** Project Warning Signs as specified in 6(B)(2) above, shall be installed on all projects. At a minimum, these signs shall be displayed on the flap between the clean room and the hand/face washroom in the decontamination unit and, where applicable, on the flapped entrances to the work areas. When the need to wear personal protective gear is not required and /or no longer required the warning signs shall reflect that.

E. Interior project work practice requirements. Abatement workers or project supervisors shall implement the following work practices on interior abatement projects (including the abatement of dust lead-based paint hazards) other than window only projects and projects solely utilizing mini enclosures. An enclosed porch with screened/storm windows is considered interior space and shall be set up and cleared accordingly.

- (1) **Signs.** Post warning signs that meet the standards in Section 6(B)(2) at the entry to work area(s) and the entry to the dwelling unit or building exterior near main and secondary entryways.
- (2) **Occupant location.** Exclude persons that are not certified lead professionals or qualified Department staff from the work area(s) until clearance is achieved. If building occupants remain in their dwelling unit (outside of the work area(s) during abatement work they must have safe passage to a bathroom and at least one living area, and an entry/egress pathway. Alternatively, an occupant can be relocated for the duration of the project.
- (3) **Barrier system.** To prevent the spread of lead dust throughout the building during abatement the following procedures must be taken:
- (a) **Floors.** Install two layers of 6-mil poly or its equivalent on the entire floor if the abatement disturbs greater than 10 square feet of painted surface per room (not including windows and mini enclosures) and the dwelling unit will be occupied for a portion of the abatement project.
- (i) Install a single layer of 6-mil poly or its equivalent on the floor extending 5 feet beyond where abatement occurs if the abatement disturbs 10 square feet or less of painted surface per room (not including windows and mini enclosures) and the dwelling unit will be occupied for a portion of the abatement project.
- (ii) If the dwelling unit will remain unoccupied during abatement and the entire unit is being treated, then no poly is required on hard-surface floors. Hard surface floors include wood, tile, and

laminated but any gaps in the flooring must be covered with 2 layers of 6-mil poly or its equivalent.

- (b) **Doors.** Entrances to individual rooms containing work areas must have two layers of 6-mil poly or its equivalent with an airlock flap on access doorways. Doors within the room must be sealed with two layers of 6-mil poly or its equivalent or all seams taped except if the entire unit is being treated, cleaned, and cleared, then doorways need not be sealed. If only a few rooms are being treated, doors to untreated rooms must be sealed with two layers of 6-mil poly or its equivalent or all seams must be taped in order to avoid cleaning untreated rooms.
- (c) **Windows.** All windows not being worked on must be closed or covered with one layer of 6-mil poly or its equivalent.
- (4) **Ventilation system.** Building ventilation systems servicing work area(s) must be turned off prior to abatement work. All vents in rooms must be pre-cleaned and then sealed with one layer of 6-mil poly or its equivalent. Negative pressure zones (with “negative air” machines) are not required, unless large supplies of fresh air must be admitted into the work area to control exposure to other hazardous substances (i.e., solvent vapors).
- (5) **Decontamination unit.** A decontamination unit must be established that is contiguous with the work area or establish blue suit procedures to a remote decontamination unit. The decontamination unit must remain in place until clearance samples are collected.
- (6) **Furniture.** Furniture and other personal items must be pre-cleaned of lead dust and removed from the work area, unless this is done by the building owner or occupant prior to set up for abatement work or pre-cleaned and left in place and sealed within a single layer of 6-mil poly or its equivalent. Cabinets must be sealed shut with tape or sealed with 6-mil poly or its equivalent.

Note: A project-specific contract may also require the pre-cleaning of cabinet interiors.

- (7) **Daily cleanup.** Daily cleanup is required in the work area. Daily cleanup shall occur at the end of each workday after all lead abatement activities have ceased. Daily cleanup includes:
 - (a) Using cleaning practices that minimize generation of dust by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming.
 - (b) Cleaning all horizontal and vertical surfaces in the work area within 5 feet of where abatement activities were performed.
 - (c) Bagging or wrapping debris in a protective covering of 6-mil poly or its equivalent with all seams taped or placed in closed, secure, container.

- (d) Examining protective coverings (i.e., 6-mil poly covering furniture, personal items, and the barrier system) and repairing as necessary.
- (8) **Final cleanup.** Final cleanup activities shall be performed by a licensed lead abatement contractor no sooner than 1 hour after work activities have ceased. The work area and any surrounding areas where lead-contaminated dust or debris may be present, including window wells whether treated or not and decontamination units whether contiguous or remote, shall be cleaned prior to performing a clearance examination. Required practices for final cleanup include:
- (a) Undertaking final cleanup after abatement activities have been completed and before repainting or sealing surfaces occurs.
- (b) Bagging or wrapping all debris in 6-mil poly or its equivalent with all seams taped or placed in closed containers and removed from the work area.
- (c) Use of cleaning practices that minimize generation of dust, including by a sequence of HEPA vacuuming, wet-cleaning, and HEPA vacuuming. Cleaning shall start at the room/work area furthest from the decontamination unit and proceed to and include the decontamination unit. Cleaning shall start at the ceiling (and associated fixtures), and then proceed down the walls to the floor. Cleaning shall include a complete cleaning of all building components and items in the abated area including window wells, protective coverings (i.e., 6-mil poly covering furniture and personal items), to include areas 5 feet from flapped entrances leading towards entrances. Barrier systems must remain in place except floor barrier.
- (9) **Sealing treated surfaces.** If treated surfaces are to be sealed, they shall be finished by painting, varnishing, or an equivalent coating after the final cleanup is complete and before a clearance examination is performed. Wooden floors shall be sealed with clear polyurethane or painted with deck enamel or durable paint. Vinyl tile, linoleum, and other similar floors shall be sealed with an appropriate floor wax (or equivalent product). Concrete floors shall be sealed with a concrete sealer or other type of concrete deck enamel.

Note: Contract specifications may require a Paint Removal Verification Inspection (commonly referred to as “Paint Scrape Inspection”) by a certified lead inspector or certified risk assessor prior to sealing treated surfaces.

- (10) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance examinations shall be performed no sooner than 1 hour after final clean-up is completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations consist of visual assessment and clearance sampling.

- (a) **Visual assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or risk assessment report. Surfaces within the work area must be dry before the final visual assessment. The risk assessor or inspector shall inspect the work area and decontamination unit for visual evidence of dust and debris to ascertain that they are free of waste, debris, paint chips, and settled dust before conducting clearance sampling. If visible dust or debris is found during the visual assessment, the work area must be re-cleaned as described above and re-evaluated before starting clearance sampling. Where window treatment is not part of the lead abatement project, windows, including window wells in treated rooms, are subject to the final cleaning requirements and must be sampled during clearance sampling.

Note: A “baby wipe” may be used in the visual assessment process to determine if a surface is free of debris.

- (b) **Clearance sampling.** Following a passing visual inspection, the risk assessor or lead inspector shall complete the following sampling of the lead abatement project:
- (i) Collect and analyze a minimum of two dust samples from every treated room when 6-mil poly barrier or equivalent systems were used within the building. Sampling and analysis include one interior windowsill or window well, alternating between areas, and one floor per room plus one floor sample per project within 5 feet of the entrance of containment.
 - (ii) Collect and analyze a minimum of two dust samples from every treated and untreated room when no 6-mil poly barrier systems were used within the building as follows:
 - a. One interior windowsill or window well, alternating between areas; and
 - b. One floor per room.

Note: Owners and operators may address the cost of any repeat clearance examination work as part of contractual agreements.

F. Interior window removal only. Abatement workers and project supervisors may use the following procedures when only abating window units from the inside of the building:

- (1) **Signs.** Post warning signs at the entry to work area containment and on exterior of building. Signs must meet the standards in Section 6(B)(2) and remain in place until clearance is achieved.

- (2) **Occupant location.** Persons that are not certified lead professionals or qualified Department staff must be excluded from the work area(s) until clearance is achieved. If building occupants remain in their dwelling unit (outside of the work area(s) during abatement work they must have safe passage to the bathroom and at least one living area, and an entry/egress pathway. Alternatively, occupants can be relocated for the duration of the project.
- (3) **Install barrier system.** A barrier system must consist of the following:
- (a) 2 layers of 6-mil poly or a closed storm window shall be placed over the exterior side of the window.
 - (b) 2 layers of 6-mil poly shall be placed on the floor extending at least 5 feet from the perimeter for each window being treated.
 - (c) All windows within 10 feet of the work area must be closed.
 - (d) When a non-treated window is closed and used as part of the work area barrier system, that window may be opened only for final cleaning and clearance sampling.
 - (e) An airlock flap shall be placed over the doorway into the room. This defines the entire room as the work area. This means that the entire work area is subject to the cleaning (daily and final) requirements described below. At the conclusion of the abatement project, the lead inspector/risk assessor shall visually inspect the entire work area and shall select randomly the location of the dust floor sample from anywhere in the work area.
- (4) **Decontamination unit.** Establish a decontamination unit contiguous with the work area or establish blue suit procedures to a remote decontamination unit. The decontamination unit must remain in place until clearance samples are collected.
- (5) **Furniture.** Furniture and other personal items must be pre-cleaned of lead dust and removed from the work area, unless this is done by the building owner or occupant prior to set up for abatement work or pre-cleaned and left in place and sealed within a single layer of 6-mil poly. Cabinets must be shut with tape or sealed with 6-mil poly.
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- Note:* A project-specific contract may also require the pre-cleaning of cabinet interiors.
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- (6) **Daily cleanup.** Daily cleanup is required in the work area. Daily cleanup shall occur at the end of each workday after all lead abatement activities have ceased. Daily cleanup includes:
- (a) Using cleaning practices that minimize generation of dust by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming;

- (b) Cleaning all horizontal and vertical surfaces in the work area within 5 feet of where abatement activities were performed;
 - (c) Bagging or wrapping debris in a protective covering of 6-mil poly with all seams taped or placed in closed, secure, container; and
 - (d) Examining protective coverings (i.e., 6-mil poly covering furniture, personal items, and the barrier system) and repairing as necessary.
- (7) **Final cleanup.** Final cleanup activities shall be performed by a licensed lead abatement contractor no sooner than 1 hour after work activities have ceased. The work area and any surrounding areas where lead-contaminated dust or debris may be present, including window wells whether treated or not and decontamination units whether contiguous or remote, shall be cleaned prior to performing a clearance examination. Required practices for final cleanup include:
- (a) Undertaking final cleanup after abatement activities have been completed and before repainting or sealing surfaces occurs.
 - (b) Bagging or wrapping all debris in 6-mil poly with all seams taped or placed in closed containers and removed from the work area;
 - (c) Using cleaning practices that minimize generation of dust, including by a sequence of HEPA vacuuming, wet-cleaning, and HEPA vacuuming; and
 - (d) Cleaning shall start at the room/work area furthest from the decontamination unit and proceed to and include the decontamination unit. Cleaning shall start at the ceiling (and associated fixtures), and then proceed down the walls to the floor. Cleaning shall include a complete cleaning of all building components and items in the abated area including window wells, protective coverings (i.e., 6-mil poly covering furniture and personal items), to include areas 5 feet from flapped entrances leading towards entrances. Barrier systems must remain in place.
- (8) **Sealing treated surfaces.** If treated surfaces are to be sealed, they shall be finished by painting, varnishing, or an equivalent coating after the final cleanup is complete and before a clearance examination is performed. Wooden floors shall be sealed with clear polyurethane or painted with deck enamel or durable paint. Vinyl tile, linoleum, and other similar floors shall be sealed with an appropriate floor wax (or equivalent product). Concrete floors shall be sealed with a concrete sealer or other type of concrete deck enamel.
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- Note:** Contract specifications may require a Paint Removal Verification Inspection (commonly referred to a “Scrape Paint Inspection”) by a certified lead inspector or certified risk assessor prior to sealing treated surfaces.
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- (9) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance

examinations shall be performed no sooner than 1 hour after final clean-up is completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations consist of visual assessment and clearance sampling.

- (a) **Visual assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or risk assessment report. Surfaces within the work area must be dry before the visual assessment. The risk assessor or inspector shall inspect the work area and decontamination unit for visual evidence of dust and debris to ascertain that they are free of waste, debris, paint chips, and settled dust before conducting clearance sampling. If visible dust or debris is found during the visual assessment, the work area must be re-cleaned as described above and re-evaluated before starting clearance sampling.

Note: A “baby wipe” may be used in the visual assessment process to determine if a surface is free of debris.

- (b) **Clearance sampling.** Following a passing visual inspection, the risk assessor or lead inspector shall complete the following sampling of the lead abatement project:
- (i) Collect and analyze a minimum of two dust samples from every treated room when 6-mil poly barrier systems or equivalent were used within the building. Sampling and analysis include one interior windowsill or window well, alternating between areas; and one floor per room plus one floor sample per project within 5 feet of the entrance of containment, to include areas 5 feet from flapped entrances.
- (ii) Collect and analyze a minimum of two dust samples from every treated and untreated room when no 6-mil poly barrier systems were used within the building as follows:
- a. One interior windowsill or window well, alternating between areas; and
 - b. One floor per room.

Note: Owners and operators may address the cost of any repeat clearance examination work as part of contractual agreements.

- G. Exterior window removal only.** Abatement workers and project supervisors shall use the following procedures when removing only window units from the outside of the building:

- (1) **Signs.** Post warning signs on the building and at a 20-foot perimeter around the building (or less if distance to next building or sidewalk is less than 20 feet). Signs must meet the standards in Section 6(B)(2) and remain in place until clearance is achieved.
 - (2) **Occupant location.** Occupants can remain inside the unit, but outside the security barrier tape until clearances are achieved. Alternatively, the occupants can leave until all work has been completed. Occupants must have access to a secure entry/egress pathway to their unit.
 - (3) **Pre-cleaning.** Remove all movable objects (this may be done by the property owner prior to abatement notification start date), that are within the proposed work area to a 20-foot distance from work area. Items that cannot be readily moved to a 20-foot distance shall be sealed with 6-mil poly. An abatement contractor shall remove all pre-existing visible lead-based paint chips and debris that are on the ground within the proposed work area before establishing the barrier system.
 - (4) **Barrier system.** To prevent the spread of lead-based paint hazards during abatement beyond the work areas, abatement workers shall:
 - (a) Place 2 layers of 6-mil poly over the interior side of the window. Secure the plastic to the wall with tape or other anchoring system such that there are no gaps between plastic and wall; and
 - (b) Place one layer of 6-mil poly or its equivalent on the ground extending 10 feet beyond the perimeter of each window being treated/replaced, securing the plastic to the side of the building with tape or other anchoring system so that there are no gaps between plastic and the building. Weight all plastic with two-by-fours or similar objects. Do not anchor ladder feet on top of plastic instead puncture the plastic to anchor ladders securely to ground. Protect plastic with boards to prevent its puncture from falling debris, nails, and other items as necessary. Raise the edges of plastic to create a basin to prevent contaminated run-off in the event of unexpected precipitation. This defines the work area. Keep all ventilation systems and windows within 20 feet of working surfaces closed.
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- Note:** In cases where neighboring buildings are within 20 feet of the treated surfaces the abatement contractor should notify the occupants to coordinate, if possible, to the shutting of windows and ventilation systems.
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- (5) **Decontamination unit.** Establish a decontamination unit contiguous with the work area or establish blue suit procedures to a remote decontamination unit. Establish a decontamination unit each day before initiating abatement activities. The decontamination unit may be removed at the end of each workday.

- (6) **Security.** Temporary fencing or barrier tape must be installed at a 20-foot perimeter around the work area (or less if the distance to the next building or sidewalk is less than 20 feet). If an entryway is within 10 feet of the working area, the use of an alternative entryway must be required. If practical, install a vertical containment to contain lead-based paint hazards. The barrier tape or fencing shall remain in place until clearance is achieved.
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- Note:** In cases where neighboring buildings are within 20 feet of the treated surfaces the abatement contractor should notify the occupants to coordinate, if possible, the shutting of ventilation systems and windows.
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- (7) **Weather.** Do not conduct work if wind speeds are greater than 20 miles per hour at the work site. Work must stop and cleanup must occur before rain begins.
- (8) **Interior cleanup.** No interior cleaning is needed if all work is done from the outside, and the two overlapping layers of 6-mil poly on the interior wall is not breached. If it is breached, clean all surfaces within a 5-foot radius from the affected area, isolate the affected area and conduct dust sampling.
- (9) **Daily cleanup.** Abatement worker/supervisor shall cleanup the work area at the end of each workday to prevent the spread of lead-based paint hazards including:
- (a) Using cleaning practices that minimize generation of dust by employing a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming;
 - (b) Cleaning all horizontal and vertical surfaces in the work area within 10 feet of the treated surfaces;
 - (c) Bagging or wrapping debris in protective covering with all seams taped or placed in a closed and secure container;
 - (d) Examining the barrier system and repairing it as necessary; and
 - (e) After cleaning the 6-mil poly barrier, roll the barrier inward upon itself for reuse the following day. Alternatively, dispose of the barrier and establish a new barrier before conducting any additional activities the following day.
- (10) **Final cleanup.** Upon completion of the abatement, abatement workers/supervisors shall remove lead debris generated by the project including:
- (a) Cleaning the work area of all debris containing lead-based paint and dust;
 - (b) Bagging or wrapping debris in 6-mil poly with all seams taped or placed in a closed, secure container and removed from the work area;
 - (c) Using cleaning practices that minimize generation of dust by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming;

- (d) Cleaning shall start at the work area furthest from the decontamination unit. Cleaning shall include a sequence of HEPA vacuuming, wet-cleaning, and HEPA vacuuming of the exterior wall and other building components (if applicable) and the barrier system. Cleaning shall start at the highest point and proceed down the wall; and
- (e) Protective coverings (i.e., 6-mil poly covering personal property i.e. lawn furniture, tools, toys, and the barrier system) must then be removed in a manner that prevents the dispersion of dust and other debris.

Note: Contract specifications may require a Paint Removal Verification Inspection (commonly referred to as “Paint Scrape Inspection”) by a certified lead inspector or certified risk assessor prior to sealing treated surfaces.

- (11) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance examinations shall be performed no sooner than 1 hour after final clean-up is completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations shall consist of a visual assessment.
 - (a) **Visual assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or risk assessment report. Surfaces within the work area must be dry before the final visual assessment. The risk assessor or lead inspector shall inspect the work area and decontamination unit for visual evidence of dust and debris to ascertain that they are free of waste, debris, paint chips, and settled dust. If visible dust or debris is found during the visual assessment, the work area must be re-cleaned as described.
 - (b) Porches require dust sampling for clearance when they are in part or encompass the work area, i.e., exterior window work where a porch is present.

Note: A “baby wipe” may be used in the visual assessment process to determine if a surface is free of debris.

H. Removing building components using a mini enclosure. Abatement workers/supervisors shall follow the following standards when using mini enclosures.

- (1) **Signs.** Post warning signs that meet the standards in Section 6(B)(2) at the entry to work area(s) (including exterior work areas), and the entry to the dwelling unit or building exterior near main and secondary entryways.
- (2) **Occupant location.** Persons that are not certified lead professionals or qualified Department staff must be excluded from the work area(s) until clearance is achieved in their dwelling unit (outside of the work area). During abatement

work they must have safe passage to the bathroom and at least one living area, and an entry/egress pathway. Alternatively, occupants who have been relocated for the duration of the project can return after clearance is achieved.

- (3) **Furniture.** Furniture and other personal items must be pre-cleaned of lead dust and removed from the work area unless this is done by the building owner or occupant prior to set up for abatement work.
- (4) **Pre-cleaning.** The proposed location of the mini enclosure (i.e., the work area) must be pre-cleaned by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming.
- (5) **Window/door containment.** Place 2 layers of 6-mil poly or its equivalent over the exterior side of the window. A closed storm window is equivalent to 2 layers of 6-mil poly. When removing doors, place 2 layers of 6-mil poly over the door opening of the other side.
- (6) **Mini-enclosure system.** Construct a mini-enclosure system as defined by this Chapter and affix it securely to the wall such that there are no gaps between the mini-enclosure and the wall. The mini enclosure defines the work area. This means that only the area within the mini enclosure is subject to the cleaning (daily and final) and the clearance sampling requirements described below, provided containment is not breached. The mini enclosure must remain in place until clearances are achieved.
- (7) **Decontamination unit.** Establish a decontamination unit contiguous with the mini-enclosure or establish blue suit procedures to a remote decontamination unit. The decontamination unit must remain in place until clearance samples are collected.
- (8) **Daily cleanup.** Abatement worker/supervisor shall cleanup the work area at the end of each workday to prevent the spread of lead-based paint hazards including:
 - (a) Using cleaning practices that minimize generation of dust by employing a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming.
 - (b) Cleaning all horizontal and vertical surfaces in the work area.
 - (c) Bagging or wrapping debris in protective covering with all seams taped or placed in a closed container.
 - (d) Examining the barrier system and repairing it as necessary.
- (9) **Final cleanup.** Upon completion of the abatement, abatement workers/supervisors shall remove lead debris generated by the project including:
 - (a) Cleaning all horizontal and vertical surfaces in the mini enclosure using a sequence of HEPA vacuuming, wet cleaning and HEPA vacuuming;

- (b) If the mini enclosure was breached or detached from the wall, clean all surfaces within a 5-foot radius from the affected area, isolate the affected area and conduct clearance sampling;
 - (c) Debris must be wrapped in 6-mil poly with all seams taped and removed from the mini enclosure; and
 - (d) Remove 6-mil poly floor from inside the mini enclosure.
- (10) **Sealing treated surfaces.** If treated surfaces are to be sealed, they shall be finished by painting, varnishing, or an equivalent coating after the final cleanup is complete and before a clearance examination is performed. Wooden floors shall be sealed with clear polyurethane or painted with deck enamel or durable paint. Vinyl tiles, linoleum and other similar floors shall be sealed with an appropriate floor wax (or equivalent product). Concrete floors shall be sealed with a concrete sealer or other type of concrete deck enamel.

Note: Contract specifications may require a Paint Removal Verification Inspection (commonly referred to as “Paint Scrape Inspection”) by a certified lead inspector or certified risk assessor prior to sealing treated surfaces.

- (11) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance examinations shall be performed no sooner than 1 hour after final clean-up is completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations consist of visual assessment and clearance sampling.
- (a) **Visual assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or risk assessment report. Surfaces within the mini enclosure must be dry before the visual assessment. The risk assessor or inspector shall inspect the mini enclosure and decontamination unit for breaches and for visual evidence of dust and debris to ascertain that they are free of waste, debris, paint chips, and settled dust before conducting clearance sampling. If visible dust or debris is found during the visual assessment, the mini enclosure must be re-cleaned as described above and re-evaluated before starting clearance sampling.

Note: A “baby wipe” may be used in the visual assessment process to determine if a surface is free of debris.

- (b) **Clearance sampling.** Following a passing visual inspection, the risk assessor or lead inspector shall complete the following sampling of the lead abatement project:

- (i) Collect and analyze a minimum of two dust samples from every mini booth. Sampling and analysis must include one interior windowsill or window well, alternating between areas; and one floor per room plus one floor sample per project within 5 feet of the entrance of containment.

I. Exterior project work practices. Abatement workers/supervisors shall follow the following standards when undertaking any abatement project that disturbs the exterior painted surface of a building, excluding window projects.

- (1) **Signs.** Post warning signs that meet the standards in Section 6(B)(2) on the building and at a 20-foot perimeter around building (or less if distance to next building or sidewalk is less than 20 feet). Signs must remain in place until clearance is achieved.
- (2) **Occupant location.** Persons that are not certified lead professionals or qualified Department staff must be excluded from the work area(s) until clearance is achieved during abatement work, they must have safe passage to the bathroom and at least one living area, and an entry/egress pathway. Alternatively, occupants can be relocated for the duration of the project.
- (3) **Pre-cleaning.** Remove all movable objects (this may be done by the property owner prior to abatement notification start date), that are within the proposed work area to 20-foot distance from work area. Items that cannot be readily moved to a 20-foot distance shall be sealed with a layer of 6-mil poly with taped seams. The abatement contractor shall remove all pre-existing lead-based paint chips and other debris that is on the ground within the proposed work area before establishing the barrier system.
- (4) **Barrier system.** To prevent the spread of lead-based paint hazards during abatement beyond the work area, abatement workers shall install one layer of 6-mil poly or its equivalent ("plastic") on the ground extending 10 feet beyond the perimeter of each work area, securing the plastic to the side of building with tape or other anchoring system so that there are no gaps between the plastic and the building. Do not anchor ladder feet on top of plastic, rather puncture the plastic to anchor ladders securely to ground. Protect plastic with boards to prevent puncture from falling debris, nails, other debris, if necessary. Raise the edges of the plastic to create a basin to prevent contaminated run-off in the event of unexpected precipitation. Weight all plastic sheets down with two-by-fours or similar objects. This defines the work area. Keep all ventilation systems and windows within 20 feet of working surfaces closed.

Note: In cases where neighboring buildings are within 20 feet of the treated surfaces the abatement contractor should attempt to notify the occupants to coordinate if possible, the shutting of ventilation systems and windows.

- (5) **Decontamination unit.** Establish a decontamination unit contiguous with the work area or make provisions for blue suits to a remote decontamination unit.

Reestablish a decontamination unit each day before initiating abatement activities. The decontamination unit may be removed at the end of each workday.

- (6) **Weather.** Do not conduct work if wind speeds are greater than 20 miles per hour at the work site. Work must stop and cleanup must occur before rain begins unless a full containment is used.
- (7) **Security.** Temporary fencing or barrier tape must be installed at a 20-foot perimeter around working surfaces (or less if the distance to the next building or sidewalk is less than 20 feet). If an entryway is within 10 feet of working surfaces, the use of an alternative entryway must be required. If practical, install vertical containment to contain lead-based paint hazards. The barrier tape or fencing shall remain in place until clearance is achieved.
- (8) **Debris and removed components.** Use a locked dumpster, covered truck, or transfer debris to a locked secure area no later than at the end of each day.
- (9) **Porches.** One secured entryway must always be made available to occupants. Do not treat front and rear porches at the same time if there is not a third doorway. Porches must be cleared prior to becoming available for occupant use.
- (10) **Playground equipment, toys, and sandboxes.** Remove all movable items to a 20-foot distance from working surfaces. Items that cannot be readily moved to a 20-foot distance shall be wrapped in 6-mil poly or its equivalent and sealed with tape.
- (11) **Daily cleanup shall include:**
 - (a) Using cleaning practices that minimize generation of dust by employing a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming;
 - (b) Cleaning all horizontal surfaces in the work area (i.e., the 10-foot 6-mil poly barrier system) in which lead abatement activities are taking place and any vertical surface within 10 feet of treated surfaces;
 - (c) Wrapping debris in protective covering with all seams taped or placed in closed and secure containers;
 - (d) Examining the barrier system and repairing as necessary; and
 - (e) After cleaning the 6-mil poly barrier, roll the barrier inward upon itself for reuse the following day. Alternatively, dispose of the barrier and establish a new barrier before conducting any additional activities the following day.
- (12) **Final cleanup.** Upon completion of the abatement, abatement worker/supervisor shall remove lead debris generated by the project, including:

- (a) Cleaning the work area of all debris containing lead-based paint and dust;
- (b) Bagging or wrapping debris in 6-mil poly with all seams taped or placed in a closed, secure container and removing from the work area;
- (c) The use of cleaning practices that minimize generation of dust by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming;
- (d) Cleaning shall start at the work area furthest from the decontamination unit. Cleaning shall include a sequence of HEPA vacuuming, wet-cleaning, and HEPA vacuuming of the exterior wall and other building components (if applicable), and of the barrier system and decontamination unit. Cleaning shall start at the highest point and proceed down the wall(s) to the decontamination unit; and
- (e) Protective coverings (i.e., 6-mil poly covering personal property and the barrier system) must be removed in a manner that prevents the dispersion of dust and other debris.

Note: Contract specifications may require a Paint Removal Verification Inspection (commonly referred to as “Paint Scrape Inspection”) by a certified lead inspector or certified risk assessor prior to sealing treated surfaces.

- (13) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations shall consist of a visual assessment.
- (a) **Visual assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or risk assessment report. Surfaces within the work area must be dry before the final visual assessment. The risk assessor or lead inspector shall inspect the work area and decontamination unit for visual evidence of dust and debris to ascertain that they are free of waste, debris, paint chips, and settled dust. If visible dust or debris is found during the visual assessment, the work area must be re-cleaned as described.
 - (b) Porches require dust sampling for clearance when they are in part or encompass the work area (i.e., exterior window work where a porch is present).

Note: A “baby wipe” may be used in the visual assessment process to determine if a surface is free of debris.

- J. Soil project work practice.** Abatement workers/supervisors shall adhere to the following standards when undertaking soil abatement projects.
- (1) **Signs.** Post warning signs that meet the standards in Section 6(B)(2) on the building and at a 20-foot perimeter around the building (or less if the distance to next building or sidewalk is less than 20 feet). Signs shall remain in place until clearances are achieved.
 - (2) **Occupant location.** Building occupants remaining inside the unit shall be excluded from the exterior work area(s) until exterior clearances are achieved and must always have contaminant free entry and egress pathways to the building. Alternatively, the occupants may be excluded from the building until all work has been completed.
 - (3) **Pre-cleaning.** Remove all movable objects (this may be done by the building owner), that are within the proposed work area to 20-foot distance from work area. Remove all pre-existing lead-based paint chips/debris (this must be done by the abatement contractor) that is on the ground within the proposed work area.
 - (4) **Decontamination unit.** Establish a decontamination unit contiguous with the work area or establish blue suit procedures to a remote decontamination unit. Reestablish the decontamination unit each day before initiating abatement activities. The decontamination unit may be removed at the end of each workday.
 - (5) **Weather.** Do not conduct work if wind speeds are greater than 20 miles per hour in the work area. Work must stop and cleanup must occur before rain begins.
 - (6) **Security.** Temporary fencing or barrier tape must be installed at a 20-foot perimeter around working surfaces (or less if distance to next building or sidewalk is less than 20 feet). If an entryway is within 10 feet of working surfaces, use of alternative entryway is required. The barrier tape or fencing shall remain in place until clearances are achieved.
 - (7) **Soil removal and containerization.** If the soil removal method is used, all soil shall be containerized at the end of each day in either sealed containers or covered and locked dumpster(s).
 - (8) **Clearance examination.** A clearance examination shall be conducted to assure that all lead abatement activities have been properly completed. Clearance examinations shall be performed no sooner than 1 hour after final clean-up is completed. Clearance examinations shall be performed by a risk assessor or lead inspector. Clearance examinations shall consist of visual assessment and may include soil clearance sampling.
 - (a) **Visual Assessment.** The risk assessor or lead inspector shall document that all lead abatement activities were properly completed by visual examination and by reference to documents such as the project specifications or a risk assessment report. The risk assessor or lead inspector shall inspect the work area and decontamination unit for visual

evidence of dust and debris. These areas shall be free of waste, debris and paint chips and other lead-based paint wastes before conducting clearance sampling. If dust and debris is found during the visual assessment, the work area must be re-cleaned as described above and visually assessed again before starting clearance sampling.

- (9) **Clearance sampling.** Soil samples shall be taken if soil abatement activities involved removing soil in accordance with Section 6(C)(b) has been performed. If the soil abatement project involved capping soil in conformance with Section 6(C)(a) then soil clearance is not required.

K. Waste handling and disposal.

- (1) **General.** The lead abatement contractor shall ensure that all lead-based paint waste is removed from the site not later than one week after completion of clean-up and prior to final clearance. The lead abatement contractor and the contractor removing lead-based paint waste shall comply with all hazardous and solid waste regulations of the Maine Department of Environmental Protection. All generators must retain documentation to substantiate each waste determination, waste transporter used, and final waste disposal location.

Note: The U. S. Department of Transportation may also regulate transportation of lead-based paint wastes.

- (2) **Household lead-based paint wastes.** Lead-based paint wastes, (including those generated by individuals, firms, and contractors) are excluded from Hazardous Waste Regulations when the Lead-based paint wastes are derived from abatement, rehabilitation, renovation and remodeling of homes and other households including single and multiple residences, hotels and motels, bunkhouses, picnic grounds, residential day-cares, and day-use recreation areas. These wastes must be handled in accordance with the State of Maine Solid Waste Management Regulations (06-096 C.M.R. chs. 400 - 424.)
- (3) **Commercial lead-based paint wastes.** Unless representative analysis demonstrates that the concentration of lead falls below the hazard threshold of 5 mg/L TCLP, commercial lead-based paint wastes are subject to the Hazardous Waste Management Rules (06-096 C.M.R. chs. 850 - 858) when the wastes are derived from:
- (a) Fire, demolition, and deconstruction of residential structures; or
 - (b) Any activity at nonresidential structures such as public and commercial buildings, warehouses, bridges, water towers, and transmission towers.

Notes: (1) See Federal Register / Vol. 68, No. 117 / Wednesday, June 18, 2003, "Criteria for Classification of Solid Waste Disposal Facilities and Practices and Criteria for Municipal Solid Waste Landfills: Disposal of Residential Lead-Based Paint Waste" page 36487-36495. Also see the

household hazardous waste exemption in 06-096 C.M.R. ch. 850, § 3(A)(4)(a)(vii).

(2) See 06-096 C.M.R. ch. 850 for applicable TCLP analytical protocols.

Note: For further guidance on appropriate handling of waste from lead-based paint activities, please contact the Lead & Asbestos Hazard Prevention Program at 207-287-7688.

- (4) **Solid waste handling and disposal.** Handling, storage, transportation and disposal of non-hazardous solid wastes, including household lead-based paint waste as described in Section 0 above, must meet the following standards:
- (a) Prior to removing household lead-based paint wastes from the work area, the abatement workers must collect paint chips, dust, soil, rubble, and other household lead-based paint wastes in 6-mil poly trash bags for disposal. Wastes that are too large for trash bags must be wrapped in 6-mil polyethylene plastic or its equivalent and all seams must be taped shut or the lead-based paint wastes must be stored in a lined mobile dumpster, roll-off container, or other container that is covered and contiguous to work area until ready for disposal.
 - (b) Wastes must be stored in a designated and secure area. If the storage area is outside the lead-based paint wastes must be stored in a mobile dumpster, roll-off container, or other container that is covered and secured. Until ready for disposal. Waste should not be dropped in excess of five feet from work area into dumpster.
 - (c) Wastes must be transported in covered vehicles by non-hazardous waste transporters that are licensed in accordance with the Non-Hazardous Waste Transporter License Rule (06-096 C.M.R. ch. 411).
 - (d) All household lead-based paint waste is non-hazardous solid waste and must be disposed of in a solid waste disposal facility that is licensed to handle the waste in accordance with the requirements of the State of Maine Solid Waste Management Rules (06-096 C.M.R. chs. 400 - 424). Prior to shipment, the lead abatement contractor must contact the operator of the solid waste disposal facility to confirm that the household lead-based paint wastes may be disposed of at the facility.
- (5) **Hazardous waste handling, storage, transportation, and disposal.** All hazardous wastes, including commercial lead-based paint wastes as described in Section 3 0 above, must be handled, stored, transported and disposed of in accordance with the State of Maine Hazardous Waste Management Rules (06-096 C.M.R. chs. 850 - 858), including the Licensing of Transporters of Hazardous Waste (06-096 C.M.R. ch. 853).

L. Clearance Standards.

- (1) **Clearance standards.** Clearance standards for residential dwelling units and child-occupied facilities are as follows:

- (a) Hard floors - 10 ug/ft² (micrograms of lead per square foot).
- (b) Carpeted floors - 10 ug/ft²
- (c) Interior windowsills - 100 ug/ft²
- (d) Window trough - 100 ug/ft²
- (e) Porch - 40 ug/ft²

If the test results are equal to or exceed these standards, the lead abatement contractor shall perform the following actions, as appropriate: If a single-surface dust sample for a residential dwelling unit or child-occupied facility fails, all components that the sample represents shall be re-cleaned in accordance with final cleanup requirements of Sections 6(E)(8), 6(F)(7), 6(G)(10), 6(H)(9), or 6(I)(12) as applicable, until they pass a clearance sampling. If single surface samples in only one room or on one type of component fail, only that room or component shall be re-cleaned and be retested until it passes a clearance sampling.

- (2) **Soil clearance standards.**

- (a) **General.** Clearance soil samples shall be taken if soil abatement activities involving removing soil in accordance with Section 6(C)(7)(b) have been performed. If the exterior lead abatement activities only involved capping lead contaminated soil, then clearance soil samples are not required and only a visual assessment is required.
- (b) **Sampling and analytical requirements.** Clearance soil samples shall be collected and analyzed in accordance with the following requirements.
 - (i) Soil testing shall not begin until the property passes the visual assessment.
 - (ii) All soil samples shall be composite and random samples of bare soil only.
 - (iii) The number and location of clearance soil samples shall be taken in accordance with the following specifications:
 - a. One composite sample shall be collected around the perimeter of the building from perimeter areas that are not play areas. If only selected faces of the building were treated, the subsamples must come from those faces.

Composite sample technique should be a minimum of 5 aliquots and not exceed 10 aliquots in these areas.

- b. A second composite sample shall be collected from bare soil in play areas, if any. Composite sample technique should be a minimum of 3 aliquots and not exceed 10 aliquots in these areas.
- (c) **Soil clearance standards.** If the test results for bare soil samples in play areas equal to or exceed 100 ppm or soil samples from the perimeter of the building in other than play areas equal to or exceed 900 ppm, then the work area fails the clearance examination and the actions required by Section 6(C)(7) shall be performed.

M. Reporting requirements.

- (1) **Final clearance sampling results.** A lead inspector or lead risk assessor shall provide all final clearance sampling results from a lead abatement project to the lead abatement contractor and the Department using the Department-approved Lead Abatement Project Clearance Summary Form M within 48 hours of receipt of those results. See Appendix E for a copy of the Form M.
- (2) **Lead abatement report.** Within 30 days of completion of the abatement, the lead abatement contractor shall prepare and provide to the property owner a lead abatement report and the lead abatement contractor shall also provide a copy of this report upon request to any lead inspector, risk assessor, and/or design consultant who performed services on the project. The abatement report is required even in instances where the property owner is also the abatement contractor who performed the abatement. The abatement report shall include the following information:
 - (a) Start and completion dates of abatement;
 - (b) The name and address of each licensed firm conducting the abatement and the name of each project supervisor assigned to the abatement project;
 - (c) The occupant protection plan prepared pursuant to Section 6(B)(3);
 - (d) The name, address, and signature of each certified risk assessor or lead inspector conducting clearance examinations and the date of clearance sampling;
 - (e) The results of clearance examinations, including all dust and soil analyses (if applicable) and the name of each NLLAP-accredited laboratory that conducted the analyses; and

- (f) A detailed written description of the abatement, including abatement methods used, locations of rooms and/or components where abatement occurred and any suggested monitoring of encapsulants or enclosures.

N. Recordkeeping requirements. A lead abatement contractor shall maintain all documents listed in this Section for a minimum of seven years at its principal place of business or at an archive facility approved in advance by the Department, in a form which is easily retrievable by project.

- (1) A lead abatement contractor must make the following documents available to the Department within 24 hours of request:
 - (a) Documents required by all applicable OSHA standards (July 1, 2020);
 - (b) The name, address, and Department certification number for each of its employees engaged in lead abatement activities, including dates of employment;
 - (c) Identification, by name and Department certification number, of each employee's involvement in each of the lead abatement contractor's past and present lead abatement projects, including name, address, location, and duration of each project;
 - (d) Copies of all correspondence between the lead abatement contractor and any regulatory agency, including letters, notices, citations received, and any notifications made by the contractor pursuant to this Chapter;
 - (e) Documents required to be maintained under any other applicable federal, state, or local laws or regulations governing lead-based paint hazards and lead hazards and occupational safety and health;
 - (f) Documentation on lead-based paint wastes generated by each project delineating: amounts; results of any waste sampling and analysis, if applicable; the waste transporter; and the disposal site;
 - (g) Copies of all laboratory and design consultant reports provided to the lead abatement contractor documenting workplace and personal exposure levels;
 - (h) Copies of abatement related reports provided to the lead abatement contractor regarding inspection, project design, and clearances, including the lead abatement project clearance inspection form;
 - (i) Individual project records specified in Section 6(N)(2) below; and
 - (j) The lead abatement report created in conformance with Section 6(M).
- (2) A lead abatement contractor must maintain the following documents at the abatement work site throughout the duration of such activity, and must make the

documents immediately available to the Department and to the lead inspector or risk assessor monitoring the project upon request:

- (a) A current copy of Chapter 424;
- (b) A copy of the ongoing lead abatement project design or work plan, and occupant protection plan;
- (c) A copy of the abatement contractor's current license;
- (d) A listing of all employees, by name, and Department certification number, who are assigned to the on-going project;
- (e) A listing of each of the subcontractors involved in the ongoing project;
- (f) A Department certification card for each employee involved in the on-going project;
- (g) A daily sign-in/sign-out log clearly identifying each employee involved in the on-going project by name and Department certification number, and identifying the length of time spent at each project location;
- (h) Records of all project documentation including a copy of the lead abatement project drawing and a daily supervisor's (job notes) log.
- (i) A copy of the notification of the project provided to the Department; and
- (j) Copies of other documentation which is relevant to the project including:
 - (i) Notice of Inspection forms from the Department; and
 - (ii) Copies of any correspondence with regulatory agencies concerning the project.

O. Non-standard work practice requirements. Variances to the work practice requirements may be permitted when the standard procedure is not practicable, not feasible, not safe, or when an alternative exists, and the proposed variance adequately protects human health and safety and the environment from exposure to lead-based paint hazards and lead hazards.

- (1) Non-standard work practice requests must be developed by a certified design consultant or project supervisor and must be sent in writing to the Department on the original notification form unless unforeseeable conditions occur during the project that warrant a request at a later time. The written request must include a justification that presents clear and convincing evidence that the lead project is distinctive in some way and the proposed alternative(s) to required work practices will comply with the intent of State law and these rules. Where applicable, the design consultant or project supervisor submitting the non-standard work practice request must notify the design consultant who prepared

the original project design for the project of the non-standard work practice(s) submission to the Department. This notification must be concurrent with the non-standard work practice submission to the Department.

- (2) Non-standard work practices require written authorization from the Department prior to implementation.

Note: The Department intends to respond to non-standard work practice requests within 5 working days of receipt and will indicate whether the proposal is authorized or not, and if not, why not.

- (3) The Department can revoke a non-standard work practice approval whenever additional information is obtained or a change in project conditions occurs.

Note: When given a variance, the abatement contractor must comply with all other applicable provisions of this rule and other applicable state and federal laws and rules.

7. Lead Inspection, Lead Determination, and Risk Assessment Requirements

Lead inspections, lead determinations, risk assessments and lead hazard screens shall be conducted in accordance with the procedures described in this Section.

- A. Lead inspections and lead determinations.** The objective of a lead inspection is to identify and report on the presence and condition of lead-based paint in a residential dwelling unit or child-occupied facility. A lead determination is a limited inspection of a residential dwelling unit or child-occupied facility for lead. Lead inspections and lead determinations may include sampling and analysis of dust, soil, and water.

Note: Risk assessors do not need to perform risk assessments if contractually the owner request only a lead inspections or determination.

- (1) **Lead inspection requirements.** A lead inspection of residential dwelling units and child-occupied facilities shall include testing of all testing combinations, or each individual surface or component, in the residential dwelling unit or child-occupied facility that are coated with paint, varnish, shellac, stain, or other coating, including those that have been coated and covered with wallpaper, except those known to have been replaced after 1978. Sampling for a lead inspection in residential dwelling units and child-occupied facilities shall at a minimum meet the requirements of Appendix D of this Chapter.
- (a) The lead content of paint on testing combinations, or each individual surface or component, shall be tested by using a portable X-Ray Fluorescence analyzer (XRF) and/or paint chip sampling performed in accordance with Appendix D. The lead inspection shall include the testing of all testing combinations or each individual surface or component in the residential dwelling unit or child-occupied facility. The test location(s) shall be representative of the testing combination(s), or each individual surface or component including all layers of paint and

shall be sufficient distance from pipes or electrical outlets to avoid interference.

- (i) The lead inspector or risk assessor may assume that inaccessible painted components or surfaces contain lead-based paint.
 - (ii) The number of XRF readings per testing combination shall at a minimum, meet the requirements of Appendix D of this Chapter. If acceptable test locations cannot be found for XRF testing, a paint chip sample shall be collected for laboratory analysis.
 - (iii) Paint chip samples shall be collected for laboratory analysis from all testing combinations with inconclusive XRF test results, or the testing combination shall be assumed to be coated with lead-based paint until otherwise demonstrated. Paint chip samples shall be collected and analyzed in accordance with the requirements contained in Appendix A.
- (b) A lead inspection shall include characterization of the condition of all identified lead-based painted testing combination(s) as either in intact, fair, or poor condition.
 - (c) When conducting inspections in multi-family dwelling units the lead inspector or risk assessor shall use Appendix D of this Chapter for determining the required number of units, testing combinations, common areas and exteriors to be tested.
- (2) **Lead determination requirements.** Any lead determination shall comply with the following requirements.
- (a) The lead content of paint on the testing combination(s) or each individual surface or component being tested may be tested by using a portable XRF and/or paint chip sampling performed in accordance with Appendix A or D.
 - (b) Lead determinations shall include the testing of the testing combination(s), or each individual surface or component except those known to have been replaced after 1978, at the residential dwelling unit or child-occupied facility. The test locations shall be representative of the testing combination(s) or each individual surface or component including all layers of paint and be sufficient distance from pipes or electrical outlets to avoid interference. The inspector or risk assessor may assume the inaccessible painted components or surfaces contain lead-based paint.
 - (c) The number of XRF reading(s) per testing combination, shall at a minimum, meet the requirements of Appendix D of this Chapter. If acceptable test locations cannot be found for XRF testing, a paint chip sample shall be collected for laboratory analysis. Paint chip samples shall be collected for laboratory analysis from all testing combination(s) that

test inconclusive with the XRF, or the testing combination(s) may be assumed to be coated with lead-based paint until otherwise demonstrated. Paint chip samples shall be collected and analyzed in accordance with the requirements contained in Appendix A.

- (3) **Lead inspection and determination reports.** The lead inspector or risk assessor shall prepare and provide to their client a report that shall include the following information:
- (a) Date of the lead inspection or lead determination;
 - (b) Address of each building;
 - (c) Date of construction of buildings (approximate, if unknown);
 - (d) Apartment number (if applicable);
 - (e) Name, address, and telephone number of each owner of each building or dwelling unit;
 - (f) Name, signature, and Maine certification number of the certified lead inspector(s) conducting the lead inspection/risk assessor or lead determination;
 - (g) An explanation of how to understand the lead inspection report;
 - (h) A summary by room of all components that contain lead-based paint, including all components represented by testing combinations, any components not tested because they were replaced after 1978;
 - (i) The name, address, and telephone number of each laboratory conducting analysis of collected samples. Laboratories performing analyses must be accredited in accordance with the requirements of Section 7(D);
 - (j) The testing method and sampling procedure for paint analysis employed;
 - (k) A brief description of the residential dwelling unit or child-occupied facility, and line diagrams showing the rooms, including common areas, of the residential dwelling unit or child-occupied facility;
 - (l) Specific locations of each painted testing combination that were tested for the presence of lead, including the listing of components represented by each testing combination, and the identification of lead-based paint that is in poor condition;
 - (m) An assessment of the condition of the paint for each testing combination tested, if applicable;

- (n) All data collected from on-site testing, including quality control data and the serial number of all XRF devices used to perform analyses;
 - (o) All results of laboratory analysis on collected paint, soil, dust, and water samples, and identification of any lead identified by these analyses;
 - (p) Any other sampling results; and
 - (q) A lead-safe certificate, if applicable.
- (4) **Environmental lead inspection summary reports to the Department.** Within thirty days of completion of each lead inspection, the lead inspector/risk assessor shall submit to the Department a summary report in a form approved by the Department. These summary reports must include: the lead inspector's name, signature and Maine certification number; address of property inspected, including apartment number, if applicable; date of lead inspection; the presence or absence of lead-based paint and certification of lead-safe status, as applicable. See Appendix F for a copy of the Environmental Lead Inspection Summary Report Form.
- (5) **Recordkeeping requirements.** Lead inspectors shall retain a copy of each lead inspection and lead determination report for a minimum of seven years at his or her principal place of business or at an archive facility approved in advance by the Department. Complete reports shall be made available to the Department upon request.
- B. Risk assessments.** The objectives of a risk assessment are to identify and report on the existence, nature, severity, source, and location of lead-based paint hazards and lead hazards; and to identify and report on options for reducing or eliminating identified lead-based paint hazard or lead hazards, including interim controls or abatement measures, or both. A complete risk assessment is performed on the entire dwelling unit and all common areas; the scope of a targeted risk assessment is determined through contract.
- (1) **Complete and targeted risk assessments.** Complete and targeted risk assessments include the following:
- (a) **Visual assessment.** The risk assessor shall perform a visual assessment of the residential dwelling unit or child-occupied facility, exterior building surfaces and any surrounding land belonging to the owner to identify potential lead-based paint hazards or lead hazards, as follows:
 - (i) If prior lead inspection reports are available, risk assessors shall consider whether the past lead inspection conforms to current standards. If the prior lead inspection is determined to be reliable and complete, the risk assessor is only required to visually assess surfaces that have been determined to contain lead-based paint. If a lead inspection has not been completed or if the risk assessor determines that the lead inspection report is or may be unreliable, a complete lead inspection shall be conducted in

accordance with the requirements of Section 7(A)(1). A targeted risk assessment shall include the testing of all painted surfaces in poor condition in accordance with the requirements of Section 7(A)(1) within the area of the residence contracted for risk assessment.

- (ii) The risk assessor may assume that inaccessible surfaces with paint in poor condition contain lead-based paint.
 - (iii) The risk assessor shall identify potential soil and water hazards on the property.
 - (iv) The risk assessor shall examine buildings and the work area for structural deficiencies, substrate deficiencies, and other conditions that contribute to observed paint deterioration and other potential lead-based paint hazards (i.e., lead paint dust, water, such as deterioration in the roof that results in water leaks).
- (2) **Evaluation of potential lead hazards.** The risk assessor shall determine if the potential hazards identified during the visual assessment are lead-based paint hazards or lead hazards.
- (a) **Poor condition paint.** Painted surfaces in poor condition with lead-based paint shall be considered lead-based paint hazards.
 - (b) **Friction and impact surfaces.** Friction and impact surfaces with lead-based paint may be identified as a lead-hazard dependent upon the surface condition. Friction surfaces that are subject to abrasion and where the lead dust level on the nearest horizontal surface is equal to or greater than the dust lead hazard identified in Section 7(B)(2)(c), or an impact surface with chipping or flaking lead-based paint caused by impact from an adjacent surface and where the lead dust level on the nearest horizontal surface is equal to or greater than the dust lead hazard identified in Section 7(B)(2)(c), may be lead hazards.
 - (i) Risk assessors may recommend that these surfaces be repaired to prevent the development of lead hazards.
 - (c) **Dust.** Dust tests of all selected residential dwelling unit and child-occupied facilities shall be performed in accordance with Section 7(C)(1) to determine if lead-contaminated dust is present. A lead-based paint hazard exists if the single surface results for any room equivalent are equal to or exceeds the following quantities of lead-contaminated dust:
 - (i) Hard floors, porches, and other horizontal surfaces - 10 ug/ft².
 - (ii) Carpeted floors - 10 ug/ft².

- (iii) Interior windowsills and/or window troughs - 100 ug/ft².
 - (d) **Soil.** If bare soil is identified during a visual assessment soil tests must be performed in accordance with Section 7(C)(2). If the test results are equal to or exceeds 100 ppm in bare soil play areas or 900 ppm from the perimeter of the building in other than play areas, the soil in these areas shall be considered a lead hazard.
 - (e) **Water hazard assessment.** Water shall be sampled in accordance with the requirements of Section 7(C)(3). If any of the test results equal to or exceed 15 ppb the water shall be considered a lead hazard.
 - (f) **Survey.** The risk assessor may survey the occupants to determine whether an occupant's occupation or hobbies pose a risk that lead may be brought into the residence from those activities.
 - (g) **Identify acceptable lead-based paint hazard and lead hazard control options.** Using information on existing lead hazards and the condition of the building, the risk assessor shall identify acceptable lead-based paint hazard or lead hazard control methods. Control options include abatement and interim controls. Lead abatement activities shall be conducted in accordance with the work practice requirements contained in Section 6.
 - (h) **Multiple units.** When conducting risk assessments in multi family dwelling unit the risk assessor shall use Appendix D of this Chapter for determining the required number of units to be assessed and the required number of dust and soil samples to be collected.
- (3) **Risk assessment reports.** The risk assessor shall prepare and provide to their client a report, which shall include the following information:
- (a) Date of the risk assessment;
 - (b) Address of each building;
 - (c) Date of construction of buildings (approximate if unknown);
 - (d) Apartment number (if applicable);
 - (e) Name, address, and telephone number of each owner of each building or dwelling unit;
 - (f) Name, signature, and Maine certification number of the risk assessor conducting the risk assessment;
 - (g) Name, address, and telephone number of each laboratory conducting analysis of collected samples. Laboratories performing analyses must be accredited in accordance with the requirements of Section 7(D);

- (h) An explanation of how to understand the risk assessment report;
 - (i) A summary by room of all components that contain lead-based paint, including the clear identification of all lead-based paint hazards and lead hazards;
 - (j) Testing method and sampling procedure for analyses employed;
 - (k) Identification of the existence, nature, severity, source, and location of all lead-based paint hazards and lead hazards;
 - (l) A description of structural and substrate condition for each identified lead-based paint hazard;
 - (m) Acceptable methods for control of all lead-based paint hazards and lead hazards identified, including interim controls and/or abatement methods;
 - (n) All data collected from on-site testing, including quality control data and the serial number of all XRF device(s) used to perform analyses;
 - (o) All results of laboratory analysis on collected paint, soil, dust, and water samples;
 - (p) A lead-safe certificate, if applicable;
 - (q) A brief description of a pre-1978 residential dwelling unit or child occupied facility, and line diagrams showing the rooms, including the common areas of a residential dwelling unit or child occupied unit should be included in the risk assessment; and
 - (r) Risk assessment reports including recommendations are valid for one year and can only be amended or changed by performing a new risk assessment.
- (4) **Lead hazard screen.** A lead hazard screen is a limited risk assessment appropriate in dwelling unit in good condition where the probability of finding lead-based paint hazards is low. If dust levels for windowsills are equal to or exceed 50 ug/ft^2 or if the dust level for a hard or carpeted floor is equal to or exceeds 5 ug/ft^2 , then a risk assessment is warranted. At a minimum, a lead hazard screen includes the following:
- (a) Background information regarding the physical characteristics of the residential dwelling unit or child-occupied facility.
 - (b) Occupant use patterns that may cause lead-based paint exposure to children less than 6 years of age.
 - (c) A visual inspection to determine if any paint in poor condition is present and to locate at least two dust sampling locations.

- (d) Testing for lead of each surface or testing combination with paint in poor condition.
 - (e) Two composite dust samples, one from the floors and others from the windowsills in rooms, hallways, or stairwells, including common areas, where any child less than 6 years of age is most likely to come in contact with lead paint dust.
 - (f) A lead hazard screen report including all information gained during the lead hazard screen, including: a narrative describing the background information, occupant use patterns, and the visual inspection; a description of any testing combinations used; the locations from which samples were collected, including an explanation of any composite sampling; and recommendations on the need for any follow-up inspection or risk assessment and interim controls and/or lead abatement to reduce lead-based paint hazards.
- (5) **Summary reports to the Department.** Within 30 of completion of each risk assessment and/or lead hazard screening, the risk assessor shall submit to the Department a summary report in a form approved by the Department. These summary reports must include: risk assessor's name, signature and Maine certification number; address of property, including apartment number if applicable; date of risk assessment; the presence or absence of lead-based paint and lead hazards; and certification of lead-safe status, as applicable; See Appendix F for a copy of the Environmental lead inspection summary report form and
- (a) **Recordkeeping requirements.** Risk assessors shall retain a copy of each risk assessment report at their principal place of business or at an archive facility approved in advance by the Department for a minimum of seven years. Complete reports shall be made available to the Department upon request.

- C. Sampling requirements for lead in settled dust, soil, and water.** Whenever a lead inspector or risk assessor, collects samples to determine the presence of lead in settled dust, soil or water, the following sample methodology shall be employed.

Note: See Appendix A for soil, settled dust and paint chip sampling protocols.

- (1) **Settled dust sampling.** Dust sampling within dwelling/child occupied units shall be conducted by single-surface wipe samples except that composite sampling may be performed as part of a lead hazard screen. Dust samples shall be analyzed in accordance with the requirements contained in Section 7(D)(2). Locations for dust wipe samples shall be selected based upon the presence of lead paint and the potential for tracking of lead dust into the residential dwelling unit or child-occupied facility.
 - (a) If a lead inspection, lead determination or risk assessment has determined that there is no lead-based paint present in any room

equivalent, dust wipe samples are not required in those room equivalents except that one dust wipe shall be taken from the floor area within three feet of each exterior entryway whenever exterior lead-based paint or lead-contaminated soil is present.

- (b) Number and location of dust samples within dwelling units. The following specific locations are recommended to be sampled for settled dust:
- (i) The floor and an interior windowsill of the bedroom of the youngest child six months of age or more. If there are no children living in the residential dwelling unit or child-occupied facility or if the residential dwelling unit or child-occupied facility is vacant, the samples shall be collected from the room that would likely be used as the bedroom of the youngest child six months of age or more.
 - (ii) The floor and an interior windowsill of the principal play area of the youngest child six months of age or more other than their bedroom. If there are no children living in the residential dwelling unit or child-occupied facility or if the residential dwelling unit or child-occupied facility is vacant, the samples shall be collected from the room that would likely be used as the play room of the youngest child six months of age or more. If there is no window in the sampled playroom, a sample shall be collected from the interior windowsill of another room that would likely be frequented by the youngest child six months of age or more.
 - (iii) The floor of the principal entryway. If the principal entryway is not distinguishable from the sampled play area or the sampled bedroom, the sample shall be collected from the floor of another high-traffic area (such as the living room, family room, TV room, dining area, or kitchen) that is distinguishable from the sampled play room or the sampled bedroom.
 - (iv) An interior windowsill sample from the kitchen. If there is no window in the kitchen, the sample shall be collected from an interior windowsill in the dining area or another room likely to be frequented by the youngest child six months of age or more.
 - (v) At least one additional representative sample may also be collected from horizontal surfaces such as heating components and shelving, as applicable.
- (c) If collecting dust samples in common areas, dust samples shall be collected from the following locations:

- (i) In multi-family buildings of four stories or less, one sample from the entry area floor and one from the floor of the first landing of a common stairway or from the first-floor hallway. If there is a hallway window that is frequently used, the risk assessor shall collect a sample from the interior windowsill and substitute this sample for the floor sample from the first landing or hallway.
- (ii) In community buildings, day care centers, or other buildings, which are frequented by children and are in the same complex as the residential dwelling unit dust sampling shall be completed in accordance with the following:
 - a. For spaces up to 2,000 square feet, collect two dust samples from widely separated locations in high traffic areas used by or accessible to children, and one dust sample from an interior windowsill.
 - b. For spaces over 2,000 square feet, collect one additional floor sample for each increment of 2,000 square feet, and one additional sample of an interior windowsill for each additional increment of 2,000 square feet.
 - c. In the building's management office, one dust sample shall be collected from the floor of the resident waiting area; two dust samples shall be collected if the area is more than 400 square feet.
- (d) If conducting dust sampling on floors and interior windowsills, specific dust sampling locations shall be selected as follows:
 - (i) **Floors.** Select hard floor surfaces that are reasonably accessible. If hard floor surfaces are not available, select carpeted surfaces. If there are friction or impact surfaces in the room, select a floor location near the friction or impact surface that is most likely to be generating lead contaminated dust. If there are no friction or impact surfaces but there is visible floor dust, select one or more dusty locations accessible to children 6 months up to 6 years of age. If none of these conditions are present, select the highest traffic area in the room.
 - (ii) **Interior windowsills.** Select windows that are frequently opened especially those most frequently contacted by children. If children's use patterns are unknown, select windows that have friction surfaces. If none of these conditions are present, select randomly.
 - (iii) **Common areas.** Select floor locations in a high traffic area and windowsill locations at windows that are frequently operated.

- (e) If conducting composite sampling as part of a lead hazard screen, the risk assessor shall conduct the sampling in accordance with the requirements of Appendix C of this Chapter.
- (2) **Soil sampling.** Soil testing shall be conducted on the building perimeter along the building drip line, and bare soil in the yard. Except for play areas and the foundation drip line, sampling is not required unless other bare soil areas total more than 9 square feet. Soil samples shall be analyzed in accordance with the requirements contained in section 7(D)(2).
- (a) **Selecting areas to sample.** At a minimum: one composite sample shall be collected from each of the child's principal play areas, one composite sample from any area of bare soil that appears likely to pose a risk, as applicable; and one composite sample from along the foundation drip line.
 - (b) **Sampling procedures.** The following procedures shall be used to collect the soil samples:
 - (i) Each sample shall consist of equal soil subsamples taken in accordance with the soil sampling protocol delineated in Section 2(C) of Appendix A.
 - (ii) The foundation drip line subsamples may be combined into a single composite sample, and subsamples from the principal play area may be composited as a single sample.
 - (iii) If paint chips are present in the soil they shall be included as part of the soil sample.
- (3) **Water sampling.** Water samples shall be analyzed in accordance with the requirements contained in Section 7(D)(2). Identify the tap(s) which serve as the major source(s) of drinking and cooking water in the residential dwelling unit or child-occupied facility. Collect a first draw and flushed sample in accordance with the following procedure.
- (a) **First-draw samples.** Collect a water sample from the cold-water tap(s) after there has been no water used for at least six hours. The water sample(s) should contain the first drops of water as the faucet is turned on and continue until the sample container is filled.
 - (b) **Flushed samples.** Collect a water sample from the same cold-water tap(s) as the first-draw samples. Allow the water to run for five (5) minutes after collecting the first-draw samples before filling the sample container to be identified as the flushed sample.

D. Sample analysis. All laboratories performing analyses of lead in paint, dust, soil and water under this Chapter shall be accredited by the U.S. Environmental Protection Agency's National Lead Laboratory Accreditation Program (NLLAP) and certified for

environmental lead analysis in accordance with 10-144 and 06-096 C.M.R. ch. 263, *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*. Paint, dust, and soil samples must be analyzed in accordance with the requirements of the Environmental Lead Proficiency Analytical Testing Program (ELPAT). Analysis of lead in water must be performed by a laboratory certified by the Maine Department of Health and Human Services to analyze for lead in drinking water.

- (1) **XRF paint analysis.** The use of an XRF analyzer to test a painted surface shall be performed in accordance with the following:
 - (a) **Instrument Calibration.**
 - (i) The calibration of each XRF instrument used shall be verified against the manufacturer's Performance Characteristic Sheet (PCS) and in accordance with the manufacturer's recommended calibration and with the requirements of Appendix D.
 - (ii) If the XRF instrument does not produce readings within the manufacturer's specified tolerance as described in the manufacturer's calibration procedure, the instrument shall be removed from use until such time as the unit has been demonstrated to be operating within the manufacturer's specified tolerance.
 - (iii) The XRF shall be operated in conformance with the instrument's Performance Characteristic Sheet developed by the U.S. EPA and HUD.
 - (iv) The XRF shall otherwise be operated according to manufacturer's instructions.
 - (b) **Special requirements applicable to XRF instruments.** The following requirements shall apply when field measurement by XRF is used:
 - (i) The user shall have a currently valid radioactive materials license for the XRF instrument used, in accordance with the *State of Maine Rules Relating to Radiation Protection* (10-144 C.M.R. ch. 220). Any user operating under a radioactive materials license issued by another jurisdiction shall be in compliance with the reciprocity provisions of the *Rules Relating to Radiation Protection* (10-144 C.M.R. ch. 220, Pt. C Section 24); and
 - (ii) The user(s) shall comply with all applicable provisions of their radioactive materials license and the *Rules Relating to Radiation Protection* (10-144 C.M.R. ch. 220).
- (2) **Dust, soil, and water analyses.** All analyses for lead in dust, soil, and water shall be conducted in accordance with EPA-approved methods. The Department

may also approve other sampling and analytical methods if the laboratory and the analytical method used by that laboratory to analyze the sample is NLLAP accredited and the laboratory has Maine certification for the analytical method.

E. Lead-safe evaluations.

- (1) A residential dwelling unit or child-occupied facility may be certified as lead-safe provided that a lead inspector or risk assessor has determined that no lead-based paint hazard or lead hazards exist. In order to determine that a residential dwelling unit or child-occupied facility is lead-safe, the lead inspection or risk assessment must include sampling and analysis of paint in accordance with the requirements of Section 7(A)(1), dust sampling in accordance with the requirements of Section 7(C)(1), soil sampling in accordance with the requirements of Section 7(C)(2) and water sampling in accordance with Section 7(C)(3). The lead inspector or risk assessor shall provide the owner a lead-safe certificate for each applicable residential dwelling unit or child-occupied facility. The lead-safe certificate shall at a minimum include the information contained in the body of the sample lead-safe certificate, included as Appendix B of this Chapter.

Note: A lead inspector or risk assessor may issue a lead-safe certificate stating that soil sampling was not conducted due to an inability to identify whether bare soil is present because of snow cover or because the ground was frozen at the time of the inspection or risk assessment. Soil sampling shall be performed at the first six-month reevaluation if bare soil is present.

- (3) **Limited lead-safe certificate.** A limited lead-safe paint and dust certificate may be issued when a lead inspector or risk assessor has determined that no lead-based paint, lead hazard or lead dust hazards exists within the residential or child-occupied facility. The limited certificate must state that soil and/or water sampling was not conducted during the inspection or risk assessment, and that the owner and residents should presume that any bare soil near the building perimeter of a pre-1978 structure is a potential lead hazard. The limited lead-safe certificate shall at a minimum include the information contained in the body of the sample lead-safe certificate, included as Appendix B of this Chapter.
- (4) In order to maintain a lead-safe status the owner must pay for reevaluation of residential dwelling unit or child-occupied facility and must comply with the following requirements:
- (a) For units that have been identified as having no lead-based paint hazards and not lead hazards which contain no lead-based paint, no reevaluation is necessary.
- (b) For all other units, a lead inspector or risk assessor shall perform a reevaluation six months after the initial inspection or risk assessment date and annually thereafter, whenever occupancy changes if an essential maintenance practices plan is not implemented, and immediately after

unexpected events which could cause deterioration of a lead-painted surface. Based on the results of three consecutive reevaluations evidencing that the owner is maintaining the residential unit and common areas as lead-safe, the lead inspector or risk assessor may decrease the frequency of reevaluations to once every two years.

- (c) A reevaluation to determine lead-safe status paid for by the building owner, is a modified lead inspection or risk assessment consisting of a visual assessment of painted surfaces, limited dust, and if applicable soil and water sampling. It also includes the review of any renovation and remodeling, maintenance or abatement activities conducted since the issuance of the certificate and a review of an implemented Essential Maintenance Program set forth in Section 7(E)(7) below if applicable. To establish the lead-safe status of multi-family residential dwelling unit or child-occupied facilities containing greater than 5 units, the inspector or risk assessor shall use Appendix D of this Chapter for determining the required number of units to be assessed and the required number of dust and soil samples to be collected.
- (d) Reevaluations shall identify:
 - (i) Changes in documented paint condition;
 - (ii) Evidence of renovation, remodeling and maintenance activities;
 - (iii) Evidence of failed lead abatement methods; and
 - (iv) Lead-contaminated dust, soil or drinking water.
- (5) **Reevaluations shall be performed in accordance with the following requirements:**
 - (a) A lead inspector or risk assessor shall perform a visual assessment to identify any deteriorated lead-based paint:
 - (i) The lead inspector or risk assessor shall review any past lead inspection report, risk assessment report, lead abatement reports, reevaluation reports and documentation related to renovation and maintenance activities and the essential maintenance program, as applicable.
 - (ii) A visual assessment of all renovation and remodeling, maintenance, and abatement activities to determine whether the paint affected by these activities is still intact and a visual assessment of the unit to identify potential lead dust.
 - (iii) A visual assessment of the exterior to identify any new lead-based paint hazards, areas of bare soil, and whether prior interim soil control or abatement measures are still effective.

- (iv) For paint surfaces in poor condition identified during the visual assessment for which reliable information about lead content is unavailable, the lead inspector or risk assessor shall measure the lead content by XRF or paint chip laboratory analysis performed in accordance with the requirements of Sections 7(A) and 7(D). If the owner, lead inspector or risk assessor assumes that inaccessible surfaces with paint in poor condition contain lead-based paint, analysis of the paint's lead content is not required.
 - (b) Upon completion of the visual assessment documenting that there is no lead-based paint in poor condition, the lead inspector or risk assessor shall begin dust sampling.
 - (c) Dust sampling of dwelling units and common areas shall be performed as follows:
 - (i) If the residential dwelling unit or child-occupied facility contains both carpeted and uncarpeted living areas, separate floor samples are required from the carpeted and uncarpeted areas.
 - (ii) Dust samples shall be collected from locations selected in accordance with Section 7(C)(1)(b) and (c).
 - (iii) If a residential dwelling unit or child-occupied facility is found to contain lead levels that exceed the standards in Section 6(L)(1), that residential dwelling unit or child-occupied facility shall be cleaned by a sequence of HEPA vacuuming, wet cleaning, and HEPA vacuuming. The unit shall then be resampled to determine lead dust levels.
 - (d) Soil testing if applicable shall be performed as part of a reevaluation if new areas of bare soil are identified during the visual assessment. Soil samples shall be collected from locations selected in accordance with Section 7(C)(2).
 - (e) A lead-safe certificate under Section 7(E)(1) shall not be issued until a lead inspector or risk assessor documents that all paint surfaces are intact, dust samples meet the standards in Section 6(L)(1) and any new areas of bare soil do not contain lead above applicable thresholds and prior soil interim control or abatement measures are still effective.
- (6) **Reporting.** Following reevaluation, the lead inspector or risk assessor shall prepare and provide to the client a written report documenting the presence or absence of lead-based paint hazards or lead hazards. The report shall:
- (a) Describe any new lead-based paint hazards or lead hazards identified and summarize how they were mitigated either through minor maintenance, certified renovator, or lead abatement methods;

- (b) Identify the date by which the next reevaluation must occur in order to maintain a lead-safe certificate, if applicable. If ownership of the property is transferred, a new reevaluation schedule must be initiated; and
 - (c) Review the Essential Maintenance Program and recommend changes as needed.
- (7) **Lead-safe certificate report.** When all required reevaluations are completed and any new identified lead-based paint hazards or lead hazards successfully controlled or abated, the residential dwelling unit or child-occupied facility may be certified as lead-safe. The report may use information that remains valid from any previous lead inspections, risk assessments, or lead-safe evaluation on the residential dwelling unit or child-occupied facility. The lead inspector or risk assessor shall prepare and submit to the client a report with the following information whenever a residential dwelling unit or child-occupied facility is certified as lead-safe:
- (a) Date of the lead-safe evaluation;
 - (b) Address of each building;
 - (c) Date of construction of buildings (approximate if unknown);
 - (d) Apartment number (if applicable);
 - (e) Name, address, and telephone number of each owner of each building;
 - (f) Name, signature, and Maine certification number of the lead inspector(s) or risk assessor(s) conducting the lead inspection or risk assessment;
 - (g) Testing method and sampling procedure for paint analysis that was employed;
 - (h) Specific locations of each painted testing combination tested for the presence of lead if tested;
 - (i) All data collected from on-site testing, including quality control data and the serial number of any XRF device(s) used to perform analyses;
 - (j) Name, address, and telephone number of each laboratory conducting analysis of collected samples. Laboratories performing analyses must be accredited in accordance with the requirements of Section 7(D);
 - (k) Any other sampling results;
 - (l) The identification of any components on which lead-based paint was previously detected that no longer have lead-based paint due to

abatement activities, renovation and remodeling activities, or the implementation of essential maintenance practices; and

- (m) A lead-safe certificate.
- (8) **Essential maintenance program.** The essential maintenance program, if developed, shall be reviewed by the lead inspector or risk assessor as part of each reevaluation in order to certify that a residential dwelling unit or child-occupied facility is lead-safe. For all units with identified lead-based paint the following essential maintenance program components, as applicable, may be developed by a lead inspector or risk assessor.
- (a) Develop and maintain a list of all suspected and known lead-based painted surfaces.
 - (b) Designate and provide lead awareness and work practice training to individuals who will be responsible for performing minor maintenance activities not subject to the EPA Lead-Based Paint, Renovation, Repair and Painting Rule, 40 C.F.R. Part 745, subpart E, as amended up to July 1, 2020.
 - (c) Classify the lead-based paint minor maintenance activities that may be performed as part of the essential maintenance program.
 - (d) Develop and implement an in-house review system to determine whether the maintenance activity is a minor maintenance activity or an activity that must be conducted by a certified renovator.
 - (e) Document each minor maintenance activity, including the location and action(s) performed.
 - (f) Document that all maintenance activities subject to the requirements of the RRP rule were performed by a certified renovator.
 - (g) Educate the resident(s) concerning the location of the lead-based paint in their dwelling unit and how to report deteriorating paint to the owner.

Note: Property owners may review with the tenants the types of activities that can disturb lead-based paint and create lead-based paint hazards. These activities include such things as: open-flame burning, renovation and remodeling activities, and dry scraping or sanding of lead-based paint.

8. Licensure of Lead Training Providers and Accreditation of Training Courses

Lead training providers must be licensed to offer accredited lead training courses in the State of Maine. A training course, used by an individual to fulfill certification requirements (including renewals), must be approved by the Department. Individuals are responsible for ensuring that a training course is approved by the Department before taking the course. Instructors cannot self-

certify as a lead professional by both instructing and attending the same initial or renewal training course.

A. Licensure of lead training providers. To obtain a license as a lead training provider or to renew an existing lead training provider license, a business entity must submit a complete application to the Department on a form approved by the Department. The application must demonstrate that the training provider meets all applicable standards and must include the following:

- (1) The name, address, telephone number and license number of the applicant, including any other name under which the applicant is known;
- (2) The name, background, education, training, and experience of the employee of the applicant who is the training manager responsible for the development and administration of training courses. This must include proof that the training manager has a post-secondary degree in adult education, or has successfully completed a “Train the Trainer” course that is approved by the Department, or has at least two full years’ experience teaching adult learners;
- (3) The name, background, education, training, and experience of the person who the lead training provider plans to use as instructor. This shall include the designation of a qualified primary instructor and any secondary instructor, and shall include:
 - (a) Evidence that the primary instructor has demonstrated experience, education, or training in teaching adults; experience in education or training in lead or asbestos abatement, painting, carpentry, renovation, remodeling, occupational safety and health, or industrial hygiene; and successful completion of a Department-approved initial training course in the discipline they are teaching; and
 - (b) Evidence that secondary instructors are persons possessing academic credentials, training, and/or field experience in a particular area, who may regularly provide portion(s) of instruction at a course. Secondary instructors do not need to have attended initial lead training courses, but need to provide, prior to conducting training, the primary instructor with written documentation detailing their experience and providing copies of training and/or academic credentials.
- (4) A detailed description of audio/visual teaching aids as well as the number and quality of supplies and equipment that will be used for the training;
- (5) A physical description and location of the primary training facility that demonstrates that it is adequate for training and learning purposes;
- (6) A copy of the course sign in/sign out log that the training provider will use to track the times that students arrive and depart the course, including the times out and in for any lunch break. The lead training provider shall ensure this log is filled in by the students when entering and exiting the classroom;

- (7) The location of and a description of the classroom and “hands-on” facilities that is normally used by the lead training provider. The hands-on facilities must ensure that the students have direct contact with actual situations encountered in abatement work sites;
- (8) A sample of the uniquely numbered certificate to be issued and mailed to training course students by the lead training provider upon successful completion of a course. This certificate must include:
- (a) The name of the student and their date of birth;
 - (b) The name of the training course completed;
 - (c) The date(s) of the training course;
 - (d) The date of the final examination;
 - (e) The date of the training expiration;
 - (f) A statement that the student passed the course; and
 - (g) The name, address, and telephone number of the lead training provider.
- (9) A statement by the lead training provider certifying that:
- (a) The training program meets the accreditation requirements established in Sections 8(B), 8(C) and 8(D), and will be implemented in accordance with Sections 8(A), 8(E), 8(F) and 8(G).
 - (b) The training manager has developed and will implement a quality control plan to maintain and improve the quality of the training program over time, including, procedures for periodic revision of training materials to reflect innovations in the field, procedures for the training manager to periodically review the principal instructors competency; and evidence that any deficiencies provided to the training manager by the Department as part of any course audit have been corrected; and
 - (c) The lead training provider will allow the Department to audit any and all aspects of each course offered by the lead training provider; and
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- Note:** The Department may request additional information for purposes of determining the proficiency and adequacy of the applicants standard operating procedures.
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- (10) The appropriate license fee.

B. Accreditation of training courses. All lead training courses that fall within the jurisdiction of this Chapter and are offered in the State of Maine must be accredited and must be offered by a licensed lead training provider. The lead training provider must

submit an application for accreditation of a training course to the Department at least 30 days prior to the scheduled training course date. Departmental accreditation of a training course expires after one year. The training provider must notify the Department at least 5 working days prior to offering each course, unless otherwise approved by the Department, so that the Department can schedule audits.

An application for accreditation of a training course must be on forms provided by the Department and must include the following:

- (1) The name, address, telephone number and license number of the lead training provider conducting the training course, including any other name under which the training provider is known;
- (2) The name of the training course for which approval is sought;
- (3) A course outline detailing specific topics to be covered in the training course along with the estimated amount of time allotted to each topic. The training course curriculum for each training course approved under this Section must at a minimum meet the content requirements outlined in Section 8(E) below;
- (4) A copy of the training course manual along with all printed or electronic material to be distributed to the training course participants;
- (5) A description of the teaching methods to be utilized, including a description of audio/visual aids;
- (6) If different than the facilities approved as described in the lead training provider's license application, the location of and a description of the classroom and "hands-on" facilities. The hands-on facilities must provide opportunity for direct contact with actual situations encountered in the field of study;
- (7) If the training will include different or additional instructors than those approved as described in this lead training provider's license application, the additional instructor qualifications as described in Section 8(A)(3);
- (8) A statement that under no circumstances will the student to instructor ratio for hands-on portions of the training course be greater than 10 to 1;
- (9) A description of the equipment that will be utilized in classroom lectures and in hands-on training;
- (10) A description of the hands-on skills for each training course discipline and a proficiency assessment of the hands-on skills given during the training course, if applicable;
- (11) For refresher courses, a copy of the final course examination;
- (12) Other information necessary for the Department to determine the adequacy of the training course content and presentation;

- (13) Any other state or jurisdiction under which the course is approved; and
- (14) The applicable license fee.

C. Training courses at remote locations. The Department may approve a training course that is offered electronically to a remote location provided the remote training facilities meet the requirements set forth in Section 8(A)(5) including demonstrating to the Department's satisfaction that the applicant will have adequate procedures to:

- (1) Verify attendance throughout the training day and the course;
- (2) Allow students to interact in real time with the instructor and each other if the course is offered simultaneously at multiple remote locations; and
- (3) Provide the hands-on and exam (including re-examinations) components of the course.

D. Renewal of training course accreditation. In order to renew an existing lead training course accreditation, the training provider must submit a complete application to the Department on a form approved by the Department. This application must include the following:

- (1) The name, address, telephone number and license number of the lead training provider conducting the training course, including any other name under which the training provider is known;
- (2) The name of the training course for which renewal of accreditation is sought;
- (3) Submission of any proposed changes in the course content or curriculum, including new instructors and new or revised course handouts;
- (4) Evidence that any changes suggested by the Department as a result of a course audit have been incorporated into the lead training course; and
- (5) The applicable license renewal fee.

E. Required course content. The following standards must be met for a training course to be approved by the Department.

- (1) **Course times and length.** Training courses conducted pursuant to these rules shall be provided during normal business day hours, Monday to Friday, and no earlier than 7 AM and not later than 6 PM. Training shall not occur on state holidays. A course day must not be less than 6 ½ hours or exceed 8 hours in duration, excluding lunch and breaks. Other course duration and times may be approved by the Department on a case-by case basis. Courses must be completed within a two-week period.
 - (a) Lead abatement worker: 24 hours, including minimum 8 hours hands-on instruction.

- (b) Project supervisor: 32 hours, including minimum 8 hours hands-on instruction.
- (c) Lead inspector: 32 hours, including minimum 8 hours hands-on instruction.
- (d) Risk assessor: 16 hours, including 4 hours hands-on instruction.
- (e) Design consultant: 16 hours.
- (f) Refresher for all disciplines, *except* design consultant: 8 hours including minimum 30 minutes of hands-on instruction.
- (g) Design consultant refresher shall be a minimum of 4 hours and does not need to have a hands-on segment.

(2) **Course content.**

- (a) All courses must include instruction on:
 - (i) Background information on lead and its adverse health effects; and
 - (ii) State of Maine statutes and rules related to lead-based paint activities, with an emphasis on specific sections of the rules relating to the discipline being taught.
- (b) Courses relating to the specific disciplines must also include modules as follows:
 - (i) Lead abatement worker and project supervisor courses: lead abatement methods; work area preparation and clean-up requirements; waste handling and disposal; clearance examination requirements; OSHA Standard for Lead in Construction (29 C.F.R. §1926.62, as amended up to July 1, 2020); and personal protective equipment and decontamination requirements/hygiene practices.
 - (ii) Project supervisor course: project notification; occupant protection planning; supervisor responsibilities; lead abatement report preparation, and contractor liability.
 - (iii) Lead inspector course: identification of lead-based paint hazards and lead hazards and inspection protocols; paint, dust soil and water sampling protocols; clearance examination requirements, XRF calibration and HUD issued XRF PCS requirements; creating line diagram/floor plans; HUD guideline for multi-family properties, radiation safety; lead safe certificate, essential maintenance practices and, report preparation.

- (iv) Risk assessor course: risk assessment and risk management, abatement and interim control methods; substrate and structural integrity assessment and substrate/paint compatibility.
- (v) Design consultant course: basic requirements of lead inspections and risk assessments and interpretation of lead inspection and risk assessment reports; occupant protection planning; lead abatement methods: work area preparation and clean-up requirements; abatement design waste handling and disposal; clearance examination procedures and standards; personal protective equipment and decontamination requirements/hygiene practices; essential maintenance practices, and report preparation.

F. Required attendance. Successful completion of a training course requires a student to attend no less than 90% of the course's time. The training provider will maintain their own course sign in/sign out log sheet. Each student each day shall log the time when they arrive in the morning, departs for lunch and any other break, returns from lunch and any other break, and departs at the end of the training day.

G. Examinations.

- (1) **General requirements.** Final examinations are required for all training courses. Hands-on skills proficiency assessments are required for all initial training courses except the design consultant course which has no hands-on component. Successful completion of a final examination requires an applicant to achieve a score of 70% or higher on the final examination and demonstrate proficiency in the hands-on skills, as applicable.
- (2) **Initial course examination.** Initial training courses require a final Maine Lead Services Examination, which shall be provided by the Department.
- (3) **Examination retakes.** Lead training providers shall offer retakes of the Maine Lead Services Examination or other course examination to course participants that do not pass the original or subsequent examinations; a grade of 70% or higher is a passing grade.
- (4) **Results.** The Department will communicate the course results to the Training Provider generally within 5 working days of the exam for initial training courses. The Training Provider will provide the course result records to the Department within 5 working days of completion of refresher training courses. The course results must include the type of course, the names, date of birth, and exam scores of all participants.

H. Recordkeeping requirements. A lead training provider must maintain student records for a period of 7 years and make such records available to the Department within 72 hours of request.

- I. Non-accredited training from other jurisdictions.** Lead training providers or individuals seeking certification or licensing in Maine by use of training from another jurisdiction that is not accredited by the Department may submit documentation to the Department affirming that the training received by the applicant was at least as stringent as the training course requirements of this Section. The Department may request any additional information in order to determine the adequacy of the training courses. It is the responsibility of the individual seeking certification or the business entity seeking licensing as a lead training provider to provide the information requested under this section. If the Department determines that the training from another jurisdiction is at least as stringent as the lead training course requirements of this Section, it may approve the use of such training as a basis for certification or licensing. The Department will administer a discipline specific examination to individuals who received training in other jurisdictions prior to the issuance of a certification letter.
- J. Course notification to Department.** Training providers must notify the Department in writing of lead training courses conducted pursuant to this Chapter on forms approved by the Department and at least 5 working days prior to the start date of the course. A training provider may seek to offer a course to be offered in less than 5 working days after notification provided that the training provider demonstrates that reasonable planning and foresight could not have predicted time and date limitations, and that starting the course in less than 5 days after notification is the only available option. The notification must include the location of the course offering, and if other than the business location of the training provider, sufficient information to demonstrate that the new location is adequate for the training and learning purposes of the course. The Department shall not approve a course unless the notice required under this Section has been properly filed. The training provider shall notify the Department via phone or other approved communication of the cancellation of any course as soon as possible but no later than 7:00 a.m. the day of the course. A training provider may notify the Department later than 7:00 a.m. provided that the training provider demonstrates that reasonable planning and foresight could not have predicted the unforeseen circumstances occurring that day that led to the cancellation of a course.

STATUTORY AUTHORITY: 38 M.R.S. §1295

EFFECTIVE DATE: April 13, 1998

EFFECTIVE DATE OF AMENDMENT: January 10, 2000

EFFECTIVE DATE OF SECOND AMENDMENT: April 11, 2001

EFFECTIVE DATE OF THIRD AMENDMENT: December 11, 2004, filing 2004-565

NON-SUBSTANTIVE CORRECTION: March 14, 2005 – corrected citations in Section 7(B)(1)(b)(ii)

EFFECTIVE DATE OF FOURTH AMENDMENT: October 3, 2016

EFFECTIVE DATE OF FIFTH AMENDMENT: [Month Day], 2021

Appendix A: Sampling Protocols

- 1. Wipe sampling for settled lead-contaminated dust.** Wipe samples for settled leaded dust can be collected from floors (both carpeted and uncarpeted), interior and sash/sill contact areas, and other reasonably smooth surfaces. Wherever possible, hard surfaces should be sampled. Wipe media should be sufficiently durable so that it is not easily torn but can be easily digested in the laboratory. Recovery rates of between 80-120% of the true value should be obtained for all media used for wipe sampling. Blank media should contain no more than 2 ug/wipe (the detection limit using Flame Atomic Absorption). Additional standards for wipe sampling can be found by consulting ASTM E1728-16.

A. Wipe sampling materials and supplies.

- (1) Type of disposable wipe: Any wipe material that meets the following criteria may be used:
- (a) Contains low background lead levels;
 - (b) Is a single thickness;
 - (c) Is durable and does not tear easily (do not use Whatman™ filters);
 - (d) Does not contain aloe;
 - (e) Can be digested in the laboratory;
 - (f) Has been shown to yield 80-120% recovery rates from samples spiked with leaded dust (not lead in solution); and
 - (g) Must remain moist during the wipe sampling process (wipes containing alcohol may be used as long as they do not dry out).

Note: Do not use any other brand of wipes before recovery data has been established. Do not use wipes that contain aloe.

- (2) Non-powdered disposable gloves. Disposable gloves are required to prevent cross-sample contamination from hands.
- (3) Non-sterilized polyethylene centrifuge tubes (50 ml size) or equivalent hard-shell container that can be rinsed quantitatively in the laboratory.
- (3) Dust sample collection forms.
- (4) Camera to document exact locations (Optional).
- (5) Template Options.
 - (a) Masking tape;

- (b) Hard, smooth, reusable templates may be used to define the area to be wiped. Decontaminant templates after each use or;
- (c) Disposable templates are also permitted so long as they are not used for more than a single surface.

Templates must be larger than 0.1 ft², but smaller than 2 ft². Templates for floors are typically 1 ft². Templates are usually not used for windows due to the variability in size and shape (use masking tape instead).

Note: Masking tape may damage the painted surface.

- (6) Container labels or permanent marker.
- (7) Trash bag or other receptacle (do not use pockets or trash containers at the residence).
- (8) Rack, bag, or box to carry tubes (optional).
- (9) Measuring tape.
- (11) Disposable shoe coverings (optional).

B. Single surface wipe sampling procedure.

- (1) **Outline wipe area:**
 - (a) Floors: Identify the sample area to be wiped. Do not walk on or touch the surface area to be sampled. If applying masking tape, create about one square foot sample area. No measurement is required at this time. The tape should be positioned in a straight line and corners should be nominally perpendicular. When putting down any template, do not touch the interior wipe area.
 - (b) Windowsills and other rectangular surfaces: Identify the area to be wiped. Do not touch the wipe area. Apply two strips of masking tape across the sill to define a wipe area at least 0.1 square foot in size (approx. 4 inches x 4 inches).
- (2) **Preliminary inspection of the disposable wipes.** Inspect the wipes to determine if they are moist. If they have dried out, do not use them. When using a container that dispenses wipes through a “pop-up” lid, the first wipe in the dispenser at the beginning of the day should be thrown away. The first wipe may be contaminated by the lid and is likely to have dried to some extent. Rotate the container prior to each use to ensure liquid inside the container contacts the wipes.
- (3) **Gloves.** Don a disposable glove on one hand; use a new glove for each sample collected. If two hands are necessary to handle the sample, use new gloves, one for each hand. It is not necessary to wipe the gloved hand before sampling.

(4) **Collection of samples.**

- (a) Place the wipe at one corner of the surface to be wiped with wipe fully opened and flat on the surface. For square sample areas, complete a first wipe pass side-to-side as follows. With the fingers together, grasp the wipe between the thumb and the palm. Press down firmly, but not excessively with both the palm and fingers. Do not use only the fingertips or the heel of the hand to hold down the wipe, because there will not be complete contact with the surface and some dust may be missed. Do not touch the surface with the thumb. Proceed to wipe side-to-side with as many “S”-like motions as are necessary to completely cover the entire wipe area. Exerting excessive pressure on the wipe will cause it to curl. Exerting too little pressure will result in poor collection of dust. Attempt to remove all visible dust from the wipe area.
- (b) Next, fold the wipe in half with the contaminated side facing inward. The wipe can be straightened out by laying it on the wipe area, contaminated side up, and folding it over. Once folded, place in the top corner of the wipe area and press down firmly with the palm and fingers. Complete a second wipe pass moving from top-to-bottom and wiping the area with “S”-like motions. Attempt to remove all visible dust. Do not touch the contaminated side of the wipe with the hand or fingers. Do not shake the wipe in an attempt to straighten it out, since dust may be lost during shaking.
- (c) For rectangular sample areas two side-to-side passes must be made over half of this surface, the second pass with the wipe folded so that the contaminated side faces inward. For a windowsill, do not attempt to wipe the irregular edges presented by the contour of the window channel. Avoid touching other portions of the window with the wipe. If there are paint chips or gross debris in the windowsill, attempt to include as much of it as possible on the wipe. If all the material cannot be picked up with one wipe, field personnel may use a second wipe at their discretion and insert it in the same container. Consult with the analytical laboratory to determine if they can perform analysis of two wipes as a single sample. When performing single-surface sampling, do not use more than two single surface wipes for each container. If heavily dust-laden, a smaller area should be wiped. It is not necessary to wipe the entire window well but do not wipe less than 0.10 ft² (approx. 4” x 4”).

(5) **Packaging the wipe.** After wiping, fold the wipe with the contaminated side facing inward again, and insert aseptically (without touching anything else) into the centrifuge tube or other hard-shelled container. If gross debris is present, such as paint chips in a window well, make every attempt to include as much of the debris as possible in the wipe.

- (a) Seal the tube and label with the appropriate identifier. Record the laboratory submittal sample number on the field sampling form.

- (6) **Area measurement.** After sampling, measure the surface area wiped to the nearest eighth of an inch using a tape measure or a ruler. The size of the area wiped must be at least 0.10 ft² in order to obtain an adequate limit for lab analysis. No more than 2 square feet should be wiped with the same wipe or else the wipe may fall apart. Record specific measurements for each area wiped on the field sampling form.
- (7) **Form completion.** Fill out the appropriate field sampling forms completely. Collect and maintain any field notes regarding type of wipe used, lot number, collection protocol, etc.
- (8) **Trash disposal.** After sampling, remove the masking tape and throw it away in a trash bag. Remove the glove; put all contaminated gloves and sampling debris used for the sampling period into a trash bag. Remove the trash bag when leaving the dwelling unit. Do not throw away gloves or wipes inside the dwelling unit where they could be accessible to young children, resulting in a suffocation hazard.
- (9) Repeat steps 1 through 8 for additional samples in the same dwelling unit.
- (10) See “Residential Sampling for Lead: Protocols for Leaded Dust and Soil Sampling” from EPA and ASTM E1792-03 (2016) “Standard Specification for Wipe Sampling Materials for Lead in Surface Dust” for further information.

C. Composite wipe sampling. Composite sampling is only allowed as part of a lead hazard screening. Consult with the analytical laboratory to determine if the laboratory can analyze composite samples. When conducting composite wipe sampling, the procedure stated above for single wipe sampling should be used with the following modifications: When outlining the wipe areas (step 1), set up all of the areas to be wiped before sampling. The size of these areas should be roughly equivalent, so that one room is not over-sampled. After preparing the centrifuge tube, put on the glove(s) and complete the wiping procedures for all subsamples (steps 4-5). A separate wipe must be used for each area sampled. After wiping each area, carefully insert the wipe sample into the same centrifuge tube (no more than 4 wipes per tube). Once all subsamples are in the tube, label the tube. Record a separate measurement for each area that is subsampled on the field collection form. Finally, complete trash disposal, making sure that no masking tape is left behind. Risk assessors, inspectors, and sampling technicians do not have to remove their gloves between subsample wipes for the same composite sample if their gloved hands do not touch an area outside of the wipe areas. If a glove is contaminated, the glove should be immediately replaced with a clean glove.

- (1) In addition to these procedural modifications, the following rules for compositing should be observed:
 - (a) Separate composite samples are required from carpeted and hard surfaces (e.g., a single composite sample should not be collected from both carpeted and bare floors).

- (b) Separate composite samples are required from each different component sampled (e.g., a composite sample should not be collected from both floors and windowsills).
- (c) Separate composite samples are required for each dwelling unit.

D. Blank preparation. After sampling the final dwelling unit of the day, but before decontamination, field blank samples should be obtained. Analysis of the field blank samples determines if the sample media is contaminated. Each field blank should be labeled with a unique identifier similar to the others but that identifies the sample as a field blank.

- (1) Blank wipes are collected by removing a wipe from the container with a new glove, shaking the wipe open, refolding as it occurs during the actual sampling procedure, and then inserting it into the centrifuge tube without touching any surface or other object. One blank wipe is collected for each dwelling unit sampled or, if more than one dwelling unit is sampled per day, one blank for every 50 field samples, whichever is less. Also, collect one blank for every lot used. Record the lot number.

E. Lead inspector decontamination. After sampling, wash hands thoroughly with plenty of soap and water. A bathroom in the dwelling unit may be used for this purpose, with the owner's or resident's permission. If there is not running water in the dwelling unit, use wet wipes to clean the hands. During sampling, lead inspectors and risk assessors must not eat, drink, smoke, or otherwise cause hand to mouth contact.

2. Paint chip sampling. Dust sampling must always be done before paint chip sampling in order to minimize the prospect of cross-sample contamination. Paint chip sampling is a destructive method that may release a small quantity of lead dust. Although paint chip samples are to be collected from inconspicuous areas, the occupant must always be notified that paint chip sampling may be necessary.

A. Paint chip sampling tools and materials.

- (1) Sharp stainless steel paint scraper.
- (2) Disposable wipes for cleaning paint scraper.
- (3) Non-sterilized non-powdered disposable gloves.
- (4) Hard-shelled containers (such as non-sterilized 50-mil polypropylene centrifuge tubes) that can be rinsed quantitatively for paint chip samples if results are to be reported in mg/cm². Sealed baggies can be used only if results are to be reported in ug/g or percent by weight.
- (5) Collection device (clean creased piece of paper or cleanable tray).
- (6) Field sampling and laboratory submittal forms.

- (7) Tape measure or ruler (if results are reported in mg/cm²).
- (8) Ladder.
- (9) Plastic trash bags.
- (10) Flashlight.
- (11) Masking tape.
- (12) Heat Gun or other heat source operating below 1,100°F to soften the paint before removal.

B. Containment.

- (1) **Method one:** Plastic Sheeting Underneath Sampling Area. A clean sheet of plastic measuring four feet by four feet should be placed under the area to be sampled to capture any paint chips that are not captured by the collection device or creased piece of paper. Any visible paint chips falling to the plastic should be included in the sample. Dispose of the plastic after each sample is collected by placing the sheeting in a trash bag. Do not throw away the plastic at the dwelling unit. Wet wipes may be used to clean the area.
- (2) **Method two:** “Glovebag” Approach. If further containment is deemed necessary, a “glovebag” approach may be used. A durable sheet of plastic is loosely taped to the surface to be sampled, with a paint scraper, collection device, and shipment container housed inside the plastic. There should be enough “play” in the plastic to permit a scraping motion without dislodging the tape holding the plastic to the surface. Large plastic baggies can be used in lieu of the sheet of plastic if paint chips are to be shipped to the lab in plastic baggies. Properly conducted, this method completely seals the surface during the actual scraping operation. A four by four-foot sheet of plastic is still required under the glove bag to capture any debris that falls to the ground during the glove bag removal. The tape should be slowly removed from the surface to avoid lifting any additional paint from the surface.

C. Paint sample collection. The paint chip sample need not be more than 2-4 square inches in size (consult with the laboratory for the optional size). Persons collecting paint chips should wear new disposable gloves for each sample.

- (1) The most common paint sampling method is to scrape paint directly off the substrate. The goal is to remove all layers of paint equally, but none of the substrate. A heat gun should be used to soften the paint before removal to reduce the chances of including substrate with the sample and to help prevent sample loss. Including substrate in the sample will dilute the lead content if results are reported in ug/g or weight percent. Hold the heat gun no closer than six inches from the surface. Do not scorch the paint. Discontinue heating as soon as softening or blistering is observed.

- (2) Use a razor-sharp scraper to remove paint from the substrate. Paint samples collected in this fashion are usually reported in ug/g or % lead only. The sample may be placed in a baggie for shipment to the laboratory.
- (3) If the area sampled is measured exactly (+/- 1/16th of an inch or 1 mm), and all the paint within that area can be removed and collected, it is possible to also report the results in mg/cm². All of the sample must be placed in a hard-shelled container for shipment to the laboratory. The hard-shelled container is used since the laboratory will analyze the entire sample submitted. The exact dimensions of the areas sampled must be recorded on the filed sampling form. For mg/cm², including a small amount of substrate in the sample is permitted.

D. Cleanup and repair.

- (1) All settled dust generated must be cleaned up using wet wipes.
- (2) The surface can be resealed with new paint if necessary. If desired, apply spackling and/or new paint to repair the area where paint was removed.
- (3) Personnel conducting paint sampling should avoid hand-to-mouth contact (specifically, smoking, eating, drinking, and applying cosmetics) and should wash their hands with running water immediately after sampling. The lead inspector should ask to use the resident's bathroom for this purpose. Wet wipes may be used if no running water is available or if the bathroom is not available.

E. Laboratory submittal. The samples should be submitted to a laboratory accredited by the EPA National Lead Laboratory Accreditation Program. Appropriate sample submittal forms should be used. The field sample number should appear on the field sampling form, the laboratory submittal form, and the container label. The name of the laboratory, the date the samples were sent to the lab, and all personnel handling the sample from the time of collection to the time of arrival at the laboratory should be recorded on a chain of custody form, if appropriate.

F. Other information. See ASTM E1792-03 (2016) and ASTM E1645-16 for additional information.

3. Soil Sampling Protocol

A. Collection technique general description.

- (1) Bare soil samples are typically collected with a coring device or a scooping technique. The device may be used in either of two ways. Most coring devices come equipped with a "T" handle which can be attached to the top of the coring tool or probe. This allows the sample collector to push the tool into the ground. The coring tool can be twisted with the "T" handle as it is pushed into the ground in order to allow the cutting edge of the soil probe to cut through roots and packed earth. In softer soils, a disposable new plastic syringe at least ½ inch diameter can be used for each composite sample.

- (2) The other method for using the coring tool is to attach a hammer device to the top of the coring tool. To utilize the coring tool in this manner, the hammer device is first attached to the top of the coring tool and the tip of the probe is placed on the ground where the sample is to be collected. The hammer is then raised and allowed to fall while it is guided by the sample collector's hands. The hammer attachment may be the most appropriate tool when the nature of the soils is hard and compacted. Otherwise the "T" handle is easier to use.
- (3) The soil samples are collected by driving or pushing the coring tool into the ground. The tool is then moved gently from side to side to loosen a plug of soil. The tool is then pulled from the ground and the soil sample is pushed so that the upper part of the soil plug lies between one-inch marks made on the coring device. The top one-half inch of the soil sample is then cut from the core with a stainless steel knife or cutting tool provided for that purpose. This top one-half inch section of the soil core is then transferred to a sample container. All sub-samples are collected in this manner. The collection of sub samples from the sampling line is referred to as a "composite" sample.
- (4) After collecting a composite sample, the soil probe should be decontaminated or discarded if disposable core liners are used. This process consists of wiping the end of the probe with wet wipes until no more visible dirt is removed from the probe. Similar cores are then collected from the bottom inch of the four-inch core.

B. Materials and supplies.

- (1) Core sampling devices: Standard soil coring device. Other similar core sampling devices may be used, such as disposable plastic syringes with the end cut off. The plunger is used to remove the soil from the syringe body.
- (2) Disposable wipes.
- (3) Non-sterilized 5" x 8" plastic sealed baggies: Unless baggies are 4 mil industrial strength, samples must be double bagged.
- (4) Non-sterilized non-powdered disposable gloves.
- (5) Floor plan & property sketch.
- (6) Soil sample collection form.
- (7) Laboratory submittal form.
- (8) Pre-printed labels or permanent ink pen.
- (9) Trash bag or other receptacle. Do not use pockets or trash containers at the residence.

C. Bare soil sampling procedures.

- (1) Soil sampling is not recommended when the ground is frozen.
- (2) The location of soil samples should be recorded on the exterior site plan sketch.
- (3) **Perimeter Sampling Locations:** One composite soil sample should be collected so that at least 5 and no more than 10 different aliquots of surface soil are collected from the building perimeter. The aliquots should be collected from all sides of the building where bare soil is present. Each spot should be at least 2 feet distant from each other and 2 feet away from the foundation unless the bare soil is closer than 2 feet.
- (4) **Play Area Sampling Locations:** A second composite sample should consist of at least 3 and not more than 10 aliquots collected along an X-shaped grid in the child's principal play area. Each spot should be at least 1 foot distant from each other. The soil where the aliquots are collected must be bare.
- (5) The core sampling device should be used to deliver the top ½ inch of soil from each spot to the baggie. If paint chips are present, they should not be avoided and should be included in the sample. When sampling play areas, the lead inspector should make an effort to avoid including grass, twigs, stones, and other gross debris in the sample.
- (6) When all aliquots of the composite sample have been placed in the baggie, the baggie should be zip locked or sealed. If the baggie is not 4-mil industrial weight, the sample should be double bagged. A label with the sample number should be affixed to the baggie. The number should be recorded on the soil platform showing the approximate location of each sample and the soil collection field data form.
- (7) The core sampler should be cleaned with disposable wipes after each composite sample is collected. If a disposable core sampler is used, it can be used for all sub-samples, but not new composite samples unless it is cleaned thoroughly.

D. Laboratory submittal. Submittal Form Preparation. The sample numbers on the sample container must be the same as those on the field sampling form and must also be used on the laboratory submittal form. Confirm that all samples recorded on are in fact present on the laboratory submittal form. Chain of custody requirements should be followed if applicable.

E. Laboratory analytical procedure. Laboratories analyzing soil samples must participate in the Environmental Lead Laboratory Proficiency Testing Program or equivalent and be an EPA-NLLAP Accredited Laboratory.

F. Additional information. See ASTM E1727-20.

Appendix B: Lead-Safe Certificate

This residence (or child occupied facility) at _____ is certified as LEAD-SAFE
(address)

A (lead inspection *or* risk assessment) (as defined by the Maine Department of Environmental Protection’s Lead Management Regulations 06-096 C.M.R. ch. 424) for the presence of lead-based paint hazards and lead hazards other than lead in water (*include if applicable*), was completed on _____. I certify that there were no lead-based paint hazards or lead hazards (*As applicable*: in this residential unit and in this building’s common areas) at the time this (lead inspection *or* risk assessment) was completed. *Optional*: (Also, the property owner has a written program for performing essential maintenance practices that, when properly implemented, will correct any lead-based paint hazards or lead hazards that may develop due to normal wear and tear or direct damage of any lead-based paint that remains in the residence. Owners and occupants must comply with a mutually agreed upon plan for implementing essential maintenance practices as needed to maintain the “Lead-Safe” condition of the residence.) Reevaluation of this property is due to be completed no later than _____; this certificate is no longer valid after this date.

Signature of Lead Inspector
or Risk assessor

Maine Certification #

Date

Appendix B.1: Limited Lead-Safe Certificate

This residence (or child occupied facility) at _____ is certified as LIMITED LEAD-SAFE (Lead-based paint and dust only) _____ (address)

A (lead inspection *or* risk assessment) (as defined by the Maine Department of Environmental Protection's Lead Management Regulations 06-069 C.M.R. ch. 424) for the presence of lead-based paint hazards limited to lead-based paint and lead dust, was completed on _____. I certify that there were no lead-based paint hazards (*as applicable*: in this residential unit and in this building's common areas) at the time this (lead inspection *or* risk assessment) was completed. Soil sampling was not conducted. Owners and residents should presume that any bare soil is a potential lead hazard. (*Optional*: Also, the property owner has a written program for performing essential maintenance practices that, when properly implemented, will correct any lead hazards that may develop due to normal wear and tear or direct damage of any lead-based paint that remains in the residence. Owners and occupants must comply with a mutually agreed upon plan for implementing essential maintenance practices as needed to maintain the "Lead-Safe" condition of this residence.) A reevaluation of this property is due to be completed no later than _____; this certificate is no longer valid after that date.

Signature of Lead Inspector
or Risk assessor

Maine Certification #

Date

Appendix C: HUD Guidelines for the Evaluation of Control of Lead-Based Paint Hazards or Housing

Composite Dust Sampling

If composite sampling is used, a minimum of three separate composite dust samples should be collected. A fourth composite sample is needed if wall-to-wall carpets are present. The composite samples should be collected from floor, interior windowsills, and window troughs.

Risk assessors should follow the composite sampling protocol found in Appendix A of this Chapter. The following rules should be observed when conducting composite dust wipe sampling.

Separate composite samples are required from carpeted and hard surfaces (e.g., single composite sample should not be collected from both carpeted and bare floors).

Separate composite samples are required from each different component sampled (e.g., a single composite sample should not be collected from both floors and interior windowsills).

Separate composite samples are required for each dwelling unit.

Floor surface areas sampled in each room should be approximately the same size (1 ft² or 929 cm²). Window trough and interior windowsill sampling sizes are dependent on window characteristics but should be as similar as possible from room to room (e.g., the surface sampling area should not be skewed so that one room is oversampled).

A new wipe should always be used for each spot sampled.

No more than four different wipes should be inserted into a single container for a composite sample. Acceptable recovery rates (80-130 percent of the "true" value) have been found when no more than four wipes are analyzed as a single sample (Jacobs, 1993©).

While a risk assessor should exercise professional judgement about the number and location of samples, three or four composite dust samples are sufficient for most evaluations in smaller dwelling units.

In an unoccupied dwelling unit or a dwelling unit facing turnover, the areas that are most likely to have lead-contaminated dust should be sampled. In general, floor samples should be collected in the four rooms with the greatest evidence of chipping and peeling paint. In a dwelling unit where children reside, however, areas where young children are most likely to be exposed to lead hazards should be sampled. The recommended subsampling locations for houses with children are the following:

Principal playroom for children (usually the TV room, living room, or dining room).

Kitchen.

Bedroom of the youngest child, who is over 6 months of age (children under 6 months are unlikely to be exposed to dust¹).

Bedroom of the next oldest child.

The preceding locations for subsamples can be used for both single-family and multifamily dwelling unit risk assessments. However, substitute locations will be necessary in dwelling units where the room designations cannot be determined. For example, in vacant units, the living room should be substituted for the playroom and the smallest bedroom for the youngest child's room.

¹ <https://www.cdc.gov/nceh/lead/prevention/children.htm>.

Appendix D: Lead-Based Paint Inspection Protocol**1. Introduction**

- A. XRF performance characteristic sheets and manufacturer's instructions.** When an XRF instrument is used for testing paint in residential dwellings and pre-1978 child occupied facilities, it must have a HUD -issued XRF Performance Characteristic Sheet (PCS). XRFs must be used in accordance with the manufacturer's instructions and the PCS. The PCS contains information about XRF readings taken on specific substrates, calibration check tolerances, interpretation of XRF readings, and other aspects of the model's performance.
- (1) If discrepancies exist among the PCS, the most stringent guidelines should be followed. For example, if the PCS has a lower (more stringent) calibration check tolerance than the manufacturer's instructions, the PCS should be followed.

2. Inspections in Single-Family Housing. List all testing combinations for each individual surface or component including those that are painted, stained, shellacked, varnished, coated, or wallpaper which covers painted surfaces.

A. Select testing combinations.

- (1) Perform XRF testing (including the calibration check readings).
- (2) Collect and analyze paint-chip samples for testing combinations that cannot be tested with XRF, that have inconclusive XRF results, or for client-approved confirmation of XRF results.
- (3) Classify XRF and paint-chip results.
- (4) Evaluate the work and results to ensure the quality of the paint inspection.
- (5) Document all findings in a report at a minimum meeting the requirements of Section 7(A)(3).

B. Listing testing combinations. Develop a list of all testing combinations in all interior rooms, on all exterior building surfaces, and on surfaces in other exterior areas, and fences, playground equipment, and garages as applicable. An inventory of a house may be completed either before any testing or on a room-by-room basis during testing.

C. Number of room equivalents to inspect. Test all room equivalents inside and outside the dwelling unit. The final report must include a final determination of the presence or absence of lead-based paint on each testing combination in each room equivalent. For varnished, stained, or similar clear-coated floors, measurements in only one room equivalent are permissible if it appears that the floors in the other room equivalents have the same coating.

- (1) Some testing combinations have multiple parts. For example, a window testing combination could theoretically be broken down into the interior sill (stool), exterior sill, trough, sash, apron, parting bead, stop bead, casing, and so on.

Because it is highly unlikely that all these parts will have different painting histories, usually they should not be considered separate testing combinations unless their professional judgment and field condition dictate otherwise. (Inspectors should regard parts of building components as separate testing combinations if they have evidence that different parts have separate, distinct painting histories). Windows and doors would typically have at least two combinations, interior and exterior.

- D. Number of testing combinations to inspect.** Inspect each testing combination in each room equivalent, unless similar building component types with identical substrates (such as windows) are all found to contain lead-based paint in the first five interior room equivalents. In that case, testing of that component type in the remaining room equivalents may be discontinued, *if and only if* the purchaser of the inspection services agrees beforehand to such a discontinuation. The inspector should then conclude that similar building component types in the rest of the dwelling unit also contain lead-based paint. For example, if an inspector finds that baseboards in the first five room equivalents are all positive, the inspector – with the client’s permission – may conclude that all remaining room equivalents in the unit contain positive baseboards. This is sometimes referred to as a “positive stop.”

- (1) Because it is highly unlikely that testing combinations *known* (and not just presumed) to have been replaced or added to the building after 1977 will contain lead-based paint, they need not be tested. If the age of the testing combination is in doubt, it should be tested.

- E. Building component types.** Results of an inspection may be summarized by classifying component types across room equivalents if patterns or trends are supported by the data.

- F. Substrates.** Several types of XRF instruments do not require “substrate correction,” needed to correct a systematic bias in an XRF instrument resulting from interference from substrate material beneath the paint. However, all substrates across all room equivalents should be grouped into one of the six substrate categories (brick, concrete, drywall, metal, plaster, or wood) shown on the XRF Performance Characteristic Sheet for the instrument being used. Substrate correction procedures, if required, can then be applied for all building component types with the same substrate. For example, the substrate correction procedure for wooden doors and wooden baseboards can use the same substrate correction value.

3. Number and Location of XRF Readings

- A. Number of XRF readings for each testing combination.** XRF testing is required for at least one location per testing combination, except for interior and exterior walls, where four readings should be taken, one on each wall. Multiple readings on the same testing combination or testing location are, therefore, unnecessary, except for interior and exterior walls.

- (1) Because of the large surface areas and quantities of paint involved, and the possibility of increased spatial variation, take at least four readings (one reading on each wall) in each room equivalent. (For room equivalents with fewer than

four walls, test each wall.) For each set of walls with the same painting history in a room equivalent, test the four largest walls. Classify each wall based on its individual XRF reading. If a room equivalent has more than four walls, calculate the average of the readings, round the result to the same number of decimal places as the XRF instrument displays, and classify the remaining walls with the same painting history as the tested walls, based on this rounded average. When the remaining walls in a room equivalent clearly do not have the same painting history as that of the tested walls, test and classify the remaining walls individually. For exterior walls, select at least four sides and average the readings (rounding the result as described above) to obtain a result for any remaining sides. If there are more than four walls and the results of the tested walls do not follow a classification pattern (for example, one is positive and the other three are negative), test each wall individually.

B. Location of XRF readings. The selection of the test location for a specific testing combination should be representative of the paint over the areas that are most likely to be coated with old paint or other lead-based coatings. Thus, locations where the paint appears to be thickest should be selected. Locations where paint has worn away or been scraped off should not be selected. Areas over pipes, electrical surfaces, nails, and other possible interferences should also be avoided if possible. All layers of paint should be included, and the XRF probe faceplate should be able to lie flat against the surface of the test location.

- (1) If no acceptable location for XRF testing exists for a given testing combination, a paint-chip sample should be collected and sent to a lead laboratory recognized by NLLAP for analysis of lead in paint. The sample should include all paint layers and should be taken as unobtrusively as possible. Because paint-chip sampling is destructive, a single sample may be collected from a wall and used to characterize the other walls in a room equivalent. For greater reliability, consider collection and analysis of more than one sample.

4. Documentation of XRF Reading Locations. Descriptions of testing combinations must be sufficiently detailed to permit another individual to find them. While it is not necessary to document the *exact* spot or the *exact* building component on which the reading was taken, it is necessary to record the *exact* testing combination measured. Current room uses or colors can change and should not be the only way of identifying them. A numbering system, floor plan, sketch, or other system, is to be used to document which testing combinations were tested.

A. Side identification. Identify perimeter wall sides with letters, numbers, or Roman numerals. For example, Side A for single-family housing is the street side for the address. Side A in multi-family housing is the apartment entry door side. Side B, C, and D are identified clockwise from Side A as one faces the dwelling unit; thus, Wall B is to the left, Wall C is across from Side A, and Side D is to the right of Side A. Each room equivalent's side identification follows the scheme for the whole housing unit. Because a room can have two or more entries, sides should not be allocated based on the entry point. For example, giving a closet a side allocation based on how the room is entered would make it difficult for another person to make an easy identification, especially if the room had two closets and two entryways.

- B. Room equivalent identification.** Room equivalents should be identified by both a number and a use pattern (for example, Room 5-Kitchen). Room 1 can always be the first room, at the A-D junction at the entryway, or it can be the exterior. Rooms are consecutively numbered clockwise. If multiple closets exist, they are given the side allocation: for example, Room 3, Side C Closet. The exterior is always assigned a separate room equivalent identifier.
- C. Sides in a room.** Sides in an interior room equivalent follow the overall housing unit side allocation. Therefore, when standing in any four-sided room facing Side C, the room's Side A will always be to the rear, Side B will be to the left, and Side D will be to the right.
- D. Building component identification.** Individual building components are first identified by their room number and side allocation (for example, the radiator in Room 1, Side B is easily identified). If multiple similar component types are in a room (for example, three windows), they are differentiated from each other by side allocation. If multiple components are on the same wall side, they are differentiated by being numbered left to right when facing the components. For example, three windows on Wall D are identified as windows D1, D2, and D3, left to right. If window D3 has the only old original sash, it is considered a separate testing combination from the other two windows. Codes or abbreviations for building components and/or locations may be used in order to shorten the time needed for data entry. If codes or abbreviations are used, the inspection records and the inspection report must include a table showing their meaning.
- (1) A sketch of the dwelling unit's floor plan is required by this protocol. Whatever documentation is used, a description of the room equivalent and testing combination identification system must be included in the final inspection report.
- 5. XRF Calibration Check Readings.** In addition to the manufacturer's recommended warm up and quality control procedures, the XRF operator should take the quality control readings recommended below, unless these are less stringent than the manufacturer's instructions. Quality control for XRF instruments involves readings to check calibration. Most XRFs cannot be calibrated on-site; actual calibration can only be accomplished in the factory.
- A. Frequency and number of calibration checks.** For each XRF instrument, two sets of XRF calibration check readings are required at least every 4 hours. The first is a set of three nominal-time XRF calibration check readings to be taken before the inspection begins. The second occurs either after the day's inspection work has been completed, or at least every 4 hours, whichever occurs first. To reduce the amount of data that would be lost if the instrument were to go out of calibration between checks, and/or if the manufacturer requires more frequent calibration checks, the calibration check can be repeated more frequently than every 4 hours. If the XRF manufacturer recommends more frequent calibration checks, the manufacturer's instructions should be followed. Calibration should also be checked before the XRF is turned off (for example, to replace a battery or before a lunch break) and after it is turned on again. For example, if an inspection of a large house took 6 hours, there would be three calibration checks: one at the beginning of the inspection, another after 4 hours, and a third at the end of the inspection.

- (1) If the XRF is not turned off as the inspector travels from one dwelling unit to the next, calibration checks do not need to be done after each dwelling unit is completed. For example, in multi-family housing, calibration checks do not need to be done after each dwelling unit is inspected, once every 4 hours is usually adequate. Some inspectors do a calibration check between units for two reasons: first, if the instrument goes out of calibration during the inspection of the unit, only that unit needs to be inspected, and, second, if the inspector inadvertently misses a calibration check, the period between checks is less likely to exceed 4 hours.
- (2) Some instruments automatically enter a “sleep” or “off” state when not being used continually to prolong battery life. It is not necessary to perform a calibration check before and after each “sleep” state episode unless the manufacturer recommends otherwise.

B. Calibration check standard materials. Portable XRF calibration check readings are taken on the National Institute of Standards and Technology (NIST) Standard Reference Material (SRM) or NIST Certified Reference Material using the nominal 1.0 mg/cm² paint film (or nearly 1.0 in older sets) within the SRM. The complete set of paint films can be obtained by calling (301) 975-2200 or using the NIST SRM site at: <http://www.nist.gov/srm/index.cfm>.

- (1) Calibration checks should be taken through the SRM paint film with the film positioned at least 1 foot (0.3 meters) away from any potential source of lead. The NIST SRM film should not be placed on a toolbox, suitcase, or surface coated with paint, shellac, or any other coating to take calibration check readings. Rather, the NIST SRM film should be attached to a solid (not plywood) wooden board or another non-metal rigid substrate such as drywall or attached directly to the XRF probe. The SRM should be positioned so that readings of it are taken when it is more than 1 foot (0.3 meters) away from a potential source of error. For example, the NIST SRM film can be placed on top of a 1 foot (0.3 meters) thick piece of Styrofoam or other lead-free material, as recommended by the manufacturer before taking readings.

C. Recording and interpreting calibration check readings. Each time calibration check readings are made; three readings should be taken. These readings should be taken using the nominal time which will be used during the inspection, selected from among those specified in the PCS. The open shutter time should be adjusted, if necessary, to reflect the age of the radioactive source. The readings can be recorded on the Calibration Check Test Results form, or stored in the instrument’s memory, and printed out or transferred to a computer later. The average of the three calibration check readings should be calculated, rounded to the same number of decimal places as the XRF instrument displays, and recorded on the form.

- (1) Large deviations from the NIST SRM value will alert the inspector to problems in the instrument’s performance. If the observed calibration check average is outside of the acceptable calibration check tolerance range specified in the instrument’s PCS, the manufacturer’s instructions should be followed to bring the instrument back into control. A successful calibration check should be

obtained before additional XRF testing is conducted. Readings not accompanied by successful calibration checks at the beginning and end of the testing period are unreliable and should be repeated after a successful calibration check has been made. If a backup XRF instrument is used as a replacement, it must successfully pass the initial calibration check test before retesting the affected test locations.

- 6. Substrate Correction.** XRF readings are sometimes subject to systematic biases as a result of interference from substrate material beneath the paint. The magnitude and direction of bias depends on the substrate, the specific XRF instrument being used, and other factors such as temperature and humidity. Results can be biased in either the positive or negative direction and may be quite high.
- A. When substrate correction is not required.** Some XRF instruments do not need to have their readings corrected for substrate bias on any substrate. Other instruments may only need to apply substrate correction procedures on specific substrates and/or when XRF results are below a specific value. The *XRF Performance Characteristic Sheet* should be consulted to determine the requirements for a specific instrument and each mode of operation (e.g., nominal time, or time required for intended precision). XRF instruments which do not require correction for any substrate, or require corrections on only a few substrates, have an advantage in that they simplify and shorten the inspection process.
- B. Substrate correction procedure.** XRF results are corrected for substrate bias by subtracting a correction value determined separately in each house for each type of substrate where lead paint values are in the substrate correction range indicated on the XRF Performance Characteristic Sheet (PCS). In single-family housing, the substrate correction value is determined using the specific instrument(s) used in that house. The correction value (formerly called “Substrate Equivalent Lead” or “SEL”) is an average of six XRF readings, with three taken from each of two test locations that have been scraped visually clean of their paint coating. The locations selected for removal of paint should have an initial XRF reading on the painted surface of less than 2.5 mg/cm², if possible. If all initial readings on a substrate type are greater than 2.5 mg/cm², the locations with the lowest initial reading should be chosen. Because available data indicate that surfaces with XRF readings in excess of about 3.0 mg/cm² or 4.0 mg/cm² are almost always coated with lead-based paint, and since bleed-through of lead into the substrate may occur, or pipes and similarly interfering building components may be behind the material being evaluated, locations with such high readings should be avoided for substrate correction.
- (1) After all, XRF testing has been completed but before the final calibration check test has been conducted, XRF results for each substrate type should be reviewed. If any readings fall within the range for substrate correction for a particular substrate, obtain the substrate correction value.
 - (2) On each selected substrate requiring correction, two different testing combinations must be chosen for paint removal and testing. For example, if the readings are inconclusive for some wooden baseboards, select two baseboards, each from a different room. If some wooden doors also require substrate correction, the inspector should take substrate correction readings on one door and one baseboard. Selecting the precise location of substrate correction should be based on the inspector’s ability to remove paint thoroughly from the

substrates, the similarity of the substrates, and their accessibility. The XRF probe faceplate must be able to be placed over the scraped area, which should be completely free of paint or other coatings.

- (3) The size of the area from which paint is taken depends on the size of the analytical area of the XRF probe faceplate; normally, the area is specified by the manufacturer. To ensure that no paint is included in the bare substrate measurement, the bare area on the substrate should be slightly larger than the analytical area on the XRF probe faceplate.
- (4) In all, six readings must be taken for each substrate type that requires correction. All six must be averaged together. Take three readings on the first *bare* substrate area. Record the substrate and XRF readings on the “Substrate Correction Values” form. Repeat this procedure for the second *bare* substrate area and record the three readings on the same form. Substrate correction values should be determined using the same instrument used to take readings on the painted surfaces. If more than one XRF model was used to take readings, apply the substrate correction values as specified on each instrument’s PCS.
- (5) Compute the correction value for each substrate type that requires correction by computing the average of all six readings as shown below and recording the results on the “Substrate Correction Values” form. The formula given below should be used to compute the substrate bias correction value for XRF readings taken on a bare substrate that is not covered with NIST SRM film. A different formula should be used when SRM film must be placed over the bare substrate. The PCS specifies when this correction is necessary and provides the formula for computing the correction value.
- (6) **Negative values.** If more than 20 percent of the corrected values are negative, the instrument’s lead paint readings and/or the substrate readings are probably in error. Calibration should be checked, and substrate measurements should be repeated.
- (7) **Discarding readings.** If the manufacturer’s instructions call for the deletion of readings at specific times, *only* readings taken at those specific times should be deleted. Similarly, readings between a successful calibration check and a subsequent unsuccessful calibration check must be discarded. Readings should not be deleted based on any criteria other than what is specified by the manufacturer’s instructions. For example, a manufacturer may instruct operators to discard the first XRF reading after a substrate change. If so, *only* the first reading should be discarded after a substrate change.

7. Classification of XRF Results. XRF results are classified as positive, negative, or inconclusive.

- A. A positive classification** indicates that lead is present on the testing combination at or above the standard of 1.0 mg/cm². A positive XRF result is any value greater than the upper bound of the inconclusive range, or greater than or equal to the threshold, as specified on the applicable XRF Performance Characteristic Sheet (PCS).

- B.** A **negative** classification indicates that lead is not present on the testing combination at or above the standard. A negative XRF result is any value less than the lower bound of the inconclusive range, or less than the threshold, specified on the PCS.
- C.** An **inconclusive** classification indicates that the XRF cannot determine with reasonable certainty whether lead is present on the testing combination at or above the standard. An inconclusive XRF result is any value falling within the inconclusive range on the PCS (including the boundary values defining the range). In single-family housing, all inconclusive results should be confirmed by analysis by a laboratory recognized by EPA, under NLLAP, for analysis of lead in paint, unless the client wishes to assume that all inconclusive results are positive.
- D.** **Positive, negative, and inconclusive** results apply to the actual testing combination and to any repetitions of the testing combination that were not tested in the room equivalents. Positive results also apply to similar component types in room equivalents that were not tested. For example, suppose that one baseboard in a room equivalent is tested, and that the inspector decided that all four baseboards are a single testing combination. The single XRF result applies to all four baseboards in that room equivalent.
- E.** When an inconclusive range is specified on the PCS, the inconclusive range includes its upper and lower bounds. XRF results are classified as positive if they are greater than the upper boundary of the inconclusive range, negative if they are less than the lower boundary of the inconclusive range, or inconclusive otherwise.
- F.** Different XRF models have different inconclusive ranges, depending on the specific XRF model and the mode of operation. The inconclusive range may also be substrate specific. In some cases, the upper and lower limits of the inconclusive range are equal; that value is called the *threshold*. If the reading is less than the threshold, then the reading is considered negative. If the reading is equal to or greater than the threshold, then the reading is considered positive. Use of the inconclusive range and threshold is detailed in the performance characteristic sheet. The categories include substrate-corrected results, if substrate correction is indicated. XRFs with *only* threshold values listed on the PCS are advantageous in that classifications of results are either positive or negative (no XRF readings are inconclusive). Note that the final inspection report should not list inconclusive readings as a third category in addition to positive and negative. There are two options for addressing inconclusive readings:
- (1) A paint chip may be sampled and sent to a laboratory recognized by EPA, under NLLAP, for analysis of lead in paint.
 - (2) If the client agrees, all inconclusive readings may be assumed to be positive. It is not permissible to assume any inconclusive reading is negative.

8. Evaluation of the Quality of the Inspection

- A.** **Repeated testing of ten surfaces.** Data from HUD's private housing lead-based paint hazard control program show that it is possible to successfully retest painted surfaces without knowing the exact spot which was tested. Select 10 testing combinations at random from the already compiled list in the "Single-Family Housing LBP Testing Data

Sheet” for retesting. If possible, the same XRF instrument used in the original inspection should be used in the retesting. If the XRF instrument used in the original inspection is not available and cannot be returned to the site, use an XRF of the same model for retesting. Use the same procedures to retest the 10 testing combinations. The 10 repeat XRF results are compared with the 10 XRF results previously made on the same testing combinations.

- (1) The repeat readings and the original readings should not be corrected for substrate bias for the purpose of this comparison. The average of the 10 repeat XRF results should not differ from the 10 original XRF results by more than the retest tolerance limit. The procedure for calculating the retest tolerance limit is specified in the PCS. If the limit is exceeded, the procedure should be repeated using 10 different testing combinations. If the retest tolerance limit is exceeded again, the original inspection is considered deficient.

9. **Inspections in Multi-family Housing.** For inspection purposes only, multi-family housing is defined as any group of more than four units that are similar in construction from unit to unit.

Selection of housing units, common areas, and exterior site areas. The first step in selecting housing units is to identify buildings in the development with a common construction based on written documentation or visual evidence of construction type. Such buildings can be grouped together for sampling purposes. For example, if two buildings in the development were built at the same time by the same builder and appear to be of similar construction, all of the units in the two buildings can be grouped for sampling purposes, as can the common areas, and exterior site areas. Units can have different sizes, floor plans, and number of bedrooms and still be grouped.

Number of Units to be Tested in Multi-family Building or Developments

Number of Similar Units, Similar Common Areas, or Similar Exterior Sites	Pre-1960 or Unknown-Age Building or Development: Number of Units to Test	1960-1977 Building or Development: Number of Units to Test
1-10	All	All
11-13	All	10
14	All	10
15	All	12
16-17	All	13
18	All	14
19	All	15
20	All	16
21-26	20	16
27	21	17
28	22	18
29	23	18
30	23	19
31	24	19
32	25	19
33-34	26	19
35	27	19

Number of Similar Units, Similar Common Areas, or Similar Exterior Sites	Pre-1960 or Unknown-Age Building or Development: Number of Units to Test	1960-1977 Building or Development: Number of Units to Test
36	28	19
37	29	19
38-39	30	20
40-48	31	21
49-50	31	22
51	32	22
52-53	33	22
54	34	22
55-56	35	22
57-58	36	22
59	37	23
60-69	38	23
70-73	38	24
74-75	39	24
76-77	40	24
78-79	41	24
80-88	42	24
89-95	42	25
96-97	43	25
98-99	44	25
100-109	45	25
110-117	45	26
118-119	46	26
120-138	47	26
139-157	48	26
158-159	49	26
160-177	49	27
178-197	50	27
198-218	51	27
219-258	52	27
259-279	53	27
280-299	53	28
300-379	54	28
380-499	55	28
500-776	56	28
777-939	57	28
940-1004	57	29
1005-1022	58	29
1023-1032	59	29
1033-1039	59	30
1500	87	44
2000	116	58
2500	145	73
3000	174	87
3500	203	102

Number of Similar Units, Similar Common Areas, or Similar Exterior Sites	Pre-1960 or Unknown-Age Building or Development: Number of Units to Test	1960-1977 Building or Development: Number of Units to Test
4000	232	116

- (1) The specific units to be tested should be chosen randomly from a list of all units in each building or buildings. (For brevity, just “units” are mentioned in describing the random selection procedure, but the procedure is the same for similar units, similar common areas, and similar exterior sites.) The “Selection of Units” form or a comparable form may be used to aid in the selection process. A complete list of all units in each group should be used and a separate identifying sequential number must be assigned to each unit. For example, if apartment addresses are shown as 1A, 1B, 2A, 2B etc., they must be given a sequence number (1, 2, 3, 4, etc.).

Note: Units without identifiers cannot not be selected for inspection and would bias the sampling. The list of units should be complete and verified by consulting building plans or by a physical inspection of the development.

- (2) Specific units to be tested should be selected randomly.

Note: Tables of random numbers are often included in statistics books. Today’s common full-function computer spreadsheet software products have random number generator functions of sufficient quality for use in lead-based paint inspections.

In Microsoft Excel the code =RANDBETWEEN (X,Y), where X is the first unit number in the list and Y is the final unit number in the list, will generate a random whole number that can be used to randomly select a unit for sampling. The Rand between function is also available in other software, such as OpenOffice.

Inspectors are, therefore, advised to use them to obtain the random numbers, which can then be used to select the specific numbered units.

- (a) The “Selection of Units” form is completed by filling in as many random numbers as are needed in the appropriate column. Numbers for the third column are obtained by multiplying the total development size by each random number. Numbers for the fourth column are obtained by rounding up from the previous calculation to the next whole number. If the whole number in the fourth column has already been selected, that selection should not be entered again. The notation “DUP” should be entered to show that the selection was a duplicate. This process should continue until the required number of distinct sample numbers has been selected. Common areas and exterior room equivalents should be identified at this time, but they are not considered to be separate units.

B. Listing testing combinations and common areas. The “Multi-family Housing LBP Testing Data Sheet” form or a comparable form should be used to list the testing

combinations in each unit, common area and exterior site that was selected for inspection. In multi-family housing, the inventory of testing combinations often will be similar for units that have the same number of bedrooms. The inspector should, however, list testing combinations that are unique to each tested unit. For example, some units may contain built-in cabinets while others do not. The selection of testing combinations should, therefore, be carried out independently in each inspected unit.

- (1) As in single family housing, take readings on all testing combinations in all room equivalents in each unit selected for testing. However, common areas need to be identified and tested as well.

C. Common areas. Similar common areas and similar exterior sites must always be tested, but in some cases, they can be sampled in much the same way that dwelling units are. Common areas and building exteriors typically have a similar painting history from one building to the next. In multi-family housing, each common area (such as a building lobby, laundry room, or hallway) can be treated like a dwelling unit. If there are multiple similar common areas, they may be grouped for sampling purposes in exactly the same way as regular dwelling units are. However, dwelling units, common areas and exterior sites cannot all be mixed together in a single group.

- (1) All testing combinations within each common area or on building exteriors selected for testing must be inspected. This includes playground equipment, benches and miscellaneous testing combinations located throughout the development. The specific common areas and building exteriors to test should be randomly selected, in much the same way as specific units are selected using random numbers.
- (2) The number of common areas to test should be taken from the above table. In this instance, common areas and building exteriors can be treated in the same way as housing units (although they are not to be confused with true housing units).

10. Classification of XRF Results in Multi-family Housing. The inspector should record each XRF reading for each testing combination on the “Multi-family Housing LBP Testing Data Sheet,” or a comparable form, and indicate whether that testing combination was classified as positive, negative, or inconclusive as described previously for single-family housing.

A. When the inspection is completed in all the selected units and the classification rules have been applied to all XRF results, the HUD “Multi-family Housing: Component Type Report” form or a comparable form should be completed. Building component types groups of like components constructed of the same substrate in the multi-family housing development are aggregated on this form. For example, grouping all interior walls would create an appropriate component type if all walls are plaster. Grouping all doors would not be appropriate; however, if some doors are metal and some are wood. At least 40 testing combinations of a given component type in a multi-family housing development must be tested to obtain the desired level of confidence in the results for that component type. If fewer than 40 testing combinations of a given component type were tested, test additional combinations of that component type. If fewer than 40 components of a given type exist in the units to be tested, test all of the components that do exist.

- B.** In some cases, additional sampling of the specific component may not be necessary. If no lead at or above the standard is found on that component type, additional measurements should be taken in other units to increase the sample size to 40. However, if all or most of the sampled component types are positive, no further sampling is needed, provided that the building owner agrees with this reduction of testing. For example, if 20 out of 60 doors are tested, and the majority is positive for lead-based paint, all similar doors in the buildings may be presumed positive; only those doors tested and found negative may be treated as negative. Note that the inspector and owner may not presume a component is negative. All required XRF testing and/or laboratory analysis must be completed to conclude that any or all components included in a given component type are negative.
- C.** The substrate and the component for each component type should be recorded on the HUD “Multi-family Housing: Component Type Report” or comparable form under the heading “Description” (for example, wooden interior doors), as should the total number of testing combinations included in the component type. In addition, for each component type, the aggregated positive, negative, and inconclusive classifications should be recorded as described below. Record the number and percentage of testing combinations classified as:
- (1) Positive for lead-based paint. This is based upon a positive XRF reading in accordance with the XRF’s Performance Characteristic Sheet;
 - (2) Low Inconclusive for lead-based paint. This is based on having XRF readings less than the midpoint of the XRF’s inconclusive range (if the XRF instrument does not have an inconclusive range (that is, it has a threshold value), this aggregation element should not be provided);
 - (3) High Inconclusive (high) for lead-based paint. This is based on having XRF readings equal to or greater than the midpoint of the XRF’s inconclusive range (if the XRF instrument does not have an inconclusive range (that is, it has a threshold value), this aggregation element should not be provided); and
 - (4) Negative for lead-based paint.
 - (5) Positive: Lead-based paint is present on one or more of the components.
 - (6) Negative: Lead-based paint is not present on the components throughout the development. (Lead may still be present at lower loadings and hazardous leaded dust may be generated during modernization, renovation, repair, remodeling, maintenance, painting or other disturbances of painted surfaces.)
- D.** The decision that lead-based paint is not present throughout the development is reached if:
- (1) 100 percent of the tested component types are negative, or
 - (2) 100 percent of the tested component types are classified as either negative or inconclusive *and* all of the inconclusive classifications have XRF readings less than the midpoint of the inconclusive range for the XRF in use.

- (3) Note: that the midpoint of the inconclusive range is *not* a threshold; it is used only for classifying XRF readings in multi-family housing in conjunction with information about other XRF readings as described here.
- (4) For cases with greater than or equal to 5% positives *and* less than 15% positives, as well as no positives but greater than 15% high inconclusive, some confirmatory laboratory testing may be needed to reach a final conclusion, unless the client wishes to assume the validity of the XRF results and that all inconclusive are positive.
- (a) For each testing combination with an inconclusive XRF reading at or above the midpoint of the inconclusive range, a paint-chip sample should be analyzed by a laboratory recognized by the EPA NLLAP for the analysis of lead in paint.
- (b) If all the laboratory-analyzed samples are negative, it is not necessary to test inconclusive XRF results below the midpoint of the inconclusive range.
- (c) If, however, *any* laboratory results are positive on a component type, all inconclusive equal to or above the midpoint of the inconclusive range should be analyzed, or they should be presumed to be positive.
- (d) Percentages of positive or inconclusive results are computed by dividing the number in each classification group by the total number of testing combinations of the component type that were tested. For example, if 245 wooden doors in a multi-family housing development were tested and 69 were classified as inconclusive with XRF readings less than the midpoint of the inconclusive range, 28 percent $[(69 / 245) \times 100 \text{ percent} = 28.2 \text{ percent}]$ should be recorded on the form in the “<1.0 percent” columns under the heading “Inconclusive.”

- 11. Unsampld Housing Units.** If a particular component type in the sampled units is classified as positive, that same component type in the un-sampled units is also classified as positive. For those cases where the number of positive components is small, further analysis may determine if there is a systematic reason for the specific mixture of positive and negative results.

Note: For example, suppose that a few porch railings tested negative, but most tested positive. Examination of the sample results in conjunction with the building records showed that the porch railings classified as positive were all original and the railings classified as negative were all recent replacements. The records did not reveal which units had replaced railings, and due to historic preservation requirements, the replacement railings were identical in appearance to the old railings. Thus, all un-sampled original porch railings could be classified as positive, and all un-sampled recently replaced porch railings could be classified as negative if at least 40 of the replaced porch railings had been tested or were determined to have been installed after 1978.

- A. Fewer than 5% positive results.** Where a small fraction of XRF readings, less than 5% percent, of a particular component type are positive, several choices are available:
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- (1) First, the inspector may confirm the results by laboratory analysis, which is considered definitive when performed; a laboratory lead result of 1.0 mg/cm² or greater (or 0.5 percent by weight or greater) is considered positive.
- (2) Second, the inspector may select a second random sample (using un-sampled units only) and test the component type in those units. If less than 2.5% of the combined set of results is positive, the component type may be considered as having lead-based paint in isolated locations, but not having lead-based paint development-wide, with a reasonable degree of confidence. Individual components that are classified positive should be considered as being lead-based painted and managed or abated appropriately.
- (3) Finally, if the client chooses not to confirm the results by laboratory analysis and not to take a second set of measurements, then the component type should be considered as having lead-based paint development-wide. The inspector may wish to advise the client that the cost of additional XRF testing or laboratory analysis is usually much less than the cost of lead abatement or interim control projects. This is of particular interest in the situation where few results are positive, because there is a significant chance that the paint, development-wide, may not be lead-based.

Appendix E: Lead Abatement Project Clearance Summary Form M

<p>State of Maine Department of Environmental Protection Lead & Asbestos Hazard Prevention Program 17 State House Station, Augusta, ME 04333 TEL (207) 287-7688 FAX (207) 287-6220 alnotifications.dep@maine.gov</p>	<p style="text-align: right;">Lead Abatement Project Clearance Summary Form M</p>
<p style="text-align: center;"><u>Important Notice</u></p> <p>This form must be completed and submitted to the Maine Department of Environmental Protection by the Maine certified Lead Inspector/Risk assessor who conducted a clearance examination of a notified lead abatement project in accordance with Maine Lead Management Regulations, 06-096 C.M.R. Chapter 424. A separate completed Lead Abatement Project Clearance Summary Form shall be submitted for each unit within a multi-family building. Submission of this form shall be within 48 hrs. of laboratory results.</p>	
<p><i>Property Information:</i></p> <p>Project Code: Abatement Contractor: Physical Address: Apt #: City: State: Maine Zip: Property Owner: Owner Mailing Address:</p> <p>City: State: Zip: Telephone #: Housing Type: <input type="checkbox"/> Private <input type="checkbox"/> Rental <input type="checkbox"/> Child Care</p>	
<p><i>Lead Inspector Information:</i></p> <p>Lead Inspector Name: ME Certification #:</p> <p>Company Name: Company Mailing Address: City: State: Zip: Telephone #:</p>	
<p><i>Lead Abatement Clearance Information:</i></p> <p>Final Lead Abatement Project Clearance Date (passed both visual assessment & dust testing): Was a "Lead-Safe Certificate" issued: <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, what is the expiration date:</p>	
<p><i>Inspector Comments:</i></p>	
<p><i>Signature:</i></p> <p>_____</p> <p>Lead Inspector Signature Date Print Name:</p>	

Appendix F: Environmental Lead Inspection/Risk Assessment Summary Form

State of Maine Department of Environmental Protection Lead & Asbestos Hazard Prevention Program 17 State House Station, Augusta, ME 04333 TEL (207) 287-7688 FAX (207) 287-6220	Environmental Lead Inspection/ Risk Assessment Summary Form Due to Department within 30 days of inspection Revised 2020
Property Information: Physical Address: Apt #: City: State: Maine Zip: Property Owner: Owner Mailing Address: City: State: Zip: Telephone #: Housing Type: Private Rental Child Care Other Building Age: Number of Rooms: If Rental, Number of Units in Building: Any Renovations Within Past 6 Months: Yes No	
Lead Inspector Information: Risk assessor/Lead Inspector Name: ME Certification #: Company Name: Company Mailing Address: City: State: Zip: Telephone #: XRF Make & Serial Number: ME Radioactive Materials License #:	
Lead Inspection Information: Lead Inspection Date: Was lead-based paint detected: Yes No If yes, was lead-based paint on: Interior Exterior Common Areas Other If yes, were lead-based paint hazards identified: Yes No Interior Exterior Common Areas Other Additional samples collected: Paint Chip Dust Water Soil Sample results: Was a "Lead-Safe Certificate" issued: Yes No If yes, what is the expiration date:	
Lead Abatement Information: Does the owner of the building plan abatement of lead-based substances: Yes No N/A If yes, will abatement be performed by: Owner Lead Abatement Contractor Undecided	
Comment: Signature: Risk assessor/Lead Inspector Signature Date Print Name:	

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