

Regulation No. 19

Lead-Based Paint Abatement

Colorado Air Quality
Control Commission



Colorado Department
of Public Health
and Environment

Regulation No. 19
Lead-Based Paint Abatement

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I. Scope and Applicability

- I.A. This Regulation No. 19 contains procedures and requirements for the accreditation of lead-based paint activities training programs, procedures and requirements for the certification of individuals and firms engaged in lead-based paint activities, and work practice standards for performing such activities. This Regulation No. 19 also requires that, except as discussed below, all lead-based paint activities, as defined in this Regulation No. 19, be performed by certified individuals and firms.
- I.B. This Regulation No. 19 applies to all individuals and firms who are engaged in lead-based paint activities as defined in Section II.B.47. of this Regulation No. 19, except persons who perform these activities within residential dwellings that they own, unless the residential dwelling is occupied by a person or persons other than the owner or the owner's immediate family while these activities are being performed, or unless a child residing in the building has been identified as having an elevated blood lead level.
- I.C. This Regulation No. 19 applies to all lead-based paint activities that are performed in target housing and child-occupied facilities and to buildings that will be converted to target housing or child-occupied facilities.
- I.D. This Regulation No. 19 applies to all projects designed to permanently eliminate lead-based paint hazards in target housing and child-occupied facilities. This Regulation No. 19 does not apply to renovation, remodeling, landscaping, or other activities when such activities are not intended nor designed to permanently eliminate lead-based paint hazards but instead are intended to repair, restore or remodel a given structure or dwelling.
- I.E. Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal and State government having jurisdiction over any property or facility, or engaged in any activity resulting, or which may result, in a lead-based paint hazard, and each officer, agent, or employee thereof shall be subject to, and comply with, all State and local requirements, both substantive and procedural, including the requirements of this Regulation No. 19 regarding lead-based paint, lead-based paint activities, and lead-based paint hazards.
- I.F. While this Regulation No. 19 establishes specific requirements for performing lead-based paint activities should they be undertaken, nothing in this Regulation No. 19 requires that the owner or occupant undertake any particular lead-based paint activity.
- I.G. [Reserved]

II. Definitions

II.A. Incorporated Materials

Some documents may be noted in this Regulation No. 19 as being incorporated by reference. Materials incorporated by reference are those in existence as of the dates indicated and do not include later amendments. The material incorporated by reference is available for public inspection during regular business hours at the Office of the Commission, located at 4300 Cherry Creek Drive South, Denver, Colorado 80246, or may be examined at any state publications depository library. Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the Office of the Commission.

II.B. Terms

Any terms that are not defined below are given the same meaning as in the Air Quality Control Commission's Common Provisions Regulation.

- II.B.1. Abatement means any measure or set of measures that will contain or permanently eliminate lead-based paint hazards, including:
- II.B.1.a. the removal of lead-based paint and lead-contaminated dust;
 - II.B.1.b. the permanent containment of lead-based paint;
 - II.B.1.c. the encapsulation of lead-based paint;
 - II.B.1.d. the replacement or enclosure of lead-painted surfaces or fixtures;
 - II.B.1.e. the removal or covering of lead-contaminated soil; and
 - II.B.1.f. all preparation, cleanup, disposal, monitoring, and clearance testing activities associated with the measures described in this Section II.B.1., of this Regulation No. 19.
- II.B.2. Accredited training program means a training program that has been accredited by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to provide training for individuals engaged in lead-based paint activities.
- II.B.3. Adequate quality control means a plan or design which ensures the authenticity, integrity, and accuracy of samples, including dust, soil, and paint chip or paint film samples. Adequate quality control also includes provisions for representative sampling.
- II.B.4. Arithmetic mean means the algebraic sum of data values divided by the number of data values (e.g., the sum of the concentration of lead in several soil samples divided by the number of samples).

- II.B.5. Certified firm means a company, partnership, corporation, sole proprietorship, association, or other business entity that performs lead-based paint activities to which the division has issued a certificate of approval pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19.
- II.B.6. Certified inspector means an individual who has been trained by an accredited training program, as defined by this Regulation No. 19, and certified by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to conduct inspections. A certified inspector also samples for the presence of lead in dust and soil for the purposes of abatement clearance testing.
- II.B.7. Certified abatement worker means an individual who has been trained by an accredited training program, as defined by this Section II. (Definitions) of this Regulation No. 19, and certified by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to perform abatement.
- II.B.8. Certified project designer means an individual who has been trained by an accredited training program, as defined by this Section II. (Definitions) of this Regulation No. 19, and certified by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to prepare abatement project designs, occupant protection plans, and abatement reports.
- II.B.9. Certified risk assessor means an individual who has been trained by an accredited training program, as defined by this Section II. (Definitions) of this Regulation No. 19, and certified by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to conduct risk assessments. A risk assessor also samples for the presence of lead in dust and soil for the purposes of abatement clearance testing.
- II.B.10. Certified supervisor means an individual who has been trained by an accredited training program, as defined by this Section II. (Definitions) of this Regulation No. 19, and certified by the division pursuant to Section III. (Training and Certification Requirements) of this Regulation No. 19 to supervise and conduct abatements, and to prepare occupant protection plans and abatement reports.
- II.B.11. Chewable surface means an interior or exterior surface painted with lead-based paint that a young child can mouth or chew. A chewable surface is the same as an “accessible surface” as defined in 42 U.S.C. 4851b(2). Hard metal substrates and other materials that cannot be dented by the bite of a young child are not considered chewable.
- II.B.12. Child-occupied facility
- II.B.12.a. Child-occupied facility means a building or portion of a building that:
- II.B.12.a.(i) was constructed prior to 1978;
- II.B.12.a.(ii) is visited regularly by the same child who is under 7 years of age;

- II.B.12.a.(iii) is visited by such child on two or more days within any week, consisting of the period from Sunday through the following Saturday, with each such visit totaling six or more hours; and
- II.B.12.a.(iv) is visited by such child a total of at least sixty hours in one year.
- II.B.12.b. "Child-Occupied Facility" includes, but is not limited to, any day-care center, preschool, or kindergarten classroom constructed prior to 1978.
- II.B.13. Clearance levels are values that indicate the maximum amount of lead permitted in dust on a surface following completion of an abatement activity.
- II.B.14. Commission means the Air Quality Control Commission as created by Section 25-7-104, C.R.S.
- II.B.15. Common area means a portion of a building that is generally accessible to all occupants. Such an area may include, but is not limited to, hallways, stairways, laundry and recreational rooms, playgrounds, community centers, garages, and boundary fences.
- II.B.16. Common area group means a group of common areas that are similar in design, construction, and function. Common area groups include, but are not limited to hallways, stairwells, and laundry rooms.
- II.B.17. Component or building component means specific design or structural elements or fixtures of a building, residential dwelling, 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, doors, door trim, floors, fireplaces, radiators and other heating units, shelves, shelf supports, stair treads, stair risers, stair stringers, newel posts, railing caps, balustrades, windows and trim (including sashes, window heads, jambs, sills or stools and troughs), built in cabinets, columns, beams, bathroom vanities, counter tops, and air conditioners; and exterior components such as: painted roofing, chimneys, flashing, gutters and downspouts, ceilings, soffits, fascias, rake boards, corner boards, bulkheads, doors and door trim, fences, floors, joists, lattice work, railings and railing caps, siding, handrails, stair risers and treads, stair stringers, columns, balustrades, window sills or stools and troughs, casings, sashes and wells, and air conditioners.
- II.B.18. Concentration means the relative content of a specific substance contained within a larger mass, such as the amount of lead (in micrograms per gram or parts per million by weight) in a sample of dust or soil.
- II.B.19. Containment means a process to protect workers and the environment by controlling exposures to the lead-contaminated dust and debris created during an abatement.
- II.B.20. Course agenda means an outline of the key topics to be covered during a training course, including the time allotted to teach each topic.

- II.B.21. Course test means an evaluation of the overall effectiveness of the training which shall test the trainees' knowledge and retention of the topics covered during the course.
- II.B.22. Course test blue print means written documentation identifying the proportion of course test questions devoted to each major topic in the course curriculum.
- II.B.23. Deteriorated paint means any interior or exterior paint or other coating that is peeling, chipping, chalking or cracking, or any paint or coating located on an interior or exterior surface or fixture that is otherwise damaged or separated from the substrate.
- II.B.24. Discipline means one of the specific types or categories of lead-based paint activities identified in this Regulation No. 19 for which individuals may receive training from accredited programs and become certified by the division. For example, "abatement worker" is a discipline.
- II.B.25. Distinct painting history means the application history, as indicated by its visual appearance or a record of application, over time, of paint or other surface coatings to a component or room.
- II.B.26. Disturb means:
- II.B.26.a. In the case of paint, any activity that causes cracking, flaking, chipping, peeling, or separation of the paint from the substrate of a building component. Activities that disturb paint include, but are not limited to, scraping, grinding, sanding, abrasive blasting, drilling, sawing, or the application of chemical strippers; encapsulation and enclosure systems that are applied to surfaces where the paint is not deteriorated typically does not disturb the paint.
 - II.B.26.b. In the case of dust or soil, any activity that causes the movement of dust or soil, such as, but not limited to, sweeping, vacuuming, digging and sifting.
- II.B.27. Division means the Air Pollution Control Division in the Department of Public Health and Environment.
- II.B.28. Documented methodologies means division recognized methods or protocols used to sample for the presence of lead in paint, dust, and soil. Documented methodologies include the U.S. Department of Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (June 1995); the EPA Guidance on Residential Lead-Based Paint, Lead Contaminated Dust, and lead-contaminated soil (Federal Register, Volume 60, No. 175, pp 47247-47257, Monday, September 11, 1995 "Guidance on Identification of Lead-Based Paint Hazard; Notice"); the EPA Residential Sampling for Lead: Protocols for Dust and Soil Sampling (EPA report number 747-R-95-001, March 1995); and other methods and guidelines determined by the division to be equivalent methods and guidelines.
- II.B.29. Dripline means the area within 3 feet surrounding the perimeter of a building.

- II.B.30. Elevated blood lead level (EBL) means an excessive absorption of lead that is a confirmed concentration of lead in whole blood of 20 µg/dl (micrograms of lead per deciliter of whole blood) for a single venous test or of 15-19 µg/dl in two consecutive tests taken 3 to 4 months apart.
- II.B.31. Encapsulant means a substance that forms a barrier between lead-based paint and the environment using a liquid-applied coating (with or without reinforcement materials) or an adhesively bonded covering material.
- II.B.32. Encapsulation means the application of an encapsulant.
- II.B.33. Enclosure means the use of rigid, durable construction materials that are mechanically fastened to the substrate in order to act as a barrier between lead-based paint and the environment.
- II.B.34. Exterior window sill means the portion of the horizontal window ledge that protrudes from the exterior of the room.
- II.B.35. Friction surface means an interior or exterior surface that is subject to abrasion or friction, including, but not limited to, certain window, floor, and stair surfaces.
- II.B.36. Guest instructor means an individual designated by the training program manager or principal instructor to provide instruction specific to the lecture, hands-on activities, or work practice components of a course.
- II.B.37. Hands-on skills assessment means an evaluation which tests the trainees' ability to satisfactorily perform the work practices and procedures identified in Section III.A.4. (Minimum Training Curriculum Requirements) of this Regulation No. 19, as well as any other skill taught in a training course.
- II.B.38. Hazardous waste means any waste as defined in 40 CFR Section 261.3.
- II.B.39. HEPA means high efficiency particulate air. A HEPA filtration system is capable of trapping and retaining at least 99.97 percent of all monodispersed particles 0.3 microns in diameter or larger.
- II.B.40. High-contact play area means any location on residential real property and on the property of a child-occupied facility or target housing where children under 7 years of age might commonly play. This term includes, but is not limited to, sandboxes, gardens, and swing sets.
- II.B.41. [Reserved]
- II.B.42. Impact surface means an interior or exterior surface that is subject to damage by repeated sudden force such as certain parts of door frames.

- II.B.43. Inspection means a surface-by-surface investigation to determine the presence of lead-based paint and the provision of a report explaining the results of the investigation.
- II.B.44. Interim controls means a set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs.
- II.B.45. Interior window sill means the portion of the horizontal window ledge that protrudes into the interior of the room.
- II.B.46. Lead-based paint means any paint containing more than six one-hundredths of one per cent by wet weight of lead metal, more than five-tenths of one percent by dry weight of lead metal, or more than one milligram per square centimeter of lead metal.
- II.B.47. Lead-based paint activities means, in the case of target housing and child-occupied facilities, inspection, risk assessment, and abatement, as defined in this Section II. (Definitions) of this Regulation No. 19.
- II.B.48. Lead-based paint hazard means any condition that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, or lead-based paint. Lead-based paint hazard also means hazardous lead-based paint, dust-lead hazard or soil-lead hazard as identified below.
- II.B.48.a. Paint-lead hazard. A paint-lead hazard is any of the following:
- II.B.48.a.(i) Any lead-based paint on a friction surface that is subject to abrasion and where the lead dust levels on the nearest horizontal surface underneath the friction surface (e.g., window sill , or floor) are equal to or greater than the dust-lead hazard levels identified in this section.
 - II.B.48.a.(ii) Any damaged or otherwise deteriorated lead-based paint on an impact surface that is caused by impact from a related building component (such as a door knob that knocks into a wall or a door that knocks against its door frame).
 - II.B.48.a.(iii) Any chewable lead-based painted surface on which there is evidence of teeth marks.
 - II.B.48.a.(iv) Any other deteriorated lead-based paint in any residential building or child-occupied facility or on the exterior of any residential building or child-occupied facility.
- II.B.48.b. Dust-lead hazard. A dust-lead hazard is surface dust in a residential dwelling or child-occupied facility that contains a mass-per-area concentration of lead equal

to or exceeding 40 $\mu\text{g}/\text{ft}^2$ on floors or 250 $\mu\text{g}/\text{ft}^2$ on interior window sills based on wipe samples.

- II.B.48.c. Soil-lead hazard. A soil-lead hazard is bare soil on residential real property or on the property of a child-occupied facility that contains total lead equal to or exceeding 400 parts per million ($\mu\text{g}/\text{g}$) in a play area or average of 1,200 parts per million of bare soil in the rest of the yard based on soil samples.
- II.B.49. Lead-contaminated dust means surface dust in residential dwellings or child-occupied facilities that contains an area or mass concentration of lead equal to or in excess of 40 $\mu\text{g}/\text{ft}^2$ on interior floors, 250 $\mu\text{g}/\text{ft}^2$ on interior window sills, 400 $\mu\text{g}/\text{ft}^2$ in window troughs, 500 $\mu\text{g}/\text{ft}^2$ on exterior window sills, and 800 $\mu\text{g}/\text{ft}^2$ on exterior surfaces (e.g. patios, porches, sidewalks).
- II.B.50. Lead-contaminated soil means bare soil on residential real property and on the property of a child-occupied facility that contains lead equal to or in excess of 400 $\mu\text{g}/\text{g}$ in a play area or in excess of 1,200 $\mu\text{g}/\text{g}$ averaged in the rest of the yard (non-play areas).
- II.B.51. Lead-contaminated waste means any waste generated as a result of lead-based paint activities or the deterioration of lead-based paint in a pre-1978 residential dwelling or child-occupied facility. This term includes, but is not limited to, lead-based paint chips, lead-contaminated dust, lead-contaminated soil, abatement control devices, disposable equipment and clothing, bags and other similar packaging contaminated with lead, waste water, architectural components, and chemical stripper sludge.
- II.B.52. Lead-hazard screen means a limited risk assessment activity that involves limited paint and dust sampling as described in Section IV.B. (Lead Hazard Screen) of this Regulation No. 19.
- II.B.53. Living area means any area of a residential dwelling used by one or more children under 7 years of age, including, but not limited to, living rooms, kitchen areas, dens, play rooms, and children's bedrooms.
- II.B.54. Loading means the quantity of a specific substance present per unit of surface area, such as the amount of lead in micrograms contained in the dust collected from a certain surface area divided by the surface area in square feet or square meters.
- II.B.55. Mid-yard means an area of a residential yard approximately midway between the dripline of a residential building and the nearest property boundary or between the driplines of a residential building and another building on the same property.
- II.B.56. Multi-family dwelling means a structure that contains more than one separate residential dwelling unit, 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.

- II.B.57. Paint means a liquid mixture, usually of a solid pigment in a liquid vehicle, used as a decorative or protective coating. This term includes, but is not limited to, primer, lacquer, polyurethane, and wood stain.
- II.B.58. Paint in poor condition means more than two square feet of deteriorated paint per room or equivalent, twenty square feet of deteriorated paint on the exterior building, or ten percent of the total surface area of deteriorated paint on an interior or exterior type of component with a small surface area.
- II.B.59. Permanently covered soil means soil which has been separated from human contact by the placement of a barrier consisting of solid, relatively impermeable materials, such as pavement or concrete. Grass, mulch, and other landscaping materials are not considered permanent covering.
- II.B.60. Person means any individual, public or private corporation, partnership, association, firm, trust, estate, the United States or the state or any department, institution, or agency thereof, any municipal corporation, county, city and county, or other political subdivision of the state, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.
- II.B.61. Play area means an area of frequent soil contact by children of less than 7 years of age as indicated by, but not limited to, such factors including the following; the presence of play equipment (e.g., sandboxes, swing sets and sliding boards), toys, or other children's possessions, observations of play patterns, or information provided by parents, residents, care givers, or property owners.
- II.B.62. Principal instructor means the individual who has the primary responsibility for organizing and teaching a particular course.
- II.B.63. Recognized laboratory means an environmental laboratory recognized by EPA pursuant to Toxic Substances Control Act Section 405(b) as being capable of performing an analysis for lead compounds in paint, soil, and dust.
- II.B.64. Reduction means measures designed to reduce or eliminate human exposure to lead-based paint hazards through methods including interim controls and abatement.
- II.B.65. Residential building means a building containing one or more residential dwellings.
- II.B.66. Residential dwelling means (1) a detached single family dwelling unit, including attached structures such as porches and stoops; or (2) a single family dwelling unit in a structure that contains more than one separate residential dwelling unit, 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.
- II.B.67. Risk assessment means (1) an on-site investigation to determine the existence, nature, severity, and location of lead-based paint hazards, and (2) the provision of a report by the individual or the firm conducting the risk assessment, explaining the results of the investigation and options for reducing lead-based paint hazards.

- II.B.68. Room means a separate part of the inside of a building, such as a bedroom, living room, dining room, kitchen, bathroom, laundry room, or utility room. To be considered a separate room, the room must be separated from adjoining rooms by built-in walls or archways that extend at least 6 inches from an intersecting wall. Half walls or bookcases count as room separators if built-in. Moveable or collapsible partitions or partitions consisting solely of shelves or cabinets are not considered built-in walls. A screened in porch that is used as a living area is a room.
- II.B.69. Soil sample means a sample collected in a representative location using ASTM E1727, "Standard Practice for Field Collection of Soil Samples for Lead Determination by Atomic Spectrometry Techniques," or equivalent method.
- II.B.70. Target housing means housing constructed prior to 1978 other than any zero-bedroom dwelling or any housing for the elderly or a person with a disability; except that "target housing" includes housing for the elderly or a person with a disability if a child under 7 years of age resides or is expected to reside in the housing.
- II.B.71. Training curriculum means an established set of course topics for instruction in an accredited training program for a particular discipline designed to provide specialized knowledge and skills.
- II.B.72. Training hour means at least 50 minutes of actual learning, including, but not limited to, time devoted to lecture, learning activities, small group activities, demonstrations, evaluations, and/or hands-on experience.
- II.B.73. Training manager means the individual responsible for administering a training program and monitoring the performance of principal instructors and guest instructor.
- II.B.74. Visible emissions means any emissions which are visually detectable without the aid of instruments, coming from lead-based paint or lead-contaminated waste material.
- II.B.75. Visual inspection for clearance testing means the visual examination of a residential dwelling or a child-occupied facility following an abatement to determine whether or not the abatement has been successfully completed.
- II.B.76. Visual inspection for risk assessment means the visual examination of a residential dwelling or a child-occupied facility to determine the existence of deteriorated lead-based paint or other potential sources of lead-based paint hazards.
- II.B.77. Weighted arithmetic mean means the arithmetic mean of sample results weighted by the number of subsamples in each sample. Its purpose is to give influence to a sample relative to the surface area it represents. A single surface sample is comprised of a single subsample. A composite sample may contain from two to four subsamples of the same area as each other and of each single surface sample in the composite. The weighted arithmetic mean is obtained by summing, for all samples, the product of the sample's result multiplied by the number of subsamples in the sample, and dividing the sum by the total number of subsamples contained in all samples. For example, the weighted arithmetic mean of a single surface sample containing 60

$\mu\text{g}/\text{ft}^2$, a composite sample (three subsamples) containing $100 \mu\text{g}/\text{ft}^2$, and a composite sample (4 subsamples) containing $110 \mu\text{g}/\text{ft}^2$ is $100 \mu\text{g}/\text{ft}^2$. This result is based upon the equation $(60+(3*100)+(4*110))/(1+3+4)$.

- II.B.78. Window trough means, for a typical double-hung window, the portion of the exterior window sill between the interior window sill (or stool) and the frame of the storm window. If there is no storm window, the window trough is the area that receives both the upper and lower window sashes when they are both lowered. The window trough is sometimes referred to as the window well.
- II.B.79. Wipe sample means a sample collected by wiping a representative surface of known area, as determined by ASTM E1728, "Standard Practice for Field Collection of Settled Dust Samples Using Wipe Sampling Methods for Lead Determination by Atomic Spectrometry Techniques, or equivalent method, with an acceptable wipe material as defined in ASTM E1792, "Standard Specification for Wipe Sampling Materials for Lead in Surface Dust."
- II.B.80. Work area means an area covered or contained by polyethylene sheeting to prevent the spread of lead contamination; and an area within which concentrations of lead, exceed, or may exceed, clearance levels.
- II.B.81. Working day means Monday through Friday and including holidays that fall on any of the days Monday through Friday.

III. Training and Certification Requirements

III.A. Accreditation of Training Programs: Target Housing and Child-occupied Facilities

III.A.1. Scope

III.A.1.a. A training program may seek accreditation to offer lead-based paint activities courses in any of the following disciplines: inspector, risk assessor, supervisor, project designer, and abatement worker. A training program may also seek accreditation to offer refresher courses for each of the above listed disciplines.

III.A.1.b. A training program shall not provide, offer, or claim to provide division-accredited lead-based paint activities courses without applying for and receiving accreditation from the division as required under Section III.A.2. (Application Process) of this Regulation No. 19 on or after the effective date of this Regulation No. 19.

III.A.2. Application Process

The following are procedures a training program shall follow to receive division accreditation to offer lead-based paint activities courses:

III.A.2.a. A training program seeking accreditation shall submit a written application to the division containing the following information:

III.A.2.a.(i) the training program's name, address, and telephone number;

III.A.2.a.(ii) a list of courses for which it is applying for accreditation; and

III.A.2.a.(iii) a statement signed by the training program manager certifying that the training program meets the requirements established in Section III.A.3. (Requirements for the Accreditation of Training Programs) of this Regulation No. 19. If a training program uses EPA-recommended model training materials, or training materials approved by a State or Indian Tribe that has been authorized by EPA under 40 C.F.R. Part 745, Subpart Q the training program manager shall include a statement certifying that, as well.

III.A.2.a.(iv) If a training program does not use EPA-recommended model training materials or training materials approved by an authorized State or Indian Tribe, its application for accreditation shall also include:

III.A.2.a.(iv)(A) a copy of the student and instructor manuals, or other materials to be used for each course; and

III.A.2.a.(iv)(B) a copy of the course agenda for each course.

- III.A.2.a.(v) All training programs shall include in their application for accreditation the following:
 - III.A.2.a.(v)(A) a description of the facilities and equipment to be used for lecture and hands-on training;
 - III.A.2.a.(v)(B) a copy of the course test blue print for each course;
 - III.A.2.a.(v)(C) a description of the activities and procedures that will be used for conducting the assessment of hands-on skills for each course; and
 - III.A.2.a.(v)(D) a copy of the quality control plan as described in Section III.A.3.i. of this Regulation No. 19.
- III.A.2.b. If a training program meets the requirements in Section III.A.3. (Requirements for the Accreditation of Training Programs) of this Regulation No. 19, then the division shall approve the application for accreditation no more than 180 days after receiving a complete application from the training program. In the case of approval, a certificate of accreditation shall be sent to the applicant. In the case of disapproval, a letter describing the reasons for disapproval shall be sent to the applicant. Prior to disapproval, the division may, at its discretion, work with the applicant to address inadequacies in the application for accreditation. The division may also request additional materials retained by the training program under Section III.A.7. (Training Program Recordkeeping Requirements) of this Regulation No. 19. If the division disapproves a training program's application, the program may reapply for accreditation at any time.
- III.A.2.c. A training program may apply for accreditation to offer courses or refresher courses in as many disciplines as it chooses. A training program may seek accreditation for additional courses at any time as long as the program can demonstrate that it meets the requirements of this Section III. (Training and Certification Requirements) of this Regulation No. 19.
- III.A.2.d. A training program which has received accreditation from US EPA or another state whose training and certification requirements are at least as stringent as Colorado's must first apply for and receive accreditation before conducting training in Colorado.
- III.A.2.e. A training program must notify the division, on a form provided by the division, of scheduled courses at least 2 weeks prior to the offering of the course. The training program must receive written approval for each class from the division prior to conducting the training.
- III.A.2.f. Fees for accreditation of training programs shall be as follows:
 - III.A.2.f.(i) Inspector (24-hour) course --\$1,500;
 - III.A.2.f.(ii) Risk Assessor (16-hour) course -- \$1,000;

- III.A.2.f.(iii) Supervisor (32-hour) course -- \$2,000;
- III.A.2.f.(iv) Project Designer (8-hour) course -- \$500;
- III.A.2.f.(v) Abatement Worker (16-hour) course -- \$1,000; and
- III.A.2.f.(vi) All refresher training courses -- \$500.

III.A.3. Requirements for the Accreditation of Training Programs

For a training program to obtain accreditation from the division to offer lead-based paint activities courses, the program shall meet the following requirements:

III.A.3.a. The training program shall employ a training manager who has:

- III.A.3.a.(i) at least 2 years of experience, education, or training in teaching workers or adults; or
- III.A.3.a.(ii) a bachelor's or graduate degree in building construction technology, engineering, industrial hygiene, safety, public health, education, business administration or program management or a related field; or
- III.A.3.a.(iii) two years of experience in managing a training program specializing in environmental hazards; and
- III.A.3.a.(iv) demonstrated experience, education, or training in the construction industry including: lead or asbestos abatement, painting, carpentry, renovation, remodeling, occupational safety and health, or industrial hygiene.

III.A.3.b. The training manager shall designate a qualified principal instructor for each course who has:

- III.A.3.b.(i) demonstrated experience, education, or training in teaching workers or adults;
- III.A.3.b.(ii) successfully completed at least 16 hours of any EPA-accredited or EPA-authorized State or Tribal-accredited lead-specific training; and
- III.A.3.b.(iii) demonstrated experience, education, or training in lead or asbestos abatement, painting, carpentry, renovation, remodeling, occupational safety and health, or industrial hygiene.

III.A.3.c. The principal instructor shall be responsible for the organization of the course and oversight of the teaching of all course material. The training manager may designate guest instructors as needed to provide instruction specific to the lecture, hands-on activities, or work practice components of a course.

- III.A.3.d. The following documents shall be recognized by the division as evidence that training managers and principal instructors have the education, work experience, training requirements or demonstrated experience, specifically listed in Sections III.A.3.a. and III.A.7. (Training Program Recordkeeping Requirements) of this Regulation No. 19. This documentation need not be submitted with the accreditation application, but, if not submitted, shall be retained by the training program as required by the recordkeeping requirements contained in Section III.A.7. (Training Program Recordkeeping Requirements) of this Regulation No. 19. Those documents include the following:
- III.A.3.d.(i) official academic transcripts or diploma as evidence of meeting the education requirements;
 - III.A.3.d.(ii) résumés, letters of reference, or documentation of work experience, as evidence of meeting the work experience requirements; and
 - III.A.3.d.(iii) certificates from train-the-trainer courses and lead-specific training courses, as evidence of meeting the training requirements.
- III.A.3.e. The training program shall ensure the availability of, and provide adequate facilities for, the delivery of the lecture, course test, hands-on training, and assessment activities. This includes providing training equipment that reflects current work practices and maintaining or updating the equipment and facilities as needed.
- III.A.3.f. To become accredited in the following disciplines, the training program shall provide training courses that meet the following training hour requirements:
- III.A.3.f.(i) The inspector course shall last a minimum of 24 training hours, with a minimum of 8 hours devoted to hands-on training activities. The minimum curriculum requirements for the inspector course are contained in Section III.A.4.a. (Inspector) of this Regulation No. 19.
 - III.A.3.f.(ii) The risk assessor course shall last a minimum of 16 training hours, with a minimum of 4 hours devoted to hands-on training activities. The minimum curriculum requirements for the risk assessor course are contained in Section III.A.4.b. (Risk Assessor) of this Regulation No. 19.
 - III.A.3.f.(iii) The supervisor course shall last a minimum of 32 training hours, with a minimum of 8 hours devoted to hands-on activities. The minimum curriculum requirements for the supervisor course are contained in Section III.A.4.c. (Supervisor) of this Regulation No. 19.
 - III.A.3.f.(iv) The project designer course shall last a minimum of 8 training hours. The minimum curriculum requirements for the project designer course are contained in Section III.A.4.d. (Project Designer) of this Regulation No. 19.

- III.A.3.f.(v) The abatement worker course shall last a minimum of 16 training hours, with a minimum of 8 hours devoted to hands-on training activities. The minimum curriculum requirements for the abatement worker course are contained in Section III.A.4.e. (Abatement Worker) of this Regulation No. 19.
- III.A.3.g. For each course offered, the training program shall conduct either a course test at the completion of the course, and if applicable, a hands-on skills assessment, or in the alternative, a proficiency test for that discipline. Each individual must successfully complete the hands-on skills assessment and receive a passing score on the course test to pass any course, or successfully complete a proficiency test.
 - III.A.3.g.(i) The training manager is responsible for maintaining the validity and integrity of the hands-on skills assessment or proficiency test to ensure that it accurately evaluates the trainees' performance of the work practices and procedures associated with the course topics contained in Section III.A.4. (Minimum Training Curriculum Requirements) of this Regulation No. 19.
 - III.A.3.g.(ii) The training manager is responsible for maintaining the validity and integrity of the course test to ensure that it accurately evaluates the trainees' knowledge and retention of the course topics.
 - III.A.3.g.(iii) The course test shall be developed in accordance with the test blueprint submitted with the training accreditation application.
- III.A.3.h. The training program shall issue unique course completion certificates to each individual who passes the training course. The course completion certificate shall include:
 - III.A.3.h.(i) the name, a unique identification number, and address of the individual;
 - III.A.3.h.(ii) the name of the particular course that the individual completed;
 - III.A.3.h.(iii) dates of course completion/test passage; and
 - III.A.3.h.(iv) the name, address, and telephone number of the training program.
- III.A.3.i. The training manager shall develop and implement a quality control plan. The plan shall be used to maintain and improve the quality of the training program over time. This plan shall contain at least the following elements:
 - III.A.3.i.(i) procedures for periodic revision of training materials and the course test to reflect innovations in the field; and
 - III.A.3.i.(ii) procedures for the training manager's annual review of principal instructor competency.

- III.A.3.j. The training program shall offer courses which teach the work practice standards for conducting lead-based paint activities contained in this Section III. (Training and Certification Requirements) of this Regulation No. 19, and other standards developed by EPA pursuant to Title IV of TSCA. These standards shall be taught in the appropriate courses to provide trainees with the knowledge needed to perform the lead-based paint activities they are responsible for conducting.
- III.A.3.k. The training manager shall be responsible for ensuring that the training program complies at all times with all of the requirements in this Section III. (Training and Certification Requirements) of this Regulation No. 19.
- III.A.3.l. The training manager shall allow the division, at no cost to the division, to audit the training program to verify the contents of the application for accreditation as described in Section III.A.2. (Application Process) of this Regulation No. 19.

III.A.4. Minimum Training Curriculum Requirements

To become accredited to offer lead-based paint courses instruction in the specific disciplines listed below, training programs must ensure that their courses of study include, at a minimum, the following course topics. Requirements ending in an asterisk (*) indicate areas that require hands-on activities as an integral component of the course.

III.A.4.a. Inspector

- III.A.4.a.(i) Role and responsibilities of an inspector.
- III.A.4.a.(ii) Background information on lead and its adverse health effects.
- III.A.4.a.(iii) Background information on Federal, State, and local regulations and guidance that pertains to lead-based paint and lead-based paint activities.
- III.A.4.a.(iv) Lead-based paint inspection methods, including selection of rooms and components for sampling or testing.*
- III.A.4.a.(v) Paint, dust, and soil sampling methodologies.*
- III.A.4.a.(vi) Clearance standards and testing, including random sampling.*
- III.A.4.a.(vii) Preparation of the final inspection report.*
- III.A.4.a.(viii) Recordkeeping.

III.A.4.b. Risk Assessor

- III.A.4.b.(i) Role and responsibilities of a risk assessor.
- III.A.4.b.(ii) Collection of background information to perform a risk assessment.

- III.A.4.b.(iii) Sources of environmental lead contamination such as paint, surface dust and soil, water, air, packaging, and food.
- III.A.4.b.(iv) Visual inspection for the purposes of identifying potential sources of lead-based paint hazards.*
- III.A.4.b.(v) Lead hazard screen protocol.
- III.A.4.b.(vi) Sampling for other sources of lead exposure.*
- III.A.4.b.(vii) Interpretation of lead-based paint and other lead sampling results, including all applicable State or Federal guidance or regulations pertaining to lead-based paint hazards.*
- III.A.4.b.(viii) Development of hazard control options, the role of interim controls, and operations and maintenance activities to reduce lead-based paint hazards.
- III.A.4.b.(ix) Preparation of a final risk assessment report.

III.A.4.c. Supervisor

- III.A.4.c.(i) Role and responsibilities of a supervisor.
- III.A.4.c.(ii) Background information on lead and its adverse health effects.
- III.A.4.c.(iii) Background information on Federal, State, and local regulations and guidance that pertain to lead-based paint abatement.
- III.A.4.c.(iv) Liability and insurance issues relating to lead-based paint abatement.
- III.A.4.c.(v) Risk assessment and inspection report interpretation.*
- III.A.4.c.(vi) Development and implementation of an occupant protection plan and abatement report.
- III.A.4.c.(vii) Lead-based paint hazard recognition and control.*
- III.A.4.c.(viii) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices.*
- III.A.4.c.(ix) Interior dust abatement/cleanup or lead-based paint hazard control and reduction methods.*
- III.A.4.c.(x) Soil and exterior dust abatement or lead-based paint hazard control and reduction methods.*
- III.A.4.c.(xi) Clearance standards and testing.

III.A.4.c.(xii) Cleanup and waste disposal.

III.A.4.c.(xiii) Recordkeeping.

III.A.4.d. Project Designer

III.A.4.d.(i) Role and responsibilities of a project designer.

III.A.4.d.(ii) Development and implementation of an occupant protection plan for large scale abatement projects.

III.A.4.d.(iii) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices for large-scale abatement projects.

III.A.4.d.(iv) Interior dust abatement/cleanup or lead hazard control and reduction methods for large-scale abatement projects.

III.A.4.d.(v) Clearance standards and testing for large scale abatement projects.

III.A.4.d.(vi) Integration of lead-based paint abatement methods with modernization and rehabilitation projects for large scale abatement projects.

III.A.4.e. Abatement Worker

III.A.4.e.(i) Role and responsibilities of an abatement worker.

III.A.4.e.(ii) Background information on lead and its adverse health effects.

III.A.4.e.(iii) Background information on Federal, State and local regulations and guidance that pertain to lead-based paint abatement.

III.A.4.e.(iv) Lead-based paint hazard recognition and control.*

III.A.4.e.(v) Lead-based paint abatement and lead-based paint hazard reduction methods, including restricted practices.*

III.A.4.e.(vi) Interior dust abatement methods/cleanup or lead-based paint hazard reduction.*

III.A.4.e.(vii) Soil and exterior dust abatement methods or lead-based paint hazard reduction.*

III.A.4.f. The training program shall allow the division, without any cost to the division, to audit the training program to evaluate the quality of the course as well as to verify the contents of the application for accreditation as described in Section III.A.2. (Application Process) of this Regulation No. 19.

III.A.5. Requirements for the Accreditation of Refresher Training Programs

A training program may seek accreditation to offer refresher training courses in any of the following disciplines: inspector, risk assessor, supervisor, project designer, and abatement worker. To obtain division accreditation to offer refresher training, a training program must meet the following minimum requirements:

- III.A.5.a. Each refresher course shall review the curriculum topics of the full-length courses listed under Section III.A.4. (Minimum Training Curriculum Requirements) of this Regulation No. 19, as appropriate. In addition, to become accredited to offer refresher training courses, training programs shall ensure that their courses of study include, at a minimum, the following:
 - III.A.5.a.(i) An overview of current safety practices relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
 - III.A.5.a.(ii) Current laws and regulations relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
 - III.A.5.a.(iii) Current technologies relating to lead-based paint activities in general, as well as specific information pertaining to the appropriate discipline.
- III.A.5.b. Each refresher course, except for the project designer course, shall last a minimum of 8 training hours. The project designer refresher course shall last a minimum of 4 training hours.
- III.A.5.c. For each course offered, the training program shall conduct a hands-on assessment (if applicable), and at the completion of the course, a course test.
- III.A.5.d. A training program may apply for accreditation of a refresher course concurrently with its application for accreditation of the corresponding training course as described in Section III.A.2. (Application Process) of this Regulation No. 19. If so, the division shall use the approval procedure described in Section III.A.2. (Application Process) of this Regulation No. 19. In addition, the minimum requirements contained in Sections III.A.3. (Requirements for the Accreditation of Training Programs) (except for the requirements in Section III.A.3.f.), and III.A.5.a., III.A.5.b., and III.A.5.c. of this Regulation No. 19 shall also apply.
- III.A.5.e. A training program seeking accreditation to offer refresher training courses only shall submit a written application to the division containing the following information:
 - III.A.5.e.(i) The refresher training program's name, address, and telephone number.
 - III.A.5.e.(ii) A list of courses for which it is applying for accreditation.

- III.A.5.e.(iii) A statement signed by the training program manager certifying that the refresher training program meets the minimum requirements established in Section III.A.3. (Requirements for the Accreditation of Training Programs) of this Regulation No. 19, except for the requirements in Section III.A.3.f. of this Regulation No. 19. If a training program uses US EPA-developed model training materials, or training materials approved by a State or Indian Tribe that has been authorized by US EPA under 40 C.F.R., Section 745.324 to develop its refresher training course materials, the training manager shall include a statement certifying that, as well.
- III.A.5.e.(iv) If the refresher training course materials are not based on US EPA-developed model training materials or training materials approved by an authorized State or Indian Tribe, the training program's application for accreditation shall include:
- III.A.5.e.(iv)(A) a copy of the student and instructor manuals to be used for each course; and
 - III.A.5.e.(iv)(B) a copy of the course agenda for each course.
- III.A.5.e.(v) All refresher training programs shall include in their application for accreditation the following:
- III.A.5.e.(v)(A) a description of the facilities and equipment to be used for lecture and hands-on training;
 - III.A.5.e.(v)(B) a copy of the course test blue print for each course;
 - III.A.5.e.(v)(C) a description of the activities and procedures that will be used for conducting the assessment of hands-on skills for each course (if applicable); and
 - III.A.5.e.(v)(D) a copy of the quality control plan as described in Section III.A.3.i. of this Regulation No. 19.
- III.A.5.e.(vi) The requirements in Sections III.A.3.a. through III.A.3.e., and III.A.3.g. through III.A.3.l. of this Regulation No. 19 apply to refresher training providers.
- III.A.5.e.(vii) If a refresher training program meets the requirements listed in this Section III.A.5. (Requirements for the Accreditation of Training Programs) of this Regulation No. 19, then the division shall approve the application for accreditation no more than 180 days after receiving a complete application from the refresher training program. In the case of approval, a certificate of accreditation shall be sent to the applicant. In the case of disapproval, a letter describing the reasons for disapproval shall be sent to the applicant. Prior to disapproval, the division may, at

its discretion, work with the applicant to address inadequacies in the application for accreditation. The division may also request additional materials retained by the refresher training program under Section III.A.7. (Training Program Recordkeeping Requirements) of this Regulation No. 19. If a refresher training program's application is disapproved, the program may reapply for accreditation at any time.

III.A.6. Re-accreditation of Training Programs

- III.A.6.a. Unless re-accredited, a training program's accreditation (including refresher training accreditation) shall expire 4 years after the date of issuance. If a training program meets the requirements of this section, the training program shall be re-accredited.
- III.A.6.b. A training program seeking re-accreditation shall submit an application to the division no later than 180 days before its accreditation expires. If a training program does not submit its application for re-accreditation by that date, the division cannot guarantee that the program will be re-accredited before the end of the accreditation period.
- III.A.6.c. The training program's application for re-accreditation shall contain:
 - III.A.6.c.(i) The training program's name, address, and telephone number.
 - III.A.6.c.(ii) A list of courses for which it is applying for re-accreditation.
 - III.A.6.c.(iii) A description of any changes to the training facility, equipment or course materials since its last application was approved that adversely affects the students ability to learn.
 - III.A.6.c.(iv) A statement signed by the program manager stating:
 - III.A.6.c.(iv)(A) That the training program complies at all times with all requirements in Sections III.A.3. (Requirements for the Accreditation of Training Programs) and III.A.5. (Requirements for the Accreditation of Refresher Training Programs) of this Regulation No. 19, as applicable; and
 - III.A.6.c.(iv)(B) The recordkeeping and reporting requirements of Section III.A.7. (Training Program Recordkeeping Requirements) of this Regulation No. 19 shall be followed.
- III.A.6.d. The training program shall allow the division, at no cost to the division, to audit the training program to verify the contents of the application for re-accreditation as described in Section III.A.6.c. of this Regulation No. 19.

III.A.6.e. Fees for re-accreditation of training programs shall be as follows:

- III.A.6.e.(i) Inspector (24-hour) course --\$1,500;
- III.A.6.e.(ii) Risk Assessor (16-hour) course -- \$1,000;
- III.A.6.e.(iii) Supervisor (32-hour) course -- \$2,000;
- III.A.6.e.(iv) Project Designer (8-hour) course -- \$500;
- III.A.6.e.(v) Abatement Worker (16-hour) course -- \$1,000; and
- III.A.6.e.(vi) Any refresher training course -- \$500.

III.A.7. Training Program Recordkeeping Requirements

III.A.7.a. Accredited training programs shall maintain, and make available to the division, upon request, the following records:

- III.A.7.a.(i) all documents specified in Section III.A.3.d. of this Regulation No. 19 that demonstrate the qualifications listed in Sections III.A.3.a. and III.A.3.b. of this Regulation No. 19 of the training manager and principal instructors;
- III.A.7.a.(ii) current curriculum/course materials and documents reflecting any changes made to these materials;
- III.A.7.a.(iii) the course test blue print; and
- III.A.7.a.(iv) information regarding how the hands-on assessment is conducted including, but not limited to:
 - III.A.7.a.(iv)(A) who conducts the assessment;
 - III.A.7.a.(iv)(B) how the skills are graded;
 - III.A.7.a.(iv)(C) what facilities are used; and
 - III.A.7.a.(iv)(D) the pass/fail rate.
- III.A.7.a.(v) the quality control plan as described in Section III.A.3.i. of this Regulation No. 19;
- III.A.7.a.(vi) results of the students' hands-on skills assessments and course tests, and a record of each student's course completion certificate; and
- III.A.7.a.(vii) any other material not listed above in Sections III.A.7.a.(i) through III.A.7.a.(vi) of this Regulation No. 19 that was submitted to the division as part of the program's application for accreditation.

III.A.7.b. The training program shall retain these records at the address specified on the training program accreditation application (or as modified in accordance with Section III.A.7.c. of this Regulation No. 19) for a minimum of 3 years and 6 months.

III.A.7.c. The training program shall notify the division in writing within 30 days of changing the address specified on its training program accreditation application or transferring the records from that address.

III.B. Certification of Individuals and Firms Engaged in Lead-based Paint Activities: Target Housing and Child-occupied Facilities

III.B.1. Certification of Individuals

III.B.1.a. Individuals seeking certification by the division to engage in lead-based paint activities must either:

III.B.1.a.(i) submit to the division an application demonstrating that they meet the requirements established in Sections III.B.2. (Inspector, Risk Assessor or Supervisor) or III.B.3. (Abatement Worker and Project Designer) of this Regulation No. 19 for the particular discipline for which certification is sought; or

III.B.1.a.(ii) submit to the division an application with a copy of a valid lead-based paint activities certification (or equivalent) from a State or Tribal program that has been authorized by EPA pursuant to 40 C.F.R., Part 745, Subpart Q.

III.B.1.b. Individuals seeking Colorado certification as an inspector, risk assessor or supervisor shall submit a fee to the division according to the following structure:

III.B.1.b.(i) Inspector -- \$175 for the first year and \$125 for each year thereafter;

III.B.1.b.(ii) Risk Assessor -- \$175 for the first year and \$125 for each year thereafter; and

III.B.1.b.(iii) Supervisor -- \$175 for the first year and \$125 for each year thereafter.

III.B.1.c. Individuals seeking Colorado certification as a worker or project designer shall submit a fee to the division according to the following structure:

III.B.1.c.(i) Worker -- \$125 for each year of certification sought; and

III.B.1.c.(ii) Project Designer -- \$125 for each year of certification sought.

- III.B.1.d. Individuals may first apply to the division for certification to engage in lead-based paint activities pursuant to this section on or after the effective date of this Regulation No. 19.
- III.B.1.e. Following the submission of an application demonstrating that all the requirements of this section have been met, the division shall certify an applicant as an inspector, risk assessor, supervisor, project designer, or abatement worker, as appropriate.
- III.B.1.f. Upon receiving the division certification, individuals conducting lead-based paint activities shall comply with the work practice standards for performing the appropriate lead-based paint activities as established in Section V. (Abatement Requirements) of this Regulation No. 19.

III.B.2. Inspector, Risk Assessor or Supervisor

III.B.2.a. To become certified by the division as an inspector, risk assessor, or supervisor, pursuant to Section III.B.1.a.(i) of this Regulation No. 19, an individual must:

- III.B.2.a.(i) Successfully complete an accredited course in the appropriate discipline and receive a course completion certificate from an accredited training program.
- III.B.2.a.(ii) Pass the certification exam in the appropriate discipline offered by the division.
- III.B.2.a.(iii) Meet or exceed the following experience and/or education requirements:

III.B.2.a.(iii)(A) Inspectors

- III.B.2.a.(iii)(A)(1) no additional experience and/or education requirements.
- III.B.2.a.(iii)(A)(2) [Reserved]

III.B.2.a.(iii)(B) Risk Assessors

- III.B.2.a.(iii)(B)(1) successful completion of an accredited training course for inspectors; and
- III.B.2.a.(iii)(B)(2) Bachelor's degree and 1 year of experience in a related field (e.g., lead, asbestos, environmental remediation work, or construction), or an Associates degree and 2 years experience in a related field (e.g., lead, asbestos, environmental remediation work, or construction); or

III.B.2.a.(iii)(B)(3) certification as an industrial hygienist, professional engineer, registered architect and/or certification in a related engineering/health/environmental field (e.g., safety professional, environmental scientist); or

III.B.2.a.(iii)(B)(4) a high school diploma (or equivalent), and at least 3 years of experience in a related field (e.g., lead, asbestos, environmental remediation work or construction).

III.B.2.a.(iii)(C) Supervisor

III.B.2.a.(iii)(C)(1) one year of experience as a certified lead-based paint abatement worker; or

III.B.2.a.(iii)(C)(2) at least 2 years of experience in a related field (e.g., lead, asbestos, or environmental remediation work) or in the building trades.

III.B.2.b. The following documents shall be recognized by the division as evidence of meeting the requirements listed in Section III.B.2.b.(iii) of this Regulation No. 19:

III.B.2.b.(i) official academic transcripts or diploma, as evidence of meeting the education requirements;

III.B.2.b.(ii) résumés, letters of reference, or documentation of work experience, as evidence of meeting the work experience requirements; and

III.B.2.b.(iii) course completion certificates from lead-specific or other related training courses, issued by accredited training programs, as evidence of meeting the training requirements.

III.B.2.c. In order to take the certification examination for a particular discipline an individual must:

III.B.2.c.(i) successfully complete an accredited course in the appropriate discipline and receive a course completion certificate from an accredited training program; and

III.B.2.c.(ii) meet or exceed the education and/or experience requirements in Section III.B.2.a.(iii) of this Regulation No. 19.

III.B.2.d. After passing the appropriate certification exam and submitting an application demonstrating that he/she meets the appropriate training, education, and/or experience prerequisites described in Section III.B.2.a. of this Regulation No. 19, an individual shall be issued a certificate by the division. To maintain certification, an individual must be re-certified as described in Section III.B.5. (Re-certification) of this Regulation No. 19.

- III.B.2.e. An individual may take the certification exam no more than three times within 6 months of receiving a course completion certificate.
- III.B.2.f. If an individual does not pass the certification exam and receive a certificate within 6 months of receiving his/her course completion certificate, the individual must retake the appropriate course from an accredited training program before reapplying for certification from the division.

III.B.3. Abatement Worker and Project Designer

III.B.3.a. To become certified by the division as an abatement worker or project designer, pursuant to Section III.B.1.a. of this Regulation No. 19, an individual must:

- III.B.3.a.(i) Successfully complete an accredited course in the appropriate discipline and receive a course completion certificate from an accredited training program.
- III.B.3.a.(ii) Meet or exceed the following additional experience and/or education requirements.

III.B.3.a.(ii)(A) Abatement Workers

III.B.3.a.(ii)(A)(1) no additional experience and/or education requirements.

III.B.3.a.(ii)(A)(2) [Reserved]

III.B.3.a.(ii)(B) Project Designers

III.B.3.a.(ii)(B)(1) successful completion of an accredited training course for supervisors; and

III.B.3.a.(ii)(B)(2) Bachelor's degree in engineering, architecture, or a related profession, and 1 year of experience in building construction and design or a related field; or

III.B.3.a.(ii)(B)(3) four years of experience in building construction and design or a related field.

III.B.3.b. The following documents shall be recognized by the division as evidence of meeting the requirements listed in this Section III.B.3. (Abatement Worker and Project Designer) of this Regulation No. 19:

- III.B.3.b.(i) official academic transcripts or diploma, as evidence of meeting the education requirements;
- III.B.3.b.(ii) résumés, letters of reference, or documentation of work experience, as evidence of meeting the work experience requirements; and

III.B.3.b.(iii) course completion certificates from lead-specific or other related training courses, issued by accredited training programs, as evidence of meeting the training requirements.

III.B.3.c. After successfully completing the appropriate training courses and meeting any other qualifications described in Section III.B.3.a. of this Regulation No. 19, an individual shall be issued a certificate from the division. To maintain certification, an individual must be re-certified as described in Section III.B.5. (Re-certification) of this Regulation No. 19.

III.B.4. Certification Based on Prior Training

III.B.4.a. Any individual who received training in a lead-based paint activity between October 1, 1990 and October 29, 1998 shall be eligible for certification by the division under the alternative procedures contained in this Section III.B.4.a. of this Regulation No. 19. Individuals who have received lead-based paint activities training at an EPA-authorized State or Tribal accredited training program shall also be eligible for certification by the division under the following alternative procedures:

III.B.4.a.(i) Applicants for certification as an inspector, risk assessor, or supervisor shall:

III.B.4.a.(i)(A) demonstrate that the applicant has successfully completed training or on-the-job training in the conduct of a lead-based paint activity;

III.B.4.a.(i)(B) demonstrate that the applicant meets or exceeds the education and/or experience requirements in Section III.B.2.a.(iii) of this Regulation No. 19;

III.B.4.a.(i)(C) successfully complete an accredited refresher training course for the appropriate discipline; and

III.B.4.a.(i)(D) pass a certification exam administered by the division for the appropriate discipline.

III.B.4.a.(ii) Applicants for certification as an abatement worker or project designer shall:

III.B.4.a.(ii)(A) demonstrate that the applicant has successfully completed training or on-the-job training in the conduct of a lead-based paint activity;

III.B.4.a.(ii)(B) demonstrate that the applicant meets the education and/or experience requirements in Section III.B.3.a. of this Regulation No. 19; and

III.B.4.a.(ii)(C) successfully complete an accredited refresher training course for the appropriate discipline.

III.B.5. Re-certification

III.B.5.a. To maintain certification in a particular discipline, a certified individual shall apply to and be re-certified by the division in that discipline by the division either:

III.B.5.a.(i) every 3 years if the individual completed a training course with a course test and hands-on assessment; or

III.B.5.a.(ii) every 5 years if the individual completed a training course with a proficiency test.

III.B.5.b. An individual shall be re-certified if the individual successfully completes the appropriate accredited refresher training course, submits a valid copy of the appropriate refresher course completion certificate to the division and submits a fee to the division according to the following structure:

III.B.5.b.(i) Inspector -- \$125 for each year of certification sought;

III.B.5.b.(ii) Risk Assessor -- \$125 for each year of certification sought;

III.B.5.b.(iii) Supervisor -- \$125 for each year of certification sought;

III.B.5.b.(iv) Worker -- \$125 for each year of certification sought; and

III.B.5.b.(v) Project Designer -- \$125 for each year of certification sought.

III.B.6. Certification of Firms

III.B.6.a. All firms which perform or offer to perform any of the lead-based paint activities described in Section IV. (Inspections, Lead-Hazard Screens, and Risk Assessments) and/or Section V. (Abatement Requirements) of this Regulation No. 19 shall be certified by the division.

III.B.6.b. A firm seeking certification shall submit to the division a letter attesting that the firm shall only employ appropriately certified employees to conduct lead-based paint activities, and that the firm and its employees shall follow the work practice standards in Section IV. (Inspections, Lead-Hazard Screens, and Risk Assessments) and/or Section V. (Abatement Requirements) of this Regulation No. 19 for conducting lead-based paint activities.

III.B.6.b.(i) Firms seeking Colorado certification as a lead-based paint abatement contractor and/or inspection, lead-hazard screen, and risk assessment firm shall submit, along with their application, a fee to the division according to the following structure:

III.B.6.b.(i)(A) one-year certification for abatement firms -- \$450;

- III.B.6.b.(i)(B) one-year certification for inspection, lead hazard screen and risk assessment firms -- \$350.
- III.B.6.c. From the date of receiving the firm's letter requesting certification, the division shall have 90 days to approve or disapprove the firm's request for certification. Within that time, the division shall respond with either a certificate of approval or a letter describing the reasons for a disapproval.
- III.B.6.d. The firm shall maintain all records pursuant to the requirements in Section IV. (Inspections, Lead-hazard Screens, and Risk Assessments) and/or Section V. (Abatement Requirements) of this Regulation No. 19.
- III.B.6.e. Firms may first apply to the division for certification to engage in lead-based paint activities pursuant to this section on or after the effective date of this Regulation No. 19.
- III.B.6.f. Firms shall be responsible for ensuring that anyone engaging in lead-based paint activities for their firm are properly trained and certified by the division pursuant to the requirements of this Regulation No. 19.
- III.B.6.g. Firms shall be responsible for ensuring that anyone engaging in lead-based paint activities for their firm have a valid training certificate or Colorado certification photo identification card on the worksite at all times.

IV. Inspections, Lead-Hazard Screens, and Risk Assessments

When performing any lead-based paint activity involving an inspection, lead-hazard screen or risk assessment of a pre-1978 residential dwelling or child-occupied facility, a certified individual must perform that activity in compliance with the appropriate requirements below.

IV.A. Inspection

- IV.A.1. An inspection shall be conducted only by a person certified by the division pursuant to this Regulation No. 19 as an inspector or risk assessor and, if conducted, must be conducted according to the procedures in Section IV.A. (Inspection) of this Regulation No. 19.
- IV.A.2. When conducting an inspection, the following locations shall be selected according to documented methodologies and tested for the presence of lead-based paint:
- IV.A.2.a. In the portion of a pre-1978 residential dwelling and child-occupied facility being inspected, each component with a distinct painting history and each exterior component with a distinct painting history shall be tested for lead-based paint, except those components that the inspector or risk assessor determines to have been replaced after 1978, or to not contain lead-based paint; and
 - IV.A.2.b. In the portion of a pre-1978 multi-family dwelling or child-occupied facility being inspected, each component with a distinct painting history in every common area shall be tested for lead-based paint, except those components that the inspector or risk assessor determines to have been replaced after 1978, or to not contain lead-based paint.
- IV.A.3. Paint shall be sampled in the following manner:
- IV.A.3.a. the analysis of paint to determine the presence of lead shall be conducted using documented methodologies which incorporate adequate quality control procedures; and/or
 - IV.A.3.b. all collected paint chip samples shall be analyzed according to Section IV.D. (Collection and Laboratory Analysis of Samples) of this Regulation No. 19, to determine if they contain detectable levels of lead that can be quantified numerically.
- IV.A.4. The certified inspector or risk assessor shall prepare an inspection report which shall include the following information:
- IV.A.4.a. date of each inspection;
 - IV.A.4.b. address of building;
 - IV.A.4.c. date of construction;

- IV.A.4.d. apartment numbers (if applicable);
- IV.A.4.e. name, address, and telephone number of the owner or owners of each pre-1978 residential dwelling or child-occupied facility;
- IV.A.4.f. name, signature, and certification number of each certified inspector and/or risk assessor conducting testing;
- IV.A.4.g. name, address, and telephone number of the certified firm employing each inspector and/or risk assessor, if applicable;
- IV.A.4.h. each testing method and device and/or sampling procedure employed for paint analysis, including quality control data and, if used, the serial number of any x-ray fluorescence (XRF) device;
- IV.A.4.i. specific locations of each painted component tested for the presence of lead-based paint; and
- IV.A.4.j. the results of the inspection expressed in terms appropriate to the sampling method used.

IV.B. Lead Hazard Screen

- IV.B.1. A lead hazard screen shall be conducted only by a person certified by the division as a risk assessor and, if conducted, must be conducted according to the procedures in this Section IV.B. (Lead Hazard Screen) of this Regulation No. 19.
- IV.B.2. If conducted, a lead hazard screen shall be conducted as follows:
 - IV.B.2.a. Background information regarding the physical characteristics of the pre-1978 residential dwelling or child-occupied facility and occupant use patterns that may cause lead-based paint exposure to one or more children under 7 years of age shall be collected.
 - IV.B.2.b. A visual inspection of the pre-1978 residential dwelling or child-occupied facility shall be conducted to:
 - IV.B.2.b.(i) determine if any deteriorated paint is present, and
 - IV.B.2.b.(ii) locate at least two dust sampling locations.
 - IV.B.2.c. If deteriorated paint is present, each surface with deteriorated paint, which is determined, using documented methodologies, to be in poor condition and to have a distinct painting history, shall be tested for the presence of lead.
 - IV.B.2.d. In residential dwellings two composite dust samples shall be collected, one from the floors and the other from the windows, in rooms, hallways or stairwells

where one or more children, under 7 years of age, are most likely to come in contact with dust.

- IV.B.2.e. In pre-1978 multi-family dwellings and child-occupied facilities, in addition to the floor and window samples required in Section IV.B.2.d. of this Regulation No. 19, the risk assessor shall also collect composite dust samples from common areas where one or more children, under 7 years of age, are most likely to come into contact with dust.

IV.B.3. Dust samples shall be collected and analyzed in the following manner.

- IV.B.3.a. all dust samples shall be taken using documented methodologies that incorporate adequate quality control procedures; and

- IV.B.3.b. all collected dust samples shall be analyzed according to Section IV.D. (Collection and Laboratory Analysis of Samples) of this Regulation No. 19, to determine if they contain detectable levels of lead that can be quantified numerically.

IV.B.4. Paint shall be sampled in the following manner:

- IV.B.4.a. the analysis of paint to determine the presence of lead shall be conducted using documented methodologies which incorporate adequate quality control procedures; and/or

- IV.B.4.b. all collected paint chip samples shall be analyzed according to Section IV.D (Collection and Laboratory Analysis of Samples) of this Regulation No. 19, to determine if they contain detectable levels of lead that can be quantified numerically.

IV.B.5. The risk assessor shall prepare a lead hazard screen report, which shall include the following information:

- IV.B.5.a. The information required in a risk assessment report as specified in Section IV.C. (Risk Assessment) of this Regulation No. 19, including Sections IV.C.10.a. through IV.C.10.n. of this Regulation No. 19, and excluding Sections IV.C.10.o. through IV.C.10.r. of this Regulation No. 19. Additionally, any background information collected pursuant to Section IV.B.2.a. of this Regulation No. 19, shall be included in the risk assessment report.

- IV.B.5.b. Recommendations, if warranted, for a follow-up risk assessment, and as appropriate, any further actions.

IV.C. Risk Assessment

- IV.C.1. A risk assessment shall be conducted only by a person certified by the division as a risk assessor and, if conducted, must be conducted according to the procedures in this Section IV.C. (Risk Assessment) of this Regulation No. 19.

- IV.C.2. A visual inspection for risk assessment of the pre-1978 residential dwelling or child-occupied facility shall be undertaken to locate the existence of deteriorated paint, assess the extent and causes of the deterioration, and other potential lead-based paint hazards.
- IV.C.3. Background information regarding the physical characteristics of the pre-1978 residential dwelling, or child-occupied facility and occupant use patterns that may cause lead-based paint exposure to one or more children under 7 years of age shall be collected.
- IV.C.4. The following surfaces which are determined, using documented methodologies, to have a distinct painting history, shall be tested for lead;
 - IV.C.4.a. Each friction surface or impact surface with visibly deteriorated paint; and
 - IV.C.4.b. All other surfaces with visibly deteriorated paint.
- IV.C.5. In pre-1978 residential dwellings, dust samples (either composite or single-surface samples) from the interior window sills and floor shall be collected in all living areas where one or more children, under 7 years of age, are most likely to come into contact with dust.
- IV.C.6. For pre-1978 multi-family dwellings and child-occupied facilities, the samples required in Section IV.C.4. of this Regulation No. 19, shall be taken. In addition, interior window sill and floor dust samples (either composite or single-surface samples) shall be collected in the following locations:
 - IV.C.6.a. common areas adjacent to the sampled pre-1978 residential dwelling or child-occupied facility; and
 - IV.C.6.b. other common areas in the building where the risk assessor determines that one or more children, under 7 years of age, are likely to come into contact with dust.
- IV.C.7. For child-occupied facilities, interior window sill and floor dust samples (either composite or single-surface samples) shall be collected in each room, hallway or stairwell utilized by one or more children, under 7 years of age, and in other common areas in the child-occupied facility where the risk assessor determines one or more children, under 7 years of age, are likely to come into contact with dust.
- IV.C.8. Soil samples shall be collected and analyzed for lead concentrations in the following locations:
 - IV.C.8.a. exterior play areas where bare soil is present; and
 - IV.C.8.b. The rest of the yard (i.e., non-play areas) where bare soil is present.

- IV.C.8.c. Any paint, dust, or soil sampling or testing shall be conducted using documented methodologies that incorporate adequate quality control procedures.
- IV.C.9. Any collected paint chip, dust, or soil samples shall be analyzed according to Section IV.D. (Collection and Laboratory Analysis of Samples) of this Regulation No. 19, to determine if they contain detectable levels of lead that can be quantified numerically.
- IV.C.10. The certified risk assessor shall prepare a risk assessment report which shall include the following information:
 - IV.C.10.a. date of assessment;
 - IV.C.10.b. address of each building;
 - IV.C.10.c. date of construction of buildings;
 - IV.C.10.d. apartment number (if applicable);
 - IV.C.10.e. name, address, and telephone number of each owner of each building;
 - IV.C.10.f. name, signature, and certification of the certified risk assessor conducting the assessment;
 - IV.C.10.g. name, address, and telephone number of the certified firm employing each certified risk assessor if applicable;
 - IV.C.10.h. name, address, and telephone number of each recognized laboratory conducting analysis of collected samples;
 - IV.C.10.i. results of the visual inspection;
 - IV.C.10.j. testing method and sampling procedure for paint analysis employed;
 - IV.C.10.k. specific locations of each painted component tested for the presence of lead;
 - IV.C.10.l. all data collected from on-site testing, including quality control data and, if used, the serial number of any XRF device;
 - IV.C.10.m. all results of laboratory analysis on collected paint, soil, and dust samples;
 - IV.C.10.n. any other sampling results;
 - IV.C.10.o. any background information collected pursuant to Section IV.C.3. of this Regulation No. 19;
 - IV.C.10.p. to the extent that they are used as part of the lead-based paint hazard determination, the results of any previous inspections or analyses for the

presence of lead-based paint, or other assessments of lead-based paint-related hazards;

IV.C.10.q. a description of the location, type, and severity of identified lead-based paint hazards and any other potential lead hazards; and

IV.C.10.r. a description of interim controls and/or abatement options for each identified lead-based paint hazard and a suggested prioritization for addressing each hazard; if the use of an encapsulant or enclosure is recommended, the report shall recommend a maintenance and monitoring schedule for the encapsulant or enclosure.

IV.D. Collection and Laboratory Analysis of Samples

Any paint chip, dust, or soil samples collected as required by the work practice standards contained in this Section IV. (Inspections, Lead Hazard Screens, and Risk Assessments) of this Regulation No. 19 shall be:

IV.D.1. collected by persons certified by the division pursuant to this Regulation No. 19 as an inspector or risk assessor; and

IV.D.2. analyzed by a recognized laboratory.

IV.E. Composite Dust Sampling

Composite dust sampling may only be conducted in the situations specified in Sections IV.B. (Lead Hazard Screen) and IV.C. (Risk Assessment) of this Regulation No. 19. If such sampling is conducted, the following conditions shall apply:

IV.E.1. composite dust samples shall consist of at least two subsamples;

IV.E.2. every component that is being tested shall be included in the sampling; and

IV.E.3. composite dust samples shall not consist of subsamples from more than one type of component.

IV.F. Recordkeeping

All reports or plans required in this Section shall be maintained by the certified firm or individual who prepared the report for no fewer than 3 years. The certified firm or individual also shall provide copies of these reports to the building owner who contracted for its services.

IV.G. Alternative Procedures and Variances

The division may, at its discretion, grant a variance from the requirements in this Section IV. (Inspections, Lead Hazard Screens, and Risk Assessments) of this Regulation No. 19, allowing use of an alternative procedure for the inspection, risk assessment, and lead

hazard screen provided that the person requesting the variance submit an alternative procedure in writing to the division and demonstrates to the satisfaction of the division that compliance with this Regulation No. 19 is not practical or that the proposed alternative procedures provides equivalent means for determining the presence of lead and lead-based paint hazards.

IV.H. Determinations

IV.H.1. Lead-based paint is present:

- IV.H.1.a. On any surface that is tested and found to contain lead equal to or in excess of 1.0 milligrams per square centimeter or equal to or in excess of 0.5% by weight; and
- IV.H.1.b. On any surface like a surface tested in the same room equivalent that has a similar painting history and that is found to be lead-based paint.

IV.H.2. A paint-lead hazard is present:

- IV.H.2.a. On any friction surface that is subject to abrasion and where the lead dust levels on the nearest horizontal surface underneath the friction surface (e.g., the window sill or floor) are equal to or greater than the dust hazard levels identified in this Regulation No. 19.
- IV.H.2.b. On any chewable lead-based paint surface on which there is evidence of teeth marks;
- IV.H.2.c. Where there is any damaged or otherwise deteriorated lead-based paint on an impact surface that is caused by impact from a related component (such as a door knob that knocks into a wall or a door that knocks against its door frame); and
- IV.H.2.d. If there is any other deteriorated lead-based paint in any residential building or child-occupied facility or on the exterior of any residential building or child-occupied facility.

IV.H.3. A dust-lead hazard is present in a residential dwelling or child occupied facility:

- IV.H.3.a. In a residential dwelling on the floors and interior window sills when the weighted arithmetic mean lead loading for all single surface or composite samples of floors and interior window sills are equal to or greater than 40 $\mu\text{g}/\text{ft}^2$ for floors and 250 $\mu\text{g}/\text{ft}^2$ for interior window sills, respectively;
- IV.H.3.b. On floors or interior window sills in an unsampled residential dwelling in a multi-family dwelling, if a dust-lead hazard is present on floors or interior window sills, respectively, in at least one sampled residential unit on the property; and

IV.H.3.c. On floors or interior window sills in an unsampled common area in a multi-family dwelling, if a dust-lead hazard is present on floors or interior window sills, respectively, in at least one sampled common area group on the property.

IV.H.4. A soil-lead hazard is present:

IV.H.4.a. In a play area when the soil-lead concentration from a composite area sample of bare soil is equal to or greater than 400 parts per million: or

IV.H.4.b. In the rest of the yard when the arithmetic mean lead concentration from a composite sample (or arithmetic mean of composite samples) of bare soil from the rest of the yard (i.e., non-play areas) for each residential building on a property is equal to or greater than 1,200 parts per million.

V. Abatement Requirements

V.A. General Requirements

V.A.1. Except for those persons and activities exempted in Section I. (Scope and Applicability) of this Regulation No. 19, persons performing lead-based paint abatement in or to a pre-1978 residential dwelling or child-occupied facility shall comply with all the requirements of Section III. (Training and Certification Requirements) and this Section V. (Abatement Requirements) of this Regulation No. 19, if either one of the following conditions apply:

V.A.1.a. two or more square feet of lead-based paint or lead contaminated dust is being abated per room or equivalent

V.A.1.b. twenty or more square feet of lead-based paint, lead contaminated dust, or lead contaminated soil is being abated from or on the exterior building

V.A.2. An abatement shall be conducted only by an individual certified by the division, and if conducted, shall be conducted according to the procedures in this Section V. (Abatement Requirements) of this Regulation No. 19.

V.A.3. A certified supervisor is required for each abatement project and shall be onsite during all work site preparation and during the post-abatement cleanup of work areas.

V.A.4. The certified supervisor and the certified firm employing that supervisor shall ensure that all abatement activities are conducted according to the requirements of this Section V. (Abatement Requirements) of this Regulation No. 19, and all other Federal, State and local requirements.

V.A.5. Notification

V.A.5.a. Notification of the commencement of lead-based paint abatement in or to a pre-1978 residential dwelling or child-occupied facility shall be provided on a division-approved form and postmarked or hand-delivered to the division, the local county health department and the local building department a minimum of 10 working days prior to the commencement of abatement activities.

V.A.5.b. The 10 working day notification may be waived by the division if one or more of the following conditions exist:

V.A.5.b.(i) a child with an elevated blood lead level resides within the pre-1978 residential dwelling or child-occupied facility or regularly visits the child-occupied facility where the abatement will occur; or

V.A.5.b.(ii) the division determines that an imminent danger to health exists; or

V.A.5.b.(iii) the division determines that an unavoidable hardship would result.

V.A.5.c. The applicable notification fee given below shall accompany the notification form for the notice to be accepted by the division.

VALUATION OF WORK	NOTIFICATION FEE
\$2,000 or less	\$110
\$2,001 - \$50,000	\$100 base plus \$8.00 per \$1,000 in valuation or fraction thereof of total valuation
\$50,001 - \$100,000	\$150 base plus \$7.00 per \$1,000 in valuation or fraction thereof of total valuation
\$100,001 - \$500,000	\$250 base plus \$6.00 per \$1,000 in valuation or fraction thereof of total valuation
Over \$500,000	\$750 base plus \$5.00 per \$1,000 in valuation or fraction thereof of total valuation

V.A.6. Occupant Protection Plan

A written occupant protection plan shall be developed for all abatement projects and shall be prepared according to the following procedures:

V.A.6.a. The occupant protection plan shall be unique to each pre-1978 residential dwelling or child-occupied facility and be developed prior to the abatement. 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 any lead-based paint hazards. At a minimum, the plan shall include the applicable occupant protection measures contained in Sections V.B. (Work Practice Restrictions and Prohibitions) through V.K. (Waste Handling) of this Regulation No. 19. In addition, the plan shall specifically address whether occupant relocation during abatement activities is necessary.

V.A.6.b. A certified supervisor or project designer shall prepare the occupant protection plan.

V.A.7. The integrity of all containment systems shall be maintained during abatement to prevent the potential spread of any lead contamination outside the work area. Should a breach occur, the areas contaminated with lead shall be cleaned in accordance with the applicable requirements in Section V.H (Cleaning) of this Regulation No. 19, and cleared in accordance with the applicable requirements in Section V.J (Final Clearance) of this Regulation No. 19.

V.B. Work Practice Restrictions and Prohibitions

The work practices listed below shall be restricted as follows during an abatement.

V.B.1. Open-flame burning or torching of lead-based paint is prohibited.

- V.B.2. Machine sanding or grinding or abrasive blasting or sandblasting or drilling or cutting of lead-based paint is prohibited unless used with High Efficiency Particulate Air (HEPA) exhaust control which continually captures all particulate from the surface being abated.
- V.B.3. Dry scraping of lead-based paint is permitted only in conjunction with heat guns or around electrical outlets.
- V.B.4. Operating a heat gun on lead-based paint is permitted only at temperatures below 1100 degrees Fahrenheit.
- V.B.5. Uncontained hydroblasting or high-pressure water washing is prohibited unless the point of operation is completely self-contained within a local shroud and the water is captured within the shroud.
- V.B.6. Chemical stripping methods shall only be used to remove lead-based paint from highly decorative or ornate components or surfaces that are otherwise difficult to abate by any other method.
- V.B.7. Dry, hand sanding is prohibited.
- V.C. Interior Abatement Requirements (excluding window abatements)
 - V.C.1. The following containment system shall be used for all interior abatement projects except window abatements:
 - V.C.1.a. A containment level I-1, I-2 or I-3, as described in this Section V.C. (Interior Abatement Requirements) of this Regulation No. 19, shall be used in those work areas if the amount of lead-based paint or lead-contaminated dust that will be disturbed per room, hallway, or stairwell is less than 2 square feet.
 - V.C.1.b. A containment level I-2 or I-3, as described in this Section V.C. (Interior Abatement Requirements) of this Regulation No. 19, shall be used in those work areas if the amount of lead-based paint or lead-contaminated dust that will be disturbed per room, hallway, or stairwell is 2 or more square feet.
 - V.C.1.c. Regardless of the requirements in Sections V.C.1.a. and b. of this Regulation No. 19, an interior containment level I-3, as described in Section V.C.4. of this Regulation No. 19, shall be used to contain the work area if either one of the following conditions apply:
 - V.C.1.c.(i) if any amount of floor surface that is painted with lead-based paint, or was at one time painted with lead-based paint, is machine sanded; or
 - V.C.1.c.(ii) if any amount of lead-based paint is abated by abrasive blasting.

V.C.2. Interior containment level I-1 shall consist of the following elements:

- V.C.2.a. Warning Signs. At a minimum, warning signs shall be posted at all entryways to the work area. The warning signs shall, in a language understandable by all occupants, state the following warning:

WARNING LEAD ABATEMENT WORK AREA HAZARDOUS LEAD DUST POISON DO NOT ENTER
--

- V.C.2.b. Warning Barriers. A physical barrier (furniture, wood planking) shall be placed around the work area perimeter so as to prevent inadvertent access by children.

- V.C.2.c. Ventilation System Shutdown. Vents that are within 5 feet from the surface being abated must be sealed with 6-mil thickness polyethylene sheeting to prevent contaminated air from leaving the work area.

- V.C.2.d. Protection of Objects. Furniture and other objects within 5 feet in all directions of the surface to be abated shall be moved outside the room, hallway, or stairwell. Objects or furniture that cannot be moved shall be sealed with a minimum of one layer of 6-mil polyethylene sheeting.

- V.C.2.e. Floor Protection. At a minimum, one layer of 6-mil thickness polyethylene sheeting or greater shall be sealed to the floor at least 5 feet beyond the perimeter of the surface being abated in all directions, so as to prevent contamination of the floor. Floors shall be pre-cleaned of debris as required in Section V.H.1. (Pre-cleaning) of this Regulation No. 19 prior to sealing polyethylene sheeting on the floor.

- V.C.2.f. Cleanup. All surfaces and floors extending 5 feet in all directions from the abated surface, and all adjacent areas used as a pathway to the work area, shall be cleaned by HEPA vacuuming, wet washing, and HEPA vacuuming, and as required in Section V.H. (Cleaning) of this Regulation No. 19.

V.C.3. Interior containment level I-2 shall consist of the following elements:

- V.C.3.a. Warning Signs. At a minimum, warning signs shall be posted at all entryways to the work area. The warning signs shall, in a language understandable by all occupants, at least state the following warning:

WARNING LEAD ABATEMENT WORK AREA HAZARDOUS LEAD DUST POISON DO NOT ENTER
--

- V.C.3.b. Ventilation System Shutdown. The ventilation system supplying air to the work area shall be turned off or otherwise prevented from supplying air to the work area until clearance has been achieved. All registers, vents and openings in the work area shall be sealed with 6-mil thickness polyethylene sheeting.
 - V.C.3.c. Barriers. All openings to the work area shall be sealed off from the rest of the building with a minimum of 1 layer of 6-mil thickness polyethylene sheeting to prevent air flow out of the work area.
 - V.C.3.d. Work Area Egress. Entry into and egress out of the work area shall be through an airlock that, at a minimum, shall consist of a single chamber with self-closing triple flaps or “Z-flaps” on either side of the chamber. Disposable clothing and footwear shall be worn by all persons entering the containment area. Disposable clothing and footwear used inside the containment shall be deposited in this airlock chamber prior to personnel exiting containment.
 - V.C.3.e. Protection of Objects. Furniture and other objects shall be moved outside the room, hallway, or stairwell. Objects or furniture that cannot be moved shall be sealed with a minimum of one layer of 6-mil polyethylene sheeting.
 - V.C.3.f. Floor Protection. The entire floor within the work area shall be sealed with a minimum of 2 layers of 6-mil thickness polyethylene sheeting. The polyethylene sheeting shall be installed such that removal of the top most layer of polyethylene sheeting will not cause the underlying polyethylene sheeting to lose its seal. Floors shall be pre-cleaned of debris as required in Section V.H.1. (Pre-cleaning) of this Regulation No. 19 prior to sealing polyethylene sheeting on the floor.
 - V.C.3.g. Cleanup. All surfaces in the work area and all adjacent areas used as a pathway to the work area shall be cleaned by HEPA vacuuming, wet washing, and HEPA vacuuming, and as required in Section V.H. (Cleaning) of this Regulation No. 19. Polyethylene sheeting shall be removed in accordance with Section V.H.4. (Polyethylene Sheeting Removal Procedures) of this Regulation No. 19.
- V.C.4. Interior containment level I-3 shall consist of the following elements:
- V.C.4.a. Containment. At a minimum, all the level I-2 containment requirements as described in Section V.C.3. of this Regulation No. 19.
 - V.C.4.b. Work Area Egress. Entry into and egress out of the work area shall be through a 3-stage decontamination unit with a shower equipped with hot and cold water that is adjustable inside the shower unit. Each airlock in the decontamination unit shall be constructed with self-closing triple flaps or “Z-flaps” separating each individual chamber. Persons entering the abatement work area prior to final clearance shall don disposable clothing and footwear. Prior to exiting the containment, personnel shall dispose of the suits in the chamber adjacent to the work area and shower.

- V.C.4.c. Negative Pressure/Airflow. The containment shall have a negative pressure differential of at least -0.02 inches water column between the work area and the clean area inside the pre-1978 residential dwelling or child-occupied facility. The pressure differential shall be continuously recorded with a recording manometer. The air within the work area shall be exchanged at a minimum rate of 10 times per hour and exhausted to the exterior of the building. Air flow shall always be from the outside of containment to within, as verified by smoke testing. Smoke tubes shall be on site at all times during abatement.

V.D. Exterior Abatement Requirements

V.D.1. Exterior Abatement Project Restrictions

All exterior abatement projects subject to this Regulation No. 19, except for abatement work areas sufficiently contained with an exterior containment level of X-2 or X-3, shall comply with the following restrictions.

- V.D.1.a. Exterior abatement, except for cleanup to prevent the spread of lead contamination, shall not proceed if the local wind gusts are, or are expected to be, greater than 20 miles per hour.
- V.D.1.b. Exterior abatement shall stop and cleanup shall occur before rain begins.

V.D.2. Containment Requirements

V.D.2.a. The following containment system shall be used for all exterior abatement projects except window and soil abatements:

- V.D.2.a.(i) An exterior containment level X-1, X-2, or X-3, as described in this Section V.D.2. (Containment Requirements) of this Regulation No. 19, shall be used if the amount of lead-based paint that will be disturbed is less than 20 square feet.
- V.D.2.a.(ii) An exterior containment level X-2 or X-3, as described in this Section V.D.2. (Containment Requirements) of this Regulation No. 19, shall be used if the amount of lead-based paint that will be disturbed is 20 or more square feet.
- V.D.2.a.(iii) Regardless of the requirements in Sections V.D.2.a.(i) and (ii) of this Regulation No. 19, an exterior containment level X-3 as described in Section V.D.2.d. of this Regulation No. 19 shall be used if either one of the following conditions apply:
 - V.D.2.a.(iii)(A) any amount of floor surface (e.g. patio, step, deck) that is painted with lead-based paint, or was at one time painted with lead-based paint, is power sanded; or
 - V.D.2.a.(iii)(B) any amount of lead-based paint is abated by abrasive blasting.

V.D.2.b. Exterior containment level X-1 shall consist of the following elements:

- V.D.2.b.(i) Warning Signs. Post warning signs on the building and at a 20-foot perimeter around the building (or less if distance to the next building or sidewalk is less than 20 feet). The warning signs shall, in a language understandable by all occupants, state the following warning:

<p>WARNING LEAD ABATEMENT WORK AREA HAZARDOUS LEAD DUST POISON DO NOT ENTER</p>

- V.D.2.b.(ii) Warning Barriers. Erect temporary fencing or barrier tape at a 20-foot perimeter around working surfaces (or less if distance to the next building or sidewalk is less than 20 feet). If an entryway to the building is within 10 feet of the working surfaces, an alternate entryway shall be provided. At least one lead-safe entryway shall be made available to occupants at all times, unless the occupants have been relocated until final clearance has been achieved.
- V.D.2.b.(iii) Barriers. All windows within 20 feet of the working surfaces shall be closed or sealed, including windows in adjacent structures.
- V.D.2.b.(iv) Protection of Objects. All movable objects shall be removed to a minimum of 20 feet away from abatement surfaces in all directions. Objects that cannot be removed shall be sealed with a minimum of 1 layer of 6-mil thickness polyethylene sheeting.
- V.D.2.b.(v) Ground Protection. At a minimum, the ground, including decks, driveways, and porches, extending 10 feet beyond the perimeter of the abatement surfaces in all directions shall be covered with one layer of 6-mil thickness polyethylene sheeting. The edges of the polyethylene sheeting shall be sealed to the building such that no gaps between the polyethylene sheeting and the building exist. The edges of the polyethylene sheeting shall be raised to create a basin to contain contaminated runoff. The polyethylene sheeting shall be weighted down or otherwise secured to prevent movement. The ground shall be pre-cleaned of visible debris as required in Section V.H.1. (Pre-cleaning) of this Regulation No. 19 prior to sealing it with polyethylene sheeting.
- V.D.2.b.(vi) Cleanup. All debris and ground polyethylene sheeting must be removed from the work area before leaving the site each night. Polyethylene sheeting shall be cleaned and removed in accordance with Section V.H.4. (Polyethylene Sheeting Removal Procedures) of this Regulation

No. 19. Paint chips in the soil shall be HEPA vacuumed and properly disposed.

V.D.2.c. Exterior containment level X-2 shall consist of the following elements:

V.D.2.c.(i) Warning Signs. Post visible warning signs on the building and on the outside of the containment barriers. The warning signs shall, in a language understandable by all occupants, state the following warning:

WARNING LEAD ABATEMENT WORK AREA HAZARDOUS LEAD DUST POISON DO NOT ENTER
--

V.D.2.c.(ii) Barriers. All openings to the work area shall be sealed off with a minimum of 1 layer of 6-mil thickness polyethylene sheeting to prevent air flow out of the work area.

V.D.2.c.(iii) Work Area Egress. Entry into and egress out of the work area shall be through an airlock that, at a minimum, shall consist of a single chamber with self-closing triple flaps or “Z-flaps” on either side of the chamber. Disposable clothing and footwear shall be worn by all persons entering the containment area. Disposable clothing and footwear used inside the containment shall be deposited in this airlock chamber prior to personnel exiting containment.

V.D.2.c.(iv) Protection of Objects. All movable objects shall be removed from the work area. Objects that cannot be removed shall be sealed with a minimum of 1 layer of 6-mil thickness polyethylene sheeting.

V.D.2.c.(v) Ground Protection. At a minimum, the ground, including decks, driveways and porches, within the work area shall be covered with two layers of 6-mil thickness polyethylene sheeting. The edges of the polyethylene sheeting shall be sealed to the building such that no gaps between the polyethylene sheeting and the building exist. The edges of the polyethylene sheeting shall be raised to create a basin to contain contaminated runoff. The polyethylene sheeting shall be weighted down or otherwise secured to prevent movement. The ground shall be pre-cleaned of visible debris as required in Section V.H.1. (Pre-cleaning) of this Regulation No. 19 prior to sealing it with polyethylene sheeting.

V.D.2.c.(vi) Cleanup. Polyethylene barriers shall be cleaned and removed in accordance with Section V.H.4. (Polyethylene Sheeting Removal Procedures) of this Regulation No. 19. All surfaces and floors within the containment and all adjacent areas used as a pathway to the work

area, shall be cleaned by HEPA vacuuming, wet washing, and HEPA vacuuming, and as required in Section V.H. (Cleaning) of this Regulation No. 19. Paint chips in the soil shall be HEPA vacuumed and properly disposed.

V.D.2.d. Exterior containment level X-3 shall consist of the following elements:

V.D.2.d.(i) Containment. At a minimum, all the exterior level X-2 containment requirements as described in Section V.D.2.c. of this Regulation No. 19.

V.D.2.d.(ii) Work Area Egress. Entry into and egress out of the work area shall be through a 3-stage decontamination unit with a shower equipped with hot and cold water that is adjustable inside the shower. Each airlock in the decontamination unit shall be constructed with self-closing triple flaps or “Z-flaps” separating each individual chamber. Persons entering the abatement work area prior to final clearance shall don disposable clothing and footwear. Prior to exiting the containment, personnel shall dispose of the suits in the chamber adjacent to the work area and shower.

V.D.2.d.(iii) Negative Pressure/Airflow. The containment shall have a negative pressure differential of at least -0.02 inches water column between the work area and the clean area. The pressure differential shall be continuously recorded with a recording manometer. The air within the work area shall be exchanged at a minimum rate of 10 times per hour. Air flow shall always be from the outside of containment to within, as verified by smoke testing. Smoke tubes shall be on site at all times during abatement.

V.E. Window Abatement

V.E.1. When abating windows from the exterior of a pre-1978 residential dwelling or child-occupied facility, the person performing the abatement shall comply with the following requirements:

V.E.1.a. Comply with the restrictions in Section V.D.1. (Exterior Abatement Project Restrictions) of this Regulation No. 19.

V.E.1.b. At a minimum, seal two layers of 6-mil thickness polyethylene sheeting to the inside wall covering the window so as to prevent dust from migrating inside the building during abatement; and

V.E.1.c. At a minimum, comply with all the exterior containment level X-1, level X-2 or level X-3 requirements described in Section V.D.2. (Containment Requirements) of this Regulation No. 19.

V.E.2. When abating windows from the interior of a pre-1978 residential dwelling or child-occupied facility, the person performing the abatement shall comply with the following requirements:

- V.E.2.a. at a minimum, secure two layers of 6-mil thickness polyethylene sheeting to the exterior wall so as to prevent dust from migrating outside the building during abatement; and
- V.E.2.b. comply with all interior containment level I-2 or level I-3 requirements as described in Section V.C. (Interior Abatement Requirements) of this Regulation No. 19.
- V.E.3. If containment is breached, then surfaces on both sides of the window shall be cleaned in accordance with the applicable requirements in Section V.H. (Cleaning) of this Regulation No. 19, and cleared in accordance with the applicable requirements in Section V.J. (Final Clearance) of this Regulation No. 19.
- V.F. Soil Abatement
 - V.F.1. If conducted, or required pursuant to Section V.J.1.g.(ii) of this Regulation No. 19, soil abatement shall be conducted in one of the following ways:
 - V.F.1.a. If soil is removed the person performing the removal shall:
 - V.F.1.a.(i) comply with the exterior abatement project restrictions as described in Section V.D.1. (Exterior Abatement Project Restrictions) of this Regulation No. 19 and the exterior containment level X-1, level X-2, or level X-3 requirements, as described in Section V.D. (Exterior Abatement Requirements) of this Regulation No. 19; and
 - V.F.1.a.(ii) replace the lead-contaminated soil with soil as close to local background as practical, but no greater than 400 µg/g of lead.
 - V.F.1.a.(iii) The soil that is removed shall not be used as top soil at another residential property or child-occupied facility.
 - V.F.1.b. If soil is not removed, the lead-contaminated soil shall be permanently covered, as defined in Section II.B.59. of this Regulation No. 19.
 - V.F.2. The abatement, handling, transportation, and disposal of lead-contaminated soil shall be performed in a manner that prevents the spread of lead contamination to areas outside the abatement work area and the approved landfill.
- V.G. Encapsulation and Enclosure Requirements
 - V.G.1. Encapsulation and enclosure systems shall be dust tight for a design life of at least 20 years. Encapsulation and enclosure systems shall not be used on unsound substrates that cannot be stabilized or repaired to support the enclosure or encapsulation systems for at least 20 years.

- V.G.2. Encapsulation and enclosure systems shall be sealed in accordance with Section V.I.2. (Sealing Replacement Components, Enclosure and Encapsulation) of this Regulation No. 19.
- V.G.3. To prevent a breach of an enclosure, the surface behind the enclosure shall be permanently labeled every 2 feet with the following warning, "Danger: Lead-Based Paint." A durable drawing of the property floor plan identifying the enclosed areas shall be mounted in a visible location within the structure (e.g. utility room, furnace area, garage).
- V.G.4. Only those encapsulants explicitly recognized by the division shall be used for abatement projects subject to this Regulation No. 19.

V.H. Cleaning

- V.H.1. Pre-cleaning. Visible paint chips and lead-contaminated dust shall be removed from the work area prior to laying polyethylene sheeting on the floor but after all other containment barriers have been erected.
- V.H.2. Daily Cleaning. All horizontal surfaces in the work area shall be cleaned of visible dust and debris prior to ceasing work for the day.

V.H.3. Carpet, Upholstery and Forced Air Duct Cleaning

- V.H.3.a. Carpet and Rugs. All carpets or rugs that are contaminated with lead-contaminated dust that will be cleaned, and all carpet in the work area that will not be disposed of as lead-contaminated waste, shall be cleaned as set forth below:

- V.H.3.a.(i) HEPA vacuums shall be used to vacuum all rugs and carpets. A HEPA vacuum equipped with a beater bar or agitator attachment on the vacuum head to dislodge embedded dust shall be used when vacuuming the pile side of carpets.
- V.H.3.a.(ii) For wall to wall carpeting, the carpet shall be vacuumed for not less than 4 minutes per 10 square feet of carpeting, divided into two time segments of at least 2 minutes for each 10 square feet. The two time vacuuming segments shall be performed in perpendicular directions.
- V.H.3.a.(iii) For area rugs, the top and bottom of the carpet shall be vacuumed for not less than 1 minute for every 10 square feet per side. After the initial vacuuming of the carpet, the floor below the area rug shall be vacuumed at normal speed. Following the vacuuming of the floor, the pile side of the rug shall again be vacuumed at a rate not less than 2 minutes per 10 square feet of rug.
- V.H.3.a.(iv) When carpet or rugs are removed from the work area for off-site cleaning or disposal, the carpet or rugs shall be misted, carefully rolled

and sealed with 6-mil thickness polyethylene sheeting to prevent the release of dust.

- V.H.3.b. Upholstery. All upholstery that is contaminated with lead-contaminated dust that will be cleaned, and all upholstered surfaces in the work area that are not disposed of as lead-contaminated waste, shall be HEPA vacuumed with a minimum of three passes over each surface at a total rate of 2 minutes per 10 square feet.
- V.H.3.c. Forced Air Ducts. Air vent registers within the work area shall be HEPA vacuumed and wet cleaned. Horizontal surfaces in the duct work that can be reached with a vacuum attachment shall be cleaned of visible dust and debris. The division recommends that air filters on heating units and air conditioners be replaced at the same time as dust removal.
- V.H.4. Polyethylene Sheeting Removal Procedures. Prior to final cleaning, protective polyethylene sheeting coverings shall be cleaned of visible debris by HEPA vacuuming and/or wet wiped so that they are visibly clean prior to removal. Multiple layers of polyethylene sheeting shall be removed one layer at a time and only after each individual layer has been wet wiped clean of visible debris.
- V.H.5. Final Cleaning. No sooner than 1 hour after the completion of removal, encapsulation, or enclosure activities have ceased, and prior to final clearance, all surfaces in the work area shall be cleaned by HEPA vacuuming, followed by wet cleaning, followed by a second HEPA vacuuming. In addition, persons performing the cleaning shall comply with the following requirements:
 - V.H.5.a. HEPA vacuuming shall take place only after the surfaces in the work area being vacuumed are dry.
 - V.H.5.b. Wet cleaning shall use clean water mixed with a cleaning agent. The proportion of cleaning agent to water shall be in accordance with the manufacturer's specifications. At a minimum, the cleaning mixture shall be changed after its use in each room, hallway, or stairwell to avoid recontaminating an area by cleaning it with dirty water.
- V.I. Coating and Sealing
 - V.I.1. Coating
 - V.I.1.a. All abated surfaces in the work area shall be sealed with polyurethane or deck enamel, painted, or similarly coated so that the surfaces are easily cleanable by occupants. The coating may be applied prior to conducting final clearance wipe sampling.
 - V.I.1.b. A visual inspection to ensure that lead-based paint hazards in the work area are eliminated shall be conducted prior to the coating of surfaces as required in

Section V.I.1.a. of this Regulation No. 19. The visual inspection shall be performed only by a certified inspector or risk assessor.

V.I.1.c. The installation of resilient coverings over an existing lead-based paint enclosure system are exempt from this Section V.I.1. (Coating) of this Regulation No. 19. Surfaces enclosed with resilient coverings such as vinyl, aluminum coil stock, or materials traditionally not repainted are exempt from this Section V.I.1. (Coating) of this Regulation No. 19.

V.I.2. Sealing Replacement Components, Enclosures and Encapsulation. All replacement components, encapsulation systems and enclosures shall be made dust-tight for at least 20 years. All crevices, holes, seams, edges, joints, and cracks shall be caulked. The underside of all components and enclosures shall be back-caulked to further prevent leaded dust and lead residues from escaping the abated surface.

V.J. Final Clearance

V.J.1. The following post-abatement clearance procedures shall be performed only by a certified inspector or risk assessor.

V.J.1.a. Visual inspection. Following an abatement, a visual inspection shall be performed to determine that all of the following conditions have been met prior to the continuation of the clearance procedures:

V.J.1.a.(i) Deteriorated painted surfaces and/or visible amounts of dust, debris or residue are not still present in the work area. If deteriorated painted surfaces or visible amounts of dust, debris or residue are present, these conditions must be eliminated prior to the continuation of the clearance procedures.

V.J.1.a.(ii) All surfaces in the work area are properly sealed and re-painted in accordance with Section V.I. (Coating and Sealing) of this Regulation No. 19, such that the surfaces are easily cleanable.

V.J.1.a.(iii) All enclosure and encapsulation systems are properly installed, caulked and are dust tight in accordance with Sections V.G. (Encapsulation and Enclosure Requirements), and V.I. (Coating and Sealing) of this Regulation No. 19.

V.J.1.a.(iv) All areas adjacent to the work area that were used as pathways to the work area are visibly free of lead-contaminated dust, debris or residue.

V.J.1.b. Following the visual inspection and any post-abatement cleanup required this Section V.J.1.a. (Visual Inspection) of this Regulation No. 19, clearance sampling for lead-contaminated dust and soil shall be conducted. Clearance sampling may be conducted by employing single-surface sampling or composite sampling techniques.

- V.J.1.c. Dust and soil samples for clearance purposes shall be taken using documented methodologies that incorporate adequate quality control procedures.
- V.J.1.d. Dust and soil samples for clearance purposes shall be taken a minimum of 1 hour after completion of final post-abatement cleanup activities.
- V.J.1.e. The following post-abatement clearance activities shall be conducted as appropriate based upon the extent or manner of abatement activities conducted in or to the pre-1978 residential dwelling, or child-occupied facility:

- V.J.1.e.(i) Clearance Sampling of Interior Abatement Projects

- V.J.1.e.(i)(A) After conducting an abatement, at least one dust sample shall be taken from one interior window sill and from one window trough (if available) and at least one dust sample shall be taken from the floor of no less than four rooms, hallways or stairwells within the containment area. In addition, at least one dust sample shall be taken from the floor outside the containment area and within 10 feet of containment where potential contamination is likely. If there are less than four rooms, hallways or stairwells within the containment area, then all rooms, hallways or stairwells shall be sampled.

- V.J.1.e.(ii) Clearance Sampling of Exterior Abatement Projects

- V.J.1.e.(ii)(A) After conducting an exterior lead-based paint abatement, the following samples shall be collected:

- V.J.1.e.(ii)(A)(1) At least two dust samples shall be collected from the work area if a paved surface or window are within the work area. At a minimum, one dust sample shall be taken from one window (if any) and one dust sample shall be collected from the floor of each patio, deck, driveway, or paved surface (if any) within the work area. Window samples shall be collected from the window sill or window trough, alternating between rooms.

- V.J.1.e.(ii)(A)(2) At least two composite soil samples shall be collected from the soil within the work area. At a minimum, one composite soil sample shall be collected from the soil along the building perimeter and one composite soil sample shall be collected from the child's principle play area (if any in the work area). Each composite soil sample shall consist of at least 5 and no more than 10 aliquots of soil from areas selected in accordance with documented methodologies.

- V.J.1.e.(ii)(B) If the exterior abatement project involved only the covering or removing of bare soil then the collection of clearance soil samples

specified in this Section V.J.1.e.(ii)(A) of this Regulation No. 19 is not required. The visual inspection requirement specified in Section V.J.1.a. (Visual Inspection) of this Regulation No. 19, still applies to soil-only abatement projects.

- V.J.1.f. The rooms, hallways or stairwells or exterior areas selected for sampling shall be selected according to documented methodologies.
- V.J.1.g. The certified inspector or risk assessor shall compare the residual lead level (as determined by the laboratory analysis) from each dust and soil sample with applicable clearance levels for lead in dust and soil on floors, windows, and other surfaces.
 - V.J.1.g.(i) If the residual lead level in a single surface dust sample equals or exceeds $40 \mu\text{g}/\text{ft}^2$ on interior floors, $250 \mu\text{g}/\text{ft}^2$ on interior window sills, $400 \mu\text{g}/\text{ft}^2$ on window troughs, $500 \mu\text{g}/\text{ft}^2$ on exterior window sills, or $800 \mu\text{g}/\text{ft}^2$ on exterior surfaces (e.g. patios, porches, sidewalks), or if the residual lead level in a composite dust sample equals or exceeds the applicable clearance level divided by half the number of subsamples in the composite sample, all the components represented by the failed sample shall be re-cleaned and re-tested until clearance levels are met.
 - V.J.1.g.(ii) If the residual lead levels in a soil sample exceed $400 \mu\text{g}/\text{g}$ in a play area, or $1,200 \mu\text{g}/\text{g}$ in the rest of the yard, the soil must be abated in accordance with Section V.F. (Soil Abatement) of this Regulation No. 19.
- V.J.2. In a pre-1978 multi-family dwelling with similarly constructed and maintained pre-1978 residential dwellings, random sampling for the purposes of clearance may be conducted provided:
 - V.J.2.a. the certified individuals who abate or clean the pre-1978 residential dwellings do not know which residential dwellings will be selected for the random samples;
 - V.J.2.b. in accordance with Appendix A, a sufficient number of pre-1978 residential dwellings are selected for dust and soil sampling to provide a 95 percent level of confidence that no more than 5 percent or 50 of the residential dwellings (whichever is smaller) in the randomly sampled population exceed the appropriate clearance levels specified in Section V.J.1.g. of this Regulation No. 19; and
 - V.J.2.c. the randomly selected pre-1978 residential dwellings are sampled and evaluated for clearance according to the procedures found in Section V.J.1. of this Regulation No. 19.

V.J.3. An abatement report shall be prepared by a certified supervisor or project designer. The abatement report shall be completed within ninety days following the successful clearance of the project and include the following information:

- V.J.3.a. start and completion dates of abatement;
- V.J.3.b. the name and address of each certified firm conducting the abatement and the name of each supervisor assigned to the abatement project;
- V.J.3.c. the occupant protection plan prepared pursuant to Section V.A.6. (Occupant Protection Plan) of this Regulation No. 19;
- V.J.3.d. the name, address, and signature of each certified risk assessor or inspector conducting clearance sampling and the date of clearance testing;
- V.J.3.e. the results of clearance testing and all soil analyses (if applicable) and the name of each recognized laboratory that conducted the analyses; and
- V.J.3.f. a detailed written description of the abatement, including abatement methods used, locations of rooms and/or components where abatement occurred, reason for selecting particular abatement methods for each component, any suggested monitoring of encapsulants or enclosure, and any suggested post-abatement maintenance and cleaning methods.

V.J.4. Collection and laboratory analysis of samples. Any dust or soil samples collected pursuant to this Section V.J. (Final Clearance) of this Regulation No. 19 shall be:

- V.J.4.a. collected by persons certified by the division as an inspector or risk assessor; and
- V.J.4.b. analyzed by a recognized laboratory.

V.J.5. Composite dust sampling. Composite dust sampling may only be conducted in the situations specified in this Section V.J. (Final Clearance) of this Regulation No. 19. If such sampling is conducted, the following conditions shall apply:

- V.J.5.a. composite dust samples shall consist of at least two subsamples, but no more than four subsamples;
- V.J.5.b. every component that is being tested shall be included in the sampling; and
- V.J.5.c. composite dust samples shall not consist of subsamples from more than one type of component.

V.K. Waste Handling

Each person handling any lead-contaminated waste shall comply with the following requirements:

- V.K.1. wrap and seal lead-contaminated waste in at least 6-mil thick polyethylene sheeting prior to removing the waste from the containment or abatement work area;
- V.K.2. store the waste in a covered container within a designated secure (locked) area, if not transported immediately off-site;
- V.K.3. do not cut or break painted materials or perform any action that is likely to generate leaded dust;
- V.K.4. comply with all local, State and Federal waste handling and disposal requirements; and
- V.K.5. discharge no visible emissions during any handling of lead-contaminated waste outside the work area.

V.L. Recordkeeping

All reports or plans required in this Section V. (Abatement Requirements) of this Regulation No. 19, shall be maintained for no fewer than 3 years by the certified firm or individual who prepared the report. The certified firm or individual also shall provide copies of these reports to the building owner who contracted for its services.

V.M. Alternative Procedures and Variances

The division may, at its discretion, grant a variance from the requirements in this Section V. (Abatement Requirements) of this Regulation No. 19, allowing use of an alternative procedure for the clearance of abatement projects or the control of emissions from a lead abatement project provided that the person conducting the abatement submit an alternative procedure in writing to the division and demonstrates to the satisfaction of the division that compliance with this Regulation No. 19 is not practical or that the proposed alternative procedures provide equivalent control of lead.

VI. Delegation to Local Health or Building Departments

VI.A. Other than training and certification requirements specified in Section III. (Training and Certification Requirements) of this Regulation No. 19, the division may delegate, at its discretion, the implementation or enforcement of standards in this Regulation No. 19 to any local health or building department, if requested by such a local department.

VI.B. To receive delegation of a program for regulating lead-based paint activities pursuant to Section VI.A. of this Regulation No. 19, the local department must:

VI.B.1. adopt standards that are at least as stringent as the standards in this Regulation No. 19;

VI.B.2. demonstrate to the division that the local enforcement program is equivalent to the division's enforcement program; and

VI.B.3. demonstrate to the division that the appropriate infrastructure or government capacity exists to effectively carry out a local program.

VII. Statement of Basis, Specific Statutory Authority, and Purpose

VII.A. August 21, 1998

1. Background

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, section 24-4-103(4), C.R.S. and the Colorado Air Pollution Prevention and Control Act, sections 25-7-110 and 25-7-110.5, C.R.S.

2. Basis

U.S. Environmental Protection Agency (“US EPA”) promulgated a regulation that allows states to promulgate US EPA-approved lead-based paint abatement programs and receive monies from US EPA to fund the initial development of state programs. (40 C.F.R. Part 745.) In 1997, the Colorado Legislature passed an act granting the Commission authority to promulgate a regulatory program for lead-based paint abatement. (SB 97-136, Prevention, Intervention, and Reduction of Lead Exposure.)

3. Authority

The authority for this regulation is contained in the Colorado Air Pollution Prevention and Control Act (“Colorado Act”), sections 25-7-1101 through 1107, which provides the Commission the authority to develop and adopt a lead-based paint abatement program.

4. Purpose

The Colorado Legislature has declared that exposure of children to lead represents a significant environmental health problem that is preventable by developing a regulatory program that leads to the creation of housing and facilities where no significant lead-based paint hazard is present. In addition, the Legislature declared that the achievement of uniformity in the regulation of lead abatement practices and uniformity in the qualifications for and certification of persons who perform such abatement is necessary statewide. The purpose of this regulation is to protect children from exposure to lead from lead-based paint by regulating how lead-based paint abatement is conducted in “target housing” and “child-occupied facilities”. As a result, the scope of Regulation No. 19 is limited to homes constructed prior to 1978, child-occupied facilities, and only those projects where the intent is to abate lead-based paint hazards. Regulation No. 19 is intended to fulfill the requirements of the Lead-based Paint Hazard Reduction Act of 1992, pertaining to target housing and child-care facilities. The Commission finds that the work practice requirements contained in Regulation No. 19 are necessary for the protection of the public in targeted housing and child-care facilities.

5. Action Taken

The Commission concludes that adoption of this regulation is an appropriate step to begin to protect children from exposure to lead from lead-based paint as a result of lead-based paint abatement in “target housing” and “child-occupied facilities”. At this time, the Commission adopts language substantially similar to the federal lead-based paint

abatement requirements. In the Commission's view, the requirements adopted will satisfy US EPA's requirements for a state lead-based paint abatement program.

a. Training and Certification

The Commission concludes that implementation of the training and certification provisions in this regulation will result in uniformity in the qualifications for and certification of persons who perform such abatement. The training and certification provisions will also aid in ensuring that trained and qualified individuals are available to advise consumers about lead hazards in general and about specific measures that may be needed to control such hazards. The training and certification requirements in the rule are identical to the training and certification requirements in the federal rule, except that the State rule: (1) establishes fees pursuant to section 25-7-1103, C.R.S.; (2) requires division approval of training courses; and (3) Does not include the provisions of the federal rule that allow accredited training courses to issue an interim certification valid for six months. Such interim certification is not necessary in the State program because, unlike the US EPA, the division is prepared to begin implementing the certification requirements immediately. Such variations from the federal rule are consistent with state statute, are administrative in nature, and do not constitute training and certification requirements that are more stringent than the federal requirements. Therefore, the training and certification provisions are not more stringent than the training and certification requirements established by the federal "Residential Lead-based Paint Hazard Reduction Act of 1992" and federal rules promulgated pursuant to that act or any training and certification requirements of any US EPA-approved state program that has been established under the Federal "Residential Lead-based Paint Hazard Reduction Act of 1992."

b. Performance Standards and Practices

Pursuant to section 25-7-1103(1)(b), C.R.S., the Commission adopts performance standards and practices for lead abatement. The Commission concludes that the performance standards and practices in Regulation 19 will result in uniformity in the regulation of lead abatement practices in the State of Colorado. These standards and practices require that abatement contractors employ consistent standards and procedures to remove, enclose, and encapsulate lead-based paint to remove lead hazards from target housing and child-occupied facilities. The standards and practices include US EPA's work practice standards and work practice measures that an abatement contractor must include in an occupant protection plan and comply with before, during, and after abatement. The work practice standards and measures were developed based upon US EPA's regulatory requirements and U.S. Department of Housing and Urban Development's ("HUD's") requirements.

The State rule includes work practices that are not required by the federal act, and that are, in some cases, otherwise more stringent than the federal requirements. The additional work practices in the State rule include the prohibition of uncontained hydroblasting and high-pressure washing, the prohibition of dry sanding, the restriction of chemical stripping, and the requirement that a supervisor be on-site at all times while abatement is occurring. Such requirements are not incorporated into

the State implementation plan and, therefore, are consistent with section 25-7-105.1, C.R.S.

In addition, the federal rule does not explicitly require the establishment of containment barriers; however, they do require an occupant protection plan that may require the use of containment barriers. The State rule expressly requires containment barriers.

US EPA requires a written occupant protection plan be developed for each residential dwelling or child-occupied facility prior to the abatement. (40 C.F.R. 745.227(e)(5).) 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 any lead-based paint hazards." (40 C.F.R. 745.227(e)(5)(i).) US EPA does not provide the abatement contractor the minimum abatement work practice measures that will be required for the occupant protection plan. The Commission pursuant to its authority in section 25-7-1103(1)(b), C.R.S., adopts the work practice measures in Regulation No. 19 as the minimum work practice measures that must be included in an occupant protection plan and followed during abatement to ensure building occupants are protected from exposure to any lead-based paint hazards.

Certain standards and methodologies adopted by the Commission were developed by the HUD. The Commission adopts such standards and methodologies, because: 1) HUD has successfully implemented and enforced its lead-based paint abatement program and the associated guidelines and methodologies for the past eight years; 2) US EPA cites to HUD guidelines and methodologies in the Federal regulation (i.e., 40 C.F.R. section 745.227(a)(3)) as acceptable standards for Federal and state programs; 3) the HUD Guidelines are considered by industry as state-of-the-art; 4) several commenters in the workgroup stressed the importance of not reinventing the wheel and being consistent with HUD; and 5) the HUD Guideline incorporates the results of studies that indicate work practices and standards necessary to contain lead-based paint hazards and protect children's health.

The Commission adopts the requirement that a certified supervisor to be onsite during all work site preparation, abatement, and during post-abatement cleanup of the work areas, because such a practice is necessary to ensure workers properly conduct lead-based paint abatement. The Commission agrees that US EPA's requirement that a certified supervisor need only be reachable by telephone and is not required to be onsite is inadequate for the State of Colorado.

In addition, the State rule contains project notification requirements and establishes a project clearance level. The federal rule also requires notification but US EPA has not yet specified rules for such notification. US EPA may propose specific notification requirements before August 31, 1998. US EPA proposed a regulation for public comment identifying dangerous levels of lead in June of 1998. US EPA's proposal for soil hazard levels differs from HUD standard and the division's proposal

by not including a separate, more stringent, standard for high contact play areas. Although US EPA's regulation is not final, its justification for a single soil level is persuasive and the Commission adopts that single soil level.

c. Procedures for Approval of Trained Persons

Regulation No. 19, as adopted, includes procedures for the approval of persons or companies who provide training or accreditation for workers, supervisors, inspectors, risk assessors, or project designers performing lead-based paint activities in target housing or child-occupied facilities pursuant to the Commission's authority in section 25-7-1103(1)(c), C.R.S.

d. Notification of Appropriate Persons

The Commission finds that the notification requirements in Regulation No. 19 are necessary and adequate to provide the Air Pollution Control Division ("Division") with notice of lead-based paint abatement projects occurring in the State of Colorado. The Division recommends that the Commission adopt a requirement that an abatement contractor notify the Division ten days prior to the commencement of lead-based paint abatement activities if the amount of lead-based paint, lead contaminated soil, or lead contaminated dust is greater than two square feet on interior surfaces or ten square feet on exterior surfaces. The Commission also adopts fee provisions intended to cover the cost of processing notifications. The Commission agrees with the division and includes such a requirement in the notification provisions of Regulation No. 19.

e. Fees for Certification of Persons

Regulation No. 19 includes requirements for fees for certification of persons conducting lead abatement services, for any necessary monitoring of such persons to ensure compliance with Regulation No. 19, and for approval of persons or companies involved in the training or accreditation of workers pursuant to the Commission's authority at section 25-7-1103(1)(e), C.R.S. The Commission concludes that the fee provisions in this Regulation No. 19 are adequate to fully fund the division's lead-based paint abatement program, if projected activity levels are accurate.

6. Definition of Child-Occupied Facilities

The rule incorporates the definition of the term "child-occupied facility" set out in section 25-7-1102(2)(a), C.R.S. Pursuant to the statutory definition, day-care centers, pre-schools and kindergarten classrooms constructed prior to 1978 are "child-occupied facilities" whether or not such facilities are visited by children for a total of at least six hours per visit. That is, the definitions set out in paragraphs (a) and (b) of sub-section (2) of section 25-7-1102, C.R.S., are independent definitions. Day-care centers, pre-schools and kindergarten classrooms are child-occupied facilities whether or not they meet the definition set out in section 25-7-1102(2)(a), C.R.S.

The foregoing interpretation of section 25-7-1102(2), C.R.S., is based on the plain language of the statute. Furthermore, such a reading furthers the legislative intent evident in section 25-7-1103(1), C.R.S., to establish a program that implements the requirements

of the federal program. The definition of "child-occupied facility" set out in section 25-7-1102(2)(a), C.R.S., differs from the federal definition expressed in 40 C.F.R. section 745.223. The difference between the two definitions concerns the length of time in which a child must visit a facility in order for the facility to be a "child-occupied facility." Pursuant to the federal definition, the critical time is defined as "combined weekly visits [of at least] six hours." The definition in section 25-7-1102(2)(a), C.R.S., requires each visit to total at least six hours. Many pre-schools and kindergarten classrooms operate more than six hours per week, but less than six hours per day. Such classrooms are included in the federal definition, but would not be included in the definition set out in section 25-7-1102(2)(a), C.R.S. Reading sections 25-7-1102(2)(a) and (2)(b), C.R.S., as independent definitions captures most, if not all, of the facilities that are included in the federal definition but excluded from the definition in section 25-7-1102(2)(a), C.R.S. Such a reading furthers the legislative intent to implement the federal program.

7. Findings Pursuant to Section 25-7-110.8, C.R.S.

The regulation promulgated by the Commission is based on reasonably available, validated, reviewed and sound scientific methodologies demonstrating that exposure to lead is hazardous to children under the age of seven, and that lead-based paint was commonly in use in residences and child-occupied facilities prior to 1978. Interested parties did not provide the Commission with any other validated, reviewed, and sound scientific methodologies or information.

The work practices in the regulation are designed to minimize airborne lead-contaminated dust during lead abatement projects. Therefore, such practices will result in a demonstrable reduction in air pollution associated with such projects. The remaining requirements of the regulation are administrative in nature and are not subject to the requirements of section 25-7-110.8(1)(b), C.R.S.

No one proposed an alternative that would comply with the state statutory requirements in a more cost-effective manner.

8. Delay of Effective Date of Regulation

The Commission delayed the effective date of this regulation for persons conducting abatement activities in dwellings that they own and occupy in order to provide homeowners time to be able to comply with this regulation.

9. Commission Directions to Staff

The Commission intends that the Department of Public Health and Environment's lead program, in September 1998, notify the primary care giver of known children with elevated blood lead levels of this regulation. The Commission intends that the division review the application of this regulation to renovation activities, and that it complete this review by December 31, 1998. The Commission intends that the division will maintain current lists of certified lead abatement contractors, supervisors and certification courses, and will make these lists available to the public.

VII.B. Revisions to Regulation No. 19; December 19, 2002

1. Background

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103(4) and (12.5), C.R.S. for new and revised regulations.

2. Basis

Regulation No. 19 sets forth the Air Quality Control Commission's lead-based paint abatement program. Colorado's program is tailored after the Federal program. In January of 2001, the United States Environmental Protection Agency ("EPA") adopted revisions to the Federal program. EPA has given the state until June 7, 2003 to revise its regulation in order to make Colorado's program consistent with EPA's newly revised regulation. These revisions to Regulation No. 19 are intended to comply with this mandate. Additionally, obsolete provisions have been deleted and certain minor language changes have been made to help clarify the regulation. Finally, changes to the certification fee structure have been made to minimize the burden on the regulated community and encourage the type of growth necessary to serve the needs of the public while allowing the program to be fully funded from the collection of fees as required pursuant to § 25-7-1105, C.R.S.

3. Specific Statutory Authority

The specific statutory authority for these revisions is set forth in various sections of the Colorado Air Pollution Prevention and Control Act. Section, 25-7-105(1), C.R.S., gives the Air Quality Control Commission general authority to promulgate rules and regulations necessary for the proper implementation of the Air Pollution Prevention and Control Act ("Act"). Section 25-7-1103(1), C.R.S. gives the Commission specific authority to promulgate regulations necessary to establish and implement a state lead-based paint abatement program, including regulations regarding lead-based paint abatement performance standards and certification requirements. Finally, § 25-7-1105, C.R.S. allows the Commission to set fees that are sufficient to cover the costs of the program.

4. Purpose

The purpose of the revised regulation is to continue to protect children from lead exposure by establishing standards for lead-based paint abatement in "target housing" and "child occupied-facilities." The primary purpose of these revisions is to make the Colorado regulation consistent with the recently adopted Federal regulations governing lead-based paint abatement. To accomplish this, revisions have been made to Sections II. (Definitions), III. (Training and Certification Requirements), IV. (Inspections, Lead Hazard Screens, and Risk Assessments) and V. (Abatement Requirements) of Regulation No. 19. Changes have also been made to the table in Appendix A, governing the number of sample that must be taken in clearing projects in multi-family dwellings constructed prior to 1978. The new table is consistent with the revised HUD Guidelines for Lead-Based Paint, and therefore serves to make Regulation No. 19 consistent with the federal program.

5. Action Taken

In addition to the changes necessary to make the State program consistent with Federal requirements, certain additional changes were made in order to clarify program requirements. For example, surplus language was removed from the provisions set forth in Section III.B.1.b., while the language in Section IV.B.1 was expanded to clarify that risk assessments are to be conducted in accordance with requirements of Section IV. (Inspections, Lead Hazard Screens, and Risk Assessments). These changes are not substantive and are not intended to change any program requirements.

A limited number of minor substantive changes were made to remove obsolete provisions, correct unintended consequences of the old regulatory language, and eliminate unnecessarily burdensome requirements. For example, the notification fee table set forth in Section V.A.5.c. sets forth the amount of fees that need to be paid based on the size of the project. Due to errors in the table, fees for larger projects could actually be less than fees for smaller projects. These errors have been corrected to create a graduated fee schedule. Section V.J.3. of the old regulation required that a supervisor or project designer prepare an abatement report, but failed to specify a time frame for completion of the report, thereby rendering enforcement of this requirement difficult. The revisions correct this oversight by providing a ninety-day time frame for report completion. Finally, section V.C.2.c. has been changed to eliminate the requirement that ventilation systems be shut down during level I-1 projects. This requirement was deemed unnecessary given the nature of such projects and the fact that vents must be adequately sealed prior to abatement.

Several changes were made with respect to certification requirements. EPA's regulations require that all abatement, inspection and risk assessment firms be certified. For some reason, the prior version of regulation No. 19 failed to require certification for inspection or risk assessment firms. The revisions correct this oversight. The revisions also set certification fees for risk assessment and inspection firms, as well as modify the fees for abatement firms. The fee levels were based on an analysis of the amount of money that needs to be collected through fees in order to cover the costs of the program as required pursuant to § 25-7-1105, C.R.S. Given the continued growth of the program, and the addition of certification fees for inspection and risk assessment firms, the fee levels for abatement firms were able to be substantially reduced. These new fees will apply to firms seeking certification after the effective date of these revisions. Firms certified prior to the effective date shall not be entitled to a refund of any previously paid fees.

6. Findings Pursuant to § 25-7-110.8, C.R.S.

These revisions are based on reasonably available, validated and reviewed, and sound scientific methodologies demonstrating that exposure to lead is hazardous to children under the age of seven, and that lead based-paint was commonly used in residences and child-occupied facilities prior to 1978. Interested parties did not provide the Commission with any other validated, reviewed and scientifically sound methodologies or information.

Based on the evidence presented on the record, the requirements of this revised regulation will reduce the amount of airborne lead-contaminated dust occurring during lead-based paint abatement projects, and therefore reduce the risks to human health and the environment thereby justifying the costs associated with this regulation.

The revisions represent the regulatory alternative presented to the Commission, which best balances cost-effectiveness, flexibility to the regulated community and maximization of air quality benefits.

APPENDIX A

Number of Units to be Tested in Pre-1978 Multifamily Developments
(Section V.J.2.b.)

Number of Similar Units, Similar Common Areas or Exterior Sites in a Building or Development	Pre-1960 or Unknown-age building or Development: Number to Test	1960-1977 Building or Development: Number to Test
1-9	All	All
10-13	All	10
14	All	11
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
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

Appendix A: (continued)

Number of Similar Units, Similar Common Areas or Exterior Sites in a Building or Development	Pre-1960 or Unknown-age building or Development: Number to Test	1960-1977 Building or Development: Number to Test
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
300-279	54	28
380499	55	28
500-776	56	28
777-939	57	28
970-1004	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
4000	232	116