

**DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

**Air Quality Control Commission**

**REGULATION NUMBER 8 CONTROL OF HAZARDOUS AIR POLLUTANTS**

**5 CCR 1001-10**

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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**PART B Asbestos Control**

All underlined text in this regulation indicates defined terms.

**I. INCORPORATED MATERIAL STATEMENT; DEFINITIONS**

**I.A. INCORPORATED MATERIALS**

Some documents are noted in this regulation 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 80246-1530, 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. The following materials are herein incorporated by reference:

I.A.1. United States Environmental Protection Agency's Asbestos Hazard Emergency Response Act (AHERA), (~~2010-4995~~) Subpart E, 40 C.F.R. Part 763, section 1, and Appendix E to Subpart E.

I.A.2. United States Environmental Protection Agency's Asbestos Hazard Emergency Response Act (AHERA) Model Accreditation Plan (MAP), 40 C.F.R. Part 763 (~~2010-4994~~), Subpart E, Appendix C.

I.A.3. United States Environmental Protection Agency's National Emission Standard for Asbestos, Standard For Waste Disposal For Manufacturing, Fabricating, Demolition, Renovation, And Spraying Operations, 40 C.F.R. Part 61 Section 150 (~~2011-4995~~).

I.A.4. United States Environmental Protection Agency's August 1994 Method EPA /600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials".

~~I.A.5.I.A.5. — United States Environmental Protection Agency's "Green Book", Managing Asbestos in Place, (TS-799)-20T-2003, Appendix G (1990); United States Environmental Protection Agency's "Purple Book," Guidance for Controlling Asbestos-containing Materials in Buildings (1985).~~

I.A.6. United States Environmental Protection Agency's "Pink Book", Simplified Sampling Scheme for Friable Surfacing Materials, (EPA 560/5-85-030a) (1985).

- I.A.7. National Institute for Occupational Safety and Health (NIOSH) Method 7400 entitled "~~Asbestos and Other~~ Fibers by PCM," published in the NIOSH Manual of Analytical Methods, 5th ~~3rd~~ Edition, ~~third second~~ supplement, ~~June 2019 August 1987~~.
- I.A.8. Occupational Safety and Health Administration (OSHA) Regulation "Asbestos", 29 C.F.R. Part 1910.1001, Appendix A (OSHA ~~2019 1987~~).

I.B. DEFINITIONS

All terms used in this Regulation ~~No.~~ 8, Part B, and that are not defined below are given the same meaning as in the definitions in Regulation ~~No.~~ 8, Part A section (I.D.), and the common provisions regulation:

- I.B.1. Accessible when referring to asbestos-containing material ACM means that the material is subject to disturbance by school or building occupants or custodial or maintenance personnel in the course of their normal activities.
- I.B.2. Act means C.R.S. sections 25-7-101 et seq., concerning the control of asbestos.
- I.B.3. Adequately wet means sufficiently mixed or penetrated with amended water liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.
- I.B.4. Air erosion means the passage of air over friable ACM ACBM which may result in the release of asbestos fibers.
- I.B.5. Airlock means a system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area. The airlock system must self-close should negative air pressure fail.
- I.B.6. Air monitoring means measuring the fiber content of a known volume of air collected over a known period of time.
- I.B.7. Air Monitoring Specialist (AMS) means a person who performs final visual clearance inspections, asbestos spill delineation, or any air monitoring referred to in this regulation.
- I.B.8. Amended water ~~means water to which a surfactant has been added means a mixture of water and a chemical wetting agent (surfactant) that provides control of asbestos fiber release. Amended water means water to which a surfactant has been added to increase the ability of water to penetrate ACM.~~
- I.B.9. Area of Public Access
- I.B.9.a. Area of Public Access means any building, facility, or property, or only that portion thereof, that any member of the general public can enter without limitation or restriction by the owner or lessee under normal business conditions, ~~except that~~ "Area of Public Access" includes a single-family residential dwelling and any facility that charges the general public a fee for admission such as any theater or arena. "General Public" does not include employees of the entity that owns, leases, or operates such building, facility, or property, or such portion thereof, or any service personnel or vendors connected therewith. Except as provided in subparagraph 1.B.9.b., Area of Public Access includes any single-family residential dwelling.

- I.B.9.b. Notwithstanding the provisions of ~~subparagraph section~~ I.B.9.a., a single-family residential dwelling will not be considered an area of public access for purposes of this Regulation ~~No-~~8, Part B, if the homeowner who resides in the single-family residential dwelling that is the homeowner's primary residence requests, pursuant to ~~subparagraph section~~ III.E.32., that the single-family residential dwelling not be considered an area of public access.
- I.B.10. Asbestos means asbestiform varieties of chrysotile, amosite (cummingtonite-grunerite), crocidolite, anthophyllite, tremolite, and actinolite.
- I.B.11. Asbestos Abatement means any of the following:
- I.B.11.a. The wrecking or removal of structural members that contain friable asbestos-containing material;
- I.B.11.b. The following practices intended to prevent or control the escape of asbestos fibers into the atmosphere:
- I.B.11.b.i. Encapsulating, cCoating, binding, or resurfacing of walls, ceilings, pipes, or other structures for the purpose of minimizing friable asbestos-containing material from becoming airborne;
- I.B.11.b.ii. Enclosing friable asbestos-containing material to make it inaccessible;
- I.B.11.b.iii. Removing friable asbestos-containing material from any pipe, duct, boiler, tank, reactor, furnace, or other structural member.
- I.B.11.b.iv. Removing facility components that are covered with or contain friable asbestos-containing material. ~~covered or asbestos-containing~~
- I.B.11.b.v. Cleaning up a major asbestos spill.
- I.B.12. ~~Asbestos Abatement Contractor means any person hired to conduct asbestos abatement.~~
- I.B.1243. Asbestos Consulting Firm (ACF) means any person that performs or offers to perform hired for a fee to conduct any of the following activities, as required by ~~R~~regulation ~~Number~~8, Part B, in the state of Colorado: asbestos building inspection and bulk sampling; development of asbestos management plans; air monitoring for asbestos fibers; development of asbestos project designs; and, project management, ~~as specified in Section H.J.~~
- I.B.134. Asbestos Laboratory means any person that performs or offers hired for a fee to perform ~~conduct~~ asbestos analysis of bulk or air samples, as required by Regulation ~~Number~~8, Part B, in the state of Colorado.
- I.B.145. Asbestos Training Provider means any person who performs or offers to perform asbestos ~~puts on~~ training courses in any of the following asbestos disciplines in the state of Colorado: Worker, Supervisor, Project Designer, Building Inspector, Management Planner or Air Monitoring Specialist.
- I.B.156. Asbestos-containing building material (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a school building or state building.

- I.B.167. Asbestos-containing material (ACM) means material containing more than 1% asbestos.
- I.B.178. Asbestos-containing waste material (ACWM) means mill tailings or any waste that contains commercial asbestos and is generated by a source subject to the provisions of this Regulation. This term includes, but is not limited to, asbestos waste from control devices, friable asbestos-containing waste material, spill debris, disposable equipment, containment components and clothing, and bags or other similar packaging contaminated with commercial asbestos fibers. As applied to demolition and renovation operations, this term also includes regulated asbestos-containing material waste and materials contaminated with asbestos including disposable equipment and clothing.
- I.B.18 Asbestos-contaminated means any material that has had contact with or been affected by an impacted or damaged material containing more than 1% asbestos. An accumulation of powder, dust or debris similar in appearance to an ACM can be used as confirmatory evidence of contamination.
- I.B.19. Asbestos debris means pieces of ACM that can be identified by color, texture, or composition, or means dust, if the dust is determined by a certified Inspector to be ACM.
- I.B.20. Asbestos mill means any facility engaged in converting, or in any intermediate step in converting, asbestos ore into commercial asbestos. Outside storage of asbestos-containing material is not considered a part of the asbestos mill.
- I.B.21. Asbestos spill means any release of asbestos fibers due to a breach of the containment barrier on an abatement project, or due to any cause other than asbestos abatement.
- I.B.22. Asbestos tailings mean any solid waste that contains asbestos and is a product of asbestos mining or milling operation.
- I.B.23. Assessment, when used in reference to ACM in a state building, means any evaluation of the condition of ACM or ACBM, or suspected ACM or ACBM, which determines the need for a response action.
- I.B.24 Business day means Monday through Friday, 8 A.M. to 5 P.M., excluding state holidays.
- I.B.254. Category I nonfriable asbestos-containing material means asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products containing more than 1 percent asbestos as determined using the method specified in Appendix E, Subpart E, 40 C.F.R. Part 763, section 1, polarized light microscopy (EPA 1995).
- I.B.265. Category II nonfriable ACM means any material, excluding category I nonfriable ACM, containing more than 1 percent asbestos as determined using the methods specified in Appendix E, Subpart E, 40 C.F.R. Part 763, section 1, polarized light microscopy, (EPA 1995) that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- I.B.276. Certified means holding a certificate issued pursuant to this regulation.
- I.B.287. Certified Industrial Hygienist (CIH) means an individual who has been certified by the American Board of Industrial Hygiene to practice as a CIH.

- I.B.298. Clean Room means an uncontaminated area or room, which is a part of the Worker decontamination enclosure system with provisions for storage of Workers' street clothes and clean protective equipment. The clean room must be sized to accommodate the clothes and equipment of the work crew.
- I.B.3029. Commercial asbestos means any material containing asbestos that is extracted from ore and has value because of its asbestos content.
- I.B.310. Commission means the Colorado Air Quality Control Commission.
- I.B.32. Conflict of Interest means any situation that has the potential to prevent impartiality or create bias. This may include a situation in which a person is in a position to derive a personal or business benefit or a competitive advantage from their actions, directions or decisions.
- I.B.334. Critical Barrier means a single layer of 6-mil or greater polyethylene sheeting or an equivalent airtight barrier installed initially over all openings between the work area and non-work area (i.e. doors, windows, ventilation openings, drains, wall penetrations, etc.), as an additional measure to prevent contaminated air from escaping the work area.
- I.B.342. Curtained Doorway means a device to allow ingress or egress from one room to another while permitting only minimal air movement between the rooms. The curtains must self-close should negative air pressure fail.
- I.B.353. Cutting means to penetrate with a sharp-edged instrument and includes sawing, but does not include shearing, slicing, or punching.
- I.B.364. Damaged friable miscellaneous ACM means friable-miscellaneous ACM which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or, if applicable, which has delaminated such that its bond to the substrate (adhesion) is inadequate or which for any other reason, lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM ACM in question may also indicate damage.
- I.B.375. Damaged friable surfacing ACM means friable surfacing ACM, which has deteriorated or sustained physical injury such that the internal structure (cohesion) of the material is inadequate or which has delaminated such that its bond to the substrate (adhesion) is inadequate, or which, for any other reason lacks fiber cohesion or adhesion qualities. Such damage or deterioration may be illustrated by the separation of ACM into layers; separation of ACM from the substrate; flaking, blistering, or crumbling of the ACM surface; water damage; significant or repeated water stains, scrapes, gouges, mars or other signs of physical injury on the ACM. Asbestos debris originating from the ACBM in question may also indicate damage.
- I.B.386. Damaged or significantly damaged thermal system insulation ACM means thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or in part, is crushed, water-stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional

water damage on the protective coverings/jackets; or exposed ACM ends or joints.  
Asbestos debris originating from the ACBM in question may also indicate damage.

- I.B.397. Decontamination unit enclosure system means a series of three (minimum) connected chambers/rooms, separated from the work area and from each other by air locks or curtained doorways, to allow for the decontamination of persons-Workers and equipment. The air locks or curtained doorways must self-close should negative air pressure fail. The decontamination unit must contain a shower equipped with hot and cold water.
- I.B.4038. Demolition means the wrecking or removal taking-out of any load-supporting structural member of a facility together with any related handling of debris, operations or the intentional burning of any facility, or moving a facility from a permanent foundation.
- I.B.4139. Division means the Colorado Air Pollution Control Division.
- I.B.429. Emergency means an unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action and that constitutes a threat to life, health or that may cause major damage to a property. Delay of a contract does not constitute an emergency, nor are demolition projects emergencies unless the building has been declared in imminent danger of collapse by a governmental entity.
- I.B.434. Encapsulation means application of a liquid material to asbestos-containing material which controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). Painting for aesthetic purposes is not considered encapsulation.
- I.B.442. Enclosure means an airtight, impermeable, permanent barrier around ACM to minimize the release of asbestos fibers into the air.
- I.B.453. Equipment room means a contaminated chamber area or room, which is part of the Worker decontamination enclosure system which with provides signs for storage of contaminated clothing and equipment.
- I.B.464. Fabricating means any processing (e.g., cutting, sawing, drilling) of a manufactured product that contains commercial asbestos, with the exception of processing at temporary sites (field fabricating) for the construction or restoration of facilities. In the case of friction products, fabricating includes bonding, rebonding, grinding, sawing, drilling, or other similar operations performed as part of fabricating.
- I.B.475. Facility means any institutional, commercial, public, industrial, or residential structure, installation, or building (including any structure, installation, or building containing condominiums or individual dwelling units operated as a residential cooperative), any ship; any railcar; and any active or inactive waste disposal site. Any structure, installation or building that was previously subject to this subpart is not excluded, regardless of its current use or function.
- I.B.486. Facility component means any part of a facility, or previously demolished facility, including equipment.
- I.B.497. Fiber release episode means any uncontrolled or unintentional disturbance of ACBM in school buildings resulting in visible emissions.

- I.B.5048. Final cleaning means the cleaning of all dust and debris from the work area near the end of the active abatement phase, immediately prior to the final visual inspection.
- I.B.5149. Fixed object means a piece of equipment or furniture in the work area (mounted or attached), which cannot be readily removed from the work area.
- I.B.520. Friable means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, or otherwise reduced to a state that is likely to emit fibers. and Friable includes previously nonfriable material after such previously nonfriable material becomes damaged or disturbed to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

~~I.B.51. Friable asbestos containing material means any material that contains asbestos and when dry can be crumbled, pulverized, or reduced to powder by hand pressure and that contains more than one percent asbestos by weight, area or volume. The term includes nonfriable forms of asbestos after such previously nonfriable material becomes damaged to the extent that when dry it can be crumbled, pulverized, or reduced to powder by hand pressure.~~

I.B.53. Full containment means a pressurized system of airtight barriers constructed to isolate a work area to prevent cross-contamination and the release of asbestos fibers. This system must include, at minimum: critical barriers, two (2) layers of six (6) mil or thicker polyethylene sheeting installed on the floor extending at least twelve (12) inches up the walls, two (2) layers of four (4) mil or thicker polyethylene sheeting installed on the walls extending at least twelve (12) inches beyond wall/floor joints, and, if a work area has a ceiling that will not be abated as part of the abatement work, one (1) layer of four (4) mil or thicker polyethylene installed on the ceiling extending at least twelve (12) inches beyond wall/ceiling joints. Additionally a decontamination unit, a waste loadout area, a viewport, and a negative pressure ventilation system which maintains a pressure differential from the work area to the clean area at a minimum of -0.02 inches and exchanges air within the work area a minimum of four (4) times per hour are required.

I.B.542. Functional space means a room, group of rooms, or homogeneous area (including crawl spaces or the space between a dropped ceiling and the floor or roof deck above), ~~such as a classroom(s), a cafeteria, gymnasium, hallways,~~ designated by a person certified under this regulation to inspect, prepare management plans, design abatement projects, or conduct response actions.

I.B.55. General Abatement Contractor (GAC) means any certified person that performs or offers to perform asbestos abatement

I.B.563. Glovebag means a manufactured or fabricated device, typically constructed of six mil transparent polyethylene or polyvinylchloride plastic, consisting of two inward projecting long sleeves with attached gloves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste.

I.B.574. Grinding means to reduce to powder or small fragments and includes mechanical chipping or drilling.

I.B.585. HEPA filtration means a filtering system capable of trapping and retaining at least 99.97 percent of all monodispersed particles 0.3 microns in diameter or larger.

I.B.596. HEPA vacuum means a vacuum system approved by the manufacturer for use in asbestos applications equipped with HEPA filtration.

I.B.6057. Homogeneous area means an area of surfacing material, thermal system insulation material, or miscellaneous material that is uniform in color, and texture, and appears, or has been confirmed, to have the same date of application, and is unlikely to consist of more than one type, or formulation, of material.

I.B.61.58 Independent means that a person is not an employee, agent, representative, partner, joint venture, shareholder, parent or subsidiary company of another person.

I.B.62. In poor condition means the binding of the material is losing its integrity as indicated by peeling, cracking, flaking, or crumbling of the material.

I.B.63. Installation means any building or structure or any group of buildings or structures at a single demolition or renovation site that are under the control of the same owner or operator (or owner or operator under common control).

I.B.64. Inspection' means an activity undertaken to determine the presence or location, or to assess the condition of, friable or non-friable ACM or ACBM or suspected ACM or ACBM, whether by visual or physical examination, or by collecting samples of such material. This term includes reinspections of friable and non-friable known or assumed ACM or ACBM which has been previously identified. The term does not include the following: a. Periodic surveillance of the type described in 40 CFR 763.92(b) and Regulation 8, Part B, subsection IV.I.2. solely for the purpose of recording or reporting a change in the condition of known or assumed ACBM; b. Inspections performed by employees or agents of Federal, State, or local government solely for the purpose of determining compliance with applicable statutes or regulations; or c. visual inspections of the type described in 40 CFR 763.90(i) or subsection III.P.1. conducted solely for the purpose of determining completion of response actions.

I.B. 65. Leak-tight means that solids, dust or liquids cannot escape or spill out.

I.B.6659. Large contiguous facility complex means a complex that has a single owner and have –3 or more buildings on a single property or adjoining properties.

I.B.679. Local education agency (LEA) means:

I.B.679.a. Any local educational agency as defined in section 198 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 3381).

I.B.679.b. The ~~owner~~ operator of any nonpublic, nonprofit, elementary, or secondary school building.

I.B.679.c. The governing authority of any school building operated under the Defense Department's education system provided for under the Defense Department's Education Act of 1978 (20 U.S.C. 921, et seq.).

I.B.68. Major asbestos spill means an asbestos spill involving the disturbance of friable, as defined in subparagraph I.B.52, ACM in an amount greater than the trigger levels.

I.B.69. Makeup air intake A means a filtered, self-closing aperture installed through the polyethylene walls of a containment in order to facilitate the flow of additional clean air into that containment. Makeup air intakes must be designed and installed in such a way that if the containment loses pressure, air will not escape from inside of the containment to the outside through the intake(s). Where installed, proper air flow into the containment through the intake- be confirmed by the use of smoke tubes..



- I.B.7064. Manufacturing means the combining of commercial asbestos -or, in the case of woven friction products, the combining of textiles containing commercial asbestos - with any other material(s), including commercial asbestos, and the processing of this combination into a product. Chlorine production is considered a part of manufacturing.
- I.B.7162. Mini-enclosure means any containment barrier small enough to restrict entry to the asbestos work area to no more than two workers, constructed around an area where small-scale, short-duration asbestos abatement is to be performed.
- I.B. 72. Minor asbestos spill means an asbestos spill involving the disturbance of ACM in an amount less than the trigger levels.
- I.B.763. Miscellaneous ACM means miscellaneous material that is ACM.
- I.B.764. Miscellaneous material means interior building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and does not include surfacing material or thermal system insulation.
- I.B.765. Movable objects means pieces of equipment or furniture free-standing, mounted or attached in the work area, which can be readily removed from the work area.
- I.B.766. Negative pressure-ventilation-system air machine- (NAM) means a portable exhaust systems specifically manufactured for use in the asbestos abatement industry that is equipped with HEPA filtration and capable of maintaining a constant high velocity air flow out of the contaminated area, resulting in a constant low velocity air flow into contaminated areas from adjacent uncontaminated areas.
- I.B.767. Nonfriable means material which, when dry, may not be crumbled, pulverized, or reduced to powder by hand pressure or otherwise reduced to a state that is likely to emit fibers . Damaged nonfriable material or nonfriable materials in poor condition may become friable.
- I.B.768. Operations and maintenance program means a program of work practices designed by a certified management planner to maintain friable ACM or ACBM in good condition, ensure clean up of asbestos fibers previously released, and prevent further release by minimizing and controlling friable ACM or ACBM disturbance or damage.
- I.B.769. Particulate asbestos material means finely divided particles of asbestos or material containing asbestos.
- I.B.870. Person means any individual, any public or private company, corporation, partnership, association, firm, trust, or estate, 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, which is recognized by law as the subject of rights and duties.
- I.B.871. Phase Contrast Microscopy (PCM) is an analytical technique used for the counting of fibers on a filter of an air sample. This technique is not specific for asbestos.
- I.B.872. Polarized Light Microscopy (PLM) is an analytical technique used for identifying types of asbestos fibers in bulk material samples.
- I.B.873. Porous means capable of trapping, retaining or holding asbestos fibers even during aggressive cleaning methods such as wet washing, wiping and HEPA vacuuming.
- I.B.874. Potential damage means circumstances in which:

- I.B.874.a. Friable ACM or ACBM is in an area regularly used by building occupants including maintenance personnel, in the course of their normal activities.
- I.B.874.b. There are indications that there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.
- I.B.875. Potential significant damage means circumstances in which:
- I.B.875.a. Friable ACM or ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.
- I.B.875.b. There are indications that there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.
- I.B.875.c. The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.
- I.B.876. Pre-cleaning means the cleaning of all surfaces inside of the work area of visible dust and debris prior to active abatement.
- I.B.877. Preventive measures mean actions taken to reduce disturbance of ACM or ACBM or otherwise eliminate the reasonable likelihood of the materials becoming damaged or significantly damaged.
- I.B.88. Project means planned work or activity that will be finished over a period of time and is intended to achieve a particular purpose. Calculation to determine if activities required under Regulation 8, Part B, will exceed trigger levels is done by summing up all quantities of work that will occur during a particular project.
- I.B.8978. Project Design means plans, specifications, project procedures, containment design/placement, descriptions of engineering controls, and shop drawings for an asbestos abatement project or response action. The project design must be written and amended by a certified Project Designer specific and unique to each project.
- I.B.790. Public and Commercial Building means any facility building, which is not a school building, except that the term does not include any residential apartment building of ten or fewer units. Single-family residential dwellings are excluded from this definition. Common areas of multi-unit dwellings including, but not limited to, hallways, entryways and boiler rooms are considered to fall under this definition of a public and commercial building. This definition includes all industrial buildings.
- I.B.91. Quantify means the determination, to a person's best extent possible, of the amount of ACM or ACBM.
- I.B.9290. Regulated asbestos-containing material (RACM) means (a) friable asbestos-containing material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this regulation.

- I.B. ~~9384~~. Removal means the taking out or the stripping of ACM or ACBM from a damaged area, a functional space, or a homogeneous area in or on a facility building.
- I.B. ~~9482~~. Renovation means altering in any way one or more facility components in or on a facility. Operations in which load-supporting structural members are wrecked or removed taken out are demolitions excluded. Examples of renovation work include replacement or repair of mechanical ventilation systems, pipes, ceilings, walls, flooring (including floor tiles), and insulating materials.
- I.B. ~~9583~~. Repair means returning damaged ACM or ACBM to an undamaged condition or to an intact state so as to prevent fiber release.
- I.B. ~~9684~~. Resilient Floor Tile means tile, which may include vinyl asbestos tile (VAT), asphalt tile, and rubber tile. Tile often appears as 9" x 9" or 12" x 12" floor tile squares. This material may be found in schools, offices and residential applications. Not all resilient floor tile contains asbestos.
- I.B. ~~9785~~. Response action means a method, including removal, encapsulation, enclosure, repair, operations and maintenance that protect human health and the environment from friable ACM or ACBM.
- I.B. ~~9886~~. Roadways mean surfaces on which vehicles travel. This term includes public and private highways, roads, streets, parking areas, and driveways.
- I.B. ~~9987~~. Routine maintenance area means an area, such as a boiler room or mechanical room that is not normally frequented by building occupants students and in which maintenance employees or contract Workers regularly conduct maintenance activities.
- I.B. ~~10088~~. Sampling Area means any area, whether contiguous or not, within a building which contains friable material that is homogeneous.
- I.B. ~~10189~~. School means any institution that provides elementary or secondary education (this included all schools, public and private, not for profit in grades K - 12).
- I.B. ~~10290~~. School building means:
- I.B. ~~10290~~.a. Any structure suitable for use as a classroom, including a school facility such as a laboratory, library, school eating facility, or facility used for the preparation of food.
  - I.B. ~~10290~~.b. Any gymnasium or other facility, which is specially designed for athletic or recreational activities for an academic course in physical education.
  - I.B. ~~10290~~.c. Any other facility used for the instruction or housing of students or for the administration of educational or research programs.
  - I.B. ~~10290~~.d. Any maintenance, storage, or utility facility, including any hallway, essential to the operation of any facility described in this definition of "school building" under subparagraphs I.B. ~~10287~~.a, b, or c.
  - I.B. ~~10290~~.e. Any portico or covered exterior hallway or walkway of any facility described in this definition of "school building" in subparagraphs I.B. ~~10287~~.a, b, c, or d.

- I.B. ~~10290~~.f. Any exterior portion of a mechanical system used to condition interior space of any facility described in this definition of "school building" in subparagraphs I.B. ~~10287~~, a, b, c, or d.
- I.B. ~~10394~~. Secondary Containment means a system of airtight barriers to isolate the work area to prevent the migration of air from the work area. This system must include, at minimum, critical barriers. Secondary containment systems are distinct from full containment systems in that they do not require the installation of a decontamination enclosure system, a waste loadout area, a viewport, or a negative pressure ventilation system, though some or all of these components may be included at the discretion of the individual(s) performing the work.
- I.B. ~~10492~~. Sheet Vinyl Flooring means material that is usually found in 6 ft., 9 ft., and 12 ft., width sheets. It often consists of three or more laminated layers. The upper layers are comprised of a wear layer and design feature. The bottom layer may be an asbestos-containing backing, ~~which may be grayish-white in color~~. Sheet vinyl flooring may be installed in an adhered or loose-laid manner. Other possible applications for this material include countertops and wall coverings. Not all sheet vinyl flooring has an asbestos-containing backing. For renovation, demolition or abatement purposes, sheet vinyl flooring is always considered to be a friable material.
- I.B. ~~10593~~. Shower ~~room~~ means a chamber/room between the clean room and the equipment room in the ~~Worker~~ decontamination unit enclosure suitably arranged for complete showering during decontamination.
- I.B. ~~10694~~. Significantly damaged friable miscellaneous ACM means damaged friable miscellaneous ACM or ACBM where the damage is extensive and severe.
- I.B. ~~10795~~. Significantly damaged friable surfacing ACM means damaged friable surfacing ACM or ACBM in a functional space where the damage is extensive and severe.
- I.B. ~~10896~~. Single-family residential dwelling or unit means any structure or portion of a structure whose primary use is for housing of ~~one~~ family. Residential portions of multi-unit dwellings such as apartment buildings, condominiums, duplexes and triplexes are also considered to be, for the purposes of this Regulation ~~No. 8, Part B, single-family residential dwellings;~~ The following are not considered to be part of a single-family residential dwelling: common areas of multi-unit dwellings including, but not limited to, such as hallways, entryways, and boiler rooms ~~are not single-family residential dwellings.~~
- I.B. ~~10997~~. Staging area means either the holding area or an area near the waste transfer airlock where containerized asbestos waste has been placed prior to removal from the work area.
- I.B. ~~11098~~. State-owned or state-leased buildings means structures occupied by any person which are either owned by the state or utilized by the state through leases of one year's duration or longer.
- I.B. ~~11199~~. Strip means to take off RACM from any part of a facility or facility components.
- I.B. ~~11290~~. Structural member means any beam, ceiling, floor, or wall ~~load-supporting member of a facility, such as beams and load supporting walls; or any non-load-supporting member, such as ceilings and non-load-supporting walls.~~
- I.B. ~~11304~~. Surfacing ACM means surfacing material that is ACM.

- I.B.11402. Surfacing material means material that is sprayed on, troweled on, or otherwise applied to surfaces, such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, or other purposes.
- I.B.11503. Surfactant means a commercially available product specifically designed to be mixed with water for use in wetting of asbestos-containing materials to improve water penetration. ~~chemical wetting agent added to water to improve penetration.~~
- I.B.11604. Thermal system insulation means material applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.
- I.B.11705. Thermal system insulation ACM means thermal system insulation that is ACM.
- I.B.11806. Transmission Electron Microscopy (TEM) is an analytical technique used for the definitive identification of asbestos. This technique can be used for both air and bulk sample analyses as allowed by this regulation.
- I.B.11907. Trigger levels means amounts of material as follows:
- I.B.119407.a. With regard to single-family residential dwellings, the trigger levels are 50 linear feet on pipes, 32 square feet on other surfaces, or the volume equivalent of a 55-gallon drum.
- I.B.119407.b. With regard to all areas other than single-family residential dwellings, the trigger levels are 260 linear feet on pipes, 160 square feet on other surfaces, or the volume equivalent of a 55-gallon drum.
- I.B.12008. Vibration means the periodic motion of friable ACM or ACBM, which may result in the release of asbestos fibers.
- I.B.12109. Visible emission means any emissions, which are visually detectable without the aid of instruments, coming from asbestos containing material, asbestos debris or asbestos containing waste material.
- I.B.12240. Waste load-out area means a specially constructed airlock system utilized as a short-term storage area for bagged or barreled waste and as a port for transferring waste to the transport vehicle. This area must be separate from the decontamination unit.
- I.B.12344. Wet wiping-cleaning means eliminating dust and debris asbestos contamination from any building surfaces or and objects by using cloths, mops, or other cleaning utensils, which have been dampened with amended water.
- I.B.12442. Work area means a room, group of rooms, or contiguous area sealed or contained by polyethylene barriers and/or walls for the purpose of eliminating air exchange between another room, group of rooms, or contiguous areas. An exterior work area may be established under the provisions of a variance request.
- I.B.12543. Working day means Monday through Friday and including holidays that fall on any of the days Monday through Friday.

I.C. ACRONYMS

I.C.1.	<u>ABIH</u>	American Board of Industrial Hygiene, 600.45 West St. Joseph, Suite <u>300.402</u> , Lansing, MI 48917- <del>4876 3980</del>
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I.C.2.	ACBM	asbestos-containing building material
I.C.3.	ACGIH	American Conference of Governmental Industrial Hygienists, 13300 Kemper Meadow Drive, Cincinnati, OH 45240-4148
I.C.4.	ACM	asbestos-containing material
I.C.5.	ACWM	asbestos-containing waste material
I.C.6.	AHERA	Asbestos Hazard Emergency Response Act
I.C.7.	AIHA	American Industrial Hygiene Association, 3141 Fairview Park Dr., Suite 777, Falls Church 2700 Prosperity Avenue, Suite 250, Fairfax, VA 22042 22034
I.C.8.	AMS	Air Monitoring Specialist
I.C.9.	ANSI	American National Standards Institute, 1899 L Street, NW, 11th Floor-18919 L Street, NW, Suite 600, Washington, DC 20036
I.C.10.	APCD	Air Pollution Control Division
I.C.11.	ASHARA	Asbestos School Hazard Abatement Reauthorization Act
I.C.12.	ASTM	American Society for Testing and Materials 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959
I.C.13.	AQCC	Air Quality Control Commission
I.C.14.	CCR	Code of Colorado Regulations
I.C.15.	CDPHE	Colorado Department of Public Health and Environment
I.C.16.	CFM	cubic feet per minute
I.C.17.	CFR	Code of Federal Regulations
I.C.18.	CIH	Certified Industrial Hygienist
I.C.19.	C.R.S.	Colorado Revised Statutes
I.C.20.	EPA	Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, N.W., Washington, DC 20460
I.C.21.	f/cc	fibers per cubic centimeter
I.C.22.	f/cm3	fibers per cubic centimeter
I.C.23.	f/m3	fibers per cubic meter
I.C.24.	GAC	General Abatement Contractor
I.C.25.	G.E.D.	General Equivalency Diploma
I.C.26.	HEPA	high efficiency particulate air
I.C.27.	HVAC	heating, ventilation and air conditioning
I.C.28.	LCF	large contiguous facility [complex]
I.C.29.	LEA	local education agency
I.C.30.	LPM	liters per minute
I.C.31.	MAAL	Maximum Allowable Asbestos Level in air
I.C.32.	MAP	Model Accreditation Plan (EPA)
I.C.33.	NAM	negative air machine
I.C.34.	NBS	National Bureau of Standards
I.C.35.	NESHAP	National Emissions Standards for Hazardous Air Pollutants, (40 C.F.R. Part 61) (EPA), Subparts A (General Provisions), and M (National Emission Standard for Asbestos)
I.C.36.	NIOSH	National Institute for Occupational Safety and Health, Hubert H. Humphrey Bldg., 200 Independence Ave., S.W., Room 715H 395 E.St., SW, Suite 9200, Washington, DC 20201
I.C.37.	NIST	National Institute of Standards and Technology, 100 Bureau Drive, Stop 3460, Gaithersburg, MD 20899-3460
I.C.38.	NVLAP	National Voluntary Laboratory Accreditation Program, National Institute of Standards and Technology 100 Bureau Drive, MS 2140 Gaithersburg, Maryland 20899-2140
I.C.39.	O&M	Operations and Maintenance
I.C.40.	OSHA	Occupational Safety and Health Administration, 200 Constitution Avenue, NW, Washington, D.C. 20210

I.C.41.	<u>PAT</u>	Proficiency Analytical Testing
I.C.42.	<u>PCM</u>	Phase Contrast Microscopy
I.C.43.	<u>PLM</u>	Polarized Light Microscopy
I.C.44.	<u>PPE</u>	personal protective equipment
I.C.45.	<u>PSI</u>	pounds per square inch
I.C.46.	<u>RACM</u>	regulated asbestos-containing material
I.C.47.	<u>RFCI</u>	Resilient Floor Covering Institute, <a href="#">115 Broad St. Suite 201, La Grange, GA 30240</a> , <a href="#">401 E. Jefferson Street, Suite 102, Rockville, MD. 20850</a>
I.C.48.	<u>s/mm<sup>2</sup></u>	structures per square millimeter
I.C.49.	<u>SFRD</u>	single-family residential dwelling
I.C.50.	<u>TEM</u>	Transmission Electron Microscopy
I.C.51.	<u>TSCA</u>	Toxic Substances Control Act, 15 U.S.C. section 2601 <u>et seq.</u> TSCA TITLE II means the 1986, amendments to TSCA found at 15 U.S.C. section 2641 <u>et seq.</u>
I.C.52.	<u>TSI</u>	thermal system insulation
I.C.53.	<u>TWA</u>	time weighted average
I.C.54.	<u>VAT</u>	vinyl asbestos [floor] tile
I.C.55.	<u>VCT</u>	vinyl composition tile

All underlined text in this regulation indicates defined terms; clicking on underlined text will take you to its definition in section I.

## II. CERTIFICATION REQUIREMENTS

### II.A. GENERAL REQUIREMENTS

II.A.1. Persons required to be certified as a General Abatement Contractor, Building Inspector, Management Planner, Project Designer, ~~Abatement~~ Worker, ~~Abatement~~ Supervisor or Air Monitoring Specialist ~~must shall~~ obtain the appropriate certification from the Division in accordance with this section II.

II.A.1.(a). No certification or registration pursuant to this Section II will be issued to a person who has failed to pay in full a Division-assessed penalty for violating any provision of this Regulation 8, Part B, or to any person who has otherwise failed to comply with any order of the Division, unless the penalty or order is under appeal before the Air Quality Control Commission.

### II.A.2. Photo IDs and Certificates

Each individual certified under this regulation must have their state certification photo identification (ID) card ~~or state certificate~~ available at each work site so that Division representatives may check their credentials.

Each individual trained under this regulation must have a copy/ies of their most recent training ~~and~~ refresher certificates available at each work site so that Division representatives may check their credentials.

### II.A.3. RESERVED Non-Public Access Areas

~~Any person certified under this regulation to work solely on asbestos abatement projects in non-public access areas will shall not be required to pay the application fee. Certificates issued under this paragraph are not valid for abatement in areas of public access, and are not transferable.~~

II.A.4. Ownership of Training Certificates

Training certificates are considered to be the property of the accredited individual. Training providers must give duplicate original training certificates to the accredited individual upon request. Training providers may charge a reasonable fee for replacement of training certificates.

II.A.5. Falsification of Training Certificates

Falsification of training certificates or licenses used to obtain state certification is considered to be a violation of these regulations, and ~~will shall~~ be sufficient reason for the denial of an application for certification, and may result in disciplinary action being taken against an applicant submitting such falsified training certificates or licenses.

II.A.6. An individual may hold more than one certification.

II.B. GENERAL ABATEMENT CONTRACTOR CERTIFICATES

II.B.1. Certificate Duration

General Abatement Contractor (GAC) certificates are valid for a period of one, two or three years.

II.B.2. Application Procedures

A person applying for a General Abatement Contractor (GAC) certificate, renewal of existing certification or reinstatement of expired certification ~~must shall~~ submit an application on a form specified by the Division and, ~~except as provided in paragraph II.A.3 (Non-Public Access Areas) above,~~ pay the applicable fee as specified in the table below:

Certification	Amount		
	1 year	2 years	3 years
GAC (initial)	\$2,000.00	N/A	N/A
GAC (renewal)	\$1,000.00	\$2,000.00	\$3,000.00
<del>Out of State (initial)</del>	<del>\$3,000.00</del>	<del>N/A</del>	<del>N/A</del>
<del>Out of State (renewal)</del>	<del>\$2,000.00</del>	<del>\$4,000.00</del>	<del>\$6,000.00</del>

II.B.3. Training Requirements

No training is required for GACs.

II.B.4. GAC Responsibilities

GACs ~~mustshall~~ ensure that all Workers and Supervisors are appropriately certified in accordance with this section II (Certification Requirements). The GAC must ensure that it employs at least one Colorado state-certified Supervisor who must be on-site at all times when abatement work is proceeding.

II.C. WORKER, SUPERVISOR, BUILDING INSPECTOR, MANAGEMENT PLANNER, PROJECT DESIGNER CERTIFICATES

II.C.1. Certificate Duration



Worker, Supervisor, Building Inspector, Management Planner, and Project Designer certificates will be issued for a period of one, three, or five years and will be valid only while the provisions of ~~subparagraphs~~ sections II.C.3 (Training Requirements), II.C.4 (Examinations) and II.C.5 (Refresher Training Requirements) are met.

II.C.2. Application Procedures

Anyone applying for a Worker, Supervisor, Building Inspector, Management Planner, or Project Designer certificate, renewal of an existing certificate or reinstatement of an expired certificate ~~must shall~~ submit an application on a form specified by the Division and, ~~except as provided in paragraph II.A.3 (Non-Public Access Areas) above,~~ pay the applicable fee as specified in the table below:

Certification	Amount		
	1 year	3 years	5 years
Worker	\$125.00	\$375.00	\$625.00
Supervisor	\$250.00	\$750.00	\$1250.00
Building Inspector	\$175.00	\$525.00	\$875.00
Management Planner	\$175.00	\$525.00	\$875.00
Project Designer	\$250.00	\$750.00	\$1250.00

II.C.3. Training Requirements

Each individual seeking certification as a Worker, Supervisor, Building Inspector, Management Planner or Project Designer ~~must shall~~ complete Division-approved training.

II.C.4. Examinations

An individual seeking certification, renewal of an existing certificate or reinstatement of an expired certificate in a specific discipline ~~must shall~~ pass, ~~on an annual basis,~~ a Division-administered closed book examination for that discipline. Each examination ~~will shall~~ cover the topics included in the training course for that discipline. The testing schedule and procedures ~~will shall~~ be determined by the Division.

~~II.C.4.a. If an applicant fails to achieve a passing score on a certification exam on the 1st attempt, he or she the applicant must take a refresher class in the applicable discipline before the applicant may retake the certification exam. After completion of the refresher course, the applicant must submit may retake the exam after submitting to the Division the refresher certificate and a new application, including payment of a retesting fee of \$125.00.~~

~~II.C.4.b. If an applicant fails to achieve a passing score on the 2nd attempt, or any attempt thereafter, the applicant must take an initial course in the applicable discipline before the applicant may retake the certification exam. After completion of the initial course, the applicant must submit to the Division the initial certificate and a new application, including payment of a retesting fee of \$125.00.~~

~~II.C.4.c. For subparagraph II.C.4.a., an applicant will only be required to retake the portion of the exam that the applicant fails for any two-part exam (Supervisor or Project Designer). For subparagraph II.C.4.b. an applicant must retake both portions of the exam.~~

- ~~proof of attendance at a remedial training course, if required by the Division.~~

II.C.5. Refresher Training Requirements

II.C.5.a. Workers, Supervisors, Building Inspectors, Management Planners or Project Designers who are certified according to this regulation must take an annual refresher-training course from a Division-approved training provider. Prior to the commencement of refresher training, the course provider is required to verify the authenticity of the initial training course certificate and all refresher-training certificates. Individuals not in possession of a valid training certificate must shall not be given refresher training.

Applicants are ineligible for refresher training if their most recent training certificate has lapsed for a year or longer, in which case the applicant must retake the initial training. During the period in which the individual's training certificate has expired, the state certificate is not valid. State certification becomes valid once the required training has been completed and state certification requirements have been met.

II.C.5.b. The length of annual refresher courses shall must be as follows:

Certification	Length
Worker	One full day (Eight (8) hours)
Supervisor	One full day (Eight (8) hours)
Project Designer	One full day (Eight (8) hours)
Building Inspector	One half day (Four (4) hours)
Management Planner	One half day Building Inspector and one half day Management Planner

II.C.5.c. All courses, at a minimum, must cover the following topics:

- Changes in Federal and State laws, regulations and requirements;
- Developments and/or changes in state-of-the-art procedures;
- Review of the key aspects of the course; and
- Pertinent developments in the particular discipline or the industry as a whole.

Testing of applicants to determine knowledge gained in the refresher course may be done at the discretion option of the course provider.

II.C.6. Combined Certificates

At the request of the applicant, the Division may issue a combined Supervisor/Project Designer or combined Inspector/Management Planner certificate. The applicant must shall submit an application on a form specified by the Division and, ~~except as provided in paragraph II.A.3 (Non-Public Access Areas) above,~~ pay the applicable fee as specified in the table below:

Certification	Amount		
	1 year	3 years	5 years
Supervisor / Project Designer	\$275.00	\$825.00	\$1375.00
Building Inspector / Management Planner	\$275.00	\$825.00	\$1375.00

II.D. AIR MONITORING SPECIALIST CERTIFICATES

~~Effective March 30, 2004, any Individual who performs a final visual inspection or performs any air monitoring referred to in this regulation must be Colorado certified as an Air Monitoring Specialist (AMS).~~

~~Until this provision for certification becomes effective, all activities required to be performed by a certified Air Monitoring Specialist as stated in this regulation may only be performed by an individual who qualified as an Air Monitoring Specialist under the previous regulation prior to March 30, 2003.~~

II.D.1. Certificate Duration

~~Air Monitoring Specialist (AMS) certificates will be issued for a period of one, three, or five years and will be valid only while the Training (II.D.3.a.i and II.D.3.b.i) and Examination (II.D.3.a.iv. and II.D.3.b.iv) requirements are met.~~

II.D.2. Application Procedures

~~Anyone applying for an AMS Air Monitoring Specialist certificate, renewal of existing certification or reinstatement of an expired certificate must shall submit an application on a form specified by the Division and, except as specified in paragraph II.A.3 (Non-Public Access Areas) above, pay the applicable fee as specified in the table below:~~

Certification	Amount		
	1 year	3 years	5 years
Air Monitoring Specialist	\$250.00	\$750.00	\$1250.00

II.D.3. Initial Certification Requirements

II.D.3.a. New AMS Applicants

~~Each Individual seeking certification as an Air Monitoring Specialist must shall satisfy the training, experience and education requirements set forth below, unless granted certification based on prior training, experience and education pursuant to section II.D.3.b.:~~

II.D.3.a.i. Training

~~Each individual seeking certification as an Air Monitoring Specialist must shall successfully complete a Division-approved Air Monitoring Specialist course. An individual certified by the American Board of Industrial Hygiene as a Certified Industrial Hygienist (CIH) is not required to attend those portions of the Air Monitoring Specialist course that instruct students exclusively on air-monitoring techniques (e.g., pump calibration, cassette placement, cassette handling, etc.).~~

~~II.D.3.a.i(A). All initial courses required under this section II.D.3.a. (New AMS Applicants), must shall, at a minimum, cover the following topics:~~

- ~~• Roles and responsibilities of an AMS~~
- ~~• Characteristics of asbestos and asbestos-containing materials~~
- ~~• Federal and state laws, regulations and requirements~~

- Understanding building construction and building systems
- Asbestos abatement contracts, specification and drawings
- Response Actions and abatement practices
- Asbestos abatement equipment
- Personal protective equipment
- Air monitoring strategies
- Safety and Health issues other than asbestos-containing material
- Conducting visual inspections
- Legal responsibilities and liabilities of an AMS
- Record keeping and report writing
- Hands-on activities

The course provider must shall test the applicants to determine knowledge gained in the course.

II.D.3.a.ii. Experience

Each individual seeking certification as an Air Monitoring Specialist must shall perform the following on-the-job training activities prior to becoming certified:

II.D.3.a.ii(A). Under the direct observation of a currently certified Air Monitoring Specialist, participate in a minimum of 62 final visual inspections and 62 final air clearances on Division permitted asbestos abatement projects.

II.D.3.a.ii(B). Under the supervision of a certified Air Monitoring Specialist, successfully perform a minimum of 12080 hours of ambient air monitoring.

II.D.3.a.ii(C). The Air Monitoring Specialist applicant must shall provide documentation of this experience on a form specified by the Division. The form will shall not be complete until signed by the certified Air Monitoring Specialist(s) who supervised and observed the training. This form must shall be submitted to the Division at the time of application for certification.

II.D.3.a.iii. Education

Anyone seeking certification as an Air Monitoring Specialist must shall possess a high school diploma or General Equivalency Diploma (G.E.D.).

II.D.3.a.iv. Examination

~~Each individual seeking certification as an Air Monitoring Specialist must shall pass, on an annual basis, a Division-administered closed book, written examination. The examination shall cover the topics included in the training course. The Division will shall determine the testing schedule and procedures.~~

~~If an applicant fails to achieve a passing score on a certification test, he or she may retake the test after submitting the following items to the Division:~~

- ~~1) a new application including payment of a retesting fee of \$125.00; and~~
- ~~2) proof of attendance at a remedial training course, if required by the Division.~~

Each individual seeking certification as an Air Monitoring Specialist or renewal of an existing certificate or reinstatement of an expired certificate must pass, on an annual basis, a Division-administered closed book examination. Each examination will cover the topics included in the training course for the discipline. The testing schedule and procedures will be determined by the Division.

II.D.3.a.iv.(A). If an applicant fails to achieve a passing score on a certification exam on the 1st attempt, the applicant must take a refresher class in the applicable discipline before the applicant may retake the certification exam. After completion of the refresher course, the applicant may retake the exam after submitting to the Division the refresher certificate and a new application, including payment of a retesting fee of \$125.00.

II.D.3.a.iv.(B). If an applicant fails to achieve a passing score on the 2nd attempt, or any attempt thereafter, the applicant must take an initial course in the applicable discipline before the applicant may retake the certification exam. After completion of the initial course, the applicant must submit to the Division the initial certificate and a new application, including payment of a retesting fee of \$125.00.

II.D.3.a.iv.(C). For subparagraph II.D.3.a.iv.(A), an applicant will only be required to retake the portion of the exam that the applicant failed for this two part exam. For subparagraph II.D.3.a.iv.(B), an applicant must retake both portions of the exam.

~~The Air Monitoring Specialist applicant must pass the written examination in order to become certified as an AMS.~~

II.D.3.a.v. Permissible Activities for AMS Applicants

Any individual seeking certification as an Air Monitoring Specialist who does not yet meet all the requirements for certification, may perform the following activities prior to becoming certified:

- II.D.3.a.v.(A). Air Monitoring

Under the supervision of a certified Air Monitoring Specialist, an individual attempting to obtain the necessary experience to fulfill the Air Monitoring Specialist requirements may collect ambient air monitoring samples on behalf of a certified Air Monitoring Specialist to determine compliance with ~~subparagraph~~ section III.U.1. (Maximum Allowable Asbestos Level). The certified Air Monitoring Specialist overseeing the sampling is, ~~however,~~ responsible for compliance with ~~subparagraph~~ section III.U.1. (Maximum Allowable Asbestos Level).

II.D.3.a.v(B). Final Visual Inspection and Final Air Clearance

Under the direct observation of a certified Air Monitoring Specialist, anyone attempting to obtain the necessary experience to fulfill the Air Monitoring Specialist requirements may participate in final visual inspections and Final Clearance Air Monitoring on Division permitted asbestos abatement projects along with the certified Air Monitoring Specialist. The certified Air Monitoring Specialist observing the final visual inspection and sampling is still responsible for ensuring compliance with performing all of the required clearance activities specified in subsection III.P. (Clearing Abatement Projects).

~~II.D.3.b. Existing AMS Applicants~~

~~Any individual who was qualified as an Air Monitoring Specialist prior to March 30, 2003 shall be deemed to have met the training, experience and education requirements for an Air Monitoring Specialist and shall be eligible for certification as an Air Monitoring Specialist upon completion of the following procedures. Each individual seeking certification as an Air Monitoring Specialist under this paragraph must complete the following items:~~

~~II.D.3.b.i. Training~~

~~The applicant must complete a Division-approved 4-hour Air Monitoring Specialist refresher course.~~

~~II.D.3.b.ii. Experience~~

~~No additional experience is required, but the individual must submit an application for certification as provided for in paragraph II.D.2, no later than June 30, 2003.~~

~~II.D.3.b.iii. Education~~

~~There are no education requirements for individuals qualified prior to March 30, 2003.~~

~~II.D.3.b.iv. Examination~~

~~Each individual seeking certification as an Air Monitoring Specialist shall pass, on an annual basis, a Division-administered closed book, written examination. The examination shall cover the topics included in the training course. The Division shall determine the testing schedule and procedures.~~

~~If an applicant fails to achieve a passing score on a certification exam, he or she may retake the exam after submitting the following items to the Division:~~

- ~~1) a new application including payment of a retesting fee of \$125.00; and~~
- ~~2) proof of attendance at a remedial training course, if required by the Division.~~

**Commented [A1]:** Grandfather clause expired on June 23, 2003.

II.D.4. Recertification Requirements

II.D.4.a. Air Monitoring Specialists who are certified according to this regulation must take an annual refresher-training course from a Division-approved training provider. Prior to the commencement of refresher training, the course provider is required to verify the authenticity of the initial training course certificate and all refresher-training certificates. Individuals not in possession of a valid training certificate must shall not be given refresher training. The length of the Air Monitoring Specialist refresher course must shall be one-half day (four (4) hours).

Applicants are ineligible for refresher training if their most recent training certificate has lapsed for a year or longer, in which case the applicant must retake the initial training. During the period in which the individual's training certificate has expired, the state certificate is not valid. State certification becomes valid once the required training has been completed and state certification requirements have been met.

II.D.4.b. All refresher courses required under this subparagraphsection II.D.4. (Recertification Requirements), at a minimum, must cover the following topics:

- Changes in Federal and State laws, regulations and requirements;
- Developments and/or changes in state-of-the-art procedures;
- Review of the key aspects of the course; and
- Pertinent developments in the particular discipline or the industry as a whole.

Testing of applicants to determine knowledge gained in the refresher course may be done at the discretion option of the course provider.

II.E. TRAINING PROVIDER APPLICATION PROCEDURES

II.E.1. Any person wishing to offer courses in disciplines for which training or certification is required must be registered as an Asbestos Training Provider. Applicants must shall apply to the Division for approval, except for the training referenced in Appendix C. Applicants seeking approval for initial training or refresher training courses must shall submit their request to the Division on a form supplied specified by the Division along with the written course materials and a fee of \$250.00 per discipline in which they wish to offer courses.

II.E.1.a. After the initial course approval, Applicants must shall submit their renewal request to the Division on a form supplied specified by the Division along with a fee of \$100.00 per discipline in which they wish to offer courses.

II.E.2. In order for a course to be approved it must adequately address the topics and format contained in the United States Environmental Protection Agency's Asbestos Model Accreditation Plan (MAP), 40 C.F.R. Part 763 (2010 1994), Subpart E, Appendix C. The Commission recommends the use of audiovisual materials to complement lectures in these courses, where appropriate.

II.E.3. After reviewing the application for course approval, the Division will shall inform the applicant in writing whether the course is approved for use in Colorado or if changes must be made in the application before approval may be granted.

- II.E.4. Once the applicant has been informed that the course is approved, the course is considered to have contingent approval, and the applicant may begin offering courses in the State. Final approval of the course will not be granted until the Division has audited the course and determined that the course meets the requirements of this regulation.
- II.E.5. After contingent approval has been granted by the Division, the applicant must make application, if necessary, with the Department of Higher Education, Division of Private Occupation Schools (DHE/DPOS), for approval as an occupational education course. Failure to follow the DHE/DPOS regulations or failure to obtain or retain DHE/DPOS approval may result in the de-certification of the course by the Air Pollution Control Division (APCD).
- II.E.6. Applicants who wish to offer courses already approved by the Environmental Protection Agency or by a state whose training requirements are at least as stringent as the Commission's and whose asbestos certification program has been approved by EPA will shall be granted reciprocity to teach classes in Colorado. The approval granted to such course provider will shall be at the same level as that already approved by EPA or another state. The applicant will shall be subject to all requirements outlined in this regulation.

~~II.E.7. In the curriculum and course agenda, the applicant must show what portions of the course will be taught by each instructor.~~

~~II.E.7 Any change to the course curriculum, daily schedule or audiovisual materials must be approved by the Division prior to being implemented.~~

Commented [A2]: Moved to II.G.3

## II.F. INSTRUCTOR QUALIFICATIONS

All courses must be taught by qualified instructors. The minimum qualifications for instructors must shall be:

- II.F.1. A high school diploma or GED;
- II.F.2. Current AHERA training credentials and current Colorado certification for the discipline being taught by the instructor. AHERA training and certification for the discipline being taught must be current at the time a course is taught by the instructor. (~~Variations for out-of-state instructors will be considered on a case-by-case basis~~);
- II.F.3. Three (3) years of field experience in the discipline being taught. This may be obtained by any of the following combinations-combination of any of the following items:
- II.F.3.a. Actual field experience in the discipline field being taught, such as; performing abatement activities as a Worker or Supervisor; or performing inspection and/or management planning activities; or performing project design activities; or performing Air Monitoring Specialist activities.
- II.F.3.b. Teaching as a Division approved assistant instructor in the discipline being taught, under the direct observationsupervision of a Division-approved full qualified instructor, with one (1) month of teaching equal to one (1) month of experience.
- II.F.3.c. Collegiate or seminar-type classes, relevant to the discipline in which the individual wishes to receive instructor status (e.g., NIOSH 582, 7400 courses, etc.), with one (1) week of training equal to one (1) month of experience.



II.F.4. Applicants seeking approval as an instructor must submit their request to the Division on a form specified by the Division along with documentation of experience claimed or instruction received must be provided by the applicant. This must include submission of a resume with telephone numbers, and references, that are provided to allow for verification by the Division.

II.F.5. After reviewing the application for instructor approval, the Division will inform the applicant in writing whether or not they have contingent approval as a full instructor or as an assistant instructor. The applicant may then begin instructing asbestos courses in Colorado. An instructor's contingent approval will expire one year from the date of issuance, unless they have received final approval.

II.F.6 Final approval will be granted once the Division has audited an instructor's course(s) and determined that the instructor is able to effectively communicate and teach the principles and practices of the discipline(s) being taught. The Division will inform the applicant in writing when they have final approval as a full instructor or as an assistant instructor.

II.F.6.a. Full instructor means an individual who meets the minimum qualifications under subsection II.F. (Instructor Qualifications). A full instructor may deliver all of the training material for the course and supervise an assistant instructor.

II.F.6.b. Assistant instructor means an individual who does not meet the minimum experience qualifications under subparagraph II.F.3. An assistant instructor may instruct one or more specific course topics if qualified and under the direct observation of a full instructor. The qualifications must include at least one (1) year of field experience in the discipline being taught. Topics of instruction will be identified by the Division.

II.F.6.c. Guest speaker means an individual who is not a full instructor or assistant instructor, but is qualified on the basis of professional expertise to address a specific topic of an approved training course. A guest speaker must provide written documentation detailing the speaker's experience training and/or academic credentials to the training provider, prior to conducting training.

II.F.7 After approval, full instructors and assistant instructors must register with the Division on an annual basis. Applicants seeking to be registered must submit their request to the Division on a form specified by the Division.

~~II.F.8. All instructors must meet the above requirements both at the time of course submission for approval and at the time the course is being taught. The Division may grant assistant instructor status to those individuals who do not currently meet all requirements at the time of the course submittal. The individuals may re-apply for approval as full instructors once they have met the requirements.~~

## II.G. TRAINING COURSE NOTIFICATIONS

II.G.1. On a form specified by the Division, Training course providers must notify the Division in writing of scheduled courses at least two weeks (10 working days) prior to the offering of the course. Notification of course cancellations must be provided to the Division by 5:00 p.m. the day prior to the course offering.

II.G.2. For any course in which training or certification is required, the Training Provider must submit on a form specified by the Division, a list of students who took the course and a fee of

\$10.00 per student to the Division no later than 30 calendar days after the conclusion of the course.

II.G.3 On each course notification, the training provider must show what portions of the course will be taught by each Full instructor, assistant instructor or guest speaker.

#### II.H. TRAINING COURSE AUDITS

The Division may audit any training course given for the purpose of preparing individuals for State certification. Any significant omissions or deficiencies may result in the de-certification of the a course or the disapproval of an instructor. There will be no charge to the Division for auditing a training course.

#### II.I. RECIPROCIITY

II.I.1. An individual who has a valid AHERA training certificate, ~~license or other registration~~ from another state, District of Columbia or other territory of the United States, or other Division-approved national entity (~~specifically, the National Asbestos Examinations and Registration System~~) which has a certification and testing program that has been approved by the EPA, and which is at least as stringent as the Commission's and is compliant with Colorado requirements, may apply for Colorado certification by submitting an application on the form specified by the Division, along with their training documents and the applicable fee. Applicants must successfully pass a Division-administered closed book examination for the discipline in which they are seeking reciprocity before Colorado certification will be issued .

II.I.2. Those individuals applying under this subsection II.I. (Reciprocity) for Colorado certification as a Supervisor or project designer must also successfully pass complete a Division-administered closed book examination on state laws and regulations related to asbestos abatement before Colorado certification will be issued.

II.I.3. Those individuals applying under this subsection II.I. (Reciprocity) for Colorado certification as an Air Monitoring Specialist must also:

II.I.3.a. provide documentation to the Division of training which is at least as stringent as the training required in subparagraph II.D.3.a.(i).

II.I.3.b. provide documentation to the Division showing that they have been certified to and have been conducting Air Monitoring Specialist activities for at least 1 year, and

II.I.3.c. pass the written examination as described in subparagraph II.D.3.a.iv. (examination).

II.I.4. After receiving Colorado certification, the applicant will shall be subject to all requirements outlined in this regulation regarding training and application for renewal of Colorado certification, including testing requirements.

II.I.5. The applicant must shall provide documentation to the Division as may be necessary to allow the Division to determine if a reciprocal certificate should be issued.

#### II.J. PROJECT MANAGER QUALIFICATIONS

II.J.1. There is no Project Manager certification requirement. Where a Project Manager is required pursuant to this Regulation ~~No.~~ 8, Part B, the Project Manager must shall satisfy the certification, academic training, experience, and educational requirements ~~as~~ set forth below:

II.J.1.a. Certification as a Project Designer in accordance with this section II. Project Managers must have proof of this certification with them on the project site.

II.J.1.b. Successful completion of a Division-approved Air Monitoring Specialist course. A 4-year college degree in industrial hygiene, a degree in environmental health with a major concentration in industrial hygiene, or the possession of a certified industrial hygienist (CIH) certificate given by the American Board of Industrial Hygiene (ABIH), may be substituted for the above Air Monitoring Specialist course. Project Managers must have proof of the required training with them on the project site.

II.J.1.c. A minimum of one (1) year of experience supervising, overseeing or monitoring asbestos abatement projects.

II.J.1.d. Possession of a high school diploma or G.E.D.

#### II.K. DENIAL, SUSPENSION, REVOCATION, OR REFUSAL TO RENEW CERTIFICATION

The Division may deny, suspend, revoke, or refuse to renew certifications in accordance with the provisions of § 25-7-508, C.R.S.

#### II.L. ASBESTOS CONSULTING FIRM REGISTRATION

Any person performing or offering to perform asbestos consulting firm activities as defined in this regulation must be registered as an Asbestos Consulting Firm. Applicants seeking to be registered must shall submit their request to the Division on a form supplied specified by the Division along with an annual fee of \$500.00. Cities, counties, municipalities or any other governmental entity employing appropriately trained and certified personnel may be exempt from paying this fee.

#### II.M. ASBESTOS LABORATORY REGISTRATION

Any person performing or offering to perform asbestos laboratory activities as defined in this regulation must be registered as an Asbestos Laboratory. Applicants seeking to be registered must shall submit their request to the Division on a form specified supplied by the Division along with an annual fee of \$250.00.

#### II.N. EXEMPTIONS

The following sections of the regulation contain exemptions from certain requirements. Please refer to the indicated section for the specific details of the exemption.

- Anyone working in Non-Public Access Areas is exempted from certain requirements. See paragraph II.A.3.
- Certified Industrial Hygienists are exempted from certain training requirements. See subparagraphs II.D.3.a., II.D.3.b., and subsection II.J.

All underlined text in this regulation indicates defined terms; clicking on underlined text will take you to its definition in section I.

### III. ABATEMENT, RENOVATION AND DEMOLITION PROJECTS

#### III.A. INSPECTION

III.A.1. Prior to any renovation or demolition in an area of public access which may disturb greater than the trigger levels of suspect asbestos-containing material (ACM), ~~the~~ ~~the suspect~~

~~ACM identified as a suspect asbestos-containing material pursuant to the EPA "Green Book," Managing Asbestos in Place, Appendix G (1990), the facility component(s) to be affected by the renovation or demolition must shall be inspected to determine if abatement is required. Inspections conducted prior to renovation may be focused on the suspect ACM to be affected by the renovation. Inspections conducted prior to demolition must comprehensively identify all ACM in and on the facility or on the component(s) affected by the demolition.~~

III.A.1.a. Individuals performing these inspections ~~must shall~~ be ~~a~~ Building Inspectors certified in accordance with this regulation.

III.A.1.b. The inspection, sampling and assessments of the suspect ACM materials must be performed as required in ~~subparagraphs subsections IV.C-III.A.34~~ (Inspection), ~~subsections IV.D-III.A.34.c~~ (Sampling) and ~~IV.F-III.A.34.d~~ (Assessment) of this regulation.

III.A.1.c. The analysis of samples collected during these inspections must be performed as required in ~~subparagraph subsection III.A.4 IV.E~~ (Analysis) of this regulation. ~~with one exception: if the asbestos content of a sample of friable asbestos is estimated to be 1% asbestos or less, but greater than 0%, by a method other than point counting (such as visual estimation), the determination shall be repeated using the point counting technique with polarized light microscopy. If a result obtained by point count is different from a result obtained by visual estimation, the point count result must be used. Tar impregnated samples do not have to be point counted.~~

III.A.1.d. Buildings, or those portions thereof, that were constructed after October 12, 1988 ~~will shall~~ be exempt from this inspection requirement if, ~~after due diligence, the an~~ architect or project engineer responsible for the construction of the building, or a Colorado state certified Asbestos Building Inspector, ~~completes assigns a form specified by the Division statement that no ACM was specified as a building material in any construction document for the building or no ACM was used as a building material in the initial construction of the building, or subsequent renovations.~~ NOTE: The Division recommends that all buildings be inspected prior to any renovation or demolition activities, regardless of the date of construction.

III.A.1.e. To prevent any real or potential conflicts of interest, Building Inspectors identifying ACM must be independent of the GAC that will subsequently abate the ACM identified. Inspectors need not be independent of the GAC if both the Inspector and the certified licensed GAC are employees of the building owner.

III.A.2. ~~Abatement, in accordance with Regulation No. 8, is required if the amount of ACM that will be disturbed in connection with the renovation exceeds the trigger levels.~~

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~~III.A.23. During renovation or abatement activities which will impact suspect materials in quantities greater than the trigger levels or during demolition activities, Teh the asbestos inspection report must shall be available onsite at all times. during demolition activities Any asbestos-containing material that is friable or will be made friable during demolition activities in any area of public access or non-public access area must be removed prior to demolition. Removal, in accordance with Regulation No. 8, is required if the amount of asbestos-containing material that is friable or will become friable during demolition exceeds the trigger levels.~~

III.A.3. For each area of public access inspected to determine the presence of ACM, the certified asbestos building inspector must:

III.A.3.a. Identify, quantify, and categorize all homogenous areas of suspect ACM.

III.A.3.b. Touch all suspect ACM to determine whether the material is friable.

III.A.3.c. Either assume homogeneous areas are ACM or collect, in a statistically random manner representative of the homogeneous area, bulk samples of suspect ACM as follows:

III.A.3.c.(i). Surfacing material. Additional information on sampling surfacing materials can be found in the EPA "Pink Book," Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials (1985).

III.A.3.c.(i).(A). At least three bulk samples must be collected from each homogenous area that is 1,000 square feet or less.

III.A.3.c.(i).(B). At least five bulk samples must be collected from each homogenous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.

III.A.3.c.(i).(C). At least seven bulk samples must be collected from each homogenous area that is greater than 5,000 square feet.

III.A.3.c.(ii). Thermal system insulation. Additional information on sampling thermal system insulation can be found in the EPA "Purple Book," Guidance for Controlling Asbestos-containing Materials in Buildings (1985).

III.A.3.c.(ii).(A). At least three bulk samples from each homogenous area of thermal system insulation.

III.A.3.c.(ii).(B). At least one bulk sample from each homogenous area of patched thermal system insulation that is less than 6 square or linear feet.

III.A.3.c.(ii).(C). In a manner sufficient to determine whether the material is ACM, collect bulk samples from mechanical system fittings such as tees, elbows, or valves.

III.A.3.c.(ii).(D). Bulk samples are not required where the certified asbestos building inspector has determined the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACM insulation.

III.A.3.c.(iii). MISCELLANEOUS

III.A.4.c.(iii).(A). In a manner sufficient to determine whether the material is asbestos-containing, collect bulk samples from each homogeneous area. A minimum of two samples of each homogeneous area of miscellaneous material must be collected.

III.A.3.d. Provide a written assessment of the condition of the ACM which must include:

III.A.3.d.(i). The location and quantity or volume of the ACM.

III.A.3.d.(ii) The condition of the ACM, including: type of damage or significant damage, severity of damage, and extent or spread of damage over the homogenous area including the quantity of damaged ACM and if a major or minor asbestos spill is present.

III.A.3.e. Provide a written report of the asbestos inspection findings. The report must include:

III.A.3.e.(i). The client's name and contact information.

III.A.3.e.(ii). The name and address or location of the structure(s) and the exact location in the structure of the facility component(s) inspected.

III.A.3.e.(iii). The certified asbestos building inspector's name, signature, contact information, certification number, and asbestos consulting firm name and registration number.

III.A.3.e.(iv). A description of the scope and purpose of the inspection.

III.A.3.e.(v). A physical description of the facility component(s) inspected. The description must also include:

III.A.3.e.(vi).(A). The location and quantity or volume of each homogenous area of all suspect ACM.

III.A.3.e.(vi).(B). A blueprint or diagram clearly illustrating each homogenous area inspected, exact sample location, and each homogenous area determined or assumed to be ACM.

III.A.3.e.(vi).(C). A description of the manner used to determine sampling locations. Additional information on sampling surfacing materials can be found in the EPA "Pink Book," asbestos in buildings: Simplified Sampling Scheme for Friable Surfacing Materials (1985). Additional information on sampling thermal system insulation can be found in the EPA "Purple Book," Guidance for Controlling Asbestos-containing Materials in Buildings (1985).

III.A.3.e.(vii). The assessment of ACM as required in subparagraph III.A.3.d.

III.A.3.e.(viii). The certified asbestos building inspector's conclusion.

III.A.3.e.(ix). A copy of the analytical report including the name and address of the laboratory performing the analysis, the laboratory's registration and accreditation, the chain of custody form, the date of analysis, the name and signature of the person performing the analysis, the method of analysis, and the results of the analysis.

#### III.A.4. ANALYSIS

III.A.4.a. Bulk standards collected under subparagraph III.A.3.c. and submitted for analysis must -be- analyzed for asbestos using laboratories accredited by the National Institutes of Standards and Technology (NIST). Laboratories must also be registered as required in subsection II.M.

III.A.4.b. Bulk samples must be analyzed for asbestos content by PLM, using the United States Environmental Protection Agency's August 1994 Method EPA/600/R-93/116, "Method for Determination of Asbestos in Bulk Building Materials."

III.A.4.c. With the exception of wallboard systems (wallboard, tape, and joint compound), bulk samples must shall not be composited for analysis. Wallboard and

associated joint compound utilized to fill seams and nail holes may be composited utilizing the procedures given in the January 5, 1994 Federal Register, Volume 59, No. 3. Any composite analysis must be performed by the laboratory who analyzed the bulk sample. Materials added onto wallboard and other base materials (e.g. sprayed or troweled on materials, textures, paints, etc.) must ~~shall~~ be analyzed separately.

III.A.4.d. If the asbestos content of a sample of friable asbestos is estimated to be 1% or less but greater than 0% by a method other than point counting, the analytical process must be repeated by the accredited laboratory using the point counting technique utilizing PLM or the material will be assumed to be asbestos containing. If a result obtained by point count is different from a result obtained by visual estimation, the point count result must be used. Non-friable tar impregnated samples do not have to be point counted.

#### III.A.4.e. INTERPRETING BULK SAMPLE RESULTS

III.A.4.e.(i). A homogeneous area is considered not to contain ACM only if the results of all samples required to be collected from the area show asbestos in amounts of one percent or less.

III.A.4.e.(ii). A homogeneous area will be determined to contain ACM based on a finding that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than one percent.

III.A.4.f. The name and address of each laboratory performing an analysis, the laboratory registration and accreditation, the date of analysis, and the name and signature of the person performing the analysis be submitted to the person requesting the asbestos building inspection and analysis.

III.A.25. Abatement in accordance with Regulation ~~No. 8, Part B~~ is required if the amount of ACM disturbed in connection with the renovation: 1) is friable or will be made friable; 2) is in an area of public access or will impact an area of public access; and 3) ~~that will be disturbed in connection with the renovation~~ exceeds the trigger levels.

III.A.36. Abatement in accordance with Regulation 8, Part B is required prior to demolition if any ACM: 1) is friable or will be made friable during demolition activities; 2) is in an area of public access or will impact an area of public access; and 3) exceeds the trigger levels. Any asbestos-containing material ACM, exceeding the trigger levels, that is friable or will be made friable during demolition activities, which is in an area of public access or ~~non-public access area~~ will impact an area of public access, must be ~~removed~~ abated prior to demolition. ~~Removal, in accordance with Regulation No. 8, is required if the amount of asbestos-containing material that is friable or will become friable during demolition exceeds the trigger levels.~~

### III.B. USE OF CERTIFIED AND REQUIRED PERSONNEL

III.B.1. Any person who conducts asbestos abatement other than abatement performed in a school building ~~must shall~~ obtain Colorado certification as a General Abatement Contractor (GAC) if the amount of asbestos to be abated exceeds the trigger levels on any occasion.

III.B.1.a. ~~A person required to be certified in accordance with paragraph III.B.1 above, shall~~ A GAC must employ at least one state-certified Supervisor who ~~must shall~~ be on-site at all times when asbestos abatement work is proceeding. Asbestos Workers must have access to a certified Supervisor throughout the duration of the abatement project.

III.B.1.b. For abatement projects where a GAC is required, all abatement Workers and Supervisors must shall be certified in accordance with the provisions of Section II (Certification Requirements). GACs must shall ensure that all asbestos abatement Workers and Supervisors are properly certified.

III.B.1.c. The requirements of this Paragraph III.B.1 will shall not apply to any homeowner individual who performs asbestos abatement on thea single-family residential dwelling where they reside and that is the homeowner's individual's primary residence.

III.B.2. With respect to school buildings, public or commercial buildings and single-family residential dwellings, any Any person individual who inspects any facility or facility component building for the presence of asbestos must shall be Colorado certified as a Building Inspector in accordance with this regulation.

III.B.3. With respect to school buildings, any individual who develops an asbestos management plan, supervises asbestos abatement activities, performs asbestos abatement, or designs asbestos abatement projects must shall be certified for the specific activity he is engaged in if the amount of asbestos-containing material exceeds, on any occasion, 3 linear feet on pipes, or 3 square feet on other surfaces.

III.B.3.a. The Local Education Agency (LEA) or its contractor must shall ensure that at least one state-certified Supervisor is on-site at all times when asbestos abatement work is proceeding. Asbestos Workers must have access to certified Supervisors throughout the duration of the abatement project.

III.B.4. With respect to public and commercial buildings and single-family residential dwellings, any individual who develops an asbestos management plan, supervises asbestos abatement activities, performs asbestos abatement, or designs asbestos abatement projects must shall be certified for the specific activity in which he is engaged if the amount of asbestos-containing material exceeds, on any occasion, the trigger levels.

III.B.5. Effective March 30, 2004, aAny individual who performs a final visual inspection or performs any air monitoring referred to in this regulation must be Colorado certified as an Air Monitoring Specialist.

III.B.6. Project Manager

A project manager must shall be used on all asbestos abatement projects in which the amount of friable asbestos-containing material to be abated exceeds 1,000 linear feet on pipes, or 3,000 square feet on other surfaces.

III.B.6.a. Waiver of the Project Management Requirements

Building owners who seek to have the project manager requirement waived must submit the request, on a form supplied by the Division as part of the notification required in III.E.1 (Notices).

III.B.6.a.(i). Waiver requests will shall be approved by the Division if the project is performed by a GAC with a non-compliance history of fewer than two (2) Division-issued compliance determinations with a finding of noncompliance guilty during the past two (2) years prior to the start of the project.

III.B.6.a.(ii). If the project is conducted by a GAC with a non-compliance history of two (2) or more Division-issued compliance determinations with a



finding of noncompliance guilty during the past two (2) years, the building owner must, on a form supplied by the Division, demonstrate to the satisfaction of the Division that compliance with the project manager requirements is overly burdensome or not feasible.

III.B.6.b. The GAC must shall notify the building owner during bid proposals as to whether or not a project manager would be required.

### III.C. PROJECT DESIGN

III.C.1. Prior to the start of any asbestos abatement in an area of public access of a non-school facility building, in which the amount of ACM asbestos-containing material to be abated exceeds 1,000 linear feet on pipes, or 3,000 square feet on other surfaces, a written project design must shall be developed by a Project Designer certified under these regulations.

III.C.2. Prior to the start of any asbestos abatement in a school building in which the amount of friable ACM asbestos-containing material to be abated exceeds 3 linear feet on pipes, or 3 square feet on other surfaces, a written project design must shall be developed by a Project Designer certified under these regulations, in accordance with paragraph IV.G.7 of this regulation.

III.C.3. Based on a site visit, the Colorado certified project designer must develop a written project design which must include: A project design shall include:

III.C.3.a. An accurate and detailed written scope of work, which must include work practices from an approved variance, if applicable;

III.C.3.b. Accurate and detailed diagrams of each abatement work area that identifies square or linear footage of ACM, type(s) of ACM, location(s) of ACM subject to the abatement action, the decontamination unit, the waste load-out, the negative air machines, air intake and exhaust, and emergency exit(s) where applicable.

III.C.3.c. A plan to address ACM within the abatement work site which is not the subject of the abatement action;

III.C.3.d. A description of the removal methods and engineering controls, including air exchange calculations;

III.C.3.e. A statement that re-cleaning of the abatement work site will occur if either the visual inspection or air sample analysis fails to meet the clearance requirements in subsection III.P;

III.C.3.f. The printed name, signature, address, telephone number, a copy of the project designer's current certification as a project designer, and the date of the on-site visit;

III.C.3.g. Modifications to the project design must be made by the project designer and documented in writing, dated, and signed by the project designer before implementation.

- an accurate and detailed scope of work
- quantities of material to be removed
- a discussion, of the removal methods

- ~~air exchange calculations~~
- ~~signature of the project designer~~
- ~~project design completion date and dates of any amendments~~
- ~~drawings that include:~~
  - ~~locations of ACM to be abated~~
  - ~~the decontamination unit~~
  - ~~the waste load-out~~
  - ~~negative air machines~~
  - ~~air intake and exhaust~~
  - ~~emergency exits, when applicable~~

III.C.4. A signed copy of the project design ~~must shall~~ be available on-site at all times once during the abatement activities have begun, ~~for review by Inspectors, the Project Manager and the certified Air Monitoring Specialist.~~

III.C.5. The General Abatement Contractor (GAC) and certified Supervisor must ensure that the project is conducted in accordance with the project design.

### III.D. PROJECT MANAGEMENT

III.D.1. The project manager ~~is shall be~~ responsible for:

- assessing that the project is conducted in accordance with this regulation.
- assessing that the project design is followed.
- assessing that any approved variance is followed.
- assessing that the abatement project is cleared in accordance with this regulation.
- assessing that the asbestos waste generated by the project is properly manifested and disposed of in accordance with this regulation.
- Immediately communicate in writing all deviations from the above requirements ~~the status of all requirements these assessments~~ to the Division, the building owner or operator, the GAC and, if applicable, the AMS.

III.D.2. Project managers ~~must shall~~ be independent of the GAC asbestos abatement contractor and work strictly on behalf of the building owner to the extent feasible, unless the abatement is being performed in-house.

III.D.3. Project managers must sign the original copy of the permit for the permit to be valid.

### III.E. NOTIFICATIONS

### III.E.1. Notices

Any person intending to either abate asbestos-containing materials (ACM) in any amount greater than the trigger levels, or demolish a facility or portion thereof must shall, on a form specified supplied by the Division, provide notification in writing a written notice of the intent to conduct asbestos abatement, renovation or demolition. When a permit is required under paragraph III.G.1 (Permits), this notification notice will shall serve as the permit application referred to in paragraph III.G.1. False, inaccurate or misleading information contained in the notification notice is cause for the Division to revoke a permit issued pursuant to paragraph III.G.1 (Permits) and/or to initiate an enforcement action pursuant to §25-7-508, C.R.S. Any modification to the notification of information contained in the notification must be received on a form specified by the Division be made in writing to the Division on the first regular business day preceding the change. No person may commence an abatement or demolition project without first obtaining the appropriate approval notice (i.e. an asbestos approval notice or a demolition approval notice) from the Division. The original of the Division-issued notice must be posted in a visible location at the work site at all times. Approval notices are valid for a maximum of one year. A new notice must be obtained for projects lasting longer than one year.

III.E.1. Notifications for facilities other than single-family residential dwelling. Notifications Notices required under this subparagraph are subject to the following conditions:

III.E.1.a. The notification notice must shall be postmarked or delivered to the Division at least 10 working days before commencing an abatement project or demolition project, except as provided in subparagraphs b., c., and d. of this subparagraph section. Any fees required under this subparagraph III.E.1 (Notices) or III.G.1 (Permits) must accompany the notice for the notice to be accepted by the Division.

III.E.1.b. If the project is not one for which a permit is required pursuant to paragraph III.G.1. (Permits), a processing fee of \$80.00 must shall be submitted to the Division for each notice. For abatement projects that occur in non-public access areas, the Division may charge the person submitting this notice a fee for site inspections and any necessary monitoring for compliance with applicable sections of this regulation. The fee must shall be assessed at a rate of \$80.00 per hour.

III.E.1.c. For large contiguous facility complexes, if the project is not one for which a permit is required pursuant to III.G.1. (Permits), an annual fee in the amount of \$80.00 per abatement project that will be undertaken that year must shall be submitted to the Division. If over the course of the year should more than the anticipated number of projects occur, an additional \$80.00 per notice must shall be submitted to the Division. At the end of one year the Division will refund fees for projects that have not been performed, less a \$80.00 processing fee.

III.E.1.d. For demolition projects, a base fee of \$50.00 is required plus an additional \$5.00 per one thousand square feet, or any portion thereof, of structure footprint.

III.E.1.e. Waiver of the 10-Working Day Notification Period.

There are three situations where the Division will consider a waiver of the 10- working day notifications. They are:

III.E.1.e.(i). Emergencies

In the event of an emergency, as defined in subparagraph I.B.41. in which asbestos abatement work must commence at once, the Division and the appropriate county health department must shall be notified by fax or telephone or email prior to commencing abatement. The GAC or building

~~owner must submit a written notification on a form supplied specified by the Division prior to at the start of the next regular State business day after commencing the emergency abatement. The notification application must shall be accompanied by an emergency form specified by the Division a written explanation of the events surrounding the emergency and signed by both the building owner and the GAC. If the emergency occurs during non-business hours, the Division and the appropriate county health department must shall be notified by telephone on the morning of the next regular State business day.~~

III.E.1.e.(ii). Unexpected Discovery

~~In the event of an An unexpected discovery occurs when of ACM asbestos-containing materials is found behind a wall, above a ceiling, beneath a floor or was otherwise inaccessible, hidden in such a way as to preclude access to it without significantly damaging part of the structure. Should the building owner wish to seek a waiver of the normal 10- working day notification, the GAC or building owner must shall request the waiver notify from the Division by the end of the next regular State business day following the unexpected discovery. Identifying ACM after a failure to conduct a thorough inspection does not constitute an unexpected discovery.~~

III.E.1.e.(iii). Demolition Following Abatement

~~In the event where a facility is to be demolished following a noticed or permitted asbestos abatement project where the 10-working day notification period was already imposed, the Division may waive the notification period if the completed demolition approval notice is filed with the Division within the 10-working day period following the completion of the abatement. No waiver of the notification period will be granted for incomplete applications, for applications received more than 10-working days after the completion of the abatement or where the Division requires further confirmation that all RACM has been removed from the facility.~~

III.E.2 Notifications for Single-Family Residential Dwellings Regarding Abatement and Demolition. Notifications required under this subsection are subject to the following conditions:

III.E.2.a. The notification must be postmarked or delivered to the Division at least ten (10) working days before commencing an abatement project or demolition project, except as provided in subparagraph d., of this section. Any fees required under subsection III.E. (Notices) or III.G.1. (Permits) must accompany the notice for the notice to be accepted by the Division.

III.E.2.b. If the project is not one for which permit is required pursuant to subparagraph III.G.1.(Permits), a processing fee of \$80.00 must be submitted to the Division for each notice.

III.E.2.c. For demolition projects, a base fee of \$50.00 is required plus an additional \$5.00 per one thousand square feet, or any portion thereof, of structure footprint.

III.E.2.d. Waiver of the 10-Working Day Notification Period.

There are four situations where the Division will consider a waiver of the 10-working day notification. They are:

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III.E.2.d.(i) Emergencies

In the event of an emergency, as defined in subparagraph I.B.41., in which asbestos abatement work must commence at once, the GAC must submit a written notification on a form specified by the Division prior to commencing the emergency abatement. The notification application must be accompanied by an emergency form specified by the Division

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III.E.2.d.(ii) Unexpected Discovery

In the event of an unexpected discovery of ACM behind a wall, above a ceiling, beneath a floor or otherwise hidden in such a way as to preclude access to it without damaging part of the structure, should the building owner wish to seek a waiver of the normal 10-working day notification, the GAC or building owner must notify the Division by the end of the next regular State business day following the unexpected discovery.

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III.E.2.d.(iii) Demolition Following Abatement

In the event a single-family residential dwelling is to be demolished following a noticed or permitted asbestos abatement project where the 10-working day notification period was already imposed, the Division may waive the waiting period provided the completed demolition approval notice is filed with the Division within the 10-working day period following the completion of the abatement. No waiver of the notification period will be granted for incomplete applications, for applications received more than 10-working days after the completion of the abatement or where the Division requires further confirmation that all RACM has been removed from the facility.

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III.E.2.d.(iv) Compelling Circumstances

In the event there is a compelling circumstance that makes providing a 10-day working notice too onerous, the Division may waive the waiting period provided the homeowner, on a form specified by the Division, submits documentation of the compelling circumstance. No waiver of the notification period will be granted for incomplete applications or where the Division requires additional information.

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III.E.3. Notifications for Single-Family Residential Dwellings Regarding Opt-Out

III.E.3.a. A homeowner of a single-family residential dwelling may provide notification of their decision to opt-out of the area of public access requirements of this regulation for the abatement of asbestos-containing material in excess of the trigger levels if:

- i.) The homeowner resides in the single-family residential dwelling;
- ii.) The single-family residential dwelling they are opting out of is the homeowner's primary residence; and
- iii.) The homeowner or GAC submits the form titled "Single-Family Residential Dwelling Area of Public Access Opt-Out Form" as specified by the Division.

~~III.E.3.b. A single-family residential dwelling will revert to being subject to the area of public access requirements: 1) at the end of the project; 2) when the homeowner no longer owns the single-family residential dwelling; or, 3) if the dwelling ceases being the homeowner's primary residence, whichever is first.~~

~~III.E.3.c. The single-family residential dwelling opt-out is not applicable for homeowners who have plans to demolish the home, plan to sell or rent the home at the conclusion of the project, if the renovation will impact an area of public access, or if the renovation will impact an area to which members of the general public will have access to for business purposes.~~

~~III.E.4. Notifications for facilities that are structurally unsound and in danger of imminent collapse1.f.~~

~~For facilities structures that are declared structurally unsound and in danger of imminent collapse by a qualified ~~or authorized~~ State or local governmental representative, ~~as described in paragraph III.W. (Structurally Unsound Buildings), the GAC, demolition contractor, or building owner must, shall notify the Division on a form specified by the Division, provide written notice of the intent to conduct asbestos abatement and demolition and comply with subsection III.W. (Structurally Unsound Buildings), as early as possible before demolition begins if the operation is as described in subsection III.W. (Structurally Unsound Buildings). The notification shall contain the name, title, and authority of the State or local governmental representative who has ordered the demolition.~~~~

#### ~~III.E.2. Single-Family Residential Dwelling Opt-Out Notice~~

~~III.E.2.a. An owner of a single-family residential dwelling may opt-out of the area of public access requirements of this regulation for the abatement of asbestos-containing material in excess of the trigger levels in that owner's primary residence by completing the opt-out form. If the homeowner chooses to opt-out, the GAC contracting with the homeowner shall provide the completed, signed "Single-Family Residential Dwelling Area of Public Access Opt-Out Form" to the Division. For a project in which the homeowner has chosen to opt-out, then the single-family residential dwelling will revert to being subject to the area of public access requirements: 1) at the end of the project; 2) when the homeowner no longer owns the single-family residential dwelling; or, 3) if the dwelling ceases being the homeowner's primary residence, whichever is first.~~

Commented [A4]: Moved to the section above.

~~III.E.2.b. An owner of a single-family residential dwelling may not opt-out of the area of public access requirements of this regulation for the abatement of asbestos-containing materials if any of the following apply:~~

~~III.E.2.ba.(i). If the owner plans to demolish, sell, or rent any part of the single-family residential dwelling to another person or company at the conclusion of the project.~~

~~III.E.2.ba.(ii). If portions of the single-family residential dwelling serve as a daycare, office or other business function to which members of the general public have access.~~

~~III.E.2.b.(iii). If the asbestos-containing materials are being abated on the exterior of the single-family residential dwelling.~~

#### III.F. ALTERNATIVE PROCEDURES AND VARIANCES

The Division may, at its discretion, grant a variance from this Regulation allowing use of an alternative procedure for the clearance of ~~an asbestos~~ abatement projects or the control of emissions from an ~~asbestos abatement~~ project provided that the ~~person, GAC or ACF conducting the asbestos abatement~~ submits the alternative procedure in writing to the Division along with a \$50.00 review fee,

and demonstrates to the satisfaction of the Division that compliance with the regulation is neither practical nor feasible, or that the proposed alternative procedures provide equivalent control of asbestos.

Within sixty (60) days of the receipt of the request the Division will shall notify the applicant in writing of its decision to either grant or deny the variance, except that if the request is to utilize an alternative procedure previously evaluated by the Division the variance will shall be granted or denied within (10) ten days. No person may shall begin abatement using such a procedure until a variance has been requested, and approved in writing. Any violation of anythe conditions of the variance will be considered a violation of this Regulation.

III.G. PERMITS

III.G.1. Permit Applications

III.G.1.a. No person may shall commence an abatement project in which the amount of friable asbestos-containing material exceeds the trigger levels in an area of public access without first obtaining an asbestos abatement permit from the Division. Only the GAC in whose name the permit is issued may conduct the abatement project.

III.G.1.b. Permit fees for large contiguous facility complexes must shall be paid annually to the Division in the amount of \$1,200.00 plus \$80.00 for each anticipated project. This fee must accompany the permit application for the application to be accepted. At the end of the permit year, the Division will refund fees for projects that have not been conducted, less a \$80.00 processing fee.

III.G.1.c. For any project other than those on large contiguous facility complexes, the permittee will shall be assessed a fee for the permit. The fee must accompany each permit application. The fee schedule is as follows:

Project Length	Permit Fee for Projects	
	Applies to ALL facilities including single-family residential dwellings	Applies ONLY to single-family residential dwellings
	Greater than 260 linear feet/160 square feet/55 gallon drum	Greater than 50 linear feet/32 square feet/55 gallon drum but less than or equal to 260 linear feet/160 square feet/55 gallon drum
1-30 days	\$400.00	\$180.00
31-90 days	\$800.00	\$300.00
91-365 days	\$1,200.00	\$420.00

Any inspections in excess of one for a 30-day permit, two for a 90-day permit, or three for a one-year permit will be assessed at a rate of \$80.00 per hour.

Permits are valid for a maximum of one year. A new permit must be obtained for projects lasting longer than one year.

III.G.2. Permit/Project Modification

Whenever there is a modification in the project, the applicant/permittee must provide notification of all changes on a form specified by the Division notify the Division and the local county health department (as designated by the Division) in writing. A project modification occurs when there is a change in the scope of work, the scheduled work dates or times, or project personnel/the

project manager. The ~~applicant/permittee~~ must shall notify the Division prior to implementing the ~~by the end of the next regular State business day following the~~ modification(s).

### III.G.3. Multiple-Phase Projects

Buildings owned by the same person, which are at different locations, must be permitted separately unless they are part of the same project. Buildings owned by the same person, which are at the same location, ~~must can~~ be covered by one multiple-phase permit. When applying for a permit for abatement to be performed in more than one building or in more than one area within a single building, the applicant must shall provide, on a form specified supplied by the Division, additional information regarding the multiple-phase project. ~~Whenever there is a change in any of the information provided on the form, a new form must shall be submitted to the Division that:~~

~~III.G.3.a. ——— Indicates clearly which phases of the project have changed;~~

~~III.G.3.b. ——— Is postmarked or delivered to the Division at least 10 working days ———  
before the start of any phase having a change in its starting date;~~

~~III.G.3.c. ——— Indicates a~~Additional phases that are to be added after the start of a multi-phase project must be submitted on a ~~by the submission of a~~ new application covering the additional phase or phases 10 working days prior to the start of the first additional phase. No person may commence work on any additional phase(s) without first obtaining approval from the Division for the additional phase(s) to their permit. There is a \$80.00 fee for each additional phase after the initial permit approval.

III.G.4. The original of any the Division-issued permit must shall be posted in a visible location at the work site at all times.

III.G.5. Asbestos abatement permits are required for asbestos abatement projects in single-family residential dwellings for which the amount of asbestos-containing materials to be abated exceeds the trigger levels, unless either of the following conditions applies:

III.G.5.a. The homeowner has requested that the single-family residential dwelling not be considered an area of public access pursuant to subsection III.E.32; or

III.G.5.b. The individual is performing the abatement project himself/herself in a single-family residential dwelling that the individual resides in and is the individual's primary residence.

### III.G.6. Transferring a Permit

Should a GAC wish to transfer a permit to another GAC, the GAC who will perform the abatement project must submit a new permit application and pay the Division a \$55.00 processing fee.

III.G.7. No permit to conduct asbestos abatement will shall be issued to a person who has failed to pay in full a Division-assessed penalty for violating any provision of this Regulation ~~No. 8, Part B~~ or to any person who has otherwise failed to comply with any order of the Division, unless the penalty or order is under appeal before the Air Quality Control Commission.

III.G.8. Permits issued on projects requiring project managers will shall not be valid until the original copy of the permit is signed by the project manager.

### III.H. ABATEMENT SEQUENCE



This subsection III.H. applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

#### III.H.1. Pre-Abatement

Pre-abatement is the time period covering the commencement of construction of the containment and all other preparations (including any necessary pre-cleaning) taking place prior to the actual abatement of ACM. This abatement phase does not include the transport of materials and equipment to the job site. The transport of materials and equipment to the job site is the only activity that is allowed prior to the permit start date.

Below are the steps for the pre-abatement phase of the project. Please note that steps 1 through 6, where applicable, are mandatory, and the exact sequence shown below is mandatory.

- 1) Install critical barriers (pursuant to subsection III.I, Critical Barrier Installation)
- 2) Establish negative pressure (pursuant to subsection III.J, Air Cleaning and Negative Pressure Requirements)
- 3) Construct the decontamination area (pursuant to subsection III.K, Decontamination Area)
- 4) Pre-clean surfaces (pursuant to subsection III.L, Pre-cleaning of Surfaces)
- 5) Cover fixed objects (pursuant to subsection III.M, Covering Fixed Objects)
- 6) Construct the containment (pursuant to subsection III.N, Containment Components)

#### III.H.2. Active Abatement

Active abatement means the time period beginning with the completion of the pre-abatement phase and ending when the area has passed final clearance air monitoring and the critical barriers have been completely removed.

The active abatement phase includes the actual "gross" removal of ACM and all aspects of "final cleaning" that are conducted prior to the areas being pronounced ready for a final visual inspection. The final visual inspection, final clearance air monitoring, and the removal of critical barriers are the last activities included in the active abatement phase.

Below are the steps for the active abatement phase of the project. Please note that steps 7, 8, 109, and 110, are mandatory, and the exact sequence shown below is mandatory.

- 7) Conduct abatement (pursuant to subsection III.O, Abatement Methods)
- 8) Conduct final visual inspection (pursuant to subparagraph III.P.1., Final Visual Inspection)
- 9) If a temporary coating material is to be applied to surfaces in the containment it may only be applied after the final visual inspection has been successfully completed. This coating must be completely dry to the touch before final clearance air sampling may commence.

- 910) Conduct final clearance air monitoring (pursuant to subparagraph III.P.3., Final Clearance Air Monitoring)
- 110) Conduct the tear-down (pursuant to subsection III.Q, Tear-down)

### III.H.3. Post-Abatement

Post abatement means any point in time following the termination of the active abatement phase. Below is the step for the post-abatement phase of the project. Please note that step 124 is mandatory.

- 124) Handle waste. ~~Any h~~Handling of waste during post-abatement or, if necessary, during is permissible during the active abatement, phase must be completed. (pursuant to subsection III.R, Waste Handling).

### III.I. CRITICAL BARRIER INSTALLATION

This subsection III.I applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material that will be abated exceeds the trigger levels.

All openings between the work area and clean areas including, but not limited to, windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers and skylights must shall be sealed with a minimum of one layer of 6-mil polyethylene sheeting.

### III.J. AIR CLEANING AND NEGATIVE PRESSURE REQUIREMENTS

This subsection III.J applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material that will be abated exceeds the trigger levels.

#### III.J.1. Negative Air Machines and HEPA Filters

III.J.1.a. Negative air machines (NAMs) pressure air filtration units must shall be operated continuously from the time of critical barrier construction through the time that acceptable final clearance air monitoring results are obtained in accordance with subsection III.P (Clearing Abatement Projects).

III.J.1.b. The General Abatement Contractor (GAC) who is required to use air cleaning must shall properly install, use, operate, and maintain all air-cleaning equipment authorized by this ~~sub~~section~~paragraph~~ III.J (Air Cleaning and Negative Pressure Requirements) in accordance with manufacturer specifications.

III.J.1.c. The GAC who is required to use air cleaning must shall use a HEPA filter to clean the air, except as noted below:

III.J.1.c.(i). Bypass devices may be used only during upset or emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

III.J.1.c.(ii). If the use of a filter creates a fire or explosion hazard, the Division may authorize as a substitute the use of wet collectors designed to operate with a NAM unit contacting energy of at least 9.95 kilopascals (40 inches of water gauge pressure).

III.J.1.c.(iii). The Division may authorize the use of filtering equipment other than HEPA filters if it has been previously approved by EPA and if it can be demonstrated to the Division's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

III.J.1.d. These NAMs units must shall exhaust filtered air to the outside of the building when the length of exhaust duct required to do so does not overburden the negative air machine units. If air must be exhausted to the interior of the building, it must be done in accordance with subparagraph III.U.1.b. (During Abatement).

### III.J.2. Air Exchange Rates

The GAC who is required to use air cleaning must shall maintain sufficient air cleaning equipment in operation at all times to ensure that the air within the work area is exchanged a minimum of four (4) times per hour.

### III.J.3. Pressure Differential

At all times the differential of the work area to the clean area must shall be, at a minimum, -0.02 inches of water. A manometer or pressure gauge must shall be set up on the outside of the containment area so that the pressure differential between the work area and the clean area may be determined. At all times the differential of the work area to the clean area must shall be recorded using a strip chart recorder or its equivalent. The manometer must have an audible alarm that will sound when pressure drops below the minimum -0.02 inches water column. The alarm function must be audible during active abatement.

### III.J.4. Air Flow Direction

At all times airflow direction must shall be from the exterior of the containment barriers into the interior of the containment barriers. In addition, smoke tubes must shall be readily available on the outside of the containment barriers at all times so that airflow direction and verification of air movement within the work area may be determined.

## III.K. DECONTAMINATION UNIT

This subsection III.K applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

### III.K.1. Construction

A decontamination unit must shall be constructed to provide employees with a means facility to be used to decontaminate asbestos-exposed personnel/Workers and equipment before such personnel and persons/Workers and equipment leave the work area. The decontamination unit must shall consist of the following three stages, which must shall be separated by three offset staggered flaps in a "Z"-pattern or an equivalent system of barriers that will self-close should negative air pressure fail:

#### III.K.1.a. Clean Room

The clean room must shall be sized to accommodate the clothes and equipment of the work crew. Clean work clothes, clean disposable clothing, replacement filters for respirators, towels and other necessary items must shall be provided in the clean room. No asbestos-contaminated items may enter this room. Workers must shall use this area to suit up, store street clothes, and don respiratory protection on their way to the work area, and to dress in clean clothes after showering.

III.K.1.b. Shower

Except for small-scale abatement projects where glovebag methods or mini- enclosure methods are used, a portable shower must shall be used to permit the employees to clean themselves after exposure to asbestos. Each showerhead must shall be supplied with hot and cold water adjustable at the tap, and a drain equipped with a filtration system to filter asbestos from the shower wastewater to a fiber size of five (5) microns prior to discharging the wastewater into a sanitary sewer. The shower room must shall contain one or more showers to accommodate all personnel/Workers. The shower enclosure must shall be constructed to ensure against leakage of any kind and must shall be kept clean of all debris and asbestos-containing waste material (ACWM) at all times.

III.K.1.c. Equipment (Dirty) Room

The equipment room must shall be used for storage of equipment and tools at the end of a shift after decontamination using a HEPA filtered vacuum or wet cleaning techniques. A labeled six-(6) mil polyethylene bag for collection of disposable clothing shall be located in this room. Contaminated footwear must shall be stored in this area for reuse.

III.K.2. Entry and Exit

The following procedures must shall be used for work area entry and exit unless there is an emergency situation immediately dangerous to life or health:

III.K.2.a. All personnel and authorized visitors must shall enter and exit the work area through the Worker decontamination unit and not the waste load-out.

III.K.2.b. All personnel must remove street clothes and shall don disposable coveralls, head covering and foot covering prior to entering the work area. To prevent contamination from leaving the work area, disposable coveralls in sizes adequate to accommodate movement without tearing must shall be worn by all personnel entering the work area. The coveralls (Tyvek® or other material equally effective in preventing gross ACM from contacting the individual's body) must shall include head and foot covers (unless head and foot covers are provided separately).

III.K.2.c. Before leaving the work area, all personnel must shall remove gross contamination from the outside of respirators and dispose of protective clothing in containers labeled for disposal in accordance with subparagraph III.R.2.b. (Labeling). Personnel must shall proceed to the shower area and then shower and shampoo to remove residual asbestos contamination. After showering, personnel must shall proceed to the clean room.

III.L. PRE-CLEANING OF SURFACES

This subsection III.L applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material that will be abated exceeds the trigger levels.

Pre-cleaning of surfaces contaminated with visible dust or debris must shall be conducted prior to the commencement of any abatement project. The following procedures must shall be conducted in the order in which they appear:

- III.L.1. HEPA vacuum or wet wipe all surfaces contaminated with visible dust or debris. All movable objects must shall be cleaned of dust and debris by HEPA vacuum or wet wiped before removal from the work area;
- III.L.2. Dispose of all dust and debris, filters, mop heads and other contaminated waste as ACWM pursuant to subsection III.R (Waste Handling);
- III.L.3. Pre-cleaning of dirt floors must shall be conducted in accordance with paragraph III.S.5 (Asbestos-Contaminated Soil).

### III.M. COVERING FIXED OBJECTS

This subsection III.M applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material that will be abated exceeds the trigger levels.

At a minimum, all fixed objects in the work area must shall be covered with one (1) layer of six-(6) mil polyethylene sheeting, secured in place.

### III.N. CONTAINMENT COMPONENTS

This subsection III.N applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

Construction of the containment components may commence only after adequate negative pressure is established.

Polyethylene sheeting must shall be used in the construction of containment barriers in order to isolate the work area during abatement projects. Spray poly may be substituted for polyethylene sheeting.

#### III.N.1. Wall, Floor and Ceiling Polyethylene

Polyethylene sheeting must shall be used in thicknesses and number of layers as specified in subparagraphs III.N.1.a., b., c., and d. below, and must shall be used to seal all windows, doors, ventilation systems, and wall penetrations, and to cover ceilings, walls, and floors in the work area. Duct tape or spray adhesive must shall be used to seal the edges of the plastic and to seal any holes in the containment. Polyethylene sheeting must shall be attached using any combination of duct tape or other waterproof tape, furring strips, spray glue, staples, nails, screws or other effective materials capable of sealing adjacent sheets of polyethylene and capable of sealing polyethylene to dissimilar finished or unfinished surfaces under both wet and dry conditions.

##### III.N.1.a. Laying Polyethylene on Floors

At a minimum, floors must shall be covered with sheeting consisting of two (2) layers of six-(6) mil polyethylene sheeting, unless spray poly is used. Floor sheeting must shall extend up sidewalls at least twelve (12) inches and be sized to minimize seams. No seams may shall be located along wall/floor joints. Unless ACM flooring material is the only material being removed in the containment, floor sheeting must be installed.

##### III.N.1.b. Hanging Polyethylene on Walls

At a minimum, walls must shall be covered with sheeting that must shall consist of two (2) independent layers of four (4) mil or thicker polyethylene, unless spray poly is used. It must shall be installed to minimize seams and must shall extend beyond wall/floor joints at least twelve (12) inches. No seams may shall be located along wall/wall joints.

#### III.N.1.c. Hanging Polyethylene Sheeting on Ceilings

If a work area has a ceiling that will not be abated as part of the abatement work, at a minimum, the ceiling must shall be covered with sheeting that must shall consist of one (1) layer of four (4) mil or thicker polyethylene, unless spray poly is used. It must shall be installed to minimize seams and must shall extend beyond wall/ceiling joints at least twelve (12) inches. No seams may shall be located along wall/ceiling joints.

#### III.N.2. View Port

A clear view port with a minimum size of 12" x 12" must shall be installed to allow a view of the interior of the work area. If a view port cannot be installed, an explanation must shall be made on the notification form stating that it will not be installed and the reason why.

#### III.N.3. Waste Load-out Area

All containments must shall be constructed to include a waste load-out area. This area must shall be separate from the decontamination unit, and may shall be used as a temporary storage area for bagged waste and must be used as thea port for transferring waste out of the work area to the transport vehicle. The innermost room must be large enough to accommodate the cleaning of bagged debris and the largest sized debris, all while maintaining closed flaps. All waste load-out areas must have a minimum of two separate rooms chambers separated by three offset flaps in a "Z"-pattern or an equivalent system of barriers that will self-close should negative air pressure fail; separated by air-locks.

#### III.N.4. Secondary Containment

III.N.4.a. For glovebag removals (see III.V.1) the General Abatement Contractor (GAC) in lieu of full containment must shall erect secondary containment barriers where the amount of ACM to be removed in a functional space exceeds three (3) linear or three (3) square feet.

III.N.4.b. For facility component removals (see III.V.2) in lieu of full containment the use of a secondary containment to facilitate the required air clearance monitoring is recommended, but not required.

### III.O. ABATEMENT METHODS

This subsection III.O applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

The three methods of asbestos abatement are listed below. Any additional requirements using these methods, other than those already specified in this regulation, are detailed in subparagraphs II.O.1., 2., and 3., below.

#### III.O.1. Removal

##### III.O.1.a. Controlling Airborne Fiber Release/Emissions

##### III.O.1.a.(i). Wetting

##### III.O.1.a.(i)(A). Amended Water

Amended water must shall be used to adequately wet ACM asbestos-containing materials before removal is attempted. All waste must shall be

kept adequately wet with amended water ~~at all times, including when until~~ bagged for disposal. ~~Surfactants~~ must be a commercially available product specifically designed to be mixed with water for use in wetting of ~~ACMasbestos-containing materials~~.

III.O.1.a.(i)(B). Airless Sprayers

Airless sprayers ~~must shall~~ be used when applying amended water or encapsulant to ~~ACMasbestos-containing materials~~.

III.O.1.a.(i)(C). Cold Temperature Wetting

When the temperature at the point of wetting is below freezing (0°C/32°F):

III.O.1.a.i(C)(1) The General Abatement Contractor (GAC) ~~must shall~~ apply for a variance from the Division in accordance with the requirements of subsection III.F. (Alternative Procedures and Variances); or

III.O.1.a.i(C)(2) Remove facility components coated or covered with friable ACMasbestos-containing materials as units or in sections in accordance with subparagraph III.V.2. (Removing of Facility Components).

~~III.O.1.a.i(C)(3) Comply with the requirements of section III (Abatement, Renovation and Demolition Projects).~~

III.O.1.a.(ii). HEPA Vacuuming

All vacuuming of contaminated surfaces ~~must shall~~ be done with a HEPA filter-equipped vacuum.

III.O.1.a.(iii). Wet Wiping

Wet wiping of contaminated surfaces prior to disassembly of containment barriers ~~must shall~~ be done using rags and a bucket of clean or amended water.

III.O.1.b. Removal of Asbestos from Elevated Heights

For friable ACMasbestos-containing materials that will be removed or stripped:

III.O.1.b.(i). Adequately wet the materials to ensure that they remain wet until they are packaged collected for disposal in accordance with subsection III.R. (Waste Handling);

III.O.1.b.(ii). Carefully lower the packaged ACM to the ground or a lower floor, not dropping, throwing, ~~sliding~~, or otherwise damaging or disturbing the ACM;

III.O.1.b.(iii). ~~Or~~ transport the packaged materials to the ground via dust-tight chutes or containers if they have been removed or stripped more than 50 feet above ground level and were not removed as units or in sections; and

Commented [A5]: Removed because regulated community must comply with all applicable parts of Section III regardless of activity.

~~III.O.1.b.(iv).— Comply with the requirements of section III. (Abatement, Renovation and Demolition Projects).~~

**Commented [A6]:** Removed since regulated community must comply with all applicable parts of Section III regardless of activity.

### III.O.2. Encapsulation

III.O.2.a. When spray-applying encapsulants they ~~must shall~~ be applied using only airless spray equipment with nozzle pressure adjustable between four hundred (400) and fifteen hundred (1500) ~~PSI~~ and in accordance with the manufacturer's recommendations for the particular encapsulant. ~~A containment barrier need not be erected when spraying an encapsulant provided that the ACM is well adhered and will not be disturbed during the encapsulation process. The abatement area must still be cleared as required by subsection III.P.~~

### III.O.3. Enclosure

III.O.3.a. If enclosure is chosen as the abatement technique, a solid structure (airtight walls and ceilings) ~~must shall~~ be built around the facility component to prevent the release of ACM into the area beyond the enclosure and to prevent disturbance of ACM by casual contact during future maintenance operations. A containment barrier need not be erected when constructing an enclosure provided that the ACM will not be disturbed during the building of the enclosure. ~~The abatement area must still be cleared as required by subsection III.P.~~ Such a permanent (i.e., for the life of the building) enclosure ~~must shall~~ be built of new construction materials and ~~must shall~~ be impact resistant and airtight. Before constructing the enclosure, the person conducting the asbestos abatement ~~must shall~~ move all active electrical conduits, telephone lines, recessed lights, and pipes out of the area to be enclosed in order to ensure that the enclosure will not have to be reopened later for routine or emergency maintenance.

III.O.3.b. The master floor plans ~~must shall~~ indicate the exact location and condition of the enclosed asbestos and this plan ~~must shall~~ be kept in a separate asbestos file with the building superintendent, ~~or~~ engineer or owner.

## III.P. CLEARING ABATEMENT PROJECTS

This subsection III.P applies to asbestos abatement projects in areas of public access, other than school buildings, where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels. For clearance requirements in school buildings, see paragraph IV.G.9. (Completion of Response Actions).

The General Abatement Contractor (GAC), certified Air Monitoring Specialist (AMS), and the building owner ~~must shall~~ ensure that all abatement projects are completed as described below.

All air monitoring and final visual inspections required under this regulation ~~must shall~~ be performed by a Colorado certified AMS Air Monitoring Specialist who works for a registered asbestos consulting firm. ~~The AMS must be independent~~ of the GAC to avoid possible conflict of interest.

### III.P.1. Final Visual Inspection

At the conclusion of any abatement action and with only critical barriers still in place, ~~the~~ certified AMS Air Monitoring Specialist, who is independent of the GAC, ~~must shall~~ visually inspect each work area where such action was conducted, and behind the critical barriers, to determine whether all dust and debris has been removed. If any such dust or debris is found, the area ~~must shall~~ be re-cleaned until no dust or debris is found. If a critical barrier is removed for cleaning purposes, the area behind the critical barrier ~~must shall~~ be cleaned and the critical barrier immediately replaced.



II.P.1.a. The AMS must, on a form specified by the Division, provide written notification to the GAC that the abatement work site has met final visual clearance standards and passed final air clearance sampling.

III.P.2. [Reserved]

III.P.3. Final Clearance Air Monitoring and Sample Analyses

III.P.3.a. Sample Collection

III.P.3.a.(i). Once the area has passed a final visual inspection and no dust or debris has been found, the ~~certified AMS or Monitoring Specialist~~ must shall collect air samples using aggressive sampling as described in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 1995), to monitor air for clearance after each abatement project; except that fans and leaf blowers ~~must~~ shall not be directed toward any known friable ACM remaining in the work area.

III.P.3.a.(ii). The total number of clearance air samples required to determine compliance with subsection III.P. (Clearing Abatement Projects) for a state-permitted abatement project involving greater than the trigger levels of ACM is indicated in the following table:

For each work area within the project where the amount of ACM is:	State-Permitted Project in Non-School Building		Response Action in School Building	
	Minimum # of samples to clear each of the following:		Minimum # of samples to clear each of the following:	
	Work area	Project	Work Area	Project
Less than 3 square feet/3 linear feet	1	5	5	5
From 3 square feet/3 linear feet up to 32 square feet/50 linear feet/volume equivalent of a 55-gallon drum	2	5	5 PCM or 13 TEM	5 PCM or 13 TEM
Greater than 32 square feet/50 linear feet/volume equivalent of a 55-gallon drum up to 160 square feet/260 linear feet/volume equivalent of a 55-gallon drum	5	5	5 PCM or 13 TEM	5 PCM or 13 TEM
Greater than 160 square feet/260 linear feet/volume equivalent of a 55-gallon drum	5	5	13 TEM	13 TEM

III.P.3.b. Clearance Criteria

III.P.3.b.(i). Transmission Electron Microscopy (TEM)

Except as provided in subparagraph III.P.3.b.iii., an abatement action will shall be considered complete when the average concentration of asbestos of five air samples collected within the abatement work area and analyzed by the TEM method in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 1995), is not statistically significantly different, as determined by the Z-test calculation as found in that Appendix A, from the average asbestos concentration of five air samples collected at the same time outside the abatement work area and analyzed in the same manner, and the average asbestos concentration of the three field blanks described in that Appendix A, is below the filter background level of 70 structures per square millimeter (70 s/mm<sup>2</sup>).

III.P.3.b.(ii). An action will shall also be considered complete if the volume of air drawn for each of the five samples collected within the abatement work area is equal to or greater than 1,199 L of air for a 25-mm filter, or equal to or greater than 2,799 L of air for a 37-mm filter, and the average concentration of asbestos as analyzed by the TEM method in 40 C.F.R. Part 763 Appendix A to Subpart E (EPA 2010 4996), for the five air samples does not exceed the filter background level of 70 s/mm<sup>2</sup>, as defined in that Appendix A. If the average concentration of asbestos of the five air samples within the abatement work area exceeds 70 s/mm<sup>2</sup>, or if the volume of air in each of the samples is less than 1,199 liters of air for a 25-mm filter, or less than 2,799 L of air for a 37-mm filter, the action shall be considered complete only when the requirements of subparagraphs III.P.3.b.i. or III.P.3.b.iii. of this subsection III.P (Clearing Abatement Projects) are met.

III.P.3.b.(iii). Phase Contrast Microscopy (PCM)

An action will also be considered complete if the volume of air drawn for each of a minimum five samples collected within the abatement work area is equal to or greater than 1,199 L of air for a 25-mm filter and the average concentration of asbestos as analyzed by PCM. The laboratory may analyze air-monitoring samples collected for clearance purposes by PCM to confirm completion of removal, encapsulation, or enclosure of ACM. The action will shall be considered complete when the results of samples collected in the abatement work area and analyzed by PCM using the NIOSH Method 7400 entitled "Asbestos and other Fibers by PCM" published in the NIOSH Manual of Analytical Methods, 5th 3rd Edition, third Second Supplement, June 2019 August 1987, show that the concentration of fibers for each of the five samples is less than or equal to a limit of quantification for PCM (0.01 fibers per cubic centimeter, 0.01 f/cm<sup>3</sup>, 10,000 f/m<sup>3</sup>). The analyst doing said analysis must shall be NIOSH 582, or-582E trained or an analyst showing successful participation in the AIHA/AAR PAT program and employed by a laboratory registered in the State of Colorado.

III.P.3.c. Laboratory Accreditation

III.P.3.c.(i). The air samples collected under this subsection III.P, must shall be analyzed for asbestos using laboratories accredited by the National Institute of Standards and Technology to conduct such analysis using TEMtransmission electron microscopy or, under circumstances permitted in this subsection III.P. (Clearing Abatement Projects), laboratories showing

successful participation in the American Industrial Hygiene Association (AIHA) Proficiency Analytical Testing (PAT) Program for phase contrast microscopy. All analysts analyzing PCM samples collected for final clearance purposes must have successfully participated in their laboratory's most current PAT round.

III.P.3.c.(ii). Whenever on-site satellite labs are used for PCM analysis for final clearance purposes, air monitoring required under this regulation, all persons conducting said analysis must shall be properly trained as an analyst pursuant to the AIHA Laboratory Quality Assurance Program and must shall follow all quality control and quality assurance guidelines as set forth in the NIOSH Method 7400 entitled "Asbestos and other Fibers by PCM Fibers" published in the NIOSH Manual of Analytical Methods, 5th 3rd Edition, third second supplement, June 14, 2019-August 1987. Satellite labs must be directly must be owned and under the direct control of a properly accredited laboratory ies pursuant to the requirements set forth in subparagraph III.P.3.b. (Clearance Criteria) above.

### III.Q. TEAR-DOWN

This subsection III.Q, applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material that will be abated exceeds the trigger levels.

The following tasks must shall be performed during the tear-down portion of the abatement project:

- Removal of the critical barriers
- Removal of negative air machines (NAMs)
- Disassembly of the decontamination unit
- Disassembly of the waste load-out area
- HEPA vacuum any minimal dust or debris discovered in the work area after tear down

### III.R. WASTE HANDLING

This subsection III.R applies to asbestos abatement projects in areas of public access and non-public access areas where any the amount of asbestos-containing material which has been removed exceeds the trigger level has been removed. Except for situations addressed under III.R.2.c., all asbestos-containing waste material (ACWM) must be removed from the abatement site at the conclusion of the project.

#### III.R.1. Disposal Containers

Disposal containers (must) shall be leak-tight and waterproof when sealed. Disposable bags must shall be at least six-(6) mil polyethylene.

#### III.R.2. Handling Waste Material

Each person handling asbestos-containing waste material (ACWM) must shall:

- III.R.2.a. Seal all ACWM asbestos-containing waste material in leak-tight containers while wet and label the containers in accordance with sub paragraph section III.R.2.b (Labeling), below.

Appropriate containers and procedures must shall be used to prevent all breakage, rupture or leakage during loading, shipping, transportation and storage of ACWM asbestos-containing waste material.

III.R.2.b. Affix warning labels to all ACWM or to their containers, with either of the following warnings:

Danger

Contains Asbestos Fibers

Avoid Creating Dust

Cancer and Lung Disease Hazard

Or

Caution

Contains Asbestos

Avoid Opening or Breaking Container

Breathing Asbestos is Hazardous To Your Health

III.R.2.c. Following an abatement project, temporary storage of ACWM must shall be limited to 500 (five hundred), 55-gallon barrels, or the volumetric equivalent thereof, prior to disposal. Storage is permitted only on property owned or operated by the General Abatement Contractor (GAC) or building owner. Temporary storage must shall not exceed a time period of more than 6 months following the completion of the abatement action.

III.R.2.d. Discharge no visible emissions during the collection, processing (including incineration), packaging, transportation, or deposition of any ACWM generated by the source.

III.R.2.e. Dispose of ACWM in accordance with Colorado Department of Public and Environment Health, Hazardous Materials and Waste Management Division regulations.

III.R.2.f. All asbestos-containing wastewater must shall be filtered to five (5) micrometers prior to discharge and mustshall be discharged to a sanitary sewer.

III.R.3. Follow the waste shipment procedures in accordance with the provisions of 40 C.F.R. Part 61 Section 150 (EPA 2011 4995).

III.R.3.a. Solid waste transfer stations may only accept asbestos waste after receiving approval from the Solid Waste and Materials Management Program and the local governing body.

### III.S. ABATEMENT OF SPECIAL MATERIALS

This subsection III.S applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

III.S.1. Resilient Floor Tile and Sheet Vinyl Flooring

III.S.1.a. Pursuant to paragraph III.E. (Notification), the person conducting the project must notify the Division of the intent to demolish, renovate, or perform asbestos abatement in any building, structure, facility or installation, or any portion thereof, which contains asbestos in any amount that exceeds the trigger levels whether friable or not.

III.S.1.b. Resilient floor tile, sheet vinyl flooring, and associated flooring adhesive which contain asbestos, are nonfriable unless the material is damaged to the extent that when dry it can be crumbled, pulverized or reduced to powder by hand pressure.

III.S.1.c. Provided that the requirements of Appendix B are followed as required, the requirements of following sections do not apply: section II (Certification Requirements), section III, subsections III G. (Permits), III.H. (Abatement Sequence), III.I. (Critical Barrier Construction), III.J. (Additional Engineering Controls), III K. (Decontamination Area), III.L. (Pre-cleaning of Surfaces), III.M. (Covering Fixed Objects), III.N. (Containment Components), III.O. (Abatement Methods), .III.P (Clearing Abatement Projects), and III.Q (Tear-Down).

If a person grinds, mechanically chips, drills, sands, bead blasts, sandblasts, mechanically powders the material or otherwise damages such material to render it friable, and the amount of the material exceeds the trigger levels, then the following sections do apply: sections I (Definitions), II (Certification Requirements) and III (Abatement, Renovation and Demolition Projects).

III.S.1.d. Sheet Vinyl Flooring

If utilizing the work practices set forth in Appendix B for the removal of sheet vinyl flooring, any Workers removing the flooring must have successfully completed an 8-hour employee training course which meets the training requirements for flooring Workers set forth in Appendix C to this regulation; furthermore, individuals supervising the removal of sheet vinyl flooring materials must have successfully completed the 8-hour employee training course and an additional training course for Supervisors which meets the training requirements for flooring Supervisors set forth in Appendix C to this regulation. Provided that the requirements of Appendix B are followed as required, the following sections do not apply: section II (Certification Requirements), section III, subsections III G. (Permits), III.H. (Abatement Sequence), III.I. (Critical Barrier Construction), III.J. (Additional Engineering Controls), III K. (Decontamination Area), III.L. (Pre-cleaning of Surfaces), III.M. (Covering Fixed Objects), III.N. (Containment Components), III.O. (Abatement Methods), .III.P (Clearing Abatement Projects), and III.Q (Tear-Down).

III.S.2. Asbestos Cement Products

Transite roofing shingles, transite siding and other asbestos cement products that are nonfriable and will remain nonfriable during removal are subject to the requirements of subsection III.E (Notifications). The transite roofing shingles, transite siding, or other asbestos cement products must be removed in accordance with subparagraph III.S.4 (Other Nonfriable Asbestos-Containing Materials), below. If the transite roofing shingles, siding, other asbestos cement products become friable during removal, then sections I. (Definitions), II. (Certification Requirements), and III. (Abatement, Renovation and Demolition Projects) apply.

III.S.2.a Asbestos cement products in any amount greater than the trigger levels must be removed prior to demolition.

III.S.3. Asphaltic Materials

Tar impregnated roofing felts, asphalt-roofing tiles, roofing asphalts, roofing mastics, asphaltic or bituminous coatings and asphaltic pipeline coatings that are nonfriable and will remain nonfriable during removal abatement are exempt from this regulation.

III.S.4. Other Nonfriable Asbestos-Containing Materials

III.S.4.a. Adequately wet the surface areas of the nonfriable ACM to prevent dust emissions throughout the removal process.

III.S.4.b. Remove the materials using hand removal methods or power tools that do not subject the material to cutting, grinding, sanding, bead blasting, sandblasting, or otherwise damage the material in such a way as to render it friable.

III.S.4.c. Remove the material carefully with minimal breakage and disturbance.

III.S.4.d. If the nonfriable material is to be disposed of, then it must be transported to the landfill that will accept nonfriable ACM. The landfill must be contacted prior to disposal to ensure that the nonfriable ACM is transported and packaged in accordance with the landfill's specific policy or regulation. If the materials have been rendered friable, they must be disposed of as friable asbestos-containing waste materials pursuant to subsection III.R. (Waste Handling).

III.S.5. Asbestos-Contaminated Soil

Any soil containing visible friable ACM asbestos-containing material or any soil with greater than 1% friable asbestos content in the top 1 inch of soil-is, for the purposes of this subsection, asbestos-contaminated soil. Where the surface area of the asbestos-contaminated soil exceeds the trigger levels, or the volume of contaminated soil to be removed exceeds the volume equivalent of a 55-gallon drum, the General Abatement Contractor (GAC) and the building owner must shall comply with all of the requirements in subsection III.T. (Asbestos Spill Response), and must shall remove gross, visible surface debris, and either remove the top 2 inches of soil, or seal the area with concrete or other impenetrable material.

III.T. ASBESTOS SPILL RESPONSE

The following procedures apply to all areas of public access, except school buildings, in which there has been a release of asbestos fibers due to a breach of the containment barrier on an abatement project, or due to any cause other than abatement of asbestos. For fiber release episodes in schools, see section IV. (School Requirements).

III.T.1

In the event of a spill involving disturbance of suspect materials in an amount greater than the trigger levels:

III.T.1.a. If disturbed materials are already known to be or will be assumed to be asbestos containing, the building owner, operator or contractor who discovered or created the disturbance must immediately comply with subsection III.T.2. and submit the form titled "Spill Notification Form" as specified by the Division.

III.T.1.b If the asbestos content of the disturbed material(s) is unknown, the building owner, operator or contractor must immediately contact a Colorado-certified Asbestos Building Inspector to collect and submit for analysis bulk samples in accordance with subsection III.A.4. The inspection report must identify if the amount of ACM disturbed constitutes a major or minor asbestos spill. The asbestos building inspector who identifies a major asbestos spill must immediately submit a division approved spill notification form to the Indoor Environment Program at the division.

III.T.24. Major Asbestos Spills

In the event of an asbestos spill involving greater than the trigger levels of ACM, the building owner, building operator or contractor must shall:

III.T.24.a. Restrict access to the area and post warning signs to prevent entry to the area by persons other than those necessary to respond to the incident.

III.T.24.b. Shut off or temporarily modify the air handling system to prevent the distribution of asbestos fibers to other areas.

III.T.2.c. Spill Delineation

III.T.2.c.(i) Indoor Spills

Unless the entire facility is to be treated as a major asbestos spill, a Colorado-certified Air Monitoring Specialist (AMS) must determine the extent of the spill area. Air samples, microvac samples, wipe samples or a combination must be collected and analyzed by transmission electron microscopy.

III.T.2.c.(ii) Outdoor spill delineation

The AMS must identify the extent of any debris and any surface contaminated by debris generated by the spill. This may be done using visual examination, bulk samples, microvac samples, wipe samples or a combination thereof.

III.T.2.d. The General Abatement Contractor (GAC) selected to perform the cleanup of the spill must:

III.T.2.d.(i) Immediately contact the Division and submit notification in accordance with subsection III.E. (Notifications) or subsection III.G. (Permits), whichever is applicable.

III.T.2.d.(ii) Using certified Workers and Supervisors, in accordance with section II. (Certification Requirements), construct a containment in accordance with the following mandatory subsections, which must be followed in the exact sequence shown:

III.T.2.d.(ii)(A) Construct the decontamination unit in accordance with subsection III.K. (Decontamination Unit).

III.T.2.d.(ii)(B) Install critical barriers in accordance with subsection III.I. (Critical Barrier Installation)

III.T.2.d.(ii)(C) Comply with the requirements of subsection III.J. (Air Cleaning and Negative Pressure Requirements)

III.T.2.d.(iii) HEPA vacuum then steam clean all carpets, drapes upholstery and other non-clothing fabrics in the contaminated area or discard these materials in accordance with subsection III.R. (Waste Handling)

III.T.2.d.(iv) Launder or discard all contaminated clothing in accordance with subsection III.R. (Waste Handling )

III.T.2.d.(v) HEPA vacuum or wet wipe with clean amended water all hard surfaces in the contaminated area

III.T.2.d.(vi) Discard all waste in accordance with subsection III.R. (Waste Handling)

III.T.2.d.(vii) Ensure items cleaned as part of the spill response are included in the clearance process.

III.T.2.e. Following completion of subparagraphs III.T.2.d. through III.T.2.d.(vi) above, the AMS must comply with air monitoring requirements as described in subsection III.P. (Clearing Abatement Projects): air samples must be collected aggressively as described in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 2010 ), except that the air stream of the leaf blower must not be directed at any friable ACM that remains in the area.

III.T.2.f. Gross removal of additional ACM may not be conducted under subparagraph III.T.2. Any remaining gross removal of ACM must be abated in accordance with subsection III.H. (Abatement Sequence) If additional ACM is to be removed, the final air sampling required in subparagraph III.T.2.e. is not required to be conducted until after the additional removal is completed.

~~III.T.1.c. Immediately contact the Division by telephone, submit a notification in compliance with subsection III.E. (Notifications) and, if in an area of public access, apply for a permit in accordance with subsection III.G. (Permits).~~

~~III.T.1.d. Be exempted from the requirements to have a certified Supervisor on-site at all times, until such time as the immediate danger has passed. Any cleanup or asbestos abatement that must occur after the immediate danger has passed shall be supervised by a person certified by the Division.~~

~~III.T.1.e. Using certified Supervisors and certified Workers in accordance with section~~



~~II. (Certification Requirements) of this Regulation, seal all openings between the contaminated and uncontaminated areas and establish negative air pressure within the contaminated area in accordance with paragraph III.J. (Air Cleaning and Negative Pressure Requirements). This is to be accomplished using polyethylene sheeting to cover areas such as doorways, windows, elevator openings, corridor entrances, grills, drains, grates, diffusers and skylights.~~

~~III.T.1.f. ——— HEPA vacuum or steam clean all carpets, drapes, upholstery, and other non-clothing fabrics in the contaminated area, or discard these materials.~~

~~III.T.1.g. ——— Launder or discard contaminated clothing in accordance with subsection III.R. (Waste Handling).~~

~~III.T.1.h. ——— HEPA vacuum or wet clean all surfaces in the contaminated area.~~

~~III.T.1.i. ——— Discard all materials in accordance with subsection III.R. (Waste Handling).~~

~~III.T.1.j. ——— Following completion of subparagraph III.T.1.a. through III.T.1.i. above, comply with air monitoring requirements as described in subsection III.P. (Clearing Abatement Projects); air samples shall be collected aggressively as described in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 1995), except that the air stream of the leaf blower shall not be directed at any friable ACM that remains in the area.~~

~~III.T.24.gk. All persons must c~~Comply with any other measures deemed necessary by the Division to protect public health.

### ~~III.T.32. Minor Asbestos Spills~~

~~In the event of an asbestos spill involving less than or equal to the trigger levels, the building owner or contractor should take the following non-mandatory steps:~~

~~III.T.32.a. ——— Restrict entry to the area and post warning signs to prevent entry to the area by persons other than those necessary to respond to the incident.~~

~~III.T.32.b. ——— Shut off or temporarily modify the air handling system to prevent the distribution of fibers to other areas in the building.~~

~~III.T.32.c. ——— Seal all openings between the contaminated and uncontaminated areas. This is to be accomplished by using polyethylene sheeting to cover all areas such as windows, doorways, elevator openings, corridor entrances, drains, grills, grates, diffusers and skylights.~~

~~III.T.32.d. — HEPA vacuum or steam clean all carpets, draperies, upholstery and other non-clothing fabrics in the contaminated area, or discard all contaminated materials in accordance with subsection III.R. (Waste Handling).~~

~~III.T.32.e. — Launder or discard contaminated clothing in accordance with subsection III.R. (Waste Handling).~~

~~III.T.32.f. — HEPA vacuum or wet clean all non-fabric surfaces in the contaminated area.~~

~~III.T.2.g. — Following completion of subparagraphs III.T.2.a. through III.T.2.f. above, conduct air monitoring as described in paragraph III.P.3. (Final Clearance Air Monitoring and Sample Analyses); air samples shall be collected aggressively as described in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 1995), except that the air stream of the leaf blower shall not be directed at any friable ACM that remains in the work area.~~

### III.U. MAXIMUM ALLOWABLE ASBESTOS LEVEL

At any time, the maximum allowable asbestos level (MAAL) must shall not be exceeded in any area of public access.

All air monitoring required under this regulation must shall be performed by certified Air Monitoring Specialists independent of the General Abatement Contractor (GAC) to avoid possible conflict of interest.

#### III.U.1. Monitoring for the MAAL

##### III.U.1.a. In Occupied Buildings During Normal Occupancy

For purposes of this subparagraph III.U.1, air monitoring must shall be conducted during normal occupancy and samples must shall not be collected in an aggressive manner.

##### III.U.1.b. During Abatement

###### III.U.1.b.(i). Exhausting Negative Air Machines (NAM)s in a Building

If air from negative air machines (NAMs) must be exhausted to the interior of the building, air samples must be taken and analyzed by Phase Contrast Microscopy (PCM), or any equivalent method approved by the Division, each day abatement activities are occurring, at least every day and The sample results must meet the requirements of subsection III.U (Maximum Allowable Asbestos Level) to ensure that there is no breach in the filtering system. In the event that the maximum allowable asbestos level is exceeded, all of the requirements of subsection III.T (Asbestos Spill Response) must be met.

###### III.U.1.b.(ii). Outside Containment (Non-mandatory)

In the event samples are collected outside a containment and the that airborne fiber levels outside a containment in an area of public access exceed the MAAL when analyzed by PCM, the GAC must shall either treat the affected

area as an asbestos spill and comply with all the requirements in subsection III.T (Asbestos Spill Response) or, reanalyze the samples by transmission electron microscopy (TEM) analysis in accordance with 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 2010.1995), within 24 hours. If the MAAL is exceeded by TEM, comply with section III.T (Asbestos Spill Response).

III.U.2. The Maximum Allowable Asbestos Level (MAAL)

III.U.2.a. PCM

If PCM is used as the method of analysis the standard is 0.01 fibers per cubic centimeter of air (f/cc), which is equivalent to 10,000 fibers per cubic meter of air ( $f/m^3$ ). The NIOSH 7400 Method entitled "Asbestos and other Fibers by PCM" published in the NIOSH Manual of Analytical Methods, 5th 3rd Edition, Third Second Supplement, June 14, 2019 August 1987, must shall be used to analyze samples. The number of samples to be taken must shall be determined by the certified Air Monitoring Specialist.

III.U.2.b. TEM

Where TEM is used as the method of analysis, the standard is 70 structures/millimeter<sup>2</sup> (s/mm<sup>2</sup>). TEM analysis must shall be conducted pursuant to the protocol in 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 2010.1995).

III.U.2.c.G. Elevated Ambient Levels

Notwithstanding the provisions of subparagraphs clauses III.U.1.b.i and III.U.1.b.ii above, if the airborne asbestos fiber level in the outside ambient air which is adjacent to an asbestos project site or in an area of public access exceeds 70 s/mm<sup>2</sup> using TEM analysis or 0.01 fibers per cubic centimeter of air (10,000  $f/m^3$ ) using PCM analysis, whichever is applicable, the existing asbestos level in such air will shall be the maximum allowable asbestos level.

III.U.3. What to do if the MAAL is Exceeded

III.U.3.a. Second Set by TEM

In the event that airborne asbestos fiber levels exceed the MAAL when analyzed by PCM, a second set of samples may be collected during normal occupancy, analyzed by TEM transmission electron microscopy analysis, and calculated as an eight-hour time-weighted average (TWA) in accord with 29 C.F.R. Part 1910.1000(d)(1)(ii), before any order of abatement is issued. The TEM sample(s) must shall be collected in the same location(s) as the original PCM sample(s) and analyzed within 24 hours of the PCM sample(s).

III.U.3.b. Outside Containment

In the event that airborne fiber levels outside a containment in an area of public access exceed the MAAL when analyzed by PCM, the GAC must shall either treat the affected area as an asbestos spill and comply with all the requirements in subparagraph III.T (Asbestos Spill Response) or, reanalyze the samples by TEM transmission electron microscopy analysis in accordance with 40 C.F.R. Part 763, Appendix A to Subpart E (EPA 2010.1995), within 24 hours. If the MAAL is exceeded by TEM, comply with subsection paragraph III.T (Asbestos Spill Response).

III.V. SPECIAL REMOVAL METHODS

This subsection III.V. applies to asbestos abatement projects in areas of public access where the amount of asbestos-containing material (ACM) that will be abated exceeds the trigger levels.

III.V.1. Glovebag Removal

Glovebag removal methods will shall only be allowed where the glovebag can be installed such that it completely surrounds the ACM to be removed without causing a fiber release.

III.V.1.a. Glovebags must shall be at least 6-mil polyethylene in thickness and must shall be seamless at the bottom.

III.V.1.b. Glovebags must shall not be used in situations where the glovebag could come into contact with surfaces that exceed 150° Fahrenheit.

III.V.1.c. \_\_\_\_\_ Glovebags may be used only once and may not be moved.

III.V.1.d. For glovebag removals the General Abatement Contractor (GAC) must shall:

III.V.1.d.(i). erect secondary containment barriers where the amount of ACM to be removed in a functional space exceeds three (3) linear or three (3) square feet. In the event of a spill or a breach of the glovebag, the entire area enclosed by the secondary containment must shall be cleaned utilizing HEPA vacuuming and wet wiping with all debris, filters, mop heads, and cloths disposed of as asbestos-containing waste material (ACWM) in leak tight containers;

III.V.1.d.(ii). tape or otherwise seal the glovebag to the area from which asbestos is to be removed. Glovebags must shall be smoke tested for leaks and any leaks sealed prior to use;

III.V.1.d.(iii). adequately wet, then remove, the ACM asbestos-containing material from the surface;

III.V.1.d.(iv). adequately wet any ACMasbestos-containing material that has fallen from the surface into the enclosed bag using an airless sprayer and amended water or other materials or equipment equally effective in wetting;

III.V.1.d.(v). thoroughly clean and wet wipe the surface until no traces of ACMasbestos-containing material can be seen;

III.V.1.d.(vi). encapsulate the rough edges of any ACMasbestos-containing material that will remain on the surface after the glovebag has been removed. This must shall be done prior to the removal of the glovebag.;

III.V.1.d.(vii). evacuate the air from the glovebag using a HEPA filter- equipped vacuum prior to removing the glovebag;

III.V.1.d.(viii). ensure that the final visual inspection and clearance air monitoring requirements of subsection III.P. (Clearing Abatement Projects) are met;

III.V.1.d.(ix). handle and dispose of all waste materials as required in subsection III.R (Waste Handling).

### III.V.2. Facility Component Removal

Only those facility components ~~in on~~ which the ACM is well adhered to the component may be taken out of the facility as units or in sections and be exempt from the containment requirements in subsection III.N (Containment Components) provided that the GAC:

III.V.2.a. Adequately wet the facility component pursuant to subparagraph III.O.2.a.(i). (Wetting) then wrap the facility component in six (6) mil polyethylene prior to removing the facility component; and

III.V.2.b. Ensure that the abatement project is cleared as required in subsection III.P. (Clearing Abatement Projects) and that the ACWM is disposed of as required in subsection III.R (Waste Handling). ~~NOTE-~~The use of a secondary containment to facilitate the required air clearance monitoring is recommended, but not required.

III.V.2.c. ~~Once the components are taken out of the facility, if the components are to be stripped, If the components are to be stripped after being removed from the containment, the GAC must~~ comply with sections I. (Definitions), II. (Certification Requirements) and III (Abatement, Renovation and Demolition Projects).

### III.W. STRUCTURALLY UNSOUND BUILDINGS

For facilities, ~~or any portions thereof,~~ described in subparagraph III.E.4, ~~i.e.~~ the Division may suspend any abatement work practice requirements, ~~the implementation of~~ which may endanger personnel who will be removing ~~the asbestos from the facility.~~ The General Abatement Contractor (GAC) ~~must shall~~ apply for a variance from the Division in accordance with the requirements of subsection III.F (Alternative Procedures and Variances). ~~The variance application must include the name, title, and qualifications of the State or local governmental representative who ordered the demolition.~~ During wrecking operations, ~~that portion of the facility that contains friable asbestos-containing material~~ must be kept adequately wet commencing from ~~the start of the project prior to the demolition~~ through delivery of the ~~demolition asbestos-containing waste material debris~~ to a landfill that will accept friable asbestos-containing material (ACM).

### III.X. EXEMPTIONS

The following sections of the regulation contain exemptions from certain requirements. Please refer to the indicated section for the specific details of the exemption.

- If the asbestos-containing material to be abated is less than the trigger levels, then only subsection III.R (Waste Handling) applies in section III.
- Inspection requirements may be exempt if the architect or project engineer responsible for the construction of the building, an architect, or a Colorado-certified asbestos Building Inspector certifies a building constructed after October 12, 1988 to be asbestos-free. See subparagraph III.A.1.d.
- If you own a Single-family residential dwelling (SFRD) that is your primary residence and you choose to do the abatement yourself, certification is not required. See subparagraph III.B.1.c.
- A Project Manager doesn't need to be independent of the General Abatement Contractor (GAC) if the project manager and GAC are ~~is~~ working in-house. See subparagraph III.D.2.

- If you own a SFRD, which is your primary residence, you may opt out of having your SFRD deemed an area of public access. See subparagraph III.E.32.
- There are three situations in which a Negative Air Machine (NAM) does not have to be fitted with a HEPA filter. See subparagraph III.J.1.c.
- Certain materials are exempted from many of the abatement requirements. See subsection III.S (Abatement of Special Materials).
- ~~During an emergency, the requirement for a certified Supervisor to be on-site may be temporarily suspended. See subparagraph III.T.1.d.~~
- While performing facility component removal, full containment is not required. See subparagraph III.V.2 (Facility Component Removal).

Commented [A7]: This exemption no longer exists

All underlined text in this regulation indicates defined terms. ~~clicking on underlined text will take you to its definition in Section I.~~