

**REGULATION 11
HAZARDOUS POLLUTANTS
RULE 2
ASBESTOS DEMOLITION, RENOVATION AND MANUFACTURING**

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REGULATION 11
HAZARDOUS POLLUTANTS
RULE 2
ASBESTOS DEMOLITION, RENOVATION AND MANUFACTURING

(Adopted December 15, 1976)

11-2-100 GENERAL

11-2-101 Description: The purpose of this Rule is to control emissions of asbestos to the atmosphere during demolition, renovation, milling and manufacturing and establish appropriate waste disposal procedures.

(Amended September 5, 1990; October 7, 1998)

11-2-110 Exemption, Visible Emission Standard: Those operations that primarily install asbestos friction products in motor vehicles are exempt from the visible emission requirements of Section 11-2-302.

11-2-111 Exemption, Prohibited Operations: Cold process cutback asphalt roof coatings and exterior and interior coatings and laminating resins containing encapsulated asbestos fibers bound within the finished product from manufacture through application are exempt from the limitations of subsection 11-2-301.3.

(Amended October 7, 1998)

11-2-112 Exemption, Maintenance and Decontamination: Maintenance and decontamination operations where no RACM is being disturbed or removed are exempt from the provisions of Section 11-2-303.

(Adopted Sept. 5, 1990; Amended Dec. 4, 1991; Oct. 7, 1998)

11-2-113 Exemption, Renovation Notification: Except for dry removals, notification is not required for renovations where the amount of RACM is less than 30.8m. (100 ft.) linear, 9.4m² (100 ft.²) and 1 m³ (35 ft.³).

(Adopted October 7, 1998)

11-2-200 DEFINITIONS

11-2-201 Active Waste Disposal Sites: Any disposal site or portion thereof which currently accepts regulated asbestos-containing waste material or has accepted regulated asbestos-containing waste material within the past year.

(Adopted September 5, 1990; Amended October 7, 1998)

11-2-202 Adequately Wetted: Sufficiently mixed or penetrated with liquid to prevent the release of asbestos-containing particles. 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 wetted. Material that is removed in units or parts of units shall be wet at all the exposed surfaces. If broken up, the material shall be wetted at all the exposed fracture surfaces. (Adopted December 4, 1991; Amended October 7, 1998)

11-2-203 Asbestos: Actinolite, amosite (cummingtonite, grunerite), anthophyllite, chrysotile, crocidolite (riebecktite), tremolite.

(Amended September 5, 1990)

11-2-204 Asbestos-Containing Material: Any building material which contains commercial asbestos in an amount greater than 1% by weight, area, or count as determined by the methods specified in Section 11-2-603.

(Adopted Sept. 5, 1990; Amended Dec. 4, 1991)

11-2-205 Asbestos-Containing Waste Material: Any waste that contains or has been contaminated by commercial asbestos and is generated by a plant, source, or operation subject to the provisions of this Rule, including, but not limited to, asbestos mill tailings, control device asbestos waste, RACM demolition and renovation waste material, disposable equipment and clothing, and bags or containers that previously contained commercial asbestos.

(Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)

11-2-206 Asbestos Mill: Any plant engaged in the conversion or any intermediate step in the conversion of asbestos ore into commercial asbestos. Indoor and outdoor storage,

- handling, conveying and loading of asbestos materials is considered a part of such a plant. (Amended September 5, 1990)
- 11-2-207 Asbestos Tailing:** Any solid waste product of asbestos mining or milling operation which contains asbestos. (Adopted October 7, 1998)
- 11-2-208 Category I Nonfriable Asbestos-Containing Material:** Asbestos-containing packings, gaskets, resilient floor coverings, mastics and asphalt roofing products. (Adopted December 4, 1991; Amended October 7, 1998)
- 11-2-209 Category II Nonfriable Asbestos-Containing Material:** Asbestos-containing material, excluding Category I nonfriable asbestos-containing material, that, when dry, and in its present form, cannot be crumbled, pulverized, or reduced to powder by hand pressure. For the purposes of this Regulation, these products include transite board, pipe and asbestos cement products, plaster, stucco, and paint. (Adopted December 4, 1991; Amended October 7, 1998)
- 11-2-210 Commercial Asbestos:** Any variety of asbestos which is produced by extracting asbestos from asbestos ore.
- 11-2-211 Completion Date:** The date on which containment is removed or the demolition of the structure is completed. (Adopted 9/5/90; Amended 10/7/98)
- 11-2-212 Containment:** The isolation of an asbestos removal area from the outside air by use of physical barriers, usually plastic sheeting. Such barriers shall include transparent viewing ports which allow observation of stripping and removal of RACM from outside the barrier. (Adopted Sept. 5, 1990; Amended Dec. 4, 1991)
- 11-2-213 Control Device Asbestos Waste:** Any asbestos-containing waste material that is collected in an air pollution control device. (Amended September 5, 1990)
- 11-2-214 Conversion Operation:** A process by which asbestos material and/or asbestos-containing waste material is converted to nonasbestos (asbestos-free) material. (Adopted December 4, 1991)
- 11-2-215 Cumulative Renovations:** A series of small (less than 30.8 m [100 ft] linear, 9.4 m² [100 ft²] or 1 m³ [35 ft³]) renovations or removals of RACM performed during a calendar year at a single plant or facility which, taken together, would add up to a reportable amount under the provisions of this Rule. (Adopted September 5, 1990; Amended December 4, 1991)
- 11-2-216 Demolition:** Wrecking, intentional burning, moving or dismantling of any load-supporting structural member, or portion thereof, of a building, facility or ship. This includes, but is not limited to, any related cutting, disjoining, stripping or removal of structural elements. (Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)
- 11-2-217 Element:** Any boiler, pipe, furnace, duct, tank, reactor, column, turbine, bridge or structural member. (Amended October 7, 1998)
- 11-2-218 Emergency Demolition:** A demolition carried out pursuant to an order of a federal, state or local government agency issued because the building is structurally unsound and in danger of imminent collapse or has been declared a public nuisance. (Amended December 4, 1991; October 7, 1998)
- 11-2-219 Emergency Renovation:** Renovation that is not planned but results from a sudden, unexpected event. This includes:
- 219.1 Operations necessitated by equipment failures;
 - 219.2 Unanticipated findings of RACM during demolition, renovation or construction activity;
 - 219.3 The conversion of previously nonfriable asbestos-containing material to friable material during the course of a renovation;
 - 219.4 Renovations due to fire, water, or earthquake damage;
 - 219.5 Renovations where imminent danger to the public health may exist;
 - 219.6 Renovations in public buildings and schools; or
 - 219.7 Owner-occupied single family dwellings (SFDs) during or within ten days of the close of escrow, which may be included at the discretion of the APCO. (Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)
- 11-2-220 Encapsulant:** A sealant material such as latex paint which, when applied, coats or penetrates the asbestos-containing material. (Adopted December 4, 1991; Amended October 7, 1998)

- 11-2-221 Fabricating:** Any processing of a manufactured product containing commercial asbestos with the exception of processing at temporary sites for the construction or restoration of buildings, structures, plants or installations.
- 11-2-222 Friable Asbestos-Containing Material:** Any material that contains more than one percent asbestos as determined by the methods specified in Section 11-2-603 and that falls into one or more of the following categories:
- 222.1 Materials that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure. These include, but are not limited to, sprayed-on or troweled-on fireproofing, acoustic ceiling material and ceiling tiles, resilient floor covering backing, thermal systems insulation, nonasphalt-saturated roofing felts, asbestos-containing paper and joint compound.
- 222.2 Materials that have been rendered to a crumbled, pulverized, or powdered state, when dry, by crushing, sanding, sawing or shot-blasting or other demolition or renovation techniques. These include, but are not limited to, U.S. E.P.A. Category I nonfriable asbestos-containing material as defined in 40 CFR Part 61.141 and in Section 11-2-208.
- 222.3 Materials in which the asbestos fibers are bound into a matrix, if such materials have been rendered to a powdered state, when dry, by crushing, sanding, sawing or shot-blasting or other demolition or renovation techniques, or by severe weathering. These include, but are not limited to, U.S. E.P.A. Category II nonfriable asbestos-containing material as defined in 40 CFR Part 61.141 and in Section 11-2-209.
(Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)
- 11-2-223 Glove Bag Method:** A method of stripping or removing RACM in which the wetted material is totally isolated inside a transparent plastic, leak-tight bag and then manually removed using gloves which are an integral part of the bag.
(Adopted Sept. 5, 1990; Amended Dec. 4, 1991; Oct. 7, 1998)
- 11-2-224 HEPA Filter:** A high efficiency particulate air filter capable of filtering 0.3 micron particles with 99.97 percent efficiency as determined by ASTM Method D-2988-71.
(Adopted September 5, 1990)
- 11-2-225 Inactive Waste Disposal Site:** Any disposal site or portion thereof, where additional asbestos-containing waste material will not be deposited and where the surface is not disturbed by vehicular traffic.
- 11-2-226 Leak-Tight:** Any method of containerization that prevents solids, liquids, or particles from escaping or spilling out.
(Adopted December 4, 1991)
- 11-2-227 Manufacturing:** 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.
- 11-2-228 Ordered Demolition:** The demolition of a stationary structure pursuant to an order of an authorized representative of a federal, state or local governmental agency, issued because that structure is structurally unsound and in danger of imminent collapse.
(Adopted October 7, 1998)
- 11-2-229 Outside Air:** The air outside buildings and structures.
- 11-2-230 Owner or Operator of a Demolition or Renovation:** Any person who owns, leases, operates, controls or supervises the stationary structure being demolished or renovated, or any person who owns, leases, operates, controls or supervises demolition or renovation, or both.
(Adopted December 4, 1991)
- 11-2-231 Particulate Asbestos Material:** Finely divided particles of asbestos material.
- 11-2-232 Planned Renovation:** A renovation, or a number of such operations, in which the amount of RACM that will be removed or stripped at an installation within a maximum time of one year can be predicted. Operations that are individually nonscheduled are included, provided a number of such operations can be predicted to occur during a given period of time based on operating experience. The minimum period of time shall be 30 days. (Amended September 5, 1990; December 4, 1991)
- 11-2-233 Regulated Asbestos-Containing Material (RACM):**
- 233.1 Friable asbestos-containing material, as defined in Section 11-2-222 or,

- 233.2 Category I nonfriable asbestos-containing material that has or will become friable, or that has been subjected to sanding, drilling, grinding, cutting, or abrading, or,
- 233.3 Category II nonfriable asbestos-containing material that may become 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.
(Adopted December 4, 1991; Amended October 7, 1998)
- 11-2-234 Removing:** The taking out, cutting, drilling or similarly disturbing of RACM used on any element from any building, structure, plant or installation.
(Amended 5/20/81; 9/5/90; 12/4/91; 10/7/98)
- 11-2-235 Renovation:** An operation other than demolition in which RACM is removed or stripped from any element of a building, structure, plant, ship, installation or portion thereof.
(Amended 9/5/90; 12/4/91; 10/7/98)
- 11-2-236 Resilient Floor Covering:** Asbestos-containing material comprised of floor tile, including asphalt or vinyl floor tile, or sheet vinyl floor covering; but not including linoleum, sheet linoleum, or the backing of linoleum, which are considered friable for the purposes of this Rule.
(Adopted December 4, 1991)
- 11-2-237 Roadways:** Surfaces on which motor vehicles operate and any shoulder which extends up to 3 m (10 feet) from the edge of the traveled way. This includes, but is not limited to, highways, roads, streets, parking areas, driveways, and haul roads.
(Amended September 5, 1990)
- 11-2-238 Set Up:** Preparation of a structure for stripping or removing of RACM, including but not limited to placement of physical barriers, installation of viewports, installation of local exhaust ventilation and collection systems, removal of nonasbestos containing structural components for the primary purpose of gaining access to RACM.
(Adopted October 7, 1998)
- 11-2-239 Starting Date:** The date on which actual disturbance, active removal or stripping of any RACM begins, or the demolition of the structure begins.
(Adopted September 5, 1990; Amended October 7, 1998)
- 11-2-240 Stripping:** Taking off, cutting, drilling, or similarly disturbing RACM used on any pipe, duct, boiler, tank, reactor, turbine, furnace, or structural member.
(Amended 5/20/81; 9/5/90; 12/4/91; 10/7/98)
- 11-2-241 Structural Member:** Any load supporting member, such as beams and load-supporting walls, or any nonload-supporting member, such as ceilings and nonload-supporting walls.
(Adopted October 7, 1998)
- 11-2-242 Visible Emissions:** Any emissions, evidence of emissions, including, but not limited to, dust, debris, particles, or fibers, or releases from any point or area source containing particulate asbestos material that are visually detectable without the aid of instruments, and which contain asbestos. This includes, but is not limited to, asbestos debris found outside of containment at a job site.
(Adopted September 5, 1990; Amended October 7, 1998)
- 11-2-243 Waste Generator:** Any owner or operator of a source subject to this Rule whose act or process produces asbestos-containing waste material.
(Adopted December 4, 1991)
- 11-2-244 Waste Shipment Record:** The shipping document, required by the APCO to be originated and signed by the waste generator, used to track and substantiate the disposition of asbestos-containing waste material.
(Adopted December 4, 1991)
- 11-2-245 Working Day:** Monday through Friday, including holidays that fall on any of the days Monday through Friday.
(Adopted December 4, 1991)
- 11-2-300 STANDARDS**
- 11-2-301 Prohibited Operations:** The following operations are prohibited:
- 301.1 The surfacing of roadways with asbestos tailings or asbestos-containing wastes except for temporary roadways on an area of asbestos deposits. The deposition of asbestos tailings on roadways covered with snow or ice is considered "surfacing."

- 301.2 Molded insulating materials which are friable, and wet-applied insulating materials which are friable after drying, installed after the effective date of this Regulation, shall contain no commercial asbestos.
- 301.3 The spraying of any substance containing any amount of asbestos in or upon a building or other structure during its construction, alteration or repair.

(Amended September 5, 1990)

11-2-302 Visible Emissions: There shall be no visible emissions to the outside air from any asbestos mill or from any operation involving the demolition, renovation, removal, manufacture or fabrication of any product containing asbestos.

302.1 For asbestos milling, or manufacturing or fabrication of products containing asbestos only, rather than meet the no visible emission requirements as specified by Section 11-2-302, a person may elect to use air-cleaning to clean emissions containing particulate asbestos material before such emissions escape to, or are vented to, the outside air. Each owner or operator must meet the following requirements:

1.1 Monitor each potential source of asbestos emissions from any part of the mill, manufacturing, or fabricating facility, including air cleaning devices, process equipment and buildings that house equipment for material processing and handling, at least once each day, during daylight hours, for visible emissions to the outside air during periods of operation.

1.2 Inspect each air cleaning device at least once each week for proper operation and maintenance, including, to the maximum extent possible without dismantling other than opening the device, the presence of tears, holes, and abrasions in filter bags and for dust deposits on the clean side of bags. For air cleaning devices that cannot be inspected weekly, submit a written maintenance plan to the APCO as specified in Section 11-2-404. If the use of fabric filters creates a fire or explosion hazard, the APCO may authorize the use of wet collectors designed to operate with a unit contacting energy of at least 9963 pa (40 in.) water gauge pressure. All air cleaning equipment authorized by this Regulation must be properly permitted, installed, used, operated and maintained. By-pass devices may be used only during emergency conditions and then only for so long as it takes to shut down the operation generating the particulate asbestos material.

(Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)

11-2-303 Demolition, Renovation, and Removal: To prevent emissions from asbestos-containing material, a person responsible for scheduled, nonscheduled, or emergency demolition, renovation, or removal of any building elements containing any amount of RACM shall use the procedures specified in subsections 303.1 through 303.13. This shall not apply to maintenance or decontamination procedures where no removal takes place.

303.1 **Wetting Method:** All exposed RACM shall be adequately wetted and kept wet during cutting, stripping, demolition, renovation, removal and handling operations both inside and outside of a building, except when the methods specified in subsections 11-2-303.2 and 303.4 are used. Wetting requirements are suspended when the temperature at the point of wetting is below 0°C (32°F) in which case elements of RACM shall be removed in units or in sections to the maximum extent possible.

303.2 **Exhaust and Collection Method:** In lieu of wetting, a local HEPA exhaust, ventilation, and collection system designed and operated to capture the emissions from RACM and prevent any visible emissions to the outside air may be used during 1) stripping of any element that has been removed as a unit or in sections, in accordance with subsection 11-2-303.4; 2) to prevent emissions of particulate asbestos-containing material to the outside air when damage to equipment resulting from wetting would be unavoidable; 3) shotblasting of mastic. Approval for dry removal of RACM must be received

from the APCO; requests for approval of dry removal must be in writing and meet the notification provisions of Section 11-2-401.

- 303.3 **Scheduling of Demolition Activities:** RACM shall be removed prior to demolition, or other operations that would either break up, or preclude access to the RACM for subsequent removal. Removal of RACM which is encased in concrete or other similar structural material is not required prior to demolition, but such material shall be adequately wetted whenever exposed during demolition or renovation and disposed of as RACM as required in Section 304.
- 303.4 **Removal in Units:** Elements that have RACM may be removed at any time in units or sections so long as the exposed RACM during cutting or disjuncting is adequately wetted or encapsulated to prevent emissions of particulate asbestos material. Such sections if elevated shall be carefully lowered to ground level, where they are to be abated in accordance with subsection 11-2-303.1 and/or 303.2.
- 303.5 **Removal By Chute or Container:** All RACM not removed in units or sections shall be adequately wetted and kept wet in accordance with subsection 11-2-303.1, and transported to the ground in leak-tight chutes or containers, utilizing negative air and HEPA equipment.
- 303.6 **Containment Requirement:** Any building, structure, room, facility or installation from which RACM is being stripped or removed shall be isolated by physical barriers from the outside air to the extent feasible as determined by the APCO. Such barriers shall include transparent viewing ports which shall be in place prior to the commencement of the removal of the RACM and which allow observation, to the extent feasible as determined by the APCO, of all stripping and removal of RACM from outside the barrier. The negative air pressure inside the isolated work area shall be maintained at a pressure differential relative to adjacent, nonisolated areas to the extent feasible. The negative air pressure ventilation equipment shall be operated continuously from the establishment of isolation barriers through final clean-up of the work area following stripping or removal of RACM. Any such local exhaust ventilation system shall filter the air from the isolated area with a HEPA filter, or equivalent, prior to exhausting. The provisions of this subsection shall not apply to a removal done entirely by the glovebag method, provided the bag is evacuated with a HEPA filter vacuum prior to removal from the element being stripped; a removal using a mini-enclosure designed and operated according to current OSHA standards; a removal of one square foot or less done in accordance with subsection 11-2-303.1 and using a local HEPA exhaust, ventilation and collection system; or a removal using any other engineering control technique approved by the APCO. The requirement to maintain negative air pressure shall not apply to outdoor pipeways at industrial facilities; however, these jobs shall be contained by plastic barriers to the extent feasible to prevent visible emissions of RACM.
- 303.7 **Clean Work Site Requirement:** All friable asbestos-containing waste material related to a specific demolition, renovation or removal, including pre-existing debris, shall be handled in accordance with the provisions of Sections 11-2-303 and 11-2-304.
- 303.8 **Surveys:** Except for ordered demolitions, prior to commencement of any demolition or renovation, the owner or operator shall thoroughly survey the affected structure or portion thereof for the presence of asbestos-containing material, including Category I and Category II nonfriable asbestos-containing material. The survey shall be performed by a person who is certified by the Division of Occupational Safety and Health, and who has taken and passed an EPA-approved Building Inspector course and who conforms to the procedures outlined in the course. The survey shall include sampling and the results of laboratory analysis of the asbestos content of all suspected asbestos-containing materials. This survey shall be made available, upon request by the APCO, prior to the commencement of any RACM removal or any demolition. This subsection shall not apply if the owner or operator

asserts that the material to be renovated is RACM and will be handled in accordance with the provisions of Sections 11-2-303, 304 and 401. The requirement for certification by the Division of Occupational Safety and Health shall not apply to in-house health professionals within a specific nonasbestos related company who perform occasional surveys only for that company as part of their regular job responsibilities

8.1 When a structure, or portion thereof, is demolished under an ordered demolition, the survey must be done prior to, during, or after the demolition but prior to loading or removal of any demolition debris. If the debris contains regulated asbestos-containing material, all of the debris shall be treated as asbestos-containing waste material pursuant to Section 11-2-304.

8.2 For renovation or demolition of residential buildings having four or fewer dwelling units, a survey is not required. A sample and test of the material will be required only when any of the following will be removed or disturbed: heating, ventilation, air conditioning ducting and systems; acoustic ceiling material or acoustic plaster; textured or skim coated wall surfaces, cement siding or stucco, or resilient flooring. Where the material is found to contain greater than 1 percent asbestos and is friable, the material must be handled in accordance with Section 11-2-303.

303.9 **On-Site Representative:** No RACM shall be stripped or removed unless at least one on-site representative, such as a foreman or management-level person or other authorized representative, certifies that he or she is familiar with the provisions of this rule as it pertains to demolition and renovation and the means of compliance therewith, and is present during all stripping and removing of RACM. The required training shall include: applicability of the regulation, notifications, procedures, material identification, and control procedures for removals, including: adequate wetting, local exhaust ventilation and HEPA filtration, negative pressure enclosures, glove-bag procedures, waste disposal work practices, and reporting and record keeping requirements. Evidence that the required training has been completed shall be posted on-site and made available for inspection by the APCO. This subsection shall not apply to RACM stripped or removed from an owner-occupied single-family dwelling by the owner.

303.10 **RACM Discovered After Demolition:** If RACM is not discovered until after demolition begins and as a result of the demolition cannot be safely removed, the asbestos-contaminated debris shall be treated as asbestos-containing waste material and kept adequately wet at all times until disposed of according to the provisions of Section 11-2-304. Immediately after the RACM is discovered the owner or operator shall comply with the provisions of subsections 11-2-303.1, 303.6 and 401.3.

303.11 **Ordered Demolition:** The owner or operator of any demolition of any building or other stationary structure pursuant to an order of an authorized representative of a state or local governmental agency, issued because that building is structurally unsound and in danger of imminent collapse, or has been declared a public nuisance, shall comply with the survey requirements of subsection 11-2-303.8, the wetting requirements of subsection 11-2-303.1 and the disposal requirements of Section 11-2-304. Fire training is not exempted from this Section.

303.12 **Intentional Burning:** If demolition is accomplished by intentional burning, all RACM, including Category I and Category II nonfriable asbestos-containing material shall be removed in accordance with Section 11-2-303, before burning.

303.13 **Emergency Renovation:** An emergency renovation shall be approved by the APCO prior to the initiation of work and shall apply only to the abatement of the immediate hazard. (Amended December 4, 1991; October 7, 1998)

11-2-304 Waste Disposal: To prevent emissions from asbestos-containing material, a person responsible for the collection, processing (including incineration and conversion),

packaging, transporting, or disposition of any asbestos-containing waste material which is generated by manufacturing; fabricating; scheduled, nonscheduled, or emergency demolition or renovation, whether notified or not; spraying operations; or asbestos milling, shall use the following procedures:

304.1 The person responsible for any demolition, renovation or removal of RACM, or for any source other than an asbestos mill may elect to use either of the following disposal methods or an alternative disposal method which has received prior approval by the APCO:

1.1 Treatment of asbestos-containing waste material with water. Control device asbestos waste shall be thoroughly mixed with water into a slurry and other asbestos-containing waste material shall be adequately wetted and kept wet. There shall be no visible emissions to the outside air from the collection, mixing and wetting operations, except as permitted in Sections 11-2-110 and 11-2-302.1. After wetting, and while still wet, all asbestos-containing waste material shall be sealed into leak-tight containers prior to being removed from containment as specified in subsection 11-2-303.6. Such containers shall remain leak-tight and be deposited at waste disposal sites which are operated in accordance with the provisions of Section 11-2-304. The containers shall be labeled with the name of the waste generator and the location (address) from which the waste was generated prior to being removed from containment. Unless they are located within a contained area, glovebags are considered to be removed from containment when they are removed from the OSHA regulated area. Containers shall also include an asbestos warning label, as specified in Section 11-2-601. These labels must be printed in letters of sufficient size and contrast to be readily visible and legible.

1.2 Processing of asbestos-containing waste material into nonfriable forms. All asbestos-containing waste material shall be formed into nonfriable pellets or other shapes and deposited at waste disposal sites which are operated in accordance with this regulation. There shall be no visible emissions to the outside air from this collection and processing of asbestos-containing waste material except as permitted in Sections 11-2-110 and 11-2-302.1. For the purposes of this subsection, the term "all asbestos-containing waste material" as applied to demolition and renovation operations covered by Section 11-2-303 includes only friable asbestos waste and control device asbestos waste.

1.3 Conversion of RACM and asbestos-containing waste material into nonasbestos (asbestos-free) material: Each owner or operator of a conversion operation shall comply with Sections 11-2-402 and 11-2-504 of this Regulation.

304.2 Rather than meet the requirements of Section 11-2-304, the person responsible for an asbestos mill may elect to meet the following requirements or use an alternative disposal method which has received prior approval by the APCO:

2.1 There shall be no visible emissions to the outside air from the transfer of control-device asbestos waste to the tailings conveyor, except as permitted in Sections 11-2-110 and 11-2-301.1. Such waste shall be subsequently processed in accordance with this Regulation.

2.2 All asbestos-containing waste material shall be adequately mixed with a wetting agent prior to disposition at a waste disposal site. Such wetting agent shall be used as recommended for the particular dust by the manufacturer of the agent. There shall be no visible emissions to the outside air from the wetting operation except as permitted in Sections 11-2-110 and 11-2-302.1. Wetting may be suspended when the ambient air temperature at the waste disposal site is less than -9.5°C (15°F). The ambient air temperature shall be determined by an appropriate measurement method with an accuracy of +1°C or +2°F

and recorded at least at hourly intervals during the period that the operation of the wetting system is suspended.

- 304.3 All asbestos-containing waste material shall be deposited at waste disposal sites operated in accordance with this Rule.
- 304.4 For demolitions where the RACM is not removed prior to demolition pursuant to subsection 11-2-303.11, the asbestos-containing waste material shall be kept adequately wetted at all times after demolition, during handling and loading and shall be sealed in leak-tight containers for transport to a disposal site.
- 304.5 All vehicles used to transport asbestos-containing waste material shall be marked as specified in Section 11-2-608 during the loading and unloading of waste. The signs shall be visible and shall be displayed in such a manner that a person can easily read the legend.
- 304.6 The owner or operator of all asbestos-containing waste material, generated as a result of demolition or renovation activities, which is transported off the facility site shall meet all of the following requirements:
 - 6.1 Maintain a waste shipment record as specified in Section 11-2-502.
 - 6.2 Provide a copy of the waste shipment record referenced in subsection 11-2-304.6.1 to the disposal site owner or operator at the same time the asbestos-containing waste material is delivered to the disposal site.
 - 6.3 Contact the transporter and/or the owner or operator of the disposal site to determine the status of the waste shipment, if the waste shipment record referenced in subsection 11-2-304.6.1, signed by the owner or operator of the designated disposal site, is not received by the waste generator within 35 days of the date the waste was accepted by the initial transporter.
 - 6.4 Provide a written report to the APCO if a copy of the waste shipment record referenced in subsection 11-2-304.6.1, signed by the owner or operator of the disposal site, is not received by the waste generator within 45 days of the date the waste was accepted by the initial transporter. The following information shall be included: A copy of the waste shipment record referenced in subsection 11-2-304.6.1 for which a confirmation of delivery was not received, and a letter signed by the waste generator explaining the efforts taken to locate the asbestos waste shipment and the results of those efforts.

(Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)

11-2-305 Waste Disposal Sites: There shall be no visible emissions to the outside air from a waste disposal site where asbestos-containing waste material has been or is being deposited.

- 305.1 Warning signs meeting the requirements of Section 11-2-602 shall be displayed at all entrances, and along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited, at intervals of 100 m (330 ft) or less. Warning signs and fencing are not required where the requirements of subsections 11-2-305.3.1 and 11-2-305.3.2 are met, or where a natural barrier adequately deters access by the general public. Upon request and supply of appropriate information, the APCO will determine whether a fence or a natural barrier adequately deters access to the general public; and
- 305.2 The perimeter of the site shall be fenced in a manner adequate to deter access by the general public, except as specified in subsection 11-2-305.1.
- 305.3 Rather than meet the requirements of subsection 11-2-305.1 and 11-2-305.2, a person may elect to meet the following requirements or may use an alternative control method for emissions from a waste disposal site which has received prior approval by the APCO.
 - 3.1 For an inactive site, the asbestos-containing waste material shall be covered with at least 15 cm (6 in) of compacted nonasbestos-containing material and a cover of vegetation shall be grown and maintained on the area adequate to prevent exposure of the asbestos-

- containing waste material; or the asbestos-containing waste material shall be covered with at least 61 cm (2 ft) of compacted nonasbestos-containing material and maintained to prevent exposure of the asbestos-containing waste.
- 3.2 For inactive waste disposal sites for asbestos tailings, a resinous or petroleum-based dust suppression agent which effectively binds dust and controls wind erosion shall be applied. Such agent shall be used as recommended for the particular asbestos tailings by the dust suppression agent manufacturer. Other equally effective dust suppression agents may be used upon prior approval by the APCO. For purposes of this subsection waste crankcase oil is not considered a dust suppression agent.
- 3.3 For an active waste disposal site, at the end of each operating day, or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material which was deposited at the site during the operating day or previous 24-hour period shall be covered with at least 15 cm (6 in) of compacted nonasbestos-containing material. Alternately, a resinous or petroleum-based dust suppression agent which effectively binds dust and controls wind erosion may be used. Such dust suppression agent shall be used as recommended for the particular dust by the dust suppression agent manufacturer. Other equally effective dust suppression agents may be used upon prior approval by the APCO. For purposes of this subsection, waste crankcase oil is not considered a dust suppression agent.
- 305.4 For an active waste disposal site, the owner or operator shall:
- 4.1 Maintain waste shipment records as specified in Section 11-2-503 for all asbestos-containing waste material received.
- 4.2 Send a copy of the signed waste shipment record to the waste generator, as soon as possible, and in no case longer than 30 days after the receipt of the waste:
- 4.3 Upon discovering a discrepancy between the quantity of asbestos-containing waste material noted in the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. If the discrepancy is not resolved within 15 days after receiving the waste, immediately report in writing to the APCO. Describe the discrepancy and attempts to resolve it, and include a copy of the waste shipment record.

(Amended Sept. 5, 1990; Dec. 4, 1991; Oct. 7, 1998)

11-2-400 ADMINISTRATIVE REQUIREMENTS

- 11-2-401 Reporting Demolition and Renovation:** The person responsible for any existing source to which this Rule is applicable shall provide to the APCO a description of the emission control equipment used for each process and the following information:
- 401.1 For active waste disposal operations a brief description of each process that generates asbestos-containing waste material; the average weight of asbestos-containing waste material disposed of, measured in kg/day; the emission control methods used in all stages of waste disposal; and the type of disposal site or incineration site used for ultimate disposal, including the name of the site operator and the name and location of the disposal site.
- 401.2 For inactive waste disposal sites a brief description of the site and the method or methods used to comply with the standard, or alternative procedures to be used.
- 401.3 For every demolition even where no RACM is present, for each renovation operation where the amount of RACM is greater than or equal to 30.8m (100 ft.) linear, 9.4m² (100 ft.²) or 1 m³ (35 ft³), and for all dry removals, a written plan or notification of intent to demolish or renovate shall be provided to the APCO at least ten (10) working days prior to commencement of

demolition or renovation. The 10 working day period shall not apply if applicable fees for single family dwellings or multiple family dwellings with four or fewer units are paid to allow a start date of 72 hours rather than 10 working days. Notification shall be as early as possible prior to commencement of emergency demolition or renovation. Such notification shall include the following information. Failure to provide such information shall constitute failure to notify.

- 3.1 Indicate whether the notification is the original or a revision.
- 3.2 The name, address and telephone numbers of both the owner(s) of the structure and the operator of the demolition or renovation.
- 3.3 A description of the structure being renovated, including the size, number of floors, age of the oldest portion, and the present and prior use of the structure.
- 3.4 An estimate of the approximate amount of RACM to be removed from the structure or portion thereof, in terms of length of pipe in linear feet, surface area in square feet, or volume in cubic feet.
- 3.5 The name, address and telephone number of the person who completed the asbestos survey including the CAL-OSHA certification number as applicable as specified in Section 11-2-303.8
- 3.6 The procedures used, including the analytical laboratory method employed, to locate and identify the presence of RACM and Category I and Category II nonfriable asbestos-containing material.
- 3.7 The address and location (including building number or name and floor or room number, as applicable) of each structure where demolition or renovation will occur.
- 3.8 Accurate starting and completion dates of demolition or renovation.
- 3.9 A description of planned demolition or renovation and method(s) to be employed.
- 3.10 A description of work practices and engineering controls to be used including emission control procedures for asbestos removal and waste handling.
- 3.11 The name, address and location of the waste disposal site where the asbestos-containing waste material will be deposited.
- 3.12 A copy of the order to demolish including the name, title, and authority of the state or local governmental representative who has ordered a demolition pursuant to Section 11-2-303.11.
- 3.13 Effective November 20, 1991, certification that at least one person, trained as required by Section 11-2-303.9, will supervise the asbestos removal described in this plan.
- 3.14 Description of the procedures to be followed in the event that unexpected RACM is found or Category II nonfriable asbestos-containing material becomes friable.
- 3.15 The name, address and telephone number of the waste transporter. Such notification shall be typewritten or computer printed and submitted on a District-approved form or facsimile thereof.

401.4 Deleted September 5, 1990

401.5 Schedule Changes and Up-dates: Any changes to any aspect of a notification submitted in accordance with Section 11-2-401.3 must be reported to the APCO. These changes shall include, but are not limited to, changes in the notified starting or completion dates, changes of amounts of RACM to be removed, and changes of contractor or waste disposal site. It shall be the responsibility of the person making the initial notification of intent to remove asbestos or perform demolition activity to ensure that the APCO is notified of any such changes. If a job starts prior to the reported starting date or continues past the completion date as shown in the notification of intent to remove asbestos or to demolish, this shall constitute a failure to notify. Failure to notify the APCO of a job cancellation or postponement will result in the imposition of such asbestos operations fees as would have been due had the job not been cancelled or postponed.

(Amended 5/20/81; 3/5/86; 7/6/88; 9/5/90; 12/4/91; 10/7/98)

11-2-402 Approval of Conversion Operation: To obtain approval for a conversion operation pursuant to Section 11-2-304.1.3, the owner or operator shall provide the APCO with the following:

402.1 An application for Authority to Construct including the following: descriptions of waste feed handling and temporary storage, process operating conditions, handling and temporary storage of the end product, and a description of the protocol to be followed when analyzing output materials by Transmission Electron Microscopy (TEM) as described in Section 11-2-605; a demonstration of the conversion process upon request of the APCO, and a protocol for the start-up performance test as described in Sections 11-2-504 and 11-2-607.

402.2 A report for each analysis of product composite samples performed during the initial 90 days of operation.

402.3 A quarterly report, including the following information concerning activities during each consecutive three (3) month period: results of analyses of monthly product composite samples; a description of any deviation from the operating parameters, including its duration, and any corrective action taken; disposition of any products produced during a period when the operating parameters were outside the range indicative of asbestos-free; and information on waste disposal activities as required in Section 11-2-305.

(Adopted December 4, 1991)

11-2-403 Excavating or Disturbing Asbestos-Containing Waste: The owner or operator of a waste disposal site referenced in Section 11-2-305 shall notify the APCO in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one stated in the original notice, notice of the new start date shall be provided to the APCO at least 14 days before excavating begins. In no event shall excavation begin earlier than the date specified in the original notification. The notice shall include: scheduled starting and completion dates; reasons for disturbing the wastes; procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material; and location of any temporary storage site and the final disposal site.

(Adopted December 4, 1991; Amended October 7, 1998)

11-2-404 Maintenance Plan: Asbestos Milling, Manufacturing and Fabrication Facilities: Asbestos milling, manufacturing and fabrication facilities subject to Section 11-2-302.1.1 shall submit a written maintenance plan to the APCO. This plan shall include the following information: maintenance schedule; recordkeeping plan; and maintenance records of the results of visible emissions monitoring and air cleaning device inspections including the following: date and time of each inspection; presence or absence of visible emissions; condition of fabric filters, including presence of tears, holes and abrasions; presence of dust deposits on clean side of filter; brief description of corrective actions taken, including date and time; and daily hours of operation for each air cleaning device. On a quarterly basis, submit a copy of visible emissions monitoring records if visible emissions occurred during the reporting period. Quarterly reports shall be postmarked by the 30th day following the end of the calendar quarter.

(Adopted December 4, 1991)

11-2-405 Fees: Notification as required by the provisions contained in this rule will be subject to the fees contained in Regulation 3, Schedule L. (Adopted October 7, 1998)

11-2-500 MONITORING AND RECORDS

11-2-501 Temperature Records: During periods when wetting operations are suspended due to freezing temperatures, the owner or operator must record the temperature in the work area at the beginning, middle, and end of each workday and keep daily temperature records available for inspection by the APCO during normal business hours at the demolition or renovation site. Records of temperature measurements

as required by Section 11-2-304.2.2 shall be retained by the operator for a minimum of two (2) years. (Amended Dec. 4, 1991; Oct. 7, 1998)

11-2-502 Waste Shipment Records: Waste shipment records as required by Section 11-2-304.6 shall include the following information:

502.1 The name, address, and telephone number of the waste generator and the site from which the waste was generated.

502.2 The name and address of the local Air Quality Management District in which the waste was generated.

502.3 The approximate amount of waste in cubic yards.

502.4 The name and telephone number of the disposal site operator.

502.5 The name and physical location of the disposal site.

502.6 The name, address, and telephone number of the transporter(s).

502.7 A certification that the contents of this consignment are fully and accurately described by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway. Records shall be retained by the waste generator for a minimum of two (2) years and made available for inspection by the APCO.

(Adopted December 4, 1991; Amended October 7, 1998)

11-2-503 Active Waste Disposal Site Records:

503.1 Waste Shipment Records: Waste shipment records as required by Section 11-2-305.4 shall include the following information:

1.1 The name, address and telephone number of the waste generator and the site from which the waste was generated.

1.2 The name, address and telephone number of the transporter(s).

1.3 The quantity of the asbestos-containing waste material in cubic yards.

1.4 The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers. If this condition exists, report in writing to the APCO by the following working day. Submit a copy of the waste shipment records along with the report.

1.5 The date of receipt.

Records shall be retained by the waste disposal site operator for a minimum of two (2) years and made available for inspection by the APCO.

503.2 Asbestos Waste Location Records: Maintain, until closure, records of the location, depth and area, and the quantity in cubic yards of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area. Upon closure of the facility, submit a copy of records of asbestos waste disposal locations and quantities to the appropriate Local Enforcement Agency. (Adopted Dec. 4, 1998; Amended Oct. 7, 1998)

11-2-504 Conversion Operations: The owner or operator of a conversion operation shall maintain the following records: results of the start-up performance testing and all subsequent performance testing, including operating parameters, feed characteristics and analyses of output materials; results of the composite analyses, continuous monitoring and logs of process operating parameters required in Section 11-2-607; the waste shipment records including the information required in Section 11-2-503 for all asbestos-containing waste received; and the name and location of the purchaser or disposal site and the date of sale or deposit for output materials. A person subject to this rule shall maintain records for two (2) years and make the records available for inspection by the APCO upon request. (Adopted December 4, 1991)

11-2-505 Recordkeeping: Surveys shall be kept for two years following the completion of removal of asbestos containing material. (Adopted October 7, 1998)

11-2-600 MANUAL OF PROCEDURES

11-2-601 Waste Disposal Warning Labels: Warning labels required by Section 11-2-304.1.1 must be as specified in the Manual of Procedures, Volume 1, Part 3 or by the Occupational Safety and Health Administration. (Amended October 7, 1998)

11-2-602 Warning Signs for Waste Disposal Sites: Warning signs required by Section 11-2-305.1 must be as specified in the Manual of Procedures, Volume I, Part 4.

- (Amended October 7, 1998)
- 11-2-603 Bulk Sampling Analysis:** Asbestos bulk samples as specified in Section 11-2-209 shall be analyzed as specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1.7.2.4, Polarized Light Microscopy, Quantification of Asbestos Content.
(Adopted Sept. 5, 1990; Amended Dec. 4, 1991; Oct. 7, 1998)
- 11-2-604** Deleted October 7, 1998
- 11-2-605 Asbestos Content-TEM:** For conversion operations, asbestos content shall be determined using the National Institute of Standards and Technology (NIST) approved Transmission Electron Microscopy (TEM) method.
(Adopted December 4, 1991; Amended October 7, 1998)
- 11-2-606 Fabric Filters:** The airflow permeability of fabric filters shall be as specified by ASTM Method D737-69.
(Adopted December 4, 1991)
- 11-2-607 Conversion Facility Performance Test:** Prior to start up of an asbestos conversion facility subject to Sections 11-2-402 and 11-2-504, an owner or operator must conduct a start-up performance test as specified in 40 CFR Part 61.155(b). Operations tests shall be performed as specified in 40 CFR Part 61.155(c) and (d).
(Adopted December 4, 1991)
- 11-2-608 Warning Signs for Transport Vehicles:** Warning signs required by subsection 11-2-304.5 must be as specified below:
- DANGER
ASBESTOS DUST HAZARD
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY**
- (Amended October 7, 1998)