

Chapter NR 447

CONTROL OF ASBESTOS EMISSIONS

NR 447.01	Applicability; purpose	NR 447.11	Standards for insulating materials
NR 447.02	Definitions	NR 447.12	Standards for waste disposal for asbestos mills
NR 447.03	Standard for asbestos mills	NR 447.13	Standard for waste disposal for manufacturing, demolition, renovation, spraying, and fabricating operations
NR 447.04	Standard for roadway areas	NR 447.14	Standard for inactive water disposal sites for asbestos mills and manufacturing and fabricating operations
NR 447.05	Standard for manufacturing	NR 447.15	Air cleaning
NR 447.06	Standard for demolition and renovation; applicability	NR 447.16	Reporting
NR 447.07	Standard for demolition and renovation; notification requirements	NR 447.17	Active waste disposal sites
NR 447.08	Standard for demolition and renovation; procedures for asbestos emission control		
NR 447.09	Standard for spraying		
NR 447.10	Standard for fabricating		

NR 447.01 Applicability; purpose. (1) **APPLICABILITY.** This chapter applies to all air contaminant sources which may emit asbestos, to their owners and operators and to any person whose action causes the emission of asbestos to the ambient air.

(2) **PURPOSE.** This chapter is adopted under ss. 144.31, 144.375 and 144.38, Stats., to establish emission limitations for asbestos air contaminant sources, to establish procedures to be followed when working with asbestos materials and to create additional reporting and recordkeeping requirements for owners or operators of asbestos air contaminant sources in order to protect air quality.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86; am. (1), Register, May, 1992, No. 437, eff. 6-1-92.

NR 447.02 Definitions. In addition to the definitions in this section, the definitions contained in chs. NR 400 and 445 apply to the terms used in this chapter.

(1) "Active waste disposal site" means any disposal site other than an inactive site.

(2) "Adequately wetted" means sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions.

(3) "Asbestos mill" means any facility engaged in the conversion or any intermediate step in the conversion of asbestos ore into commercial asbestos. Outside storage of asbestos materials is not considered a part of such a facility.

(4) "Asbestos tailings" means any solid waste products of asbestos mining or milling operations which contain asbestos.

(5) "Asbestos-containing waste material" means any waste which contains commercial asbestos and is generated by a source subject to the provisions of this chapter, including asbestos mill tailings, control device asbestos waste, friable asbestos waste material, and bags or containers that previously contained commercial asbestos.

(6) "Commercial asbestos" means any variety of asbestos which is produced by extracting asbestos from asbestos ore.

(7) "Control device asbestos waste" means any asbestos-containing waste material that is collected in a pollution control device.

(8) "Demolition" means the wrecking or taking out of any load-supporting structural member and any related removing or stripping of friable asbestos materials.

(9) "Emergency renovation" means a renovation operation that results from a sudden, unexpected event, and is not a planned renovation. Operations necessitated by non-routine failures of equipment are included.

(10) "Fabricating" means 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, facilities or installations.

(11) "Friable asbestos material" means any material that contains more than one percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

(12) "Inactive waste disposal site" means 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.

(13) "Manufacturing of asbestos products" 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, including commercial asbestos, and the processing of this combination into a product as specified in s. NR 447.05.

(14) "Particulate asbestos material" means any finely divided particles of asbestos material.

(15) "Planned renovation" means a renovation operation, or a number of such operations, in which the amount of friable asbestos material that will be removed or stripped within a given period of time 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.

(16) "Renovation" means the removing or stripping of friable asbestos material used on any pipe, duct, boiler, tank, reactor, turbine, furnace or structural member. Operations in which load-supporting structural members are wrecked or taken out are excluded.

(17) "Roadway areas" means any surface on which motor vehicles travel including, but not limited to, highways, roads, streets, parking areas and driveways.

(18) "Stripping" means taking off friable asbestos materials from any pipe, duct, boiler, tank, reactor, turbine, furnace or structural member.

(19) "Structural member" means any load-supporting member, such as beams and load-supporting walls; or any nonload-supporting member, such as ceilings and nonload-supporting walls.

(20) "Visible asbestos emissions" means any emissions which are visually detectable without the aid of instruments and which contain particulate asbestos material.

History: Renum. from NR 154.01, Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.03 Standard for asbestos mills. Each owner or operator of an asbestos mill shall either discharge no visible emissions to the outside air from that asbestos mill or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

History: Renum. from NR 154.19 (4) (a) and am., Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.04 Standard for roadway areas. No person may surface a roadway area with asbestos tailings or deposit asbestos-containing waste material on that roadway area, unless it is a temporary roadway area on asbestos ore deposits.

History: Renum. from NR 154.19 (4) (b) and am., Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.05 Standard for manufacturing. (1) **APPLICABILITY.** This section applies to the following manufacturing operations using commercial asbestos.

(a) The manufacture of cloth, cord, wicks, tubing, tape, twine, rope, thread, yarn, roving, lap or other textile materials.

(b) The manufacture of cement products.

(c) The manufacture of fireproofing and insulating materials.

(d) The manufacture of friction products.

(e) The manufacture of paper, millboard and felt.

(f) The manufacture of floor tile.

(g) The manufacture of paints, coatings, caulks, adhesives and sealants.

(h) The manufacture of plastics and rubber materials.

(i) The manufacture of chlorine.

(j) The manufacture of shotgun shell wads.

(k) The manufacture of asphalt concrete.

(2) **STANDARD.** Each owner or operator of any of the manufacturing operations to which this section applies shall either:

(a) Discharge no visible emissions to the outside air from these operations or from any building or structure in which they are conducted; or

(b) Use the methods specified by s. NR 447.15 to clean emissions from these operations containing particulate asbestos material before they escape to, or are vented to, the outside air.

History: Renum. from NR 154.19 (4) (c) and am., Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.06 Standard for demolition and renovation; applicability. The requirements of ss. NR 447.07 and 447.08 apply to each owner or operator of a demolition or renovation operation as follows:

(1) If the amount of friable asbestos materials in a facility being demolished is at least 80 linear meters (260 linear feet) on pipes or at least 15 square meters (160 square feet) on other facility components, all the requirements of ss. NR 447.07 and 447.08 apply, except as provided in sub. (3).

(2) If the amount of friable asbestos materials in a facility being demolished is less than 80 linear meters (260 linear feet) on pipes and less than 15 square meters (160 square feet) on other facility components, only the requirements of s. NR 447.07 (1), (2) and (3) (a), (b), (c), (d) and (e) apply.

(3) If the facility is being demolished under an order of a state or local governmental agency, issued because the facility is structurally unsound and in danger of imminent collapse, only the requirements in ss. NR 447.07 and 447.08 (4), (5), (6) and (7) apply.

(4) If at least 80 linear meters (260 linear feet) of friable asbestos materials on pipes or at least 15 square meters (160 square feet) of friable asbestos materials on other facility components are stripped or removed at a facility being renovated, all the requirements of ss. NR 447.07 and 447.08 apply.

(a) To determine whether this subsection applies to planned renovation operations involving individual nonscheduled operations, predict the additive amount of friable asbestos materials to be removed or stripped over the maximum period of time a prediction can be made, not to exceed 1 year.

(b) To determine whether this subsection applies to emergency renovation operations estimate the amount of friable asbestos materials to be removed or stripped as a result of the sudden, unexpected event that necessitated the renovation.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.07 Standard for demolition and renovation; notification requirements. Each owner or operator to which this section applies shall:

(1) Provide the department with written notice of intention to demolish or renovate.

(2) Postmark or deliver the notice as follows:

(a) At least 10 days before demolition begins if the operation is described in s. NR 447.06 (1).

(b) At least 20 days before demolition begins if the operation is described in s. NR 447.06 (2).

(c) As early as possible before demolition begins if the operation is described in s. NR 447.06 (3).

(d) As early as possible before renovation begins.

(3) Include the following information in the notice:

Register, May, 1992, No. 437

- (a) Name and address of owner or operator.
- (b) Description of the facility being demolished or renovated, including the size, age, and prior use of the facility.
- (c) Estimate of the approximate amount of friable asbestos material present in the facility in terms of linear feet of pipe, and surface area on other facility components. For facilities described in s. NR 447.06 (2) explain techniques of estimation.
- (d) Location of the facility being demolished or renovated.
- (e) Scheduled starting and completion dates of demolition or renovation.
- (f) Nature of planned demolition or renovation and methods to be used.
- (g) Procedures to be used to comply with the requirements of this chapter.
- (h) Name and location of the waste disposal site where the friable asbestos waste material will be deposited.
- (i) For facilities described in s. NR 447.06 (3), the name, title, and authority of the state or local governmental representative who has ordered the demolition.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.08 Standard for demolition and renovation; procedures for asbestos emission control. Each owner or operator to whom this section applies shall comply with the following procedures to prevent emissions of particulate asbestos material to the outside air:

(1) Remove friable asbestos materials from a facility being demolished or renovated before any wrecking or dismantling that would break up the materials or preclude access to the materials for subsequent removal. However, friable asbestos materials need not be removed before demolition if:

(a) They are on a facility component that is encased in concrete or other similar material; and

(b) These materials are adequately wetted whenever exposed during demolition.

(2) When a facility component covered or coated with friable asbestos materials is being taken out of the facility as units or in sections:

(a) Adequately wet any friable asbestos materials exposed during cutting or disjuncting operations; and

(b) Carefully lower the units or sections to ground level, not dropping them or throwing them.

(3) Adequately wet friable asbestos materials when they are being stripped from facility components before the members are removed from the facility. In renovation operations, wetting that would unavoidably damage equipment is not required if the owner or operator:

Register, May, 1992, No. 437

(a) Asks the department to determine whether wetting to comply with this subsection would unavoidably damage equipment and before beginning to strip, supplies the department with adequate information to make this determination; and

(b) When the department does determine that equipment damage would be unavoidable, uses a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping and removal of the friable asbestos materials. The system shall exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in s. NR 447.15.

(4) After a facility component has been taken out of the facility as units or in sections, either:

(a) Adequately wet friable asbestos materials during stripping; or

(b) Use a local exhaust ventilation and collection system designed and operated to capture the particulate asbestos material produced by the stripping. The system shall exhibit no visible emissions to the outside air or be designed and operated in accordance with the requirements in s. NR 447.15.

(5) For friable asbestos materials that have been removed or stripped:

(a) Adequately wet the materials to ensure that they remain wet until they are collected for disposal in accordance with s. NR 447.13; and

(b) Carefully lower the materials to the ground or a lower floor, not dropping or throwing them; and

(c) Transport the 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.

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

(a) Comply with the requirements of subs. (4) and (5). The owner or operator need not comply with the other wetting requirements in this section; and

(b) Remove facility components coated or covered with friable asbestos materials as units or in sections to the maximum extent possible.

(7) For facilities described in s. NR 447.06 (3), adequately wet the portion of the facility that contains friable asbestos materials during the wrecking operation.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.09 Standard for spraying. The owner or operator of an operation in which asbestos-containing materials are spray applied shall comply with the following requirements:

(1) Use materials that contain one percent asbestos or less on a dry weight basis for spray-on application on buildings, structures, pipes, and conduits, except as provided in sub. (3).

Register, May, 1992, No. 437

(2) For spray-on application of materials that contain more than one percent asbestos on a dry weight basis on equipment and machinery, except as provided in sub. (3):

(a) Notify the department at least 20 days before beginning the spray-on operation. Include the following information in the notice:

1. Name and address of owner or operator;
2. Location of spraying operation; and
3. Procedures to be followed to meet the requirements of this subsection.

(b) Discharge no visible emissions to the outside air from the spray-on application of the asbestos-containing material or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(3) The requirements of subs. (1) and (2) do not apply to the spray-on application of materials where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.10 Standard for fabricating. (1) APPLICABILITY. This section applies to the following fabricating operations using commercial asbestos:

- (a) The fabrication of cement building products.
- (b) The fabrication of friction products, except those operations that primarily install asbestos friction materials on motor vehicles.
- (c) The fabrication of cement or silicate board for ventilation hoods, ovens, electrical panels, laboratory furniture, bulkheads, partitions, and ceilings for marine construction, and flow control devices for the molten metal industry.

(2) **STANDARD.** Each owner or operator of any of the fabricating operations to which this section applies shall either:

- (a) Discharge no visible emissions to the outside air from any of the operations or from any building or structure in which they are conducted; or
- (b) Use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to the outside air.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86

NR 447.11 Standards for insulating materials. After October 1, 1986, no owner or operator of a facility may install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. The provisions of this section do not apply to spray-applied insulating materials regulated under s. NR 447.09.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

Register, May, 1992, No. 437

NR 447.12 Standards for waste disposal for asbestos mills. Each owner or operator of any source covered under the provisions of s. NR 447.03 shall:

(1) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of s. NR 447.17; and

(2) Discharge no visible emissions to the outside air from the transfer of asbestos waste from control devices to the tailings conveyor, or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air. Dispose of the asbestos waste from control devices in accordance with s. NR 447.13 (2) or sub. (3); and

(3) Discharge no visible emissions to the outside air during the collection, processing, packaging, transporting, or deposition of any asbestos-containing waste material, or use one of the disposal methods specified in pars. (a) and (b), as follows:

(a) Use a wetting agent as follows:

1. Adequately mix all asbestos-containing waste material with a wetting agent recommended by the manufacturer of the agent to effectively wet dust and tailings, before depositing the material at a waste disposal site. Use the agent as recommended for the particular dust by the manufacturer of the agent.

2. Discharge no visible emissions to the outside air from the wetting operation or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

3. Wetting may be suspended when the ambient temperature at the waste disposal site is less than -9.5°C (15°F). Determine the ambient air temperature by an appropriate measurement method with an accuracy of $\pm 1^{\circ}\text{C}$ ($\pm 2^{\circ}\text{F}$), and record it at least hourly while the wetting operation is suspended. Keep the records for at least 2 years in a form suitable for inspection.

(b) Use an alternative disposal method that has received prior approval by the department

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.13 Standard for waste disposal for manufacturing, demolition, renovation, spraying, and fabricating operations. Each owner or operator of any source covered under the provisions of ss. NR 447.05 to 447.10 shall:

(1) Deposit all asbestos-containing waste material at waste disposal sites operated in accordance with the provisions of s. NR 447.17; and

(2) Discharge no visible emissions to the outside air during the collection, processing (including incineration), packaging, transporting, or deposition of any asbestos-containing waste material generated by the source, or use one of the disposal methods specified in par. (a), (b) or (c), as follows:

(a) Treat asbestos-containing waste material with water, as follows:

Register, May, 1992, No. 437

1. Mix asbestos waste from control devices with water to form a slurry; adequately wet other asbestos-containing waste material; and
2. Discharge no visible emissions to the outside air from collection, mixing, and wetting operations, or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air; and
3. After wetting, seal all asbestos-containing waste material in leak-tight containers while wet; and
4. Label the containers specified in subd. 3, as follows:

CAUTION
Contains Asbestos-
Avoid Opening or
Breaking Container
Breathing Asbestos is HAZARDOUS
to Your Health

Alternatively, use warning labels specified by occupational safety and health standards of the department of labor, occupational safety and health administration (OSHA) under 29 CFR s. 1910.1001(j) (2) (ii), incorporated by reference in ch. NR 484.

(b) Process asbestos-containing waste material into nonfriable forms, as follows:

1. Form all asbestos-containing waste material into nonfriable pellets or other shapes; and
2. Discharge no visible emissions to the outside air from collection and processing operations, or use the methods specified by s. NR 447.15 to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

(c) Use an alternative disposal method that has received prior approval by the department.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.14 Standard for inactive water disposal sites for asbestos mills and manufacturing and fabricating operations. Each owner or operator of any inactive waste disposal site that was operated by sources covered under s. NR 447.03, 447.05 or 447.10 and received deposits of asbestos-containing waste material generated by the sources, shall:

(1) Comply with one of the following:

(a) Either discharge no visible emissions to the outside air from an inactive waste disposal site subject to this section; or

(b) Cover the asbestos-containing waste material with at least 15 centimeters (6 inches) of compacted non-asbestos-containing material, and grow and maintain a cover of vegetation on the area adequate to prevent exposure of the asbestos-containing waste material; or

(c) Cover the asbestos-containing waste material with at least 60 centimeters (2 feet) of compacted non-asbestos-containing material, and maintain it to prevent exposure of the asbestos-containing waste; or

Register, May, 1992, No. 437

(d) For inactive waste disposal sites for asbestos tailings, apply a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Use the agent as recommended for the particular asbestos tailings by the manufacturer of the dust suppression agent. Obtain prior approval of the department to use other equally effective dust suppression agents. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(2) Unless a natural barrier adequately deters access by the general public, install and maintain warning signs and fencing as follows, or comply with sub. (1) (b) or (c).

(a) Display warning signs at all entrances and at intervals of 100 m (330 feet) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material was deposited. The warning signs shall:

1. Be posted in such a manner and location that a person can easily read the legend; and

2. Conform to the requirements for 51 cm × 36 cm (20" × 14") upright format signs specified in 29 CFR s. 1910.145 (d) (4), incorporated by reference in ch. NR 484, and this paragraph; and

3. Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this subdivision.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	1.9 cm (¾ inch) Sans Serif, Gothic or Block
Breathing Asbestos is Hazardous to Your Health	14 Point Gothic

Spacing between any 2 lines must be at least equal to the height of the upper of the 2 lines.

(b) Fence the perimeter of the site in a manner adequate to deter access by the general public.

(c) Upon request and supply of appropriate information, the department will determine whether a fence or a natural barrier adequately deters access by the general public.

(3) The owner or operator may use an alternative control method that has received prior approval of the department rather than comply with the requirements of sub. (1) or (2).

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.15 Air cleaning. (1) The owner or operator who elects to use air-cleaning, as permitted by ss. NR 447.03, 447.05, 447.08 (3) (b) and (4) (b), 447.09 (2) (b), 447.10 (2), 447.12 (2) and (3) (a) 2. and 447.13 (2) (a) 2. and (b), shall:

(a) Use fabric filter collection devices, except as noted in sub. (2), doing all the following:

Register, May, 1992, No. 437

1. Operating the fabric filter collection devices at a pressure drop of no more than .995 kilopascal (4 inches water gage), as measured across the filter fabric; and

2. Ensuring that the airflow permeability, as determined by ASTM Method D737-75 (1980), incorporated by reference in ch. NR 484, does not exceed $9 \text{ m}^3/\text{min}/\text{m}^2$ ($30 \text{ ft}^3/\text{min}/\text{ft}^2$) for woven fabrics or $11 \text{ m}^3/\text{min}/\text{m}^2$ ($35 \text{ ft}^3/\text{min}/\text{ft}^2$) for felted fabrics, except that $12 \text{ m}^3/\text{min}/\text{m}^2$ ($40 \text{ ft}^3/\text{min}/\text{ft}^2$) for woven and $14 \text{ m}^3/\text{min}/\text{m}^2$ ($45 \text{ ft}^3/\text{min}/\text{ft}^2$) for felted fabrics is allowed for filtering air from asbestos ore dryers; and

3. Ensuring that felted fabric weighs at least 475 grams per square meter (14 ounces per square yard) and is at least 1.6 millimeters (one-sixteenth inch) thick throughout; and

4. Avoiding the use of synthetic fabrics that contain fill yarn other than that which is spun.

(b) Properly install, use, operate, and maintain all air-cleaning equipment authorized by this section. 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.

(2) There are the following exceptions to sub. (1) (a):

(a) If the use of fabric creates a fire or explosion hazard the department may authorize as a substitute the use of wet collectors designed to operate with a unit contacting energy of at least 9.95 kilopascals (40 inches water gage pressure).

(b) The department may authorize the use of filtering equipment other than that described in sub. (1) (a) and par. (a) if the owner or operator demonstrates to the department's satisfaction that it is equivalent to the described equipment in filtering particulate asbestos material.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.

NR 447.16 Reporting. Within 90 days after October 1, 1986, each owner or operator of any existing source to which this chapter applies shall provide the following information to the department:

(1) A description of the emission control equipment used for each process; and

(2) If a fabric filter device is used to control emissions, the pressure drop across the fabric filter in inches of water gage; and

(a) If the fabric filter device uses a woven fabric, the airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$ and; if the fabric is synthetic, whether the fill yarn is spun or not spun; and

(b) If the fabric filter device uses a felted fabric, the density in g/m^2 , the minimum thickness in inches, and the airflow permeability in $\text{m}^3/\text{min}/\text{m}^2$.

(3) For sources subject to ss. NR 447.12 and 447.13:

(a) A brief description of each process that generates asbestos-containing waste material; and

(b) The average weight of asbestos-containing waste material disposed of, measured in kg/day; and

(c) The emission control methods used in all stages of waste disposal; and

(d) The type of disposal site or incineration site used for ultimate disposal, the name of the site operator, and the name and location of the disposal site.

(4) For sources subject to s. NR 447.14:

(a) A brief description of the site; and

(b) The method or methods used to comply with the standard, or alternative procedures to be used.

History: CR. Register, September, 1986, No. 369, eff. 10-1-86; am. (2) (intro.) and (a), Register, May, 1992, No. 437, eff. 6-1-92.

NR 447.17 Active waste disposal sites. To be an acceptable site for disposal of asbestos-containing waste material under ss. NR 447.12 and 447.13, an active waste disposal site must meet the requirements of this section.

(1) Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of sub. (3) or (4) must be met.

(2) Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as follows, or the requirements of sub. (3) (a) must be met.

(a) Warning signs must be displayed at all entrances and at intervals of 100 m (330 ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:

1. Be posted in such a manner and location that a person can easily read the legend; and

2. Conform to the requirements of 51 cm × 36 cm (20" × 14") upright format signs specified in 29 CFR s. 1910.145 (d) (4), incorporated by reference in ch. NR 484, and this paragraph; and

3. Display the following legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in this paragraph.

Legend	Notation
Asbestos Waste Disposal Site	2.5 cm (1 inch) Sans Serif, Gothic or Block
Do Not Create Dust	1.9 (¾ inch) Sans Serif, Gothic or Block
Breathing Asbestos is Hazardous to Your Health	14 Point Gothic

Spacing between any 2 lines must be at least equal to the height of the upper of the 2 lines.

Register, May, 1992, No. 437

(b) The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public.

(c) Upon request and supply of appropriate information, the department will determine whether a fence or a natural barrier adequately deters access by the general public.

(3) Rather than meet the no visible emission requirement of sub. (1), an active waste disposal site would be an acceptable site if 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 is covered with either:

(a) At least 15 centimeters (6 inches) of compacted non-asbestos-containing material; or

(b) A resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. This agent must be used as recommended for the particular dust by the manufacturer of the dust suppression agent. Other equally effective dust suppression agents may be used upon prior approval by the department. For purposes of this paragraph, waste crankcase oil is not considered a dust suppression agent.

(4) Rather than meet the no visible emission requirement of sub. (1), an active waste disposal site would be an acceptable site if an alternative control method for emissions that has received prior approval by the department is used.

History: Cr. Register, September, 1986, No. 369, eff. 10-1-86.