

1 Pollution Control Agency

2

3 Adopted Permanent Rules Relating to Abrasive Blasting of
4 Residential, Child Care, and School Buildings

5

6 Rules as Adopted

7 7005.6010 APPLICABILITY.

8 Parts 7005.6010 to 7005.6080 establish the procedures that
9 a contractor shall follow to test for the presence of lead paint
10 prior to abrasive blasting and to remove lead paint by abrasive
11 blasting of the exterior walls of any residential building,
12 child care building, school building, or any building within 100
13 feet of a residential, child care, or school building, or a
14 playground.

15 7005.6020 DEFINITIONS.

16 Subpart 1. **Scope.** For the purposes of parts 7005.6010 to
17 7005.6080, the terms in subparts 2 to 15 have the meanings given
18 them.

19 Subp. 2. **Abrasive blasting.** "Abrasive blasting" means the
20 use of air pressure and an abrasive grit to remove surface
21 coatings, ~~and includes, but is not limited to,~~ Among the
22 techniques specifically identified as abrasive blasting are dry
23 abrasive blasting, wet abrasive blasting, modified-wet abrasive
24 blasting and vacuum blasting.

25 Subp. 3. **Acid extraction.** "Acid extraction" means
26 laboratory analysis of lead concentration according to Method
27 3050 as described in "Test Methods for Evaluating Solid Waste
28 Volume 1A: Laboratory Manual Physical/Chemical Methods" SW-846,
29 United States Environmental Protection Agency, Third Edition,
30 November 1986. This document is incorporated by reference and
31 is available through the Minitex interlibrary loan system. This
32 document is not subject to frequent change.

33 Subp. 4. **Child care building.** "Child care building" means
34 a building that incorporates a place where children are cared
35 for or supervised at any time of the day or year.

1 Subp. 5. **Commissioner.** "Commissioner" means the
2 commissioner of the Minnesota Pollution Control Agency.

3 Subp. 6. **Contractor.** "Contractor" means a person or an
4 organization who, for financial gain, directly performs or,
5 through subcontracting or similar delegation, causes abrasive
6 blasting to be performed.

7 Subp. 7. **Lead paint.** "Lead paint" means a coating that:

8 A. contains one-half of one percent (0.5 percent)
9 total lead or more, as determined by the analytical methods of
10 acid extraction or by X-ray fluorescence laboratory analyzer;

11 B. contains one milligram per square centimeter (1.0
12 mg/cm²) of lead or more, as determined by an X-ray fluorescence
13 hand-held analyzer; or

14 C. causes a positive reaction when combined with
15 sodium sulfide (Na₂S).

16 Subp. 8. **Modified-wet abrasive blasting.** "Modified-wet
17 abrasive blasting" means abrasive blasting with the addition of
18 a minimum quantity of water to the air abrasive stream such that
19 dispersal of particulate matter is suppressed with little or no
20 adherence of waste material to the substrate.

21 Subp. 9. **Playground.** "Playground" means an area
22 designated for children's play including a school building
23 playground, a child care building playground, a play area of a
24 public park, or an area that contains permanent play equipment.

25 Subp. 10. **Residential building.** "Residential building"
26 means a single family or multi-unit structure that is used or
27 intended for use as human habitation, including every other
28 structure located within the same lot.

29 Subp. 11. **School building.** "School building" means a
30 building that contains a public school as defined in Minnesota
31 Statutes, section 120.05, or a nonpublic school, church, or
32 religious organization, or home-school in which a child is
33 provided instruction in compliance with Minnesota Statutes,
34 sections 120.101 and 120.102.

35 Subp. 12. **Sodium sulfide.** "Sodium sulfide" means a six to
36 eight percent solution of sodium sulfide (Na₂S) compound in

1 water that reacts with lead at concentrations greater than 1.0
2 percent (10,000 ppm).

3 Subp. 13. **Total lead.** "Total lead" means the
4 concentration of lead in paint, determined by acid extraction or
5 by X-ray fluorescence laboratory analyzer, expressed in units of
6 parts per million (ppm) or percent (%).

7 Subp. 14. **Vacuum blasting.** "Vacuum blasting" means dry
8 abrasive blasting with a blast nozzle that is surrounded by a
9 chamber under negative air pressure that is held against the
10 coated surface.

11 Subp. 15. **X-ray fluorescence analyzer.** "X-ray
12 fluorescence analyzer" or "XRF analyzer" means:

13 A. a hand-held portable instrument that measures lead
14 concentration (by fluorescence of lead atoms) by gamma
15 radiation, expressed in milligrams per centimeter square
16 (mg/cm^2); or

17 B. a desktop laboratory instrument that measures lead
18 concentration (by fluorescence of lead atoms) by gamma
19 radiation, expressed in parts per million (ppm).

20 7005.6030 TESTING.

21 Subpart 1. **Testing required.** A contractor shall test a
22 coating for lead concentration, using the methods required by
23 this part, before using abrasive blasting to remove a coating
24 from the exterior of a residential, child care, or school
25 building, or any building within 100 feet of a residential,
26 child care, or school building, or a playground.

27 Subp. 2. **Paint samples.** The contractor shall test all
28 layers of paint on the following exterior surfaces from which
29 paint is to be removed:

30 A. the paint on the original structure;

31 B. the paint on any addition to the original
32 structure;

33 C. the paint on each separate structure; and

34 D. if surfaces have been painted or repainted at
35 different times or with different paints, the paint on each

1 surface.

2 Subp. 3. **Analysis.** The contractor shall analyze each
3 paint sample for lead concentration using one of the methods in
4 items A to D.

5 A. Acid extraction. If the contractor tests by acid
6 extraction, the contractor shall analyze for total lead using
7 paint samples that contain equal surface areas of all the paint
8 coatings of the surface that is tested.

9 B. X-ray fluorescence analyzer. If the contractor
10 tests using a hand-held portable XRF analyzer, the lead
11 concentration for each surface shall be the mean value of at
12 least five separate measurements for that surface. If the
13 contractor tests using a desktop laboratory XRF analyzer, each
14 paint sample shall contain equal surface areas of all paint
15 coatings of the surface that is tested.

16 C. Sodium sulfide (Na_2S). If the contractor tests
17 using sodium sulfide and obtains a negative test result for lead
18 on any surface painted before 1978, the contractor shall confirm
19 the absence of lead paint by testing a sample from that surface
20 with either acid extraction or an XRF analyzer in the manner
21 required in item A or B.

22 D. Other analysis methods. The contractor may test
23 for lead concentration using an analysis method not listed in
24 items A to C only if the commissioner approves the analysis
25 method in writing prior to its use. The commissioner shall
26 approve an analysis method if the commissioner finds that the
27 precision and accuracy of the method is comparable to the
28 methods in item A or B.

29 Subp. 4. **Test results.** The contractor shall provide the
30 test results to the building owner or administrator and the
31 adult residents as part of the notice described in part
32 7005.6040, subpart 2, to the commissioner as part of the notice
33 described in part 7005.6040, subpart 3, and shall retain the
34 test results for a period not less than five years from the date
35 of the test.

36 Subp. 5. **Waiver of testing.** A contractor may elect to

1 conduct abrasive blasting of a residential, child care, or
2 school building, or of any building within 100 feet of a
3 residential, child care, or school building, or a playground,
4 without testing to determine the presence and concentration of
5 lead in paint if the contractor treats the paint as lead paint,
6 so states in the notice of part 7005.6040, and otherwise
7 complies with parts 7005.6010 to 7005.6080.

8 7005.6040 NOTIFICATION.

9 Subpart 1. Notice required. At least five days before the
10 start of abrasive blasting of lead paint on the exterior of a
11 residential, child care, or school building, or of any building
12 within 100 feet of a residential, child care, or school
13 building, or a playground, the contractor shall provide notice
14 as described in items A and B.

15 A. Written notice as required in subpart 2 must be
16 given to the owner or administrator and the adult residents of
17 the building to be abrasive blasted, and to the owner or
18 administrator and the adult residents of any residential, child
19 care, or school buildings within 50 feet of the building to be
20 abrasive blasted, ~~and~~. The contractor must mail or physically
21 hand the notice to the owner or administrator of a child care or
22 school building. For residences, the contractor must mail,
23 physically hand, or put on or under the door of each residence a
24 notice for at least one adult resident of each single-family
25 structure and one adult resident of each unit in a multi-family
26 structure.

27 B. Written notice as required in subpart 3 must be
28 given to the commissioner.

29 If the contractor postpones abrasive blasting more than
30 five days from the anticipated start of abrasive blasting stated
31 in the written notices required by this subpart, then the
32 contractor shall, at least two days before the start of abrasive
33 blasting, revise and redistribute the notices required by this
34 subpart with the new days and hours during which abrasive
35 blasting is anticipated.

1 Subp. 2. Contents of notice to residents, administrator,
2 and owner. The notice required in subpart 1, item A, shall
3 state that lead paint is present on the structure, shall provide
4 the results of the test required by part 7005.6030 and the
5 methods of analysis used, shall specify the days and the hours
6 during which abrasive blasting is anticipated, and shall advise
7 the owner or administrator and the adult residents to take the
8 following actions before abrasive blasting begins:

9 A. close all doors, windows, and storm windows on the
10 walls to be abrasive blasted and their adjoining walls, and on
11 the walls of neighboring buildings that face the structure to be
12 abrasive blasted and their adjoining walls;

13 B. completely seal from the outside with adhesive
14 tape or caulking the outermost window or storm window to the
15 window frame, the outermost door or storm door to the door
16 frame, and ~~other~~ air intake openings ~~to-the-exterior~~ on the
17 walls of the neighboring building that are specified in item A.
18 Walls that adjoin the walls facing the abrasive blasting need
19 only be sealed to a distance of 50 feet from the wall to be
20 abrasive blasted;

21 C. turn off all air conditioning units on the walls
22 to be abrasive blasted and their adjoining walls, and on the
23 walls of neighboring buildings that face the structure to be
24 abrasive blasted and their adjoining walls, and tightly cover
25 all of these units with impermeable material; and

26 D. take inside or remove from the ~~premises-near-the~~
27 ~~building-or-from~~ property within 50 feet of the structure to be
28 abrasive blasted all children's toys and play equipment, or
29 cover equipment that cannot be moved, and all pets, pet
30 houses, and pet food, and water bowls.

31 Subp. 3. Contents of notice to commissioner. The notice
32 required in subpart 1, item B, shall state:

33 A. the address and location of the building to be
34 abrasive blasted;

35 B. the scheduled starting and completion days and
36 times;

1 C. the results of the test required by part 7005.6030
2 and the method of analysis used;

3 D. the name, business address, and telephone number
4 of the contractor;

5 E. a description of the building or buildings to be
6 abrasive blasted, including whether each building is a
7 residential, child care, or school building, or within 100 feet
8 of a residential, child care, or school building, or a
9 playground;

10 F. a copy of the notice given to the owner or
11 administrator and adult residents of each building under
12 subparts 1 and 2;

13 G. the abrasive blasting method the contractor plans
14 to use;

15 H. the procedures the contractor plans to use to
16 comply with parts 7005.6010 to 7005.6080;

17 I. the name and location of the waste disposal site
18 where the debris collected as required by part 7005.6060 will be
19 deposited; and

20 J. any other information that the commissioner deems
21 necessary to determine that the requirements of parts 7005.6010
22 to 7005.6080 will be followed.

23 7005.6050 CONTAINMENT.

24 Subpart 1. **Containment required.** The contractor shall
25 apply containment, using the methods required by this part,
26 before using abrasive blasting to remove lead paint from the
27 exterior of a residential, child care, or school building, or a
28 building within 100 feet of a residential, child care, or school
29 building, or a playground. The contractor may utilize methods
30 of removal by abrasive blasting or of containment other than
31 those specified in this part only if the commissioner approves
32 the alternative method of removal or containment in writing
33 prior to its use. The commissioner shall approve the
34 alternative method of removal or containment if the contractor
35 demonstrates that the alternative containment method will

1 prevent contamination of soil and house dust at least as well as
2 the methods specified in this part.

3 Subp. 2. Sealing the residential, child care, or school
4 building. Before abrasive blasting begins, the contractor shall:

5 A. fully close and completely seal from the outside
6 with adhesive tape or caulking the outermost window or storm
7 window to the window frame, the outermost door or storm door to
8 the door frame, and ~~other~~ air intake openings ~~to-the-exterior~~ on
9 the wall to be abrasive blasted and on the two adjoining walls
10 to a distance of 50 feet from the wall to be abrasive blasted,
11 if the building is a residential, child care, or school
12 building;

13 B. ~~fully-close-and-completely-seal-with-adhesive-tape~~
14 ~~the-openings-listed-in-item-A-on-any-wall-that-faces-the~~
15 ~~structure-to-be-abrasive-blasted,-and-the-adjoining-walls,-of-a~~
16 ~~neighboring-residential,-child-care,-or-school-building-that-is~~
17 ~~within-a-distance-from-a-wall-to-be-abrasive-blasted-that-is~~
18 ~~less-than-the-distance-of-ground-cover-required-by-subparts-3~~
19 ~~and-4,-and~~

20 C. tightly cover and seal with impervious plastic all
21 air conditioning units and other ~~vents-and~~ air intake openings
22 on the walls listed in ~~items~~ item A and B; and

23 ~~The-contractor-is-not-required-to-perform-the-actions~~
24 ~~listed-in-items-B-and-C-only-if-the-owner,-administrator,-or~~
25 ~~adult-residents-of-a-building-have-performed-the-actions-listed~~
26 ~~in-items-B-and-C-as-advised-in-part-7005.6040.~~

27 C. if a wall of a neighboring residential, child
28 care, or school building is less than 20 feet from a wall to be
29 abrasive blasted, suspend curtains between the wall to be
30 abrasive blasted and the neighboring building that:

31 (1) are parallel to the wall being abrasive
32 blasted;

33 (2) extend vertically from the ground to the
34 height of the wall to be abrasive blasted or, if the curtains
35 are located on the neighboring building, extend vertically from
36 the ground to the height of the wall of the neighboring building

1 which faces the wall to be abrasive blasted;

2 (3) extend horizontally for the width of the wall
3 to be abrasive blasted or, if the curtains are located on the
4 neighboring building, extend horizontally for the width of the
5 wall on the neighboring building which faces the wall to be
6 abrasive blasted; and

7 (4) overlap at each seam a distance of at least
8 1-1/2 feet.

9 The contractor shall not conduct abrasive blasting if any
10 windows or doors are open on any wall that faces the wall to be
11 abrasive blasted, and on the adjoining walls to a distance of 50
12 feet from the wall to be abrasive blasted, of a neighboring
13 residential, child care, or school building that is within a
14 distance from a wall to be abrasive blasted that is less than or
15 equal to the distance of ground cover required by subpart 3.

16 Subp. 3. **Ground cover.** Before abrasive blasting begins,
17 the contractor shall completely cover, with impermeable
18 tarpaulins, the ground beneath the wall or structure to be
19 abrasive blasted by:

20 A. laying the tarpaulins as close as possible to the
21 building foundation;

22 B. overlapping the tarpaulin edges by a distance not
23 less than 1-1/2 feet;

24 C. anchoring the tarpaulins at the foundation and
25 along the overlapping edges to prevent separation; and

26 D. covering the ground with tarpaulins for a distance
27 of at least 25 feet in all directions from the area of blasting.
28 For each story above the first, the contractor shall increase
29 this distance by ten feet.

30 Subp. 4. **Additional containment required.** If visible
31 emissions of particulate matter occur in the air or visible
32 deposits occur on the ground at a distance from the structure
33 greater than the distance of the ground cover, then the
34 contractor shall immediately cease abrasive blasting until the
35 contractor:

36 A. adds additional ground cover, in the manner

1 required in subpart 3, to a distance greater than the distance
2 of visible particle transport or deposition;

3 B. uses a curtain or curtains that prevent the
4 dispersal of visible particles to a distance beyond the ground
5 cover; or

6 C. uses modified-wet abrasive blasting or vacuum
7 blasting, instead of open dry abrasive blasting, to remove the
8 lead paint.

9 7005.6060 CLEANUP.

10 Subpart 1. **Cleanup.** At the end of each workday, the
11 contractor shall recover and remove all blasting debris
12 including used abrasive; wood, brick, or stucco dust; and paint
13 particles from:

14 A. the roof and the roof gutters of the building that
15 was abrasive blasted, while ground covers remain in place;

16 B. the ground covers in such a way as to not deposit
17 any blasting debris on the ground; and

18 C. all soil, grass, walkways, porches, patios, steps,
19 outside window wells and door wells, shrub and flower beds, and
20 any other places surrounding the building that was abrasive
21 blasted and any neighboring buildings, so that no visible
22 deposits remain.

23 Subp. 2. **Cleanup methods.** The contractor may remove the
24 blasting debris by manual means or by vacuum, but shall not use
25 an air pressure stream or a water stream which redistributes,
26 but does not remove, the blasting debris. The contractor may
27 use air pressure to remove particles from exterior walls, but
28 only if ground covers are in place as required by part
29 7005.6050, subpart 3, and only before the ~~seals-of~~ adhesive tape
30 or caulking seals and the curtains required by part 7005.6050,
31 subpart 2, are removed.

32 Subp. 3. **Removal and transportation.** The contractor shall
33 remove and transport all blasting debris from the property in
34 such a way as to prevent any deposition of blasting debris on
35 the property, the right-of-way, the walkway, or the roadway.

1 Subp. 4. **Disposal.** The contractor shall dispose of the
2 blasting debris as required by either chapter 7035 or 7045,
3 whichever applies.

4 7005.6070 RESTRICTIONS.

5 Subpart 1. **Wet abrasive blasting.** A contractor shall not
6 use wet abrasive blasting to remove lead paint, but may use
7 modified-wet abrasive blasting to remove lead paint if the
8 contractor complies with parts 7005.6010 to 7005.6080.

9 Subp. 2. **Reuse of abrasive.** A contractor shall not reuse
10 or recycle abrasive for abrasive blasting of lead paint unless
11 the abrasive is cleaned prior to reuse by a dust collector that
12 removes the lead paint particles or unless the abrasive is used
13 only for vacuum blasting conducted as required in part 7005.6080.

14 Subp. 3. **Access of children.** The contractor shall make a
15 reasonable effort to prevent children under the age of ten years
16 from entering the area within 50 feet of abrasive blasting while
17 it is occurring and until cleanup as required by part 7005.6060
18 is completed. If a child under the age of ten years comes
19 within 50 feet of abrasive blasting while it is occurring,
20 abrasive blasting shall immediately cease until the child leaves
21 or is removed from the area.

22 Subp. 4. **Identification of contractor.** The contractor
23 shall post its name and telephone number in letters and numbers
24 at least four inches high on a vehicle at the property or on a
25 sign posted on the property from the commencement of abrasive
26 blasting until completion of the contractor's work at the
27 building.

28 7005.6080 VACUUM BLASTING.

29 Subpart 1. **Certain contractors exempt from requirements.**
30 A contractor that uses vacuum blasting to remove lead paint from
31 all parts of a structure is exempt for that structure only from
32 the requirements of subpart 2 if:

33 A. the contractor removes all paint by holding the
34 workhead of the vacuum blasting unit at all times against the
35 substrate;

1 B. all parts of the vacuum blasting equipment are in
2 a condition that prevents emissions of particulate matter; and

3 C. no other method of abrasive blasting is used.

4 Subp. 2. Inapplicable requirements. Contractors described
5 in subpart 1 are exempt from the following requirements:

6 A. part 7005.6040, subparts 1 and 2, to the extent
7 that they require the contractor to notify the owner or
8 administrator and adult residents of neighboring buildings;

9 B. part 7005.6050, subpart 4; and

10 C. part 7005.6050, subpart 2, item B~~7~~-and-part
11 ~~7005.60507-subpart-27-item C7-to-the-extent-that-item-C-requires~~
12 ~~covering-and-sealing-of-the-air-conditioning-units-and-other~~
13 ~~openings-on-neighboring-structures.~~

14 For contractors described in subpart 1, the requirement of
15 part 7005.6050, subpart 3, item D, of distance of ground cover
16 is reduced to a minimum of 15 feet in all directions of the
17 point of blasting and need not be increased according to the
18 height of the structure.