

CITY OF SALEM BOARD OF HEALTH REGULATION 23
RULES AND REGULATIONS FOR EXTERIOR PAINT REMOVAL AND
ABRASIVE BLASTING

Section 1 – GENERAL

- A. The Board of Health, City of Salem, Massachusetts, acting under the authority of Section 31, Chapter 111 of the Massachusetts General Laws and amendments and additions thereto, and by any other power thereto enabling, has adopted the following rules and regulations in the interest if and for the preservation of the public health.

PUBLIC AWARENESS OF HEALTH

- B. The Board of Health in the City of Salem recognizes that the methods commonly employed in the removal of exterior paint and abrasive blasting often result in creation of uncontrolled particulate matter and other by-products, which, in addition to creating to a nuisance, may result in the inhalation or ingestion of dust and contamination of soil, water and air. In addition, the inhalation central nervous system, reproductive system, kidneys, liver, and other vital systems in both children and adults.

The Board of Health recognizes that restrictions on exterior paint removal and abrasive blasting will enable paint removers and abrasive blasting operator's better control particular matter and other by-products and thereby minimize the nuisance and health effects associated with these activities.

Section 2- Definitions

For the purpose of this regulation, the following definitions shall apply:

2.0 "Abrasive Blasting" – Shall include dry, wet, mist abrasive blasting, which are defined as follows:

"Dry abrasive blasting"– propulsion of the stream abrasive blasting material by means of air, stream, or other gas under pressure, for the purpose of paint removal or abrading or cleaning a surface.

"Mist abrasive blasting"– application, for the purpose of paint removal or abrading or cleaning a surface, of a water mist together with an abrasive material which has been propelled by means of compressed air, steam, or other gas.

“wet abrasive blasting” – application, for the purpose of paint removal or abrading or cleaning of a surface, of a stream of water under pressure together with an abrasive material which has been propelled by means of compressed air, steam, or gas.

2.1 “Abrasive Material”- substance which is used to abrade or clean a surface.

2.2 “Air Contaminant”- any substance in the ambient air space including, but not limited to, dust, fume, mist, odor, smoke, vapor, heat, any combination of thereof, or any reaction product thereof.

2.3 “Air contamination Source”-any source at, from, or by reason of which any air contaminant is emitted directly into the ambient air space.

2.4 “Ambient air space”- all of the air space outside of the shrouded or contained work air spreading in all directions indefinitely.

2.5 “Atmospheric Pollution” – the presence in the ambient air space of one or more air contaminations or combination thereof in such concentration and of such duration as

- a) to be noticeable by sight or smell
- b) to be injurious or tend to be injurious to human or animal life, vegetation, or property.
- c) to unreasonably interfere with comfortable enjoyment of life and property or the conduct of business.

2.6 “Blood Lead Level Elevation”- blood lead level in an operator of 60 ug lead per 100 g whole blood or greater.

2.7 “By-Products” - used abrasive material, paint, chips, wood chips, dust, water, or any other material resulting from the paint removal or abrasive blasting operation.

2.8”contractor- “A person who contracts to perform exterior paint removal or abrasive blasting work at a certain price or rate.

2.9 “Dangerous Level of Lead” level which materially endangers the health of children or adults, by producing a substantial and serious danger of lead poisoning. When present in paint, a dangerous level shall be deemed pursuant to M.G.L. Chapter 111, ss. 194 and 196, to be the following:

- a) more than 0.5 percent lead by dry weight as measured by an atomic absorption spectrophotometry test the sample or by testing with 6 to 8 percent sodium sulfide.
- b) More than 1.2 milligrams of lead per square centimeter of surface as measured on-site by a mobile X-ray fluorescence analyzer or comparable equipment.

2.10 “Department”- the City of Salem Health Department.

2.11 “Dust”- finely divided solid matter

2.12 “Electric Sanding” – will be considered the use of power tools to remove paint.

2.13 “Emission “- discharge or release to the ambient air space of any air contaminant.

2.14 “Fume” any aerosol resulting from chemical reaction, distillation, or sublimation.

2.15 “HEPA Filter Vacuum Cleaner” – Vacuum cleaner equipped with a high efficiency particulate air (HEPA) filter capable of filtering out particles of 0.3 microns or greater diameter from a body of air at 99.97% efficiency or greater.

2.16 “Low-Level Heating Element” – Controlled heating element which produces a temperature not exceeding 1000 degrees Fahrenheit, does not include torch or flame burning.

2.17 “Mist” – any liquid aerosol formed by the condensation of vapor or by the atomization of liquids.

2.18 “Odor” – that property of gaseous, liquid, or solid materials that elicits; a physiologic response by the human sense of smell.

2.19”Operator”- a person who performs exterior paint removal or abrasive blasting.

2.20”Paint removal”- any surface treatment with the potential for removing or dislodging any surface coating, in its entirety or in part. Methods of paint removal may include but are not limited to: wet, dry, or mist abrasive blasting; sanding; scraping; power washing; and others.

2.21”Particular Matter”- any material that exist in a finely divided form as a liquid or solid in the ambient air.

2.22”Person” – an individual, partnership, association, firm, syndicate, company, trust, corporation, city department, bureau, agency, or any other entity recognized by law as the subject of rights and duties.

2.23”Smoke”- visible aerosol, which may contain fly-ash, resulting from combustion of materials.

2.24”Vapor”- the gaseous state of certain substances that can exist in equilibrium with their solid or liquid states under standard conditions.

Section 3- PERMITS

- 3.0 A permit, specific in location and time, must be obtained from the Department by the owner of the property on which exterior paint removal or abrasive blasting is to occur.
- 3.1 Application for a permit shall be made on form(s) provided by the Department.
- 3.2 The fee shall be determined by the Department based on the estimated number of days to complete the project, at a rate of \$10 per day, with a maximum fee of \$50. For owner- occupants performing work on their own residences, the fee shall be waived.
- 3.3 Permits shall be posted at the work site for the duration of the paint removal or abrasive blasting process.
- 3.4 Permits must be obtained a minimum of two weeks prior to the commencement of paint removal or abrasive blasting in order to allow for notification of abutters, when required.
- 3.5 The property owner is responsible for notifying in writing all abutters one week prior to conducting abrasive blasting. An advisory notification form will be provided by the Department to the owner along with his permit for distribution of abutters

Section 4-ABRASIVE BLASTING AND ELECTRIC STANDING

- 4.0 Abrasive blasting and electric standing on exterior surfaces of any structure within the City of Salem is prohibited
- 4.1 Variances for provision 4.0 of this regulation may be granted at the discretion of the Board of Health on a case-by-case basis as follows:
 - a) The use of wet or mist abrasive blasting may be permitted on certain masonry and metal surfaces in instances in which alternative methods of paint removal are not feasible.
 - b) Variances granted from provision 4.0 of this regulation do not release the operator from the other requirements of this regulation

Section 5- LEAD TESTING

- 5.0 Lead testing will not be required on the surfaces on which only manual methods of paint removal are to be employed.

- 5.1 lead testing will be required on the surfaces for which a variance permitting wet or mist abrasive blasting is sought. Such test must be conducted on-site by Massachusetts licensed lead paint inspector and the results must be submitted to the Department prior to the issuance of a permit. Cost of the testing is to be borne by the property owner.

Section 6 – CONDITIONS AND TERMS

- 6.0 If no lead testing of surfaces to be worked upon is performed, all work must be conducted in accordance with the requirements of 454 CMR 22.11, “Safety Procedures for renovation and/or Rehabilitation”, and in accordance with all applicable sections of 454 CMR 11.00, “Structural Painting Safety Code.”
- 6.1 If the testing required in 5.1 or otherwise reveals the presence of a dangerous level of lead of lead, a permit will be granted only if the application is accompanied by a copy of a signed contract with a Massachusetts licensed deleading contractor who must conduct all work in accordance with Deleading Regulations: 454 CMR 22.00, Lead Paint Regulations: 105 CMR 460.000 and this regulation.
- 6.2 Dry abrasive blasting may not be performed on exterior surfaces of any structures within the City of Salem.
- 6.3 Mist abrasive blasting
- a) Mist abrasive blasting may not commence unless and until a variance for that site has been granted in writing by the Board of Health.
 - b) Mist abrasive blasting activities shall be so enclosed or curtained off to prevent the escape onto public property, rights-of-way, or the property of others, any air contaminant, particulate matter, water, or other byproducts of the operation.
 - c) The exterior of all windows within the shrouded area must be sealed with 6 mil plastic and taped.
 - d) All ground area within the work area shall be covered with 6 mil plastic to prevent any escape of a particular matter.
 - e) Abrasive blasting may not commerce, and must cease once started, if the judgment of an authorized agent of the Department conditions

of wind velocity or wind gusting exist such that total containment of particulate matter within the shrouded work area would be impossible.

- f) All enclosures are to be inspected prior to the start of each work day by the operator. Enclosures which show excessive wear at any time, I.e. large holes or tears, are to be adequately repaired or discarded. All enclosure which are joined together shall be adequately fastened to prevent any escape of a particulate matter
- g) The following precautions shall be taken at all times during the blasting operation:
 - 1. Protection of gardens, vegetation, or specially planted areas on-site, and adjacent properties.
 - 2. protection of permanent play equipment, sandbox, pools, and any other item that may not be readily removed from possible exposure to particulate matter on-site or adjacent properties.
 - 3. Adequate protection of all areas where the blasting operation is in close proximity to playgrounds, parks, or any other area where use by the general public may pose a potential health problem. Such protection shall include at a minimum the use of 6 mil plastic ground cloths to fully cover all susceptible areas.
- h) The operator shall be responsible for securing the work-site, and cease operation immediately if it is found that any member of the general public is exposed to the abrasive material, air contaminants, or any by-products of the operation.
- i) Operators shall confine work time to normal daylight working hours, to permit proper and adequate clean-up. Any exception to the provision must receive special approval from the department

6.4 Wet abrasive blasting

- a) Plan for containment and disposal of abrasive material, water and particulate matter must be submitted to the Department when applying for a permit.
 - b) Ground cloths (6 mil Plastic) will be required to cover all unpaved areas within the work area.
- 6.5 The reuse of abrasive material is prohibited, unless such material has been cleaned and recycled
- 6.6 Abrasive materials shall not contain any siliceous sand
- 6.7 Operators engaged in the performance of any aspects of blasting operation shall be protected against the inhalation of particulate matter through the use of all protective devices including, but not limited to, powered-air purifying respirators (PAPR) with high efficiency filters approved by OSHA or the American National Standards Institute (ANSI), goggles, and protective clothing.
- 6.8 Other Exterior Surface Treatments
Other methods of paint removal including but not limited to dry scraping, dry scraping with the aid of chemical solvents (excluding methylene chloride solutions), dry scraping with the aid of low-level heating elements, wire brushing, power washing, and hand sanding, are permitted with the following restrictions:
 - a) All ground area and vegetation within the work area shall be covered with 6 mil plastic to fully contain particulate matter.
 - b) Any other precaution deemed necessary by the Department to prevent the contamination of the interior of the structure itself and to prevent the escape onto public property of others, any air contaminant, particulate matter, or by-products of the operation, shall be employed.

Section 7 – CLEAN-UP PROCEDURES

- 7.0 For abrasive blasting operations, a HEPA vacuum shall be used to remove all particulate matter from all the surfaces, including the ground, shrubs, windows, doorways, ledges, and inside of shrouding within the shrouded work area and ten feet beyond work area when shrouding is removed. Shrouding may be left in place for the duration of the operation as long as the vacuuming of the area inside the shrouding takes place at the end of each working day. Additional clean-up may be done but no other method can replace the above procedures.

- 7.1 For all paint removal and abrasive blasting operations, the work site is to be completely cleaned at the end of each work day.
- 7.2 It shall be the responsibility of the operator to prevent ground contamination as a direct result of any abrasive material, chemical, or solvent used during the paint removal or abrasive blasting operation or failure to recover all material and by-products. Operator shall assume all clean-up costs and liability resulting from failure to comply with this and other applicable regulations or failure to adequately contain and dispose of by-products of the operation.
- 7.3 The cleaning shall include additional adjacent areas as deemed necessary by the Department.
- 7.4 Disposal of all particulate matter shall be in accordance with all applicable Department of Environmental Protection (DEP) regulations at site approved by DEP. Lead-contaminated waste materials removed from homes by homeowners is exempt from the Massachusetts Hazardous Waste Regulations and must be disposed of in accordance with 310 CMR 19.00: regulations for the disposal of Solid Waste by Sanitary Landfills, at an approved DEP sanitary landfill. Such waste material, however, removed from any structure by a contractor in any quantity, must undergo the toxicity characteristic leaching procedure test (TCLP) at certified laboratory. Waste containing 5 parts of lead per million parts of leachate is subject to 310 CMR 30.00; Hazardous Waste Regulations, and must be disposed of in accordance with all applicable regulations.
- 7.5 Wastewater generated from mist or wet abrasive blasting operations must also undergo TCLP testing to determine if it is hazardous waste must be disposed of in accordance with 310 CMR 30.000. Non-hazardous wastewater is subject to the requirements of 314 CMR 1.00 through 15.00 and may require a permit to discharge to a sewerage treatment plant, in accordance with 314 CMR 7.00.

Section 8- EVIDENCE OF VIOLATION

- 8.0 Authorized agents of the Department shall conduct on-site inspections to ensure compliance with all applicable regulations

- 8.1 Any of the following conditions shall be prima facie evidence of violations and will result in the immediate cessation of the paint removal operation. Work can resume when the inspector is satisfied that the violation(s) has/have been corrected:
- a) Operating without an exterior paint removal or abrasive blasting permit
 - b) Failure to enclose or curtain off that area of the building undergoing abrasive blasting.
 - c) Visible emission of particulate matter or air contaminants outside of the area enclosed in accordance with provisions 6.4(b) and 6.5(a).
 - d) Failure to ensure adequate precautions against ground surface contamination as required by provisions 6.4 (d) and 6.5 (b).
 - e) Failure to clean property in accordance with Section 7
 - f) Evidence of blood lead level elevation in operator
- 8.2 If the work is stopped twice on the same day due to violations, the permit will automatically be revoked.

Section 9 – VARIENCE

- 9.0 The Board of Health or its authorized Agent may vary the application of any provision of these regulations with respect to any particular case, when, in its opinion, the enforcement thereof would do manifest injustice; provided that the decision of the Board of Health is not in conflict with the spirit of these standards
- 9.1 Request for a variance from any part of this regulation must be submitted in writing to the Board of Health at the time of application for a permit. Such request must be accompanied by the reasons why the variance should be considered and the manner in which the spirit of these regulations is to be upheld, resulting in a comparable degree of public protection.
- 9.2 Any variance granted by the Board of Health must be in writing with a copy available to the public at all reasonable hours in the office of the Board of Health.

- 9.3 An applicant for a variance shall remain subject to prosecution and in violation under the terms of this regulation unless or until a variance is granted.
- 9.4 The Board of Health or its authorized Agent shall evaluate all applications for variance from the requirements of this regulation and may grant said variances subject to such terms, conditions, and requirements as it may deem reasonable to achieve maximum compliance with the provisions of these regulations.

Section 10-SEPARABILITY

- 10.0 Each part of these regulations is construed as separate to the end that if any section, item, sentence, clause, or phrase is held invalid for any reason, the remainder of these regulations shall continue in full force and effect.

Section 11-PENALTY

- 11.0 Operators operating in violation of this regulation shall be punished, for the first offense, by a fine of not less than fifty dollars, nor more than one hundred dollars, and for any subsequent offense, by a fine of not less than two hundred dollars, nor more than five hundred dollars. Each day or part thereof violations, whether such violation be continuous or intermittent, shall be constructed as a separate and succeeding offense. (M.G.L Chapter 111, Section 31 C)

Compiled and submitted by
Robert E. Blenkhorn, C.H.O. , Health Agent
March 12, 1991

Approved July 9, 1991

By Board of Health

George H. Levesque, Chairman

Robert E. Fouhey

Peter H. Saindon

Martin Fair

Gene Collins

Irving Ingraham M.D.

Brian Condron

Barabara A. Sirois, Clerk of the Board
Published in the Salem Evening News
on August 23, 1991

