

HOUSE BILL NO. 936

AMENDMENT IN THE NATURE OF A SUBSTITUTE

(Proposed by the House Committee on Education

on _____)

(Patron Prior to Substitute--Delegate LeVere Bolling)

A BILL to amend the Code of Virginia by adding in Chapter 9 of Title 22.1 an article numbered 4, consisting of sections numbered 22.1-141.3 through 22.1-141.9, relating to public school buildings; indoor air quality standards.

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Chapter 9 of Title 22.1 an article numbered 4, consisting of sections numbered 22.1-141.3 through 22.1-141.9, as follows:

Article 4.

Indoor Air Quality Standards.

§ 22.1-141.3. Scope of article.

The provisions of this article apply to matters relating to indoor air quality in public school buildings occupied by school board employees and students during regular work and school hours.

§ 22.1-141.4. Definitions.

As used in this article, unless the context requires a different meaning:

"Air contaminants" means substances contained in the vapors from paint, cleaning chemicals, pesticides, solvents, particulates, outdoor air pollutants, and other airborne substances that together may cause material impairment to school board employees working in school buildings.

"Building-related illness" means specific medical conditions of known etiology that can be documented by physical signs and laboratory findings. "Building-related illness" includes sensory irritation when caused by known agents, respiratory allergies, asthma, nosocomial infections, humidifier fever, Legionnaires' disease, and the signs and symptoms characteristic of exposure to chemical or

26 biologic substances such as carbon monoxide, formaldehyde, pesticides, endotoxins, or mycotoxins.

27 "Building-related illness" does not include sick building syndrome.

28 "Building system" includes the heating, ventilation, and air conditioning (HVAC) system, the
29 energy management system, and any other system in a school building that may impact indoor air quality.

30 "Designated individual" means an individual who has been given the responsibility by the school
31 board to take necessary measures to assure compliance with this article.

32 "HVAC system" means the collective components of the heating, ventilation, and air conditioning
33 system, including filters and frames, cooling coil condensate drip pans and drainage piping, outside air
34 dampers and actuators, humidifiers, air distribution ductwork, automatic temperature controls, and cooling
35 towers.

36 "HVAC system commissioning report" means a document normally prepared by an architect or
37 engineer that provides verification that the HVAC system is operating in conformity with the design intent.

38 "Renovation and remodeling" mean building modification including removal or replacement of
39 walls, roofing, ceilings, floors, carpet, and components such as moldings, cabinets, doors, and windows;
40 painting; decorating; demolition; surface refinishing; and removal or cleaning of ventilation ducts.

41 "Sick building syndrome" means a situation in which a substantial number of school building
42 occupants are experiencing health and comfort problems and for which the reported symptoms do not fit
43 the pattern of any particular illness, are difficult to trace to any specific source, and resolve upon leaving
44 the school building.

45 **§ 22.1-141.5. Compliance program.**

46 A. Each school board shall identify a designated individual and ensure that such designated
47 individual is familiar with the requirements of this article. Such designated individual shall ensure, at
48 minimum, that the following actions are implemented and documented for each school building in the
49 local school division:

50 1. The establishment of and adherence to a preventive maintenance schedule for the HVAC system
51 in accordance with the manufacturer's recommendations or with accepted practice, including checking air
52 filters and changing them as necessary, checking belts and changing them as necessary, lubricating

53 equipment parts, checking the functioning of motors, confirming that all other components of such system
54 are in operating order, replacing or repairing any damaged or inoperable components as appropriate, and
55 checking visually for microbial or fungal growth on any parts of such system that has standing water.
56 Additionally, whenever (i) the carbon dioxide level exceeds 1,000 parts per million or the temperature in
57 the school building is outside of the range of 68 to 79 degrees Fahrenheit, the entire HVAC system shall
58 be checked to confirm that all components of such system are in operating order and any damaged or
59 inoperable components shall be replaced or repaired as appropriate and (ii) contamination of the make-up
60 air supply is identified and documented, including from sources such as cooling towers, vents, and vehicle
61 exhaust, then the make-up inlets or exhaust air outlets, or both, shall be relocated or the source of the
62 contamination eliminated;

63 2. The implementation of the use of general or local exhaust ventilation in areas of the school
64 building where housekeeping and maintenance activities involve the use of equipment or products that
65 could reasonably be expected to result in hazardous chemical or particulate exposures;

66 3. The maintenance in operable condition of windows, doors, vents, stacks, and other portals
67 designed or used for natural ventilation in buildings without mechanical ventilation; and

68 4. The prompt investigation of all school board employee complaints of signs or symptoms that
69 may be associated with building-related illness or sick building syndrome.

70 B. Each school board shall maintain and review and update at least annually and whenever it deems
71 necessary based on the circumstances a written plan describing how it will achieve compliance with this
72 article that includes the identity and responsibilities of the designated individual and procedures for (i)
73 following of a preventive maintenance schedule for each building system; (ii) keeping and locating
74 relevant records and compliance documents as set forth in § 22.1-141.8; (iii) investigating school board
75 employee complaints; (iv) responding to signed school board employee complaints that have been
76 submitted to the Department pursuant to § 22.1-141.9 alleging a violation of any applicable air quality
77 standards; (v) notifying school board employees of work that may introduce air contaminants; (vi)
78 controlling microbial and fungal growth and air contaminants; (vii) responding to unsafe temperatures and

79 carbon dioxide levels; (viii) maintaining air quality during renovations and remodeling; and (ix)
80 maintaining natural ventilation in buildings without mechanical ventilation.

81 **§ 22.1-141.6. Controls of specific contaminant sources.**

82 A. When general ventilation is inadequate to control air contaminants emitted from point sources
83 within a school building to below any applicable exposure limits, each school board shall implement other
84 control measures such as local source capture exhaust ventilation or substitution.

85 B. Each school board shall control microbial and fungal contamination in each school building in
86 the local school division by promptly repairing water intrusion that can promote microbial growth or
87 fungal growth, in accordance with the Institute of Inspection, Cleaning and Restoration Certification's
88 ANSI/IICRC S500 Standard for Professional Water Damage Restoration, Fifth Edition.

89 C. Each school board shall remediate damp or wet material in any school building in the local
90 school division, by drying, replacing, removing, or cleaning such materials, in accordance with the
91 Institute of Inspection, Cleaning and Restoration Certification's ANSI/IICRC S500 Standard for
92 Professional Water Damage Restoration, Fifth Edition, within 48 hours of discovery and shall continue
93 such remediation until the water intrusion is eliminated.

94 D. Each school board shall take measures to remove visible microbial or fungal contamination, in
95 accordance with the Institute of Inspection, Cleaning and Restoration Certification's ANSI/IICRC S520
96 Standard for Professional Mold Remediation, Third Edition, however identified, on ductwork,
97 humidifiers, dehumidifiers, condensate drip pans, heat exchange components, other HVAC and building
98 system components, or any other building surface such as drywall, carpeting, and ceiling tiles.

99 **§ 22.1-141.7. Indoor air quality during renovation and remodeling or new construction.**

100 A. Renovation and remodeling or new construction that results in the diffusion of dust, stone, or
101 other small particles, toxic gases, or other harmful substances in quantities hazardous to health shall be
102 safeguarded by means of local ventilation or other protective devices to ensure the safety of school board
103 employees. Renovation and remodeling or new construction work in occupied buildings shall be isolated
104 and air contaminants, dust, and debris shall be confined to the renovation and remodeling or construction
105 area by use of measures such as physical barriers or pressure differentials or by performing the work

106 during periods of minimal building occupancy. Before re-occupancy, work areas shall be cleaned and
107 aired out as necessary. School boards shall use hazard information to select products and to determine
108 necessary measures to be taken to comply with this subsection.

109 B. Before selection and use of paints, adhesives, sealants, or solvents or installation of insulation,
110 drywall, particle board, plywood, floor coverings, carpet, textiles, or other materials in the course of
111 renovation and remodeling or new construction, each school board shall check product labels or seek and
112 obtain information from the manufacturers of such products to determine whether they contain volatile
113 organic compounds such as solvents, formaldehyde, or isocyanates that could be emitted during regular
114 use.

115 C. Each school board shall notify relevant school board employees at least 24 hours in advance,
116 or promptly in emergency situations, of work to be performed on a school building that may introduce air
117 contaminants into their work area.

118 **§ 22.1-141.8. Recordkeeping.**

119 Each school board shall create, retain for at least three years from the date of their creation, and
120 make available for examination and copying within 10 business days of receipt of a request from a school
121 board employee or the Department records to show all maintenance performed on any building system in
122 any school building in the local school division, including the date of the maintenance and the name of
123 the individual or entity who performed the maintenance.

124 **§ 22.1-141.9. Complaint and resolution process.**

125 A. The Department shall establish a process whereby any school board employee may file a
126 complaint against a school board alleging a violation of any applicable provision of this article. The
127 Department shall require each school board, pursuant to such process, to respond to any such complaint
128 within 15 business days of receipt with as-built construction documents; HVAC system commissioning
129 reports; HVAC system testing, adjusting, and balancing reports; operations and maintenance manuals;
130 water treatment logs; and operator training materials, if available, pertinent, and requested by the
131 Department, and with any combination of the following:

132 1. A statement that the complaint is unfounded;

