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HOUSE BILL NO. 936

Offered January 10, 2024

Prefiled January 9, 2024

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.*

Patrons—LeVere Bolling and Reaser

Referred to Committee on Education

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 during regular work 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 biologic substances such as carbon monoxide, formaldehyde, pesticides, endotoxins, or mycotoxins. "Building-related illness" does not include sick building syndrome.

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

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

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

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

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

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

§ 22.1-141.5. Compliance program.

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

1. The establishment of and adherence to a preventive maintenance schedule for the HVAC system in accordance with the manufacturer's recommendations or with accepted practice, including checking air filters and changing them as necessary, checking belts and changing them as necessary, lubricating equipment parts, checking the functioning of motors, confirming that all other components of such system are in operating order, replacing or repairing any damaged or inoperable components as appropriate, and checking visually for microbial or fungal growth on any parts of such system that has

59 standing water. Additionally, whenever (i) the carbon dioxide level exceeds 1,000 parts per million or
60 the temperature in the school building is outside of the range of 68 to 79 degrees Fahrenheit, the entire
61 HVAC system shall be checked to confirm that all components of such system are in operating order
62 and any damaged or inoperable components shall be replaced or repaired as appropriate and (ii)
63 contamination of the make-up air supply is identified and documented, including from sources such as
64 cooling towers, vents, and vehicle exhaust, then the make-up inlets or exhaust air outlets, or both, shall
65 be relocated or the source of the contamination eliminated;

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

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

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

73 B. Each school board shall maintain and review and update at least annually and whenever it deems
74 necessary based on the circumstances a written plan describing how it will achieve compliance with this
75 article that includes the identity and responsibilities of the designated individual and procedures for (i)
76 following of a preventive maintenance schedule for each building system; (ii) keeping and locating
77 relevant records and compliance documents as set forth in § 22.1-141.8; (iii) investigating school board
78 employee complaints; (iv) responding to signed school board employee complaints that have been
79 submitted to the Department pursuant to § 22.1-141.9 alleging a violation of any applicable air quality
80 standards; (v) notifying school board employees of work that may introduce air contaminants; (vi)
81 controlling microbial and fungal growth and air contaminants; (vii) responding to unsafe temperatures
82 and carbon dioxide levels; (viii) maintaining air quality during renovations and remodeling; and (ix)
83 maintaining natural ventilation in buildings without mechanical ventilation.

84 **§ 22.1-141.6. Controls of specific contaminant sources.**

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

88 B. Each school board shall control microbial and fungal contamination in each school building in
89 the local school division by promptly repairing water intrusion that can promote microbial or fungal
90 growth.

91 C. Each school board shall remediate damp or wet materials in any school building in the local
92 school division by drying, replacing, removing, or cleaning such materials within 48 hours of discovery
93 and shall continue such remediation until the water intrusion is eliminated.

94 D. Each school board shall take measures to remove visible microbial or fungal contamination,
95 however identified, on ductwork, humidifiers, dehumidifiers, condensate drip pans, heat exchange
96 components, other HVAC and building system components, or any other building surface such as
97 carpeting and ceiling tiles.

98 **§ 22.1-141.7. Indoor air quality during renovation and remodeling or new construction.**

99 A. Renovation and remodeling or new construction that results in the diffusion of dust, stone, or
100 other small particles, toxic gases, or other harmful substances in quantities hazardous to health shall be
101 safeguarded by means of local ventilation or other protective devices to ensure the safety of school
102 board employees. Renovation and remodeling or new construction work in occupied buildings shall be
103 isolated and air contaminants, dust, and debris shall be confined to the renovation and remodeling or
104 construction area by use of measures such as physical barriers or pressure differentials or by
105 performing the work during periods of minimal building occupancy. Before re-occupancy, work areas
106 shall be cleaned and aired out as necessary. School boards shall use hazard information to select
107 products and to determine necessary measures to be taken to comply with this subsection.

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

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

116 **§ 22.1-141.8. Recordkeeping.**

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

name of the individual or entity who performed the maintenance.

§ 22.1-141.9. Complaint and resolution process.

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

1. A statement that the complaint is unfounded;
2. A description of any remedial action already taken;
3. An outline of any remedial action planned but not yet taken and a timetable for completion of such remedial action; or
4. An outline of any study of such complaint planned but not yet taken and a timetable for completion of such study.

B. Any remedial action or study described in subdivision A 3 or 4 shall be completed as soon as feasible and a written report of the results shall be submitted to the Department within 15 business days of completion.

C. Any school board that plans remedial action as described in subdivision A 3 shall ensure that it complies with all applicable laws, regulations, and codes and that all applicable permits have been obtained in advance.