UCM ASBESTOS & AIR QUALITY REGULATIONS: References 5/25/21

Asbestos: Why must our asbestos be removed? Aren't churches exempt?

- Exposure to Asbestos fibers is a health hazard (see below), especially for children, and is controlled by legislation within schools.
- Churches are not exempt from mitigating health hazards.

Outside Air: Why is this required? Aren't Churches exempt?

- In order to eliminate the asbestos, the existing ducts must be removed. Any 'renovation' of the ductwork triggers the Vermont Energy Code, which requires that outdoor air be supplied for health.
- Churches are not exempt from the requirements of the Montpelier Building Codes, especially as public buildings, which offer spaces for rental to the public.
- Churches are only exempt from portions of the Zoning Ordinance, which determines where specific building types can be developed. Specifically, churches can only be regulated by zoning "…with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off-street parking, loading facilities, traffic, noise, lighting, landscaping, and screening requirements …"

Vermont Department Of Health: Asbestos & Lead In Buildings

Asbestos is a mineral fiber that has been used in building construction materials for insulation and as a fire retardant. Other manufactured goods that may contain asbestos include building materials (for example, roofing shingles, ceiling and floor tiles, paper products, and asbestos cement products), friction products (for example, automobile clutch, brake and transmission parts), heat-resistant fabrics, packaging, gaskets and coatings. Some vermiculite or talc products may contain asbestos.
If these materials are disturbed or damaged in any way—such as when renovating or demolishing a building—asbestos fibers can be released into the air and breathed in. Exposure to asbestos fibers increases the risk of developing health effects—such as lung cancer, mesothelioma and asbestosis.

Exposure to asbestos can be prevented, as long as building owners, homeowners, property owners and contractors know how to reduce or eliminate exposure to airborne asbestos fibers, and what danger signs to look for.

ASBESTOS

For Owners of Rental, Public or Commercial Buildings

1. Before renovating a building, an inspection is required and must be conducted by a Vermont-certified asbestos inspector.
2. Follow all asbestos-related requirements.

If the inspector finds ACM in the building:

- The ACM must be removed by a Vermont-certified asbestos abatement contractor before the renovation.
- The abatement contractor will need to notify the Health Department and the EPA before the project to get a permit from the Health Department.
- If the inspector does not find ACM in the building, you can proceed with the project.

Some ACM can be removed by someone without an asbestos contractor license because they pose less of a health risk—unless they are chipped, ground, sanded, sawed, drilled, abraded, etc. However, the ACM **must be removed before the renovation and safe work practices must be followed** (see Section 6). Please call the Health Department for more information at 802-863-7220 or 800-439-8550 (toll free in VT) or email AHS.VDHALRPGeneral@vermont.gov.

Call your health care provider if you think you or a family member have been exposed to asbestos, even if you or they do not feel sick.
Below are links to resources and more information on asbestos from the Health Department, the Environmental Protection Agency (EPA), and the Agency for Toxic Substances and Disease Registry (ATSDR).

Environmental Protection Agency:

"EPA regulates asbestos in school buildings, public and commercial buildings, at clean-up sites, and in certain asbestos products. EPA and the Occupational Safety and Health Administration (OSHA) are also responsible for regulating environmental exposure and protecting workers from asbestos exposure.

"Many states administer their own asbestos programs, and your home state department of environmental protection or health is generally the best place to start with questions about requirements and/or regulations that may apply to any given asbestos situation; Find your state asbestos contact.

- Amy Danielson, 802-865-7784, amy.danielson@vermont.gov

Are churches that have Sunday school classes, daycare centers, or kindergartens regulated under the Asbestos Emergency Response Act (AHERA)?
The Asbestos Hazard Emergency Response Act (AHERA) applies to public and private non-profit elementary and secondary schools."

"The Asbestos Hazard Emergency Response Act (AHERA) applies to public and private non-profit elementary and secondary schools. The term 'non-profit elementary or secondary school' means any elementary or secondary school as defined in section 198 of the Elementary and Secondary Education Act of 1965. Under this Act, the terms elementary and secondary schools refer to day or residential schools which provide elementary or secondary education determined under state law. Sunday school classes and daycare accommodations would not be subject to AHERA.
However, kindergarten classes conducted in a church may be covered under the Act. Whether or not kindergarten classes conducted in a particular church are subject to AHERA would depend on the stipulations of the state education law in the state in which the church is located. If state law defines elementary and secondary education as K through 12, then that part of the church where kindergarten classes are conducted would be subject to AHERA because the classroom would be included under AHERA's definition of "school building.""

TITLE	SOURCE	DESCRIPTION
Asbestos and Your Health	ATSDR	Information on asbestos exposure and reducing exposure, health effects of asbestos, ATSDR's asbestos work, and links to more resources on asbestos
Asbestos Information	EPA	Information on what asbestos is, how to protect your family, asbestos in school buildings, requirements for building owners and managers, asbestos at cleanup sites, and asbestos professionals

---

Ventilation in the Unitarian Church of Montpelier:

From the Cx Associates Report: Existing Conditions

- "…Efficiency Vermont further recommended installing a ventilation unit that can supply 1250 CFM of outside air, but it is unsure if this value is based on maximum occupancy or building area.
- " The existing ductwork is more than 70 years old, is dirty and is sealed with asbestos tape…"

"As the existing equipment does not bring fresh air into the building, pre-pandemic CO levels were measured at over 3,000 ppm toward end of the second Sunday church service and 4,000 ppm toward end of a (full house) 2-hour choral concert. This is an indication that, even without a pandemic, the building and its occupants would benefit from ventilation air."

Summary of Recommendations:

"…Cx Associates calculated the minimum airflow requirement of each proposed HRV using the maximum space occupancy levels, space square footage, and ASHRAE Standard 62.1[3] minimum ventilation requirements, These calculations are shown in Table 2 below and should be used…"

2015 Vermont Commercial Building Energy Standards:

Chapter 4: Commercial Energy Efficiency

Section C403.2.6. **Ventilation**

"**Ventilation, either natural or mechanical, shall be provided** in accordance with ASHRAE Standard 62.1-2013. Where mechanical ventilation is provided the system shall provide the capability to reduce the outdoor air supply to the minimum required by ASHRAE Standard 62.1-2013. The design professional shall utilize ventilation rates based on the expected occupancy level of the space…"

Chapter 5: Existing Buildings

Section C503.4 **Heating and cooling systems.**

"**New heating, cooling and duct systems that are part of the alteration shall comply with Sections C403**."

Chapter 6: Referenced Standards

"ASHRAE 62.1-2013 Ventilation for Acceptable Indoor Air Quality
C403.2.5, C403.2.6.1, C403.4.1.1.1, C403.4.4.4, C403.4.4.6"

Montpelier Zoning Regulations:

Section 1004. Applicability

1. 1004.A Unless specifically exempted in these regulations (see Chapter 110), all development in the City of Montpelier requires a zoning permit issued in accordance with these regulations.

Section 3103. Community Facilities

1. 3103.A Development associated with a community facility requires approval under these regulations but such reviews shall be limited to only those provisions allowed under the Act §4413(a)(1).
2. 3103.B Community facilities include:
3. (1) State- or community- owned and operated institutions and facilities;
    1. (2) Public and private schools and other institutions certified by the Agency of Education;
    2. (3) Churches and other places of worship, convents, and parish houses;
    3. (4) Public and private hospitals;
    4. (5) Regional solid waste management facilities certified under 10 V.S.A. chapter 159;
    5. (6) Hazardous waste management facilities for which a notice of intent to construct has been received under 10 V.S.A. §6606a.

Act § 4413. Limitations on municipal bylaws

"(a)(1) The following uses may be regulated only with respect to location, size, height, building bulk, yards, courts, setbacks, density of buildings, off-street parking, loading facilities, traffic, noise, lighting, landscaping, and screening requirements, and only to the extent that regulations do not have the effect of interfering with the intended functional use…

"(2) Except for State-owned and -operated institutions and facilities, a municipality may regulate each of the land uses listed in subdivision (1) of this subsection for compliance with the National Flood Insurance Program and for compliance with a municipal ordinance or bylaw regulating development in a flood hazard area or river corridor, consistent with the requirements of subdivision 2291(25) and section 4424 of this title. These regulations shall not have the effect of interfering with the intended functional use."

Montpelier City Building Code (2007): Chapter 4: Building Regulations

Sec. 4-101. PURPOSE AND NECESSITY

This ordinance regulates the design, construction, renovation, alteration, maintenance, demolition and moving of structures, buildings and building systems, and is found and determined by the City Council to be necessary for the protection of the health, safety and welfare of the people of Montpelier and the preservation of the built environment.

Sec. 4-107. EXEMPTIONS FROM PERMITTING REQUIREMENTS

Buildings owned by the United States or by the State of Vermont are exempt from the requirements of this chapter… All existing buildings, building systems, new construction, renovations, and dangerous and hazardous substance use and storage, public and private, must comply with the following codes:

Sec. 4-201. BUILDING & FIRE CODE

Vermont Fire and Building Safety Code, IBC, IRC, NFPA 101, NFPA 1, NFPA 13, NFPA 13R, NFPA 13D as defined below.

EPA: Asbestos-Containing Materials in Schools Rule

"Pursuant to the Asbestos Hazard Emergency Response Act (AHERA), the Asbestos-Containing Materials in Schools rule requires local education agencies to inspect their school buildings for asbestos-containing building material, prepare asbestos management plans and perform asbestos response actions to prevent or reduce asbestos hazards. Public school districts and non-profit private schools, including charter schools and schools affiliated with religious institutions (collectively called local education agencies) are subject to the rule's requirements.
Docket ID: OPTS-62048E; FRL-3269-8"

- Asbestos-Containing Materials in Schools Rule (40 CFR Part 763, Subpart E)

Environmental Protection Agency
PART 763—ASBESTOS
Subparts A–D [Reserved]
Subpart E—Asbestos-Containing Materials in Schools

§ 763.80 Scope and purpose.

(a) This rule requires local education agencies to identify friable and nonfriable asbestos-containing material (ACM) in public and private elementary and secondary schools by visually inspecting school buildings for such materials, sampling such materials if they are not assumed to be ACM, and having samples analyzed by appropriate techniques referred to in this rule. The rule requires local education agencies to submit management plans to the Governor of their State by October 12, 1988, begin to implement the plans by July 9, 1989, and complete implementation of the plans in a timely fashion. In addition, local education agencies are required to use persons who have been accredited to conduct inspections, reinspections, develop management plans, or perform response actions. The rule also includes recordkeeping requirements. Local education agencies may contractually delegate their duties under this rule, but they remain responsible for the proper performance of those duties. Local education agencies are encouraged to consult with EPA Regional Asbestos Coordinators, or if applicable, a State's lead agency designated by the State Governor, for assistance in complying with this rule.

§ 763.83 Definitions.

For purposes of this subpart:
Act means the Toxic Substances Control Act (TSCA), 15 U.S.C. 2601, *et seq.*

Accessible when referring to ACM means that the material is subject to disturbance by school building occupants or custodial or maintenance personnel in the course of their normal activities.

Damaged or significantly damaged thermal system insulation ACM means thermal system insulation ACM on pipes, boilers, tanks, ducts, and other thermal system insulation equipment where the insulation has lost its structural integrity, or its covering, in whole or

in part, is crushed, water- stained, gouged, punctured, missing, or not intact such that it is not able to contain fibers. Damage may be further illustrated by occasional punctures, gouges or other signs of physical injury to ACM; occasional water damage on the protective coverings/jackets; or ex- posed ACM ends or joints. Asbestos debris originating from the ACBM in question may also indicate damage.

Friable when referring to material in a school building means that the mate- rial, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously non- friable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

Potential significant damage means circumstances in which:
(1) Friable ACBM is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities.
(2) There are indications that there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated due to factors such as changes in building use, changes in operations and maintenance practices, changes in occupancy, or recurrent damage.
(3) The material is subject to major or continuing disturbance, due to factors including, but not limited to, accessibility or, under certain circumstances, vibration or air erosion.
Preventive measures means actions taken to reduce disturbance of ACBM or otherwise eliminate the reasonable likelihood of the material's becoming damaged or significantly damaged.
Removal means the taking out or the stripping of substantially all ACBM from a damaged area, a functional space, or a homogeneous area in a school building.
Repair means returning damaged ACBM to an undamaged condition or to an intact state so as to prevent fiber release.
Response action means a method, including removal, encapsulation, enclosure, repair, operations and maintenance, that protects human health and the environment from friable ACBM.

Thermal system insulation means material in a school building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes.
Thermal system insulation ACM means thermal system insulation that is ACM.
Vibration means the periodic motion of friable ACBM which may result in the release of asbestos fibers.

§ 763.90 Response actions.
(a) The local education agency shall select and implement in a timely manner the appropriate response actions in this section consistent with the assessment conducted in §763.88. The response actions selected shall be sufficient to protect human health and the environment. The local education agency may then select, from the response actions which protect human health and the environment, that action which is the least burdensome method. Nothing in this section shall be construed to prohibit removal of ACBM from a

school building at any time, should removal be the preferred response action of the local education agency.
(b) If damaged or significantly dam- aged thermal system insulation ACM is present in a building, the local education agency shall:
(1) At least repair the damaged area.
(2) Remove the damaged material if it is not feasible, due to technological factors, to repair the damage.
(3) Maintain all thermal system insulation ACM and its covering in an in- tact state and undamaged condition.
(c)(1) If damaged friable surfacing ACM or damaged friable miscellaneous ACM is present in a building, the local education agency shall select from among the following response actions: encapsulation, enclosure, removal, or repair of the damaged material.
(2) In selecting the response action from among those which meet the definitional standards in §763.83, the local education agency shall determine which of these response actions protects human health and the environment. For purposes of determining which of these response actions are the least burdensome, the local education agency may then consider local circumstances, including occupancy and use patterns within the school building, and its economic concerns, including short- and long-term costs.
(d) If significantly damaged friable surfacing ACM or significantly dam- aged friable miscellaneous ACM is present in a building the local education agency shall:
(1) Immediately isolate the functional space and restrict access, unless isolation is not necessary to protect human health and the environment.
(2) Remove the material in the functional space or, depending upon whether enclosure or encapsulation would be sufficient to protect human health and the environment, enclose or encapsulate.
(e) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for damage is present in a building, the local education agency shall at least implement an operations and maintenance (O&M) program, as described under § 763.91.
(f) If any friable surfacing ACM, thermal system insulation ACM, or friable miscellaneous ACM that has potential for significant damage is present in a building, the local education agency shall:
(1) Implement an O&M program, as described under § 763.91.
(2) Institute preventive measures appropriate to eliminate the reasonable likelihood that the ACM or its covering will become significantly damaged, deteriorated, or delaminated.
(3) Remove the material as soon as possible if appropriate preventive measures cannot be effectively implemented, or unless other response actions are determined to protect human health and the environment. Immediately isolate the area and restrict access if necessary to avoid an imminent and substantial endangerment to human health or the environment.
(g) Response actions including removal, encapsulation, enclosure, or repair, other than small-scale, short-duration repairs, shall be designed and conducted by persons accredited to design and conduct response actions.