

The House Committee on Education:

Performance of large building radon testing in accordance with MALB-2014 is an involved process.

I want to frame things in terms of limitations. This may help the Committee decide the timeframe question.

Following are a few items in MALB-2014 that are important.

- 1). Testing should be performed under normal occupied operating conditions. This means when school is in operation and conditions are most likely to emphasize a clear characterization of a radon hazard. This does not mean Summer vacation, Dec./Feb./April breaks, Holidays, weekends or other times when school is not in session.
- 2). Short term testing is relevant and must be performed over 3 or 4 (continuous) significantly occupied days with test durations as close as practicable to durations of 72 hours to 96 hours, and as close as practicable to increments of 24 hours.
- 3). Testing in cooler climates (i.e., Vermont) should be performed during the colder months (i.e., October to March). This will allow for the best opportunity to determine if a radon hazard is present. Closed buildings will theoretically trap radon gas as opposed to more open buildings where fresh air can dilute radon concentrations. We expect to find higher readings in most buildings during colder months.

When we put these three (3) factors together, testing a school building might look like the following. I've framed it in terms of a typical week for one (1) professional. Testing device placement must occur on Monday and Tuesday to allow for device pickup on Thursday and Friday. This is not as simple as it may seem. At least one (1) device must be placed in every room touching ground level. Larger rooms require multiple devices. There are exceptions and other rules but that's an adequate summary. This is required because of the known variability in geology and building condition. Your house may be below the EPA action level but your next door neighbor's may have high readings. Similarly, the Gym/Cafeteria in a school may be below the action level but the Spanish Classroom at the other end of the building may be elevated. So imagine, hoofing the equipment from room to room and entering while a class is in session. The process will be somewhat arduous including a brief explanation and answering inevitable questions. My point is that one (1) professional may only be able to place devices in two (2) or, possibly, three (3) small schools on any given Monday. Larger schools may take most of the day. Regional high schools may take Monday and Tuesday. Of course, there may be an opportunity to place devices in small schools before classes start but that may be impractical to expect a professional to get up in the middle of the night, drive some distance and place all devices before 7:30 - 8:00 am (and then repeat the process three (3) days later). Devices cannot be disturbed during the testing period but they must be placed somewhat centrally in a room. They cannot be placed around the edge of a room or necessarily "out of the way". This may be challenging for many reasons. For instance, the Wednesday night basketball league cannot move the devices placed in the Gym while they play hoops. Wednesday would be devoted to planning for the next week's testing, including site visits to meet with a facilities representative, learn about the building's mechanical systems and obtain (hopefully) accurate floor plans. These are some of the other components of MALB-2014 that are required and potentially time consuming if the work is to be conducted properly.

Thursday and Friday would be devoted to device pickup, logging samples and shipping to the analytical service. Pickup will be quicker than placement so there may be an opportunity to conduct a site visit at an adjacent school for future testing.

Somewhere in that week, there also needs to be time for report writing. MALB-2014 outlines the components of a quality report. It will take time to compile an accurate and useful document. One of the limiting factors may be lack of quality floor plans and the need for the professional to draw their own.

Please note that there is also a re-testing requirement in MALB-2014 for rooms/buildings that determine levels above the action level. This will eventually take away time from initial testing because addressing known issues will become a priority.

What does this all mean?

I've looked at my son's 2020 - 2021 school calendar. It looks like there were thirty four days (34) where device placement could occur during Octb. 2020 - Mar. 2021 in accordance with MALB-2014 (assuming there was no pandemic). That would mean one (1) professional might be able to test 60 - 70 small schools and much fewer large school buildings in one (1) year.

There are 250 public school buildings in Vermont. 28 of them are regional High Schools. If this rule is going to be followed utilizing the Health Department as the testing professionals, H.426 is likely too aggressive relative to completion by January 23, 2023. If the work will be conducted by the private sector, there is always a way to get things done. To meet the proposed deadline would require multiple professionals, possibly multiple firms. This may raise questions about consistency and also place demands on the State office managing the testing program.

MALB-2014 states that re-testing should occur every five (5) years. One approach to the H.426 timeframe would be to require all buildings be tested before April 2026. This would set up a manageable five (5) year testing cycle.

The downside of this approach would be that some schools would not be tested in the short term. If elevated levels do exist in these buildings, we may not be adequately protecting public health.

My concern about a tight timeframe is that quality may suffer.

I was the first Technical Coordinator of the VDH Asbestos Program back in the late 1980's. The new EPA School Rule promulgated at that time had a very tight timeframe for initial asbestos building inspections. There simply were not enough qualified inspectors available. Hindsight has shown that the quality of work performed to meet the tight EPA deadline was not adequate for future use by building managers.

Thanks,

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