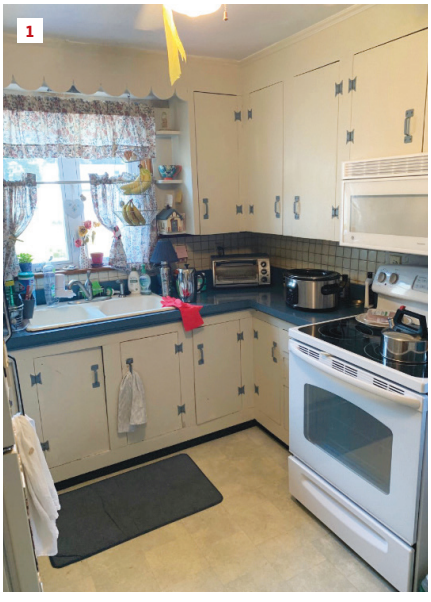
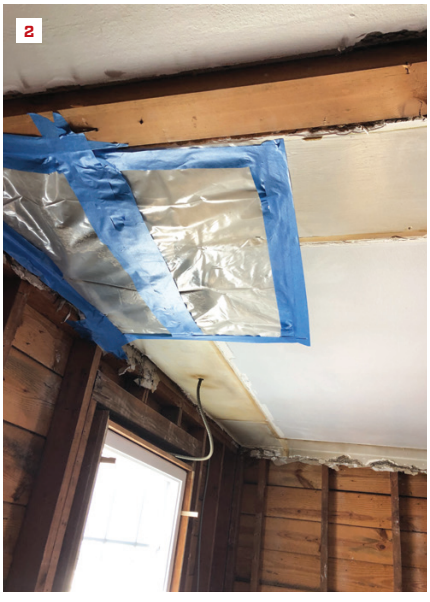
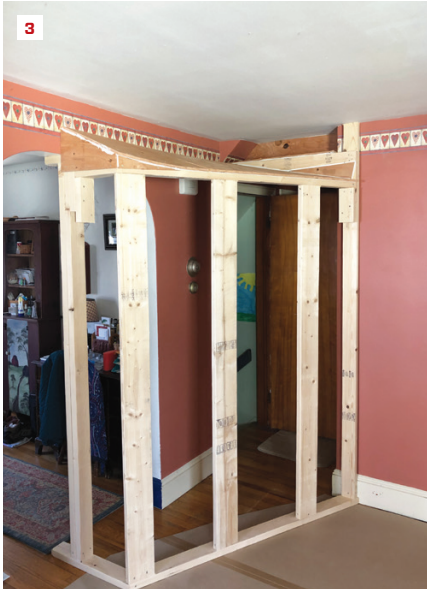
BY MIKE WHALEN

Managing Asbestos During a Remodel







"Before" image of the kitchen in the client's late-1950s Cape-style home **(1)**. Work stopped when vermiculite was found in the ceiling; the author quickly sealed off the demo hole and around a ceiling light after its discovery **(2)**. A temporary 2-by wall was framed in the middle of an archway to isolate the kitchen and to allow access to the bathroom, bedrooms, and basement **(3)**.

I'm a project manager for DBS Remodel, a residential remodeling company based in Poughkeepsie, N.Y. A few months ago, in the midst of remodeling a kitchen, we came across what we believed to be vermiculite insulation above the room's plaster ceiling. Upon discovery, we quickly sealed up the ceiling with tape and plastic and notified the homeowners. Our clients had chosen to remain in their late-1950s Cape-style home during the remodel, so we felt a sense of urgency when reaching out to asbestos abatement companies to confirm our find.

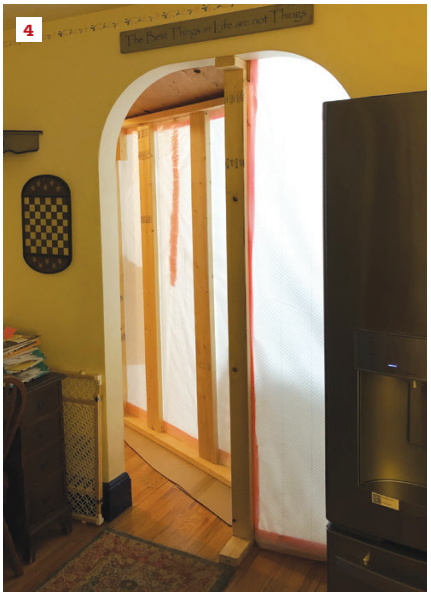
Kevin Mathisen of Lucas Environmental Services out of Kingston, N.Y., made a jobsite visit and verified that the light granular insulation was vermiculite. He noted that while it may or may not contain asbestos, a substantial amount of vermiculite that had been sold throughout the U.S. under the trade name "Zonolite" contained varying amounts of asbestos. As a result, New York state regulations assume vermiculite to be an asbestos-containing material.

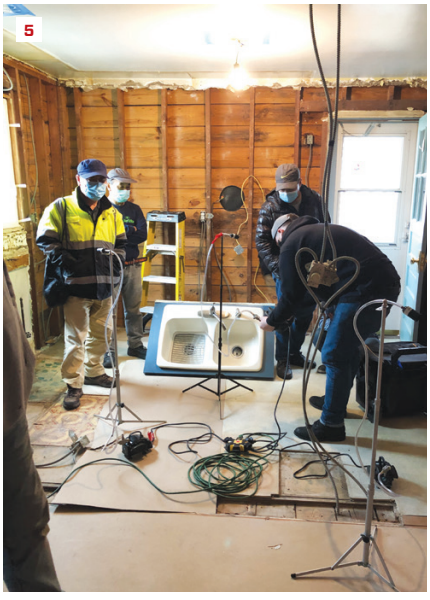
Size matters. Our client's kitchen was 150 square feet and Mathisen explained that New York state defines any work under 160 square feet as a "small" abatement project (square footage is used to estimate asbestos-tainted materials like floor tile or vermiculite, while linear footage is used for materials like pipe insulation). For abatement projects, square footage is one of various regulatory thresholds that impact the scope of the asbestos mitigation work. Even "small" projects require the rigors of a licensed abatement contractor setting up a containment area, removing the asbestos, and demobilizing the work area. In addition, baseline air testing, visual inspection of the containment, visual inspection of the completed removal area, and collection of final air samples must be conducted by a third-party air monitoring firm to avoid conflict of interest. See "Mobilizing for a Small Abatement Project" on pages 30 and 31.

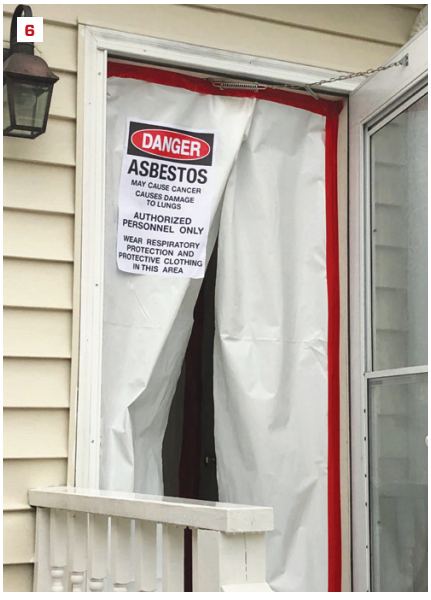
The estimate was $6,400 for the abatement work and an additional $800 for monitoring-supervising services. While the homeowners noted that neighbors up the road had just renovated a home similar in style and vintage to theirs and didn't have an asbestos abatement, our clients quickly came to appreciate the steps we took to bring Lucas on board and that the vermiculite would be removed properly, even though it would add to the project's cost.

The abatement. The separation wall between the kitchen and the rest of the living area had to be beefier than a standard ZipWall dust barrier, so I framed a temporary wall out of 2-bys—on which

Photos by Mike Whalen and Kevin Mathisen







A double layer of 6-mil poly is installed on the framed wall by the abatement contractor **(4)**. A third-party air monitoring firm sets up equipment to take a baseline air test **(5)**. Warning signage is placed at the entrance of the containment area **(6)**. Two layers of 6-mil reinforced fire-retardant poly, with seams sealed, cover floors, walls, and non-abatement surfaces.

Lucas later installed a double layer of woven reinforced plastic—in the middle of an open archway. This gave the clients access to their bathroom and bedroom areas. Once the third-party monitor, JPM Environmental Solutions, out of Newburgh, N.Y., had conducted baseline air testing, Lucas set up its containment shell and warning signage and cordoned off outdoor work areas. Wearing Tyvek suits, respirators, and gloves, workers wetted down the vermiculite with sprayers and bagged up the material, sealing the heavy-mil bags with duct tape. The bags were brought out to their box truck and later transported to their shop.

JPM Environmental then inspected the abatement work and gave the OK, and the abatement crew HEPA vacuumed and wet-wiped the work area. Once it was clean, JPM conducted another visual inspection, and upon its approval, the Lucas crew exited the work area via a three-chambered decontamination/waste-out system, which consisted of a changing room, a shower room, and an equipment room. A post-abatement settling period began, to allow the room to dry and the air to settle. A couple of days later, JPM Environmental returned to conduct its final air check to verify the amount of fibers in the air was below the legal limit.

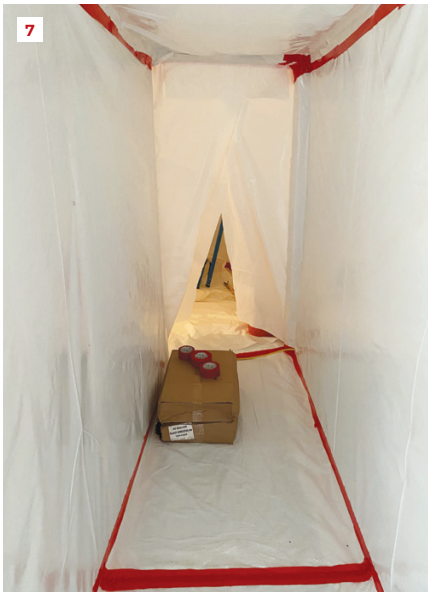
Given the all clear by JPM, the abatement crew returned and broke down the work area, disposing of the poly sheeting in asbestos waste bags. The abatement process came to an end, and after four business days, we resumed remodeling the kitchen.

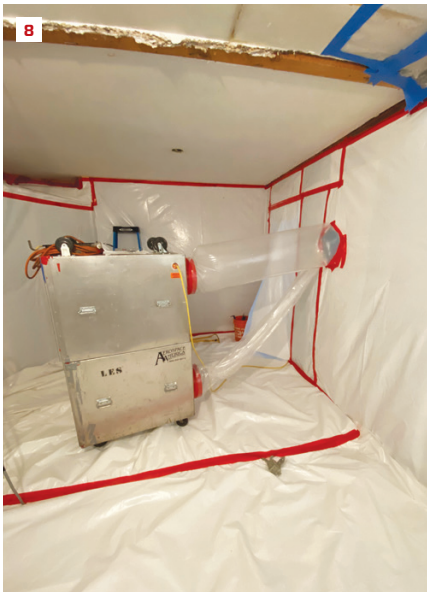
Mike Whalen is a project manager at DBS Remodel, a design-build residential remodeling company based in Poughkeepsie, N.Y.

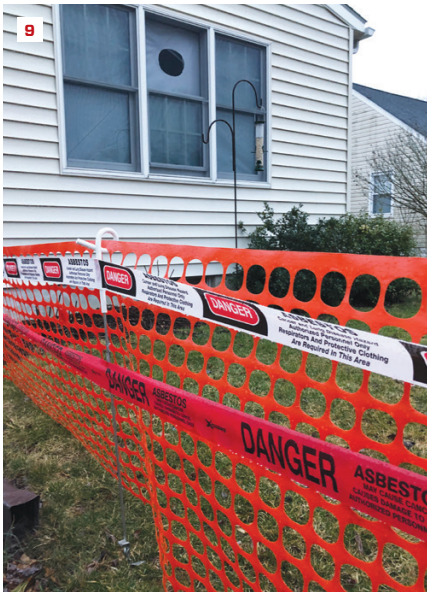
MOBILIZING FOR A SMALL ABATEMENT PROJECT

I've been doing asbestos abatement work in New York state for 16 years. The following is a brief summary of the typical procedure we follow when removing asbestos-contaminated friable waste from a "small" project (less than 160 square feet of asbestos material) as defined by the New York State Department of Labor (NYSDOL).

1. A licensed air monitoring firm is contracted to conduct material testing and air monitoring and may act as the abatement contractor supervisor.
2. A licensed abatement contractor is hired to complete the removal project.
3. A paper building occupant notice is placed on entrance doors three days prior to the project's start.
4. The third-party air monitoring firm collects background air sampling to establish a baseline.
5. The abatement firm mobilizes the project and installs a fully functional decontamination/waste-out system stocked with PPE equipment and cleaning materials. The area is demarcated with "danger asbestos" barrier tapes and signage.
6. The work area is prepped, which includes installing







The enclosed hall shown here will be fitted out with a three-chambered decontamination/waste-out system consisting of a changing room, a shower room, and an equipment room **(7)**. A 1,800-cfm HEPA-filtered air scrubber **(8)** exhausts to an exterior area that is fenced in with orange temp fencing and posted with warning signage and barrier tapes **(9)**.

two layers of 6-mil poly at all openings, light fixtures, and outlets within the space. Floors, walls, and non-abatement surfaces are covered with two layers of 6-mil reinforced fire-retardant poly (seams are overlapped and sealed using T-50 staples, spray adhesive, and poly tape to ensure the containment is airtight). HEPA-filtered negative air scrubbers are installed and exhausted to an exterior area that is fenced in with orange temp fencing and demarcated with "danger asbestos" signage and barrier tapes.

7. A pre-abatement waiting period is observed to ensure the containment remains intact while under negative pressure.
8. For the abatement, workers don Tyvek suits, half-face respirators, and gloves and enter the work area to remove the asbestos material using "wet methods" (an airless sprayer is used to wet the material down during bulk removal—NYSDOL explicitly prohibits dry removal). The removed material is immediately placed into 6-mil asbestos waste bags that are then sealed using duct tape. Once bulk removal is complete, all removed material is bagged, cleaned, and placed into a second 6-mil asbestos waste bag. That bag is sealed and labeled with a generator label showing both abatement contractor and homeowner information and then removed from the work area (the waste is later placed into a properly lined waste container before being transported to an approved waste disposal facility). The work area is then HEPA vacuumed and wet-wiped. Once it's considered clean, the contractor supervisor conducts a visual inspection; if acceptable, the workers decontaminate out of the work area and a post-abatement drying and settling period is observed.
9. The third-party air monitoring firm returns to inspect the work area, and if it's found acceptable, the firm collects final air clearances and those samples are sent to a testing lab.
10. Once air-sample results are returned and pass the sampling criteria, the abatement crew can return and demobilize the work area. All polyethylene sheeting is carefully dismantled and placed into asbestos waste bags in the same manner as the asbestos waste, as it's considered part of the project's waste. Once the containment is removed, the decontamination/waste-out system along with the barrier tapes and signage can be removed from the site. Project is demobilized and considered complete.

Kevin Mathisen owns and operates Lucas Environmental Services, in Kingston, N.Y.