

the upper living area. Setting up the air flow this way moves air into the basement from the living space, and gives radon little opportunity to move into the upper floors from the basement. Remember to seal air ducts in the basement that supply the house with heated or cooled air, because the furnace circulation fan could bypass the heat exchanger and pull radon into the upper part of the house. Also, place the heat exchanger inlet and outlet far enough apart to prevent cross-contamination.

If well water is a major source of radon in the building, there are fairly simple solutions: filters and aeration tanks. (See information at end of article.)

We continually turn up new information on how radon enters buildings and how it can be controlled. You may well encounter a situation that we have not covered in this article. Once again, don't panic. The basic principles still apply. The radon is coming from somewhere. Your plan of attack will be to identify the source and to control it as close to the points of entry as possible. Where possible, seal the radon from the living space and exhaust it outdoors. If this can't be done, dilute it with outside air.

Air-cleaning

Filtering the air with electrostatic air cleaners or high-efficiency filters (HEPA's) doesn't remove radon gas from the air, but it can reduce the concentration of radon by-products or "daughters", which cause the health risks. Unfortunately, the issue is complicated by the fact that after filtering, the type of radon daughters (known as "unattached") left behind may be more harmful—reducing the effectiveness of the air cleaning. Until this is better understood, we do not recommend this approach.

Did the plan work?

After completing your work, measure for radon in the same places you did before—the living area and the basement. Quick short-term measurements are invaluable for feedback. Did sealing the cracks do the job, or do you need sub-slab fans too? Is one sub-slab vent enough or do you need three?

But it is important to measure long-term averages as well, because a house behaves differently from hour to hour, day to day, and season to season. For

example, when the furnace kicks on in the winter, the stack exhaust puts a negative pressure on the basement. In many cases, this increases the flow of radon into the building. What worked well in the summer may be inadequate in the winter. ☺

Where to Get Monitors

Track-etch radon monitors are available from R.S Landauer Jr. & Co., a Division of Tech/Ops, 2 Science Rd., Glenwood, Ill. 60425 (312) 755-7000; and Terradex Corp., 460 N. Wiget Ln., Walnut Creek, Calif. 94598 (415) 938-2545

One-week charcoal adsorption radon monitors are available from Air Chek, P.O. Box 100, Penrose, N.C. 28766 (704) 862-4037; and Radon Project, Physics Dept., University of Pittsburgh, Pittsburgh, Pa. 15260 (412) 624-3513.

Radon in Well Water

For information on removing radon gas from well water, write to Land and Water Resource Center, 11 Coburn Hall, U. of Maine, Orono, Maine 04469.