TABLE I

Radon Concentrations (in pC/l) Before and After Treatment

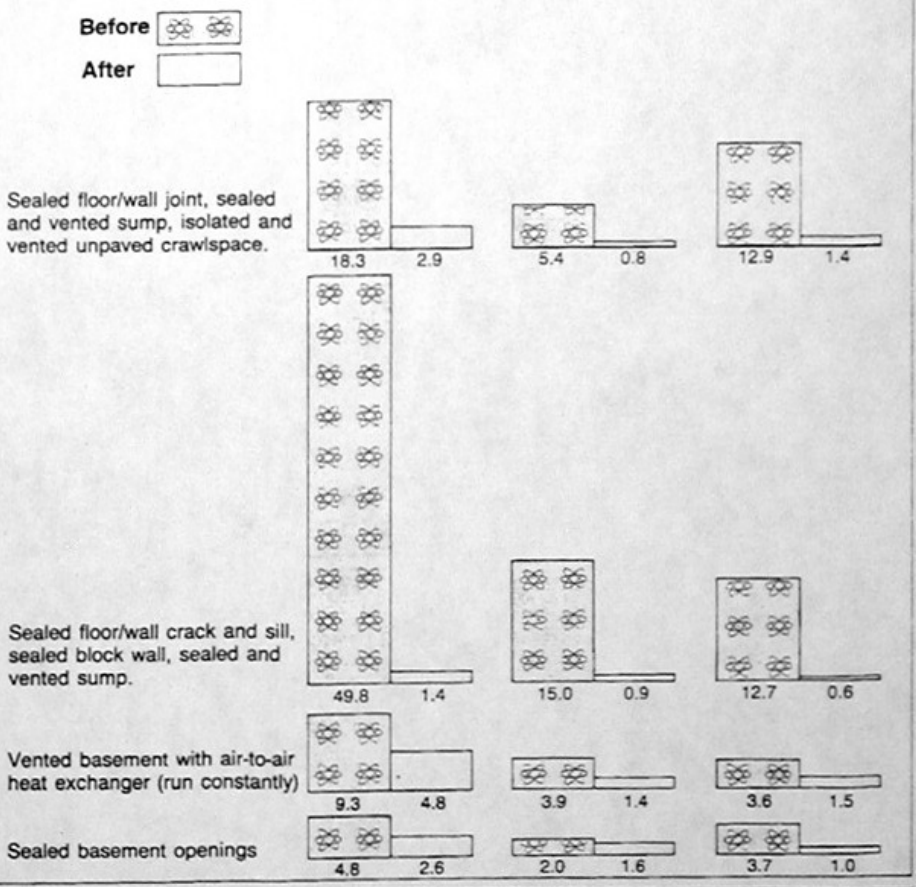

Table I shows before and after radon levels in four houses (selected from 14 tested) that were treated for radon mitigation as part of a large project on indoor air quality.

While it is difficult to generalize about the dynamics of radon flow through buildings, the study yielded some conclusions:

- It is possible to make large reductions in radon concentrations.
- The buildings with big reductions had large, easily identified radon sources, such as sump pump holes or unpaved crawlspaces.
- In systems that used air-to-air heat exchangers, timers were used so that they only ran part of the time. Radon levels could be reduced further by increasing the on-time.
- Total costs for the mitigation work ranged from $50 to over $1200 per house.

The final report of this project "Indoor Air Quality, Infiltration and Ventilation in Residential Buildings" NYSERDA Report 85-10, contains a wealth of information on radon, other indoor contaminants, and natural infiltration. For further information contact Mary Jean Frank at New York State Energy Research and Development Authority, 2 Rockefeller Plaza, Albany, N.Y. 12223.

little mortar, you might consider building an entirely new insulated and tightly sealed frame wall inside the stone wall, and ventilating between the new and old walls. Anyone who has retrofit basements knows that this is not a simple job because of all the wires, ducts, and pipes found in most basements (not to mention boxes of old *National Geographics* and shelves of canned tomatoes).

If the basement is already finished off with interior walls, it is very difficult to locate and seal entry points. It may be possible to install sub-slab ventilation—the most effective cure for high radon concentrations. For lower levels (say, less than 15 piC/l) an alternative is to use an air-to-air heat exchanger to ventilate either the basement alone or the whole house. Both approaches have been used successfully by Airxchange, a manufacturer of air-to-air heat exchangers, in a test study in Pennsylvania.

If just the basement is to be vented, you can use a smaller heat exchanger. The basement should be isolated from the living space by sealing holes in the floor and any basement return-air ductwork. To vent the whole house, exhaust air from the basement and supply it to