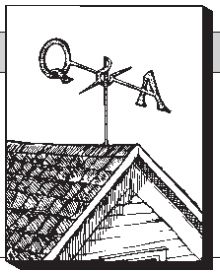

Insulating Under Aluminum Siding

by Henry Spies

Q. *I operate in the northwestern part of Massachusetts, where there are a lot of houses 25 to 35 years old with aluminum siding and no insulation. How can they be safely insulated (i.e., what material should I use) to avoid moisture problems?*

A. Blown-in insulation should not cause any problems under these circumstances unless there are extreme moisture conditions.

These houses usually have fiberboard sheathing, which is not much of a vapor retarder, and the aluminum siding has enough joints to permit the escape of moisture. If the inside walls originally were finished with oil-based paint, that should provide a reasonably effective interior vapor retarder.

A nonabsorbent insulation, such as fiberglass or rock wool, would be preferred. If the settling of insulation is a problem, a number of blowing machines are capable of adding an adhesive to the insulation as it is blown in, which provides the same effect as a batt fastened inside the wall.

An insulation contractor should check the house thoroughly for signs of excessive moisture (stains on the window sash, etc.) before agreeing to the job. If there is no ground cover under a house with a crawl space, or if the basement or crawl space is wet, I would refuse the job unless appropriate moisture-control measures are included in the contract. This is one of those instances in which insulation contractors would be blamed for the problem because they would make it visible, even though it would not be their fault.

A test pit should be flooded for at least 24 hours before the test. Tight soils, such as heavy clays, may require leach fields as long as 400 feet or more, while sandy soils may require only 50 feet or so.

What Do Test Pits Really Tell Us?

Q. *How much can you really learn from a test pit for a septic system? Who should do it? Who should handle the report?*

A. A percolation test is a simple way of measuring the permeability of the soil, which in turn is used to determine the length of the disposal field necessary for the system.

The test hole is required to be flooded for at least 24 hours before the test to offset the effects of extremely dry or wet weather on the soil prior to the test. The rate at which the water level in the test hole falls during the test is indicative of the absorption rate of the soil. Tight soils, such as heavy clays, may require leach fields as long as 400 feet or more, while sandy soils may require only 50 feet or so.

Whom you get to perform the test depends primarily on the local authority. Anyone who can follow simple instructions can conduct the test, but local jurisdictions often require certified personnel to perform the test or a registered, professional engineer to issue the test report.

For more information on test pits, see the "Case in Point" column by Ray DiPasquale in the July issue of *NEB*.

Detecting 'Hidden' Damage in Wood

Q. *Short of the wood actually being rotout, how can one determine whether "hidden" problems in wood siding are about to make themselves known so they can be solved before the structure needs a major overhaul?*

A. Primarily by inspection and a little judicious probing with an ice pick. Another method is to test it with a moisture meter, if you have access to one. Any wood that is not pressure-treated will begin to deteriorate at a moisture content greater than 21 percent. The longevity of wood is based upon one premise: keep it dry! ■

Henry Spies is *with the Small Homes Council-Building Research Council of the University of Illinois. Questions for this column should be sent to Henry Spies at* NEB's *new editorial office:* P.O. Box 5059, *Burlington, Vt. 05402.*