Lead Industries Association, Inc.
292 Madison Avenue • New York, N.Y. 10017 • Telephone: (212) 578-4750

January 10, 1989

Dear Colleague:

As the recently elected Chairman of the Lead Industries Association, the international trade group for producers and users of lead, I am writing to share with you promising information about a potential new system for protecting homeowners from the hazards of radon gas.

A national study now under way has produced preliminary results indicating that lead shielding may be an effective answer to protecting people from the lung cancer risks posed by exposure to naturally-occurring radon gas -- a hazard that has been identified as being perhaps the most serious environmental health threat in the United States today.

We take the opportunity to include in this packet important background materials about lead that you might find worth saving in your files for future reference. Although lead is a familiar word to many, detailed information regarding this metal's direct application and usefulness to man is scattered through the literature and often difficult to locate.

We hope you find these materials of interest. If we can be of further assistance to you, I hope you will feel free to contact us at LIA - 292 Madison Avenue, New York, NY 10017.

For our part, the Lead Industries Association intends to keep you apprised of any new developments and issues related to lead and the lead industry through future mailings.

Thank you for your attention.

Sincerely,

Jeffrey L. Zelms
Chairman

JFL/kb
Enclosure

# NEWS RELEASE

**FOR IMMEDIATE RELEASE**
January 10, 1990

For more details, contact:
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## LEAD SHIELD BEING DEVELOPED TO GUARD AGAINST RADON IN HOMES

The Lead Industries Association (LIA) today announced a new development employing lead that offers promise as an effective barrier to radon gas in homes.

Preliminary results from a new home field test indicate that a sheet lead membrane or liner under the foundation of a home may effectively shield residents from the health hazards of naturally-occurring radon gas.

The U. S. Environmental Protection Agency has identified radon gas as an extremely serious health threat, and in many states, such as New Jersey, where radon levels in soil have been identified as being particularly high, radon-induced lung cancer has been dubbed the "single most serious environmental health problem" of the day.

"Lead, one of the oldest building materials known to man, appears to be a natural choice to guard against the menace of radon gas seeping into homes," said Jerome F. Smith, Executive Director of LIA. "Lead has many beneficial applications. We rely on lead to protect people from radiation in applications so diverse as nuclear power production, medical diagnostics, and even watching television."

The lead shielding field tests are being conducted by the research arm of the largest organization of home contractors in the world, the National Association of Home Builders National Research Center (NAHB/NRC), and is funded by the Lead Industries Association. The two groups are working together to determine if sheet lead would be a cost-effective remedy to block the seepage of radon gas into the atmosphere of the home, where it poses a cancer threat.

NAHB's National Research Center is monitoring and reporting on the test phase of the program, which involved installation of a lead sheet membrane under a slab-built home in Gainesville, Florida. A second test house has been built in nearby Port Charlotte, Florida.

This area of Central Florida was chosen as the site for the initial field test because the USEPA has cited this region as one of high radon risk.

Bion Howard, a senior energy analyst for NAHB National Research Center, analyzed the soil at the test sites and found it contained medium concentrations of radon gas.

The radon problem is not restricted to Central Florida. Recent estimates from various federal agencies indicate that millions of new and existing homes in North America are harboring unhealthy levels of the cancer-causing gas.

A number of anti-radon systems have been tested by the EPA, NAHB National Research Center, and other agencies, with varying degrees of success. But so far, both polyethylene and rubber-based barriers have produced disappointing results in high radon areas. And, so-called "active systems" in which radon is fan-ventilated out of the basement or substructure of homes, have their own shortcomings, such as higher cost of operation and maintenance.

"Sheet lead may prove to be an effective material for use as a barrier to retard soil gas entry into homes," NAHB National Research Center wrote in its initial report. "In addition to serving as a barrier to radon, lead sheet has also been shown to be an effective waterproofing material."

The lead radon shield was installed in less than a day at each of the Florida test sites. It was created from rolls of sheet lead which were trucked to the site and rolled out like a rug across the entire underslab.

A standard gauge of 2-1/2 lb. sheet lead, which is about 0.04 inches thick, was used. As the material was rolled out, its edges were overlapped about two inches to assure a seal. To guard against the possibility of seepage, all overlapped seams were caulked and tamped.

Next step involved coating the lead barrier with liquid asphaltum, to protect it from the corrosive reaction of the concrete slab that forms the first floor of the home.

All told, the lead sheet barrier runs the full width and length of the home -- 36' 2" by 54' 2", and as of mid-August, a typical American family has been living in the Gainesville home.

The NAHB National Research Center expects to have final results on the radon-blocking effectiveness of the lead shield tests in Florida sometime in mid 1990.

Meanwhile, the Lead Industries Association is extending the testing to other parts of the nation. Here is its step-by-step plan:

- o In addition to the Florida sites, test home builders are also being solicited in Alabama and New Jersey.
- o The NAHB National Research Center will again work closely with members of LIA's Fabricated Products Committee to design the sheet lead barricade system for each site.
- o The NAHB National Research Center will also evaluate costs and provide a fiscal summary to both educate builders and enable manufacturers to develop a practical product with effective installation technologies/directions.
- o The NAHB National Research Center group will again monitor installation of the sheet lead prior to pouring the concrete slab upon completion of the homes.

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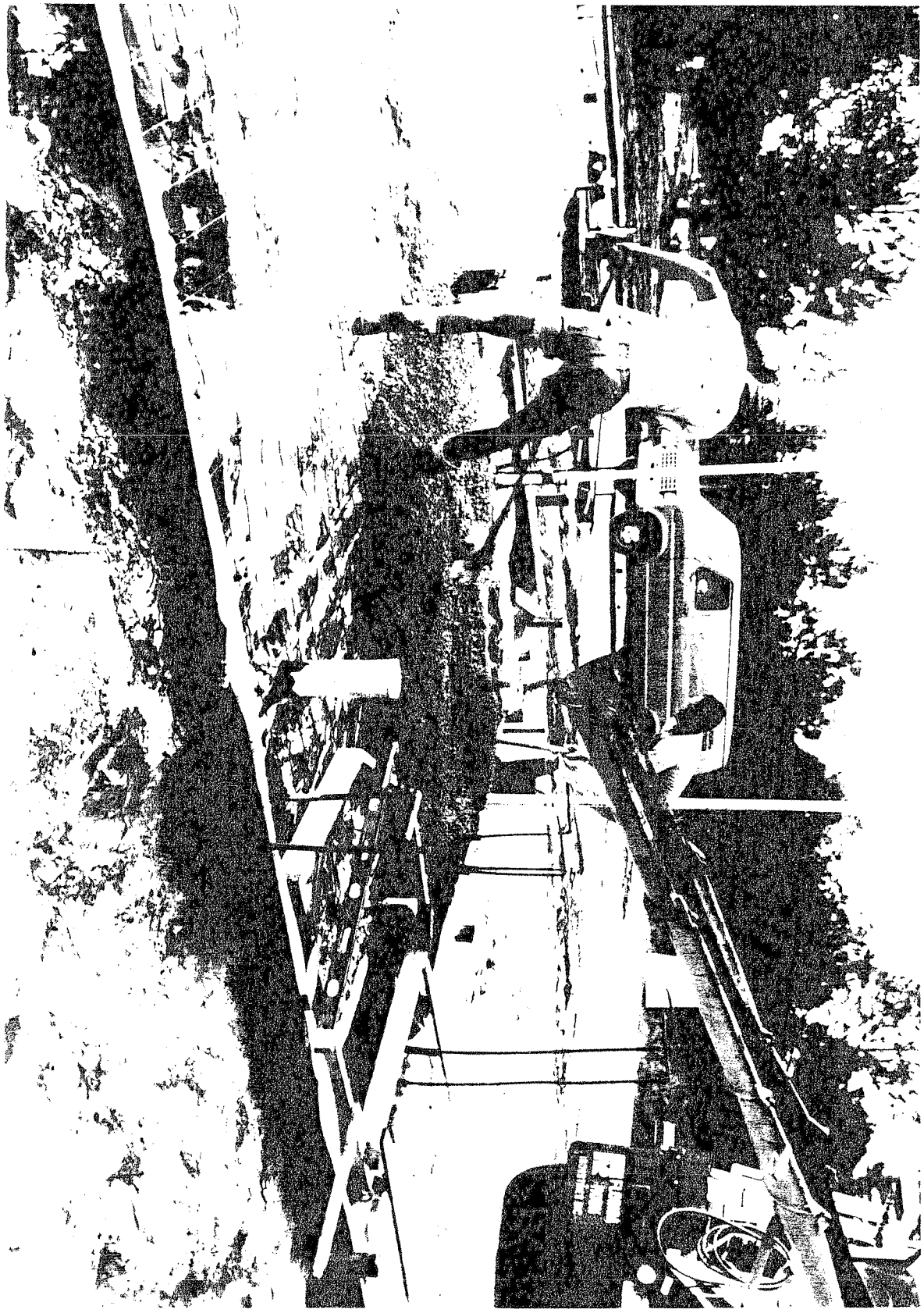

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FLORIDA HOME BUILDER POURS CONCRETE SLAB OVER SHEET LEAD RADON BARRIER AT NEW HOME TEST SITE. RADON MEASUREMENTS TAKEN BOTH BEFORE AND AFTER CONSTRUCTION SHOW A SUBSTANTIAL DECREASE IN RADON LEVELS.