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Project Summary

Proceedings of the Indoor Radon Modeling Workshop, Florida Radon Research Program

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The report documents the Florida Radon Research Program's (FRRP's) Indoor Radon Modeling Workshop, held April 16-17, 1991, in Tampa. Florida. The workshop brought together experts in various aspects of modeling the behavior and origin of indoor radon, with the objective of evaluating models for potential integration and application to Florida buildings and the FRRP. The workshop provided guidance for the use of theoretical modeling as an aid to developing codes for radon resistant buildings. Presentations addressed general modeling methods and strategies, radon and soil gas entry models, radon mitigation methods modeling, indoor air transport modeling, and integration of diagnostic and empirical measurements to support modeling.

This Project Summary was developed by EPA's Air and Energy Engineering Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

Introduction

The Florida Radon Research Program (FRRP) conducted the Indoor Radon Modeling Workshop, on April 16-17, 1991, in Tampa Florida. The workshop brought together experts in various aspects of modeling the behavior and origin of indoor radon, with the objective of evaluating specific models for potential integration, and application to Florida buildings and the FRRP. The workshop provided guidance for the utilization of theoretical modeling as an aid to the development of radon resistant building codes. This includes both direct applications to building design as well as applications that provide indirect guidance through research efforts.

To achieve these objectives a number of eminent researchers who have worked with well developed theoretical models made presentations elucidating the particular details of their models and relevant applications. The proceedings include a narrative summary and the visual presentation materials for each presentation. Presentations addressed:

- General Modeling Methods and Strategies
- Radon and Soil Gas Entry Models
- Radon Mitigation Methods Modeling
- Indoor Air Transport Modeling
- Integration of Diagnostic and Empirical Measurements to Support Modeling

At the conclusion of the presentations, the participants divided into two task groups to address questions and develop recommendations and guidelines.

Task Group 1 addressed FRRP Research House and New House Evaluation Project (NHEP) issues, while Task Group 2 addressed model extension and integration. The proceedings summarize the discussion and conclusion of each task group.

Task Group 1 concluded that modeling efforts should be expected to be able to be integrated with the research house and NHEP studies to provide useful tools that will avoid the need for massive empirical testing. A strategy for applying both detailed models and more general macro models to the Research House and NHEP programs was developed.

Task Group 2 concluded that models addressing each problem area discussed in the workshop are well developed, but not complete. Integration of some of these models is feasible and would be valuable to enhance the understanding of the fundamental physical principles governing indoor radon entry and transport processes.

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***David C. Sanchez** is the EPA Project Officer (see below).*
The complete report, entitled "Proceedings of the Indoor Radon Modeling Workshop, Florida Radon Research Program," (Order No. PB93-172922; Cost: $27.00), will be available only from:
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