AARST CONSORTIUM
On National Radon Standards

**ASD-RMS June, 2006**

# Active Soil Depressurization Radon Mitigation Standards (ASD RMS) for Low Rise Residential Buildings



***Notices for this 2012 Reprint:***

*This document contains material that has been deemed valuable for observance and publication. As a result of co-operative efforts towards harmonization of content with a similar document (ASTM E2121), the review and revision requirements at the AARST Consortium on National Radon Standards have been allowed to expire for this document. Observing that harmonization is not yet complete, this publication of the original content is in response to requests from a wide range of concerned parties.*

***Additional Notice (ANSI):***

*The information contained in this document is not an American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. While Consortium processes emulated ANSI requirements in 2006, this document contains material that has not been subjected to public review as defined by the American National Standards Institute's essential requirements. In addition, the consensus process that promulgated this content does not meet all current consensus requirements for the AARST Consortium on National Radon Standards.*

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**Foreword**

The 1988 Indoor Radon Abatement Act required the Environmental Protection Agency (EPA) to develop a voluntary program to provide information on proper installation procedures for radon mitigation systems and as a means to evaluate contractors who offer radon control services to homeowners. In December 1991, EPA published the "Interim Radon Mitigation Standards". The complete version of the Radon Mitigation Standards (RMS) was published in October of 1993. In April 1994 the RMS was revised (EPA 402-R-93-078, Revised April 1994).

Since that time, EPA's RMS document has been used as a basis for the creation of individual versions including for Pennsylvania, Illinois and the American Society for Testing and Materials (ASTM E2121). These documents and the input from the AARST Consortium stakeholders were used to develop and approve the present AARST Active Soil Depressurization Radon Mitigation Standards (ASD RMS) set forth in this document.

This Standard was approved on June 1st, 2006 by the procedures outlined in the bylaws for AARST National Radon Standards that includes a balance of stakeholder representation and a public review that includes but is not limited to the AARST membership.

AARST National Radon Standards approved documents shall be reviewed for update and revision at least every five years.



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## 1.0 Purpose and Scope

1.1 Purposes
The purposes of the Active Soil Depressurization Radon Mitigation Standards (ASD RMS) are to:

a. provide minimum requirements and uniform standards that emphasize safety, system quality and effectiveness in the design and installation of mitigation systems in detached and attached residential buildings three stories or less in height.

b. serve as a model set of requirements to be adopted in part or whole by state and/or local jurisdictions to fulfill objectives of their radon contractor certification or licensure programs; and

c. provide a means to evaluate ASD systems

1.2 The methods described in this standard are based on the techniques that have proven most effective in reducing radon levels in a wide range of residential buildings and soil conditions. Active soil depressurization systems include sub-slab depressurization, sub-membrane depressurization, block wall depressurization and crawl space depressurization.

1.3 Contractors
A “Contractor” is a person, persons or contracting firm regardless of its organizational structure who installs a radon reduction system.

1.4 Qualified Contractors
A “Qualified Contractor” is a Contractor who has demonstrated a minimum degree of appropriate technical knowledge and skills widely considered necessary to successfully lower radon concentrations. In addition:

1.4.1 A Qualified Contractor doing work in a non-certifying state has attended an entry-level radon mitigation course and also maintains current mitigation certification with a nationally recognized accrediting agency;

1.4.2 A Qualified Contractor doing work in any state that has a radon certification program maintains all required state certifications.

1.5 Preference for Qualified Contractors
Successfully lowering radon concentrations in a home requires significant technical knowledge and special skills. For purposes of consumer health and safety, it is highly recommended that Qualified Contractors design, install and inspect radon mitigation systems. However, where Qualified Contractors are unavailable, consumers may utilize Contractors with significant appropriate technical background and skills in the design, installation and inspection of radon mitigation systems. It is highly recommended that a Contractor who installs ASD radon mitigation systems become a Qualified Contractor and refer to these standards.

1.6 AARST recommends that any jurisdiction considering use of this document seek consensus through the AARST National Standards consortium process prior to adopting a modified version of this document. This provides the jurisdiction with a degree of expertise for such considerations while also providing an opportunity for the National Standards consortium to update this document when appropriate.

1.7 ASD systems have been found to be effective for minimizing entry of other soil based gases. A Contractor who uses ASD to vent soil gas other than radon should follow the appropriate requirements of this standard as well as state provided vapor intrusion control documents and/or other appropriate documents.

1.8 The terms “must” and “shall” indicate those provisions herein that are considered mandatory, while the terms “should”, “may”, or “recommended” indicate provisions considered helpful or good practice, but which are not mandatory.

## 2.0 Limitations

2.1 The ASD RMS is not intended to be used as a design manual, and compliance with its provisions will not guarantee reduction of indoor radon concentrations to any specific level. Design guidance is provided in the documents referenced in section 11.0. Those documents should be used as a minimum to assist with the selection of the most appropriate radon mitigation strategy.

2.2 The ASD RMS is limited to active soil depressurization systems. It does not address mitigation of airborne radon that results from radon in water or other mitigation methods such as sub-slab pressurization, building pressurization or changes to ventilation.