



# Radon Reporter

WINTER 2014



## **STEP ASIDE, MR. SMITH** **AARST's Coming to Washington**

**Also in this issue:**  
**A Tribute To Elizabeth Hoffmann**  
**Radon House from Heck • Science & Measurement**

## AARST-NRPP

The National Radon Proficiency Program (NRPP) is recognized as the nation's leading certification program for radon professionals, with over 2500 certified professionals qualified in measurement, mitigation and as radon laboratories.

Administered by the AARST, professionals engage in a process of continuing education, professional development and quality assurance protocols. All members are expected to operate in accordance with ethical practices based on national standards as well as adhering to local rules and regulations. Through the work of an advisory board and technical committees, the AARST-NRPP is involved in a process of continued quality and technical improvement and is working on new credentials which reflect state of the art approaches to radon services in the home, large buildings and schools.

NRPP staff and certified professionals are committed to excellence and professional compliance to national standards. This raises the professional profile of all radon professionals and ensures that radon measurement and mitigation in the home and workplace is properly addressed.

[www.NRPP.info](http://www.NRPP.info)

800-269-4174

[info@nrpp.info](mailto:info@nrpp.info)



## Officers, Board Members and Staff

AARST, the American Association of Radon Scientists & Technologists, is a nonprofit, professional organization dedicated to the highest standard of excellence and ethical performance of radon measurement, mitigation and transfer of information for the benefit of members, consumers, and the public at large. AARST's leadership is democratically elected by the members.

AARST represents your voice as we meet the wide range of challenges facing radon professionals and the community. Your membership and participation provides you a voice in the changes to come, and allows you to gain updated information, discover new techniques, learn about new problems before they occur, and hone your professional skills.

AARST has several local chapters where you can meet other radon professionals and state and federal officials who work with the radon industry.

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# FROM THE PRESIDENT



Shawn Price  
AARST President

## HAPPY NEW YEAR TO THE RADON COMMUNITY!

**2013** was a year full of excitement, new business opportunities, new policies, and busy schedules. However, we're just getting started as we have many new opportunities and challenges right in front of us.

Most of you have been receiving emails from us asking for donations from AARST, on behalf of the AARST Foundation or CanSAR, and you may be asking yourself, "Aren't they all the same, and isn't it all going to the same place?" The answer is, "Well, yes and no." Let me explain.

Although AARST, the Foundation, and CanSAR have familiar faces that might represent one organization today and another tomorrow, the organizations are really different. This is mainly due to IRS regulations that classify the different types of non-profit organizations and limit the type of activities that they can engage in, where they can obtain their funding, and how they can legally spend money. While the organizations have similar end goals, the way they get there and their Mission Statements are different and the accounting must remain separate.

**AARST** is your trade association, which is classified as a non-profit corporation by the IRS, aka a 501(c)(6). This type of organization *does not qualify* for many government grants, and while we can lobby elected officials for policy change, we cannot donate to their election campaigns. You can legally contribute funds to AARST and they are tax deductible as long as they



*“While the organizations have similar end goals, the way they get there and their Mission Statements are different...”*

are classified as legitimate business expenses, such as membership dues, AARST publications, and advertising.

**The AARST Foundation** is a partner of AARST, but has a separate Board of Directors, bank account, etc. It is designated as a 501(c)(3) non-profit, which *does qualify* it for research grants from government agencies while also being able to issue grants to other groups that qualify. The Foundation supports radon related research, standards, and environmental justice to financially assist those that are unable to take action to test for and reduce elevated radon levels when discovered. Donations to the Foundation are tax deductible and not limited to business expenses like payments to AARST.

**CanSAR** is also classified as a 501(c)(3), but the mission is different than the Foundation. CanSAR educates the public on the dangers of radon exposure through the eyes of those that have been directly impacted by lung cancer. Their story is the strongest way to put a face with the messages that validate the efforts of AARST, the Foundation, the US EPA, the state radon programs, and other organizations working for healthy homes.

The radon message has been too silent for far too long and together, AARST, the Foundation, and CanSAR are doing something about it. Thank you for those that have already contributed to the fundraising efforts.

If you are still considering a contribution, please, please, please, make a pledge today! Your business will benefit from our efforts as we increase testing and mitigation, new policies will be developed, older policies will be strengthened, and more importantly, lives will be saved!

*Shawn Price*

**Visit these websites to contribute:**

AARST: [www.aarst.org](http://www.aarst.org)  
AARST Foundation: [www.aarstfoundation.org](http://www.aarstfoundation.org)  
CanSAR: [www.cansar.org](http://www.cansar.org)

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# RADON ADVOCACY

## MR SMITH, PLEASE STEP ASIDE: AARST HAS COME TO WASHINGTON

Peter Hendrick  
Executive Director

*In 1988, the U.S. Congress passed the Indoor Radon Abatement Act<sup>1</sup> with the goal of the program being to reduce the level of radioactivity from radon gas in U.S. housing to ambient outdoor levels. Despite explicit rule making authority granted to the U.S. EPA Administrator, and despite radon being listed under TSCA as a group A carcinogen, and despite having a high and significant annual mortality rate, the environmental agency quickly established radon as a voluntary program.*

**Let's talk straight:** Despite rulemaking authorization, a voluntary approach was taken by the agency due to resistance and opposition from the home builders associations and the real estate industry. In 2008, the agency's own Inspector General's office issued a critical review of the agency<sup>2</sup>, noting that they had failed to use all of the regulatory authority granted to the agency. To this day, the agency refuses to recognize the rule making authority granted to it under the IRRA.

Twenty-five years later, with an annual mortality rate over 21,000 deaths a year from radon induced lung cancer<sup>3</sup> and with more homes with high radioactive levels from radon than when we started in 1988, the agency continues to divest itself of the radon program. The latest effort has been through the creation of outsourcing and off-loading responsibility to other federal agencies through a non-statutory effort, the Federal Radon Action Plan. In reality, there are fewer than 4,000 licensed and certified radon professionals in the United States; after 25 years, there should be at least 10 times that number to serve the nation's grow-

**Let's also talk straight on one other item:** the risk ratio is not 1 out of 15 homes. It's much higher than that. This issue has not been studied in depth since the early 1990's. What's under that rug?

AARST now recognizes that EPA is reserving its own resources to what EPA perceives as its primary regulatory programs and that the NGO or private radon sector is going to have to step forward to ensure that our national radon policy is enhanced.

For more than 3 years, AARST and a handful of volunteers have petitioned Congress to re-secure funding for the State Indoor Radon Grant (SIRG) program. We expect to have to do it again this year as we believe EPA will continue to try to further reduce radon from its program portfolio.

Starting January 7, 2014, a primary goal of your association, having professional representation before Congress to concentrate on agencies and departments with existing rule making authority and to seek authority to increase the number of required radon tests during the real estate and home occupancy process was realized. On that date, the association retained an experienced Capitol Hill professional, Randy Pence of Capitol Hill Advocates, to be the registered lobbyist for our radon professional association.

**Our goals are simple but powerful:**

1. Focus on Single Family Mortgage Policies - Radon Testing and Mitigation Policies for all government backed mortgages and government owned housing stock

2. Establish resources for consistent development of consensus national standards
3. Insure that the HUD home inspection flyer specifically calls out radon testing. This is set to expire 5/31/14 and we need to extend it
4. Monitor current cycle budget process and maintain our dialogue with the House and Senate Appropriations Committees to ensure continued interim funding of EPA State Indoor Radon Grants (SIRG)
5. Identify and initiate radon reauthorization for 2015 and beyond
6. Utilize third party advocates for establishing Radon Risk message
7. Properly define radon's risk with actual facts from the field.

**Why is AARST doing this you ask?**

We're doing this because this is how our government actually works and this is what every other profession does, they have paid professionals representing their interests. For nearly 25 years, neither the radon professional nor the radon advocate/survivor have had a voice inside the beltway of Washington, D.C. The result has been a steady erosion of policy and program. Radon has become the Cinderella of environmental movements. AARST has begun to change that and neither the professional with high standards of practice nor the radon advocate will be silenced.

Mr. Smith, step aside: AARST has arrived in Washington.

*More, in the next issue, on Capitol Hill Advocates and Randy Pence.*

<sup>1</sup> <http://www.law.cornell.edu/uscode/text/15/chapter-53/subchapter-III>

<sup>2</sup> <http://www.epa.gov/oig/reports/2008/20080603-08-P-0174.pdf> - see subchapter 2670 of the IRRA for regulations

<sup>3</sup>2003 data, based on a population of approximately 260 Million. \* Radon is estimated to cause about 21,000 lung cancer deaths per year, according to EPA's 2003 *Assessment of Risks from Radon in Homes (EPA 402-R-03-003)*.



# AARST

• F O U N D A T I O N •

## The Foundation Purpose

AARST Foundation exists to partner with you in your efforts to reduce the number of radon induced lung cancer deaths.

1) help support AARST/ANSI Radon Standards (the Consortium's operating expenses include all of the following and more: printing, conference calls, editing, legal reviews, etc.)

2) assist those financially challenged, in testing for and/or remediating (if necessary) radon exposure in their homes.\*

\* Contact the Foundation for qualification to this program.

The AARST Foundation, A 501 (C) (3) Organization, Depends on your tax deductible donations to make our mission a reality.

Please Donate Today

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**PDS STOCKS A LARGE SELECTION OF RADON MITIGATION SUPPLIES**

# HOUSE FROM HECK

## Taming A Missouri Monster

Jim Medley  
Radon Systems 4U, LLC

*The home was 20 years old, 6200 square feet, built high on a hill above the river, with a full walkout basement. We were called in because the radon level was 14.5 pCi/L with an existing single ASD system that did not meet mitigation standards running. The original radon level was 21.0 pCi/L.*

We started with 2 ports and one RP265 fan and gradually worked our way up to 4 ports and two RP265s, then 6 ports (all 4 inch piping) with 3 GP501 replacing the two RP265 fans due to the very high negative pressure readings. The result? No real change in the radon level. With all 3 fans running and 2 suction points per system, the reduction was between 2.0 to 3.0 pCi/L lower with the radon level still reading around 12.0 pCi/L. With the systems running, we checked and found that the pressure field extension was measured in inches, not feet. Was that the problem? Not exactly.

### What Lies Beneath

During our re-evaluation process, we learned that this was the first home in this subdivision and that the developer originally built this house as his personal home. (The people who called us in were the second owners.) Most importantly, we discovered that the builder was building roads while he was building the home, and he used road base as the substrate underneath the basement slab. Road base (also known as dirty base) in our area consists of gravel, sand and red clay. It was used to save money.

What further compounded the issue in regards to correcting the radon problem was the fact that after they put in the road base as the substrate, they used a compactor to compact all of the substrate. Normally, if a substrate is compacted, it will be compacted with a walk-behind compactor that's the size of a push lawn mower. We cannot prove it, but we believe that they possibly used a standard road unit compactor to compact the substrate before they poured the concrete floor. We discovered part of this information when we decided to cut out a small section of the concrete floor in order to inspect the substrate below.



### Not an Easy Fix

The substrate was so hard and packed underneath the concrete floor that we could not remove it with a shovel or pick. The solution to removing the substrate was an electric powered jack / shovel. The generalized thought started with cutting just some 18 inch channels through the concrete, but then we decided to change the channels to 24 inches wide. The more channels we cut, the more we did not like what we saw.



After we cut all the channels and spoke with the owner, we ultimately decided to take out as much as possible of the remaining floor and the compact base present beneath the concrete floor. (Side note: The owner was a doctor who had previously had throat cancer and had the attitude, "I do not care what it takes to get the radon level down, just do it – which in this case was much needed.")

When we first got into this job we knew it was not going to be easy. There were tall retaining walls in the backyard and a large swimming pool. There was no way to get any equipment into the basement area at all, so we did it the old-fashioned way, bucket by bucket.



*Continued on p. 8.*

## HOUSE FROM HECK (Continued from p. 7)

After cleaning out the road base and laying down a bed of three-quarter-inch clean gravel, we installed 400 feet of drain tile, burying it in approximately 6 more inches of gravel. To ensure direct access to the system ports left a very clean straight path between the floor tile and the ports. With this design we could reach our hands below the floor and up into the system port, giving us a straight pathway for removal of the radon.



### Putting it Back Together

After the drain tile was installed and the new gravel was leveled out we were ready to install the new concrete floor. We were concerned with the finished product and did not want to take any chances, so we drilled into the existing floor every 12 inches and inserted rebar pieces, installing wire and rebar in every location where the new concrete floor was being replaced. Although this was not an area that overly concerned us about hydrostatic pressure, at the same time we did not want to take any chances.



Our goal was the removal of the radon gas but at the same time aesthetics also are important. Shown in the

photo below is one of the ports we installed in a closet to keep it out of the way. (Out of sight, out of mind.)



Due to the swimming pool and retaining wall in the rear of the home, we had to use a pump truck to install the new floor.



With the concrete people and the pump truck operator, we had a total of 10 people on site to pour the new floor. Needless to say it was quite a job. Once done the new floor looked great, the concrete guys did a great job.



Not wanting to take a chance on anything, we also decided to seal the floor with radon seal before the new floor coverings are installed. (Better safe than sorry.) After the work was done we had to replace everything, even the tile floor in the bathroom.

The owner did not want to see any of the system install, so we had to cut out sheetrock and do some minor framing here and there once the work was done.



### Final Results

This home started with a radon level of 14.5 pCi/L with a small system installed by another contractor. With our first system installed to replace the old system, we brought the level down to 14.0 pCi/L. From there, we started adding ports and different system fans, doing some experimenting with the system design as we went. We got to the point that we had 6 four-inch ports and 3 GP501 system fans, but the lowest reading we got was 11.2 pCi/L with all three fans installed.



After performing an extreme home makeover in regards to removing the basement floor (with the homeowners and their children living in the home during the whole process), the final test results were down to 0.6 pCi/L, which of course made everyone (especially me) very happy.

*Do you have a "House from Heck" story you would like to share? Please email [editor@aarst.org](mailto:editor@aarst.org).*

# AARST TRIBUTE

## ELIZABETH HOFFMANN, A RADON WARRIOR



*Elizabeth Hoffmann, co-founder and president of Cancer Survivors Against Radon (CanSAR), lost her 10-year fight against radon induced lung cancer on November 6, 2013. After her diagnosis, Liz dedicated her life to educating cancer patients and policy makers about radon and its health impacts. She advocated courageously for more effective radon regulations and greater funding for radon testing and mitigation initiatives.*

*Liz's major accomplishments as an advocate, in addition to starting CanSAR and serving as its first President, include lobbying Congress for stronger policies, saving SIRG funding in 2012; in 2003, she was responsible for initiating advocacy with HUD that led to the HUD Multi-family Mortgage Radon Policies in 2013, a major contribution that is her outstanding legacy. She worked for free. Those who want to donate to a family fund in Liz's Honor may do so by sending donations to:*

Elizabeth Hoffmann Memorial Fund  
c/o US Bank  
4015 South Howell Avenue  
Milwaukee, WI 53207



Liz was a special person. I'm a better person for having known her. The radon risk reduction community has lost a passionate advocate.  
- Kyle Hoylman

Liz was a dear friend and an inspiration to me. Her strength and perseverance were remarkable. She was a devoted president of CanSAR whose vision was to have every home tested for radon and increase public awareness. She is missed.  
- Marlene MacEwan

Liz was a strong, courageous, and willing individual with a determination to live and make a difference with her life. Lives will be saved because of her.  
- Gloria Linnertz

Liz was a real warrior against her 10-year battle with radon induced lung cancer. Despite her illness, she continued her efforts with CanSAR and other organizations to increase radon awareness and education. She touched many lives, including mine, and she will be missed by all who knew her.  
- Barb Sorgatz

I spent a week in Washington, DC, in March 2013 for the AARST Advocacy Days. With us was CanSAR President Liz Hoffmann, a wonderful lady who, in spite of being somewhat weak from treatments, navigated the Congressional hallways and offices telling her story again and again to the politicians. Her spirit, courage, sense of purpose, and good humor were inspiring.  
- John Mallon

Liz always said, "How sweet it is to be standing on the edge of tomorrow."

She embraced every day with courage and the finest of attitudes. With the passing of Liz come positive memories of the years and events that have passed. I know all of us cannot imagine life without Liz.

With her loss comes wisdom. She had the wisdom and ability to anticipate problems that can occur through the process of change. She always hoped that we would choose to make change and do more with her passing. Liz was a very creative leader who wanted us all to take her loss as a key to further change. She set the bar high and we need to carry on her good work.

She said, "When I must leave you I will always be at your side. Please do not grieve and shed tears. Hug your sorrow through the years and carry on the cause in my memory." She wants us to live on and grasp her endless energy to carry on her good work. She will always be with us, to comfort us and drive us on to save lives.

Her favorite prayer should be our guide:

"God grant me the Serenity to accept the things I cannot change, Courage to change the things I can and Wisdom to know the difference."

Liz said: "Never, never be afraid to die. Do not stand at my grave and cry. I am not there. I will be your forever influence that will not sleep."

Liz Hoffmann will be the thousand winds that blow, the diamond that glints the snow, the sunlight that ripens things to grow and the gentle autumn rain. In the morning she will be the swift uplifting rush and carries you to the soft stars that shine at night.

She is deeply missed but always there.

- Tom Heine

# RCi



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| Uniseals         | Systems Labels |

# RADON HISTORY

## RADON RESEARCH AND MEASUREMENT FROM THE EARLY 1900'S TO TODAY

*The following is an excerpt from a paper presented by Dr. George in Brazil. For a copy of the entire paper, email editor@aarst.org*

Andreas C. George

*In 1900, Frederick (Friedrich) Dorn, a German scientist, found that radium-226 was giving off a gas which he called "radium emanation" known today as Rn-222. In 1908, Ramsey and Whytlow-Gray, isolated enough of the gas to study its physical properties and named it Niton (the shining one). In 1904, Mache, introduced the first unit for radon activity concentration and called it Mache-Enheit that was replaced in 1910 with the Curie. Mache used a galvanometer similar to the one used by Curie to measure the ionization current.*

In 1901, Rutherford and Brooks demonstrated that radon is a radioactive gas. Rutherford, in the same year discovered the active deposits of thorium and the Curies discovered the active deposits of radium. In 1902, Rutherford and Soddy characterized alpha particles when they worked on thorium compounds

### **Radon Health Effects in Underground Workers**

Although radon was discovered in 1900, the effects of prolonged exposure had been noted about 300 years earlier. Georgius Agricola, a German physician and geologist (1494-1555), noted a high frequency of fatal lung diseases occurring among local miners. Paracelsus, a Swiss physician and scientist (1493-1541), studied the diseases of underground miners in the Erz Mountains of Eastern Europe and found that many miners died from lung disease, concluding that dust and gases present in the mines were the cause of it.

In 1879, two physicians, Harting and Hesse, found that the mortality rate of uranium miners who worked in Ger-

many and Czechoslovakia to be near 75%. The German miners who worked more than 10 years developed the Erz Mountain disease which was later identified as lung cancer. In 1921, Margaret Uhlig, was the first to suggest that the radium emanation might well be the cause of lung cancer.

Three years later, in 1924, Ludewig and Lorensen suggested that the lung cancers of these miners might be caused by the radon gas in the mines. During 1924-1932, the finding of high concentrations of radon in the region and in the nearby mines of Joachimstal in Czechoslovakia and in radium mines of Schneeberg Germany, suggested that radon was the cause of the high lung cancer incidence.

In 1932, Pirchan and Sikl, concluded that the radium emanation causes lung tumors among the miners at Jachymov. Over half the deaths were from lung cancer and most occurred among miners before they reached the age of 50.

### **Findings in the Last Fifty Years**

Research on radium and radon exposure began to shift to the other side of the Atlantic. Work on factory workers, medical patients, radium dial painters and the military.

In 1944, Lorenz pointed out that radon itself, contributed a small percentage of the radiation. Bale (1951) and Harley (1952), were the first to point out that the lung cancer hazard was from the alpha dose delivered by the radon decay products when deposited in the respiratory tract. In 1956, Bale and Shapiro calculated the dose to the

lungs from inhaled and deposited radon decay products, making radon decay product concentration measurements very important.

### *Eleven studies provided quantitative information on the exposure response relationship between radon and lung cancer risk.*

The hypothesis that radon decay products caused lung cancer was not accepted by some, until the findings of epidemiological studies of underground miners in the 1950's and 1960's. The findings of the BEIR Report VI, which was based on underground mine data and laboratory studies, showed that from 60,000 miners who worked between 1941-1990, in different groups of mines in 8 countries, over 2,600 developed lung cancer where only 750 were expected. From 20 epidemiological studies of underground miners, eleven studies provided quantitative information on the exposure response relationship between radon and lung cancer risk (Lubin et al.).

In the past decade, the epidemiological study in Iowa US in particular, showed a high incidence of lung cancer among women exposed to high radon levels in residential buildings. As a result of these studies, both in the underground mines and in residential studies support very strongly the characterization of radon concentration levels and the assessment of the radiation dose from radon found in different environments.

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# AARST EASY LINKS

## Web links to radon news and information

### *Kids and Radon Posters and Radon Rangers*

**What Are Kids Doing To Reduce Radon:** Look at these Apples (Posters) <http://sosradon.org/poster-contest/2013-poster-contest-winners>

**What's Out there for Kids:** Radon Ranger Books are still available, we hand them out at health fairs, schools and other locations. <http://www.radonranger.com/> and EPA has a site with links <http://www.epa.gov/radon/justforkids.html>

### *New report on Lung Cancer from CDC*

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6301a1.htm?s\\_cid=mm6301a1\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6301a1.htm?s_cid=mm6301a1_w)

**What's Being Said:** The response of Harold Wimmer, National President and CEO of the American Lung Association: "The CDC report is a good news / bad news kind of story:

- Certainly it is good news that lung cancer rates as a whole are declining.
- But the decline can be bad news to the extent it is seen by some as demonstrating the problem of lung cancer has been "solved" -- making it more difficult to convince the public and policymakers that lung cancer continues to be a problem that needs to be fought and to which adequate resources in prevention, treatment and research need to be devoted.

### *Harvard Radon Study – Any Updates?*

**What's Being Asked:** Radon Professionals in the U.S. are wondering if there are any new studies from Harvard's Center for Risk Analysis <http://www.hsph.harvard.edu/hcra/> since the one they performed many years ago - <http://www.hsph.harvard.edu/hcra/files/2013/06/Ranking-Risks-in-the-Home-April-98.pdf>

### *Health Canada's Radon Course for the Medical Community*

**What's Being Communicated:** There is also now a 1 hour online continuing medical education course for health care professionals available in Canada and we will be working with our partners across the country to promote this course.

The course can be found at: <http://machealth.ca/programs/radon/default.aspx>

### *Occupational and Environmental Causes of Lung Cancer*

**What's Been Published:** By the National Institute for Health: Occupational and Environmental Causes of Lung Cancer reference - <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3875302/>



# 2014 INTERNATIONAL RADON SYMPOSIUM CHARLESTON, SC SEPTEMBER 28 - OCTOBER 1

## CALL FOR PAPERS

The deadline for submitting abstracts for Peer Review for the 2014 Annual Symposium is April 4, 2014.

The AARST 2014 International Radon Symposium welcomes the participation of members of the scientific and medical community, radon testers, diagnosticians, mitigators, educators, public policy leaders and business leaders, as well as consumers.

**Abstracts:** Your abstract should convey in 150 words or less, the essence of the intended presentation clearly indicating the contribution it will make. Abstracts will be screened by the AARST Editorial Board. Original research, on radon science, risk communication, public policy and business-related papers, are especially encouraged (but not limited to) the following areas with an emphasis on practical application:

- Environmental Economic Motivators
- Radon Risk Communication
- Radon Risk Assessment
- Health Risk Assessment
- Radon Risk Reduction in Low Income Communities
- Radon Prevention in Existing and New Construction
- Effective Worker Safety Programs for Mitigators/ Measurement Professionals
- Cost-Effectiveness of Radon Policy and Program Options
- Health Physicists papers on Radon and Radioactivity

**How to Submit Abstracts:** Please submit your abstract via email using WORD (.doc or docx) format to: [JBurkhart@aarst.org](mailto:JBurkhart@aarst.org) by April 4, 2014. Do not use a PDF format, as this cannot be edited.

**More Details:** [http://www.aarst.org/images/AARST\\_2014\\_InternationalRadonSymposium\\_Call\\_for\\_Papers-1.pdf](http://www.aarst.org/images/AARST_2014_InternationalRadonSymposium_Call_for_Papers-1.pdf)

## CALL FOR PROPOSALS FOR CONTINUING EDUCATION (CE) COURSES

Due March 31, 2014

**I. Pre-Symposium CE Courses** (4 or 8 hours) – 3 to 4 courses are anticipated to be held on Sunday, September 28, 2014: Three 4-hour courses and one 8-hour course, or four 4-hour courses, are available for the schedule.

**II. Symposium Track II Concurrent CE Courses** No fees, Voluntary Instructors – A limited number of 1- or 2-hour CE courses will run concurrently with the peer-reviewed scientific paper presentations on Tuesday and Wednesday.

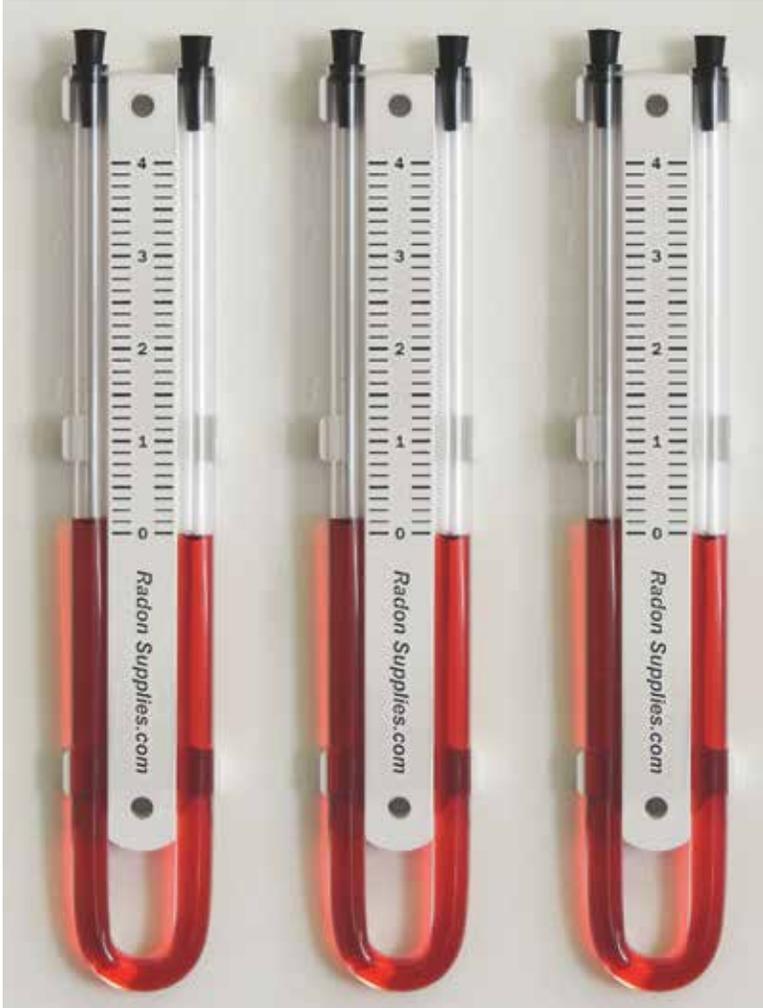
**\*NEW\* Symposium Track II Concurrent CE Courses “Radon Main Street Case Studies”** No fees, Voluntary Instructors - Three 1-hour Case Studies will be accepted and the course instructors selected will receive up to 6 Category I credits.

**More Details:** [http://aarst.org/images/2014\\_Symposium\\_Call\\_for\\_CE.pdf](http://aarst.org/images/2014_Symposium_Call_for_CE.pdf)



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# ABOUT THE AARST ASSOCIATION



## AARST IS THE LEADER in Radon Science, Innovation, and Technology

AARST is the parent organization whose affiliates work intently on the tasks of Professional Credentialing (AARST-NRPP) and creating events such as the annual [International Radon Symposium](#), which provides a forum for radon studies worldwide. AARST develops American National Radon Standards (AARST/ANSI), and assists in programs that enhance radon risk reduction for all communities. AARST supports additional research and standards through [The AARST Foundation](#).

## The History of AARST

Since 1986, AARST, the American Association of Radon Scientists and Technologists, Inc., has represented radon professionals, scientists and risk reduction advocates in the United States, Canada, and all around the world.

AARST brings service professionals, scientists, researchers, public officials and consumers together to achieve a mutual goal of reducing the harmful radioactive effects of radon exposure.

## The Mission of AARST

AARST is a nonprofit, professional organization of members who are dedicated to the highest standards of excellence and ethical performance of radon measurement, radon mitigation, and transfer of radon information for the benefit of members, consumers and the public at large.

AARST supports and represents radon professionals as they meet the wide range of challenges facing radon risk reduction.

**AARST** *The leader in radon science, standards, and Radon Risk Reduction*

## About our Members

Members are dedicated to reducing radon risk by adhering to AARST standards of excellence and ethical performance, supporting development of professional standards, and expanding radon knowledge and awareness.

AARST Membership allows you to gain updated educational, technical, and professional information that serves to enhance and expand opportunities while promoting professionalism and ethical practices for consumers.

AARST Members enjoy:

- Specialized liability insurance designed specifically for the radon professional
- Membership Toolkit which contains hundreds of dollars worth of free templates, forms, media relations, and marketing tips, and QA plans plus more
- National database listings, networking, and Continuing Education opportunities
- A role in creating American National Standards for radon (ANSI-AARST)

## About the AARST 2014 CREDO

**Lead** – join a standards, technical, or policy committee and become a recognized professional

**Learn** – practical, applied science, and professional skills through NRPP C.E. and AARST Chapter programs

**Mentor** – other professionals so that we can grow the profession and the marketplace of radon risk reduction

**Communicate** – effective information on radon risk reduction

**Contribute** – your talents and skills to new markets and new opportunities as we work to enhance your credentialing



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