



An Post and Active OM&M for Residential Radon Mitigation Systems, with Built-in Data Analytics and Quantified Risk Reduction Analysis/Outcome (A Radon Business Model)

What if?.....

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The Reality Overview



- ▶ You have just in Pennsylvania, probably over 100,000 radon mitigation systems installed.
- ▶ Close to over a million residential installed radon mitigation systems in the U.S.
- ▶ Many of these systems are over 20 years old.
- ▶ With combination of EPA and other federal and state agencies, along with the professional radon industry organizations (AARST and NRSB), have been responsible for radon risk communication and guidance for addressing radon risk reduction.
- ▶ EPA and many states recommend that the installed radon mitigation systems are retested and inspected every 2 years?
- ▶ This implies there should be OM&M program for installed residential mitigation systems?

The Reality Overview

- ▶ The 2 year OM&M is only a guidance.
- ▶ Residential ASD systems are generally triggered by real estate transactions across the U.S.
- ▶ EPA action level and recommended radon mitigation is part of many real estate transaction addendums in various forms
- ▶ **The installed radon mitigation system is a critical safety/risk reduction system of the home, like the HVAC or electrical system**
- ▶ **It is there to reduce radon-induced lung cancer for the occupants of that home long-term!!!!**

The Reality Overview

- ▶ The mitigation professional generally deals with the seller during a real estate transaction.
- ▶ Once the system is installed, generally, the mitigation professional does not have contact or even know who the buyer is.
- ▶ The seller and even that buyer moves, then new buyer.
- ▶ Radon mitigation guidance, standard documents, and licensed state regulation require the a written notification to the occupants of the recommended OM&M (2 years retesting and inspection).

The Reality Overview

- ▶ An information packet is attached to the radon mitigation system (ideally) for all residential radon mitigation systems.
- ▶ Many buyers do not even realize they have or have lost the ASD system packet.
- ▶ The mitigation system can become invisible and on the general maintenance of the home systems.
- ▶ Many homeowners are not even aware that the radon mitigation fan has stopped or there is damage to the ASD system components
- ▶ **SO MANY OF THESE MITIGATED HOMES ARE NEVER RE-TESTED AND INSPECTED EVERY 2 YEARS**
- ▶ **UNKOWN, HOME MANY ASD SYSTEMS MAY HAVE STOPPED WORKING**
- ▶ **THIS CAN BE CONSIDERED SYSTEMIC**

The Reality Overview

- ▶ Some state radon programs do collect radon testing and mitigation information from their licensed radon testers and mitigators?
- ▶ There are no state programs mandating an active and effective OM&M program by its mitigators, which includes active reminders/communication to the property site/owners.
- ▶ (Personal Opinion) Most states do not have the critical design components in their database system or manpower/funding to track and perform analytics and quantified outcome analysis on residential ASD systems.

What if:

- ▶ If we could track and know the radon reduction effectiveness for the million plus ASD systems every 2 years?
- ▶ Know in two years, operation and conditions of the basic ASD components for each mitigation property? Now and 30 years back.
- ▶ Have failure awareness and corrective response by radon business industry to ensure true residential OM&M.
- ▶ Would that not be invaluable information/data for EPA and the state radon programs, especially for reporting to U.S. Congress?
- ▶ Other industries perform OM&M analytics as part of doing business,--
WHY CAN'T WE DO THE SAME?

TOTAL QUALITY MANAGEMENT (TQM)

Total Quality Management (TQM) is an enhancement to the traditional way of doing business. It is a proven technique to guarantee survival in world-class competition by making continuous improvement a culture and focusing on customers.



Total – Made up of the whole

Quality – Degree of excellence a product or service provides.

Management – Manner of handling, controlling, directing etc.

TQM requires basic focuses on:

- A committed and involved management
- customers, both internal and external
- Effective involvement and utilization of work force
- Continuous improvement
- Treating suppliers as partners
- Establish performance measures for the processes



JRD Tata:

“In free enterprise, the community is not just another stakeholder in the business, but in fact, the very purpose.”

Possible Solutions

- ▶ Go to the states that have the data collection of installed ASD systems and see if they implement a major PR (post cards, social media, and news coverage)---I did inquire.
- ▶ Encourage, motivate and educate the radon industry on starting now, an active and aggressive business model that intrinsically incorporates a residential ASD OM&M program (every 2 years). Will increase value-added business model.
- ▶ Encourage software OM&M programs
- ▶ Set up a specific committee for AARST to make this a committed project goal.
- ▶ Work with EPA and States. Start a pilot study program, maybe in Pennsylvania
- ▶ PLUS IT IS A BASICALLY UNTAPPED ADDITIONAL BUSINESS MODEL COMPONENT FOR THE RADON INDUSTRY
- ▶ **GIVES US THE ABILITY TO TRACK LONG-TERM EFFECTIVENESS AND OUTCOME FOR RESIDENTIAL ASD SYSTEMS. (QUANTIFIED ANALYTICS-SAVING LIVES!!!!)**
- ▶ I AM NOT SAYING I HAVE THE ANSWERS, JUST BRINGING THE ISSUE TO THE FOREFRONT
- ▶ **OPEN FOR DISCUSSION????**

