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The following comments are from Bill Brodhead, President of WPB Enterprises.

General note: The numbering of this document is very confusing. I most likely have the wrong designation number for each suggested revision.

Section 240.111 (a) (b)

The structuring of certification that sets up two tiers of either a certified individual or a certified individual under a certified firm is problematic, causes unfair burdens to firms and leads to abuses of the system. In PA a contractor is required to have contractor certification through the Home Improvement Contractor (HIC) program. This in effect requires an individual to be a business with insurance if he wants to do home improvement in PA. The certification program should work in conjunction with this program and needs to be structured the same way. If you are accepting money in PA for radon services then you are doing home improvement and need to act like and be certified as a firm not an individual.

- A) I recommend that the certification program require adherence to all PA home improvement contractor requirements.
- B) I strongly recommend that all PA Radon Certification programs be structured to require each certified individual must work under a certification firm. A Certified Mitigation or Testing individual cannot do work without being associated with a certified firm. An individual can be however be both a single person certified firm and the certified individual in that firm. A firm can also have multiple certified individuals working for that firm. A certified individual in the firm can have up to five non certified but listed employees under his supervision. Reporting of jobs and testing would be done under the firm. The job or testing reporting should include a requirement that the listed certified individual responsible for the job or test is included in the report. Any problems or issues with work whether from the DEP or the homeowner would be addressed to the firm. The Firm would be required to have HIC license.

Revision 1) Section 240.111 (b) page 60

I assume that the last section is eliminated because it is in [].

Revision 2) Section 240.112 (b) (5) page 61. PA DEP has no legal right to mandate that a company cannot expand beyond one certified individual or to mandate that a company certified individual has to report jobs as if he was the sole responsibility for that job. He that is the case then that individual would have to be have a HIC license and carry his own insurance.

Change wording to: A mitigation firm may list a maximum of five mitigation firm employees at <u>any</u> one time <u>under each of the firms listed certified mitigation individuals</u>.

Revision 3) Section 240.112 (b) (5) (iii) This is a new requirement that is not defined. According to this section a mitigation employee must take a course and pass an exam?? Is this correct? Who's exam and what course must he take?

Revision 4) Rewrite of Section 240.112 (7) (c) page 61

Additional requirements. A firm shall have a health and safety program, and a continuing education program as required in 240.305 and 240.306 (relating to health and safety program; and continuing education program. All certified mitigation individuals and mitigation firm employees shall be familiar with these programs and abide by the requirements of these programs.

Question 1) Section 240.132 (1) page 66 Which states does PA have reciprocal with?

Revision 5) Section 240.308 (a) (6) This section needs a re-write to include additional language to allow option of extending the termination point higher than a nearby vertical wall. There are many times that a roof changes height by 1 to 2 feet. Guidance should allow the termination to be next to a roof change in height as long as it is above the higher roof if it within 10' of the height change.

(6) The termination point must be 10 feet or more horizontally from a vertical wall that extends above the roof <u>or higher than the vertical wall</u>.

Revision 6) Section 240.308 (b) (1) page 66 These days there are lots of egress window wells with ladders in the well built in basements. A mitigator could define the floor of the large window well as grade and therefore install the fan in the egress window well. Add this additional language clarification to prevent this from happening.

(1) Below grade, <u>in a window well or egress window well</u>, or in the heated or cooled space in the building.

Revision (7) Section 240.308 (c) (1) (iii) page 77. Foundation walls require water-proofing on the outside of the wall. We have yet to experience an elevated radon level in a building due to foundation cracks. The requirement to seal foundation walls without any science or personal experience of effectiveness is not justified.

Expansion and control joints often have a vapor barrier under the cracks which provides an air seal. Our experience is that sealing the perimeter slab to foundation crack even if small can double to ten-fold increase sub-slab negative pressure. Center expansion joints typically do not give us anywhere as much pressure field change indicating they typically don't need to be sealed. If the vapor barrier is known to exist then these cracks do not need to be sealed. When the suction hole is installed it can be determined that there is or is not a vapor retarder under the slab.

(iii) Openings or cracks in the foundation or at expansion or control joints that have no vapor retarder membrane installed under the slab.

Revision (8) Section 240.308 (c) (3) page 77. In almost every house that has a basement that is used even for storage or any slab that has finished walls there are "other openings or cracks that are inaccessible". The present wording of this section would require mitigators to provide written statements for every home that has a work bench or boxes blocking a perimeter crack. This is excessive.

If the mitigator and homeowner determine that the perimeter channel drain cannot be sealed for water control reasons, or that other openings or cracks are inaccessible, then the mitigator may leave those areas unsealed and shall provide the following written statements to the homeowner:

Revision (9) Section 240.308 (c) (3) (i) & (ii) page 77. What is an increased heating and cooling penalty? Replace penalty with cost. Most homeowners do not care if the efficiency of a radon system is reduced (example: use of a larger than required fan). Homeowners are concerned if the effectiveness of the system is reduced. I would think the PA DEP would also be more concerned with system effectiveness.

- (i) This technique may contribute to an increased heating and cooling penalty cost.
- (ii) This technique may decrease the efficiency reduce the effectiveness of the radon mitigation system.

Revision (10) Section 240.308 (d) (1)(ii) (iii) page 77. The system label should only have the Certified Firm's id. The owner needs to contact the Firm if there are issues with the system not the original installer who may no longer work for the firm.

- (iii) The name and certification number of the mitigation certified individual firm,
- (iv) The contact number of the mitigator mitigation certified firm.

Revision (11) Section 240.309 (10) (iii) page 77. The guidance implies that if 30 days have passed you can no longer do a post mitigation test. Change wording to require the test within 30 days but not disallow the test after 30 days.

(iii) The post mitigation test <u>shall be completed no may not be performed sooner than 24 hours or</u> later than 30 days following the completion of and activation of the mitigation system or an alteration to an existing system. <u>The test shall be initiated no sooner than 24 hours after system</u> <u>activation</u>.

Revision (11) Section 240.303 (6) (c) page 71 & (g) (ii) (4) page 77 Radon monitors sold over the internet are common place. Homeowners use these monitors to measure their own radon levels and loan the monitors to family members and friends. I homeowner is not required to perform a certified radon test. A homeowner also has the right to hire a certified radon contractor to install a radon system at his house no matter what radon level he has or how a radon level was determined. The DEP should not require an approved radon test prior to mitigation. This section implies the radon mitigation firm is performing the radon testing. (c) For a person performing mitigation, each building shall be tested for radon levels before and after mitigation is performed. Each The post mitigation test must be at least 48 hours in duration and follow ......

Revision 12 Section 240.308 page 75 to 78. There are several radon mitigation standards and these standards have different requirements. A certified mitigation firm needs to define which standard they will use. This section is important because it defines the minimum mitigation system requirements that have to be followed no matter which standard is used. It is important therefore that this section include any significant minimum requirements that are not included in any of the other mitigation standards. One critical component that is part of the PA DEP RMS is the necessity of a certified radon mitigator to inspect a building prior to any mitigation work being done to define all aspects of the job that need to be done in order to abide by the appropriate radon mitigation standards. A certified radon mitigator must take a course that reviews and defines all the mitigation requirements and pass an exam demonstrating at least a reasonable knowledge of those requirements. PA DEP RMS specifies that a mitigation installation cannot be started based on the decision of what needs to be done by a mitigation employee who has not passed the written exam or attended the 3 day mitigation class. At the end of the system installation the certified mitigator must inspect at least one fifth of all jobs the mitigation firm employees perform that he was not on site for. At least one of the radon mitigation standards approved by DEP does not include this requirement. If PA DEP does not include this requirement, non-certified mitigators will be able to install hundreds of radon mitigation systems without a single inspection by a certified mitigator who has been trained in the requirements of radon mitigation standards.

I strongly recommend that the inspection requirements prior to and after mitigation as specified in the PA DEP RMS be included in this document. Imagine if the building code requirements for all construction in the state of PA would now be based on the honor system and building inspections were no longer required. That is what the new guidance is proposing.