

## ADVISORY COMMITTEE COMMENT FORM FOR PROPOSED CODE CHANGES

(This form must be submitted electronically)

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### **Proposed Code Change - Language**

1. A vent pipe fan with a minimum measurement of 50 cfm @ ½ inch w.g. shall be installed in the vertical vent pipe. ~~If the fan is installed inside the building envelope, the vent pipe on the discharge side of the fan shall be independently pressure tested at 5 psi for 15 minutes to ensure there are no leaks in the pipe.~~ The vent pipe fan shall be installed only outdoors, in attics or in garages that are not beneath conditioned spaces. The vent pipe fan shall not be installed below ground, in conditioned spaces, in occupiable spaces of a building or in any basement, crawlspace or other interior location that is directly beneath a conditioned or occupiable space of a building. Vent pipe fan shall not be mounted in any location where pipe positively pressured by the fan is located inside conditioned or occupiable space.

### **Proposed Code Change – Need and Reason**

This change is needed to reduce the public's exposure to radon gas.

This change is reasonable because all existing radon mitigation standards used in the United States (either in regulated or non-regulated radon states) require radon fans to be located outside the conditioned living space. This is mostly due to radon fans leaking over time.

Fan leakage has been demonstrated many times, more recently in EPA sponsored vapor intrusion worksites. There are leakage issues with the housing of radon fans as well as their electrical boxes and connections. It's important to keep in mind the amount of radon entering the structure is but a small fraction of the amount of radon found in the soils under and around the structure. Because only a fraction of the radon in the soil enters existing homes without a radon fan, installing fans in the living space may greatly increase the amount of radon in the conditioned space by drawing it in from around the foundation and pumping it into the living space. It is not uncommon to find levels of radon in the vent stacks of active radon mitigation systems to be in the 1,000s (or greater) pCi/L – the USEPA has said if your home is at 4.0 pCi/L or greater you should take steps to lower your risk.

There is no economically viable means to continuously test for radon around these fans without spending hundreds or thousands of dollars on expensive radon testing equipment. It is easier and much less expensive to install the radon fan outside the conditioned living space to avoid this issue.

Upon being contacted, the largest radon fan manufacturer in the United States will not support fans being located inside the conditioned living space of the house.

MDH is less worried about pressure testing the vent pipe because if the fan is in the attic, the vent pipe through the conditioned space will be under negative pressure and radon leakage into the living space from punctures or unsealed pipe joints will not occur.

### **Proposed Code Change – Cost/Benefit Analysis**

This addition should have a minimal effect on the cost of construction.

**Other Factors to Consider Related to Proposed Code Change**

1. Is this proposed code change meant to:

change language contained in a published code book? If so, list section(s).

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

delete language contained in a published code book? If so, list section(s).

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

neither; this language will be new language, not found in the code book or in Minnesota Rule.

2. Is this proposed code change required by a Minnesota Statute or new legislation? If so, please provide the citation to the Statute or legislation.

No

3. Will this proposed code change impact other sections of a published code book or of an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.

unknown

4. Will this proposed code change impact other parts of the Minnesota State Building Code? If so, please list the affected parts of the Minnesota State Building Code.

Unknown

5. Who are the parties affected or segments of industry affected by this proposed code change?

Residential contractors and their subcontractors, building code officials and homeowners

6. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result.

No

7. Are you aware of any federal requirement or regulation related to this proposed code change? If so, please list the regulation or requirement.

No