

RADON CONTROL SYSTEMS

Minnesota Department of Labor and Industry

Are there requirements for the control of radon in new building construction?

Yes. The commissioner of the Minnesota Department of Labor and Industry (DLI) adopts rules for radon control as part of the State Building Code for all new residential buildings (Minn. Statutes 326B.106 subd. 6). Requirements for controlling radon in new residential structures are located in sections 1303.2400 through 1303.2403 of the Minnesota Residential Code. The code contains two methods for controlling radon in buildings: passive and active systems.

How is the control of radon regulated in the Minnesota Residential Code?

When a new residential building is built in Minnesota, the building must contain a passive radon mitigation system constructed in accordance with section 1303.2402 of the code. A passive radon mitigation system is designed to naturally draw radon gas from under the slab and vent it by convective air flow to the exterior of the building. Some of the common features required of a passive system include:

- gas-permeable soil, aggregate, sand or other approved material installed under the slab;
- soil-gas membrane applied to the top of the gas-permeable material;
- sealed floor and foundation openings;
- “T” fitting installed beneath the soil-gas membrane connected to two, 10-foot lengths of perforated pipe or the interior drain tile system;
- vent pipe(s) connected from the “T” fitting, extending a minimum of 12 inches above the roof;
- electrical power terminating at a box installed at an anticipated future fan location.



Radon is a colorless, odorless radioactive soil gas that seeps up from the earth. It is harmful to humans and long-term exposure can lead to lung cancer.

Installation of a fan in a passive radon control system creates an active radon control system that must comply with section 1303.2403 of the Minnesota Residential Code.

When an active radon control system is installed in a building, the requirements for a passive radon control system must also be met. An active radon mitigation system uses a fan that continuously pulls radon-laden air from the soil and exhausts it outdoors. In addition to the requirements for a passive system, an active radon control system incorporates three additional features as specified in section 1303.2403:

- radon gas vent pipe fan;
- system-monitoring device to indicate when the fan is not operating;
- a switch-controlled light and receptacle installed near the fan.

Are permits and inspections required for the installation of radon control systems?

Yes. Building permits and inspections are required for passive and active control systems.

Do the requirements for radon control systems apply to radon remediation work in existing homes?

No. Passive radon control systems are only required in new residential structures (section 1303.2400 subp. 1). Requirements for active radon control systems would only apply when adding a fan to an existing home that already has a (code compliant) passive radon control system in place (section 1303.2403).

Do the requirements for radon control systems apply when an addition is added to an existing dwelling?

A passive radon control system must be installed within any addition to a dwelling that currently has a (code compliant) radon control system incorporated into the existing dwelling (section 1303.2400, subp. 1, item H).



An example of a radon-control vent pipe.