**Section 422.20 Definitions**

As used in this Part:

"Act" means the Radon Industry Licensing Act [420 ILCS 44].

"Active Mitigation System", also known as "Active Soil Depressurization" or "ASD", means *a family of radon mitigation systems involving mechanically driven soil depressurization, including sub-slab depressurization (SSD), drain tile depressurization (DTD), block wall depressurization (BWD), and sub-membrane depressurization (SMD).* [420 ILCS 52]

"Agency" means the Illinois Emergency Management Agency (IEMA).

"Altering" means to change or modify a building or building design, or to revise, rather than repair, a mitigation system or mitigation system design.

"As Low As Is Reasonably Achievable" or "ALARA" means making every reasonable effort to maintain exposures to radiation as far below the dose limits in 32 Ill. Adm. Code: Chapter II, Subchapters b and d as is practical consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

"Backdrafting" means a condition where the normal movement of combustion products up a flue, resulting from the buoyant forces on the hot gases, is reversed, so that the combustion products can enter the house. Backdrafting of combustion appliances (such as fireplaces and furnaces) can occur when depressurization in the house overwhelms the buoyant force on the hot gases. Backdrafting can also be caused by high air pressures or blockage at the chimney or flue termination.

"Backer Rod" means a semi-rigid foam material resembling a rope of various diameters used to fill around pipes, etc., and to assist in making a sealed penetration. For example, where a pipe is inserted through a concrete slab, a length of backer rod is jammed into the opening around the pipe. Caulking is then applied to the space above the backer rod and between the outside of the pipe and the slab opening. The purpose of the backer rod is to hold the semi-fluid caulk in place until it sets or hardens. It is most important that a sealant only adhere to the 2 sides of the joint and not the base of the joint (third side). Adhesion to all 3 sides will prevent the sealant from elongating properly and will cause sealant failure.

"Batch" means a group of passive detectors manufactured by the same entity at the same time.

"Block Wall Depressurization" means a radon mitigation technique that depressurizes the void network within a block wall foundation by drawing air from inside the wall and venting it to the outside.

"Client" means any person who contracts for measurement or mitigation services.

"Combination Foundations" means buildings constructed with more than one foundation type, e.g., basement/crawlspace or basement/slab-on-grade.

"Commercial Building" means a type of building that is designed for commercial use, but not limited to office buildings, warehouses, retail facilities, schools, recreational facilities, assisted living facilities and buildings that combine these uses.

"Communication Test" means a diagnostic test designed to qualitatively measure the ability of a suction field and air flow to extend through the material beneath a concrete slab floor and thus evaluate the potential effectiveness of a sub-slab depressurization system. This qualitative test is commonly conducted by applying suction on a centrally located hole drilled through the concrete slab and simultaneously observing the movement of smoke downward into small holes drilled in the slab at locations separated from the central suction hole. (See also Pressure Field Extension.)

"Continuing Education Credits" or "CE Credits" means those continuing education credits received for documented successful completion of Agency-approved CE courses or for instructing an approved CE course.

"Crawlspace" means a foundation type with an open area beneath the livable space of a dwelling that typically has either a concrete slab or earthen floor. The crawlspace can have an open height of a few inches to several feet. The crawlspace may or may not be ventilated to the outdoors.

"Crawlspace Depressurization" means a radon control technique designed to achieve lower air pressure in the crawlspace relative to indoor air pressure by use of a fan-powered vent drawing air from within the crawlspace. (See also Mechanically Ventilated Crawlspace System.)

"Diagnostic Tests" means procedures used to identify or characterize conditions within buildings that may contribute to radon entry or elevated radon levels or may provide information regarding the performance of a mitigation system.

"Drain Tile Depressurization" or "DTD" means a type of active soil depressurization system where the suction point piping attaches to a drain tile or is located in the gas-permeable material near the drain tile. The drain tile may be inside or outside the footings of the building.

"Drain Tile Loop" means a continuous length of drain tile or perforated pipe extending around all or part of the internal or external perimeter of a basement or crawlspace footing.

"Dwelling" means a single family home or a single unit within a multiple family complex.

"Eave" means the border of a roof that overhangs any wall.

"Electret Ion Chamber" or "Electret" means an electrostatically charged piece – usually a disk – of Teflon, called an electret, located inside an electrically conducting plastic chamber of a known air volume. The electret serves as a source of high voltage needed for the chamber to operate as an ion chamber. It also serves as a sensor for the measurement of ionization in air. The ions produced inside the sensitive volume of the chamber are collected by the electret causing a depleted charge. The measurement of the depleted charge during the exposure period is a measure of integrated ionization during the measurement period. The electret charge is read before and after the exposure using a specially built non-contact electret voltage reader.

"Footprint" means each foundation type in direct contact with soil or other material.

"Foundation Type" means basement, crawlspace, slab-on-grade or any other construction technique approved by local building code.

"Government Entity" means the State, a State agency, a political subdivision, or any entity of local government.

"HVAC" means heating, ventilation and air conditioning.

"Home Environment Measurement" means a short term or long term measurement of radon in a single family home, duplex or condominium.

"Individual" means any human being.

"Interfere" means *to adversely or potentially adversely impact the successful completion of an indoor radon measurement by changing the radon or radon progeny concentrations or altering the performance of measurement equipment or an indoor radon mitigation system installation or operation.* [420 ILCS 44/15]

"Laboratory" means any organization that analyzes or calibrates radon or radon progeny measurement devices or detectors.

"Laboratory Analysis" means *the act of analyzing the radon or radon progeny concentrations with passive devices, or the act of calibrating radon or radon progeny measurement devices, or the act* *of exposing radon or radon progeny devices to known concentrations of radon or radon progeny as a compensated service.* [420 ILCS 44/15]

"Living Area" means any area in a building that is, or could be, adapted for human habitation whether the area is located in a basement, over a crawlspace, or situated on a slab-on-grade.

"Long Term Measurement" means measurements lasting 91 days or more; closed building conditions are not required, but are recommended. Long term measurements are not time-sensitive and, therefore, real estate testing options do not apply.

"Measurement" means any radon or radon progeny tests, laboratory analysis, or exposure in a known radon or radon progeny environment, as in a radon chamber.

"Mechanically Ventilated Crawlspace System" means a radon control technique designed to increase ventilation within a crawlspace, achieve higher air pressure in the crawlspace relative to air pressure in the soil beneath the crawlspace, or achieve lower air pressure in the crawlspace relative to air pressure in the living spaces, by use of a fan. (See also Crawlspace Depressurization.)

"Mitigation" means *the act of repairing or altering a building or building design for the purpose in whole or in part of reducing the concentration of radon in the indoor atmosphere.* [420 ILCS 44/15]

"Mitigation System" means any system or steps designed to reduce radon concentrations in the indoor air of a building.

"Multi-Family Building" means a building, 3 stories or less, designed to house more than 4 families in separate units that do not have a common HVAC system for multiple units.

"New Residential Construction" means *any original construction of a single-family home or a dwelling containing 2 or fewer apartments, condominiums, or town houses*. [420 ILCS 52]

"NIST" means the United States Department of Commerce, Technology Administration, National Institute of Standards and Technology (formerly National Bureau of Standards).

"Passive Monitor" means a measurement tool that does not require external power or batteries to operate, such as charcoal detectors or alpha track detectors.

"Passive New Construction Pipe" or "PNC" means *a pipe installed in new construction that relies solely on the convective flow of air upward for soil gas depressurization and may consist of multiple pipes routed through conditioned space from below the foundation to above the roof*. [420 ILCS 52]

"Performance Audit" means an examination of a program, function or operation or of the management systems, procedures and records of a radon contractor to assess whether the entity is complying with the Radon Industry Licensing Act [420 ILCS 44], this Part and its Quality Assurance Program.

"Perimeter Channel Drain" means a system for collecting water in a basement by means of a large gap or channel between the concrete floor and the wall. Collected water may flow to aggregate beneath the slot ("French Drain") or to a sump where it can be drained or pumped away.

"Person" means an entity including, but not limited to, *an individual,* company, corporation, *firm, group, association, partnership, joint venture, trust, or government agency or subdivision.* [420 ILCS 44/15]

"Picocurie Per Liter" or "pCi/L" means 2.2 disintegrations per minute of radioactive material per liter of air.

"Pressure Field Extension" means the distance that a pressure change is induced in the sub-slab area, measured from a single or multiple suction points. (See also Communication Test.)

"QAP" means Quality Assurance Program.

"Radon" means a *gaseous radioactive decay product of uranium or thorium.* [420 ILCS 44/15]

"Radon Chamber" means a facility in which radon measurement devices or detectors are exposed to known radon concentrations.

"Radon Contractor" or "Contractor" means a *person licensed to perform radon or radon progeny mitigation or to perform measurements* of *radon or radon progeny in an indoor atmosphere.* [420 ILCS 44/15]

"Radon Progeny" means any *combination of the radioactive decay products of radon.* [420 ILCS 44/15]

"Radon Resistant Construction" means *the installation of passive new construction pipe during new residential construction.* [420 ILCS 52]

"Radon Service Provider" means a radon contractor, laboratory, or person who performs laboratory analysis.

"Real Estate Testing" means short-term measurements that may be requested by a party not residing in the dwelling and that are performed in, or as a result of, or in expectation of, a real estate transaction and are time-limited due to this transaction.

"Re-Entrainment" means the unintended re-entry into a building of radon that is being exhausted from the vent of a radon mitigation system.

"Renewal" means issuance of a license that is expiring, has expired or has been previously terminated.

"Research" means Agency-approved scientific investigation by testing and/or mitigating for radon or radon progeny.

"Residential Building Code" means *an ordinance, resolution or law that establishes standards applicable to new residential construction*. [420 ILCS 52]

"Residential Building Contractor" means *any individual, corporation or partnership that constructs new residential* buildings. [420 ILCS 52]

"Residential Real Estate Measurement" means a measurement of radon in a single family home, duplex or condominium involved in a real estate transaction. Based on the time sensitive nature of real estate transactions, only short term measurements are appropriate and specific protocols are required.

"School Screening Measurement" means a measurement of radon performed by school district staff in accordance with the School Code [105 ILCS 5].

"Sealing and Caulking" means to plug and make tight to reduce the passage of gas. Sealing and caulking enhances radon reduction techniques; however, sealing and caulking alone has not been shown to lower radon levels significantly or consistently.

"Short Term Measurement" means measurements conducted for at least 48 hours and up to 90 days; closed building conditions are required for measurements lasting seven days or less and recommended throughout.

"Soil Gas" means the gas mixture present in soil that may contain radon.

"Soil Gas Retarder" means a continuous membrane of 6 mil (3 mil cross-laminated) polyethylene or equivalent flexible material used to retard the flow of soil gases into a building.

"Stack Effect" means the overall upward movement of air inside a building that results from heated air rising and escaping through openings in the building envelope, thus causing indoor air pressure in the lower portions of a building to be lower than the pressure in the soil beneath or surrounding the building foundation.

"Subfloor" means a concrete slab and other approved permanent floor system that directly contacts the ground and is within the walls of the living spaces of the building.

"Sub-Membrane Depressurization" or "SMD" means a radon control technique designed to achieve lower air pressure in the space under a soil gas retarder membrane laid on the crawlspace floor and sealed, relative to air pressure in the crawlspace, by use of a vent or fan-powered vent drawing air from beneath the membrane.

"Sub-Slab Depressurization (Active)" or "SSD (Active)" means a radon control technique designed to achieve lower sub-slab pressure relative to indoor air pressure by use of a fan-powered vent drawing air from beneath the concrete slab.

"Sub-Slab Depressurization (Passive)" or "SSD (Passive)" means a radon control technique designed to achieve lower sub-slab air pressure relative to indoor air pressure by use of a vent pipe (without a fan) routed through the conditioned space of a building and connecting the sub-slab area to the outdoor air. This system relies primarily on the convective flow of warmed air upward in the vent to draw air from beneath the concrete slab.

"Suitable for Occupancy" means a structural area in a home currently lived in or an area not currently used for occupancy, such as a basement, that an occupant or homeowner could use for living space without renovations. This includes an unfinished basement that could be used regularly as, for example, a recreation room, playroom, exercise room or workshop.

"USEPA" means the United States Environmental Protection Agency.

"Working Level" or "WL" means any combination of short-lived radon progeny in 1 liter of air that will result in the ultimate emission of 1.3 x 105 MeV of potential alpha particle energy. The short-lived radon progeny for radon-222 are: polonium-218, lead-214, bismuth-214 and polonium-214.

"Working Level Month" or "WLM" means a unit of exposure used to express the accumulated human exposure to radon decay products. It is calculated by multiplying the average working level to which a person has been exposed by the number of hours exposed and dividing the product by 170.

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