**Section 422.150 Mitigation Standard for Existing Housing**

a) The Mitigation Standard (MS) includes requirements for installation of radon remediation systems and provides a basis for evaluating the quality of such installations. It provides the basis against which in-progress or completed inspections will be evaluated.

b) Radon Mitigation Professional licensees shall be responsible for all radon mitigation systems installed by their firm or its subcontractors to ensure compliance with the requirements of this Mitigation Standard.

c) Limitations

1) Where discrepancies exist between provisions of the MS and municipal codes, the municipal codes shall take precedence, except that the municipal codes shall not take precedence with regard to alterations that may adversely impact the radon reduction functions for which such systems were originally designed and may adversely impact public health and safety regarding exposure to a radioactive element.

2) Compliance with the MS does not guarantee reduction of indoor radon concentrations to any specific level.

3) When altering a mitigation system, it shall be upgraded to the requirements of this Section. Altering radon mitigation systems does not include activities such as replacing worn out equipment or providing new filters, while leaving the remainder of the system unchanged. When maintenance is performed by a licensee on a mitigation system that does not comply with this Part, the client shall be notified in writing that the mitigation system does not comply with the mitigation standards of this Part. In addition, the professional licensee shall provide a written estimate of the upgrades needed and the cost to bring the system into compliance.

d) Quality Assurance. Radon Mitigation licensees shall follow the procedures specified in the Quality Assurance Program as required by Section 422.60(c)(5)(D).

e) General Practices. The following general practices are required for all contacts between Radon Mitigation licensees and clients.

1) In the initial contact with a client, the licensee shall review any available results from previous radon measurements to assist in developing an appropriate mitigation strategy. If the radon measurement was not performed in accordance with this Part, the client shall be advised that a retest is recommended.

2) The licensee shall inform the client of or provide to the client, Illinois specific documents, approved by the Agency, that discuss interpretation of indoor radon test results and the health risk associated with the radon level found in the building. These documents are available from the Agency and are on the Agency web site.

3) The licensee shall inform the client in writing, at the time a proposal for the installation of a radon reduction system is offered, of any sealants, caulks, or bonding chemicals containing volatile solvents and of the need to ventilate work areas during and after the use of such materials. The licensee shall provide ventilation as recommended by the manufacturer of the material used if existing ventilation does not meet the recommendations of the manufacturer of the material used.

f) Building Investigation

1) The licensee shall conduct a thorough visual inspection of the building prior to initiating any radon mitigation work. The results of the inspection shall be recorded in detail on a drawing of the floor plan. The licensee shall identify and describe any specific building characteristics and configurations, such as large cracks in slabs, exposed earth in crawlspaces, open stairways to basements, or air ducts under the slab of any foundation, and operational conditions, such as continuously running HVAC systems, or operability of windows, that may affect the design, installation, and effectiveness of radon mitigation systems.

A) As part of this inspection, the licensee shall request from the client any available information on the building, such as construction specifications, pictures, drawings, etc., that might be valuable in determining the radon mitigation strategy.

B) A floor-plan drawing shall be finalized from preliminary inspection sketches and shall include illustration of the building foundation, the location of all walls, drain fixtures, HVAC systems and radon entry points, results of any diagnostic testing, the layout of any radon mitigation system piping, and the location of any vent fan and system warning devices.

C) The finalized drawing shall be an auditable part of the mitigation file and shall be available to the occupant, the owner of the building, his/her representatives or the client, upon request.

2) The licensee shall conduct diagnostic tests to assist in identifying and verifying radon entry points and shall document the results of these tests in writing. Such tests may include radon grab sampling, continuous radon monitoring, and the use of smoke sticks.

3) If a contractor has concerns about backdrafting potential at a particular site, the contractor shall recommend that a qualified person inspect the natural draft combustion appliances and venting systems for compliance with local codes and regulations. The contractor shall recommend that the building owner bring into compliance any combustion appliance or venting system found to be non-complying.

4) Licensees shall not install a fan-powered radon reduction system in any building wherein confirmed spillage from any natural combustion appliance occurs, until the licensee has confirmed that the problem has been corrected by the client.

5) Licensees shall conduct a communication test prior to completing a proposal for the installation of a radon reduction system in any building where the characteristics of the sub-slab material are unknown to the licensee. The results of the communication test shall be documented in writing or on a drawing of the building floor plan.

g) Systems Design

1) All radon mitigation systems shall be designed and installed as permanent, integral additions to a building, except in accordance with subsection (e)(3).

2) All radon mitigation systems shall be designed to avoid the creation of other health, safety, or environmental hazards to building occupants, such as backdrafting of natural draft combustion appliances.

3) The main run of vent pipe, from primary suction point to exhaust, shall be a minimum 3 inches in diameter to avoid excessive flow noise inside the pipe and noise when the exhaust jet is released.

4) All radon mitigation systems and their components shall be designed to comply with the laws, ordinances, codes, and regulations of relevant jurisdictional authorities, including applicable mechanical, electrical, building, plumbing, energy and fire prevention codes.

5) All radon mitigation systems shall be designed to reduce a radon concentration in each area within the footprint of the building as low as reasonably achievable (ALARA).

6) As installed, the mitigation system shall operate at a reasonable noise level.

h) Systems Installation

1) General Requirements

A) All components of radon mitigation systems shall also be in compliance with the applicable mechanical, electrical, building, plumbing, energy and fire prevention codes, standards, and regulations of local jurisdiction.

B) Where portions of structural framing material must be removed to accommodate radon vent pipes, material removed shall be no greater than that permitted for plumbing installations by applicable building or plumbing codes.

C) Where radon mitigation system installation requires pipes or ducts to penetrate a firewall or other fire resistance rated wall, floor or ceiling penetrations shall be protected in accordance with applicable building, mechanical, fire and electrical codes.

 AGENCY NOTE: An example of a protected penetration would be the installation of a fire collar on a vent pipe penetrating a ceiling.

D) Sump pits shall not be used as the primary suction point for mitigation systems, unless in accordance with subsection (h)(7).

2) Radon resistant construction is required of new one- and two-family building construction. Active mitigation systems installed in new construction must be performed by a licensed mitigation professional or technician.

3) Radon Vent Pipe Installation

A) All joints and connections in radon mitigation systems using plastic vent pipes shall be permanently sealed with adhesives as specified by the manufacturer of the pipe material used, with 2 exceptions:

i) If secondary suction points are installed in sump pits, the system shall be designed with removable or flexible couplings to facilitate removal of the sump pit cover and for sump pump maintenance; and

ii) To facilitate maintenance and future replacement, radon vent fans shall be installed in the vent pipe using removable couplings or flexible connections that can be tightly secured to both the fan and the vent pipe.

B) All joints and connections in radon mitigation systems using a 3-inch by 4-inch metal downspout on the exterior of a building shall be permanently sealed with appropriate sealants.

C) Vent stack discharge points shall be directed vertically with no obstruction in the discharge except for a rodent screen of wire mesh no smaller than ¼ inch. The rodent screen or wire mesh shall be installed in a manner that allows for easy removal for cleaning. Rain caps shall not be installed on the discharge.

D) Radon vent pipes shall be fastened to the structure of the building with hangers, strapping, or other supports that will permanently secure the vent material. Existing plumbing pipes, ducts, or mechanical equipment shall not be used to support or secure a radon vent pipe.

E) Radon vent pipes shall be supported as follows:

i) Supports for radon vent pipes shall be installed at least every 6 feet on non-vertical runs.

ii) Vertical runs shall be secured either above or below the points of penetration through floors, ceilings and roofs.

iii) Vertical runs shall be secured at least every 8 feet on runs that do not penetrate floors, ceilings or roofs.

F) To prevent blockage of air flow into the bottom of radon vent pipes, these pipes shall be supported or secured in a permanent manner that prevents their downward movement to the bottom of suction pits or sump pits, or into the soil beneath an aggregate layer under a slab.

G) Radon vent pipes shall be installed in a configuration that ensures that any rain water or condensation within the pipes drains downward into the ground beneath the slab or soil gas retarder membrane.

H) Radon vent pipes shall not block access to any areas requiring maintenance or inspection. Radon vents shall not be installed in front of or interfere with any light, opening, door, window or equipment access area required by code.

I) When a radon mitigation system is designed to draw soil gas from a perimeter drain tile loop (internal or external) that discharges water through a drain line to daylight or a soakaway, a one-way flow valve, water trap, or other control device shall be installed if diagnostic testing indicates that outside air is entering the system.

4) Vent Stack Discharge Point. The discharge from vent stack pipes of active soil depressurization systems shall prevent re-entrainment of radon, prevent vent stack blockage due to heavy snowfall and prevent the direct exposure of individuals outside of buildings to high levels of radon by meeting all the following requirements:

A) Above the highest eave of the roof and as close to the roof ridge line as possible, unless an attached garage may be used for vent stack pipe discharge and all the following additional conditions are met:

i) The vent stack point penetrates the highest point on the roof that maximizes distance from people using the house, yard, patio, deck, etc.;

ii) There are no windows in the direct line of sight from the vent stack point;

iii) The vent stack point penetrates the farthest point on the roof that maximizes distance from the nearest opening (such as windows, doors, etc.) into the house and garage that is less than 2 feet below the exhaust point; and

iv) The reason for routing through an attached garage shall be documented and maintained for inspection by the Agency;

B) 10 feet or more above ground level;

C) 10 feet or more from any window, door or other opening into conditioned spaces of the structure that is less than 2 feet below the exhaust point. The 10 feet may be measured either directly between the 2 points or be the sum of measurements made around intervening obstacles;

D) 10 feet or more from any opening into an adjacent building;

E) For vent stack pipes that penetrate the roof, at least 12 inches above the surface of the roof; and

F) For vent stack pipes attached to or penetrating the sides of buildings, vertical and at least 12 inches above the edge of the roof and in a position to prevent blockage from snow or other materials and from being filled with water from the roof or an overflowing gutter.

5) Radon Vent Fan Installation

A) Vent fans used in radon mitigation systems shall be designed or otherwise sealed to reduce the potential for leakage of soil gas from the fan housing.

B) Radon vent fans used in active soil depressurization systems shall be installed in attics, in garages that are not beneath conditioned spaces, or on the exterior of the building. Radon vent fans shall not be installed below ground nor in the conditioned (heated/cooled) space of a building, nor in any basement, crawlspace, or other interior location directly beneath the conditioned spaces of a building.

C) Radon vent fans shall be installed in a configuration that avoids condensation buildup in the fan housing. Fans shall be installed in vertical runs of the vent pipe.

D) Radon vent fans shall be mounted and secured in a manner that minimizes transfer of vibration to the structural framing of the building.

E) Radon vent fans shall be to mounted to the vent pipe with removable couplings or flexible connections to facilitate fan removal for repair or replacement.

F) The intakes of fans used in crawlspace pressurization, or in pressurizing the building itself, shall be screened or filtered to prevent ingestion of debris or personal injury. Screens or filters shall be removable to permit cleaning or replacement and the building occupant and owner shall be informed of the need to periodically replace or clean such screens and filters. This information shall be included in documentation provided to the client.

G) Vent fans shall originate from a manufacturer that lists radon mitigation as one of the fan's intended uses.

6) Suction Pit Requirement for Sub-Slab Depressurization (SSD) Systems.

Materials shall be excavated from the area immediately below the slab penetration point of SSD system vent pipes to provide optimum pressure field extension.

7) Sump Pit Requirements

A) Sump pits shall not be used as the primary suction point for mitigation systems except in accordance with subsection (h)(7)(J).

B) Sump pits that require a sump pump shall have a submersible sump pump installed, except in areas where the water table is near the surface causing flooding of the basement or interfering with the effectiveness of the mitigation system. (See subsection (h)(7)(D).)

C) When the sump pit is used as a secondary suction point, a submersible pump shall be installed in the sump pit.

D) In areas where the water table is near the surface, causing flooding of the basement or interfering with the effectiveness of the mitigation system, pedestal pumps with a higher pumping capacity may be installed in accordance with all the following conditions:

i) The pump is installed in accordance with the manufacturer's instructions.

ii) The sump lid can be sealed air tight with the exception of the tiny opening necessary to permit free operation of the pedestal pump's float.

iii) The design does not create noise, through the float opening, that is objectionable to the client.

E) Sump pits that permit entry of soil gas or that would allow conditioned air to be drawn into a mitigation system shall be covered and sealed to prevent such entry.

F) The covers on sumps that previously provided protection or relief from surface water collection shall be fitted with a water or mechanically trapped drain. Water traps shall be fitted with an automatic supply of priming water.

G) Sump pit covers shall be made of durable plastic or clear polycarbonate and be designed to permit air-tight sealing.

H) Sump pit covers shall be designed to support the weight of a 155-pound individual standing on the cover.

I) To permit easy removal for sump pump servicing, the sump pit cover shall be sealed using silicone or other non-permanent type caulking materials or an air-tight gasket.

J) When the basement of the home being mitigated has radiant heat lines installed in or below the floor, the sump pit may be used as the primary suction point. The radon vent shall include provisions for the removal of the sump lid for maintenance of the sump pump.

8) Sealing Requirements

A) Openings around radon vent pipe penetrations of the slab, the foundation walls, or the crawlspace soil gas retarder membrane shall be cleaned, prepared and sealed in a permanent, air-tight manner using compatible caulks or other sealants.

B) Openings around other utility penetrations of the slab, walls or soil gas retarder shall also be sealed. Cracks in slabs and other small openings around penetrations of the slab and foundation walls shall be cleaned, prepared and sealed in a permanent air-tight manner using caulks or other sealants designed for such application.

C) Where a Block Wall Depressurization (BWD) system is used to mitigate radon, openings in the tops of the block walls and all accessible openings or cracks in the interior surfaces of the block walls shall be cleaned, prepared and sealed with caulks or other sealants designed for such application.

D) When sealing holes for plumbing rough-in or other large openings in slabs and foundation walls that are below the ground surface, non-shrink mortar, grouts, expanding foam, or other sealants designed for such application shall be used.

E) Openings or cracks that are determined to be inaccessible or beyond the ability of the licensee to seal shall be disclosed to the client and included in the documentation.

F) Openings, perimeter channel drains or cracks that exist where the slab meets the foundation wall (floor-wall joint), shall be sealed with urethane caulk or other sealants designed for such application. When the opening or channel is greater than ½ inch in width, a foam backer rod shall be inserted in the channel before application of the sealant. This sealing technique shall be done in a manner that retains the channel feature as a water control system. Other openings or cracks in slabs or at expansion or control joints should also be sealed.

G) When installing baseboard type suction systems, all seams and joints in the baseboard material shall be joined and sealed using materials recommended by the manufacturer of the baseboard system. Baseboards shall be secured to walls and floors with adhesives designed and recommended for such installations. If a baseboard system is installed on a block wall foundation, the tops of the block walls shall be closed and sealed.

9) Soil Gas Retarder Requirements

A) A soil gas retarder membrane shall be installed in basement or crawlspace areas without a concrete floor.

B) Plastic sheeting installed in crawlspaces or basements as soil gas retarders shall be a minimum of 6 mil (3 mil cross-laminated) polyethylene or equivalent flexible material. Heavier gauge sheeting shall be used when crawlspaces or basements are used for storage or frequent entry is required for maintenance of utilities.

C) Any seams in soil gas retarder membranes shall be overlapped at least 12 inches and sealed in a permanent air tight manner using compatible glues. The membrane shall also be sealed around interior piers and to the inside of exterior walls with furring strips and sealant or in accordance with specific procedures approved by the Agency.

D) Access doors required by local building codes shall be fitted with air tight gaskets and a means of positive closure, but shall not be permanently sealed. In cases where both the basement and the adjacent crawlspace areas are being mitigated with active SSD and SMD systems, sealing of the openings between those areas is not required.

E) Crawlspace depressurizationwithout the use of a soil gas retarder membrane shall only be used when the crawlspace is inaccessible. When crawlspace depressurization is used for radon mitigation, openings and cracks in floors above the crawlspace that would permit conditioned air to pass out of the living spaces of the building, shall be identified, closed and sealed. Sealing of openings around hydronic heat or steam pipe penetrations shall be done using non-combustible materials.

F) Drain tile depressurization in a crawlspace shall only be installed under the following conditions:

i) In conjunction with a sub-membrane depressurization system; or

ii) Suction can be obtained beneath the soil gas retarder.

10) Electrical Requirements

A) All electrical components of radon mitigation systems shall conform to provisions of the National Electrical Code and any additional local regulations.

B) Wiring shall not be located in or chased through the radon vent piping or any heating or cooling ductwork.

C) Any plugged cord used to supply power to a radon vent fan shall be no longer than 6 feet in length.

D) No plugged cord shall penetrate a wall or be concealed within a wall.

E) Radon mitigation fans installed on the exterior of buildings shall be hard-wired into an electrical circuit. Electrical disconnects shall be installed within line of sight and within 4 feet of the fan. Exteriorly, plugged fans shall be used only inside of weather-proofed fan housings or weather-proofed chases.

F) If the rated electricity requirements of a radon mitigation system fan exceeds 50 percent of the circuit capacity into which it will be connected, or if the total connected load on the circuit (including the radon vent fan) exceeds 80 percent of the circuit's rated capacity, a separate, dedicated circuit shall be installed to power the fan.

G) An electrical disconnect switch or circuit breaker shall be installed in radon mitigation system fan circuits to permit deactivation of the fan for maintenance or repair. Disconnect switches are not required with plugged fans.

11) Drain Installation Requirements

A) If drains discharge directly into soil beneath the slab or through solid pipe to a soakaway, the licensee shall install a drain that meets local building codes.

B) If condensate drains from air conditioning units terminate beneath the floor slab, the licensee shall install a trap in the drain that provides a minimum 6-inch standing water seal depth, reroute the drain directly into a trapped floor drain, or reconnect the drain to a condensate pump.

C) Perimeter (channel or French) drains shall be sealed with backer rods and urethane or comparable sealants in a manner that will retain the channel feature as a water control system.

D) When a sump pit is the only system in a basement for protection or relief from excess surface water and a cover is installed on the sump for radon control, the cover shall be recessed and fitted with a trapped drain meeting the requirements of subsection (h)(7).

12) HVAC Installation Requirements

A) Modifications to an existing HVAC system that are proposed to mitigate elevated levels of radon should be reviewed and approved by the original designer of the installed HVAC system or by a licensed mechanical contractor.

B) Foundation vents, installed specifically to reduce indoor radon levels by increasing the natural ventilation of a crawlspace, shall be non-closeable. In areas subject to sub-freezing conditions, the existing location of water supply and distribution pipes in the crawlspace, and the need to insulate or apply heat tape to those pipes, shall be considered when selecting locations for installing foundation vents.

C) Heat Recovery Ventilation (HRV) systems shall not be installed in rooms that contain friable asbestos.

D) In HRV installations, supply and exhaust ports in the interior shall be located a minimum of 12 feet apart. The exterior supply and exhaust ports shall be positioned to avoid blockage by snow or leaves and be a minimum of 10 feet apart.

E) Contractors installing HRV systems shall verify that the incoming and outgoing airflow is balanced to ensure that the system does not create a negative pressure within the building. Contractors shall inform their client, the occupant and the owner that periodic filter replacement and inlet grill cleaning are necessary to maintain a balanced airflow. Information on filter replacement and inlet grill cleaning shall be provided to their client, the occupant and the owner and shall be included in the documentation.

F) Both internal and external intake and exhaust vents in HRV systems shall be covered with wire mesh or screening to prevent entry of animals or debris or injury to occupants.

13) Materials

A) As a minimum, all plastic vent pipes in mitigation systems shall be smooth-walled Schedule 40 PVC.

B) Piping routed exteriorly shall be rated against deterioration from ultra-violet radiation from the sun.

C) Exteriorly, Schedule 40 PVC or 3-inch by 4-inch metal downspout shall be used as the vent pipe.

D) Vent pipe fittings in a mitigation system shall be of the same material as the vent pipes except as noted in subsection (h)(3)(A).

E) Cleaning solvents and adhesives used to join plastic pipes and fittings shall be as recommended by manufacturers for use with the type of pipe material used in the mitigation system.

F) When sealing holes for plumbing rough-in or other large openings in slabs and foundation walls that are below the ground surface, non-shrink mortar, grouts, expanding foam or other sealants designed for such application shall be used.

G) Penetrations of sump covers to accommodate electrical wiring, water ejection pipes, or radon vent pipes shall be designed to permit air-tight sealing around penetrations, using caulk or grommets.

H) Plastic sheeting installed in crawlspaces or basements as soil gas retarders shall be a minimum of 6 mil (3 mil cross-laminated) polyethylene or equivalent flexible material. Heavier gauge sheeting shall be used when crawlspaces or basements are used for storage or frequent entry is required for maintenance of utilities.

I) Any wood that comes into direct contact with the soil or concrete and is used in attaching soil gas retarder membranes to crawlspace walls or piers shall be pressure treated or naturally resistant to decay and termites.

J) When transitioning from one material or shape to another, an adapter specifically designed for the transition shall be used.

K) Drain tile or perforated pipe may be installed under soil gas retarders for the purpose of depressurization and to allow condensation to drain back to the soil.

L) The juncture of each radon vent pipe with the roof line shall be made water tight by an approved flashing. Radon vent pipes discharge large quantities of water vapor that will freeze at the discharge point; therefore, lead vent flashings or any other flashing or cap that would impede the exhaust from the radon vent are prohibited from use.

14) Monitors and Labeling

A) All active soil depressurization systems shall include a mitigation system monitor to indicate fan operation system performance or warn of fan failure.

B) Electrical radon mitigation system monitors (whether visual or audible) shall be installed on non-switched circuits and be designed to reset automatically when power is restored after service or power supply failure. Battery operated monitoring devices shall not be used unless they are equipped with a low-power warning feature.

C) Mechanical radon mitigation system monitors, such as manometer type pressure gauges, shall be clearly marked to indicate the range or zone of pressure readings that existed when the system was initially activated.

D) An Illinois Mitigation System Tag shall be placed on the vent pipe next to the mitigation system monitor. This label shall be purchased from the Agency and include the following information: "Radon Reduction System"; the installer's name, phone number and the Illinois license number; the date of installation; and an advisory that the building should be tested for radon at least every 2 years.

E) All exposed and visible interior radon mitigation system vent pipe sections shall be identified with at least one label on each floor level that reads "Radon Reduction System".

F) Fans mounted outdoors and exterior vent pipe shall be identified with a label that reads "Radon Reduction System" in a weatherproof manner.

G) Sump pits that are depressurized by the mitigation system or covered to minimize radon entry shall be identified with a label that reads "Radon Reduction System – Removal of this cover may result in failure of the Radon Reduction System. Consult (installer's name and phone number) before removing this cover and for instructions on the correct procedure for replacing it."

H) Circuit breakers controlling the circuits on which the radon vent fan and system failure warning devices operate shall be labeled "Radon Reduction System".

15) Post Installation Checklist

A) Upon completion of the installation of any radon mitigation system, the licensee shall complete the following steps, and document them on an installation check sheet that shall be signed and dated by a mitigation licensee and shall become auditable evidence.

i) Re-examine and verify the integrity of the fan mounting seals and all joints in the interior vent piping.

ii) Verify suctions or flows in the system piping or ducting to assure that the system is operating as designed.

iii) Advise the client that retesting the building at least every 2 years or if the building undergoes significant alteration is recommended.

iv) Request a copy of the report of any post-mitigation testing conducted by the client or by a Radon Measurement licensee.

B) Radon Mitigation licensees shall inform the client in writing that post-mitigation testing should be conducted no sooner than 24 hours nor later than 30 days following completion and activation of the mitigation system and that the test may be conducted by an independent Radon Measurement licensee or by the resident of the dwelling.

16) Post-Mitigation Testing

A) Evaluate the effectiveness of the mitigation system using an approved measurement device to assure the system is performing as designed.

B) Post-mitigation tests shall be performed in accordance with the applicable requirements of Section 422.130.

17) Contracts and Documentation

A) No mitigation activity shall be undertaken before a proposal for the work is accepted by the client, as evidenced by the client's signature and date on the proposal. A proposal for the installation of any radon mitigation system shall include as a minimum:

i) The Radon Mitigation Professional licensee's Illinois license number;

ii) A statement describing the planned scope of the work and an estimated completion date;

iii) A statement describing any known hazards associated with chemicals used in or as part of the installation;

iv) A statement indicating compliance with and implementation of the mitigation standards described in this Section;

v) A description of any system maintenance that the client, the occupant, or the building owner would be required to perform;

vi) A firm price of the installation cost and an estimate of the annual operating costs of the system; and

AGENCY NOTE: The firm price may include stepped approaches.

vii) A statement that the system is guaranteed to reduce and maintain the average radon concentration to less than 4.0 pCi/L and the conditions thereof; or a statement explaining that there is no guarantee and the reasons why there is no guarantee.

B) Licensees shall maintain the following records for 5 years or for the period of any warranty or guarantees, whichever is longer, and shall make the following records available to the homeowner upon request and documentation of home ownership:

i) Copies of the building investigation summary and floor plan sketch;

ii) The finalized drawing that includes illustration of the building foundation, the location of all walls, drain fixtures, HVAC systems and radon entry points, results of any diagnostic testing, the layout of any radon mitigation system piping, and the location of any vent fan and system warning devices;

iii) Pre- and post-mitigation radon test data;

iv) Copies of contracts and warranties;

v) A description of the mitigation system installed and its basic operating principles;

vi) A description of any deviations from the MS and applicable regulations of this Part;

vii) A description of the proper operating procedures of any mechanical or electrical systems installed, including manufacturer's operation and maintenance instructions and warranties;

viii) The proposal, contract, and warranties or guarantees made to the client, and any other documentation important to the mitigation system installed; and

ix) The address of the building mitigated, including the zip code, the mitigation system type, the mitigation date, whether radon resistant new construction techniques were used, and the Illinois Mitigation System Tag number.

C) Licensees shall, upon completion of the mitigation project, provide clients with an information package that includes:

i) A list of appropriate actions for clients to take if the system failure warning device indicates system degradation or failure; and

ii) The name, telephone number, and license number of the professional licensee and the phone number of the Agency's Radon Program.

(Source: Amended at 37 Ill. Reg. 20240, effective December 9, 2013)