



Conference of Radiation Control Program Directors, Inc.

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February 19, 2010

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Rob Lewis, Deputy Director
Division of Materials Safety and State Agreements
US Nuclear Regulatory Commission
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

Dear Mr. Lewis:

Please find enclosed the finished copy of the latest revision to the *Suggested State Regulations for Control of Radiation* from the Conference of Radiation Control Program Directors, Inc. (CRCPD):

Part R – Radon

2010 Rationale Part R – Radon

The CRCPD Board of Directors on February 18, 2010 approved the publication of Part R. CRCPD now requests concurrence from your agency. CRCPD requests that a written response relative to federal concurrence by your agency be submitted within 60 days of receipt of this correspondence.

Thank you for your attention to this important matter.

Sincerely,

Ruth E. McBurney, CHP
Executive Director

Enclosures

cc: CRCPD Board of Directors
Kathleen Schneider, NRC
Robert Stillwell (ME), Chair, SR-R
Bruce Hirschler (CRCPD) SSRCR Publication Manager

PART R**RADON**Sec. R.1 - Purpose and Scope.

- a. Except as otherwise specifically provided, these regulations apply to all ~~persons or business entities~~ and other persons located within or outside [insert state name here] that, for a fee or other remuneration, offer to conduct air [and water] radon services, including but not limited to radon testing, analysis of radon detection devices, radon testing or mitigation consultation, or radon mitigation, in [insert state name here].
- b. In addition, these regulations establish requirements for the control of radon in new residential structures and requirements for radon measurements performed during real estate transactions.

Sec. R.2 - Definitions. As used in Part R, these terms have the definitions set forth below:

"Applicant" means any person who applies for an Agency certification [license].

"Approved ~~radon~~ measurement device" as used in this Part means a radon or radon decay product measurement device that quantifies radiation from radon or its decay products and meets proficiency requirements determined by the Agency.

"Analytical radon measurement service" means a radon measurement service or activity that includes the capability to extract, read, analyze or manipulate the radon/WL data from the measurement device(s) and calculate the final concentration for the client test report. These capabilities include, but are not limited to, reading and recording initial and final electret voltages, printing continuous monitor data tapes, recording radon or WL concentrations from a data window, or processing the radon/WL data for test report generation.

"Authorized radon measurement protocol" means an Agency-approved method for measuring radon [in air] [in water] [in environmental media].

"Becquerel per cubic meter" means, for purposes of this Part, a unit of radioactivity representing one disintegration per second per cubic meter: 1 Bq/m³ (0.027 pCi/L).

"Building" means a structure enclosed with exterior walls or fire walls, built, erected and framed of component structural parts, designed for the housing, shelter, enclosure or support of individuals.

"Business entity" means any form of corporation, partnership, association, cooperative, joint venture, business trust, or sole proprietorship that conducts business in this state.

"Business day" means any day of the year, exclusive of Saturdays, Sundays, and [insert name of state] holidays.

~~"Certified [Licensed] radon laboratory" means a laboratory which analyzes samples collected with approved radon measurement devices for the presence of radon and/or radon decay products in a site that uses stationary equipment separate from the location in which the sample was taken and holds a current valid certificate issued or accepted by the Agency for radon analysis.~~

"Certified [Licensed] person" or "certified [licensed] individual" means an Agency-certified [licensed] radon laboratory, an Agency-certified [licensed] radon measurement specialist, an Agency-certified [licensed] radon measurement business, an Agency-certified [licensed] radon measurement technician, an Agency-certified [licensed] radon mitigation business, an Agency-certified [licensed] radon mitigation specialist or an Agency-certified [licensed] residential radon mitigator as defined by Part R.

"Certified [Licensed] radon laboratory" means a laboratory which analyzes samples collected with approved radon measurement devices for the presence of radon and/or radon decay products in a site that uses stationary equipment separate from the location in which the sample was taken and holds a current valid certificate [license] or accreditation issued or accepted by the Agency for radon analysis.

"Certified [Licensed] radon measurement business" means a business entity which holds a current valid certificate [license] issued or accepted by the Agency for radon measurement and provides on-site measurement services using Approved approved radon measurement devices for radon or radon decay products and which meets the requirements for Agency certification [licensing] in accordance with these regulations. For the purpose of Part R, an Agency-certified [licensed] radon laboratory which does not provide on-site measurement services directly to the public is not considered a radon measurement business.

"Certified [Licensed] radon^{*/} measurement specialist" is an individual who holds a current valid certificate [license] issued or accepted by the Agency for radon measurement specialist and provides on-site residential and nonresidential radon or radon decay product measurement services with a portable laboratory and/or non-analytical devices that are approved by an organization accepted by the Agency. The measurement services provided by the specialist may include the evaluation and interpretation of measurement protocol and diagnostic radon measurements.

"Certified [Licensed] radon measurement technician" is an individual who holds a current valid certificate [license] issued or accepted by the Agency for radon measurement technician and provides on-site residential measurement services with non-analytical radon measurement devices that are approved by an organization accepted by the Agency.

"Certified [Licensed] radon mitigation business" means a commercial business (see business entity

^{*/} *The word radon is inserted to specify that measurement specialists can interpret radon measurements, not pressure field extension measurements.*

definition above) which designs and/or installs systems in existing buildings to mitigate radon and holds a current valid certificate [license] issued or accepted by the Agency for radon mitigation which meets the requirements for Agency certification [licensing] provided by Part R.

"Certified [Licensed] radon mitigation specialist" means an individual who performs or evaluates diagnostic tests to determine appropriate radon mitigation strategies for any type of building or structure, designs and installs or supervises the installation of mitigation systems, and holds a current valid certificate [license] issued or accepted by the Agency for radon mitigation specialist meets the requirements for Agency certification [licensing] provided by Part R.

"Certified [Licensed] residential radon mitigator " means an individual who performs or evaluates diagnostic tests to determine appropriate radon mitigation strategies for one-or-two family low rise residential buildings, designs and installs or supervises the installation of one-or-two family low rise residential mitigation systems and holds a current valid certificate [license] issued or accepted by the Agency for residential radon mitigator, and meets the requirements for Agency certification [licensing] provided by Part R.

"Continuing education" means, as used in this Part, lifelong learning to ensure that basic skills and abilities required for certification [license] under Part R are maintained, and that new information and knowledge relevant to certification [license] under Part R is put into practice.

"Course provider" means an individual, business or agency currently approved, authorized, or certified [licensed] by the Agency to provide instruction in radon measurement or mitigation techniques as part of the Agency's radon certification [licensing] program.

"Diagnostic tests" means tests performed or procedures used to determine appropriate mitigation methods for a building.

~~"Facility" means the location within one building (or vehicle, or under one roof, or at one address) and under the same administrative control (1) at which the possession, use, processing or storage of radioactive material is or was authorized, (2) at which a radiation machine is or was installed, operated and/or stored, and/or (3) at which a source of radiation is located. "Facility" may also mean multiple such locations or addresses at a site or part of a site if so approved by the Department.~~

"Facility" means, as used in this Part, the location within one building (or vehicle, or under one roof, or at one address) and under the same administrative control at which radon testing, analysis, or mitigation equipment; or associated records are installed, operated, used, processed or stored.

~~"Facility" may also mean multiple such locations or addresses at a site or part of a site.~~

"Mitigate" means to install systems and/or materials to prevent entry of radon into the indoor environment or to reduce radon concentrations in the indoor environment.

"Mitigation system" means any system or interventions designed to reduce radon concentrations in the indoor environment of a building, including but not limited to, active soil depressurization techniques, sealing techniques, and natural and forced air ventilation techniques.

"Non-analytical radon or non-analytical radon decay product measurement device" is a device that cannot be read directly by the operator and requires additional equipment or instruments to obtain the measurement results from the device.

"On-site measurement" means a radon or radon decay product measurement, either active or passive, where the certified measurement technician or specialist places and retrieves the measurement device at the measurement location.

"Person" means, as used in this Part, any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, any other State or political subdivision or agency thereof, and any legal successor, representative, agent, or agency of the foregoing.

"Picocurie per liter (pCi/L)" means 2.22 disintegrations per minute of radioactive material per liter, or 37 becquerels per cubic meter. It may be used as a measure of the concentration of radon gas in air. One picocurie is equivalent equal to 10^{-12} cCuries.

"Portable laboratory" means an approved radon measurement device or system that is able to provide radon concentration information at the site where testing occurred, or elsewhere, without the need to be returned to a certified [licensed] radon laboratory.

"Proficiency test" means a procedure to demonstrate analysis capabilities by the exposure of radon or radon decay product measurement devices in an independent radon test chamber, conducted within an authorized accreditation or certification program accepted by the Agency.

"Quality Assurance~~assurance~~" (QA) means all those planned and systematic actions necessary to provide adequate confidence that a system will perform satisfactorily and to insure accuracy and reproducibility in radon measurements and analysis in accordance with written procedures and standards.

"Quality Assurance Officer" means the individual with sufficient authority within the business responsible for the development, maintenance and oversight (including corrective action) of the quality assurance program.

"Quality ~~Control~~control" (QC) means the steps taken by an organization to measure performance, compare performance with standards, and act on any differences.

"Radon (Rn)" means the naturally occurring, colorless, odorless, radioactive gaseous element formed by radioactive decay. The atomic number is 86. The most common isotope of radon that occurs in nature is radon-222, with radon-220 (thoron) sometimes present. The term is often used generically to represent radon and radon decay products.

"Radon chamber" means an enclosure in which radon gas and decay products of known concentration can be controlled in a stable manner such that measurements can be made without significantly affecting the concentration.

"Radon decay products" means, for purposes of this Part, the radionuclides formed as a result of the decay of radon-222, ~~including specifically~~ polonium-218, bismuth-214, lead-214, and polonium-214; or as a result of the decay of radon-220, ~~including specifically~~ polonium-216, lead-212, bismuth-212, and polonium-212.

"Radon reciprocity state" means a state other than that of the Agency with radon certification [licensing] requirements and procedures no less stringent than those required by Part R and formally recognized by the Agency.

"Site" means a geographic entity comprising leased or owned land, buildings, and other structures where program activities are performed.

"Working level (WL)" as used in this Part, means any combination of short-lived radon decay products that will result in the ultimate emission of 130,000 million electron volts of potential alpha particle energy per liter of air.

"Working level month" (WLM) as used in this Part, means an exposure to one working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).

Sec. R.3 - Exemptions.

- a. The Agency certification [licensing] requirements of Part R shall not apply to:
 - i. An individual who occupies a residence and tests that residence;
 - ii. An individual who owns and occupies a single-unit residence and mitigates that residence;
 - iii. A person not otherwise regulated under Part R who incorporates radon control options, in conformance with guidance designated by the Agency, prior to completion of initial construction (not upgrading, modifying, or remodeling), or prior to initial occupancy. Installing or modifying any radon control system component after initial occupancy shall be done by persons Agency-certified [licensed] pursuant to Part R;
 - iv. A laborer performing specific mitigation system installation tasks under the direct on-site supervision of an Agency-certified [licensed] radon mitigation specialist or Agency-certified [licensed] residential radon mitigator;
 - v. A trades professional such as an electrician or plumber installing a portion of the radon mitigation system specific to the professional's trade, as required by federal, state, or local codes.
 - vi. A person who sells or offers for sale at a retail outlet radon measurement devices, such as charcoal canisters, provided that:

- (1) The radon measurement devices are manufactured or supplied by an Agency-certified [licensed] radon measurement business;
 - (2) The analysis, result, ~~and or~~ interpretation of such tests are performed with the device and are sent directly to the purchaser by the certified [licensed] radon measurement business;
 - (3) Consultation on radon is provided only by an Agency-certified [licensed] radon measurement business;
 - (4) The measurement devices are stored and displayed in a manner that maintains their integrity;
- vii. A person testing for or mitigating radon and/or radon progeny:
- (1) As part of radon training as approved by the Agency;
 - (2) As part of scientific research as approved by the Agency; or
 - (3) Without remuneration as a public service as approved by the Agency;
- viii. Other exemption deemed appropriate under A.3 of these regulations.

Sec. R.4 - Requirements for Radon Record Retention and Confidentiality.

- a. Data collected by the Agency pursuant to the reporting requirements of Part R shall be retained for at least [insert number in accordance with state law] years. When the Agency does not have pre-existing policies or procedures for retention of records such as those collected pursuant to the reporting requirements of Part R, the Agency may determine a retention period for these records.
- b. When the Agency does not have pre-existing policies or procedures governing confidentiality for records such as those collected pursuant to the reporting requirements of Part R, the Agency may determine confidentiality policies or procedures. These policies and procedures may include confidentiality for information that identifies the address, owner or occupant of a private building which was tested or treated for the presence of radon or radon decay products, shall be maintained confidential unless the owner waives this right of confidentiality in writing or the information is disclosed in accordance with state law.
- c. When the Agency does not have pre-existing policies or procedures governing special considerations shall be given for release of confidential information as necessary for investigations or enforcement actions, scientific studies, and/or statistical summaries, the Agency may determine policies or procedures for such special conditions which warrant the release of confidential information.

Agency Certification [Licensing], Application, Renewal and Termination

Sec. R.5 - Agency Certification [License].

- a. No person may conduct radon/radon decay product measurements, including the placement and retrieval of measurement devices, analyze [or distribute] radon/radon decay product measurement devices, or mitigate any building to reduce radon concentrations, for a fee or other remuneration, unless such person has been certified [licensed] by the Agency.
- b. These regulations do not exempt any person from other state or local occupational licensure or contractual requirements.
- c. Agency certifications [licenses] issued under Part R shall be valid for a period of 12 months [or specify other period, not to exceed 24 months] from the date of issuance.

Sec. R.6 - Requirements for a Radon Measurement Device Manufacturers. A manufacturer shall have each radon measurement device model approved by an accreditation or certification program acceptable to the Agency prior to offering said device for sale or use for radon or radon decay product measurement.

Sec. R.7 - Requirements for a Calibration Facilities Facility. A calibration facility shall ~~meet~~ meet criteria determined by the Agency, including:

- a. Meet the following criteria:
 - i.- Use only standards with traceability to nationally or internationally recognized standards;
 - ii. Conduct inter-comparisons annually [periodically] in accordance with nationally or internationally recognized standards; and
 - iii. Expose devices to a known radon concentration in a controlled environment; and
 - iv. Meet the requirements of Sections R.8b. and R.8c; and
 - v. Meet such other criteria as the Agency determines; or
- b. Provide evidence of current [national or state] accreditation or certification listing accepted by the Agency with the corresponding identification number(s) provided to the applicant from an accreditation or certification program~~Conduct inter-comparisons annually [periodically] in accordance with nationally or internationally recognized standards;~~
- e. ~~Expose devices to a known radon concentration in a controlled environment; and~~
- d. ~~Meet the requirements of Sections R.8b. and R.8c.~~

Sec. R.8 - Agency Certification [~~Licensing~~] Requirements to Become a ~~for~~ Certified [~~Licensed~~] Radon Measurement Laboratories Laboratory.

- a. An Agency-certified [licensed] radon measurement laboratory shall maintain accreditation or certification [licensure] with each measurement method utilized by the laboratory from an accreditation or certification program accepted by the Agency.
- b. An Agency-certified [licensed] radon measurement laboratory shall adhere to a written quality assurance plan in order to assure the reliability and validity of the results from each type of radon measurement device analyzed by the laboratory. Such plan shall be approved by the Agency and contain each applicable element of the Agency approved guidance regarding quality.
- c. An Agency-certified [licensed] radon measurement laboratory shall designate and identify a quality assurance officer within the organization to supervise and/or carry out the monitoring, record keeping, statistical techniques and other functions required to maintain high quality data for each type of radon measurement device analyzed by the laboratory.

Sec. R.9 - Application Requirements to Become a Certified [~~Licensed~~] ~~for~~ Radon Measurement Laboratories Laboratory. Each applicant for initial Agency certification [license] under this section shall submit a completed, signed and dated application in a format and manner as prescribed by the Agency. The application, accompanied by the nonrefundable initial application and Agency certification [license] fee(s), shall include at minimum:

- a. ~~Evidence, acceptable to the Agency, of current accreditation or certification listing accepted by the Agency with the corresponding identification number(s) provided to the applicant from an accreditation or certification program. This shall include evidence, acceptable to the Agency, of accreditation or certification for each measurement method used by the applicant.~~
- a. The name, business location, address, telephone number, fax number, and email address of the applicant;
- b. The tax identification number [Employer Identification Number] of the business;
- c. The name and address of each owner, officer, or other individual responsible for the business entity;
- d. A list of each approved measurement device type for which analytical results will be provided;
- e. For each device listed in 12.d., documentation which demonstrates proficiency through:
 - i. Current third-party accreditation or certification from a national proficiency testing program that the Agency has determined to be acceptable; or
 - ii. Meeting other criteria that the Agency determines to be equivalent.

- bf. For each approved measurement device, a copy of the instructions provided for its use;
- g. A current, blank copy of each form used to report results to clients, including any guidance or recommendations provided based on the results;
- h. A copy of current publications and advertisements of radon-related services made by the applicant.
- i. A copy of the applicable Quality Assurance Plan covering each approved measurement method device to be used by the applicant. Such plan shall be approved by the Agency and contain each applicable element of the Agency approved guidance regarding quality.
- ej. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- ek. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by ~~another agency~~any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.10 - Agency Certification [license] Renewal Requirements for a Measurement LaboratoriesLaboratory.

- a. ~~No radon analysis service for measurements conducted within the state shall be conducted by the laboratory after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency. Each application for Agency certification [license] renewal under R.10 shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~
- b. ~~Each application for Agency certification [license] renewal under R.10 shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~No radon analysis service for measurements conducted within the state shall be conducted by the laboratory after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.
- c. The application shall be in a format and manner as prescribed by the Agency and shall include:
 - i. The information required in ~~R.9a. and R.9b.~~9.
 - (1) In the application, the applicant may reference information contained in prior applications, statements, or reports filed with the Agency provided such references are clear and specific.
 - (2) For an unchanged Quality Assurance Plan, submit a new signature page which has current signatures and a signed statement that the entire plan has been

reviewed not more than 30 days prior to the renewal, ~~is required.~~

- ii. The nonrefundable Agency certification [license] renewal fee.
- iii. Any reports currently due as required by R.32.

Sec. R.11 - Agency Certification [License] Requirements for a Radon Measurement Businesses.

- a. An Agency-certified [licensed] radon measurement business shall at all times maintain on staff or retain as a consultant an Agency-certified [licensed] radon measurement specialist to serve as quality assurance officer. The Agency-certified [licensed] radon measurement specialist shall perform the following duties for the measurement business:
 - i. Review, approve and ensure the implementation of the quality assurance ~~Plan~~plan(s);
 - ii. Review, approve, and sign reports required by the Agency;
 - iii. Ensure compliance with state and federal regulations and at least annually conduct an on-site evaluation of standard operating procedures;
 - iv. Provide annual (refresher) training covering measurement procedures and worker health and safety for all technicians employed by the business;
 - v. ~~Shall be~~Be present during scheduled Agency inspections when requested by the Agency; and
 - vi. ~~Shall e~~Evaluate each worker's radon and/or radon decay product exposures [each calendar quarter] and provide an annual report of the evaluation to each employee.
- b. Each radon/radon decay product measurement in air, reported to clients, shall be performed with devices approved by an accreditation or certification program accepted by the Agency. Authorized radon measurement protocols shall be followed for all measurements reported to clients.
- c. Each radon in water measurement reported to clients shall be conducted in accordance with a standard method approved by the Agency. Additionally, all reports provided for radon in water measurements shall meet the same criteria as reports for radon in air measurements according to authorized radon measurement protocols as determined appropriate by the Agency.
- d. An Agency-certified [licensed] radon measurement business shall adhere to a Quality Assurance Plan for each type of measurement equipment employed in order to assure the reliability and validity of radon measurements. Such plan shall be approved by the Agency and contain each applicable element of the Agency approved guidance regarding quality.
- e. An Agency-certified [licensed] radon measurement business shall develop and adhere to a

radiological safety plan designed to keep each employee's exposure to radon and radon decay products as low as reasonably achievable.

- f. Each radon measurement device used by the business shall be analyzed by a currently accredited or certified laboratory or analytical service provider holding an accreditation or certification accepted by the Agency.
- g. An Agency-certified [licensed] radon measurement business shall have radon measurements, including the placement and retrieval of the measurement devices, performed by an Agency-certified [licensed] radon measurement technician or specialist.
- h. An Agency-certified [licensed] radon measurement business shall submit reports as required by R.32.
- i. An Agency-certified [licensed] radon measurement business shall maintain, at a minimum, the following records for 5 years:
 - i A copy of all reports submitted to the Agency;
 - ii A complete copy of all client reports for all measurements performed; and
 - iii Quality assurance reports and records for each measurement method used.
- fj. An Agency certified [licensed] radon measurement business shall provide to an Agency certified [licensed] radon mitigation business, upon written request including evidence that the mitigator installed the system in question, the results of any post-mitigation test used to determine system effectiveness.}

Sec. R.12 - Application Requirements for a Radon Measurement Businesses.

a. — Each applicant for initial Agency certification [license] under this section shall submit a completed, signed and dated application in a form and manner as prescribed by the Agency. The application, accompanied by the nonrefundable initial application and Agency certification [license] fee(s), shall include at minimum:

- i.a. The name, business location, address, telephone number, fax number, and email address of the applicant;
- ii.b. The tax identification number [Employer Identification Number] of the business;
- iii.c. The name and address of each owner, officer, or other individual responsible for the business entity;
- iv.d. The names and Agency certification [license] numbers of the Agency-certified [licensed] radon measurement specialists and Agency-certified [licensed] radon measurement technicians employed by or affiliated with the business as staff members or consultants to be

utilized by the applicant;

- ve. Identification of all radon and radon decay product measurement methods to be offered, including the type, manufacturer and model number of the measurement equipment;
- vif. Designation of those measurement methods for which the business has analytical capabilities and evidence, acceptable to the Agency, of certification accepted by the Agency, with the corresponding identification number(s) for each of these methods;
- viig. Designation of those measurement methods used without analytical capabilities;
- viiih. Identification of the name, address and certification or accreditation identification number of the analytical laboratory that will analyze each method designated in R.12a.v.;
- ixi. A copy of the applicable Quality Assurance Plan covering each measurement method to be used by the applicant.
- xj. A copy of a radiological safety plan;
- xik. A current, blank copy of each form used to report results to clients, including any guidance provided concerning the need for further measurement or mitigation;
- xiil. A copy of current publications and advertisements of radon-related services made by the applicant.
- xiiim. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- xivn. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by ~~another agency~~any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.13 - Agency Certification [License] Renewal Requirements for a Radon Measurement Businesses.

- a. ~~No radon measurement service shall be conducted by the business after the certification expiration date unless a renewal application has been approved by the Agency. Each Application for Agency certification [license] renewal under R.13 shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~
- b. ~~Each Application for Agency certification [license] renewal under R.13 shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date. No radon measurement service shall be conducted by the business after the certification expiration date unless a complete renewal application has been received by the Agency in a timely manner.~~

- c. The application shall be in a format and manner as prescribed by the Agency and shall include:
- i. The information required in R.12a. ~~such that~~:
 - (1) In the application, the applicant may reference information contained in prior applications, statements or reports filed with the Agency provided such references are clear and specific; and
 - (2) For an unchanged Quality Assurance Plan, submit a new signature page which has current signatures and a signed statement that the entire plan has been reviewed not more than 30 days prior to the renewal, ~~is required.~~
 - ii. The nonrefundable Agency certification [license] renewal fee;
 - iii. Any reports currently due as required by R.32.

Sec. R.14 - Agency Certification [License] Requirements for a Radon Mitigation Businesses.

- a. An Agency-certified [licensed] radon mitigation business shall at all times maintain on staff, or retain as a consultant, an Agency-certified [licensed] radon mitigation specialist. For mitigation businesses that provide services solely for one- and two-family low-rise residential structures, an Agency-certified [licensed] residential radon mitigator may be substituted. An Agency-certified [licensed] radon mitigation specialist, or Agency-certified [licensed] residential radon mitigator, as appropriate, shall perform the following duties for the mitigation business:
- i. Evaluate diagnostic tests to determine appropriate radon mitigation strategies for the appropriate type of building or structure;
 - ii. Design and supervise the installation of mitigation systems, and review work done by trades professionals on the system to ensure agreement with mitigation system needs and requirements;
 - iii. Review, approve, and sign monthly [quarterly] reports to the Agency;
 - iv. Provide annual (refresher) training covering mitigation procedures and worker health and safety for all technicians employed by the business;
 - v. Be present during scheduled Agency inspections when requested by the Agency; and
 - vi. Evaluate each worker's radon and/or radon decay product exposure [each calendar quarter] and provide an annual report of the evaluation to each employee.
- b. An Agency-certified [licensed] radon mitigation business shall develop and adhere to a

radiological safety plan designed to keep each employee's exposure to radon and radon decay products as low as reasonably achievable.

- c. An Agency-certified [licensed] radon mitigation business shall assure that all radon mitigation system installations are performed under the supervision of an Agency-certified [licensed] radon mitigation specialist or Agency-certified [licensed] residential radon mitigator.
- d. An Agency-certified [licensed] radon mitigation business shall submit reports as required by Part R.32.
- e. A Certified [Licensed] radon mitigation business shall include in contracts with all mitigation system clients, language that states the necessity for post mitigation testing. See model language in Appendix C.
- f. Upon completion of the radon mitigation project, an Agency-certified [licensed] radon mitigation business shall provide the client, and affix to the mitigation system, a written information package that includes:
 - i. Copies of signed and dated contracts, guarantees and warranties;
 - ii. A description of the mitigation system installed, date of installation, and its basic operating principles;
 - iii. A description of the proper operating procedures of any mechanical or electrical systems installed, including manufacturers' operation and maintenance instructions;
 - iv. Copy of any Agency-approved deviation from mitigation standards and documentation supporting the deviation;
 - v. A list of appropriate actions for clients to take if the system failure warning device indicates a system degradation or failure;
 - vi. The name, Agency certification [license] number, address, and phone number of the Agency-certified [licensed] mitigation business and certified [licensed] individual performing the mitigation; and
 - vii. The following written notice: "This system documentation is provided to you by [name of organization or individual], [who or which] is currently certified [licensed] by the [insert name of Agency] to perform radon mitigation services. Any question, comment, or complaint regarding the persons performing these measurements or mitigation services may be directed to the [insert name of Agency] at [Agency address, phone number, fax number, and email address]."
- g. An Agency-certified [licensed] mitigation business shall install radon mitigation systems in compliance with a mitigation standard accepted by the Agency. Prior to the start of the

post-mitigation radon measurement, all systems shall be inspected by a the mitigation specialist or residential radon mitigator to assure compliance.

- h. An Agency-certified [licensed] radon mitigation business shall ensure that each building is measured for radon levels after mitigation work is performed.
- i. The mitigation system shall be operated normally during the entire measurement period.
 - ii. Post-mitigation measurements shall be started no sooner than 24 hours nor later than 30 days following completion of the mitigation system.
 - iii. Measurements shall be of sufficient type, duration and consistency to allow for comparison of before and after mitigation radon levels;
 - iv. Measurements shall be performed with devices that meet the requirements of an accreditation or certification program accepted by the Agency; and
 - v. Measurements shall be performed by an Agency-certified [licensed] measurement business independent of the Agency-certified [licensed] mitigation business; or
 - vi. Measurements shall be performed by the homeowner, occupant or other person responsible for the building, using an approved test device:
 - (1) Provided by the Agency-certified [licensed] mitigation business but analyzed by an independent measurement business; or
 - (2) Obtained independently by the homeowner, occupant, or other person responsible for the building;
 - (3) In either case, the Agency-certified [licensed] mitigation business shall instruct that person, in writing, that a radon measurement should be performed using an approved radon test device to verify proper function of the mitigation system.
 - vii. The mitigation system will be considered successful when the post mitigation test results are below 4 pCi/l, or a lower concentration agreed upon between the mitigator and their client.
- i. An Agency-certified [licensed] radon mitigation business shall maintain at a minimum, the following records for 5 years or for the period of any warranty or guarantee, whichever is longer:
- i. Records of all mitigation work performed, including:
 - (1) Client name, mailing address;

- (2) Street address of property mitigated;
 - (3) Pre- and post-mitigation measurement methods and results and all pertinent dates;
 - (4) Building investigation and diagnostic test data;
 - (5) A description of each mitigation system and materials installed;
 - (6) Copies of signed and dated contracts and warranties;
 - (7) Copy of any Agency-approved deviation from mitigation standards and documentation supporting the deviation;
- ii. Records of mitigation plans developed and signed by an Agency-certified [licensed] radon mitigation specialist or Agency-certified [licensed] residential radon mitigator. Such records must include observations, calculations, and methodology for justification of the use of alternate pipe sizes or materials.

Sec. R.15 - Application Requirements for a Radon Mitigation Businesses. a.—Each applicant for initial Agency certification [license] under this section shall submit a completed, signed and dated application in a format and manner as prescribed by the Agency. The application, accompanied by the nonrefundable initial application and Agency certification [license] fee(s), shall include at minimum:

- ia. The name, business location, address, telephone number, fax number, and email address of the applicant;
- ib. The tax identification number [Employer Identification Number] of the business;
- ic. The name and address of each owner, officer, or other individual responsible for the business entity;
- id. A description of all mitigation systems offered and types of diagnostic evaluations performed.
- ie. The names and Agency certification [license] numbers of the Agency-certified [licensed] radon mitigation specialists and the Agency-certified [licensed] radon mitigation technicians employed by or affiliated with the business as staff members or consultants to be utilized by the business;
- if. The names and Agency certification [license] numbers of the independent Agency-certified [licensed] radon measurement businesses to be utilized by the Agency-certified [licensed] radon mitigation business to perform radon and/or radon decay product testing following the radon mitigation.

vii.g. A copy of the standard information package which is provided to the client.

viii.h. A copy of the radiological safety plan.

ix.i. Disclosure of any current or past radon certification, license or other credential granted by another agency any other agency, jurisdiction, or credentialing body.

viii.j. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by another agency any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.16 - Agency Certification [License] Renewal Requirements for a Radon Mitigation Businesses.

a. ~~No radon mitigation service shall be conducted by the business after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency. Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~

b. ~~Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date. No radon mitigation service shall be conducted by the business after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.~~

c. The application shall be in a format and manner as prescribed by the Agency and shall include:

i. The information required in R.15a.;

(1) In the application, the applicant may reference information contained in prior applications, statements or reports filed with the Agency provided such references are clear and specific;

ii. The nonrefundable Agency certification [license] renewal fee;

iii. Any reports currently due as required by Part R.32.

Sec. R.17 - Agency Certification [Licensing] Requirements for a Radon Measurement Specialist.

a.a. ~~Prior to applying~~ Every applicant for an Agency certification [license] as a radon measurement specialist, ~~the applicant~~ shall:

i. Have a high school diploma or equivalent; and

- ii. (1) Meet Agency approved or accepted training requirements and pass an Agency approved or accepted examination; or
 - (2) Hold a current third-party radon measurement specialist or comparable certification accepted by the Agency and successfully complete an Agency approved course on state radon statutes and Agency rules and regulations.
- b. When performing radon measurement activities for which Agency certification [license] is required, an Agency-certified [licensed] radon measurement specialist shall own, be employed by or be retained as a consultant to an Agency-certified [licensed] radon measurement business.

Sec. R.18 - Application Requirements for a Radon Measurement Specialists. Each applicant for initial Agency certification [license] under this section shall submit a completed, signed and dated application, in a format and manner as prescribed by the Agency and shall include:

- a. The nonrefundable application and certification fee required by the Agency;
- b. The name, address, telephone number, fax number, and email address of the applicant;
- c. Written evidence, acceptable to the Agency, of meeting the certification requirements specified in Sec. R.17;
- d. A list of all the certified radon measurement businesses for which the applicant will be an Agency-certified [licensed] measurement specialist.
- e. A passport-quality electronic photograph [only if the Agency will issue wallet cards with photographs].
- f. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- g. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.19 - Agency Certification [License] Renewal Requirements for a Radon Measurement Specialists.

- a. ~~No radon measurement service shall be conducted by the business after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency.~~ Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.

- b. ~~Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date. No radon measurement service shall be conducted by the business after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.~~
- c. The application shall be in a format and manner as prescribed by the Agency;
- d. The application shall include the information required in R.18-~~;~~
- i. ~~_____~~ The applicant may reference information contained in prior applications, statements, or reports filed with the Agency provided such references are clear and specific-~~;~~
- e. The application shall also include evidence of continuing education as required by, and acceptable to the Agency.
- f. The applicant shall include the nonrefundable Agency certification [license] renewal fee.

Sec. R.20 - Agency Certification [Licensing] Requirements for a Radon Mitigation Specialist.

- a. ~~Every applicant for~~ Prior to applying for Agency certification [license] as a radon mitigation specialist the applicant shall:
- i. Have a high school diploma or equivalent; and
- ii. (1) Meet Agency approved or accepted training requirements and pass an Agency approved or accepted examination or;
- (2) Hold a current third-party radon mitigation specialist or comparable certification accepted by the Agency and successfully complete an Agency approved course on state radon statutes and Agency rules and regulations.
- b. When performing radon mitigation activities for which Agency certification [license] is required, an Agency-certified [licensed] radon mitigation specialist shall own, be employed by or be retained as a consultant to an Agency-certified [licensed] radon mitigation business.

Sec. R.21 - Application Requirements for a Radon Mitigation Specialists. Each applicant for initial Agency certification [license] under this section, shall submit a completed, signed and dated application, in a format and manner as prescribed by the Agency and shall include:

- a. The nonrefundable application and Agency certification [license] fee required by the Agency;
- b. The name, address, telephone number, fax number, and email address of the applicant;
- c. Written evidence, acceptable to the Agency, of meeting the certification requirements specified in Sec. R.20;

- d. A list of all the certified radon mitigation businesses for which the applicant will be an Agency-certified [licensed] mitigation specialist.
- e. A passport-quality electronic photograph [only if the agency will issue wallet cards with photographs].
- f. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- g. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by ~~another agency~~any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.22 - Agency Certification [License] Renewal Requirements for a Radon Mitigation Specialists.

- a. ~~No radon measurement service shall be conducted by the specialist after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency.~~ Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.
- b. ~~Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~ No radon mitigation service shall be conducted by the specialist after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.
- c. The application shall be in a format and manner as prescribed by the Agency and shall include:
 - i. The information required in R.~~20~~21;
 - ii. ~~and~~ Evidence, acceptable to the Agency, of continuing education as required by the Agency;
 - iii. In the application, the applicant may reference information contained in prior applications, statements or reports filed with the Agency provided such references are clear and specific; and
 - iiiv. The nonrefundable Agency certification [license] renewal fee.

Sec. R.23 - Measurement Services and Duties of the Radon Measurement Technician Duties and Services.

- a. The duties and services of a radon measurement technician shall be limited to:
- a.i. Placement and retrieve-retrieval of non-analytical radon measurement devices;
 - ii. Use of an accredited or certified laboratory acceptable to the Agency to analyze approved measurement devices;
 - b.
 - e.iii. Follow Adherence to the authorized measurement protocol for the type of measurement performed;
 - iv. Comply-Compliance with the applicable quality control and quality assurance procedures for each non-analytical measurement device used;
 - d.
- b. A radon measurement technician shall notNo radon measurement technician shall provide consultation to clients on radon entry, diagnostics or mitigation system components or installations unless also Agency-certified [licensed] as a radon mitigation specialist or Agency-certified [licensed] residential radon mitigator.

Sec. R.24 - Agency Certification [Licensing] Requirements for a Radon Measurement Technician.

- a. Every applicant for Prior to applying for Agency certification [licensing] as a radon measurement technician, the applicant shall:
- i. Meet Agency-approved or accepted training requirements and pass an Agency-approved or accepted examination; or
 - ii. Hold a current third-party radon mitigation specialist or comparable certification accepted by the Agency and successfully complete an Agency-approved course on state radon statutes and Agency rules and regulations.
- b. Prior to performing radon measurement activities for which Agency certification [license] is required, an Agency-certified radon measurement technician shall own, be employed by or be retained as a consultant to an Agency-certified radon measurement business.

Sec R.25 - Application Requirements for a Radon Measurement Technicians. Each applicant for initial Agency certification [licensing] under this section shall submit a completed, signed and dated application in a format and manner as prescribed by the Agency and shall include:

- a. The nonrefundable application and Agency certification [license] fee required by the Agency.
- b. The name, address, telephone number, fax number, and email address of the applicant;
- c. Written evidence, acceptable to the Agency, of meeting the certification requirements specified in Sec. R.24;

- d. A list of all the Agency-certified [licensed] radon measurement businesses for which the applicant will be a Agency-certified [licensed] measurement technician; and
- e. A passport-quality electronic photograph [only if the Agency will issue wallet cards with photographs].
- f.f. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- g. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by ~~another agency~~any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.26 - Agency Certification [License] Renewal Requirements for a Radon Measurement Technicians.

- a. ~~No radon measurement service shall be conducted by the technician after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency. Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~
- b. ~~Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date. No radon measurement service shall be conducted by the technician after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.~~
- c. The application shall be in a format and manner as prescribed by the Agency and shall include:
 - i. The information required in R.24;
 - ii. ~~and evidence~~Evidence, acceptable to the Agency, of continuing education as required by the Agency.;
 - iii. In the application, the applicant may reference information contained in prior applications, statements or reports filed with the Agency provided such references are clear and specific; and
 - iv. The nonrefundable Agency certification [license] renewal fee.

Sec. R.27 - Agency Certification [Licensing] Requirements for a Residential Radon Mitigator.

- a. ~~Every applicant for~~ Prior to applying for Agency certification [license] as a residential radon mitigator the applicant shall:
- i. Meet Agency approved or accepted training requirements and pass an Agency approved or accepted examination; or
 - ii. Hold a current third-party residential radon mitigator or comparable certification accepted by the Agency and successfully complete an Agency approved course on state radon statutes and Agency rules and regulations.
- b. Prior to performing radon mitigation activities for which Agency certification [license] is required, an Agency-certified [licensed] residential radon mitigator shall own, be employed by or be retained as a consultant to an Agency-certified [licensed] radon mitigation business.

Sec. R.28 - Application Requirements for a Residential Radon Mitigators. Each applicant for initial Agency certification [license] under this section, shall submit a completed, signed and dated application, in a format and manner as prescribed by the Agency and shall include:

- a. The nonrefundable application and Agency certification [license] fee required by the Agency;
- b. The name, address, telephone number, fax number, and email address of the applicant;
- c. Written evidence, acceptable to the Agency, of meeting the certification requirements specified in Sec. R.27;
- d. A list of all the Agency-certified [licensed] radon mitigation businesses for which the applicant will be an Agency-certified [licensed] residential radon mitigator.
- e. Disclosure of any current or past radon certification, license or other credential granted by ~~another agency~~any other agency, jurisdiction, or credentialing body.
- f. Disclosure of any administrative order or action, denial, revocation, or suspension of license or certification by ~~another agency~~any other agency, jurisdiction or credentialing body relating to radon testing, analysis, or mitigation.

Sec. R.29 - Agency Certification [License] Renewal Requirements for a Residential Radon Mitigator.

- a. ~~No radon mitigation service shall be conducted by the mitigator after the Agency certification [license] expiration date unless a renewal application has been approved by the Agency. Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification [license] expiration date.~~
- b. ~~Each Application for Agency certification [license] renewal under this section shall be received by the Agency not less than 60 days [30 days] prior to the Agency certification~~

~~[license] expiration date. No radon mitigation service shall be conducted by the mitigator after the Agency certification [license] expiration date unless a complete renewal application has been received by the Agency in a timely manner.~~

- c. The application shall be in a format and manner as prescribed by the Agency and shall include:
- i. The information required in R.2728;
 - ii. ~~and~~ Evidence, acceptable to the Agency, of continuing education as required by the Agency;
 - iii. In the application, the applicant may reference information contained in prior applications, statements or reports filed with the Agency provided such references are clear and specific; and
 - iv. The nonrefundable Agency certification [license] renewal fee.

Sec. R.30 - Change in Agency Certification [Licensing] Status. Any person or business entity that is Agency-certified [licensed] under these regulations must notify the Agency within five working days after a change occurs that alters an applicant's ability to meet the prerequisites for certification [licensure], or after a change occurs that affects the Agency's ability to contact the person or business entity (such as address change). Notification shall be in writing and on business entity letterhead.

Sec. R.31 - Termination of Agency Certification [Licensing].

- a. A radon measurement laboratory, radon measurement business, or radon mitigation business may terminate its Agency certification [license] by providing written notification, by certified mail, stating the effective date of termination; and returning with this mailing all Agency certifications [licenses] for radon services. No radon service may be provided after the specified termination date.
- b. A radon measurement laboratory, radon measurement business or radon mitigation business seeking termination of Agency certification [license] under R.31 shall submit all reports required by R.32 with the notification of termination, or at the next scheduled reporting date, whichever is appropriate. Failure to submit required reports shall result in applicable penalties.
- c. A radon measurement specialist, radon measurement technician, radon mitigation specialist, or residential radon mitigator may terminate their Agency certification [license] by providing written notification stating the effective date of termination; and returning with this mailing all Agency certifications [licenses] for radon services. No radon service may be provided after the specified termination date.

Sec. R.32 - Reporting Requirements.

- a. An Agency-certified [licensed] radon measurement business shall submit to the Agency by the twentieth day of each month [calendar quarter] the results of all radon and radon decay product measurements performed during the previous month [calendar quarter].^{**/} Data shall be submitted in the format and the media required by the Agency. For each test conducted, this data shall include, but not necessarily be limited to:
- i. The street address, municipality, county and zip code of location where testing was performed [and name and contact information of the client];
 - ii. The type of equipment used for radon and/or radon decay product measurements;
 - iii. The level or floor of the building where tests were conducted;
 - iv. The serial number of the radon measurement device;
 - (1) Radon results shall be reported in picocuries/liter (pCi/l), to no more than one decimal place;
 - (2) Radon decay product results shall be reported in working levels (WL), to no more than 3 decimal places.
 - v. The period of measurement, including starting date and time and completion date and time;
 - vi. The purpose of the test and the protocol used, for example, initial short term, short term or long term follow up, real estate or non-real estate, pre-mitigation, post-mitigation;
 - vii. The name and accreditation or certification identification number of the radon laboratory accepted by the Agency which performed analysis of the radon measurement devices;
 - viii. The type of building that the radon measurement was performed in: residential, non-residential, child care center or school; and
 - ix. Name and Agency certification [license] number of the individual performing the radon measurement.
 - x. Name and Agency certification [license] number of the radon measurement business responsible for the measurement.
 - xi. Name and Agency certification [license] number of the individual preparing the

^{**/} For example, the results from March [calendar quarter one] testing is to be submitted by April 20.

report.

- b. The Agency-certified [licensed] radon measurement business shall provide a written report, prepared and reviewed by the measurement specialist, directly to the client (and the owner if different from the client) which shall include the following statements:
- i. The street address, municipality, county and zip code of location where testing was performed [and name and contact information of the client];
 - ii. The level or floor of the building where the radon measurement was conducted;
 - iii. The serial number of the radon measurement device;
 - iv. Radon results shall be reported in picocuries/liter (pCi/l), to no more than one decimal place;
 - v. Radon decay product results shall be reported in working levels (WL), to no more than 3 decimal places;
 - vi. The date, start and completion times and dates of the measurement;
 - vii. The purpose of the test and the protocol used, for example, initial short term, short term or long term follow up, real estate or non-real estate, pre-mitigation, post-mitigation;
 - viii. The name and accreditation or certification [license] identification number of the radon laboratory accepted by the Agency which performed analysis of the radon measurement devices; and
 - ix. Name and Agency certification [license] number of the individual performing the radon measurement.
 - x. Name and Agency certification [license] number of the radon measurement business responsible for the measurement.
 - xi. Name and Agency certification [license] number of the individual preparing the report.
- c. The following statements shall be provided on the report to the client:
- "(Measurement business name) is certified [licensed] by the Agency to perform certain radon services. Any question or complaint regarding the persons performing these services may be directed to the (Agency, address, phone number, fax number, and email address)."
- d. An Agency-certified radon mitigation business shall submit to the Agency by the twentieth day of each month [calendar quarter] a report of each mitigation system completed during the

previous month [calendar quarter].^{***} Data shall be submitted in the format and the media required by the Agency. For each system, this data shall include, but not necessarily be limited to:

- i. The street address, municipality, county and zip code of location where mitigation was installed [and name and contact information of the client];
- ii. The type of mitigation system(s) installed; (Agency determines types of mitigation systems for reporting requirements);
- iii. The type of building that the system was installed in: residential, non-residential, child care center or school; and
- iv. The name of the certified [licensed] radon measurement business and individual performing the pre-mitigation and post-mitigation radon and radon progeny measurements, and the measurement results.
- v. Name and Agency certification [license] number of the individual performing the radon mitigation.
- vi. Name and Agency certification [license] number of the radon mitigation business responsible for the mitigation.
- vii. Name and Agency certification [license] number of the individual preparing the report.

Sec. R.33 - Inspections.

- a. The Agency and/or its designated representatives may conduct inspections to determine compliance with these regulations;
 - i. At any building, facility, site or any portion thereof, owned or operated by any person subject to these regulations, at any time;
 - ii. During work at any work location.
- b. Certified businesses or applicants, and any employees or representatives thereof, shall allow and shall not hinder or delay the Agency and/or its designated representatives while performing any inspection, or while accompanying the certified [licensed] person, who is performing any measurement or mitigation work-at a site. [The certified person, shall, upon request, make available to the Agency any and all records relating to activities subject to these regulations and any and all equipment used to perform an activity subject to these

^{***} For example, the results from May mitigation [first quarter] are to be submitted by June 20 [one month after quarter ends].

regulations.]

- c. Upon request, an Agency-certified [licensed] business shall make known to the Agency the identity and contact information of the owners and occupants with the addresses of properties or buildings where radon measurement or mitigation activities are scheduled, in progress, or completed, for the purpose of possible inspection by the Agency.

Sec. R.34 - Agency Denial of Application for Agency Certification [License].

- a. Any application for Agency certification [license] may be denied:
 - i. For any material false statement in the application or any statement of fact required under the provisions of these regulations; or
 - ii. Because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Agency to refuse to grant an Agency certification [license] on an application.
- b. Any application for renewal of Agency certification [license] may be denied or refused for failure to comply with any requirement of Part R, in particular, for actions that would otherwise result in suspension or revocation under R.35.

Sec. R.35 - Agency Suspension or Revocation of an Agency Certification [License].

- a. Any Agency certification [license] may be revoked or suspended:
 - i. For any material false statement in the application or any statement of fact required under the provisions of these regulations; or
 - ii. Because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Agency to refuse to grant an Agency certification [license] on an application.
- b. Any Agency certification [license] may be revoked or suspended for violation of, or failure to comply with these regulations, or of any rule, regulation, or order of the Agency, or for the following:
 - i. To remove a threat to the public health and safety or the environment;
 - ii. To stop mitigation activities when:
 - (1) Further work could preclude or significantly hinder the identification or correction of an improperly constructed mitigation related system or component; or

- (2) The certified [licensed] entity's quality assurance program implementation is not adequate to provide confidence that testing and or analysis activities are being properly carried out;
- iii. When the certified [licensed] entity has not responded adequately to other enforcement action;
- iv. When the certified [licensed] entity interferes with the conduct of an inspection or investigation;
- v. After sufficient documentation of misconduct has been obtained by the Agency;
- vi. When a certified [licensed] entity is unable or unwilling to comply with the requirements set forth in these regulations, to include:
 - (1) Misrepresentation or false advertising;
 - (2) False reporting;
 - (3) Failure to report as required by these regulations;
 - (4) No longer meeting requirements of certification [licensing];
 - (5) Other good cause as may be deemed reasonable by the Agency; or
 - (6) Misleading advertising;
- vii. When a certified [licensed] entity fails to correct a violation;
- viii. When a certified [licensed] entity does not respond to a notice of violation where a response was required within a specified time frame ;
- ix. When a certified [licensed] entity fails to pay a penalty; or
- x. For any reason not mentioned above for which certification [license] revocation is legally authorized.

Sec. R.36 - Requirements for Radon Control Service Providers in New Construction. Any person subject to these regulations, when contracted or consulting regarding radon control in new construction and or substantial renovation or addition to an existing building, shall assure conformance with guidance designated by the Agency.

Sec. R.37 - Requirements for Radon Measurement Service Providers in Real Estate Transactions. Any person subject to these regulations, when performing radon measurements for real estate transactions, shall assure conformance with Authorized radon measurement protocols as defined in R.2 and other guidance designated by the Agency.

Sec. R.38 - Minimum Performance Standards.

- a. General Performance Standards. All radon service providers shall conform to minimum performance standards for radon measurement, mitigation or other radon work as determined by the Agency and shall comply with applicable federal, state, and local statutes, ordinances, and rules. Additionally, anyone certified [licensed] to perform radon related work in [insert name of state] shall abide by acceptable general performance standards.
- b. Radon Measurement. Any person subject to these regulations, when performing radon measurements for other than real estate transactions, shall assure conformance with authorized radon measurement protocols as defined in R.2 and other guidance designated by the Agency.
- c. Radon Mitigation. Any person subject to these regulations, when performing radon mitigation, shall assure conformance with standards or guidelines accepted by the Agency.

Sec. R.39 - Enforcement Actions and Administrative Procedures. Any person found to be in violation of the provisions of Part R shall be subject to enforcement action and/or prosecution according to Agency administrative procedure [as described in Appendix B]. ~~The purpose of the enforcement program is to promote and protect the health, welfare and safety of the public, including employees by:~~

- a. ~~Ensuring compliance with certification [license] conditions;~~
- b. ~~Obtaining prompt correction of violations and adverse quality conditions which may affect safety;~~
- e. ~~Deterring future violations and occurrences of conditions adverse to quality; and~~
- d. ~~Encouraging improvement of certified [licensed] entity activities, including the prompt identification and reporting of potential safety problems.~~
- e. ~~Consistent with the purpose of this enforcement program, prompt and vigorous enforcement action shall be taken when dealing with certified [licensed] entities who do not achieve the necessary attention to detail and high standard of compliance.~~
- f. ~~The enforcement program shall follow [insert state name] administrative procedure requirements [as described in Appendix B].~~

Part R
Appendix A

Reserved for Elements of a Quality Assurance and Quality Control Program

Part R
[Appendix B]

[Example Enforcement Procedures]

[I. Enforcement Conferences.

- a. Whenever the Agency has learned of the existence of a potential violation for which an enforcement action may be warranted, the Agency will conduct an enforcement conference with the certified [licensed] entity prior to taking enforcement action, unless the Agency determines that the severity of the potential violation warrants escalating enforcement action. The purpose of the enforcement conference is to:
- i. Discuss the violations or nonconformance, their significance and causes, and the registrant's corrective actions.
 - ii. Determine whether there are any aggravating or mitigating circumstances, and
 - iii. Obtain other information which will help determine the appropriate enforcement action.
- b. During the enforcement conference, the certified [licensed] entity will be given an opportunity to explain to the Agency what corrective actions were taken or will be taken following discovery of the potential violation or nonconformance.
- c. When needed to protect the public health and safety, escalated enforcement action, such as the issuance of an order suspending or revoking a registration, will be taken prior to the enforcement conference. In such cases, an enforcement conference may be held after the escalated enforcement action is taken.
- d. Following the enforcement conference, the Agency shall issue a notice of violation or a letter indicating the potential violation has been resolved.

[II. Notice of Violation.

- a. Before instituting any proceeding to suspend or revoke a certification [license] or to take other action for alleged violation of any provision of these regulations, the Agency will serve on the certified [licensed] entity a written notice of violation. The notice of violation will concisely state the alleged violation and will require that the certified [licensed] entity or any other person submit, within (insert number) working days of the date of the notice or other specified time, a written (facsimile accepted) explanation or statement in reply including:
- i. Corrective steps which have been taken by the certified [licensed] entity or other person and the results achieved;

- ii. Corrective steps which will be taken; and
 - iii. The date when full compliance will be achieved.
- b. When the Agency finds that the public health, safety, or interest so requires, or that the violation is willful, the notice of violation may be omitted. If a notice of violation is served and the Agency determines the response is unsatisfactory, or no response is made within the required time frame, the Agency may escalate its enforcement action.
- III. Administrative Hearing. If the Agency decides to refuse to renew a certification [license], or denies an application for certification [license], the aggrieved person may request an Administrative Hearing pursuant to (State) administrative procedures. The Agency shall notify the certified [licensed] entity or applicant of its intention and shall notify the certified [licensed] entity or applicant of the procedures for requesting such a hearing. The request must be made within (insert number) days of the Agency's notification letter.
- IV. Denial Of Administrative Hearing. The Agency may suspend, revoke, or refuse to review a certification [license] without affording opportunities for hearing pursuant to the previous sections when the health or physical safety of a person is in immediate jeopardy at the time of the Agency's action, and affording such hearings would fail to respond adequately to a known risk. Suspensions, revocations or refusals to review certifications [licenses] pursuant to this section may not continue for more than (insert number) days.
- V. Public Disclosure Of Enforcement Actions. In accordance with the [insert state name] administrative procedures, all enforcement actions and certified [licensed] entity responses are publicly available for inspection. In addition, press releases may be issued for civil penalties and orders.
- VI. Appeals Procedure. Any person aggrieved by a final Agency decision may seek review pursuant to [insert state name] administrative procedures.]

**Part R
Appendix C**

Required Model Mitigation Contract Language Regarding Required Post-Mitigation Testing

Each contract for mitigation services shall include the following language on a form for signature by the client. This language shall be in writing and clearly and conspicuously state:

The [Agency] requires that a post mitigation measurement shall be made to determine the effectiveness of the mitigation system.

["Upon completion of radon mitigation work, a test of mitigation system effectiveness shall be conducted using an approved measurement device and in accordance with Agency approved protocols. This test should be conducted no sooner than 24 hours nor later than 30 days following completion and activation of the mitigation system(s). The mitigator shall ensure that this test take place. This test is to be conducted by a certified [licensed] radon measurement business that is hired by the mitigator. [The test can also be conducted by a certified [licensed] radon measurement business hired by the property owner.] A copy of the post mitigation test report is to be provided to the mitigator. Refusal by the owner or owner's agent to allow the post-mitigation testing to be performed, or to provide the post-mitigation test report to the mitigator, is a breach of contract on the part of the owner."]

— I agree to allow the certified [licensed] radon measurement business designated by the mitigator, access to this property between one (1) and thirty (30) days after completion of the mitigation to perform a post mitigation measurement.

— I will contract with a certified [licensed] radon measurement business to perform a post mitigation measurement and will provide the results of that test to the mitigator within thirty (30) days of completion of the mitigation.

— I refuse to allow a post mitigation measurement. I understand that failure to allow or perform post mitigation measurements prevents the client and the mitigator from knowing if the mitigation system is performing as intended. This will result in a violation of Part R and may result in fines or penalties. I still refuse to allow a post mitigation measurement to be performed. [I accept any and all legal and financial consequences caused by this decision; and will immediately reimburse all fines or penalties levied upon the mitigator and/or their business resulting from this decision and my failure to allow a post mitigation test.]

"I have read and agree to the above stated terms."

Signature of Client or Agent

Date

2010 Rationale

Part R Radon

Introduction

This Part is intended to assist States in developing regulations governing radon service providers operating in their jurisdiction. This includes but is not limited to the laboratories that analyze test devices, testing contractors who consult or go to structures to test for radon, and mitigation contractors who consult or go to structures to reduce radon concentrations.

This Part is also intended to apply to both radon service providers working with radon in air and radon in water. The language in this Part is intended to be broad enough so it covers radon in either medium (or another that may be appropriate in the future).

This Part is not overly specific on how to approach regulatory activities, but does delineate the areas that must be addressed. For example, the application section specifies the information to be included on the application, but not how the Agency will evaluate this information. It is recognized that each state has its own needs and administrative procedures that will determine how the information will be evaluated. Another example is giving the Agency authority to determine performance criteria and/or standards without specifying particular guidance documents or standards. Any guidance or standards selected for incorporation must be technically sound and protective of the public health, and meet state needs. Language can be crafted into a state's rules to also include the adoption of future standards.

States will have the opportunity to decide if they want to develop their own certification programs, or accept third-party certifications that are acceptable to the state. This Part is crafted to allow for either option.

Another feature of this Part is separate minimum requirements, application, and renewal sections for each service provider type. These sections have parallel structures, for example, the application requirements for Measurement Specialist, Mitigation Specialist, Measurement Technician, and Residential Mitigator, and could be combined into one section. It is recognized that some states' administrative procedures may require each service provider type to be specified. The section on termination is an example of how to combine requirements for all service provider types.

Specific Provisions

Sec. R.1 - Purpose and Scope.

This section specifies that the regulations are applicable to manufacturers and distributors of devices as well as testers and mitigators. This is to ensure that home owners who purchase mail-order services will get devices that are approved in some way. Without these provisions, homeowners could receive devices that are ineffective and unreliable. Concerns about regulating distributors of passive devices (such as hardware stores) are addressed in the exemptions, as are issues on

manufacturers as necessary. Part R applies to any and all radon service providers operating or offering to operate in the state, regardless of their base of operations.

Sec. R.2 - Definitions.

Definitions specific to these regulations are included here. Whenever possible, they are based on definitions found in existing standards, guidance or protocols. Several were crafted specifically to delineate limits of activity for specific sectors of the regulated community, or to fill a gap where technology has outpaced technical guidance. In those instances, the definition is often broad to allow for continued change.

The language in this regulation was crafted to allow a state to either operate its own certification program, or operate a licensing program that accepts a third-party certification. This regulation defaults to 'certify' because most existing state regulations use this term and always implies a level of training in the subject matter. The term 'license' means 'giving permission' but does not always imply a level of training. However, many existing state 'certifications' would meet the definition of a license because their basis is acceptance of a third-party certification.

Sec. R.3 - Exemptions.

This section was created because some aspects of radon services are not best or most appropriately regulated by Part R. For example, a licensed electrician may be required to perform activities subject to the electrical code. It is unreasonable to require all electricians to also become certified or licensed radon mitigators. Also, some radon-related support activities can be performed by an uncertified/unlicensed individual under the supervision of a certified or licensed radon service provider.

This is also where it is made clear that these regulations do not apply to some retail sales of radon measurement devices.

An item found useful when considering public health protection, is installing radon control features during new construction or addition to existing structures. It is preferable to have trained radon service providers involved in this, but reality is such that it often does not happen. For years, varied guidance has been provided for builders who intend to include radon control features during construction. This section allows an Agency to determine the appropriate guidance or standards for builders to use, and permits builders to install the appropriate features without violating these regulations. However, the implied alternate is that a builder installing his own features would need to become a regulated service provider. This is acceptable due to the possible health consequences of a builder installing ineffective radon control features and giving their clients a false sense of safety.

Finally, it is sometimes necessary for the state Agency overseeing these regulations to have staff or other consultants perform activities covered in these regulations. To this end, the Agency staff or those they deem appropriate may be exempted from the terms of the regulation. However, it is expected that these individuals would be trained and qualified to do the activities they would be asked to perform.

Sec. R.4 - Requirements for Radon Records Retention and Confidentiality. This section is an attempt to permit appropriate use of radon testing and mitigation data, without creating conflicts for

the Agency by allowing inappropriate use of the data. It is expected that this section will vary from state to state.

Sec. R.5 - Agency Certification [License]. This section provides a broad listing of regulated activities.

Sec. R.6 - Requirements for Measurement Device Manufacturers. Because radon test devices range from simple devices that can be purchased through the mail to complex devices that require an enhanced level of training to use, this section is intended to make sure that all radon testing device models and types in use have demonstrated effectiveness and reliability in measuring radon.

Sec. R.7 - Requirements for Calibration Facilities. This section sets basic requirements for those facilities that calibrate radon test devices.

Sec. R.8 - Agency Certification [Licensing] Requirements for Measurement Laboratories. This section sets the basic criteria for facilities that analyze radon test devices.

Sec. R.9 - Application Requirements for Measurement Laboratories. Self explanatory. ~~An option for a two-year certification/license is offered here, and is also offered for all other types of regulated entity.~~

Sec. R.10 - Agency Certification [License] Renewal Requirements for Measurement Laboratories. Self explanatory. Emphasis was placed on making sure the laboratory looks over its QA/QC plan prior to requesting renewal, because states with current regulatory programs find that laboratories do not always review and update their plans when necessary.

Sec. R.11 - Agency Certification [License] Requirements for Radon Measurement Businesses. This section sets the requirements for a business that sends people out to perform radon testing in structures. This requires the business to demonstrate that employees are trained to perform the necessary activities. It also sets requirements for staff members who will have oversight authority and responsibility.

Sec. R.12 - Application Requirements for Radon Measurement Businesses. This section requires information on who is trained to do the work, and who will receive the enforcement letters if business/staff fail to comply with any requirement. It also requires information on trained/regulating individuals who are affiliated with the company but are not actually employees of the company (for example, home inspectors who subcontract for the business).

The section also asks for the radiological safety plan followed by the business.

Sec. R.13 - Agency Certification [License] Renewal Requirements for Radon Measurement Businesses. This section is self explanatory. The ability to reference previously submitted documents in the application is analogous to sections of other Suggested State Regulations (SSR's).

Sec. R.14 - Agency Certification [License] Requirements for Radon Mitigation Businesses. This section sets the requirements for a business that sends people out to perform radon mitigation in structures. This requires the business to demonstrate that employees are trained to perform necessary activities. It also sets requirements for staff members who will have oversight authority and responsibility.

Sec. R.15 - Application Requirements for Radon Mitigation Businesses. This section requires information on who is trained to do the work, and who will receive the enforcement letters if business/staff fail to comply with any requirement. It also requires information on trained/regulated individuals who are affiliated with the company but are not actually employees of the company (for example, home inspectors who subcontract for the business to do post-mitigation testing, etc.).

The section also asks for the radiological safety plan followed by the business.

Application requirements for all businesses are similar.

Sec. R.16 - Agency Certification [License] Renewal Requirements for Radon Mitigation Businesses. This section is self explanatory. The ability to reference previously submitted documents in the application is analogous to sections of other Suggested State Regulations (SSR's).

Sec. R.17 - Agency Certification [Licensing] Requirements for a Radon Measurement Specialist. This section specifies the minimum requirements for each individual seeking certification [license] in this individual service provider type. Criteria are provided for both an Agency that accepts a third-party certification as evidence of minimum training and an Agency that develops its own certification program. For those that accept certification by a third-party that would not necessarily train service providers on State-specific information, this section includes language that requires training or examinations on state-specific material (statutes and regulations).

Sec. R.18 - Application Requirements for Radon Measurement Specialists. This section contains the minimum elements required by the Agency such as personal information that allows the Agency to contact the person when necessary, evidence of meeting the minimum requirements, and the certified businesses for which the individual will provide services.

Sec. R.19 - Agency Certification [License] Renewal Requirements for Radon Measurement Specialists. This section sets time frames and criteria for renewal (including evidence of continuing education). Part of the evidence for renewal is providing updates on all the information required for initial application. The procedure allowing reference to previously filed reports, applications, etc. is consistent with other SSR's.

Sec. R.20 - Agency Certification [Licensing] Requirements for a Radon Mitigation Specialist. This section specifies the minimum requirements for each individual seeking certification [license] in this individual service provider type. Criteria are provided for both an Agency that accepts a third-party certification as evidence of minimum training and an Agency that develops its own certification program. For those that accept certification by a third-party that would not necessarily train service providers on State-specific information, this section includes language that requires training or examinations on state-specific material (statutes and regulations).

Sec. R.21 - Application Requirements for Radon Mitigation Specialists. This section contains the minimum elements required by the Agency such as personal information that allows the Agency to contact the person when necessary, evidence of meeting the minimum requirements, and the certified businesses for which the individual will provide services.

Sec. R.22 - Agency Certification [License] Renewal Requirements for Radon Mitigation Specialists. This section sets time frames and criteria for renewal (including evidence of continuing

education). Part of the evidence for renewal is providing updates on all the information required for initial application. The procedure allowing reference to previously filed reports, applications, etc. is consistent with other SSR's.

Sec. R.23 - Measurement Services and Duties of a Radon Measurement Technician. This section is included because it is the only individual service provider type that does not have duties prescribed in one of the criteria for businesses. Where the duties are of limited scope, including this section to specify them was seen as necessary. For those not familiar with a measurement technician, the slang term used for them in the industry is a 'can dropper,' which is a rough description of their primary duty of placing a passive detector that has to be analyzed by a laboratory, in simple (not complicated) structures. All complex measurement duties, including interpretation of test results, would be done by the measurement specialist affiliated with the business.

Sec. R.24 - Agency Certification [Licensing] Requirements for a Radon Measurement Technician. This section specifies the minimum requirements for each individual seeking certification [license] in this individual service provider type. Criteria are provided for both an Agency that accepts a third-party certification as evidence of minimum training, and an Agency that develops its own certification program. For those that accept certification by a third-party that would not necessarily train service providers on State-specific information, this section includes language that requires training or examinations on state-specific material (statutes and regulations).

Sec. R.25 - Application Requirements for Radon Measurement Technicians. This section contains the minimum elements required by the Agency such as personal information that allows the Agency to contact the person when necessary, evidence of meeting the minimum requirements, and the certified businesses for which the individual will provide services.

Sec. R.26 - Agency Certification [License] Renewal Requirements for Radon Measurement Technicians. This section sets time frames and criteria for renewal (including evidence of continuing education). Part of the evidence for renewal is providing updates on all the information required for initial application. The procedure allowing reference to previously filed reports, applications, etc. is consistent with other SSR's.

Sec. R.27 - Agency Certification [Licensing] Requirements for a Residential Radon Mitigator. This section specifies the minimum requirements for each individual seeking certification [license] in this individual service provider type. It addresses criteria for both an Agency that accepts a third-party certification as evidence of minimum training and an Agency that develops its own certification program. For those that accept certification by a third-party that would not necessarily train service providers on State-specific information, this section includes language that requires training or examinations on state-specific material (statutes and regulations).

Sec. R.28 - Application Requirements for Residential Radon Mitigators. This section contains the minimum elements required by the Agency such as personal information that allows the Agency to contact the person when necessary, evidence of meeting the minimum requirements, and the certified businesses for which the individual will provide services.

Sec. R.29 - Agency Certification [License] Renewal Requirements for Residential Radon Mitigator. This section sets time frames and criteria for renewal (including evidence of continuing education). Part of the evidence for renewal is providing updates on all the information required for initial

application. The procedure allowing reference to previously filed reports, applications, etc. is consistent with other SSR's.

Sec. R.30 - Change in Agency Certification [Licensing] Status. This section sets the requirements when a regulated entity moves location, phone number or other contact information changes, or a change in regulated staff occurs.

Sec. R.31 - Termination of Agency Certification [Licensing]. This section is a combined section covering all regulated entities. Termination information for measurement and mitigation businesses is the same. Termination information for all individual certifications is the same.

This section also serves as a model for states that have the ability to combine application, renewal, etc. sections for the individual and/or business sections, since individual application and renewal sections have parallel structures between service provider types.

Sec. R.32 - Reporting Requirements. This section addresses the different reports (laboratory reports to clients, laboratory reports to the Agency, mitigator reports to the Agency, etc.) These requirements reflect the authority granted to the differing levels of business and individual service providers, and specify a large number of items to be reported. An agency may have a reason to require all the information specified, or may choose to require a lesser amount of information. All the items specified have been found useful in one or more states that currently have regulations.

Sec. R.33 - Inspections. This section gives the Agency ability to go out and look at the work being done by the radon service providers and radon businesses. This is necessary to ensure at least an acceptable level of health protection is the end result. Without inspection ability, individual service providers are often pressured to put economic interest above public health protection.

Sec. R.34 - Agency Denial of Application for Agency Certification [License]. This section is self-explanatory.

Sec. R.35 - Suspension or Revocation of an Agency Certification [License]. Ability to hold a radon service provider to the applicable standards and practices is necessary. This section gives the Agency tools for this. This is the stick, and is also the carrot (end of suspension) when the service provider comes back into compliance.

The long list of issues that can result in suspension or revocation have been found appropriate by states with current regulations.

Sec. R.36 - Requirements for Radon Control Service Providers in New Construction. Radon control in new construction is important to recognize in Part R. This section gives the boundaries for regulated service providers who are involved during the construction process, and gives such providers direction in guiding builders who install radon control features during new construction.

Sec. R.37 - Requirements for Radon Measurement Service Providers in Real Estate Transactions. Radon measurements during real estate transactions are important to recognize in Part R. Regulated service providers involved in real estate transactions are governed by this section.

Sec. R.38 - Minimum Performance Standards. Minimum standards are necessary to ensure public health protection. This section authorizes the Agency to determine appropriate general, measurement, and mitigation standards and guidance.

Sec. R.39 - Enforcement Actions And Procedures. This section provides the framework for enforcement actions (suspension, revocation, etc.). Recommended specifics are provided in Appendix B, but the state administrative procedures will likely take precedence.

Matters for Future Consideration.

1. An appendix will be added to specify elements of QA/QC program.
2. More reference to radon in water standards or guidance could be added as they become available.
3. An appendix specifying continuing education requirements could be added, including how much is needed, the time frame, and the suggested curriculum.
4. Reciprocal Recognition of Agency Certifications [Licenses]. A state needs to determine that the certification (licensing) requirements of another state are acceptable to the Agency. Without an independent third party doing a review of all state regulatory programs, or having the Agency do a complete review of any state radon regulatory program whenever someone wanted reciprocity, it is difficult to determine how to specify terms for granting reciprocity. This will require considerable discussion.
5. Requirements for commercial calibration facilities could be added.
6. The relationships between Parts D, O, R and U need to be elucidated.