

PENNSYLVANIA'S RADON CERTIFICATION PROGRAM

by: Carl L. Granlund  
Department of Environmental Resources  
Bureau of Radiation Protection  
P.O. Box 2063 Harrisburg, Pennsylvania 17120

**ABSTRACT**

The Radon Certification Act of 1987 was enacted based on legislative findings that radon presents significant health risks, and that property owners should test for its presence. The Department then developed regulations for those individuals and firms that test, mitigate, perform laboratory analysis, or manufacture for sale in Pennsylvania. This paper will discuss the development of the regulations, the regulations in general, and finally some observations from the application review process.

**LEGISLATION**

On July 1, 1987, the Governor of Pennsylvania signed into law the Radon Certification Act (1). The General assembly found that radon levels in public and private buildings can present a significant health risk to the occupants, that property owners should have their residences and other buildings tested for radon levels, and there is a need to assure these owners that firms and consultants are qualified to perform testing and mitigation.

The intent of the legislation was to, "protect property owners from unqualified or unscrupulous consultants and firms by requiring the Department of Environmental Resources (DER) to establish and carry out a program of certification for persons who test, mitigate, perform laboratory analysis, or manufacture for sale in the Commonwealth.

DER was directed to adopt rules and regulations that would include but not be limited to the following subjects: 1. Qualifications and minimum experience requirements.

2. Proficiency testing.
3. Periodic testing.
4. Measures for decertification.
5. Truth in advertising requirements.

The act authorized DER to establish a fee schedule to cover the costs of the certification programs established. This requirement for self-funding is the reason for the high fees, e.g., \$100 dollars for individuals and \$250 dollars for firms.

Pennsylvania's legislation was modeled after New Jersey's legislation that was passed August 14, 1986 (2). One important difference was the addition of an interim certification period. The normal regulatory process is to develop proposed regulations and submit them to the formal regulatory review process. This review process is lengthy and time consuming; ask New Jersey. The authors of the legislation recognized this fact and directed DER to develop an interim certification program that would begin as soon as proposed regulations were introduced to the regulatory review process.

This clause enabled DER to temporarily circumvent the formal review process and begin the certification program while the regulations were being reviewed.

#### REGULATION DEVELOPMENT

Work on the proposed regulations began soon after the act was signed. Input was requested from various sources. New Jersey's and New York's draft radon certification regulations were used as a starting point. Two technical advisory committees, testing and mitigation, were established to provide input for the draft regulations. The advisory committees were made up of representatives from both testing and mitigation firms. Other groups also had input on the regulations such as EPA, DER public radon advisory committee, Pennsylvania Health

Physics Society members, DER course participants and other interested parties.

A final draft was prepared and submitted for an in-house DER review in December 1987 (3). The preliminary draft of the regulations was very similar to New Jersey's draft radon regulations. During the in-house review process it was decided to rewrite the regulations. The next draft incorporated some major changes and was easier to read.

One major change was not to certify every individual involved in the radon industry. The new draft required a firm to employ only one individual. Because there was now only one certified individual, the requirements for this individual were increased. New firms would be allowed to become certified if they could make arrangements for a certified individual to work for the firm, either directly, or as a consultant. A section was added for radon manufacture to cover those firms that were selling direct reading radon instruments or selling complete radon reduction systems direct to the public. A requirement for preapproval of all advertising was dropped.

#### COST/IMPACT

The Radon Certification Act mandated DER to collect fees to support the cost of the program. To get an idea of how many firms and individuals were expected to become certified, an analysis of current firms doing radon work in the state was done. From our Private Radon Services Listing (July 88) the following breakdown was observed: testing firms 184, mitigation firms 118, total firms 220.

#### Testing Services Mitigation Services

141 Kits through mail	114 Soil ventilation systems
154 Home visits	89 Ventilation systems
38 Soil testing	6 Air filtration
82 Water testing	5 Water filtration
	110 Sealing
	55 Sell radon reduction materials and supplies

(93 firms provided both testing and mitigation activities)

It was estimated that 100 firms and 150 individuals would apply for testing and laboratory certification, 50 individuals and 35 firms for mitigation and 10 manufacturers for equipment certification.

Certifications fees were set at \$100 dollars per year for individuals and \$250 dollars per year for firms. These fees would generate approximately \$58,000 dollars per year. This would be enough to support two full time positions. It was thought that the fees could be adjusted at a later date to reflect actual program costs.

Estimated costs born by the radon industry would include: application fees, training course fees, reporting and recordkeeping requirement costs, and the costs of hiring qualified employees. Major benefits expected would include: increasing caliber and competency of those working in the radon field, deterring dishonest practices through certification, inspection and enforcement and raising public confidence. It is hoped that increased public confidence will move more residents to test.

#### REGULATION OUTLINE

The radon certification regulations are broken down into six parts: 1) general provisions, 2) certification, 3) certification review procedures and standards, 4) operational requirements, 5) enforcement and decertification. and 6) interim certification.

#### GENERAL PROVISIONS

The general provision section gives a brief description of the regulations, defines the scope of the regulations including exemptions and defines terms used in the regulations.

#### CERTIFICATION

The next section, certification, lists the requirements for each category of certification including prerequisites, application contents and filing deadlines. There are four categories of certification: radon testing, radon mitigation, radon laboratory and manufacture. There are two classes of certification within each category, except manufacture. The first class is individual certification, either a specific individual working within a firm or an individual working independently. The second class is a firm certification for an organization such as a corporation or partnership.

The following paragraphs do not apply to certification of manufacturers.

Below is an example of the activities performed by a radon testing firm and a radon laboratory.

**Radon testing:** performing radon/radon progeny measurements using portable instruments or using passive devices such as a charcoal canister or a Track-Etch detector supplied from a certified laboratory.

**Radon Laboratory:** performing the analysis of passive radon detectors such as charcoal canisters or Track-Etch detectors.

An individual, working independently, must meet requirements in the following areas, e.g., radon testing: approved radon training course, pass a comprehensive radon examination, one year professional radon measurement experience, bachelors degree or equivalent, quality assurance program, health and safety program, continuing education program and be successfully enrolled in EPA's radon measurement proficiency (RMP) program.

The requirements for a quality assurance program and enrolling in the RMP program do not apply to the individual mitigation category. See section below in interim certification for note. If an individual is working for a certified firm, he need only have attended a radon training course, have one year measurement experience and have a bachelors degree or equivalent to receive an individual certification.

For a firm to be certified it must meet the following requirements, e.g., radon testing: employ an individual certified in radon testing, quality assurance program, health and safety program, continuing education program and be successfully enrolled in EPA's RMP program. The requirements for a quality assurance program and enrolling in EPA's RMP program do not apply to the mitigation firm category. The word "employ" used in the regulations is intended to cover direct employment and also consulting arrangements.

## Testing/Laboratory/Mitigation (1) Requirements

<u>Individual working Independently</u>	<u>Firm</u>
*Radon course	
*Experience	Certified Individual
*Education (2)	
*Examination (2)	Quality Assurance Quality
Assurance	
Health and Safety	Health and Safety
Continuing Education	Continuing Education
Proficiency (3)	Proficiency (3)

(individuals working directly for a certified firm only have to meet requirements marked with an \*)

- (1) Quality Assurance and Proficiency requirements do not apply to mitigation category.
- (2) Not required under interim certification period.
- (3) Individuals or firms using passive monitors from a certified lab do not have to enroll in the RMPP for that test method.

The regulations specify that a certified individual must be employed by the firm. This certified individual must "be in responsible charge of the firm's radon activities." The firm's application must also include the duties of the certified individual. The certified individual gives a way for new firms to enter the radon field and gives DER a second enforcement capability, i.e., control over the firm and the certified individual.

The certification application for both individuals and firms must include: evidence of the certification prerequisites, fees, applicant information, compliance information, copies of information distributed to potential clients and recent advertisements and other information requested by the Department. The certification for manufacture is somewhat different than the other certifications. The manufacture certification category covers direct reading radon instruments and complete radon reduction systems sold directly to the public.

The regulations were not intended to certify equipment manufactures that supply radon instruments to certified

individuals, e.g., Pylon, Ludlum or Eberline. One good example of an instrument that must be certified is the At-Ease monitor. Firms that manufacturer charcoal canisters are not required to be certified in manufacture. The regulations were also not intended to cover common mitigation supplies such as in-line fans, piping, sealants or electrical cable. A good example of a system that must be certified is the No-Rad Radon Removal System.

To receive certification, an instrument manufacture must be successfully enrolled in the EPA RMP Program. The manufacturer must also supply evidence that the instrument will continue to perform accurately over the expected lifetime of the instrument. The manufacturer should also show that each instrument was tested and must supply all documentation supplied to the buyer including directions for use, recommendations for recalibration, and how to determine if the instrument is functioning properly.

A radon reduction equipment manufacturer must show that the equipment is reliable, can reduce radon levels or prevent radon entry over its expected lifetime and that the equipment performs in the manner in which it is advertised. The manufacturer must supply all documentation supplied to the buyer including directions for use and how to determine if the equipment is functioning properly.

The final topic covered under the certification section is reciprocity with other states. The regulations state that an out-of-state person or firm may perform radon activities in Pennsylvania if they are certified in their home state, they perform these activities less than 90 calendar days per year and their home state has a reciprocal arrangement with Pennsylvania. Those individuals or firms not meeting these requirements must apply for certification in Pennsylvania. At this time Pennsylvania has no reciprocal agreements with any other state.

#### CERTIFICATION REVIEW PROCEDURES AND STANDARDS

The basis for issuing a certification will be based primarily on the applicant's certification application. The Department may deny a certification to a person who has shown a lack of ability or intention to comply with the regulations or who has previously been decertified .

Certifications will be issued for a period of two years. The certified person shall conduct only those activities that are described in his certification. DER will publish the names and addresses of every certified individual and firm in the Pennsylvania Bulletin.

## **OPERATIONAL REQUIREMENTS**

The operational requirements for certified individuals and firms are as follows: 1) Advertising, 2) Notice to clients, 3) Reporting of Information, 4) Quality Assurance Program, 5) Health and Safety Program, 6) Continuing Education Program and 7) EPA RMP Program.

The advertising requirements state that an individual or firm may not advertise with false or misleading statements regarding services offered, products or risk to health or property value. The requirement also prohibits advertising services which an individual or firm does not have certification for.

A notice to clients requirement provides that persons and firms must a potential price list and proof of certification if requested. The firm is also required to supply notice to the client that only persons having radon certification may provide radon services. The regulations state how this notice must be written or they may copy the notice in the regulations. The notice must read as follows:

### **NOTICE**

The Radon Certification Act requires that anyone who provides any radon-related service or product to the general public must be certified by the Pennsylvania Department of Environmental Resources. You are entitled to evidence of certification from any person who provides such services or products. You are also entitled to a price list for services or products offered. All radon measurement data will be sent to the Department as required in the Act and will be kept confidential. If you have any questions, comments or complaints concerning persons who provide radon-related services, please contact the Department at the Bureau of Radiation Protection, Department of Environmental Resources, P. O. Box 2063, Harrisburg, Pennsylvania 17120, (717)-787-2480.

For mitigation firms, warranty information and information on the proper method of checking and servicing of mitigation equipment to maintain its function shall be provided in writing to the client.

Those persons performing radon services will report the results of radon measurements to DER within 45 days of the testing. The reported information will include the person providing the service, name and address of the owner or occupant

of the structure involved, the location of the structure involved, date the measurement was made, measurement type and measurement results. Mitigation firms shall report the method of mitigation used. Mitigation firms are responsible for ensuring that each building is tested for radon before and after mitigation is performed.

A quality assurance program is required for all radon testing and radon laboratory firms and individuals working independently. A good outline for a quality assurance program is in the RMP Program application booklet (4).

The health and safety program is intended to provide protection to radon workers. Persons conducting radon activities must keep a record of each individual's exposure to radon.

Certified firms must have a continuing education program. This program must include training for new employees and a statement that the certified individual will participate in at least 16 hours of continuing education in radon related activities.

Certified individuals working independently and firms performing radon testing or laboratory analysis must be successfully enrolled in EPA's RMP Program. The only exception are for persons using passive detectors from a certified laboratory. DER has set up a temporary proficiency testing program for those firms that have been enrolled in the EPA's RMP program but are awaiting for the next round to begin.

#### ENFORCEMENT AND DECERTIFICATION

DER will conduct inspections of certified individuals and firms. These inspections may include site visits, observation of testing and double blind testing conducted by the Department.

DER may assess a civil penalty for a violation of the radon regulations. The civil penalty may be assessed or increased based on one or more of the following: seriousness of the violation, monetary loss of client, risks to health and safety and costs avoided by the violator.

Those firms or individuals that have violated the regulations or a term of their certification may be decertified.

#### INTERIM CERTIFICATION

As discussed previously, there is an interim certification period that begins when the permanent regulations are proposed

for review. The interim regulations are essentially the same as the proposed permanent regulations with three exceptions. The first two exceptions are that a certified individual does not have to possess bachelors degree or equivalent and there is no requirement for a comprehensive examination. The third exception is that since the interim certification period will be relatively short, the fees are \$100 dollars for individuals and \$250 dollars for firms.

After September 21, 1988, no person may test, mitigate, perform laboratory analysis or manufacture for sale unless that person has obtained interim certification or has submitted an interim certification application. New firms will be required to submit an interim certification application 30 days before radon activities begin.

### INITIAL EXPERIENCES

#### PAST

The initial development of the regulations was difficult because there was no starting point. We had copies of draft regulation from the state of New Jersey and New York. The initial draft of the regulations turned out to be very similar to New Jersey's regulations. After an in-house review the draft was scrapped and the regulation package rewritten. Some of the lessons learned from drafting the regulations were: never let a lawyer help in the drafting of regulations, to much input from outside sources can be more of a hindrance than a help, make the regulations readable, and finally never let a lawyer help in the drafting of regulations.

#### CURRENT

The following is a breakdown of the applications received as of September 20, 1988.

Total Applications received		280
Testing, Firm.....	83	
Testing, Individual.....	99	
Laboratory, Firm.....	18	
Laboratory, Individual...	18	
Mitigation, Firm.....	26	
Mitigation, Individual...	37	
Manufacture.....	2	

There was a formal 60-day comment period on the proposed regulations. By far, the most controversial item was the educational requirement. The proposed permanent regulations have a requirement for the certified individual to have a Bachelors degree or equivalent. Surprisingly, the comments have been split evenly, half commenting that the educational requirement is needed and half stating that the requirement is restrictive and unfair.

The second major comment has been on the proposed fees. All comments have stated that the fees are too high. We are forced by the requirements of the legislation to make the program self-funding. The philosophy will probably become more widespread with DER and EPA in the future with budget cuts. One idea that may more equally distribute the certification program costs is to charge a small fee for each radon measurement done or to get a portion of the real estate transfer tax (est. \$160 million dollars per year in Pennsylvania) .

Supervision of testers and mitigators. by certified individuals did not bring much comment. Most people thought that the degree of supervision was fine as specified in the regulations. The regulations would allow a noncertified person to perform radon activities by himself. But, this person would be directed by a certified individual. The certified individual and the firm would then be liable for damages and possible decertification. if the unsupervised worker got into trouble.

Some businesses trying to get into the radon business expressed frustration when they studied the requirements for becoming certified. Most were under the impression that they could take a course/exam then start work. Most questioned how they could get experience if they are not certified and how they could get certified if they do not have any experience. This was a problem of not understanding that a consultant could be hired by a new firm that had no radon experience and then become certified. Some businesses thought that the whole certification program was just so much government interference.

Many comments were received that didn't fall under one category. I have listed them below:

- Should be "grandfather clause."
- Exempt all state, federal and local officials.
- Results should be private, state should not be notified.
- Required radon course is not applicable for laboratory.

- Certification should only require taking a course and then an exam.
- AARST and the state should work more closely.
- Should have mentioned radon testing and real estate transactions in the regulations.
- Regulations specify residential structures, this could mean every type of building including schools and businesses. This type of testing is more involved and should have a different certification. Also, there may be a conflict with other state laws concerning mitigation, or specifically changing structural components, in certain types of buildings, e.g. schools, hospitals.
- There should not be an exemption for contractors installing radon preventative techniques in new construction.
- Credit should be given for other types of certification s, e.g., certified health physicist, certified industrial hygienists.
- Will these regulations make the radon industry any better?
- There is no practical program for monitoring worker exposure.
- DER gives preferential treatment to some firms
- There should be a fee on each radon measurement to replace radon certification fees.

#### FUTURE

A large part of Pennsylvania's and other states future radon regulations will focus on the EPA RMP program. There is a great need to insure that this program continues and that the program continues to improve its operations. There is also a need to establish a Northeastern radon chamber facility for the RMP program.

Most states in the Northeast are different phases of radon program development. The states that will have radon certification regulations in the future are not very close in their proposed regulations. It looks like in the future there

may be 50 different certification programs. There is a need to guide the states towards the common goal. EPA or CRCPD should take the lead.

Finally, a large part of Pennsylvania's radon industry will depend on how well the certification program is run. A meaningful program will encourage public confidence and increased homeowner testing. The potential problem we face is adequate staffing. Estimates for present staffing did not take into account a large rise in public interest following the EPA radon press conference on September 12, 1988.

The work described in this paper was not funded by the U.S. Environmental Protection Agency and therefore the contents do not necessarily reflect the views of the Agency and no official endorsement shall be inferred.

## REFERENCES

1. Pennsylvania, Radon Certification Act, July 9, 1987 (Act 43)
2. New Jersey, an Act concerning radon and radon progeny contamination, supplementing P.L. 1958, c. 116 (C. 26:2D-1 et seq.)
3. Proposed Radon Certification Program, Pennsylvania Bulletin, July 23, 1988, Volume 18, Number 30.
4. EPA, Implementation Strategy for the Radon/Radon Progeny Measurement Proficiency Evaluation and Quality Assurance Program, EPA 520/1-86-03, February 1986.