REPORT OF THE
VIRGINIA BOARD OF COMMERCE ON

The Need for Regulating Commercial Testers of Radon Gas

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 6

COMMONWEALTH OF VIRGINIA
RICHMOND
1990

COMMONWEALTH of VIRGINIA

Department of Commerce

Board of Commerce

DAVID R. HATHCOCK
Director

3600 WEST BROAD STREET, RICHMOND, VIRGINIA 23230-4917

September 28, 1989

TO: The Honorable Gerald L. Baliles
Governor of Virginia
and
The General Assembly of Virginia

The report transmitted herewith is pursuant to House Joint Resolution No. 233 of the 1989 Session of the General Assembly of Virginia. This Resolution requested the Board of Commerce to study the need for the regulation of commercial testers of radon gas and submit its findings and recommendations to the 1990 Session of the General Assembly.

Respectfully submitted,

Lois S. Miller

Dr. Lois S. Miller
Chairman

Enclosure

VIRGINIA BOARD OF COMMERCE

REPORT ON THE REGULATION OF

COMMERCIAL TESTERS OF RADON GAS

September, 1989

Radon Gas Study
Subcommittee Members:

Dr. George W. Rimler
Mr. Jim O'Quinn

Virginia Board of Commerce

Report on the Regulation of

Commercial Testers of Radon Gas

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I. Executive Summary

A. Study Overview

This study was initiated as a result of House Joint Resolution 233 to determine the need for regulating commercial testers of radon gas in the Commonwealth of Virginia.

The Board of Commerce through the means of survey data, public hearings, and written comments, reviewed the nature of the occupation, its unregulated effect on the public, and the existing statutory requirements affecting the occupation.

The Board's recommendation is based on an extensive analysis of this information.

B. Key Findings

1. The search for complaints against radon gas testers revealed little evidence of harm to the public health, safety, or welfare.

2. The radon gas testing industry is relatively young and there are numerous factors which can affect the outcome of a test.

3. The U.S. Environmental Protection Agency and the Virginia Bureau of Radiological Health provide technical and helpful advice to the public on radon gas testing.

C. Conclusions

Three major conclusions have been drawn as a result of this study.

1. There are no documented cases of harm because of radon gas testers to the public health, safety, or welfare which would justify regulation of radon gas testers.

2. The Virginia statutory requirements that radon gas testers and mitigators (effective April 1, 1990) be listed by the EPA's Radon Measurement Proficiency Program provide protection for the public.

3. The industry is constantly changing and the federal government as well as the real estate industry will be providing regulatory guidance in the coming years.

D. Recommendation

Based on the above conclusions, the Board of Commerce recommends that no additional form of occupational regulation be imposed at this time.

II. BACKGROUND AND PURPOSE OF REPORT

II. Background and Purpose of Report

The Board of Commerce has the legislative mandate for evaluating the need for additional regulation of occupations and making recommendations to the General Assembly.

Section 54.1-100 of the Code of Virginia (1950, as amended) states that "no regulation shall be imposed upon any profession or occupation except for the exclusive purpose of protecting the public interest when:

1. The unregulated practice of the profession or occupation can harm or endanger the health, safety or welfare of the public, and the potential for harm is recognizable and not remote or dependent upon tenuous argument;

2. The practice of the profession or occupation has inherent qualities peculiar to it that distinguish it from ordinary work and labor;

3. The practice of the profession or occupation requires specialized skill or training and the public needs, and will benefit by, assurances of initial and continuing professional and occupational ability, and

4. The public is not effectively protected by other means."

In the 1989 Session of the Virginia General Assembly, Delegate Robert Tata introduced House Joint Resolution 233 requesting the Board of Commerce to study the need for the regulation of commercial testers of radon gas. (See Appendix A for a copy of HJR 233). The passage of that resolution provided the mandate for this study.

Using the requirements for regulation set forth in Section 54.1-100 of the Code of Virginia, the Board of Commerce began a seven-month study of this issue. The study included information gathering from various sources, a complaint search, surveys of practitioners and others and two public hearings. This report will serve to outline the findings of the study and then present the Board's recommendations.

III. KEY ISSUES

A. Radon and Its Measurement

B. EPA's Radon Measurement Proficiency Program

C. Existing Law Regulating Radon Gas Testing

D. Consumer Education and Information

E. National Professional Associations

F. Real Estate Transfer Testing

A. Radon and Its Measurement

Radon is a radioactive gas produced by the natural decay of uranium in the soil. Studies have shown that prolonged exposure to radon by-products may cause lung cancer. For these reasons, there has been growing concern by Federal and State health officials to test for indoor radon concentrations.

As mandated by the 1987 Session of the General Assembly, the Secretary of Human Resources appointed a task force to study the problems associated with radon gas in homes, the methods by which radon can be detected, and the means by which hazards to the public can be reduced (House Joint Resolution 229). House Document No. 11 dated 1988 represents the findings and recommendations of that task force. References to that report from this point on shall be referred to as the "Task Force Report on Radon."

Radon testing is very dependent upon many factors, namely the method of testing used, the time of year the test was performed, the prevailing weather conditions during the test, and the type of ventilation being employed by the home occupants during the test. For these reasons, the Environmental Protection Agency does not know of a way to use the results of a single measurement to provide an accurate estimate of health risks or make a well-informed decision on the need for remedial action. What the EPA recommends, therefore, is a two-step strategy for making the fewest measurements possible, while ensuring that radon concentrations are not seriously underestimated.

The first step is a screening measurement which is used to quickly and inexpensively estimate the highest concentrations to which occupants may be exposed and to decide whether and what type of additional measurements are needed. The second step of making follow-up measurements is recommended when the screening measurement exceeds 4 picocuries per liter (pCi/l) of air. The duration of the follow-up measurements depends on the magnitude of the screening measurement result. If the screening result is significantly elevated, then a short-term follow-up should be conducted which will minimize exposure to the occupants. If the screening results are only moderately elevated, then a full year schedule of measurement is recommended so that the various seasons are included. Follow-up measurements should be made in at least two levels of the house as well.

Several different measurement methods may be used to determine the radon concentration in houses. Eight different methods are most commonly used: continuous radon monitoring and continuous working-level monitoring; alpha-track detection; activated charcoal adsorption; radon progeny integrating sampling unit; grab radon and grab working level; electric passive environmental radon monitor. The choice of method is usually determined by availability and cost. Advantages of one type of testing may make it more appealing for a quick screening rather than a follow-up measurement.

When a high level of radon concentration is discovered, a diagnostic test should be taken to determine where the radon entry points are in a home. After mitigation efforts are completed, another radon test should be performed to determine effectiveness. According to the EPA as well as Virginia radon gas testers who testified at the public hearing, almost every home with an elevated level of radon can be corrected with established techniques. Depending on the type of correction needed, estimated costs range from $200 to $1,500. It is important to note that given the current contractor's licensing statute, mitigation contractors do not have to be licensed if the work peformed is under $1,500.

B. EPA's National Radon Measurement Proficiency (RMP) Program

At the request of states, the EPA developed the National Radon Measurement Proficiency (RMP) Program. The program's objective is to assist states and the public in selecting companies that have demonstrated competence in measuring indoor radon. When companies demonstrate such proficiency, they are listed in the RMP Cumulative Proficiency Report. The National RMP Program does not accredit, certify, recommend, or endorse participating companies. The report is only a list of testing companies that have demonstrated capabilities for measuring radon.

The testing periods for the RMP are called "rounds." There are two types of companies; a "primary company" which runs its own analysis capabilities and a "secondary company" which offers services ranging from detector distribution to home inspection but must use a primary company for its detector analyses.

Due to the growing number of applicants for RMP, companies will no longer participate in each round. Beginning with Round 6 which began in March, 1989, a staggered renewal will be initiated so that a company will only participate every other round.

C. Existing Law Regulating Radon Gas Testing

Section 32.1-229-01 of the Code of Virginia states that "no person shall conduct or offer to conduct any radon screening, testing, or mitigation in the Commonwealth unless he has been listed as proficient by the United States Environmental Protection Agency to offer such screening, testing, or mitigation." The requirement that mitigators be "listed" will not be effective until April 1, 1990.

The implied intent of this statute is that individuals must have successfully completed the EPA proficiency program in order to perform testing in Virginia. Those who perform diagnostic tests (to determine where the radon entry points are in a house) are excluded.

D. Consumer Education and Information

Virginia statute also requires the Department of Health to maintain a program of education and technical assistance relating to

radon. As a result, the Bureau of Radiological Health disseminates educational materials and technical assistance to Virginia citizens regarding radon. The Bureau of Radiological Health also operates a state radon hotline which is a toll free number (1-800-468-0138) for Virginia residents.

The volume of calls on this radon hotline seems to vary according to media attention on radon. According to Bureau staff, the majority of questions concern how to get a home tested for radon. The Bureau provides consumers with a list of Virginia testers who are on the EPA's Measurement Proficiency list. Since radon quick-screening tests are also available at various hardware stores, drug stores and other retail centers, questions may arise regarding the validity of such tests. The Bureau can tell the consumer whether the primary company to which the test will be sent is listed by the RMP.

E. National Professional Associations

Unlike other professions, the radon industry has developed national trade associations including the National Radon Association, Inc., the American Association of Radon Scientists, and the American Radon Association. All of these associations provide educational programs and materials to update members on changing issues in the industry.

Membership in the association is not based on years of experience or an examination. Fees are paid and membership is granted. Although there are no efforts within the associations to initiate self-regulatory programs, the associations do attempt to provide guidance to states in the establishment of radon standards.

F. Real Estate Transfer Testing

At both hearings conducted for this study, Board of Commerce members heard testimony that problems often occur when radon gas testing is performed at the time of a real estate transfer. The National Association of Realtors (NAR) is currently working with EPA and the National Association of Home Builders to develop a radon guide for citizens involved in real estate transactions. The NAR is also working with state associations of realtors to determine the desirability of disclosure language in listings and contracts of sale.

In the meantime, NAR encourages homeowners to test for radon well in advance of putting a home on the market, for short-term testing is not as representative of overall radon levels. The Board's random survey of real estate brokers in Virginia also did not indicate a real growing problem with radon gas testing. Of the 285 surveys returned, 90.2% said radon gas testing was not presenting a problem in their business (9.5% said yes; 4% not answered).

IV. RESEARCH AND COMPLAINTS

A. Methodology

B. Radon Gas Testers Survey

C. City, Town, County Survey

D. Consumer Affairs Offices and Better Business Bureaus Surveys

E. Survey of Other States

F. Random Survey of Real Estate Brokers

G. Public Hearings

H. Written Comments

IV. Research and Complaints

A. Methodology

Due to the high direct and indirect costs inherent in regulation, it was necessary to conduct an extensive search and analysis of complaints and abuses to ensure that any problems are properly addressed at minimal costs and in the most efficient and effective manner.

The following section will analyze data compiled from the Board of Commerce surveys in addressing the issues set forth in the purpose of this report (Page 1).

B. Radon Gas Testers Survey

Using the EPA's National Radon Measurement Proficiency Program's Cumulative Proficiency Report, a survey was sent to 133 radon gas testers doing business in Virginia; 54 returned a completed survey. The survey results indicated that only 9.4% had over four years as a radon gas tester (13.0% - 1 year; 29.6% - 2 years; 22.2% - 3 years; 7.4% - 4 years). However, 85.2% have had special radon gas testing training (13.0% No; 1.9% Not Answered).

When asked to choose the major clients of their services, 92.6% checked homeowners; 37.0% office building owners; 20.4% schools. A question on the type(s) of radon gas testing offered showed 83.3% using activated charcoal adsorption; 48.1% alpha-track detection; 27.8% continuous radon monitoring; 24.1% electret passive environmental radon monitoring; 18.5% grab radon; 9.3% continuous working level monitoring; and 1.9% radon progeny integrating sampling.

While 46.3% of the practitioners had come in contact with work performed by an incompetent radon gas tester (51.9% No; 1.9% Not Answered), 55.6% believed that state regulation of radon gas testers would benefit the general public (27.8% No; 16.7% Uncertain). The reasons for regulation included "establish minimum competency and build public confidence and credibility." Reasons against regulation were "regulation would be burdensome and costly; EPA listing is adequate." (See Appendix B for copy of survey and results.)

C. City, Town, County Survey

The Board of Commerce sent surveys to 351 top-ranking officials in each city, town and county of the Commonwealth; 195 responses were received. When asked whether their local government receives many inquiries about radon levels in their area, 93.3% answered No; 6.2% Yes; .5% Not Answered.

While 92.8% said their area had not been hit by so-called "fly-by-night" radon gas testers who perform faulty testing at exorbitant costs (3.6% answered Yes; 3.6% Not Answered), 43.1% thought state regulation of radon gas testers is necessary (11.8% No; 45.1% Uncertain).

Likewise, 79.5% said their area had not been hit by so-called "fly-by-night" radon gas mitigators, 44.6% thought state regulation of mitigators is necessary (10.3% No; 45.1% Uncertain). (See Appendix C for copy of survey and results.)

D. Consumer Affairs Offices and Better Business Bureaus Surveys

The Board surveyed ten Consumer Affairs Offices regarding complaints against radon gas testers; five returned completed surveys. Two offices had received two complaints each over the past five years about radon gas testers. The nature of the complaints were "scare tactics" or "delay in providing results."

Four Better Business Bureaus were surveyed with one response. The Office had not received any complaints against radon gas testers. (See Appendix D for copy of surveys and results.)

E. Survey of Other States

Only 25 of the 50 Secretaries of State identified agencies which could have authority for regulating radon gas testers. The Board received 14 responses, of which 28.6% regulate radon gas testers, but 35.7% are considering some form of regulation. When asked whether their state required radon gas testers to be listed by the EPA's Cumulative Proficiency Report, 50.0% answered Yes; 50.0% No.

Pennsylvania and New Jersey are two states which have received attention due to high levels of radon discovered through testing. Pennsylvania has a certification program and a requirement that testers be listed by the EPA. New Jersey has had a voluntary program, but is currently writing regulations for a mandatory certification program with education requirements and an examination. Maine, where elevated levels of radon have been found in water, has a "buyer beware" statute and requirement that testers be listed by the EPA's RMP program. (See Appendix E for copy of survey and results.)

F. Random Survey of Real Estate Brokers

At the time of this study, the Department of Commerce listed 8,742 individuals who were licensed sole proprietors or principal real estate brokers in the Commonwealth. In order to reach an appropriate sample of this population, the Board of Commerce used Statistics, A Tool for the Social Sciences' (Duxbury Press) formula for choosing a sample size. The formula resulted in a sample size of 738 brokers who were to be surveyed in order to get a fair response rate.

The Board of Commerce received 285 completed surveys. Of those responding, radon gas testing at the time of a real estate transaction does not appear to be that prevalent. Responses showed that 28.1% of the brokers had 0% of their buyers request a radon gas test; 62.1% said 1-15% requested a test; 4.6% said 16-25% requested a test; 2.8% said 26-50% requested a test; 2.5% said 51-100% requested a test.

Only 20.0% of the brokers responding recommend a radon gas test to their buyers (73.0% do not recommend; 6.7% not answered). When asked whether radon gas testers should be regulated in Virginia, only 16.5% said yes; 15.4% indicated no and 65.6% had no experiences with testers. (See Appendix F for a copy of the survey and complete results.)

G. Public Hearings

The Board of Commerce conducted a public hearing in Roanoke on May 15, 1989 and a hearing in Fredericksburg on May 16, 1989.

The Virginia Bureau of Radiological Health was represented at both hearings and provided a history of radon activities in Virginia. According to the spokesperson, the radon hotline for Virginia receives anywhere from 12 to 200 calls a day depending on the media's attention to radon gas. The Bureau also testified that only three individuals had been investigated as to whether they were listed by the EPA's RMP program since July 1, 1988 when that requirement went into effect. In addition, the EPA identified two cases in Virginia where the company was on the list, but the testing devices being sold to consumers were not to be used in the RMP.

Some of the testers who testified expressed concern that regulation of radon gas testers is not necessary. Real estate transfer testing is often a concern and they felt that there needs to be more guidance from the National Association of Realtors. (See Appendix G for a cumulative list of public hearing participants.)

H. Written Comments

Written comments were submitted to the Board of Commerce for the purpose of being placed in the official record of this study. (See Appendix H for a Cumulative List of Written Comments.) Delegate Frank Medico encouraged the Board to study activities by radon gas mitigators as well as testers.

Mr. G.H. Harrington, President of Plum Grove Corporation, supported regulation and suggested that testing companies should have a Class A Contractors license and suitable insurance before offering services.

Mr. Ned Marnula of Terradynamics Corporation also expressed the need for regulation, but was more concerned that qualified tests be performed by an engineer or geologist rather than using charcoal canisters or alpha-track detectors which have limitations in their accuracy.

The American Lung Association of Virginia supports a regulatory program to protect consumers from using an unqualified tester.

V. Summary

A. Findings

B. Regulatory Options

C. Conclusions

D. Recommendation

V. Summary

A. Findings

In order to analyze properly all the information gathered through this study, the Board of Commerce returned to Section 54.1-100 of the Code of Virginia and outlined these findings:

No regulation shall be imposed upon any profession or occupation except for the exclusive purpose of protecting the public interest when:

1. **The unregulated practice of the profession or occupation can harm or endanger the health, safety or welfare of the public, and the potential for harm is recognizable and not remote or dependent upon tenuous argument;**

The Board of Commerce finds no recognizable harm or endangerment to the public health, safety or welfare by unregulated radon gas testers. While the Board recognizes that possible "rip-offs" could occur by incompetent individuals who offer fraudulent testing and then also perform corrective measures on a house, there was no evidence brought to the Board of such activity in the Commonwealth.

Threat of danger to the public health could occur when homes, schools or other buildings are not tested for radon. The Board agrees with many of the hearing participants that education efforts in the testing process should be continued.

2. **The practice of the profession or occupation has inherent qualities to it that distinguish it from ordinary work and labor;**

The Board of Commerce finds that radon gas testing is dependent upon numerous factors and a tester needs to be aware of these variables. In addition, the Board believes that this is a relatively young industry in the United States and continued research will lead to clearer and more accurate testing and mitigation procedures.

3. **The practice of the profession or occupation requires specialized skill or training and the public needs and will benefit by assurances of initial and continuing professional and occupational ability and**

The level of skill and training needed for radon gas testing is not really clear to the Board of Commerce. While states like New Jersey will require a college degree in a scientific area to perform tests, some individuals may have learned some testing procedures through a week's training event. The Board finds that the public needs and benefits by the requirement that a radon gas tester be listed by the EPA's RMP Program.

4. **The public is not effectively protected by other means.**

The Board of Commerce finds the state law requiring all radon gas testers to be listed by the EPA's Radon Measurement Proficiency Program to be effective in protecting the public. While this program has been in effect for a relatively short time, only a few violators have been identified by the Bureau of Radiological Health. In addition, mitigators will also be listed by RMP effective April 1, 1990.

B. Regulatory Options

In many cases, regulation can be an effective means of dealing with problems in the marketplace. The concept implied behind a regulatory scheme is that regulation will be more effective than the free market systems and civil remedies in weeding out incompetent and dishonest practitioners.

In order for regulation to be effective, occurrences of abuses have to be recognizable, of a significant magnitude, and occur often enough for the regulation to have any impact.

The following are the degrees of regulation in the order in which they must be considered as specified by Title 54 of the Virginia Code Section 1.311:

1. Private civil actions and criminal prosecutions - Whenever existing common law and statutory causes of civil action or criminal prohibitions are not sufficient to eradicate existing harm or prevent potential harm, the Board may first consider the recommendation of statutory change to provide more strict causes for civil action and criminal prosecution.

2. Inspection and injunction - Whenever current inspection and injunction procedures are not sufficient to eradicate existing harm, the Board may promulgate regulations consistent with the intent of this chapter to provide more adequate inspection procedures and to specify procedures whereby the appropriate regulatory board may enjoin an activity which is detrimental to the public well being. The Board may recommend to the appropriate agency of the Commonwealth that such procedures be strengthened or it may recommend statutory changes in order to grant to the appropriate state agency the power to provide sufficient inspection and injunction procedures.

3. Registration - Whenever it is necessary to determine the impact of the operation of a profession or occupation on the public, the Board may implement a system of registration.

4. Certification - When the public requires a substantial basis for relying on the professional services of a practitioner, the Board may implement a system of certification.

5. Licensing - Whenever adequate regulation cannot be achieved by means other than licensing, the Board may establish licensing procedures for any particular profession or occupation.

The alternatives set forth below were examined by the Board of Commerce in considering the regulation of radon gas testers.

STATUS QUO

The Board of Commerce could recommend that additional regulation of radon gas testers is unnecessary at this time.

PROS:

1. No state regulatory program at this time would allow the statutory requirement that radon gas testers be listed by EPA's RMP Program to be further tested for effectiveness in protecting the public.

2. No expense to the public or members of the occupation.

CONS:

1. The potential for possible "rip-offs" could exist.

STATUTORY CHANGES

The Board of Commerce could recommend that building codes be changed requiring that proper ventilation be built into all new homes.

PROS:

1. Passive stacks (a pipe running all the way up through the roof) has been shown to actually solve radon problems in most homes.

CONS:

1. This could present an unnecessary expense to new housing when radon may not be a major problem in the area of construction. The EPA has essentially said that soil sampling before construction for an individual house is not that effective in detecting high levels of radon gas.

CERTIFICATION

A recommendation to implement a system of certification would allow the Board of Commerce to grant a designation of professional competence in order that consumers may have a substantial basis for relying upon the services of a radon gas tester. The certification could include minimum requirements for education and experience and for an examination of competency.

PROS:

1. Since certification would be voluntary, such a regulatory program would not exclude those who do not wish to participate from continuing to practice the occupation.

CONS:

1. The voluntary nature of certification means enforcement would have little effect on protecting the public.

2. The cost of certification would most likely be passed on to the consumer.

3. Certification could be somewhat redundant due to Virginia's statutory requirements already in place.

LICENSURE

A recommendation for licensure would require all individuals who wish to perform radon gas testing to qualify for a license. As determined by the Board of Commerce, the requirements for licensure could include minimum education and experience and/or an examination of competency.

PROS:

1. Licensure provides a mechanism for enforcement which would include a centralized clearinghouse for consumer complaints.

CONS:

1. An increased expense to the practitioner (and to the consumer of the services) would be inherent in this alternative.

C. Conclusions

After considering these findings, the following conclusions have been made:

1. There are no documented cases of harm to the public health, safety, or welfare which would justify regulation of radon gas testers.

2. The Virginia statutory requirements that radon gas testers and mitigators (effective April 1, 1990) be listed by the EPA's RMP program provide protection for the public.

3. The industry is constantly changing and the federal government as well as the real estate industry will be providing regulatory guidance in the coming years.

D. Recommendation

Based on the above conclusions, the Board of Commerce recommends that no additional form of occupational regulation be imposed at this time.

VI. APPENDICES

A. House Joint Resolution 233

B. Radon Gas Testers Survey

C. City, Town, County Survey

D. Consumer Affairs Offices and Better Business Bureaus Survey

E. Survey of Other States

F. Random Survey of Real Estate Brokers

G. Cumulative List of Hearing Participants

H. Cumulative List of Written Comments

APPENDIX A

1989 SESSION

LD9007578

HOUSE JOINT RESOLUTION NO. 233

Offered January 11, 1989

Prefiled November 18, 1988

Requesting the Board of Commerce to study the need for the regulation of commercial testers of radon gas.

Patron–Tata

Referred to the Committee on Rules

WHEREAS, radon gas testing is encouraged for any dwelling suspected of having elevated levels of the colorless, odorless radioactive gas produced by the natural decay of uranium in rock and soil; and

WHEREAS, houses which are energy efficient and well insulated are especially prone to trapping the noxious gas; and

WHEREAS, radon gas is considered a leading cause of lung cancer; and

WHEREAS, there has been a proliferation of companies offering kits to test for this poisonous gas which has prompted the Environmental Protection Agency to warn consumers to beware of frauds and incompetent testers; and

WHEREAS, the Environmental Protection Agency estimates that the number of radon gas testing companies has grown from thirty-five in 1986 to more than 2,000 today; and

WHEREAS, the Radon Measurement Proficiency Program, a voluntary testing procedure, has been developed by the Environmental Protection Agency to assist the public in finding competent testing companies with accurate measurement devices and proper testing procedures; and

WHEREAS, the Board of Commerce is authorized by § 54.1-310 of the Code of Virginia to evaluate professions not regulated in the Commonwealth for consideration as to whether such professions should be regulated, and to make recommendations as to the degree of regulation whenever the Board determines that the public interest requires that a nonregulated profession be regulated; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Board of Commerce is requested to study the need for the regulation of commercial testers of radon gas in the Commonwealth. The Board shall submit its findings and recommendations to the 1990 Session of the General Assembly.

Official Use By Clerks	
Agreed to By The House of Delegates	**Agreed to By The Senate**
without amendment ☐	without amendment ☐
with amendment ☐	with amendment ☐
substitute ☐	substitute ☐
substitute w/amdt ☐	substitute w/amdt ☐
Date: _____	Date: _____
_____	_____
Clerk of the House of Delegates	Clerk of the Senate

APPENDIX B

SURVEYS SENT = 133
SURVEYS RETURNED = 54

Contact: _____

Phone: _____

Return to: Debra Vought
Department of Commerce
3600 West Broad Street
Richmond, VA 23230

RADON GAS TESTERS SURVEY

1. How many years experience do you have as a radon gas tester?

   1 YR. = 13.0%; 2 YR. = 29.6%; 3 YR. = 22.2%; 4 YR. = 7.4%
   OVER 4 YR. = 9.4%

2. Did you complete high school or GED?

   100.0% YES 0.0% NO

3. How many years of post high school education do you have?

   (55.7%) 0-4 YEARS (44.6%) OVER FOUR YEARS

4. Have you had any special radon gas testing training?

   85.2% YES 13.0% NO 1.9% NOT ANSWERED

5. Do you offer radon mitigation?

   40.7% YES 59.3% NO

6. What would you estimate the average charge (in dollars) for the type of work you most frequently perform?

   SURVEY RESULTS VARIED GREATLY

7. Who are the major clients of your service?

   92.6% homeowners

   37.0% office building owners

   20.4% schools

8. What type(s) of radon testing do you offer?

   27.8% continuous radon monitoring

   9.3% continuous working level monitoring

   48.1% alpha-track detection

   83.3% activated charcoal adsorption

   1.9% radon progeny integrating sampling

   18.5% grab radon

   24.1% electret passive environmental radon monitoring

9. Are you listed by the U. S. Environmental Protection Agency's Cumulative Proficiency Report?

98.1% YES 0.0% NO 61.1% IN THE CURRENT TEST ROUND

1.9% NOT ANSWERED

10. Have you ever come in contact with work performed by an incompetent radon gas tester?

46.3% YES 51.9% NO 1.9% NOT ANSWERED

11. If yes, how would you describe the frequency? (Circle the appropriate number)

18.5%	20.4%	5.6%	0.0%
RARELY	OCCASIONALLY	REGULARLY	CONTINUOUSLY

55.6% NOT ANSWERED

12. Do you believe that State regulation of radon gas testers would benefit the general public?

55.6% YES 27.8% NO 16.7% UNCERTAIN

13. If "yes" to question #12, please list benefits the regulations would accomplish of if "no" to question #12, list reasons not to regulate.

	YES		NO
1.	SAFEGUARD PUBLIC	1.	REGULATION WILL BE BURDENSOME AND COSTLY
2.	ESTABLISH MINIMUM COMPETENCE	2.	RAISE PRICES OF RADON TESTING
3.	ESTABLISH PUBLIC CONFIDENCE AND CREDIBILITY	3.	EPA LISTING IS ADEQUATE
4.	STANDARDIZATION OF PROTOCOL	4.	STATE PROGRAM WOULD BE REDUNDANT
5.	REGULATE SECONDARY TEST COMPANIES WHICH ARE NOW EXCLUDED FROM EPA PROGRAM	5.	KEEP WATCHFUL EYE AND ACT IF ABUSES OCCUR
6.	PREVENT SCAM COMPANIES FROM OPERATING	6.	REGULATION WILL NOT PREVENT DELIBERATE FRAUD

7.	"WEED OUT" UNDESIRABLES	7.	VERY LITTLE JUSTIFICATION SINCE TESTIMG PROBLEMS ARE NOT WIDESPREAD IN VIRGINIA
8.	STANDARDIZE PRICES AND PRACTICES		
9.	ASSIST IN OFFERING TESTERS MORE EDUCATION PROGRAMS		
10.	STOP FALSE DISCLOSURES IN THE SELLING OF HOMES		
11.	IF STATE ENFORCEMENT OCCURS		

APPENDIX C

SURVEYS SENT = 351
SURVEYS RETURNED = 195

City, Town, or County _____

RETURN TO: Debra Vought
Department of Commerce
3600 West Broad Street
Richmond, VA 23230

City, Town, County Survey

1. Are you aware of homes in your area that received radon test scores above the EPA's goal of 4.0 picocuries per liter of air?

   7.7% Yes 34.9% No 56.9% Not aware .5% NOT ANSWERED

2. Approximately what percentage of homes in your area have been tested for radon? (Please circle one.)

   67.7% 1.0% .5% 0.0% 0.0% 30.8% NOT ANSWERED

   0-15% 16-25% 26-50% 51-75% 76-100%

3. Does your local government receive many inquiries about radon levels in your area?

   6.2% Yes 93.3% No .5% NOT ANSWERED

4. Does your city, town, or county have a radon task force in place?

   1.5% Yes 96.4% No 1.0% Preparing one 1.0% NOT ANSWERED

5. Have you assigned personnel to monitor the issue and/or assist the public with problems?

   10.8% Yes 88.7 No 0.5% NOT ANSWERED

6. To your knowledge, has your area been hit by so-called "fly by night" radon gas testers who perform faulty testing at exorbitant costs?

   3.6% Yes 92.8% No 3.6% NOT ANSWERED

7. To your knowledge, has your area been hit by so-called "fly by night" radon gas mitigators who perform unnecessary mitigation at exorbitant costs?

   1.5% Yes 79.5% No 18.5% Uncertain 0.5% NOT ANSWERED

8. To your knowledge, have local schools been tested for radon?

   9.2% Yes 38.5% No 49.7% Uncertain 2.6% NOT ANSWERED

9. Do you believe state regulation of radon gas testers is necessary?

   43.1% Yes 11.8% No 45.1% Uncertain

10. Do you believe state regulation of radon gas mitigators is necessary?

    44.6% Yes 10.3% No 45.1% Uncertain

APPENDIX D

SURVEYS SENT = 10
SURVEYS RETURNED = 5

Contact: _____

City/County: _____

Phone: _____

Return to: Debra Vought
Department of Commerce
3600 West Broad Street
Richmond, VA 23230

CONSUMER AFFAIRS OFFICE SURVEY

(RADON GAS TESTERS)

1. How would you describe the seriousness of problems with radon gas testers? (RESPONSES FOUND ABOVE CHOICES GIVEN)

3	2	0	0	0
NONEXISTENT	MINOR	MODERATE	SEVERE	VERY SEVERE

2. How would you describe the frequency of problems with radon gas testers? (RESPONSES FOUND ABOVE CHOICES GIVEN)

3	2	0	0	0
NEVER	RARELY	OCCASIONALLY	REGULARLY	CONTINUOUSLY

3. What is the approximate number of complaints against radon gas testers over the past five years?

   3 RESPONSES OF 0, 2 RESPONSES OF 2

4. Check the types of complaints received:

   ( ) short term testing

   ( ) incompetent testers

   ( ) inability to read test results

   (1) scare tactics (1 RESPONSE)

   ( ) false or misleading statements/advertisements

   (1) other (describe) DELAY IN PROVIDING RESULTS, COLLECTED MONEY FOR SEMINAR WHICH WAS NEVER CONDUCTED

5. How many investigations were conducted as a result of complaints?

   1 RESPONSE OF 1, 1 RESPONSE OF 2 AND 3 RESPONSES OF 0

6. How many valid claims were determined as a result of the complaints?

1 RESPONSE OF 1, 1 RESPONSE OF 2 AND 3 RESPONSES OF 0

7. Are there other problem areas with radon gas testing that should be addressed through regulation?

ONE RESPONDENT FELT THERE WAS POTENTIAL FOR MORE PROBLEMS AS MORE RADON TESTING COMPANIES APPEAR. PROBLEMS WITH ADVERTISING CLAIMS AND PRACTICES.

APPENDIX D

SURVEYS SENT = 4
SURVEYS RETURNED = 1

Contact: _____

City/County: _____

Phone: _____

Return to: Debra Vought
Department of Commerce
3600 West Broad Street
Richmond, VA 23230

BETTER BUSINESS BUREAU SURVEY

(RADON GAS TESTERS)

1. How would you describe the seriousness of problems with radon gas testers? (RESPONSES FOUND ABOVE CHOICES GIVEN)

1	0	0	0	0
NONEXISTENT	MINOR	MODERATE	SEVERE	VERY SEVERE

2. How would you describe the frequency of problems with radon gas testers? (RESPONSES FOUND ABOVE CHOICES GIVEN)

1	0	0	0	0
NEVER	RARELY	OCCASIONALLY	REGULARLY	CONTINUOUSLY

3. What is the approximate number of complaints against radon gas testers over the past five years?

   1 RESPONSE OF 0

4. Check the types of complaints received: NO RESPONSES

   ( ) short term testing

   ( ) incompetent testers

   ( ) inability to read test results

   ( ) scare tactics

   ( ) false or misleading statements/advertisements

   ( ) other (describe) _____

   _____

5. How many investigations were conducted as a result of complaints?

   1 RESPONSE OF 0

6. How many valid claims were determined as a result of the complaints?

   1 RESPONSE OF 0

7. Are there other problem areas with radon gas testing that should be addressed through regulation?

APPENDIX E

SURVEYS SENT = 25
SURVEYS RETURNED = 14

State: _____

Contact Person: _____

Phone: ( ) _____

Return to: Debra Vought
Board of Commerce
3600 W. Broad St.
Richmond, Virginia
23230

STATE SURVEY
(Radon Gas Testers)

Section A

1. Does your state regulate radon gas testers?

   28.6% YES 71.4% NO

   (If "no", answer questions in Section A only.)

2. How would you describe problems with radon gas testers in your state? (Circle the appropriate number.)

7.1%	57.1%	28.6%	0.0%	0.0%
NONEXISTENT	MINOR	MODERATE	SEVERE	VERY SEVERE

   7.1% NOT ANSWERED

3. How would you describe the frequency of problems with radon gas testers?

7.1%	28.6%	35.7%	21.4%	0.0%
NEVER	RARELY	OCCASIONALLY	REGULARLY	CONTIUOUSLY

   7.1% NOT ANSWERED

4. What was the total number of complaints against radon gas testers in your state last year?

71.4%	7.1%	7.1%	0.0%
1-50	51-100	101-200	OVER 200

   14.3% NOT ANSWERED

5. Please describe the most common types of complaints made against radon gas testers.

   42.9% a) Unable to read test results

   28.6% b) Short term testing with questionable results
   64.3% c) false or misleading advertisements/statements

21.4% d) other (please describe) CONSUMERS WANT STATE TO CERTIFY AND LIST WITH PRICES; TESTERS RECOMMENDING MITIGATION AFTER ONLY DOING A SCREENING; EXCESSIVE PRICES; TESTING WITHOUT CERTIFICATION AND LOSING RESULTS.

6. Is regulation of radon gas testers being considered in your state?

35.7% YES 35.7% NO 28.6% NOT ANSWERED

7. Does your state require a radon gas tester to be listed on the EPA's Cumulative Proficiency Report in order to provide screening or testing?

50.0% YES 50.0% NO

Section B

1. What category best describes radon gas tester regulations in your state? (circle one)

7.1% a) Registration - any person may engage in an occupation, but that person must submit certain information to the appropriate authorities.

7.1% b) Certification - any person may practice the occupation but only those who have met certain standards may use the title "Certified Radon Gas Tester."

14.3% c) Licensure - a person is prohibited from engaging in the occupation without meeting certain standards and obtaining a license.

71.4% NOT ANSWERED

2. Which of the following groups are being regulated?

28.6% a) Radon gas testers

21.4% b) Radon gas mitigators

21.4% c) Radon gas laboratories

3. What type of examination is given for radon gas testers?

14.3%	0.0%	0.0%	28.6%
WRITTEN	PRACTICAL	BOTH	NONE

57.1% NOT ANSWERED

APPENDIX F

Surveys Sent = 738
Surveys Returned = 285

City/Town/County_____

RETURN TO:
Debra Vought
Department of Commerce
3600 West Broad Street
Richmond, VA 23230

RANDOM SURVEY OF REAL ESTATE BROKERS

1. Is the growing awareness of radon gas in Virginia creating a problem in your real estate business?

9.5% Yes 90.2% No .4% Not Answered

2. Have you lost any real estate sales because of a discovery of high levels of radon gas?

2.1% Yes 97.5% No .4% Not Answered

3. If "yes" to question #2, approximately how many sales have you lost in the last twelve months?

1.4% Two or less .4% 3-5 .4% 6-10 0.0% over 10

97.9% Not Applicable

4. What percentage of your buyers are requesting a radon gas test as part of their sales contract?

28.1% None 62.1% 1-15% 4.6% 16-25% 2.8% 26-50%

2.5% 51-100%

5. Is there specific real estate in your area that is unsellable because of high radon levels?

.7% Yes 86.7% No 12.6% Not Answered

Have you or your clients experienced work performed by an incompetent radon gas tester?

3.2% Yes 92.6% No 4.2% Not Answered

6a. If "yes," how many experiences?

1.4% One 2.1% Two .4% Three or more

96.1% Not Applicable

7. Have you come in contact with work performed by an incompetent radon gas mitigator?

1.8% Yes 96.1% No 2.1% Not Answered

7a. If "yes," how many experiences?

.7% One 1.1% Two .4% Three or more

97.9% Not Applicable

8. Do you believe radon gas testers are enough of a problem that they need to regulated in the Commonwealth?

16.5% Yes 15.4% No 65.6% No experience with testers

2.5% Not Answered

9. Do you believe radon gas mitigators are enough of a problem that they need to be regulated in the Commonwealth?

13.7% Yes 11.2% No 72.6% No experience with mitigators

2.5% Not Answered

10. For your "listings" are you now recommending that the seller have the home tested?

20.0% Yes 73.0% No 6.7% Not Answered

11. For your buyers, are you actively suggesting that a radon gas test be written into each purchase offer?

17.9% Yes 77.5% No 4.6% Not Answered

APPENDIX G

PUBLIC HEARING PARTICIPANTS

FREDERICKSBURG, VIRGINIA

MAY 17, 1989

Speaker	Affiliation	Position
David Saum	Infiltec	Too early to regulate the industry
Bruce Phillips	Air Quality Analysts	All government buildings must now be tested
Leslie Foldesi	Virginia Bureau of Radiological Health	-----

PUBLIC HEARING PARTICIPANTS

ROANOKE, VIRGINIA

May 15, 1989

Leslie Foldesi	Virginia Bureau of Radiological Health	-----
Richard C. Moore	C'Sentinel Enterprise	Supports some listing or licensing of testers
Christopher Halladay	Appalachian Environmental Testing, Inc.	Sees little justification for regulation of radon gas testers

APPENDIX H

WRITTEN COMMENTS SUBMITTED

TO THE BOARD OF COMMERCE

Name	Affiliation	Position
G.H. Harrington	Plum Grove Corp.	Testers should have Class A Contractor's License and insurance
Ned Mamula	Terradynamics Corp.	Radon testing should be left to professionals
The Hon. Frank Medico	Virginia House of Delegates	Suggested that radon gas mitigators also be included in the study
	American Lung Association of Virginia	Supports regulation
Tom Curran	Realty 2000	Opposes regulation
Janice Lee	The American Radon Association, Inc.	Encourages a state regulatory program