

MINUTES

**MONTANA SENATE
53rd LEGISLATURE - REGULAR SESSION**

COMMITTEE ON PUBLIC HEALTH, WELFARE & SAFETY

Call to Order: By Senator Dorothy Eck, Chair, on March 31, 1993,
at 12:00 noon.

ROLL CALL

Members Present:

Sen. Dorothy Eck, Chair (D)
Sen. Eve Franklin, Vice Chair (D)
Sen. Chris Christiaens (D)
Sen. Terry Klampe (D)
Sen. Kenneth Mesaros (R)
Sen. David Rye (R)
Sen. Tom Towe (D)

Members Excused: Sen. Tom Hager

Members Absent: None.

Staff Present: Tom Gomez, Legislative Council
Laura Turman, Committee Secretary

Please Note: These are summary minutes. Testimony and
discussion are paraphrased and condensed.

Committee Business Summary:

Hearing: HB 585
Executive Action: None.

HEARING ON HB 585

Opening Statement by Sponsor:

Rep. Vicki Cocchiarella, House District 59, said HB 585 is a radon education bill. Montana has the 3rd highest levels of radon in the nation, and it is one of two states that currently do not have radon programs. The program has been reduced to an education program that will have no licensure requirements. The consumer protection issue is that there are "unscrupulous" people conducting phony radon testing. Those currently certified by the state of Montana do a good job, but they hear stories of Montanans being ripped off. The bill encourages the public to do their own testing, which is a simple process. Long term radon exposure is the second leading cause of lung cancer. HB 585 also requires realtors to provide notice that there is a radon problem in Montana, but the real estate fee has been taken out of the

bill. Rep. Cocchiarella provided copies of the amendment relating to the real estate fee. (Exhibit #1) The House Appropriations took out that fee, as was the one and a half FTE. The compromise was that the testing would be by Montana Tech in Butte. This is not the ideal situation, and the Department of Health now opposes the bill because they do not have enough staff to administer the EPA grant. Rep. Cocchiarella said the bottom line issue is if there is no radon program in Montana, the state will not qualify for EPA funds to mitigate radon in schools. Not only that, Montana will continue to be one of two states that don't protect public health and safety or educate the public about radon. Rep. Cocchiarella urged the Committee to concur with HB 585.

Proponents' Testimony:

Rep. Cocchiarella said because of the change in hearing time, there were proponents on their way. Kate Miller of Montana Tech is a proponent who was going to supply maps and surveys. Also, Deb Bottee, owner of a Missoula construction company, was also on her way to testify as a proponent.

Chairman Eck said those individuals could leave testimony with the Committee Secretary and the members would look at it before taking Executive Action on HB 585.

Opponents' Testimony:

Adrian Howe, Chief of the Occupational Health Bureau with the Department of Health and Environmental Sciences, said he opposes HB 585 as it stands. Mr. Howe provided written testimony. (Exhibit #2) Mr. Howe said Montana Bureau of Mines does not have anyone qualified to provide the public with information pertaining to radon dynamics, radiation physics, radon biological effects, risk assessment or risk indication. Without the professional FTE, the Department would not have the necessary resources to conduct the program as currently outlined under HB 585.

Questions From Committee Members and Responses:

Sen. Christiaens asked Rep. Cocchiarella about needing an additional \$50,000. Rep. Cocchiarella said the \$50,000 mentioned in the bill was needed, there was not an additional \$50,000.

Sen. Christiaens asked Rep. Cocchiarella if the need to implement the program hinged on the FTE from the Department of Health. Rep. Cocchiarella said that was what Adrian Howe had told the Committee. The House Appropriations Committee did not want to give the Department any more FTE's. The money is still there, and the Bureau of Mines could probably use the money in the same way.

Sen. Christiaens said that was his question because in Senate Finance and Claims, the Committee also did not allow the Department of Health any additional FTE's, and even cut some funds. This isn't the only program "going down".

Sen. Klampe asked Rep. Cocchiarella about the money still being available to be used by the Montana Bureau of Mines. Rep. Cocchiarella said the \$50,000 has been appropriated in the bill from RIT (Resource Idemnity Trust). The money originally requested has not changed, but it would be directed to the Bureau of Mines through the Department of Health. There will no longer be FTE's allocated to the Department.

Sen. Klampe asked Adrian Howe how dangerous were the levels of radon in Montana. Mr. Howe said radon is one of the few environmental contaminants whereby there exists human data indicating there are health risks. There are numerous studies indicating that uranium mine workers have a higher instance of lung cancer from exposure to radon. It is estimated there are 7000-30,000 lung cancer deaths attributable to radon. Mr. Howe said the wide range is due to the confidence level of 95%.

Sen. Klampe asked Mr. Howe if the Bureau of Mines was not capable of doing the study. Mr. Howe said the public information regarding the risks of radon is a function that should be done by a health physicist. There are currently only three health physicists in the state, two of which work for the Department of Health. The Bureau of Mines does not have a health physicist.

Chairman Eck asked Mr. Howe about the high numbers of people doing radon testing, and if that testing was worthless. Mr. Howe said that was true in some cases. Individuals can go through a voluntary program called the Radon Measurement Proficiency Program, and they will be listed as proficient by the EPA. Those individuals follow EPA criteria to do radon testing. Individuals who do testing for radon, but have not gone through the program would not use the EPA criteria. Mr. Howe said it was very likely those tests would be worthless.

Chairman Eck asked Mr. Howe if there was any reason why it could not be a requirement that those who do the testing follow EPA criteria. Mr. Howe said originally that was the intent of HB 585. There is currently grant money available to the states, provided by Congress, to establish radon programs. There is a 40% match the first year and a 50% match the second.

Chairman Eck asked Mr. Howe what kind of EPA grant Montana would be eligible for if the state put in \$50,000. Mr. Howe said the grant would be about \$105,000. The EPA requires the state programs to maintain a list of individuals in the state who are proficient, and provide it to the citizens of the state. There are informational pamphlets the state program is required to send out as well.

Chairman Eck said it seemed to her that something was being done at the local level. A good deal of this involves loaning kits to people. Chairman Eck asked Mr. Howe if those kits were worthless. Mr. Howe said the kits were passive monitors. Given the proper instructions, home owners can administer the tests themselves. Contacts have been established to try and disseminate the information as best as they can. The workload associated with the state survey, which is statistically valid, is overwhelming. The Department doesn't have a pro-active program, rather they are reactive to the public.

Chairman Eck asked Mr. Howe about the Department employing the only two qualified people in the state, besides the retired individual. Chairman Eck asked who provided the training for the EPA. Mr. Howe said it was provided through Colorado State University, the Western Regional Radon Training Center. In order for an individual from Montana to receive that training, they must travel to Fort Collins, Colorado.

Chairman Eck asked Mr. Howe what kind of qualifications the individual giving the training had. Mr. Howe said primarily, those giving training are engineers and construction professionals.

Chairman Eck asked Mr. Howe if he thought that was adequate. Mr. Howe said he did, for what they were training for. They are not trying to disseminate radiation physics information or radon dynamics.

Chairman Eck asked Mr. Howe if the information was available in written form. Mr. Howe said it was not necessary to "start from scratch" because there is a lot of information available.

Chairman Eck asked Mr. Howe for what the radiation physicist was needed. Mr. Howe said a radiation physicist takes in information from test results for a given situation and evaluates it as far as risk assessment and risk indications are concerned. A health physicist would also be able to provide information to the general public pertaining to risk assessment and actual biological effects.

Chairman Eck asked Marvin Miller if he would address this. Marvin Miller, Montana Bureau of Mines and Geology in Butte, said Kate Miller of their department had been doing investigations about radon in Montana. Mr. Miller said Ms. Miller had attended several special radon schools. The important thing about radon in Montana is the high level of it in the state. They are interested in doing the studies because Kate Miller has an interest in radon and would like to pursue the research aspects of the program. Mr. Miller said it is important to study radon levels in the air, but the most crucial thing is the radon levels in water. For this reason, the Bureau of Mines would like to continue to be associated with the research, and additional projects through the Board of Health and the EPA.

Chairman Eck asked Mr. Miller about the geological information system, and if radon levels would show up on it. Mr. Miller said through the Ground Water Information Center, which has over 100,000 wells, once they have base line information, it can be tied to their database. A lot more radon information is needed on those wells.

Sen. Klampe asked Mr. Howe if the lung cancer in Montana was higher than the rest of the country. Mr. Howe said his information from the tumor registry was not specific regarding lung cancer. He did say that approximately 450 lung cancer deaths (from radon exposure) per year in the United States.

Sen. Klampe asked Mr. Howe again if the lung cancer rate in Montana was higher than the rest of the country. Mr. Howe said the tumor registry does not divide information in that manner which would allow him to answer Sen. Klampe's question.

Sen. Klampe asked Mr. Howe about the discussion regarding radon levels in water. Mr. Howe said that needs more investigation, but currently there is no standard regarding radon levels in water supplies. So far, every instance he has seen concerning elevated radon levels in homes, it was correctable by working on the ground source, not the water source. He does not have any evidence that water is a significant contributor, however, they do not have a large database.

Sen. Christiaens asked Mr. Howe if not doing something would put the state in a primacy situation. Mr. Howe said it would not. Radon is one of the few environmental contaminants that is not regulatory at this point. The EPA program is purely voluntary, and the state programs primarily provide information and encourage the public to test for radon levels. There is a bill before Congress which would require radon testing in schools.

Sen. Christiaens asked Mr. Howe if the state had the grant for the \$105,000 mentioned earlier, or was it necessary to write to get that grant. Mr. Howe said the money had been set aside, but the grant application has not yet been submitted to EPA.

Sen. Christiaens asked Mr. Howe if the Water Quality Bureau could be utilizing some of the funds. Mr. Howe said "probably not" until EPA establishes a radon in water standard for water supplies. At that point, the Bureau could utilize information for such a program.

Chairman Eck asked Mr. Howe if the federal grant had to go through the Department, or could it go through the Bureau of Mines or another agency. Mr. Howe said the grant had to go through the lead agency for radon.

Chairman Eck asked if that was the Department of Health. Mr. Howe said it was.

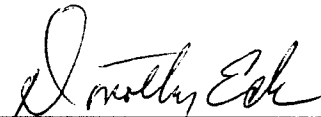
Chairman Eck asked Mr. Howe who designates the lead agency. Mr. Howe said the Governor did.

Closing by Sponsor:

Rep. Cocchiarella provided information packets about the survey. (Exhibit #3) The study indicates that 54 out of the 56 Montana counties have unsafe radon levels. Rep. Cocchiarella said she disagreed with Adrian Howe, and believes that there is the needed expertise at the Bureau of Mines to do the studies. Montana Tech can teach the public about radon; they can produce needed literature, they can work with EPA. Locally, the Lung Association is trying to educate people by providing information from the EPA. HB 585 goes one step towards establishing a radon program. It is not the "ideal" program, but it needs to be set up. Kate Miller of the Bureau of Mines is already doing radon in water research, but that has nothing to do with this bill. It is important that the public know there are trained individuals that can be trusted to find the source and mitigate the problem. HB 585 allows the public to protect themselves, and allows the people who want to do testing to get the education they need. Rep. Cocchiarella said she discovered five minutes before the hearing that the Department was going to oppose the bill, when they had worked together on the bill all along. She urged Committee to ask lobbyists from the Department how else this could be taken care of.

ADJOURNMENT

Adjournment: Chairman Eck adjourned the hearing at 12:50 p.m.



SENATOR DOROTHY ECK, Chair



LAURA TURMAN, Secretary

DE/LT

ROLL CALL

SENATE COMMITTEE Public Health DATE 3-31-93

[illegible]

Amendments to House Bill No. 585
Third Reading Copy (Second Printing)

SENATE HEALTH & WELFARE
AMENDMENT NO. 1
DATE 3-31-93
BILL NO. HB 585

Requested by Rep. Cocchiarella
For the Committee on Public Health, Welfare and Safety

Prepared by Todd Everts
March 31, 1993

1. Page 4, lines 6 through 9.
Strike: "The" on line 6 through "fee." on line 9

HB585 "Radon Control Act" Fact Sheet

Requirements of HB 585

DHES is required to do the following:

Institute an education program for persons performing radon testing and mitigation services.

Develop a comprehensive public education and outreach program for radon to encourage testing and mitigation, which shall include:

- a) public presentations.
- b) development, reproduction, and distribution of printed materials.
- c) maintenance of a toll-free hotline for telephone inquiries.
- d) providing lists of proficient individuals in radon related occupations.
- e) developing effective communication strategies and partnerships to encourage testing and mitigation.

Publish a listing of those persons that have successfully completed radon training and testing requirements.

Adopt rules to establish standards and procedures for education and testing of persons engaged in radon related occupations, fees, criteria for training and maintaining proficiency, and review and approval of training courses and applicable tests.

Compile and provide to the Montana Bureau of Mines and Geology (MBMG) all pertinent radon data and information.

Contract with the MBMG for purposes of implementing the provisions of the Act.

Difficulties with the Provisions of HB585

The MBMG's only authorized involvement with radon to date was to conduct the statewide radon survey, which consisted of student employees utilizing very strict guidelines to contact homeowners by telephone and mailing out test kits, and to establish laboratory capabilities to test for radon in groundwater for addition to the Groundwater Information Center database.

MBMG does not currently have any expertise pertaining to radon or radiation physics, and therefore would not be qualified to

provide information pertaining to radon dynamics, radiation physics, radiation biological effects, risk assessment, and risk communication.

EPA contends that planning, implementation, and management of a statewide radon program should be the responsibility of the state radiation control program, which would have individuals with expertise in radiation health physics, radiation measurements, and risk communication. As the MBMG's expertise, interests, and state organizational function are not consistent with the goals required to deal with radon as a public health problem, it is unlikely that EPA would approve any future grants under the scenario presented by HB585.

The FTE needs of the DHES have been removed by HB585 in lieu of contracting with the MBMG. Even if the MBMG were functionally capable of implementing the provisions of HB585, the DHES would not have the necessary resources to properly manage and oversee a grant a contract or any other coordination activities required by HB585.

While the MBMG's expertise and skills could be utilized as a cooperative partner to develop GIS maps based upon geology and test results and would certainly augment the goals of a radon program, such a program is still public health oriented with radiation health physics needs. The research needs which could be provided by the MBMG are only a very small portion of a comprehensive radon program.

The DHES has been working with radon since 1977, completed much of the early research in radon, and brought radon to the attention of the EPA and much of the rest of the country. Certainly the DHES has developed the expertise and contacts necessary to manage such a comprehensive public health program, but currently lacks the necessary resources to do so. However, to contract such a public health program to another organization lacking the expertise or public health interests, would constitute an inefficient expenditure of public funds.

The State/EPA Residential Radon Survey (SRRS)

Cumulative Overview

- A total of 42 States have participated
- Over 59,000 homes have been tested in the SRRS program
- One in five of the homes measured in the SRRS have screening measurements above 4 pCi/L
- An average of 1.4 percent of the homes measured are above 20 pCi/L, which represents 316,500 homes

HOTTEST STATES

State	Percentage > 4 pCi/L	State	Percentage > 4 pCi/L
Iowa	71	Hawaii	0.4
North Dakota	61	Louisiana	0.8
Nebraska	54	Mississippi	2.2
Minnesota	45	Oklahoma	3.3
Montana	42	Texas	3.6

LOWEST STATES

* These results are based on 2-7 day screening measurements in the lowest livable level and should not be used to estimate annual averages or health risks.

YEAR 6 RESULTS

- The States of Virginia and Montana participated in the final round of the SRRS
- Montana is the fifth highest State tested to date, with 42 percent of their homes being above 4 pCi/L
- Montana also has a large number (4.7%) of homes have screening measurements 20 pCi/L
- Virginia's results show that 14% of their homes had screening measurements above 4 pCi/L
- There is a large regional disparity of radon levels in Virginia

FIVE HIGHEST MEASUREMENTS in EACH STATE

VIRGINIA

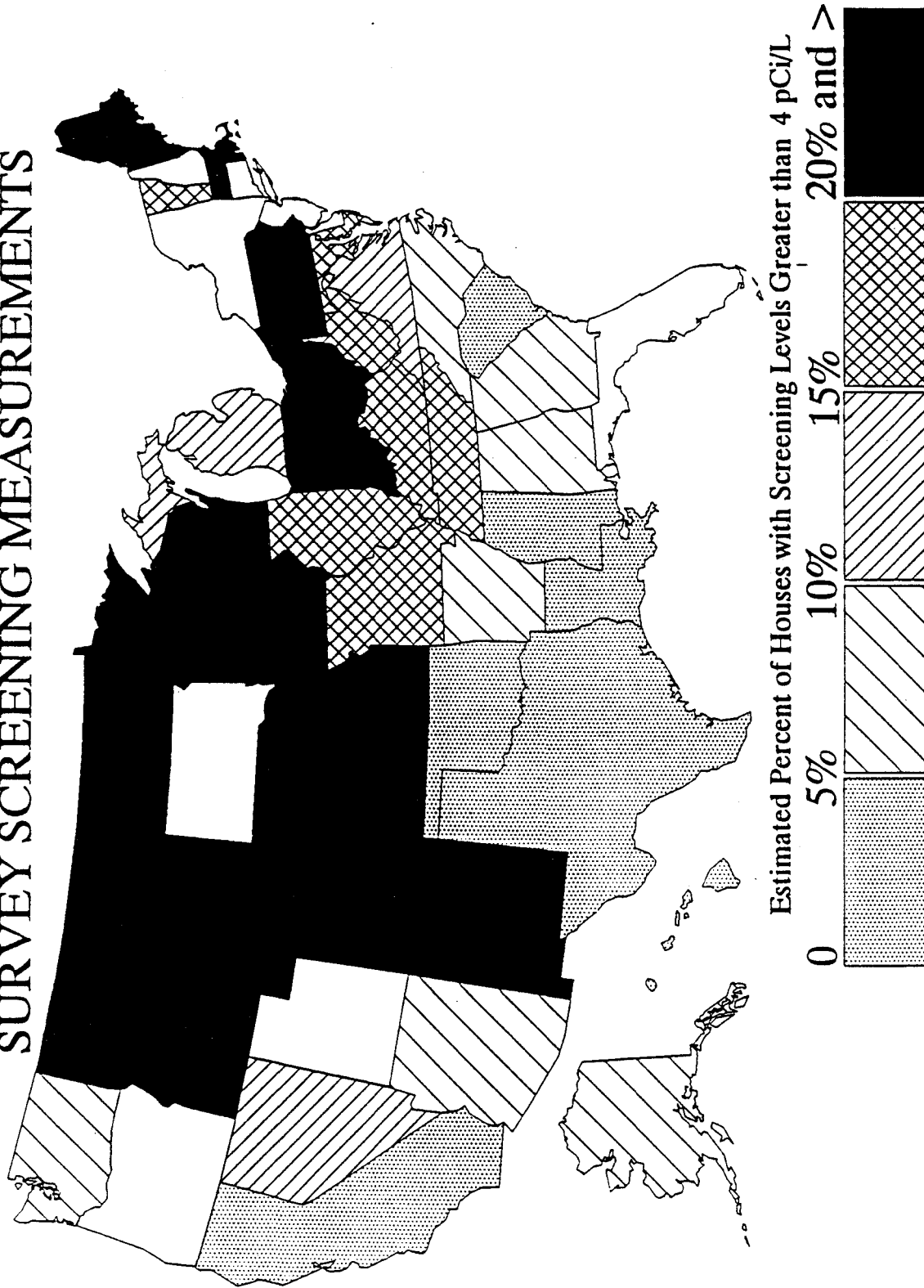
MONTANA

County	pCi/L	County	pCi/L
Danville-City	81.5	Flathead	133.6
Dinwiddie	78.6	Lewis and Clark	115.1
Shenandoah	77.2	Flathead	71.4
Chesterfield	49.9	Sanders	69.1
Russel	42.2	Park	63.4

* These results are based on 7-day screening measurements in the lowest livable level and should not be used to estimate annual averages or health risks.

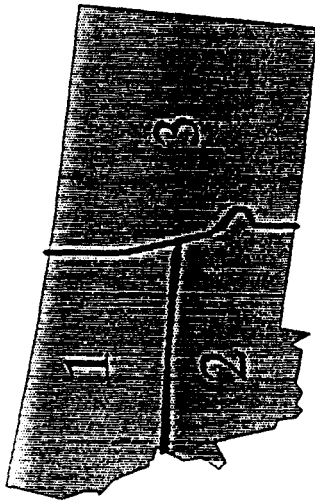
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STATE/EPA RESIDENTIAL RADON SURVEY SCREENING MEASUREMENTS



These results are based on 2-7 day screening measurements in the lowest livable level and should not be used to estimate annual averages or health risks.

The States of DE, FL, NH, NJ, NY, and UT have conducted their own surveys. OR & SD declined to participate in the SRRS.



MONTANA

State/EPA Residential Radon Survey Screening Results

Region	# Homes Measured	% Homes > 4 pCi/L	% Homes > 20 pCi/L	Arith. Mean
1	264	36.4	2.7	5.6
2	266	52.5	9.8	8.3
3	303	37.6	1.4	4.1
State	833	42.2	4.7	6.0

These results are based on 7 day screening measurements in the lowest livable level and should not be used to estimate annual averages or health risks.

Table 1. Sample Size, Target Population and Percentage of Houses With A Basement, by State and Region - Montana

	<u>Number of Houses Tested</u>	<u>Estimated Number of Houses in Target Population</u>	<u>Percentage of Houses With a Basement</u>
State	833	151,605	65.6
Basement	509	93,977	
Nonbasement	278	49,244	
Region 1	264	52,918	68.1
Basement	168	33,820	
Nonbasement	80	15,816	
Region 2	266	50,799	60.1
Basement	151	28,990	
Nonbasement	102	19,249	
Region 3	303	47,888	68.7
Basement	190	31,167	
Nonbasement	96	14,179	

Table 2. Parameter Estimates by State and Region - Montana

Estimate of Population									
	Arith. Mean pCi/L	Geo. Mean pCi/L	Median pCi/L	75th Percentile pCi/L	90th Percentile pCi/L	% Houses > 4 pCi/L	% Houses > 20 pCi/L		
State	6.0	3.4	3.4	6.2	13.1	42.2	4.7		
Basement	7.3	4.5	4.2	7.6	14.2	53.0	5.9		
Nonbasement	3.8	2.0	1.9	3.5	7.0	20.0	2.8		
Region 1	5.6	2.9	2.8	5.3	12.2	36.4	2.7		
Basement	6.8	3.8	3.6	7.1	13.6	46.3	3.6		
Nonbasement	3.3	1.7	1.8	2.9	5.0	13.6	1.3		
Region 2	8.3	4.5	4.2	9.1	17.9	52.5	9.8		
Basement	10.3	6.5	6.0	11.1	21.6	65.9	12.5		
Nonbasement	5.2	2.5	2.1	4.4	12.2	29.8	6.0		
Region 3	4.1	3.0	3.3	5.1	7.5	37.6	1.4		
Basement	5.0	3.7	3.9	6.0	8.0	48.4	2.1		
Nonbasement	2.5	1.8	1.9	2.9	4.8	13.7	0.0		

DISTRIBUTION OF CANISTERS PER COUNTY FOR MONTANA

----- REGION=1 -----

REGION	COUNTY	NCANS
1	CASCADE	70
1	CHOUTEAU	12
1	FLATHEAD	43
1	GLACIER	5
1	HILL	9
1	LAKE	9
1	LIBERTY	4
1	LINCOLN	20
1	MINERAL	5
1	MISSOULA	60
1	PONDERA	6
1	SANDERS	14
1	TETON	5
1	TOOLE	2

REGION		264

----- REGION=2 -----

REGION	COUNTY	NCANS
2	BEAVERHEAD	15
2	BROADWATER	4
2	DEER LODGE	9
2	GALLATIN	49
2	GRANITE	4
2	JEFFERSON	6
2	JUDITH BASIN	7
2	LEWIS AND CLARK	58
2	MADISON	8
2	MEAGHER	6
2	PARK	14
2	POWELL	6
2	RAVALLI	30
2	SILVER BOW	35
2	SWEET GRASS	10
2	WHEATLAND	5
2	YELLOWSTONE NAT PARK	0

REGION		266

DISTRIBUTION OF CANISTERS PER COUNTY FOR MONTANA

----- REGION=3 -----

REGION	COUNTY	NCANS
3	BIG HORN	9
3	BLAINE	10
3	CARBON	11
3	CARTER	9
3	CUSTER	14
3	DANIELS	5
3	DAWSON	10
3	FALLON	5
3	FERGUS	12
3	GARFIELD	5
3	GOLDEN VALLEY	6
3	MCCONE	8
3	MUSSELSHELL	4
3	PETROLEUM	3
3	PHILLIPS	11
3	POWDER RIVER	12
3	PRAIRIE	6
3	RICHLAND	11
3	ROOSEVELT	4
3	ROSEBUD	11
3	SHERIDAN	9
3	STILLWATER	9
3	TREASURE	6
3	VALLEY	7
3	WIBAU	5
3	YELLOWSTONE	101

REGION		303
		=====
		833

Exhibit #5
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LISTING OF 50 HIGHEST ACTIVITY LEVELS
FOR MONTANA SR HOUSEHOLDS WITH ADJMT > 0

HOUSE_ID	FLOOR	ACTIVITY	COUNTY	EERFCNTY	CNTYERR	EERFZIP	RTIZIP	ZIPERR
00555	0	133.6	FLATHEAD	FLATHEAD		59912	59912	
00721	0	115.1	LEMIS AND CLARK	LEMIS AND CLARK		59604	59601	***
00195	1	71.4	FLATHEAD	FLATHEAD		59901	59901	
00300	0	69.1	SANDERS	SANDERS		59874	59874	
00978	0	63.4	PARK	PARK		59030	59030	
20067	0	61.4	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
00152	0	51.6	RAVALLI	RAVALLI		59870	59870	
00291	0	46.0	HIBAU	HIBAU		59353	59353	
00897	1	44.3	SILVER BOM	SILVER BOM		59701	59701	
00225	0	42.2	HISSOULA	HISSOULA		59801	59801	
00737	0	42.1	SANDERS	SANDERS		59874	59874	
00485	0	40.7	BEAVERHEAD	BEAVERHEAD		59725	59725	
00906	0	40.6	RAVALLI	RAVALLI		59875	59875	
00489	1	38.6	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
00764	0	32.2	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
00218	0	31.7	LINCOLN	LINCOLN		59923	59923	
00890	1	30.3	SILVER BOM	SILVER BOM		59701	59701	
00659	0	29.7	RAVALLI	RAVALLI		59829	59829	
00663	0	28.9	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
00606	0	28.5	BROADWATER	BROADWATER		59644	59644	
20021	0	28.4	PARK	PARK		59065	59065	
00167	0	27.1	SHERIDAN	SHERIDAN		59211	59211	
01006	0	26.9	JEFFERSON	JEFFERSON		59634	59634	
00632	0	25.6	HIBAU	HIBAU		59353	59353	
00526	1	25.5	RAVALLI	RAVALLI		59833	59833	
00222	0	25.2	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
20022	0	25.2	SILVER BOM	SILVER BOM		59701	59701	
00928	3	24.6	SILVER BOM	SILVER BOM		59701	59701	
00446	1	22.8	WHEATLAND	WHEATLAND		59036	59036	
20108	0	22.1	HIBAU	HIBAU		59353	59353	
00505	0	22.0	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
01144	0	21.6	DEER LODGE	DEER LODGE		59711	59711	
00964	0	21.2	LEMIS AND CLARK	LEMIS AND CLARK		59635	59635	
00392	0	20.8	HIBAU	HIBAU		59353	59353	
00327	0	20.7	HISSOULA	HISSOULA		59851	59851	
00282	1	20.3	LEMIS AND CLARK	LEMIS AND CLARK		59639	59639	
00648	0	20.2	GALLATIN	GALLATIN		59714	59714	
00465	0	19.7	CASCADE	CASCADE		59412	59412	
00216	0	19.3	HISSOULA	HISSOULA		59803	59803	
00497	1	19.2	CASCADE	CASCADE		59401	59401	
00772	3	18.5	RAVALLI	RAVALLI		59829	59829	
00641	0	18.0	FLATHEAD	FLATHEAD		59901	59901	
00230	1	17.9	GALLATIN	GALLATIN		59714	59714	
00385	0	17.7	FLATHEAD	FLATHEAD		59937	59937	
00599	0	17.0	PHILLIPS	PHILLIPS		59544	59544	
00892	0	17.0	PARK	PARK		59018	59018	
00602	0	16.9	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	
00626	1	16.9	HIBAU	HIBAU		59353	59353	
00924	0	16.7	SILVER BOM	SILVER BOM		59701	59701	
00956	0	16.6	LEMIS AND CLARK	LEMIS AND CLARK		59601	59601	

Updated Radon Information

The following represents current information as of May 92:

Radon gas is the nation's second leading cause of lung cancer.

EPA and the U.S. Surgeon General recommend testing all homes below the third floor for radon.

Radon is estimated to cause about 14,000 deaths per year -- however, this number could range from 7,000 to 30,000 deaths per year.

Nearly 1 out of every 15 homes in the U.S. is estimated to have elevated radon levels -- 4 picocuries per liter of air (pCi/L) or more.

EPA recommends the following testing steps:

Step One: Take a short-term test (2 to 90 days in duration). If your result is 4 pCi/L or higher, take a follow-up test (Step 2) to be sure.

Step Two: Follow up with either a long-term test (90 days to 1 year in duration) or a second short-term test.

- For a better understanding of your year-round average radon level, take a long-term test.
- If you need results quickly, take a second short-term test.

The higher your initial short-term test result, the more certain you can be that you should take a short-term rather than a long-term follow-up test. If your first short-term test result is several times the action level -- for example, about 10 pCi/L or higher -- you should take a second short-term test immediately.

Step Three: If you followed up with a long-term test: Fix your home if your long-term test result is 4 pCi/L or more.

If you followed up with a second short-term test: The higher your short-term results, the more certain you can be that you should fix your home. Consider fixing your home if the average of your first and second test is 4 pCi/L or higher.

Test kits should be placed in the lowest lived-in level of the home (for example, the basement if it is frequently used, otherwise the first floor). It should be put in a room that is used regularly (like a living room, playroom, den or bedroom) but not your kitchen or bathroom.

Even radon levels below 4 pCi/L pose some risk, and you can reduce your risk of lung cancer by lowering your radon level. Most homes today can be reduced to 2 pCi/L or below.

The average home costs about \$1,200 for a contractor to fix, although this can range from about \$500 to about \$2,500. You should use a contractor who is certified by the EPA's Radon Contractor Proficiency (RCP) Program. A contractor who has passed the EPA test will carry a special RCP identification card.

If you smoke and your home has high radon levels, your risk of lung cancer is especially high.

Children have been reported to have greater risk than adults of certain types of cancer from radiation, but there are currently no conclusive data on whether children are at greater risk than adults from radon.

RADON RISK IF YOU SMOKE

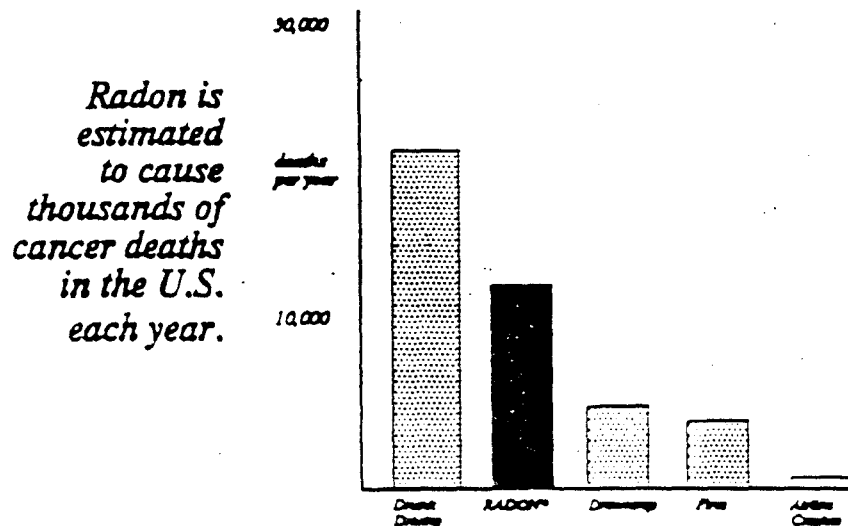
Radon Level	If 1,000 people who smoked were exposed to this level over a lifetime...	The risk of cancer from radon exposure compared to...	WHAT TO DO: Stop Smoking and...
20 pCi/L	About 135 people could get lung cancer	← 100 times the risk of drowning	Fix your home
10 pCi/L	About 71 people could get lung cancer	← 100 times the risk of dying in a home fire	Fix your home
8 pCi/L	About 57 people could get lung cancer		Fix your home
4 pCi/L	About 29 people could get lung cancer	← 100 times the risk of dying in an airplane crash	Fix your home
2 pCi/L	About 15 people could get lung cancer	← 2 times the risk of dying in a car crash	Consider fixing between 2 and 4 pCi/L
1.3 pCi/L	About 9 people could get lung cancer	(Average indoor radon level)	(Reducing radon levels below 2 pCi/L is difficult)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	

Note: If you are a former smoker, your risk may be lower.

RADON RISK IF YOU'VE NEVER SMOKED

Radon Level	If 1,000 people who never smoked were exposed to this level over a lifetime...	The risk of cancer from radon exposure compared to...	WHAT TO DO
20 pCi/L	About 8 people could get lung cancer	← The risk of being killed in a violent crime	Fix your home
10 pCi/L	About 4 people could get lung cancer		Fix your home
8 pCi/L	About 3 people could get lung cancer	← 10 times the risk of dying in an airplane crash	Fix your home
4 pCi/L	About 2 people could get lung cancer	← The risk of drowning	Fix your home
2 pCi/L	About 1 person could get lung cancer	← The risk of dying in a home fire	Consider fixing between 2 and 4 pCi/L
1.3 pCi/L	Less than 1 person could get lung cancer	(Average indoor radon level)	(Reducing radon levels below 2 pCi/L is difficult)
0.4 pCi/L	Less than 1 person could get lung cancer	(Average outdoor radon level)	

Note: If you are a former smoker, your risk may be higher.



* Radon is estimated to cause about 14,000 deaths per year - however, this number could range from 7,000 to 30,000 deaths per year. The numbers of deaths from other causes were taken from 1990 National Safety Council records.

STATE RADON CONTACTS

Alabama	800/582-1866
Alaska	800/478-4845
Arizona	602/255-4845
Arkansas	501/661-2701
California	800/748-7236
Colorado	800/846-3986
Connecticut	203/566-3122
Delaware	800/554-4636
District of Columbia	202/727-5728
Florida	800/543-8279
Georgia	800/745-0037
Hawaii	808/586-4700
Idaho	800/445-8647
Illinois	800/325-1245
Indiana	800/272-9723
Iowa	800/383-5992
Kansas	913/296-1560
Kentucky	502/564-3700
Louisiana	800/256-2494
Maine	800/232-0842
Maryland	800/872-3666
Massachusetts	413/586-7525
Michigan	517/335-8190
Minnesota	800/798-9050
Mississippi	800/626-7739
Missouri	800/669-7236
Montana	406/444-3671
Nebraska	800/334-9491
Nevada	702/687-5394
New Hampshire	800/852-3345 x4674
New Jersey	800/648-0394
New Mexico	505/827-4300
New York	800/458-1158
North Carolina	919/571-4141
North Dakota	701/221-5188
Ohio	800/523-4439
Oklahoma	405/271-5221
Oregon	503/731-4014
Pennsylvania	800/237-2366
Puerto Rico	809/767-3563
Rhode Island	401/277-2438
South Carolina	800/768-0362
South Dakota	605/773-3351
Tennessee	800/232-1139
Texas	512/834-6688
Utah	801/538-6734
Vermont	800/640-0601
Virginia	800/468-0138
Washington	800/323-9727
West Virginia	800/922-1255
Wisconsin	608/267-4795
Wyoming	800/458-5847

For most pollutants, the assessment of human risk is based on data from animals exposed to very high levels of a given substance. The large and obvious uncertainty associated with this extrapolation is usually compounded by the fact that the substance may be administered to laboratory animals in a way that is different from human exposure (e.g., oral versus inhalation). In addition, the animals are often exposed to levels of a substance several orders of magnitude greater than typical human exposures.

Radon is a known human carcinogen. Estimates of lung cancer risk for the general population from inhalation of radon and radon progeny are derived using human data on the occurrence of lung cancer in underground miners due to inhalation exposures. Furthermore, the average lifetime cumulative radon exposures to the general population are only slightly below those for which increased risk can be demonstrated in underground miners. Hence, low-exposure extrapolation is less of an issue for radon risk assessment than it is for the assessment of risk for most other environmental carcinogens.

There is extensive evidence supporting the classification of radon as a known human carcinogen. There is some uncertainty associated with the projection of lung cancer risk from occupational radon exposures to the general population for residential exposures. Although the epidemiologic data on increased risk from indoor exposures are limited, some of the studies suggest that the relative risk coefficients for the general population and for underground miners are comparable.

Uncertainty is always present to some extent in risk assessment for environmental pollutants. However, as more data become available for radon, the uncertainties associated with estimation of lung cancer risk may diminish. Follow-up of the underground miners will continue to clarify the relationship of radon and smoking and the nature of the exposure-response relationship for radon exposure and lung cancer risk over a lifetime. The results of epidemiologic studies of indoor radon exposure may help to further define the relationship at low exposure levels. Advances in dosimetric modeling and the findings of the NAS' report on comparative radon dosimetry (NAS 1991) have improved the extrapolation of risks from miners to the public. As new information becomes available, EPA will continue to update its estimates of lung cancer risk from residential radon exposure.

DATE 3-31-93

SENATE COMMITTEE ON Public Health

BILLS BEING HEARD TODAY: HB 585

Name *please print*

Representing

Bill
No.

Check One

Support Oppose

Adrian Howe	DHES	585		X

VISITOR REGISTER

PLEASE LEAVE PREPARED STATEMENT WITH COMMITTEE SECRETARY