Open-File Report 91-4

Results of the 1987–88 EPA Supported Radon Study in Colorado

With a Discussion on Geology

By
The Colorado Geological Survey

Colorado Geological Survey
Department of Natural Resources
Denver, Colorado
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ACKNOWLEDGEMENTS

The Colorado Geological Survey (CGS) expresses appreciation to the U.S. Environmental Protection Agency, and especially to Milt Lammering and Philip Nyberg who were instrumental in this project. The Colorado Department of Health (CDH) Radiation Division and Consumer Protection Division, Albert Hazle, Richard Gamewell and Tom Messenger devised the project from the early stages and assisted in the delivery of many of the test devices. The counties, county health departments, and county sanitarians contributed their time and energy to the completion of the study. The Colorado Geological Survey owes a debt of gratitude to these people and organizations for their involvement.

This study at CGS began under the guidance of Lew Ladwig and Pat Rogers but the real momentum was supplied by Ann Scanlon who directed the secretarial staff and volunteers and coordination between the federal, state, and county agencies. Ann "Radon Annie", did an excellent job with all aspects of this complex project and deserves most of the credit. Ann, with EPA and CDH staff visited many of the homes with elevated radon and offered professional advice to the owners. She also made many public and TV appearances to describe the program and the significance of the results.

Other contributing staff members at CGS include: Mark Davis and Randy Streufert who commented on the geology, Randy Phillips who performed the final data reduction, and Cheryl Brchan who proofed and formatted the publication.

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WORK STATEMENT

The Colorado Geological Survey was asked by the Colorado Department of Health to complete the organization and compilation of the radon 48 hour test data obtained during 1987 and 1988. Additionally, CGS was to supply the Health Department with the following:

1. hard copy of the data base
2. diskette of the data base in ASCII
3. an evaluation of the average concentration of radon with the percentage of tests which exceeded 4 pCi/l, 10 pCi/l, and 20 pCi/l for each county, zip code, and geologic formation
4. a separate data listing where county, geologic formation are not provided but where other data such as time of testing are listed
5. the same concentration breakdown for construction type as listed in 3 above.

PROJECT DESCRIPTION

During the winters of 1986-1987 and 1987-1988 Colorado participated with 16 other States in the United States Environmental Protection Agency's nationwide Indoor Radon Gas Survey. This survey was partially funded by the EPA. The EPA supplied the charcoal canister test devices and had the analyses conducted in the EPA laboratories in Montgomery, Alabama. The EPA also supplied the states with a random listing of names, addresses, and phone numbers of people who could be contacted for participation. The Colorado Geological Survey, the Colorado State Health Department, and most of Colorado's sixty-three counties made contact with participants and installed the test devices.

Several factors were considered as guidelines for conducting the survey. The placement strategy was to cover the entire state focussing on geologic area and population.

Colorado was initially separated into seven geological regions to effectuate placement in similar geologic environments. These are:

1) Precambrian rocks
2) older complex sediments
3) Cretaceous-Tertiary Basins
4) Tertiary valley fill
5) volcaniclastic sediments
6) Tertiary volcanics.
7) Laramide intrusions

Following the identification of these geologic environments and the testing, CGS then compared the test results to individual lithologic units within these geologic environments. This resulted in increasing the number of geologic characterization units from 7 to 76. For the more detailed characterization, the actual mapped formations of the state geologic map were used and sorted by abbreviation. These abbreviations are identified in Appendix J. The lithologic units were obtained from the 1:500,000 scale state geologic map assembled by Ogden Tweto (1979) which can be purchased from the Colorado Geological Survey, 1313 Sherman Street, Room 715 at a cost of $10.00.

The second major consideration was population density. The number of canisters placed throughout each geologically similar region was based upon the population found within each region. Other goals for canister distribution included two canisters per zip code zone and a reasonable geographic distribution. Canister distributions and responsibility for assembling map locations were undertaken by the counties. In almost all cases this was a difficult task for the individual counties because there was no funding available to them for the project.

From the randomly generated published phone listing provided by the EPA, homeowners were contacted by each county health department, sanitarian or building inspector. Basic qualifications for participation in the State survey included ownership of the home, single family dwellings, and a willingness to participate.

Several areas of the state included volunteer participants. A volunteer system was incorporated to account for 1) subdivision areas lacking phone service, 2) poor response rates from the randomly generated list in densely populated areas, and 3) areas where canister distribution indicated poor geographic coverage.

Several questionnaires were completed by the participants. The questionnaires were designed to obtain information regarding home construction, age, venting and heating systems, soil type, geologic setting and water supply.

Participant homes whose radon levels exceeded 100 pCi/l were visited by CGS and EPA Region VIII personnel to assist with re-testing and to suggest possible mitigation. High indoor radon levels were not required for CGS or EPA personnel to offer assistance and other homes were also visited.

The Colorado Geological Survey cautions anyone using this data for scientific evaluation of state-wide radon potential. As can be seen in the database, many of the sample parameters are few in number. This negates their value in a statistically valid study. Moreover, the 48 hour test is basically a "snap shot" of the radon conditions for just that period. The U.S. Geological Survey has conducted studies in a controlled environment that show radon levels to increase ten-fold in a twenty-four hour period due to the passing of a weather front. Furthermore, ventilation in the test room such as an open window has a marked effect on radon levels.

The radon potential can vary considerably within the same geologic unit. In fact uranium deposits often form as a result of leaching uranium from one formation and depositing it in another. This forms a highly concentrated body of uranium ore in a host formation and several feet away in the same formation there may be very low levels of uranium.

The Colorado Geological Survey and the Colorado Department of Health are completing a long-term survey using alpha sensitive film exposed to indoor radon for one year in 150 of the houses that volunteered for this 48 hour test. The results of the long-term survey will be compared to the 48 hour test results.

SUMMARY OF RESULTS

The data collected from this study have been sorted in Dbase IV and total 1,911 usable records. The results of these tests were stored as a Lotus-123 spreadsheet. A basic statistical analysis statewide and of each county was conducted. Statewide, 42.96 percent of the 1,911 valid test results exceed EPA's 4.0 pCi/l guideline.

The Colorado Geological Survey has shown that the potential for indoor radon levels is strongly influenced by the geologic setting. The following tables are computer sorts from the main data base.

Table 1 displays the statewide average and shows that 42.96 percent exceed the 1990 EPA guideline of 4.0 pCi/l.

Table 1. State of Colorado radon results, and percentages in each range.

No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
		Percentage in each range			
1,911	5.60	57.04	31.61	8.01	3.35

Table 2 displays a listing of the counties where the average of the measurements exceeded 10 pCi/l which is an arbitrarily chosen parameter but includes certain counties which have a significant number or percentage of readings which exceeded 20 pCi/l. Twenty pCi/l to 200 pCi/l readings were recommended by EPA to require retesting within months. Clear Creek County has only one reported reading. Although one reading is not statistically valid, we suspect that additional readings would confirm that this county in localized areas has a high potential for radon.

Table 2. Radon that exceeds the average of 10 pCi/l by county, and percentages in each range.

County	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
Clear Creek	1	38.10	0.00	0.00	0.00	100.00
Gilpin	8	20.86	25.00	12.50	25.00	37.50
Jackson	8	10.76	50.00	12.50	25.00	12.50
Mineral	5	10.22	60.00	20.00	0.00	20.00
Pitkin	12	12.99	58.33	33.33	0.00	8.33
San Juan	5	10.64	20.00	40.00	20.00	20.00
Teller	12	31.94	41.67	25.00	8.33	25.00
Yuma	3	11.10	33.33	33.33	0.00	33.33

Table 3 displays zip codes whose averages exceed 10 pCi/l and the nearest town. The purpose for this display is to abbreviate the total listing as shown in Appendix A to those codes which may require further examination.

Table 3. Radon that exceeds the average of 10 pCi/l by zip code, and percentages in each range.

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20	Town
			Percentage in each range				
80016	1	13.40	0.00	0.00	100.00	0.00	Aurora
80118	5	12.08	0.00	60.00	20.00	20.00	Larkspur
80121	8	10.34	12.50	50.00	25.00	12.50	Littleton
80122	11	10.87	27.27	36.36	27.27	9.09	Littleton
80125	1	12.30	0.00	0.00	100.00	0.00	Littleton
80135	5	10.98	20.00	40.00	20.00	20.00	Sedalia
80236	13	10.19	15.38	46.15	30.77	7.69	Englewood
80403	17	20.42	5.88	29.41	29.41	35.29	
80427	2	62.80	0.00	0.00	0.00	100.00	Central Cty
80440	1	80.80	0.00	0.00	0.00	100.00	Georgetown
80442	2	21.40	50.00	0.00	0.00	50.00	
80452	1	38.10	0.00	0.00	0.00	100.00	Idaho Spgs
80454	4	12.95	0.00	50.00	25.00	25.00	Indian Hills
80455	9	23.49	0.00	77.78	11.11	11.11	Jamestown
80480	8	10.76	50.00	12.50	25.00	12.50	
80758	2	11.90	50.00	0.00	0.00	50.00	Wray, Yu
80808	2	14.60	50.00	0.00	0.00	50.00	Calhan, EP
80816	2	64.75	0.00	0.00	0.00	100.00	Florissant
80866	5	46.46	60.00	0.00	20.00	20.00	Woodland Pk
80904	9	12.16	33.33	33.33	11.11	22.22	Colo Spgs
80906	18	12.53	38.89	22.22	22.22	16.67	Colo Spgs
80926	1	14.80	0.00	0.00	100.00	0.00	Colo Spgs
81021	1	55.40	0.00	0.00	0.00	100.00	Arlington
81058	1	12.70	0.00	0.00	100.00	0.00	
81071	1	21.60	0.00	0.00	0.00	100.00	Sheriden Lake
81130	5	10.22	60.00	20.00	0.00	20.00	Creede
81240	15	10.25	53.33	20.00	20.00	6.67	Penrose
81433	5	10.64	20.00	40.00	20.00	20.00	Silverton
81611	5	26.20	40.00	40.00	0.00	20.00	Aspen
81621	2	13.15	0.00	50.00	50.00	0.00	Basalt
81639	2	21.65	50.00	0.00	0.00	50.00	

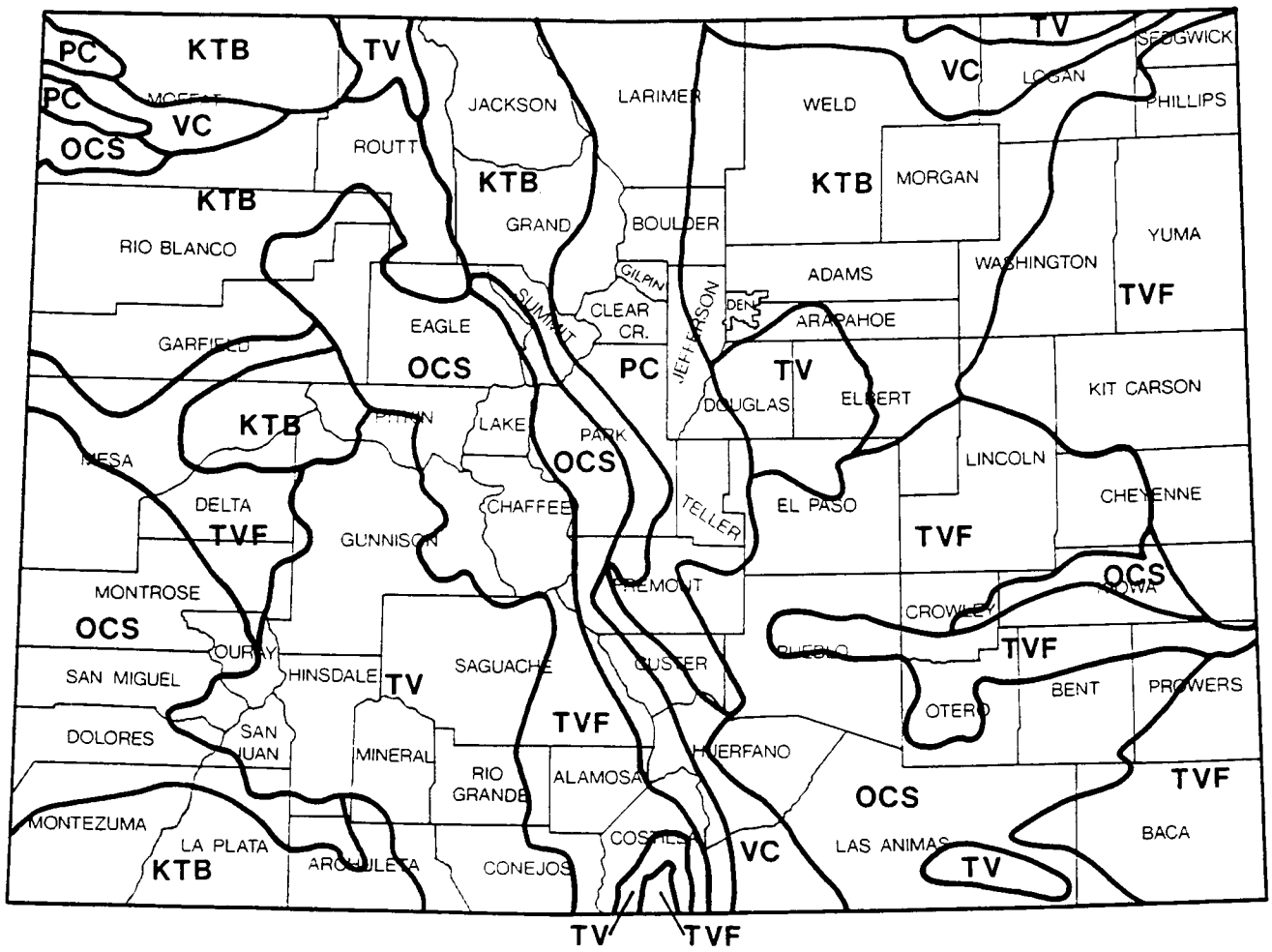
Table 4 displays the house construction factors. These include the presence of a basement, the number of floors, the floor on which the test was conducted, and the existence and description of a crawl space. It is clear that basement tests are the highest, but a meaningful correlation may be drawn from a comparison of tests in basements and number of floors to examine the potential stack effect.

Table 4. Radon results by house construction factors, and percentages in each range.

Basement	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
yes	1303	6.55	49.50	36.07	10.13	4.30
no	608	3.55	73.19	22.04	3.45	1.32
No. of Floors	**No. of Samples**	**Average pCi/1**	**≥0<4**	**≥4<10**	**≥10<20**	**≥20**
			Percentage in each range			
one	102	4.57	53.92	38.24	6.86	0.98
two	760	6.03	50.13	35.92	10.13	3.82
three	342	8.17	49.42	32.75	11.40	6.43
four	130	5.31	46.92	42.31	9.23	1.54
Test Floor	**No. of Samples**	**Average pCi/1**	**≥0<4**	**≥4<10**	**≥10<20**	**≥20**
			Percentage in each range			
basement	1144	6.81	46.07	39.16	10.14	4.63
first	758	3.80	73.22	20.45	4.88	1.45
second	8	1.90	100.00	0.00	0.00	0.00
third	1	7.00	0.00	100.00	0.00	0.00
Crawl space	**No. of Samples**	**Average pCi/1**	**≥0<4**	**≥4<10**	**≥10<20**	**≥20**
			Percentage in each range			
none	897	6.55	50.72	35.67	9.92	3.68
part	418	3.42	75.84	19.38	3.35	1.44
all	596	5.69	53.36	34.06	8.39	4.19

GEOLOGIC FACTORS

The geologic factors were initially selected in very broad categories to assure coverage of most geologic parameters. The category was identified by a descriptor that generally set the different environments apart. For example the volcaniclastic area includes many non-volcaniclastic units but may have a preponderance of these rocks having a volcanic genesis. Following the initial selection, individual lithologic units were identified from the 1:500,000 state geologic map consistent in scale with the zip code criterion for presenting the data. The factors shown in Figure 1 and listed in Table 5 are further described below.



EXPLANATION

VC	Volcaniclastic	KTB	Cretaceous-Tertiary basin
TV	Tertiary volcanic	OCS	Older complex sediments
TVF	Tertiary valley fill	PC	Precambrian

Figure 1. Generalized Colorado rock types (factors).

Volcaniclastic (VC)

These are sedimentary units distinguished from the Cretaceous Tertiary basin sedimentary rocks by their derivation from volcanic rocks. In northeastern and north-central Colorado the Tertiary White River Formation (Twr) is included in these rocks. This formation is composed of ashy claystone which is thought to be the source rock for uranium deposits in the eastern Wyoming basins. The Wall Mountain Tuff (Twm) and the Dawson Arkose

(Tdu) located near the Castle Rock area are included in this geologic environment. The Wall Mountain unit is an ash-flow tuff and the Dawson is an arkosic sandstone conglomerate known to contain uranium concentrations and elevated radon levels. The Denver and Arapaho Formations (TKda) are included in this environment. The Arapaho is comprised of sandstones, mudstones, claystones, and conglomerates. The Denver Formation is known to contain andesitic material. Within the boundary of the volcaniclastic rocks are Quaternary eolian deposits (Qe) which include dune sand and silt and the Peoria Loess. Although these units are not necessarily volcanogenic they are found within the initially identified geologic area.

Cretaceous-Tertiary basins (KTB)

These areas include the Denver-Julesburg Basin in eastern Colorado, the Sand Wash Basin in the northwest, the San Juan Basin and the South Park area in the south, and the Canon City embayment in the east-central portion of the state. The geology of these areas include the Fox Hills Formation (Kf), generally sandstones but known to contain uranium deposits, the Pierre Formation (Kp, Kpu, Kpm, Kpl) composed of shales and siltstones and the Sharon Springs unit which is known to contain elevated levels of uranium, the Niobrara Formation (Kn) composed of shales and limestones, the Dakota and Purgatoire Formations (Kd, Kdp) both of which have uranium deposits in association, Mesaverde shales (Km), and Wasatch Formation (Tw). Common to the KTB environment are Quaternary alluvial (Qa) valleys.

Tertiary volcanics (TV)

This environment is represented by the San Juan volcanic field in southwestern Colorado and is made up of ash-flows, breccia flows, and other volcanic units ranging in composition from rhyolites to basalts (TKi).

Tertiary valley fill (TVF)

This geologic environment was chosen to accommodate areas predominantly comprised of younger materials such as those found near Yuma, Springfield, the San Luis Valley, and Colorado Springs. Included are the Quaternary sediments as well because the TVF implies unconsolidation and enhanced permeability.

Older complex sediments (OCS)

This environment was mainly chosen to accommodate the southwestern and the southeastern portion of the state along with the hogback area of the Front Range. The rocks include much of the Cretaceous identified in the KTB but also older Mesozoic units such as the Entrada and Morrison Formations (Jme), and the Chinle Formation (Rwc) all of which had significant uranium production, and units related to the Paleozoic. Paleozoic rocks such as the Lyons Formation (PPlf), Fountain Formation, Minturn Formation (Pm), and Maroon Formations (P Pm) are included in this grouping but are insignificant with respect to radon generation potential.

Precambrian (P€)

The Precambrian rocks comprise the core of the Rocky Mountains and include igneous rocks such as granites, monzonites, and diorites, and metamorphic rocks such as schists and gneisses. The igneous rocks generally have elevated levels of uranium and thorium, especially the Pikes Peak granite (Yp) and the Silver Plume quartz monzonite (Yg). The metamorphic rocks such as the Idaho Springs Formation (the name has been discontinued and these rocks are now referred to as Xb and Xfh) have hosted many uranium occurrences in Colorado including the Schwartzwalder Mine, possibly the largest vein-type mine in North America. Strangely, these metamorphic units generally display lower levels of uranium than the granites which contain no commercial uranium deposits.

Laramide intrusives (LI)

This category was chosen to include a suite of rocks not included in any of the above but containing some interesting rock types. One of these units is extremely radioactive and can contain well over 1,000 parts per million (ppm) uranium. These are the bostonites found in Clear Creek, Gilpin, and Boulder Counties. No tests were taken,

however, in close proximity to these rock types but we assume that results would be higher than tests taken in granitic rocks.

As can be seen in Table 5, most of the initially chosen geologic environments are fairly similar in their effects on radon. In fact most approximate the state average of 5.6 pCi/l. The Tertiary valley fill and the older complex sediments are below the average and also below the EPA 4 pCi/l level. The Precambrian is however, approximately twice the state average. Additionally, the Precambrian has over 10 percent of the results in excess of 20 pCi/l and the highest levels recorded from this study occur in Precambrian rocks.

Table 5. Radon results by geologic area, and percentages in each range.

Geologic Area	Abbr.	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Volcaniclastic	VC	491	5.82	46.44	40.12	10.79	2.65
Tertiary Volcanic	TV	94	5.24	63.83	23.40	8.51	4.26
Tertiary Valley Fill	TVF	378	3.97	68.52	25.66	4.50	1.32
Cretaceous/Tert. Basin	KTB	613	5.29	60.52	28.55	7.50	3.43
Older Complex Sediments	OCS	109	3.60	60.55	35.78	3.67	0.00
Precambrian	Pϵ	177	11.01	44.07	32.20	12.99	10.73
Laramide Intrusives	LI	0	0.00	0.00	0.00	0.00	0.00

When comparisons are more narrowly confined to the individual lithologic units all of the initially chosen geologic environments can be further refined with respect to their radon potential. Shown below are the individual lithologic units in Tables 6, 7, and 8 sorted by radon level. Descriptions and locations for these units can be found on the State Geologic Map, 1:500,000 by Ogden Tweto, 1979 and explanations for the abbreviations can be found in Appendix J. It is recommended that interested readers obtain this map and the State Zip Code map at 1:500,000 scale.

Many of the individual lithologic units tested at levels below the EPA guideline of 4 pCi/l. The results suggest that Mancos Formation (Km), Idaho Springs Formation (Xfh), Brown's Park Formation (Tbp), and Wasatch Formation (Two) appear to have less potential for elevated radon than the other formations. Some of the other formations listed in Table 6 have an insufficient number of test results to infer radon potential. The Quaternary alluvium (Qa) has a large number of results which are also below 4 pCi/l. Quaternary alluvium is not a rock type but a description of how sands and gravels are deposited by river and stream processes. The lithology of the individual particles depends on the source of the weathered material. This could range widely in composition and in some cases exhibit high potential for radon. A lithologic breakdown of the Quaternary alluvium is beyond the scope of this report.

Table 6. Radon samples by geologic formation with averages below 4.0 pCi/l and percentages in each range.

Geology*	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
KJdm	1	0.60	100.00	0.00	0.00	0.00
KJds	1	3.80	100.00	0.00	0.00	0.00
Kcg	19	3.06	73.68	26.32	0.00	0.00
Kd	1	2.60	100.00	0.00	0.00	0.00
Kdb	20	2.80	80.00	15.00	5.00	0.00
Kl	18	3.96	55.56	44.44	0.00	0.00
Klf	27	2.96	77.78	22.22	0.00	0.00
Km	146	3.41	76.03	19.18	4.11	0.68
MC	4	3.55	50.00	50.00	0.00	0.00
P Pm	3	2.23	100.00	0.00	0.00	0.00
P Ps	3	1.37	100.00	0.00	0.00	0.00
Pb	3	1.57	100.00	0.00	0.00	0.00
Pc	1	0.50	100.00	0.00	0.00	0.00
Prh	1	1.70	100.00	0.00	0.00	0.00
QTsa	26	2.51	80.77	19.23	0.00	0.00
Qa	122	3.57	68.85	25.41	5.74	0.00
Qd	7	3.61	57.14	28.57	14.29	0.00
TKa	1	0.90	100.00	0.00	0.00	0.00
Ta	1	2.70	100.00	0.00	0.00	0.00
Taf	3	1.67	100.00	0.00	0.00	0.00
Tbb	1	0.90	100.00	0.00	0.00	0.00
Tbp	15	3.09	73.33	26.67	0.00	0.00
Tcu	9	3.37	66.67	33.33	0.00	0.00
Tial	1	1.20	100.00	0.00	0.00	0.00
Tpl	2	3.00	100.00	0.00	0.00	0.00
Pjs	1	3.00	100.00	0.00	0.00	0.00
Pll	2	1.95	100.00	0.00	0.00	0.00
d	7	1.76	100.00	0.00	0.00	0.00
Tw	2	1.05	100.00	0.00	0.00	0.00
Two	20	3.12	70.00	30.00	0.00	0.00
Twr	3	2.37	66.67	33.33	0.00	0.00
Xfh	16	3.64	68.75	31.25	0.00	0.00
YXg	1	1.10	100.00	0.00	0.00	0.00

*Geologic formation symbol in alphabetical order.

Table 7. Radon samples by geologic formation with averages from 4.0 pCi/l to less than 10 pCi/l and percentages in each range.

Geology*	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
Kdp	14	5.61	50.00	28.57	21.43	0.00
Ki	1	4.30	0.00	100.00	0.00	0.00
Kms	1	4.80	0.00	100.00	0.00	0.00
Kn	60	7.06	60.00	25.00	10.00	5.00
Kp	94	5.63	44.68	43.62	9.57	2.13
Kpl	113	6.31	46.90	31.86	18.58	2.65
Kpm	42	6.40	58.54	31.71	2.44	7.32
Kpu	46	4.88	58.70	30.43	8.70	2.17
Kvt	2	6.15	0.00	100.00	0.00	0.00

Table 7. - Continued

Geology*	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
P Pwm	1	6.80	0.00	100.00	0.00	0.00
Pee	19	5.06	63.16	31.58	0.00	5.26
Pm	10	5.45	60.00	10.00	30.00	0.00
Qe	273	5.10	53.11	37.36	7.33	2.20
Qg	124	4.81	62.10	31.45	4.03	2.42
Qgo	58	5.32	53.45	32.76	10.34	3.45
TKdl	77	5.39	50.65	35.06	11.69	2.60
Tdu	123	6.50	43.90	40.65	10.57	4.88
Th	4	7.28	0.00	75.00	25.00	0.00
Tkda	1	4.20	0.00	100.00	0.00	0.00
Tm	2	6.65	50.00	0.00	50.00	0.00
Tmi	8	6.94	50.00	25.00	12.50	12.50
To	42	5.07	54.76	35.71	4.76	4.76
Tt	6	8.02	50.00	33.33	0.00	16.67
Xb	74	8.90	43.24	35.14	10.81	10.81
Xg	18	8.51	27.78	38.89	22.22	11.11
Yp	3	4.63	0.00	100.00	0.00	0.00

*Geologic formation symbol in alphabetical order.

The following table lists the formations that exceed 10 pCi/l. Any construction on these formations should employ radon mitigation techniques to minimize any potential radon problems.

Table 8. Radon samples by geologic formation with averages greater than 10 pCi/l and percentages in each range.

Geology*	No. of Samples	Average pCi/1	≥0<4%	≥4<10%	≥0<20%	≥20%
			Percentage in each range			
Kc	3	11.17	33.33	33.33	0.00	33.33
Kls	2	21.65	50.00	0.00	0.00	50.00
MD	1	15.40	0.00	0.00	100.00	0.00
P Pf	7	10.07	57.14	14.29	14.29	14.29
Tc	8	10.76	50.00	12.50	25.00	12.50
Tki	9	23.49	0.00	77.78	11.11	11.11
Tos	7	25.80	42.86	14.29	0.00	42.86
Xq	2	28.00	0.00	0.00	0.00	100.00
Yg	14	11.99	50.00	35.71	7.14	7.14
Yp	11	43.79	14.29	57.14	14.29	14.29

*Geologic formation symbol in alphabetical order.

When the geologic parameters are computer-sorted with the construction parameter describing the basement (Appendix D existing basement) the test levels have approximately the same ratio as the general construction parameter data set. However, the Precambrian tests average 4.62

pCi/l when there is no basement or crawl space and 13.97 pCi/l when a basement of crawl space is present.

Table 9 displays the beginning date for the testing and shows that most tests were taken in March 1987 and April 1988. As expected, higher test results were obtained during the colder months because the houses are less open to ventilation.

Table 9. Radon results by beginning date, and percentages in each range.

Beginning Date	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
01/16/88	2	4.05	50.00	50.00	0.00	0.00
02/14/87	145	5.96	52.41	36.55	6.21	4.83
03/24/87	585	6.65	52.31	33.85	9.23	4.62
04/15/88	765	5.32	55.95	32.68	9.02	2.35
05/04/88	348	4.74	60.92	29.02	6.61	3.45
06/08/88	45	3.12	75.56	20.00	4.44	0.00
07/17/87	19	3.01	68.42	31.58	0.00	0.00
08/11/87	1	4.00	0.00	100.00	0.00	0.00
12/22/87	1	6.90	0.00	100.00	0.00	0.00

The geology is displayed along with the beginning testing date in Appendix D. As expected the colder months have higher readings. The Precambrian is again anomalous. The Precambrian testing shows an extremely high average of 17.51 pCi/l in February and still high readings through April. Two readings taken in the summer are anomalously low at 1+ pCi/l. One might expect more balanced readings since much of the Precambrian terrain is mountainous and therefore of lower temperature for more of the year.

APPENDIX A

RADON AVERAGES BY COUNTY AND PERCENTAGES IN EACH RANGE

County	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
ADAMS	7	5.54	59.46	32.43	5.41	2.70
ALAMOSA	11	1.82	100.00	0.00	0.00	0.00
ARAPAHO	64	7.68	31.25	40.63	23.44	4.69
ARCHULETA	11	2.48	81.82	18.18	0.00	0.00
BACA	37	4.56	56.76	32.43	10.81	0.00
BENT	21	2.70	90.48	9.52	0.00	0.00
BOULDER	141	7.62	47.52	33.33	14.18	4.96
CHAFFEE	3	9.43	66.67	0.00	0.00	33.33
CHEYENNE	20	6.42	35.00	50.00	10.00	5.00
CLEAR CREEK	1	38.10	0.00	0.00	0.00	100.00
CONEJOS	2	5.60	50.00	50.00	0.00	0.00
COSTILLA	17	4.46	58.82	35.29	5.88	0.00
CROWLEY	20	7.52	50.00	40.00	5.00	5.00
CUSTER	6	3.83	83.33	0.00	16.67	0.00
DELTA	5	2.66	80.00	20.00	0.00	0.00
DENVER	82	5.70	43.90	43.90	9.76	2.44
DOLORES	2	4.00	50.00	50.00	0.00	0.00
DOUGLAS	58	7.53	46.55	32.76	12.07	8.62
EAGLE	20	5.89	60.00	15.00	25.00	0.00
ELBERT	28	4.68	50.00	42.86	7.14	0.00
EL PASO	169	4.73	65.09	27.81	3.55	3.55
FREMONT	96	4.67	59.38	33.33	6.25	1.04
GARFIELD	64	4.12	59.38	35.94	3.13	1.56
GILPIN	8	20.86	25.00	12.50	25.00	37.50
GRAND	27	6.31	55.56	33.33	3.70	7.41
GUNNISON	17	4.29	58.82	29.41	11.76	0.00
HINSDALE	0	0.00	0.00	0.00	0.00	0.00
HUERFANO	38	5.75	36.84	55.26	7.89	0.00
JACKSON	8	10.76	50.00	12.50	25.00	12.50
JEFFERSON	122	5.92	45.90	38.52	10.66	4.92
KIOWA	17	8.93	35.29	52.94	0.00	11.76
KIT CARSON	10	6.89	40.00	40.00	20.00	0.00
LAKE	0	0.00	0.00	0.00	0.00	0.00
LA PLATA	12	4.95	58.33	25.00	16.67	0.00
LARIMER	105	5.25	59.05	25.71	12.38	2.86
LAS ANIMAS	29	5.19	37.93	48.28	13.79	0.00
LINCOLN	15	4.73	46.67	46.67	6.67	0.00
LOGAN	5	3.42	60.00	40.00	0.00	0.00
MESA	46	2.27	91.30	8.70	0.00	0.00
MINERAL	5	10.22	60.00	20.00	0.00	20.00
MOFFAT	18	3.96	55.56	44.44	0.00	0.00
MONTEZUMA	17	2.63	88.24	5.88	5.88	0.00
MONTROSE	24	3.03	79.17	12.50	8.33	0.00
MORGAN	10	3.51	70.00	20.00	10.00	0.00
OTERO	23	3.36	73.91	21.74	4.35	0.00
OURAY	7	2.33	85.71	14.29	0.00	0.00
PARK	16	8.28	75.00	6.25	12.50	6.25
PHILLIPS	3	2.57	100.00	0.00	0.00	0.00
PITKIN	12	12.99	58.33	33.33	0.00	8.33
PROWERS	19	2.52	78.95	21.05	0.00	0.00
PUEBLO	35	2.57	71.43	25.71	2.86	0.00
RIO BLANCO	18	1.60	94.44	5.56	0.00	0.00
RIO GRANDE	10	3.03	80.00	20.00	0.00	0.00
ROUTT	22	7.04	59.09	22.73	9.09	9.09

APPENDIX A - Continued

RADON AVERAGES BY COUNTY AND PERCENTAGES IN EACH RANGE

County	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
SAGUACHE	17	1.89	94.12	5.88	0.00	0.00
SAN JUAN	5	10.64	20.00	40.00	20.00	20.00
SAN MIGUEL	7	1.33	85.71	14.29	0.00	0.00
SEDGEWICK	2	2.15	100.00	0.00	0.00	0.00
SUMMIT	0	0.00	0.00	0.00	0.00	0.00
TELLER	12	31.94	41.67	25.00	8.33	25.00
WASHINGTON	0	0.00	0.00	0.00	0.00	0.00
WELD	50	3.92	60.00	38.00	2.00	0.00
YUMA	3	11.10	33.33	33.33	0.00	33.33
UNKNOWN	12	6.35	41.67	50.00	0.00	8.33
BLANK	126	5.18	60.32	30.95	6.35	2.38
TRI-COUNTY	64	6.92	39.06	48.44	7.81	4.69

APPENDIX B

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
80002	4	7.73	50.00	0.00	50.00	0.00
80003	7	5.49	42.86	42.86	14.29	0.00
80004	9	5.20	44.44	44.44	11.11	0.00
80005	4	2.80	75.00	25.00	0.00	0.00
80010	6	6.18	83.33	0.00	0.00	16.67
80011	3	7.00	33.33	33.33	33.33	0.00
80012	10	5.15	80.00	10.00	0.00	10.00
80013	11	4.51	45.45	54.55	0.00	0.00
80014	8	2.38	75.00	25.00	0.00	0.00
80015	5	5.28	40.00	40.00	20.00	0.00
80016	1	13.40	0.00	0.00	100.00	0.00
80017	5	9.58	20.00	40.00	40.00	0.00
80018	1	4.00	100.00	0.00	0.00	0.00
80020	3	5.07	33.33	66.67	0.00	0.00
80022	6	9.13	83.33	0.00	0.00	16.67
80025	1	3.10	100.00	0.00	0.00	0.00
80026	5	3.00	80.00	20.00	0.00	0.00
80027	4	4.28	50.00	50.00	0.00	0.00
80030	11	5.24	45.45	45.45	9.09	0.00
80033	3	4.07	66.67	33.33	0.00	0.00
80054	1	2.90	100.00	0.00	0.00	0.00
80102	1	2.40	100.00	0.00	0.00	0.00
80103	1	4.90	0.00	100.00	0.00	0.00
80104	23	5.57	60.87	30.43	4.35	4.35
80106	3	2.37	66.67	33.33	0.00	0.00
80107	19	4.65	52.63	42.11	5.26	0.00
80110	9	5.43	55.56	22.22	22.22	0.00
80111	6	8.07	16.67	66.67	16.67	0.00
80112	6	7.83	33.33	50.00	0.00	16.67
80116	13	7.05	38.46	53.85	0.00	7.69
80117	3	7.13	0.00	66.67	33.33	0.00
80118	5	12.08	0.00	60.00	20.00	20.00
80120	9	8.77	22.22	44.44	33.33	0.00
80121	8	10.34	12.50	50.00	25.00	12.50
80122	11	10.87	27.27	36.36	27.27	9.09
80123	7	3.54	57.14	42.86	0.00	0.00
80124	1	3.80	100.00	0.00	0.00	0.00
80125	1	12.30	0.00	0.00	100.00	0.00
80126	6	8.02	0.00	83.33	16.67	0.00
80127	5	4.32	40.00	60.00	0.00	0.00
80132	3	5.77	33.33	66.67	0.00	0.00
80133	2	4.05	50.00	50.00	0.00	0.00
80134	39	7.68	33.33	43.59	17.95	5.13
80135	5	10.98	20.00	40.00	20.00	20.00
80136	1	3.70	100.00	0.00	0.00	0.00
80155	1	4.30	0.00	100.00	0.00	0.00
80173	1	0.00	100.00	0.00	0.00	0.00
80201	1	0.50	100.00	0.00	0.00	0.00
80203	1	6.50	0.00	100.00	0.00	0.00
80205	1	3.40	100.00	0.00	0.00	0.00
80206	2	4.25	50.00	50.00	0.00	0.00
80207	4	4.88	50.00	50.00	0.00	0.00
80209	1	5.60	0.00	100.00	0.00	0.00
80210	11	5.13	54.55	36.36	9.09	0.00
80211	4	2.98	100.00	0.00	0.00	0.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
80212	5	3.62	60.00	40.00	0.00	0.00
80214	1	2.50	100.00	0.00	0.00	0.00
80215	1	4.00	100.00	0.00	0.00	0.00
80219	9	3.83	44.44	55.56	0.00	0.00
80220	11	4.75	45.45	54.55	0.00	0.00
80221	3	6.90	33.33	66.67	0.00	0.00
80222	6	4.28	50.00	50.00	0.00	0.00
80224	4	6.13	25.00	50.00	25.00	0.00
80226	7	7.03	42.86	42.86	0.00	14.29
80227	3	3.87	33.33	66.67	0.00	0.00
80228	3	3.23	66.67	33.33	0.00	0.00
80229	4	4.75	50.00	50.00	0.00	0.00
80231	6	6.00	50.00	16.67	33.33	0.00
80233	4	4.88	25.00	75.00	0.00	0.00
80234	3	7.30	66.67	0.00	33.33	0.00
80235	4	7.78	25.00	25.00	50.00	0.00
80236	13	10.19	15.38	46.15	30.77	7.69
80237	4	6.05	0.00	100.00	0.00	0.00
80239	6	3.30	83.33	16.67	0.00	0.00
80241	2	5.00	50.00	50.00	0.00	0.00
80301	6	6.50	66.67	16.67	0.00	16.67
80302	53	7.93	43.40	28.30	22.64	5.66
80303	16	4.81	68.75	12.50	18.75	0.00
80401	13	4.05	69.23	23.08	7.69	0.00
80403	17	20.42	5.88	29.41	29.41	35.29
80420	2	7.15	50.00	0.00	50.00	0.00
80421	8	5.41	50.00	25.00	25.00	0.00
80422	1	1.90	100.00	0.00	0.00	0.00
80427	2	62.80	0.00	0.00	0.00	100.00
80432	1	3.20	100.00	0.00	0.00	0.00
80433	12	6.97	41.67	33.33	16.67	8.33
80439	30	4.78	46.67	46.67	3.33	3.33
80440	1	80.80	0.00	0.00	0.00	100.00
80442	2	21.40	50.00	0.00	0.00	50.00
80446	9	8.13	44.44	44.44	0.00	11.11
80447	5	2.74	60.00	40.00	0.00	0.00
80449	1	2.70	100.00	0.00	0.00	0.00
80451	4	4.30	75.00	0.00	25.00	0.00
80452	1	38.10	0.00	0.00	0.00	100.00
80453	1	3.70	100.00	0.00	0.00	0.00
80454	4	12.95	0.00	50.00	25.00	25.00
80455	9	23.49	0.00	77.78	11.11	11.11
80456	1	2.60	100.00	0.00	0.00	0.00
80457	1	5.80	0.00	100.00	0.00	0.00
80459	3	5.23	33.33	66.67	0.00	0.00
80465	8	7.41	25.00	50.00	25.00	0.00
80466	11	5.24	54.55	36.36	0.00	9.09
80469	1	1.10	100.00	0.00	0.00	0.00
80470	2	5.00	0.00	100.00	0.00	0.00
80471	1	3.10	100.00	0.00	0.00	0.00
80477	14	5.00	64.29	21.43	7.14	7.14
80478	2	2.95	50.00	50.00	0.00	0.00
80480	8	10.76	50.00	12.50	25.00	12.50
80481	3	6.77	33.33	33.33	33.33	0.00
80482	2	1.00	100.00	0.00	0.00	0.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
80483	3	7.67	66.67	0.00	33.33	0.00
80487	1	9.20	0.00	100.00	0.00	0.00
80501	22	3.06	63.64	36.36	0.00	0.00
80512	1	0.70	100.00	0.00	0.00	0.00
80513	3	2.80	100.00	0.00	0.00	0.00
80516	1	7.30	0.00	100.00	0.00	0.00
80517	5	5.00	80.00	0.00	20.00	0.00
80520	1	1.10	100.00	0.00	0.00	0.00
80521	16	4.67	56.25	25.00	18.75	0.00
80524	12	5.18	58.33	25.00	8.33	8.33
80525	11	8.28	36.36	18.18	36.36	9.09
80526	21	5.28	52.38	42.86	4.76	0.00
80535	1	1.00	100.00	0.00	0.00	0.00
80536	1	1.50	100.00	0.00	0.00	0.00
80537	15	5.49	66.67	20.00	6.67	6.67
80538	16	5.41	50.00	37.50	12.50	0.00
80540	6	5.70	50.00	33.33	16.67	0.00
80542	1	8.60	0.00	100.00	0.00	0.00
80547	1	0.80	100.00	0.00	0.00	0.00
80550	2	2.60	100.00	0.00	0.00	0.00
80601	7	7.27	42.86	42.86	0.00	14.29
80610	1	3.20	100.00	0.00	0.00	0.00
80615	2	3.95	50.00	50.00	0.00	0.00
80620	2	1.90	100.00	0.00	0.00	0.00
80621	1	2.80	100.00	0.00	0.00	0.00
80623	2	2.95	50.00	50.00	0.00	0.00
80624	1	3.40	100.00	0.00	0.00	0.00
80631	15	4.11	46.67	53.33	0.00	0.00
80634	4	2.25	100.00	0.00	0.00	0.00
80640	1	4.70	0.00	100.00	0.00	0.00
80642	1	3.30	100.00	0.00	0.00	0.00
80644	2	1.00	100.00	0.00	0.00	0.00
80645	2	5.80	50.00	50.00	0.00	0.00
80650	1	1.80	100.00	0.00	0.00	0.00
80651	1	4.60	0.00	100.00	0.00	0.00
80654	1	0.90	100.00	0.00	0.00	0.00
80701	4	6.73	25.00	50.00	25.00	0.00
80723	4	1.10	100.00	0.00	0.00	0.00
80731	1	3.00	100.00	0.00	0.00	0.00
80734	2	2.35	100.00	0.00	0.00	0.00
80736	1	0.50	100.00	0.00	0.00	0.00
80737	5	2.44	100.00	0.00	0.00	0.00
80744	2	2.15	100.00	0.00	0.00	0.00
80749	1	0.80	100.00	0.00	0.00	0.00
80751	4	4.15	50.00	50.00	0.00	0.00
80755	1	9.50	0.00	100.00	0.00	0.00
80758	2	11.90	50.00	0.00	0.00	50.00
80802	1	3.50	100.00	0.00	0.00	0.00
80804	1	7.70	0.00	100.00	0.00	0.00
80807	5	6.32	60.00	20.00	20.00	0.00
80808	2	14.60	50.00	0.00	0.00	50.00
80810	9	7.18	33.33	55.56	0.00	11.11
80813	2	4.55	50.00	50.00	0.00	0.00
80815	3	8.93	0.00	66.67	33.33	0.00
80816	2	64.75	0.00	0.00	0.00	100.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
80817	4	3.88	50.00	50.00	0.00	0.00
80818	1	6.20	0.00	100.00	0.00	0.00
80819	1	5.10	0.00	100.00	0.00	0.00
80820	5	1.44	100.00	0.00	0.00	0.00
80821	6	4.80	83.33	0.00	16.67	0.00
80823	1	4.70	0.00	100.00	0.00	0.00
80825	8	6.58	25.00	50.00	25.00	0.00
80828	6	3.92	33.33	66.67	0.00	0.00
80829	3	4.67	66.67	0.00	33.33	0.00
80831	1	4.50	0.00	100.00	0.00	0.00
80832	1	6.00	0.00	100.00	0.00	0.00
80834	1	9.30	0.00	100.00	0.00	0.00
80835	2	6.15	50.00	50.00	0.00	0.00
80860	2	3.50	50.00	50.00	0.00	0.00
80861	1	1.20	100.00	0.00	0.00	0.00
80862	1	2.80	100.00	0.00	0.00	0.00
80863	1	5.40	0.00	100.00	0.00	0.00
80866	5	46.46	60.00	0.00	20.00	20.00
80903	6	4.15	66.67	33.33	0.00	0.00
80904	9	12.16	33.33	33.33	11.11	22.22
80906	18	12.53	38.89	22.22	22.22	16.67
80907	18	3.29	72.22	22.22	5.56	0.00
80908	2	3.40	50.00	50.00	0.00	0.00
80909	28	3.05	75.00	25.00	0.00	0.00
80910	9	2.34	77.78	22.22	0.00	0.00
80911	11	2.57	81.82	18.18	0.00	0.00
80913	3	4.57	33.33	66.67	0.00	0.00
80915	8	2.15	87.50	12.50	0.00	0.00
80916	6	3.82	66.67	33.33	0.00	0.00
80917	17	2.56	76.47	23.53	0.00	0.00
80918	18	2.87	77.78	16.67	5.56	0.00
80919	9	7.36	44.44	33.33	11.11	11.11
80920	4	2.28	75.00	25.00	0.00	0.00
80921	1	1.90	100.00	0.00	0.00	0.00
80922	1	5.90	0.00	100.00	0.00	0.00
80926	1	14.80	0.00	0.00	100.00	0.00
81001	6	4.33	50.00	33.33	16.67	0.00
81003	2	3.20	50.00	50.00	0.00	0.00
81004	7	2.54	71.43	28.57	0.00	0.00
81005	12	2.13	83.33	16.67	0.00	0.00
81006	2	2.30	50.00	50.00	0.00	0.00
81007	2	1.10	100.00	0.00	0.00	0.00
81008	1	1.20	100.00	0.00	0.00	0.00
81020	6	6.43	33.33	16.67	50.00	0.00
81021	1	55.40	0.00	0.00	0.00	100.00
81023	1	4.30	0.00	100.00	0.00	0.00
81025	1	4.90	0.00	100.00	0.00	0.00
81027	1	6.00	0.00	100.00	0.00	0.00
81029	4	5.80	0.00	100.00	0.00	0.00
81033	2	2.50	100.00	0.00	0.00	0.00
81034	1	3.40	100.00	0.00	0.00	0.00
81036	13	9.44	23.08	69.23	0.00	7.69
81040	4	7.28	0.00	75.00	25.00	0.00
81045	2	2.50	100.00	0.00	0.00	0.00
81046	1	7.40	0.00	100.00	0.00	0.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
81047	5	3.02	80.00	20.00	0.00	0.00
81050	13	3.11	69.23	30.77	0.00	0.00
81052	14	2.34	78.57	21.43	0.00	0.00
81054	20	2.70	90.00	10.00	0.00	0.00
81055	8	3.25	75.00	25.00	0.00	0.00
81057	1	2.70	100.00	0.00	0.00	0.00
81058	1	12.70	0.00	0.00	100.00	0.00
81062	3	2.23	100.00	0.00	0.00	0.00
81063	11	6.76	18.18	72.73	9.09	0.00
81064	2	6.65	50.00	50.00	0.00	0.00
81067	6	2.65	100.00	0.00	0.00	0.00
81069	1	2.00	100.00	0.00	0.00	0.00
81071	1	21.60	0.00	0.00	0.00	100.00
81073	13	6.04	46.15	30.77	23.08	0.00
81076	3	2.93	100.00	0.00	0.00	0.00
81077	3	2.77	66.67	33.33	0.00	0.00
81080	1	2.50	100.00	0.00	0.00	0.00
81081	1	1.90	100.00	0.00	0.00	0.00
81082	30	5.08	43.33	50.00	6.67	0.00
81084	6	5.40	66.67	16.67	16.67	0.00
81087	2	3.00	50.00	50.00	0.00	0.00
81089	24	6.08	33.33	62.50	4.17	0.00
81090	11	2.13	81.82	18.18	0.00	0.00
81101	9	2.11	100.00	0.00	0.00	0.00
81112	1	2.40	100.00	0.00	0.00	0.00
81120	2	5.60	50.00	50.00	0.00	0.00
81122	1	0.90	100.00	0.00	0.00	0.00
81123	4	2.40	75.00	25.00	0.00	0.00
81125	3	1.47	100.00	0.00	0.00	0.00
81130	5	10.22	60.00	20.00	0.00	20.00
81131	2	1.45	100.00	0.00	0.00	0.00
81132	1	3.10	100.00	0.00	0.00	0.00
81133	3	3.50	66.67	33.33	0.00	0.00
81143	1	0.70	100.00	0.00	0.00	0.00
81144	5	3.88	60.00	40.00	0.00	0.00
81146	1	1.00	100.00	0.00	0.00	0.00
81147	9	2.76	77.78	22.22	0.00	0.00
81149	6	2.27	83.33	16.67	0.00	0.00
81150	1	1.00	100.00	0.00	0.00	0.00
81152	8	4.90	50.00	50.00	0.00	0.00
81153	2	7.75	50.00	0.00	50.00	0.00
81154	3	1.67	100.00	0.00	0.00	0.00
81157	3	0.83	100.00	0.00	0.00	0.00
81201	3	9.43	66.67	0.00	0.00	33.33
81210	1	1.10	100.00	0.00	0.00	0.00
81211	3	1.73	100.00	0.00	0.00	0.00
81212	62	4.22	50.00	45.16	4.84	0.00
81224	4	1.05	100.00	0.00	0.00	0.00
81226	11	2.09	90.91	9.09	0.00	0.00
81230	12	5.63	41.67	41.67	16.67	0.00
81233	3	1.37	100.00	0.00	0.00	0.00
81240	15	10.25	53.33	20.00	20.00	6.67
81248	1	1.10	100.00	0.00	0.00	0.00
81249	1	1.20	100.00	0.00	0.00	0.00
81250	2	3.15	50.00	50.00	0.00	0.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
81252	5	4.36	80.00	0.00	20.00	0.00
81301	11	5.32	54.55	27.27	18.18	0.00
81321	11	3.36	81.82	9.09	9.09	0.00
81323	3	0.97	100.00	0.00	0.00	0.00
81324	1	6.30	0.00	100.00	0.00	0.00
81328	3	1.77	100.00	0.00	0.00	0.00
81332	1	1.70	100.00	0.00	0.00	0.00
81401	19	3.57	73.68	15.79	10.53	0.00
81410	1	4.40	0.00	100.00	0.00	0.00
81413	5	4.28	60.00	20.00	20.00	0.00
81415	1	2.40	100.00	0.00	0.00	0.00
81416	7	4.04	57.14	42.86	0.00	0.00
81418	2	1.65	100.00	0.00	0.00	0.00
81419	3	6.63	33.33	66.67	0.00	0.00
81423	5	1.60	80.00	20.00	0.00	0.00
81425	4	1.08	100.00	0.00	0.00	0.00
81428	4	2.88	75.00	25.00	0.00	0.00
81430	2	0.65	100.00	0.00	0.00	0.00
81431	1	0.50	100.00	0.00	0.00	0.00
81432	1	4.80	0.00	100.00	0.00	0.00
81433	5	10.64	20.00	40.00	20.00	20.00
81435	6	1.92	100.00	0.00	0.00	0.00
81501	15	1.68	100.00	0.00	0.00	0.00
81503	16	3.19	75.00	18.75	6.25	0.00
81504	13	2.35	92.31	7.69	0.00	0.00
81505	7	2.97	85.71	14.29	0.00	0.00
81506	9	3.19	77.78	22.22	0.00	0.00
81520	2	4.85	50.00	50.00	0.00	0.00
81521	10	2.01	100.00	0.00	0.00	0.00
81525	1	5.40	0.00	100.00	0.00	0.00
81526	4	3.13	75.00	25.00	0.00	0.00
81601	16	5.04	56.25	37.50	0.00	6.25
81611	5	26.20	40.00	40.00	0.00	20.00
81612	1	6.00	0.00	100.00	0.00	0.00
81615	1	1.70	100.00	0.00	0.00	0.00
81621	2	13.15	0.00	50.00	50.00	0.00
81623	26	4.40	57.69	34.62	7.69	0.00
81625	17	3.97	52.94	47.06	0.00	0.00
81626	1	3.70	100.00	0.00	0.00	0.00
81630	1	2.60	100.00	0.00	0.00	0.00
81631	3	3.80	66.67	33.33	0.00	0.00
81632	3	3.10	100.00	0.00	0.00	0.00
81635	2	2.10	100.00	0.00	0.00	0.00
81637	2	2.45	100.00	0.00	0.00	0.00
81639	2	21.65	50.00	0.00	0.00	50.00
81641	12	1.68	91.67	8.33	0.00	0.00
81642	1	4.00	100.00	0.00	0.00	0.00
81645	2	8.35	50.00	0.00	50.00	0.00
81646	1	1.60	100.00	0.00	0.00	0.00
81647	3	4.67	0.00	100.00	0.00	0.00
81648	6	1.45	100.00	0.00	0.00	0.00
81650	13	3.15	76.92	23.08	0.00	0.00
81652	6	2.72	66.67	33.33	0.00	0.00
81654	1	5.20	0.00	100.00	0.00	0.00
81655	1	2.60	100.00	0.00	0.00	0.00

APPENDIX B - Continued

RADON AVERAGES BY ZIP CODE WITH PERCENTAGES IN EACH RANGE

Zip Code	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
81656	1	1.50	100.00	0.00	0.00	0.00
81657	9	5.71	55.56	11.11	33.33	0.00
81659	1	3.10	100.00	0.00	0.00	0.00
87503	1	8.80	0.00	100.00	0.00	0.00

APPENDIX C

RADON AVERAGES BY GEOLOGIC FORMATION WITH PERCENTAGE IN EACH RANGE

Geology*	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
KJdm	1	0.60	100.00	0.00	0.00	0.00
KJds	1	3.80	100.00	0.00	0.00	0.00
Kc	3	11.17	33.33	33.33	0.00	33.33
Kcg	19	3.06	73.68	26.32	0.00	0.00
Kd	1	2.60	100.00	0.00	0.00	0.00
Kdb	20	2.80	80.00	15.00	5.00	0.00
Kdp	14	5.61	50.00	28.57	21.43	0.00
Ki	1	4.30	0.00	100.00	0.00	0.00
Kl	18	3.96	55.56	44.44	0.00	0.00
Klf	27	2.96	77.78	22.22	0.00	0.00
Kls	2	21.65	50.00	0.00	0.00	50.00
Km	146	3.41	76.03	19.18	4.11	0.68
Kn	60	7.06	60.00	25.00	10.00	5.00
Kp	94	5.63	44.68	43.62	9.57	2.13
Kpl	113	6.31	46.90	31.86	18.58	2.65
Kpm	42	6.29	59.52	30.95	2.38	7.14
Kpu	46	4.88	58.70	30.43	8.70	2.17
Kvt	2	6.15	0.00	100.00	0.00	0.00
M€	4	3.55	50.00	50.00	0.00	0.00
MD	1	15.40	0.00	0.00	100.00	0.00
PPf	7	10.07	57.14	14.29	14.29	14.29
PPm	3	2.23	100.00	0.00	0.00	0.00
PPs	3	1.37	100.00	0.00	0.00	0.00
PPwm	1	6.80	0.00	100.00	0.00	0.00
Pb	3	1.57	100.00	0.00	0.00	0.00
Pc	1	0.50	100.00	0.00	0.00	0.00
Pee	19	5.06	63.16	31.58	0.00	5.26
Pm	10	5.45	60.00	10.00	30.00	0.00
Prh	1	1.70	100.00	0.00	0.00	0.00
QTsa	26	2.51	80.77	19.23	0.00	0.00
Qa	122	3.57	68.85	25.41	5.74	0.00
Qd	7	3.61	57.14	28.57	14.29	0.00
Qe	273	5.10	53.11	37.36	7.33	2.20
Qg	124	4.81	62.10	31.45	4.03	2.42
Qgo	58	5.32	53.45	32.76	10.34	3.45
TKa	1	0.90	100.00	0.00	0.00	0.00
TKda	113	6.17	41.59	42.48	13.27	2.65
TKdl	78	5.66	50.00	34.62	11.54	3.85
Ta	1	2.70	100.00	0.00	0.00	0.00
Taf	3	1.67	100.00	0.00	0.00	0.00
Tbb	1	0.90	100.00	0.00	0.00	0.00
Tbp	15	3.09	73.33	26.67	0.00	0.00
Tc	8	10.76	50.00	12.50	25.00	12.50
Tcu	9	3.37	66.67	33.33	0.00	0.00
Tdu	122	6.50	43.90	40.65	10.57	4.88
Th	4	7.28	0.00	75.00	25.00	0.00
Tial	1	1.20	100.00	0.00	0.00	0.00
Tki	9	23.49	0.00	77.78	11.11	11.11
Tm	2	6.65	50.00	0.00	50.00	0.00
Tmi	8	6.94	50.00	25.00	12.50	12.50
To	42	5.07	54.76	35.71	4.76	4.76
Tos	7	25.80	42.86	14.29	0.00	42.86
Tpl	2	3.00	100.00	0.00	0.00	0.00
ŦPjs	1	3.00	100.00	0.00	0.00	0.00

*Geologic formation symbol in alphabetical order.

APPENDIX C - Continued

RADON AVERAGES BY GEOLOGIC FORMATION WITH PERCENTAGE IN EACH RANGE

Geology*	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
			Percentage in each range			
TRpll	2	1.95	100.00	0.00	0.00	0.00
TRd	7	1.76	100.00	0.00	0.00	0.00
Tt	6	8.02	50.00	33.33	0.00	16.67
Tw	2	1.05	100.00	0.00	0.00	0.00
Two	20	3.12	70.00	30.00	0.00	0.00
Twr	3	2.37	66.67	33.33	0.00	0.00
Xb	74	8.90	43.24	35.14	10.81	10.81
Xfh	16	3.64	68.75	31.25	0.00	0.00
Xg	18	8.51	27.78	38.89	22.22	11.11
Xq	2	28.00	0.00	0.00	0.00	100.00
YXg	1	1.10	100.00	0.00	0.00	0.00
Yg	14	11.99	50.00	35.71	7.14	7.14
Yp	7	35.40	14.29	57.14	14.29	14.29

APPENDIX D

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
KJdm	80451	1	0.60	100.00	0.00	0.00	0.00
KJds	80513	1	3.80	100.00	0.00	0.00	0.00
Kc	80302	2	4.20	50.00	50.00	0.00	0.00
Kc	80537	1	25.10	0.00	0.00	0.00	100.00
Kcg	81027	1	6.00	0.00	100.00	0.00	0.00
Kcg	81047	1	8.70	0.00	100.00	0.00	0.00
Kcg	81050	11	2.72	72.73	27.27	0.00	0.00
Kcg	81052	1	1.80	100.00	0.00	0.00	0.00
Kcg	81057	1	2.70	100.00	0.00	0.00	0.00
Kcg	81069	1	2.00	100.00	0.00	0.00	0.00
Kcg	81081	1	1.90	100.00	0.00	0.00	0.00
Kcg	81084	1	3.50	100.00	0.00	0.00	0.00
Kcg	81212	1	1.60	100.00	0.00	0.00	0.00
Kd	81655	1	2.60	100.00	0.00	0.00	0.00
Kdb	81321	11	3.36	81.82	9.09	9.09	0.00
Kdb	81323	2	1.05	100.00	0.00	0.00	0.00
Kdb	81324	1	6.30	0.00	100.00	0.00	0.00
Kdb	81328	1	1.00	100.00	0.00	0.00	0.00
Kdb	81431	1	0.50	100.00	0.00	0.00	0.00
Kdb	81503	3	3.03	66.67	33.33	0.00	0.00
Kdp	81073	14	5.61	50.00	28.57	21.43	0.00
Ki	81647	1	4.30	0.00	100.00	0.00	0.00
Kl	81625	18	3.96	55.56	44.44	0.00	0.00
Klf	80026	5	3.00	80.00	20.00	0.00	0.00
Klf	80027	4	4.28	50.00	50.00	0.00	0.00
Klf	80516	1	7.30	0.00	100.00	0.00	0.00
Klf	80520	1	1.10	100.00	0.00	0.00	0.00
Klf	80829	1	0.50	100.00	0.00	0.00	0.00
Klf	80907	2	4.35	50.00	50.00	0.00	0.00
Klf	80911	1	1.50	100.00	0.00	0.00	0.00
Klf	80915	4	2.28	100.00	0.00	0.00	0.00
Klf	80916	3	2.80	100.00	0.00	0.00	0.00
Klf	80917	2	1.65	100.00	0.00	0.00	0.00
Klf	80918	3	2.60	66.67	33.33	0.00	0.00
Kls	81639	2	21.65	50.00	0.00	0.00	50.00
Km	80477	2	17.95	0.00	0.00	50.00	50.00
Km	80483	2	10.00	50.00	0.00	50.00	0.00
Km	80487	1	9.20	0.00	100.00	0.00	0.00
Km	81147	11	2.48	81.82	18.18	0.00	0.00
Km	81301	12	5.25	50.00	33.33	16.67	0.00
Km	81328	1	3.80	100.00	0.00	0.00	0.00
Km	81410	1	4.40	0.00	100.00	0.00	0.00
Km	81413	1	1.60	100.00	0.00	0.00	0.00
Km	81415	1	2.40	100.00	0.00	0.00	0.00
Km	81416	7	4.04	57.14	42.86	0.00	0.00
Km	81418	1	2.40	100.00	0.00	0.00	0.00
Km	81419	3	6.63	33.33	66.67	0.00	0.00
Km	81425	4	1.08	100.00	0.00	0.00	0.00
Km	81428	4	2.88	75.00	25.00	0.00	0.00
Km	81501	15	1.68	100.00	0.00	0.00	0.00
Km	81503	14	3.62	71.43	21.43	7.14	0.00
Km	81504	13	2.35	92.31	7.69	0.00	0.00
Km	81505	7	2.97	85.71	14.29	0.00	0.00
Km	81506	9	3.19	77.78	22.22	0.00	0.00

*Geologic formation symbol in alphabetical order.

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Km	81520	1	1.10	100.00	0.00	0.00	0.00
Km	81521	10	2.01	100.00	0.00	0.00	0.00
Km	81525	1	5.40	0.00	100.00	0.00	0.00
Km	81526	4	3.13	75.00	25.00	0.00	0.00
Km	81611	1	6.00	0.00	100.00	0.00	0.00
Km	81621	2	13.15	0.00	50.00	50.00	0.00
Km	81641	10	1.80	90.00	10.00	0.00	0.00
Km	81647	1	4.80	0.00	100.00	0.00	0.00
Km	81648	6	1.45	100.00	0.00	0.00	0.00
Km	81654	1	5.20	0.00	100.00	0.00	0.00
Kn	81003	1	0.70	100.00	0.00	0.00	0.00
Kn	81004	1	2.30	100.00	0.00	0.00	0.00
Kn	81005	9	1.77	88.89	11.11	0.00	0.00
Kn	81007	2	1.10	100.00	0.00	0.00	0.00
Kn	81021	1	55.40	0.00	0.00	0.00	100.00
Kn	81036	13	9.44	23.08	69.23	0.00	7.69
Kn	81046	1	7.40	0.00	100.00	0.00	0.00
Kn	81058	1	12.70	0.00	0.00	100.00	0.00
Kn	81076	3	2.93	100.00	0.00	0.00	0.00
Kn	81080	1	2.50	100.00	0.00	0.00	0.00
Kn	81212	8	3.58	62.50	25.00	12.50	0.00
Kn	81240	15	10.25	53.33	13.33	26.67	6.67
Kn	81656	1	1.50	100.00	0.00	0.00	0.00
Kp	80432	1	3.20	100.00	0.00	0.00	0.00
Kp	80459	2	4.25	50.00	50.00	0.00	0.00
Kp	80903	1	8.60	0.00	100.00	0.00	0.00
Kp	80904	2	2.80	100.00	0.00	0.00	0.00
Kp	80906	7	10.53	28.57	28.57	28.57	14.29
Kp	80907	10	3.57	70.00	20.00	10.00	0.00
Kp	80908	1	1.80	100.00	0.00	0.00	0.00
Kp	80909	2	4.55	50.00	50.00	0.00	0.00
Kp	80910	3	1.57	100.00	0.00	0.00	0.00
Kp	80913	1	7.30	0.00	100.00	0.00	0.00
Kp	80919	2	14.75	0.00	50.00	0.00	50.00
Kp	81020	6	6.43	33.33	16.67	50.00	0.00
Kp	81082	30	5.08	43.33	50.00	6.67	0.00
Kp	81089	24	6.08	29.17	66.67	4.17	0.00
Kp	81632	1	3.10	100.00	0.00	0.00	0.00
Kp	81645	1	1.30	100.00	0.00	0.00	0.00
Kpl	80302	48	8.20	43.75	27.08	22.92	6.25
Kpl	80303	2	13.45	0.00	0.00	100.00	0.00
Kpl	80501	1	1.50	100.00	0.00	0.00	0.00
Kpl	80521	10	4.26	50.00	30.00	20.00	0.00
Kpl	80525	4	10.83	25.00	0.00	75.00	0.00
Kpl	80526	12	5.43	50.00	41.67	8.33	0.00
Kpl	80538	2	5.30	0.00	100.00	0.00	0.00
Kpl	81001	6	4.33	50.00	33.33	16.67	0.00
Kpl	81003	1	5.70	0.00	100.00	0.00	0.00
Kpl	81008	1	1.20	100.00	0.00	0.00	0.00
Kpl	81212	24	4.01	54.17	41.67	4.17	0.00
Kpm	80301	6	6.50	66.67	16.67	0.00	16.67
Kpm	80302	1	1.60	100.00	0.00	0.00	0.00
Kpm	80303	11	3.81	81.82	9.09	9.09	0.00
Kpm	80524	2	3.90	50.00	50.00	0.00	0.00
Kpm	80537	2	4.70	50.00	50.00	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Kpm	80538	7	3.00	71.43	28.57	0.00	0.00
Kpm	80542	1	8.60	0.00	100.00	0.00	0.00
Kpm	80817	3	3.07	66.67	33.33	0.00	0.00
Kpm	80904	2	7.30	0.00	100.00	0.00	0.00
Kpm	80906	3	32.27	0.00	33.33	0.00	66.67
Kpm	80907	1	4.30	0.00	100.00	0.00	0.00
Kpm	80913	2	3.20	50.00	50.00	0.00	0.00
Kpm	81226	1	3.50	100.00	0.00	0.00	0.00
Kpu	80303	1	4.80	0.00	100.00	0.00	0.00
Kpu	80513	2	2.30	100.00	0.00	0.00	0.00
Kpu	80524	1	8.30	0.00	100.00	0.00	0.00
Kpu	80537	3	8.83	33.33	33.33	33.33	0.00
Kpu	80538	1	17.60	0.00	0.00	100.00	0.00
Kpu	80547	1	0.80	100.00	0.00	0.00	0.00
Kpu	80817	1	6.30	0.00	100.00	0.00	0.00
Kpu	80821	4	5.85	75.00	0.00	25.00	0.00
Kpu	80828	4	2.90	50.00	50.00	0.00	0.00
Kpu	80903	2	2.60	100.00	0.00	0.00	0.00
Kpu	80904	2	17.50	0.00	0.00	50.00	50.00
Kpu	80906	2	3.00	100.00	0.00	0.00	0.00
Kpu	80909	1	5.20	0.00	100.00	0.00	0.00
Kpu	80911	4	3.23	75.00	25.00	0.00	0.00
Kpu	80915	1	2.30	100.00	0.00	0.00	0.00
Kpu	80916	1	8.50	0.00	100.00	0.00	0.00
Kpu	81212	5	5.16	20.00	80.00	0.00	0.00
Kpu	81226	10	1.95	90.00	10.00	0.00	0.00
Kvt	81212	2	6.15	0.00	100.00	0.00	0.00
M€	81601	4	3.55	50.00	50.00	0.00	0.00
MD	81645	1	15.40	0.00	0.00	100.00	0.00
P Pf	80866	4	4.33	75.00	0.00	25.00	0.00
P Pf	80904	2	24.45	50.00	0.00	0.00	50.00
P Pf	81023	1	4.30	0.00	100.00	0.00	0.00
P Pm	81623	3	2.23	100.00	0.00	0.00	0.00
P Ps	81233	3	1.37	100.00	0.00	0.00	0.00
P Pwm	81601	1	6.80	0.00	100.00	0.00	0.00
Pb	81601	1	2.00	100.00	0.00	0.00	0.00
Pb	81611	2	1.35	100.00	0.00	0.00	0.00
Pc	81430	1	0.50	100.00	0.00	0.00	0.00
Pee	81601	8	6.79	50.00	37.50	0.00	12.50
Pee	81623	4	4.83	50.00	50.00	0.00	0.00
Pee	81631	3	3.80	66.67	33.33	0.00	0.00
Pee	81632	2	3.10	100.00	0.00	0.00	0.00
Pee	81637	2	2.45	100.00	0.00	0.00	0.00
Pm	81657	9	5.71	55.56	11.11	33.33	0.00
Pm	81659	1	3.10	100.00	0.00	0.00	0.00
Prh	81332	1	1.70	100.00	0.00	0.00	0.00
QTsa	81101	9	2.11	88.89	11.11	0.00	0.00
QTsa	81120	2	5.60	50.00	50.00	0.00	0.00
QTsa	81123	4	2.40	75.00	25.00	0.00	0.00
QTsa	81125	3	1.47	100.00	0.00	0.00	0.00
QTsa	81143	1	0.70	100.00	0.00	0.00	0.00
QTsa	81144	5	3.88	60.00	40.00	0.00	0.00
QTsa	81146	1	1.00	100.00	0.00	0.00	0.00
QTsa	81157	1	0.00	100.00	0.00	0.00	0.00
Qa	80123	1	5.50	0.00	100.00	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Qa	80205	1	3.40	100.00	0.00	0.00	0.00
Qa	80209	1	5.60	0.00	100.00	0.00	0.00
Qa	80221	3	6.90	33.33	33.33	33.33	0.00
Qa	80224	1	12.90	0.00	0.00	100.00	0.00
Qa	80229	2	4.10	50.00	50.00	0.00	0.00
Qa	80303	2	1.70	100.00	0.00	0.00	0.00
Qa	80521	3	4.40	66.67	33.33	0.00	0.00
Qa	80524	4	4.63	50.00	25.00	25.00	0.00
Qa	80535	1	1.00	100.00	0.00	0.00	0.00
Qa	80536	1	1.50	100.00	0.00	0.00	0.00
Qa	80610	1	3.20	100.00	0.00	0.00	0.00
Qa	80654	1	0.90	100.00	0.00	0.00	0.00
Qa	80736	1	0.50	100.00	0.00	0.00	0.00
Qa	80751	4	4.15	50.00	50.00	0.00	0.00
Qa	81004	1	1.30	100.00	0.00	0.00	0.00
Qa	81047	4	1.60	100.00	0.00	0.00	0.00
Qa	81050	1	7.20	0.00	100.00	0.00	0.00
Qa	81052	13	2.38	76.92	23.08	0.00	0.00
Qa	81054	20	2.70	90.00	10.00	0.00	0.00
Qa	81132	1	3.10	100.00	0.00	0.00	0.00
Qa	81212	18	3.94	50.00	50.00	0.00	0.00
Qa	81230	12	5.63	41.67	41.67	16.67	0.00
Qa	81401	19	3.57	73.68	15.79	10.53	0.00
Qa	81601	2	1.65	100.00	0.00	0.00	0.00
Qa	81650	4	2.05	100.00	0.00	0.00	0.00
Qd	80420	1	11.80	0.00	0.00	100.00	0.00
Qd	80446	1	5.20	0.00	100.00	0.00	0.00
Qd	80447	1	4.10	0.00	100.00	0.00	0.00
Qd	81224	4	1.05	100.00	0.00	0.00	0.00
Qe	80010	5	2.18	100.00	0.00	0.00	0.00
Qe	80011	3	7.00	33.33	33.33	33.33	0.00
Qe	80012	10	5.15	80.00	10.00	0.00	10.00
Qe	80013	11	4.51	45.45	54.55	0.00	0.00
Qe	80014	8	2.38	75.00	25.00	0.00	0.00
Qe	80015	5	5.28	40.00	40.00	20.00	0.00
Qe	80016	1	13.40	0.00	0.00	100.00	0.00
Qe	80017	5	9.58	20.00	40.00	40.00	0.00
Qe	80018	1	4.00	0.00	100.00	0.00	0.00
Qe	80022	6	9.13	66.67	16.67	0.00	16.67
Qe	80030	10	5.66	40.00	50.00	10.00	0.00
Qe	80102	1	2.40	100.00	0.00	0.00	0.00
Qe	80103	1	4.90	0.00	100.00	0.00	0.00
Qe	80110	4	5.90	50.00	25.00	25.00	0.00
Qe	80116	1	2.00	100.00	0.00	0.00	0.00
Qe	80120	8	9.80	12.50	50.00	37.50	0.00
Qe	80121	5	12.66	0.00	60.00	20.00	20.00
Qe	80122	4	15.78	25.00	50.00	0.00	25.00
Qe	80126	2	7.20	0.00	100.00	0.00	0.00
Qe	80201	1	0.50	100.00	0.00	0.00	0.00
Qe	80203	1	6.50	0.00	100.00	0.00	0.00
Qe	80206	2	4.25	50.00	50.00	0.00	0.00
Qe	80207	4	4.88	50.00	50.00	0.00	0.00
Qe	80210	10	5.01	50.00	40.00	10.00	0.00
Qe	80212	2	1.55	100.00	0.00	0.00	0.00
Qe	80220	11	4.75	45.45	54.55	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Qe	80222	5	4.34	40.00	60.00	0.00	0.00
Qe	80224	3	3.87	33.33	66.67	0.00	0.00
Qe	80227	1	6.10	0.00	100.00	0.00	0.00
Qe	80231	6	6.00	33.33	33.33	33.33	0.00
Qe	80237	4	6.05	0.00	100.00	0.00	0.00
Qe	80239	6	3.30	83.33	16.67	0.00	0.00
Qe	80501	21	3.14	61.90	38.10	0.00	0.00
Qe	80524	1	1.70	100.00	0.00	0.00	0.00
Qe	80525	1	0.00	100.00	0.00	0.00	0.00
Qe	80537	6	2.40	83.33	16.67	0.00	0.00
Qe	80538	6	6.22	50.00	33.33	16.67	0.00
Qe	80601	7	7.27	42.86	42.86	0.00	14.29
Qe	80640	1	4.70	0.00	100.00	0.00	0.00
Qe	80644	2	1.00	100.00	0.00	0.00	0.00
Qe	80645	2	5.80	50.00	50.00	0.00	0.00
Qe	80731	1	3.00	100.00	0.00	0.00	0.00
Qe	80734	1	0.80	100.00	0.00	0.00	0.00
Qe	80755	1	9.50	0.00	100.00	0.00	0.00
Qe	80802	1	3.50	100.00	0.00	0.00	0.00
Qe	80807	3	8.67	0.00	66.67	33.33	0.00
Qe	80810	9	7.18	22.22	66.67	0.00	11.11
Qe	80815	1	7.80	0.00	100.00	0.00	0.00
Qe	80821	2	2.70	100.00	0.00	0.00	0.00
Qe	80823	1	4.70	0.00	100.00	0.00	0.00
Qe	80825	8	6.58	25.00	50.00	25.00	0.00
Qe	80862	1	2.80	100.00	0.00	0.00	0.00
Qe	80903	2	3.70	50.00	50.00	0.00	0.00
Qe	80904	1	5.30	0.00	100.00	0.00	0.00
Qe	80906	5	7.86	60.00	0.00	40.00	0.00
Qe	80907	2	1.60	100.00	0.00	0.00	0.00
Qe	80909	22	2.66	81.82	18.18	0.00	0.00
Qe	80910	4	2.75	75.00	25.00	0.00	0.00
Qe	80911	6	2.32	83.33	16.67	0.00	0.00
Qe	80915	1	4.50	0.00	100.00	0.00	0.00
Qe	81045	2	2.50	100.00	0.00	0.00	0.00
Qe	81423	5	1.60	80.00	20.00	0.00	0.00
Qg	80440	1	80.80	0.00	0.00	0.00	100.00
Qg	80442	2	21.40	50.00	0.00	0.00	50.00
Qg	80446	5	5.02	40.00	60.00	0.00	0.00
Qg	80456	1	2.60	100.00	0.00	0.00	0.00
Qg	80482	1	1.40	100.00	0.00	0.00	0.00
Qg	80615	1	7.90	0.00	100.00	0.00	0.00
Qg	80623	2	2.95	50.00	50.00	0.00	0.00
Qg	80624	1	3.40	100.00	0.00	0.00	0.00
Qg	80631	15	4.11	46.67	53.33	0.00	0.00
Qg	80634	4	2.25	100.00	0.00	0.00	0.00
Qg	80650	1	1.80	100.00	0.00	0.00	0.00
Qg	80651	1	4.60	0.00	100.00	0.00	0.00
Qg	80701	4	6.73	25.00	50.00	25.00	0.00
Qg	80723	4	1.10	100.00	0.00	0.00	0.00
Qg	80737	3	2.73	100.00	0.00	0.00	0.00
Qg	80744	1	2.70	100.00	0.00	0.00	0.00
Qg	80749	1	0.80	100.00	0.00	0.00	0.00
Qg	80903	1	3.70	100.00	0.00	0.00	0.00
Qg	80906	1	9.80	0.00	100.00	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Qg	80907	1	1.90	100.00	0.00	0.00	0.00
Qg	80909	2	4.55	50.00	50.00	0.00	0.00
Qg	80916	2	3.00	50.00	50.00	0.00	0.00
Qg	81004	2	3.75	50.00	50.00	0.00	0.00
Qg	81006	1	4.60	0.00	100.00	0.00	0.00
Qg	81050	1	3.30	100.00	0.00	0.00	0.00
Qg	81067	6	2.65	100.00	0.00	0.00	0.00
Qg	81077	3	2.77	66.67	33.33	0.00	0.00
Qg	81131	2	1.45	100.00	0.00	0.00	0.00
Qg	81133	3	3.50	66.67	33.33	0.00	0.00
Qg	81149	6	2.27	83.33	16.67	0.00	0.00
Qg	81150	1	1.00	100.00	0.00	0.00	0.00
Qg	81152	8	4.90	50.00	50.00	0.00	0.00
Qg	81153	2	7.75	50.00	0.00	50.00	0.00
Qg	81201	3	9.43	66.67	0.00	0.00	33.33
Qg	81211	4	1.43	100.00	0.00	0.00	0.00
Qg	81328	1	0.50	100.00	0.00	0.00	0.00
Qg	81413	4	4.95	50.00	25.00	25.00	0.00
Qg	81430	1	0.80	100.00	0.00	0.00	0.00
Qg	81432	1	4.80	0.00	100.00	0.00	0.00
Qg	81611	3	4.83	33.33	66.67	0.00	0.00
Qg	81623	17	4.70	47.06	41.18	11.76	0.00
Qgo	80123	1	3.60	100.00	0.00	0.00	0.00
Qgo	80125	1	12.30	0.00	0.00	100.00	0.00
Qgo	80451	1	3.30	100.00	0.00	0.00	0.00
Qgo	80521	3	6.30	66.67	0.00	33.33	0.00
Qgo	80524	4	6.48	75.00	0.00	0.00	25.00
Qgo	80525	6	7.97	33.33	33.33	16.67	16.67
Qgo	80526	9	5.08	55.56	44.44	0.00	0.00
Qgo	81004	3	2.23	66.67	33.33	0.00	0.00
Qgo	81005	3	3.20	66.67	33.33	0.00	0.00
Qgo	81006	1	0.00	100.00	0.00	0.00	0.00
Qgo	81033	2	2.50	100.00	0.00	0.00	0.00
Qgo	81062	3	2.23	100.00	0.00	0.00	0.00
Qgo	81063	10	6.67	20.00	70.00	10.00	0.00
Qgo	81212	4	6.55	25.00	50.00	25.00	0.00
Qgo	81252	5	4.36	80.00	0.00	20.00	0.00
Qgo	81623	2	4.20	0.00	100.00	0.00	0.00
TKa	81122	1	0.90	100.00	0.00	0.00	0.00
TKda	80002	4	7.73	50.00	0.00	50.00	0.00
TKda	80003	7	5.49	42.86	42.86	14.29	0.00
TKda	80004	9	5.20	44.44	44.44	11.11	0.00
TKda	80005	4	2.80	75.00	25.00	0.00	0.00
TKda	80020	3	5.07	33.33	66.67	0.00	0.00
TKda	80030	1	1.00	100.00	0.00	0.00	0.00
TKda	80033	3	4.07	66.67	33.33	0.00	0.00
TKda	80116	1	3.70	100.00	0.00	0.00	0.00
TKda	80123	5	3.14	60.00	40.00	0.00	0.00
Tkda	80127	4	4.88	25.00	75.00	0.00	0.00
TKda	80211	4	2.98	100.00	0.00	0.00	0.00
TKda	80212	3	5.00	33.33	66.67	0.00	0.00
TKda	80215	1	4.00	0.00	100.00	0.00	0.00
TKda	80219	9	3.83	44.44	55.56	0.00	0.00
TKda	80222	1	4.00	0.00	100.00	0.00	0.00
TKda	80226	7	7.03	42.86	42.86	0.00	14.29

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/1	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
TKda	80227	2	2.75	50.00	50.00	0.00	0.00
TKda	80228	2	4.05	50.00	50.00	0.00	0.00
TKda	80229	2	5.40	50.00	50.00	0.00	0.00
TKda	80233	4	4.88	25.00	75.00	0.00	0.00
TKda	80234	2	9.10	50.00	0.00	50.00	0.00
TKda	80235	4	7.78	25.00	25.00	50.00	0.00
TKda	80236	12	9.88	8.33	50.00	33.33	8.33
TKda	80241	2	5.00	50.00	50.00	0.00	0.00
TKda	80401	8	4.13	62.50	25.00	12.50	0.00
TKda	80403	9	14.36	11.11	44.44	33.33	11.11
Tkdl	80010	1	26.20	0.00	0.00	0.00	100.00
TKdl	80110	5	5.06	60.00	20.00	20.00	0.00
TKdl	80111	6	8.07	16.67	66.67	16.67	0.00
TKdl	80112	6	7.83	33.33	50.00	0.00	16.67
TKdl	80121	3	6.47	33.33	33.33	33.33	0.00
TKdl	80122	7	8.07	28.57	28.57	42.86	0.00
TKdl	80124	1	3.80	100.00	0.00	0.00	0.00
TKdl	80126	4	8.43	0.00	75.00	25.00	0.00
TKdl	80210	1	6.30	0.00	100.00	0.00	0.00
TKdl	80621	1	2.80	100.00	0.00	0.00	0.00
TKdl	80642	1	3.30	100.00	0.00	0.00	0.00
TKdl	80808	2	14.60	50.00	0.00	0.00	50.00
TKdl	80832	1	6.00	0.00	100.00	0.00	0.00
TKdl	80835	2	6.15	50.00	50.00	0.00	0.00
TKdl	80907	2	2.70	50.00	50.00	0.00	0.00
TKdl	80910	1	0.60	100.00	0.00	0.00	0.00
TKdl	80915	2	0.65	100.00	0.00	0.00	0.00
TKdl	80917	11	3.12	63.64	36.36	0.00	0.00
TKdl	80918	12	3.09	75.00	16.67	8.33	0.00
TKdl	80919	7	5.24	57.14	28.57	14.29	0.00
TKdl	80920	1	0.00	100.00	0.00	0.00	0.00
TKdl	80922	1	5.90	0.00	100.00	0.00	0.00
Ta	80449	1	2.70	100.00	0.00	0.00	0.00
Taf	81154	3	1.67	100.00	0.00	0.00	0.00
Tbb	81418	1	0.90	100.00	0.00	0.00	0.00
Tbp	0	1	8.20	0.00	100.00	0.00	0.00
Tbp	80469	1	1.10	100.00	0.00	0.00	0.00
Tbp	80477	12	2.84	75.00	25.00	0.00	0.00
Tbp	80483	1	3.00	100.00	0.00	0.00	0.00
Tc	80480	8	10.76	50.00	12.50	25.00	12.50
Tcu	80155	1	4.30	0.00	100.00	0.00	0.00
Tcu	81055	8	3.25	75.00	25.00	0.00	0.00
Tdu	80104	23	5.57	60.87	30.43	4.35	4.35
Tdu	80107	17	4.72	52.94	41.18	5.88	0.00
Tdu	80116	11	7.82	27.27	54.55	9.09	9.09
Tdu	80117	3	7.13	0.00	66.67	33.33	0.00
Tdu	80118	5	12.08	0.00	60.00	20.00	20.00
Tdu	80132	3	5.77	33.33	66.67	0.00	0.00
Tdu	80133	1	3.50	100.00	0.00	0.00	0.00
Tdu	80134	41	7.48	34.15	43.90	17.07	4.88
Tdu	80135	5	10.98	20.00	40.00	20.00	20.00
Tdu	80831	1	4.50	0.00	100.00	0.00	0.00
Tdu	80908	1	5.00	0.00	100.00	0.00	0.00
Tdu	80909	1	3.60	100.00	0.00	0.00	0.00
Tdu	80917	4	1.48	100.00	0.00	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Tdu	80918	3	2.27	100.00	0.00	0.00	0.00
Tdu	80920	3	3.03	66.67	33.33	0.00	0.00
Tdu	80921	1	1.90	100.00	0.00	0.00	0.00
Th	81040	4	7.28	0.00	75.00	25.00	0.00
Tial	81249	1	1.20	100.00	0.00	0.00	0.00
Tki	80455	9	23.49	0.00	77.78	11.11	11.11
Tm	80451	2	6.65	50.00	0.00	50.00	0.00
Tmi	80820	3	0.77	100.00	0.00	0.00	0.00
Tmi	81433	5	10.64	20.00	40.00	20.00	20.00
To	80734	1	3.90	100.00	0.00	0.00	0.00
To	80737	2	2.00	100.00	0.00	0.00	0.00
To	80744	1	1.60	100.00	0.00	0.00	0.00
To	80758	3	8.67	66.67	0.00	0.00	33.33
To	80804	1	7.70	0.00	100.00	0.00	0.00
To	80807	2	2.80	100.00	0.00	0.00	0.00
To	80815	2	9.50	0.00	50.00	50.00	0.00
To	80818	1	6.20	0.00	100.00	0.00	0.00
To	80828	2	5.95	0.00	100.00	0.00	0.00
To	80834	1	9.30	0.00	100.00	0.00	0.00
To	80861	1	1.20	100.00	0.00	0.00	0.00
To	81029	4	5.80	0.00	100.00	0.00	0.00
To	81064	2	6.65	50.00	50.00	0.00	0.00
To	81071	1	21.60	0.00	0.00	0.00	100.00
To	81084	5	5.78	60.00	20.00	20.00	0.00
To	81087	2	3.00	50.00	50.00	0.00	0.00
To	81090	11	2.13	81.82	18.18	0.00	0.00
Tos	80816	2	64.75	0.00	0.00	0.00	100.00
Tos	81130	5	10.22	60.00	20.00	0.00	20.00
Tpl	80420	1	2.50	100.00	0.00	0.00	0.00
Tpl	80820	1	3.50	100.00	0.00	0.00	0.00
TRPjs	80537	1	3.00	100.00	0.00	0.00	0.00
TRPll	80537	2	1.95	100.00	0.00	0.00	0.00
TRd	81323	1	0.80	100.00	0.00	0.00	0.00
TRd	81435	6	1.92	100.00	0.00	0.00	0.00
Tt	80446	2	19.45	0.00	50.00	0.00	50.00
Tt	80447	2	1.65	100.00	0.00	0.00	0.00
Tt	80478	2	2.95	50.00	50.00	0.00	0.00
Tw	81641	2	1.05	100.00	0.00	0.00	0.00
Two	81630	1	2.60	100.00	0.00	0.00	0.00
Two	81635	2	2.10	100.00	0.00	0.00	0.00
Two	81646	1	1.60	100.00	0.00	0.00	0.00
Two	81647	1	4.90	0.00	100.00	0.00	0.00
Two	81650	9	3.63	66.67	33.33	0.00	0.00
Two	81652	6	2.72	66.67	33.33	0.00	0.00
Twr	80106	3	2.37	66.67	33.33	0.00	0.00
Xb	80403	3	35.90	0.00	33.33	0.00	66.67
Xb	80421	8	5.41	50.00	25.00	25.00	0.00
Xb	80427	2	62.80	0.00	0.00	0.00	100.00
Xb	80433	9	8.02	44.44	22.22	22.22	11.11
Xb	80439	22	5.18	45.45	45.45	4.55	4.55
Xb	80452	1	38.10	0.00	0.00	0.00	100.00
Xb	80457	1	5.80	0.00	100.00	0.00	0.00
Xb	80465	5	8.76	20.00	40.00	40.00	0.00
Xb	80466	11	5.24	54.55	36.36	0.00	9.09
Xb	80470	2	5.00	0.00	100.00	0.00	0.00

APPENDIX D - Continued

RADON RESULTS BY GEOLOGIC AND FORMATION AND ZIP CODE

Geology*	Zip Code	No. of Samples	Average pCi/l	≥0<4	4<10	≥10<20	≥20
				Percentage in each range			
Xb	80471	1	3.10	100.00	0.00	0.00	0.00
Xb	80481	3	6.77	33.33	33.33	33.33	0.00
Xb	80512	1	0.70	100.00	0.00	0.00	0.00
Xb	80517	2	3.10	100.00	0.00	0.00	0.00
Xb	80813	2	4.55	50.00	50.00	0.00	0.00
Xb	80820	1	1.40	100.00	0.00	0.00	0.00
Xfh	80228	1	1.60	100.00	0.00	0.00	0.00
Xfh	80401	5	3.94	80.00	20.00	0.00	0.00
Xfh	80422	1	1.90	100.00	0.00	0.00	0.00
Xfh	80439	2	3.95	50.00	50.00	0.00	0.00
Xfh	80453	1	3.70	100.00	0.00	0.00	0.00
Xfh	80454	1	6.00	0.00	100.00	0.00	0.00
Xfh	80465	4	4.10	50.00	50.00	0.00	0.00
Xfh	81248	1	1.10	100.00	0.00	0.00	0.00
Xg	80025	1	3.10	100.00	0.00	0.00	0.00
Xg	80127	1	2.10	100.00	0.00	0.00	0.00
Xg	80302	2	8.55	0.00	50.00	50.00	0.00
Xg	80403	3	18.07	0.00	0.00	66.67	33.33
Xg	80446	1	4.00	0.00	100.00	0.00	0.00
Xg	80447	2	3.15	50.00	50.00	0.00	0.00
Xg	80454	3	15.27	0.00	33.33	33.33	33.33
Xg	80459	1	7.20	0.00	100.00	0.00	0.00
Xg	80860	2	3.50	50.00	50.00	0.00	0.00
Xg	81250	2	3.15	50.00	50.00	0.00	0.00
Xq	80403	2	28.00	0.00	0.00	0.00	100.00
YXg	81210	1	1.10	100.00	0.00	0.00	0.00
Yg	80433	2	3.60	50.00	50.00	0.00	0.00
Yg	80439	6	3.62	50.00	50.00	0.00	0.00
Yg	80482	1	0.60	100.00	0.00	0.00	0.00
Yg	80517	3	6.27	66.67	0.00	33.33	0.00
Yg	81611	1	115.50	0.00	0.00	0.00	100.00
Yg	81642	1	4.00	0.00	100.00	0.00	0.00
Yp	80133	1	4.60	0.00	100.00	0.00	0.00
Yp	80433	1	4.20	0.00	100.00	0.00	0.00
Yp	80819	1	5.10	0.00	100.00	0.00	0.00
Yp	80829	2	6.75	50.00	0.00	50.00	0.00
Yp	80863	1	5.40	0.00	100.00	0.00	0.00
Yp	80866	1	215.00	0.00	0.00	0.00	100.00

APPENDIX E

RADON RESULTS BY GEOLOGIC FORMATION AND CRAWL SPACE CONSTRUCTION

Geology question 13 from the questionnaire;
"Is crawl space under all or part of the home?"
1 = all, 2 = part, 0 = none.

Geology*	Quest 13	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
KJdm	1	1	0.60	100.00	0.00	0.00	0.00
KJds	2	1	3.80	100.00	0.00	0.00	0.00
Kc	0	1	25.10	0.00	0.00	0.00	100.00
Kc	2	2	4.20	50.00	50.00	0.00	0.00
Kcg	0	6	2.90	83.33	16.67	0.00	0.00
Kcg	1	3	5.03	33.33	66.67	0.00	0.00
Kcg	2	10	2.56	80.00	20.00	0.00	0.00
Kd	1	1	2.60	100.00	0.00	0.00	0.00
Kdb	0	4	5.68	50.00	25.00	25.00	0.00
Kdb	1	6	1.67	100.00	0.00	0.00	0.00
Kdb	2	10	2.33	80.00	20.00	0.00	0.00
Kdp	0	6	3.53	66.67	33.33	0.00	0.00
Kdp	1	2	0.35	100.00	0.00	0.00	0.00
Kdp	2	6	9.43	16.67	33.33	50.00	0.00
Ki	2	1	4.30	0.00	100.00	0.00	0.00
Kl	0	8	4.51	25.00	75.00	0.00	0.00
Kl	1	4	3.65	75.00	25.00	0.00	0.00
Kl	2	6	3.42	83.33	16.67	0.00	0.00
Klf	0	16	2.91	81.25	18.75	0.00	0.00
Klf	1	5	2.90	80.00	20.00	0.00	0.00
Klf	2	6	3.12	66.67	33.33	0.00	0.00
Kls	1	1	3.70	100.00	0.00	0.00	0.00
Kls	2	1	39.60	0.00	0.00	0.00	100.00
Km	0	42	4.25	66.67	21.43	11.90	0.00
Km	1	58	2.42	89.66	8.62	1.72	0.00
Km	2	46	3.90	67.39	30.43	0.00	2.17
Kn	0	20	6.88	65.00	30.00	0.00	5.00
Kn	1	14	3.74	71.43	14.29	14.29	0.00
Kn	2	26	8.98	50.00	26.92	15.38	7.69
Kp	0	45	5.05	55.56	37.78	4.44	2.22
Kp	1	20	6.01	40.00	50.00	10.00	0.00
Kp	2	29	6.26	31.03	48.28	17.24	3.45
Kpl	0	59	8.21	30.51	44.07	20.34	5.08
Kpl	1	22	3.46	68.18	27.27	4.55	0.00
Kpl	2	32	4.78	62.50	12.50	25.00	0.00
Kpm	0	24	7.03	54.17	37.50	4.17	4.17
Kpm	1	10	2.08	90.00	10.00	0.00	0.00
Kpm	2	8	9.34	37.50	37.50	0.00	25.00
Kpu	0	18	5.74	61.11	22.22	11.11	5.56
Kpu	1	10	3.51	50.00	50.00	0.00	0.00
Kpu	2	18	4.77	61.11	27.78	11.11	0.00
Kvt	2	2	6.15	0.00	100.00	0.00	0.00
M€	0	2	3.20	50.00	50.00	0.00	0.00
M€	1	2	3.90	50.00	50.00	0.00	0.00
MD	0	1	15.40	0.00	0.00	100.00	0.00
P Pf	0	2	7.45	50.00	0.00	50.00	0.00
P Pf	1	4	2.30	75.00	25.00	0.00	0.00
P Pf	2	1	46.40	0.00	0.00	0.00	100.00
P Pm	0	2	1.95	100.00	0.00	0.00	0.00
P Ps	1	1	0.70	100.00	0.00	0.00	0.00

*Geologic formation symbol in alphabetical order.

APPENDIX E - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND CRAWL SPACE CONSTRUCTION

Geology*	Quest 13	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
P Pm	1	1	2.80	100.00	0.00	0.00	0.00
P Ps	0	1	1.50	100.00	0.00	0.00	0.00
P Ps	2	1	1.90	100.00	0.00	0.00	0.00
P Pwm	0	1	6.80	0.00	100.00	0.00	0.00
Pb	0	1	2.00	100.00	0.00	0.00	0.00
Pb	1	2	1.35	100.00	0.00	0.00	0.00
Pc	1	1	0.50	100.00	0.00	0.00	0.00
Pee	0	8	2.94	75.00	25.00	0.00	0.00
Pee	1	3	1.87	100.00	0.00	0.00	0.00
Pee	2	8	8.38	37.50	50.00	0.00	12.50
Pm	0	4	5.45	50.00	25.00	25.00	0.00
Pm	1	4	4.85	75.00	0.00	25.00	0.00
Pm	2	2	6.65	50.00	0.00	50.00	0.00
Prh	1	1	1.70	100.00	0.00	0.00	0.00
QTsa	0	4	4.43	50.00	50.00	0.00	0.00
QTsa	1	16	2.04	87.50	12.50	0.00	0.00
QTsa	2	6	2.50	83.33	16.67	0.00	0.00
Qa	0	37	4.71	59.46	27.03	13.51	0.00
Qa	1	41	2.79	75.61	21.95	2.44	0.00
Qa	2	44	3.35	70.45	27.27	2.27	0.00
Qd	0	3	7.03	0.00	66.67	33.33	0.00
Qd	1	4	1.05	100.00	0.00	0.00	0.00
Qe	0	151	5.49	50.33	37.09	10.60	1.99
Qe	1	32	2.50	81.25	18.75	0.00	0.00
Qe	2	90	5.38	47.78	44.44	4.44	3.33
Qg	0	55	6.19	56.36	36.36	3.64	3.64
Qg	1	30	3.00	73.33	23.33	3.33	0.00
Qg	2	39	4.27	61.54	30.77	5.13	2.56
Qgo	0	27	5.71	48.15	37.04	11.11	3.70
Qgo	1	12	5.20	50.00	41.67	8.33	0.00
Qgo	2	19	4.84	63.16	21.05	10.53	5.26
TKa	1	1	0.90	100.00	0.00	0.00	0.00
TKda	0	71	6.72	36.62	49.30	9.86	4.23
TKda	1	13	3.02	84.62	15.38	0.00	0.00
TKda	2	29	6.23	34.48	37.93	27.59	0.00
TKdl	0	44	5.09	56.82	29.55	11.36	2.27
TKdl	1	7	6.23	71.43	14.29	0.00	14.29
TKdl	2	27	6.44	33.33	48.15	14.81	3.70
Ta	2	1	2.70	100.00	0.00	0.00	0.00
Taf	0	2	1.90	100.00	0.00	0.00	0.00
Taf	1	1	1.20	100.00	0.00	0.00	0.00
Tbb	2	1	0.90	100.00	0.00	0.00	0.00
Tbp	0	6	3.92	50.00	50.00	0.00	0.00
Tbp	1	8	2.70	87.50	12.50	0.00	0.00
Tbp	2	1	1.30	100.00	0.00	0.00	0.00
Tc	0	2	9.45	0.00	50.00	50.00	0.00
Tc	1	2	3.05	100.00	0.00	0.00	0.00
Tc	2	4	15.28	50.00	0.00	25.00	25.00
Tcu	0	3	4.30	66.67	33.33	0.00	0.00
Tcu	1	6	2.90	66.67	33.33	0.00	0.00
Tdu	0	82	6.67	39.02	46.34	9.76	4.88
Tdu	1	8	5.40	62.50	25.00	12.50	0.00
Tdu	2	34	6.31	50.00	32.35	11.76	5.88
Th	0	2	6.20	0.00	100.00	0.00	0.00
Th	1	1	12.60	0.00	0.00	100.00	0.00

APPENDIX E - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND BASEMENT CONSTRUCTION

Geology*	Quest 13	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Th	2	1	4.10	0.00	100.00	0.00	0.00
Tial	2	1	1.20	100.00	0.00	0.00	0.00
Tki	0	5	35.20	0.00	80.00	0.00	20.00
Tki	2	4	8.85	0.00	75.00	25.00	0.00
Tm	0	1	11.90	0.00	0.00	100.00	0.00
Tm	1	1	1.40	100.00	0.00	0.00	0.00
Tmi	0	1	0.90	100.00	0.00	0.00	0.00
Tmi	1	4	7.18	75.00	0.00	0.00	25.00
Tmi	2	3	8.63	0.00	66.67	33.33	0.00
To	0	19	5.61	47.37	36.84	10.53	5.26
To	1	10	3.48	70.00	30.00	0.00	0.00
To	2	13	5.50	53.85	38.46	0.00	7.69
Tos	0	5	27.94	40.00	20.00	0.00	40.00
Tos	2	2	20.45	50.00	0.00	0.00	50.00
Tpl	1	2	3.00	100.00	0.00	0.00	0.00
ŦPjs	2	1	3.00	100.00	0.00	0.00	0.00
ŦPll	0	2	1.95	100.00	0.00	0.00	0.00
Ŧd	0	3	2.37	100.00	0.00	0.00	0.00
Ŧd	1	3	1.47	100.00	0.00	0.00	0.00
Ŧd	2	1	0.80	100.00	0.00	0.00	0.00
Tt	0	3	13.77	33.33	33.33	0.00	33.33
Tt	1	1	1.20	100.00	0.00	0.00	0.00
Tt	2	2	2.80	50.00	50.00	0.00	0.00
Tw	1	1	1.30	100.00	0.00	0.00	0.00
Tw	2	1	0.80	100.00	0.00	0.00	0.00
Two	0	15	3.29	60.00	40.00	0.00	0.00
Two	1	2	2.35	100.00	0.00	0.00	0.00
Two	2	3	2.77	100.00	0.00	0.00	0.00
Twr	0	2	2.25	50.00	50.00	0.00	0.00
Twr	2	1	2.60	100.00	0.00	0.00	0.00
Xb	0	39	8.55	46.15	30.77	15.38	7.69
Xb	1	10	7.44	60.00	10.00	10.00	20.00
Xb	2	25	10.03	32.00	52.00	4.00	12.00
Xfh	0	6	4.55	66.67	33.33	0.00	0.00
Xfh	1	5	2.44	80.00	20.00	0.00	0.00
Xfh	2	5	3.76	60.00	40.00	0.00	0.00
Xg	0	9	10.13	22.22	33.33	33.33	11.11
Xg	1	6	4.87	50.00	33.33	16.67	0.00
Xg	2	3	10.90	0.00	66.67	0.00	33.33
Xq	1	2	28.00	0.00	0.00	0.00	100.00
YXg	1	1	1.10	100.00	0.00	0.00	0.00
Yg	0	7	20.90	42.86	28.57	14.29	14.29
Yg	1	5	2.64	60.00	40.00	0.00	0.00
Yg	2	2	4.15	50.00	50.00	0.00	0.00

APPENDIX F

RADON RESULTS BY GEOLOGIC FORMATION AND BASEMENT CONSTRUCTION

Geology question 19 from the questionnaire; "is there any sort of basement, cellar, garden level, etc.?" 1 = yes, 2 = no

Geology*	Quest 19	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
KJdm	2	1	0.60	100.00	0.00	0.00	0.00
KJds	1	1	3.80	100.00	0.00	0.00	0.00
Kc	1	3	11.17	33.33	33.33	0.00	33.33
Kcg	1	12	2.98	75.00	25.00	0.00	0.00
Kcg	2	7	3.19	71.43	28.57	0.00	0.00
Kd	2	1	2.60	100.00	0.00	0.00	0.00
Kdb	1	14	3.31	71.43	21.43	7.14	0.00
Kdb	2	6	1.62	100.00	0.00	0.00	0.00
Kdp	1	11	6.59	45.45	27.27	27.27	0.00
Kdp	2	3	2.00	66.67	33.33	0.00	0.00
Ki	1	1	4.30	0.00	100.00	0.00	0.00
Kl	1	10	4.82	40.00	60.00	0.00	0.00
Kl	2	8	2.88	75.00	25.00	0.00	0.00
Klf	1	22	3.00	77.27	22.73	0.00	0.00
Klf	2	5	2.78	80.00	20.00	0.00	0.00
Kls	1	1	39.60	0.00	0.00	0.00	100.00
Kls	2	1	3.70	100.00	0.00	0.00	0.00
Km	1	66	4.63	62.12	27.27	9.09	1.52
Km	2	80	2.41	87.50	12.50	0.00	0.00
Kn	1	31	7.68	58.06	25.81	9.68	6.45
Kn	2	29	6.39	62.07	24.14	10.34	3.45
Kp	1	62	6.04	41.94	45.16	9.68	3.23
Kp	2	32	4.83	50.00	40.63	9.38	0.00
Kpl	1	75	7.66	40.00	30.67	25.33	4.00
Kpl	2	38	3.66	60.53	34.21	5.26	0.00
Kpm	1	31	7.29	51.61	38.71	0.00	9.68
Kpm	2	11	3.46	81.82	9.09	9.09	0.00
Kpu	1	33	5.14	57.58	30.30	9.09	3.03
Kpu	2	13	4.22	61.54	30.77	7.69	0.00
Kvt	1	2	6.15	0.00	100.00	0.00	0.00
MC	1	2	3.20	50.00	50.00	0.00	0.00
MC	2	2	3.90	50.00	50.00	0.00	0.00
MD	1	1	15.40	0.00	0.00	100.00	0.00
P Pf	1	2	29.40	0.00	0.00	50.00	50.00
P Pf	2	5	2.34	80.00	20.00	0.00	0.00
P Pm	1	3	2.23	100.00	0.00	0.00	0.00
P Ps	2	3	1.37	100.00	0.00	0.00	0.00
P Pwm	1	1	6.80	0.00	100.00	0.00	0.00
Pb	1	1	2.00	100.00	0.00	0.00	0.00
Pb	2	2	1.35	100.00	0.00	0.00	0.00
Pc	2	1	0.50	100.00	0.00	0.00	0.00
Pee	1	13	5.90	61.54	30.77	0.00	7.69
Pee	2	6	3.23	66.67	33.33	0.00	0.00
Pm	1	7	5.46	57.14	14.29	28.57	0.00
Pm	2	3	5.43	66.67	0.00	33.33	0.00
Prh	2	1	1.70	100.00	0.00	0.00	0.00
QTsa	1	3	3.03	66.67	33.33	0.00	0.00
QTsa	2	23	2.44	82.61	17.39	0.00	0.00
Qa	1	70	4.25	64.29	27.14	8.57	0.00
Qa	2	52	2.66	75.00	23.08	1.92	0.00
Qd	1	2	7.95	0.00	50.00	50.00	0.00

*Geologic formation symbol in alphabetical order.

APPENDIX F - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND BASEMENT CONSTRUCTION

Geology*	Quest 19	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Qd	2	5	1.88	80.00	20.00	0.00	0.00
Qe	1	221	5.54	47.51	42.08	8.14	2.26
Qe	2	52	3.23	76.92	17.31	3.85	1.92
Qg	1	76	6.18	50.00	40.79	5.26	3.95
Qg	2	48	2.66	81.25	16.67	2.08	0.00
Qgo	1	45	5.42	55.56	28.89	11.11	4.44
Qgo	2	13	4.96	46.15	46.15	7.69	0.00
TKa	2	1	0.90	100.00	0.00	0.00	0.00
TKda	1	91	6.73	38.46	41.76	16.48	3.30
TKda	2	21	3.82	57.14	42.86	0.00	0.00
TKdl	1	69	5.68	47.83	36.23	13.04	2.90
TKdl	2	8	2.90	75.00	25.00	0.00	0.00
Ta	2	1	2.70	100.00	0.00	0.00	0.00
Taf	2	3	1.67	100.00	0.00	0.00	0.00
Tbb	2	1	0.90	100.00	0.00	0.00	0.00
Tbp	1	7	3.54	57.14	42.86	0.00	0.00
Tbp	2	8	2.70	87.50	12.50	0.00	0.00
Tc	1	4	18.80	0.00	25.00	50.00	25.00
Tc	2	4	2.73	100.00	0.00	0.00	0.00
Tcu	1	1	1.50	100.00	0.00	0.00	0.00
Tcu	2	8	3.60	62.50	37.50	0.00	0.00
Tdu	1	113	6.46	42.48	41.59	11.50	4.42
Tdu	2	12	6.36	58.33	33.33	0.00	8.33
Th	1	1	4.10	0.00	100.00	0.00	0.00
Th	2	3	8.33	0.00	66.67	33.33	0.00
Tial	2	1	1.20	100.00	0.00	0.00	0.00
Tkda	1	1	4.20	0.00	100.00	0.00	0.00
Tkdl	2	1	26.20	0.00	0.00	0.00	100.00
Tki	1	9	23.49	0.00	77.78	11.11	11.11
Tm	1	1	11.90	0.00	0.00	100.00	0.00
Tm	2	1	1.40	100.00	0.00	0.00	0.00
Tmi	1	4	5.93	50.00	25.00	25.00	0.00
Tmi	2	4	7.95	50.00	25.00	0.00	25.00
To	1	27	5.96	44.44	40.74	7.41	7.41
To	2	15	3.45	73.33	26.67	0.00	0.00
Tos	1	5	35.14	20.00	20.00	0.00	60.00
Tos	2	2	2.45	100.00	0.00	0.00	0.00
Tpl	2	2	3.00	100.00	0.00	0.00	0.00
T̄Pjs	2	1	3.00	100.00	0.00	0.00	0.00
T̄Pll	2	2	1.95	100.00	0.00	0.00	0.00
T̄d	1	3	1.37	100.00	0.00	0.00	0.00
T̄d	2	4	2.05	100.00	0.00	0.00	0.00
Tt	1	5	9.38	40.00	40.00	0.00	20.00
Tt	2	1	1.20	100.00	0.00	0.00	0.00
Tw	1	1	0.80	100.00	0.00	0.00	0.00
Tw	2	1	1.30	100.00	0.00	0.00	0.00
Two	1	19	3.17	68.42	31.58	0.00	0.00
Two	2	1	2.10	100.00	0.00	0.00	0.00
Twr	1	3	2.37	66.67	33.33	0.00	0.00
Xb	1	57	10.24	35.09	40.35	12.28	12.28

APPENDIX F - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND BASEMENT CONSTRUCTION

Geology*	Quest 19	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Xb	2	17	4.42	70.59	17.65	5.88	5.88
Xfh	1	11	4.10	63.64	36.36	0.00	0.00
Xfh	2	5	2.64	80.00	20.00	0.00	0.00
Xg	1	10	11.46	10.00	40.00	30.00	20.00
Xg	2	8	4.81	50.00	37.50	12.50	0.00
Xq	2	2	28.00	0.00	0.00	0.00	100.00
YXg	2	1	1.10	100.00	0.00	0.00	0.00
Yg	1	7	21.57	28.57	42.86	14.29	14.29
Yg	2	7	2.40	71.43	28.57	0.00	0.00
Yp	1	4	58.48	25.00	25.00	25.00	25.00
Yp	2	3	4.63	0.00	100.00	0.00	0.00

APPENDIX G

Geology question 28; number of floors in the house including basement and attic

1 - one
2 - two
3 - three
4 - four or more

Geology*	Floors	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
KJdm	0	1	0.60	100.00	0.00	0.00	0.00
KJds	3	1	3.80	100.00	0.00	0.00	0.00
Kc	2	1	2.50	100.00	0.00	0.00	0.00
Kc	3	1	5.90	0.00	100.00	0.00	0.00
Kc	4	1	25.10	0.00	0.00	0.00	100.00
Kcg	0	7	3.19	71.43	28.57	0.00	0.00
Kcg	1	3	3.70	66.67	33.33	0.00	0.00
Kcg	2	7	3.10	71.43	28.57	0.00	0.00
Kcg	3	1	1.50	100.00	0.00	0.00	0.00
Kcg	4	1	1.50	100.00	0.00	0.00	0.00
Kd	0	1	2.60	100.00	0.00	0.00	0.00
Kdb	0	7	1.39	100.00	0.00	0.00	0.00
Kdb	1	1	0.50	100.00	0.00	0.00	0.00
Kdb	2	10	4.42	60.00	30.00	10.00	0.00
Kdb	3	1	1.10	100.00	0.00	0.00	0.00
Kdb	4	1	0.50	100.00	0.00	0.00	0.00
Kdp	0	3	2.00	66.67	33.33	0.00	0.00
Kdp	2	10	6.76	50.00	20.00	30.00	0.00
Kdp	3	1	4.90	0.00	100.00	0.00	0.00
Ki	3	1	4.30	0.00	100.00	0.00	0.00
Kl	0	8	2.88	75.00	25.00	0.00	0.00
Kl	2	7	4.69	42.86	57.14	0.00	0.00
Kl	3	3	5.13	33.33	66.67	0.00	0.00
Klf	0	6	2.68	83.33	16.67	0.00	0.00
Klf	2	13	3.08	76.92	23.08	0.00	0.00
Klf	3	6	3.37	66.67	33.33	0.00	0.00
Klf	4	2	1.75	100.00	0.00	0.00	0.00
Kls	0	1	3.70	100.00	0.00	0.00	0.00
Kls	2	1	39.60	0.00	0.00	0.00	100.00
Km	0	76	2.41	88.16	11.84	0.00	0.00
Km	1	3	2.23	66.67	33.33	0.00	0.00
Km	2	48	4.08	66.67	25.00	8.33	0.00
Km	3	18	5.22	55.56	33.33	5.56	5.56
Km	4	1	19.00	0.00	0.00	100.00	0.00
Kn	0	28	6.60	60.71	25.00	10.71	3.57
Kn	1	5	6.14	40.00	20.00	40.00	0.00
Kn	2	23	8.21	65.22	26.09	0.00	8.70
Kn	3	3	6.13	33.33	33.33	33.33	0.00
Kn	4	1	0.70	100.00	0.00	0.00	0.00
Kp	0	25	5.24	44.00	48.00	8.00	0.00
Kp	1	32	5.52	40.63	43.75	15.63	0.00
Kp	2	28	6.39	42.86	46.43	7.14	3.57
Kp	3	5	6.58	60.00	20.00	0.00	20.00
Kp	4	4	2.33	75.00	25.00	0.00	0.00
Kpl	0	38	3.47	63.16	34.21	2.63	0.00
Kpl	1	6	2.67	83.33	16.67	0.00	0.00
Kpl	2	49	8.80	32.65	32.65	28.57	6.12
Kpl	3	14	7.20	35.71	28.57	35.71	0.00
Kpl	4	6	5.57	50.00	33.33	16.67	0.00

*Geologic formation symbol in alphabetical order.

APPENDIX G - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND NUMBER OF FLOORS

Geology*	Floors	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Kpm	0	12	3.35	83.33	8.33	8.33	0.00
Kpm	1	1	2.20	100.00	0.00	0.00	0.00
Kpm	2	19	7.56	42.11	52.63	0.00	5.26
Kpm	3	5	13.54	20.00	40.00	0.00	40.00
Kpm	4	5	2.08	100.00	0.00	0.00	0.00
Kpu	0	13	4.22	61.54	30.77	7.69	0.00
Kpu	1	1	5.50	0.00	100.00	0.00	0.00
Kpu	2	22	4.57	63.64	27.27	9.09	0.00
Kpu	3	9	7.04	44.44	33.33	11.11	11.11
Kpu	4	1	0.00	100.00	0.00	0.00	0.00
Kvt	1	1	4.40	0.00	100.00	0.00	0.00
Kvt	2	1	7.90	0.00	100.00	0.00	0.00
Mc	0	2	3.90	50.00	50.00	0.00	0.00
Mc	2	2	3.20	50.00	50.00	0.00	0.00
MD	2	1	15.40	0.00	0.00	100.00	0.00
P Pf	0	4	2.30	75.00	25.00	0.00	0.00
P Pf	2	3	20.43	33.33	0.00	33.33	33.33
P Pm	1	1	2.50	100.00	0.00	0.00	0.00
P Pm	3	2	2.10	100.00	0.00	0.00	0.00
P Ps	0	2	1.10	100.00	0.00	0.00	0.00
P Ps	2	1	1.90	100.00	0.00	0.00	0.00
P Pwm	2	1	6.80	0.00	100.00	0.00	0.00
Pb	0	3	1.57	100.00	0.00	0.00	0.00
Pc	0	1	0.50	100.00	0.00	0.00	0.00
Pee	0	6	3.23	66.67	33.33	0.00	0.00
Pee	2	5	3.84	60.00	40.00	0.00	0.00
Pee	3	6	4.58	66.67	33.33	0.00	0.00
Pee	4	2	15.00	50.00	0.00	0.00	50.00
Pm	0	3	5.43	66.67	0.00	33.33	0.00
Pm	2	1	12.10	0.00	0.00	100.00	0.00
Pm	3	3	3.23	66.67	33.33	0.00	0.00
Pm	4	3	5.47	66.67	0.00	33.33	0.00
Prh	0	1	1.70	100.00	0.00	0.00	0.00
QTsa	0	23	2.44	82.61	17.39	0.00	0.00
QTsa	1	1	0.50	100.00	0.00	0.00	0.00
QTsa	2	2	4.30	50.00	50.00	0.00	0.00
Qa	0	51	2.62	76.47	21.57	1.96	0.00
Qa	1	6	3.08	66.67	33.33	0.00	0.00
Qa	2	48	4.45	60.42	31.25	8.33	0.00
Qa	3	16	3.56	75.00	18.75	6.25	0.00
Qa	4	1	12.90	0.00	0.00	100.00	0.00
Qd	0	5	1.88	80.00	20.00	0.00	0.00
Qd	2	1	11.80	0.00	0.00	100.00	0.00
Qd	3	1	4.10	0.00	100.00	0.00	0.00
Qe	0	51	3.32	72.55	21.57	3.92	1.96
Qe	1	4	2.10	100.00	0.00	0.00	0.00
Qe	2	122	6.14	45.08	42.62	9.02	3.28
Qe	3	63	4.91	50.79	39.68	7.94	1.59
Qe	4	33	4.72	51.52	42.42	6.06	0.00
Qg	0	42	2.42	85.71	11.90	2.38	0.00
Qg	1	9	5.52	33.33	66.67	0.00	0.00
Qg	2	51	5.48	58.82	29.41	7.84	3.92
Qg	3	18	7.96	44.44	50.00	0.00	5.56
Qg	4	4	5.78	0.00	100.00	0.00	0.00
Qg	0	12	5.27	41.67	50.00	8.33	0.00

APPENDIX G - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND NUMBER OF FLOORS

Geology*	Floors	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Qgo	1	4	5.38	25.00	75.00	0.00	0.00
Qgo	2	27	5.30	55.56	25.93	14.81	3.70
Qgo	3	10	5.46	70.00	10.00	10.00	10.00
Qgo	4	5	5.22	60.00	40.00	0.00	0.00
TKa	2	1	0.90	100.00	0.00	0.00	0.00
TKda	0	20	3.66	60.00	40.00	0.00	0.00
TKda	1	2	3.05	100.00	0.00	0.00	0.00
TKda	2	54	5.89	40.74	44.44	11.11	3.70
TKda	3	24	9.36	33.33	33.33	29.17	4.17
TKda	4	13	5.78	23.08	61.54	15.38	0.00
TKdl	0	9	5.49	66.67	22.22	0.00	11.11
TKdl	1	1	3.30	100.00	0.00	0.00	0.00
TKdl	2	28	6.02	50.00	32.14	14.29	3.57
TKdl	3	25	6.01	44.00	36.00	16.00	4.00
TKdl	4	15	4.67	46.67	46.67	6.67	0.00
Ta	0	1	2.70	100.00	0.00	0.00	0.00
Taf	0	3	1.67	100.00	0.00	0.00	0.00
Tbb	0	1	0.90	100.00	0.00	0.00	0.00
Tbp	0	7	2.70	85.71	14.29	0.00	0.00
Tbp	1	1	2.70	100.00	0.00	0.00	0.00
Tbp	2	4	3.98	50.00	50.00	0.00	0.00
Tbp	3	2	3.15	50.00	50.00	0.00	0.00
Tbp	4	1	2.60	100.00	0.00	0.00	0.00
Tc	0	4	2.73	100.00	0.00	0.00	0.00
Tc	2	4	18.80	0.00	25.00	50.00	25.00
Tcu	0	2	4.80	50.00	50.00	0.00	0.00
Tcu	1	6	3.12	66.67	33.33	0.00	0.00
Tcu	2	1	2.00	100.00	0.00	0.00	0.00
Tdu	0	11	6.85	54.55	36.36	0.00	9.09
Tdu	1	1	0.90	100.00	0.00	0.00	0.00
Tdu	2	58	6.69	43.10	41.38	8.62	6.90
Tdu	3	37	6.39	43.24	40.54	13.51	2.70
Tdu	4	17	6.11	35.29	47.06	17.65	0.00
Th	0	3	7.87	0.00	66.67	33.33	0.00
Th	1	1	5.50	0.00	100.00	0.00	0.00
Tial	1	1	1.20	100.00	0.00	0.00	0.00
Tki	1	2	6.65	0.00	100.00	0.00	0.00
Tki	2	5	9.18	0.00	80.00	20.00	0.00
Tki	3	2	76.10	0.00	50.00	0.00	50.00
Tm	0	1	1.40	100.00	0.00	0.00	0.00
Tm	2	1	11.90	0.00	0.00	100.00	0.00
Tmi	0	4	7.95	50.00	25.00	0.00	25.00
Tmi	2	1	0.90	100.00	0.00	0.00	0.00
Tmi	3	3	7.60	33.33	33.33	33.33	0.00
To	0	15	3.45	73.33	26.67	0.00	0.00
To	1	2	4.95	50.00	50.00	0.00	0.00
To	2	21	5.92	38.10	47.62	9.52	4.76
To	3	4	6.68	75.00	0.00	0.00	25.00
Tos	0	4	33.60	50.00	0.00	0.00	50.00
Tos	2	1	5.50	0.00	100.00	0.00	0.00
Tos	3	2	20.35	50.00	0.00	0.00	50.00
Tpl	0	2	3.00	100.00	0.00	0.00	0.00
TRPjs	0	1	3.00	100.00	0.00	0.00	0.00
TRPll	0	2	1.95	100.00	0.00	0.00	0.00
TRd	0	3	1.47	100.00	0.00	0.00	0.00

APPENDIX G - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND NUMBER OF FLOORS

Geology*	Floors	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Trd	3	4	1.98	100.00	0.00	0.00	0.00
Tt	0	1	1.20	100.00	0.00	0.00	0.00
Tt	2	1	5.10	0.00	100.00	0.00	0.00
Tt	3	3	12.33	66.67	0.00	0.00	33.33
Tt	4	1	4.80	0.00	100.00	0.00	0.00
Tw	0	1	1.30	100.00	0.00	0.00	0.00
Tw	2	1	0.80	100.00	0.00	0.00	0.00
Two	0	1	2.10	100.00	0.00	0.00	0.00
Two	2	15	3.23	66.67	33.33	0.00	0.00
Two	3	4	2.95	75.00	25.00	0.00	0.00
Twr	0	1	2.60	100.00	0.00	0.00	0.00
Twr	2	2	2.25	50.00	50.00	0.00	0.00
Xb	0	17	4.42	70.59	17.65	5.88	5.88
Xb	1	3	12.47	33.33	0.00	33.33	33.33
Xb	2	26	6.25	38.46	46.15	7.69	7.69
Xb	3	23	15.00	39.13	30.43	13.04	17.39
Xb	4	5	7.72	0.00	80.00	20.00	0.00
Xfh	0	4	3.18	75.00	25.00	0.00	0.00
Xfh	2	8	3.58	62.50	37.50	0.00	0.00
Xfh	3	2	5.90	50.00	50.00	0.00	0.00
Xfh	4	2	2.60	100.00	0.00	0.00	0.00
Xg	0	8	4.81	50.00	37.50	12.50	0.00
Xg	2	7	9.83	14.29	57.14	0.00	28.57
Xg	3	3	15.27	0.00	0.00	100.00	0.00
Xq	0	2	28.00	0.00	0.00	0.00	100.00
YXg	0	1	1.10	100.00	0.00	0.00	0.00
Yg	0	6	1.55	83.33	16.67	0.00	0.00
Yg	2	3	8.37	33.33	33.33	33.33	0.00
Yg	3	3	40.37	33.33	33.33	0.00	33.33
Yg	4	2	6.15	0.00	100.00	0.00	0.00
Yp	0	3	4.63	0.00	100.00	0.00	0.00
Yp	2	2	6.75	50.00	0.00	50.00	0.00
Yp	3	2	110.20	0.00	50.00	0.00	50.00

APPENDIX H

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE TESTED

This appendix displays the construction parameter regarding the level on which the test was taken and compared with the geology. This question appeared on the questionnaire sent to participants.

0 - basement
1 - first floor
2 - second floor

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
KJdm	1	1	0.60	100.00	0.00	0.00	0.00
KJds	0	1	3.80	100.00	0.00	0.00	0.00
Kc	0	3	11.17	33.33	33.33	0.00	33.33
Kcg	0	7	2.50	85.71	14.29	0.00	0.00
Kcg	1	12	3.38	66.67	33.33	0.00	0.00
Kd	1	1	2.60	100.00	0.00	0.00	0.00
Kdb	0	8	4.91	50.00	37.50	12.50	0.00
Kdb	1	12	1.39	100.00	0.00	0.00	0.00
Kdp	0	5	11.00	20.00	20.00	60.00	0.00
Kdp	1	9	2.61	66.67	33.33	0.00	0.00
Ki	0	1	4.30	0.00	100.00	0.00	0.00
Kl	0	12	5.07	33.33	66.67	0.00	0.00
Kl	1	6	1.73	100.00	0.00	0.00	0.00
Klf	0	23	2.97	78.26	21.74	0.00	0.00
Klf	1	4	2.88	75.00	25.00	0.00	0.00
Kls	1	1	3.70	100.00	0.00	0.00	0.00
Km	0	56	4.68	57.14	33.93	8.93	0.00
Km	1	90	2.62	87.78	10.00	1.11	1.11
Kn	0	27	8.06	59.26	25.93	7.41	7.41
Kn	1	33	6.24	60.61	24.24	12.12	3.03
Kp	0	71	6.12	38.03	50.70	8.45	2.82
Kp	1	21	4.15	66.67	19.05	14.29	0.00
Kp	2	1	0.70	100.00	0.00	0.00	0.00
Kp	3	1	7.00	0.00	100.00	0.00	0.00
Kpl	0	57	8.45	33.33	35.09	26.32	5.26
Kpl	1	56	4.14	60.71	28.57	10.71	0.00
Kpm	0	29	5.69	51.72	42.38	0.00	6.90
Kpm	1	13	7.62	76.92	7.69	7.69	7.69
Kpu	0	23	6.61	39.13	43.48	13.04	4.35
Kpu	1	23	3.14	78.26	17.39	4.35	0.00
Kvt	0	2	6.15	0.00	100.00	0.00	0.00
M€	0	1	0.90	100.00	0.00	0.00	0.00
M€	1	3	4.43	33.33	66.67	0.00	0.00
MD	1	1	15.40	0.00	0.00	100.00	0.00
P ₱f	0	2	29.40	0.00	0.00	50.00	50.00
P ₱f	1	5	2.34	80.00	20.00	0.00	0.00
P ₱m	0	2	1.95	100.00	0.00	0.00	0.00
P ₱m	1	1	2.80	100.00	0.00	0.00	0.00
P ₱s	1	3	1.37	100.00	0.00	0.00	0.00
P ₱wm	0	1	6.80	0.00	100.00	0.00	0.00
₱b	0	1	2.00	100.00	0.00	0.00	0.00
₱b	1	2	1.35	100.00	0.00	0.00	0.00
Pc	1	1	0.50	100.00	0.00	0.00	0.00
₱ee	0	10	6.98	50.00	40.00	0.00	10.00
₱ee	1	9	2.92	77.78	22.22	0.00	0.00
₱m	0	5	5.34	60.00	20.00	20.00	0.00
₱m	1	5	5.56	60.00	0.00	40.00	0.00

APPENDIX H - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE TESTED

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Prh	1	1	1.70	100.00	0.00	0.00	0.00
QTsa	0	4	5.03	50.00	50.00	0.00	0.00
QTsa	1	14	2.14	85.71	14.29	0.00	0.00
Qa	0	45	5.47	51.11	35.56	13.33	0.00
Qa	1	76	2.50	78.95	19.74	1.32	0.00
Qa	2	1	0.00	100.00	0.00	0.00	0.00
Qd	0	2	6.90	50.00	0.00	50.00	0.00
Qd	1	5	2.30	60.00	40.00	0.00	0.00
Qe	0	212	5.74	45.75	43.40	8.02	2.83
Qe	1	59	2.89	77.97	16.95	5.08	0.00
Qe	2	2	2.90	100.00	0.00	0.00	0.00
Qg	0	65	6.48	50.77	40.00	4.62	4.62
Qg	1	57	3.04	73.68	22.81	3.51	0.00
Qg	2	2	1.30	100.00	0.00	0.00	0.00
Qgo	0	30	6.68	43.33	33.33	16.67	6.67
Qgo	1	28	3.87	64.29	32.14	3.57	0.00
TKa	1	1	0.90	100.00	0.00	0.00	0.00
TKda	0	90	6.68	37.78	44.44	14.44	3.33
TKda	1	23	4.17	56.52	34.78	8.70	0.00
TKdl	0	66	5.63	46.97	37.88	12.12	3.03
TKdl	1	12	5.83	66.67	16.67	8.33	8.33
Ta	1	1	2.70	100.00	0.00	0.00	0.00
Taf	1	3	1.67	100.00	0.00	0.00	0.00
Tbb	1	1	0.90	100.00	0.00	0.00	0.00
Tbp	0	4	3.90	50.00	50.00	0.00	0.00
Tbp	1	11	2.80	81.82	18.18	0.00	0.00
Tc	0	4	18.80	0.00	25.00	50.00	25.00
Tc	1	4	2.73	100.00	0.00	0.00	0.00
Tcu	0	2	2.25	100.00	0.00	0.00	0.00
Tcu	1	7	3.69	57.14	42.86	0.00	0.00
Tdu	0	111	6.82	41.44	41.44	11.71	5.41
Tdu	1	13	3.53	61.54	38.46	0.00	0.00
Tdu	2	1	3.70	100.00	0.00	0.00	0.00
Th	0	1	12.60	0.00	0.00	100.00	0.00
Th	1	3	5.50	0.00	100.00	0.00	0.00
Tial	1	1	1.20	100.00	0.00	0.00	0.00
Tki	0	6	30.47	0.00	83.33	0.00	16.67
Tki	1	3	9.53	0.00	66.67	33.33	0.00
Tm	0	1	11.90	0.00	0.00	100.00	0.00
Tm	1	1	1.40	100.00	0.00	0.00	0.00
Tmi	0	1	14.90	0.00	0.00	100.00	0.00
Tmi	1	7	5.80	57.14	28.57	0.00	14.29
To	0	20	7.27	35.00	45.00	10.00	10.00
To	1	22	3.06	72.73	27.27	0.00	0.00
Tos	0	3	33.60	0.00	33.33	0.00	66.67
Tos	1	4	19.95	75.00	0.00	0.00	25.00
Tpl	1	2	3.00	100.00	0.00	0.00	0.00
$\overline{P}$Pjs	1	1	3.00	100.00	0.00	0.00	0.00
$\overline{P}$Pll	1	2	1.95	100.00	0.00	0.00	0.00
$\overline{P}$d	0	1	3.80	100.00	0.00	0.00	0.00
$\overline{P}$d	1	6	1.42	100.00	0.00	0.00	0.00
Tt	0	4	11.53	25.00	50.00	0.00	25.00
Tt	1	2	1.00	100.00	0.00	0.00	0.00
Tw	0	1	0.80	100.00	0.00	0.00	0.00
Tw	1	1	1.30	100.00	0.00	0.00	0.00

APPENDIX H - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE TESTED

Geology*	Test Level	No. of Samples	Average pCi/1	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Two	0	17	3.19	64.71	35.29	0.00	0.00
Two	1	3	2.67	100.00	0.00	0.00	0.00
Twr	0	2	2.25	50.00	50.00	0.00	0.00
Twr	1	1	2.60	100.00	0.00	0.00	0.00
Xb	0	49	8.15	40.82	40.82	8.16	10.20
Xb	1	25	10.38	48.00	24.00	16.00	12.00
Xfh	0	9	4.31	55.56	44.44	0.00	0.00
Xfh	1	7	2.79	85.71	14.29	0.00	0.00
Xg	0	11	10.78	18.18	36.36	27.27	18.18
Xg	1	7	4.93	42.86	42.86	14.29	0.00
Xq	1	2	28.00	0.00	0.00	0.00	100.00
YXg	1	1	1.10	100.00	0.00	0.00	0.00
Yg	0	5	25.70	40.00	40.00	0.00	20.00
Yg	1	9	4.37	55.56	33.33	11.11	0.00
Yp	0	4	58.48	25.00	25.00	25.00	25.00
Yp	1	3	4.63	0.00	100.00	0.00	0.00

APPENDIX I

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE LEVEL TESTED

This appendix displays the month in which the sample was taken compared to the geology.

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
KJdm	04	1	0.60	100.00	0.00	0.00	0.00
KJds	04	1	3.80	100.00	0.00	0.00	0.00
Kc	05	3	11.17	33.33	33.33	0.00	33.33
Kcg	02	1	6.00	0.00	100.00	0.00	0.00
Kcg	03	4	4.90	25.00	75.00	0.00	0.00
Kcg	04	13	2.35	92.31	7.69	0.00	0.00
Kcg	05	1	2.00	100.00	0.00	0.00	0.00
Kd	03	1	2.60	100.00	0.00	0.00	0.00
Kdb	03	4	2.28	75.00	25.00	0.00	0.00
Kdb	04	14	2.86	85.71	7.14	7.14	0.00
Kdb	06	2	3.40	50.00	50.00	0.00	0.00
Kdp	04	13	5.96	46.15	30.77	23.08	0.00
Kdp	05	1	1.00	100.00	0.00	0.00	0.00
Ki	03	1	4.30	0.00	100.00	0.00	0.00
Kl	03	5	2.94	60.00	40.00	0.00	0.00
Kl	04	11	3.62	63.64	36.36	0.00	0.00
Kl	05	2	8.35	0.00	100.00	0.00	0.00
Klf	02	2	1.45	100.00	0.00	0.00	0.00
Klf	03	6	3.72	66.67	33.33	0.00	0.00
Klf	04	4	3.78	50.00	50.00	0.00	0.00
Klf	05	13	2.75	84.62	15.38	0.00	0.00
Klf	06	1	2.60	100.00	0.00	0.00	0.00
Klf	07	1	1.10	100.00	0.00	0.00	0.00
Kls	03	2	21.65	50.00	0.00	0.00	50.00
Km	02	54	3.60	68.52	29.63	1.85	0.00
Km	03	47	3.73	82.98	8.51	6.38	2.13
Km	04	23	2.01	86.96	13.04	0.00	0.00
Km	05	18	4.09	66.67	22.22	11.11	0.00
Km	06	4	2.13	75.00	25.00	0.00	0.00
Kn	02	1	7.40	0.00	100.00	0.00	0.00
Kn	03	2	4.50	0.00	100.00	0.00	0.00
Kn	04	43	8.92	53.49	25.58	13.95	6.98
Kn	05	14	1.67	92.86	7.14	0.00	0.00
Kp	02	7	4.93	57.14	28.57	14.29	0.00
Kp	03	38	4.90	52.63	36.84	10.53	0.00
Kp	04	42	5.99	35.71	52.38	9.52	2.38
Kp	05	6	8.33	50.00	33.33	0.00	16.67
Kp	07	1	6.90	0.00	100.00	0.00	0.00
Kpl	02	1	7.10	0.00	100.00	0.00	0.00
Kpl	03	35	9.19	45.71	22.86	22.86	8.57
Kpl	04	50	5.04	50.00	36.00	14.00	0.00
Kpl	05	26	4.84	46.15	30.77	23.08	0.00
Kpl	12	1	6.90	0.00	100.00	0.00	0.00
Kpm	02	1	5.10	0.00	100.00	0.00	0.00
Kpm	03	6	7.00	33.33	50.00	16.67	0.00
Kpm	04	17	8.77	52.94	35.29	0.00	11.76
Kpm	05	18	3.77	76.78	16.67	0.00	5.56
Kpu	02	2	17.50	0.00	0.00	50.00	50.00

*Geologic formation symbol in alphabetical order.

APPENDIX I - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE LEVEL TESTED

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Kpu	03	8	4.03	62.50	37.50	0.00	0.00
Kpu	04	31	4.13	61.29	32.26	6.45	0.00
Kpu	05	5	5.80	60.00	20.00	20.00	0.00
Kvt	04	2	6.15	0.00	100.00	0.00	0.00
MЄ	03	3	4.20	33.33	66.67	0.00	0.00
MЄ	05	1	1.60	100.00	0.00	0.00	0.00
MD	03	1	15.40	0.00	0.00	100.00	0.00
P Pf	03	4	16.00	50.00	0.00	25.00	25.00
P Pf	04	2	1.10	100.00	0.00	0.00	0.00
P Pf	05	1	4.30	0.00	100.00	0.00	0.00
P Pm	03	1	2.80	100.00	0.00	0.00	0.00
P Pm	04	1	2.50	100.00	0.00	0.00	0.00
P Pm	05	1	1.40	100.00	0.00	0.00	0.00
P Ps	04	3	1.37	100.00	0.00	0.00	0.00
P Pwm	03	1	6.80	0.00	100.00	0.00	0.00
Pb	04	2	1.35	100.00	0.00	0.00	0.00
Pb	05	1	2.00	100.00	0.00	0.00	0.00
Pc	06	1	0.50	100.00	0.00	0.00	0.00
Pee	02	2	4.70	50.00	50.00	0.00	0.00
Pee	03	15	5.60	60.00	33.33	0.00	6.67
Pee	04	2	1.35	100.00	0.00	0.00	0.00
Pm	02	1	2.80	100.00	0.00	0.00	0.00
Pm	03	4	4.88	75.00	0.00	25.00	0.00
Pm	04	5	6.44	40.00	20.00	40.00	0.00
Prh	04	1	1.70	100.00	0.00	0.00	0.00
QTsa	02	2	0.85	100.00	0.00	0.00	0.00
QTsa	03	12	2.18	83.33	16.67	0.00	0.00
QTsa	04	9	2.87	77.78	22.22	0.00	0.00
QTsa	05	2	1.65	100.00	0.00	0.00	0.00
QTsa	06	1	8.40	0.00	100.00	0.00	0.00
Qa	02	2	5.30	0.00	100.00	0.00	0.00
Qa	03	20	2.30	85.00	15.00	0.00	0.00
Qa	04	72	3.68	68.06	26.39	5.56	0.00
Qa	05	20	3.37	70.00	25.00	5.00	0.00
Qa	06	8	5.84	50.00	25.00	25.00	0.00
Qd	03	1	11.80	0.00	0.00	100.00	0.00
Qd	04	2	4.65	0.00	100.00	0.00	0.00
Qd	05	3	1.23	100.00	0.00	0.00	0.00
Qd	06	1	0.50	100.00	0.00	0.00	0.00
Qe	02	25	4.42	44.00	52.00	4.00	0.00
Qe	03	62	5.74	56.45	30.65	9.68	3.23
Qe	04	103	5.10	48.54	40.78	9.71	0.97
Qe	05	76	5.13	55.26	36.84	3.95	3.95
Qe	06	5	1.34	100.00	0.00	0.00	0.00
Qe	07	2	1.80	100.00	0.00	0.00	0.00
Qg	02	6	5.15	33.33	50.00	16.67	0.00
Qg	03	39	5.95	53.85	38.46	5.13	2.56
Qg	04	33	5.54	69.70	18.18	6.06	6.06
Qg	05	23	3.40	65.22	34.78	0.00	0.00
Qg	06	11	3.53	72.73	27.27	0.00	0.00
Qg	07	12	2.87	66.67	33.33	0.00	0.00
Qgo	03	4	5.83	50.00	25.00	25.00	0.00
Qgo	04	32	5.09	50.00	37.50	12.50	0.00
Qgo	05	22	5.56	59.09	27.27	4.55	9.09
TKa	05	1	0.90	100.00	0.00	0.00	0.00

APPENDIX I - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE LEVEL TESTED

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
TKda	02	1	7.50	0.00	100.00	0.00	0.00
TKda	03	21	8.75	28.57	47.62	19.05	4.76
TKda	04	72	5.69	47.22	37.50	12.50	2.78
TKda	05	19	5.06	36.84	52.63	10.53	0.00
TKdl	02	7	4.56	42.86	42.86	14.29	0.00
TKdl	03	25	6.84	48.00	36.00	4.00	12.00
TKdl	04	26	4.98	53.85	30.77	15.38	0.00
TKdl	05	18	5.72	44.44	38.89	16.67	0.00
TKdl	07	2	3.05	100.00	0.00	0.00	0.00
Ta	05	1	2.70	100.00	0.00	0.00	0.00
Taf	03	1	2.30	100.00	0.00	0.00	0.00
Taf	04	1	1.20	100.00	0.00	0.00	0.00
Taf	05	1	1.50	100.00	0.00	0.00	0.00
Tbb	03	1	0.90	100.00	0.00	0.00	0.00
Tbp	02	5	2.06	100.00	0.00	0.00	0.00
Tbp	03	10	3.61	60.00	40.00	0.00	0.00
Tc	02	1	41.30	0.00	0.00	0.00	100.00
Tc	03	1	3.90	100.00	0.00	0.00	0.00
Tc	04	5	7.50	40.00	20.00	40.00	0.00
Tc	05	1	3.40	100.00	0.00	0.00	0.00
Tcu	03	5	3.24	60.00	40.00	0.00	0.00
Tcu	04	4	3.53	75.00	25.00	0.00	0.00
Tdu	02	6	6.30	50.00	33.33	16.67	0.00
Tdu	03	68	7.83	35.29	44.12	11.76	8.82
Tdu	04	32	4.31	53.13	40.63	6.25	0.00
Tdu	05	17	5.39	58.82	25.41	11.76	0.00
Tdu	06	1	2.60	100.00	0.00	0.00	0.00
Tdu	08	1	4.00	0.00	100.00	0.00	0.00
Th	03	2	9.05	0.00	50.00	50.00	0.00
Th	04	2	5.50	0.00	100.00	0.00	0.00
Tial	05	1	1.20	100.00	0.00	0.00	0.00
Tki	03	9	23.49	0.00	77.78	11.11	11.11
Tm	04	2	6.65	50.00	0.00	50.00	0.00
Tmi	03	4	5.20	50.00	25.00	25.00	0.00
Tmi	04	1	0.90	100.00	0.00	0.00	0.00
Tmi	05	3	11.27	33.33	33.33	0.00	33.33
To	01	2	4.05	50.00	50.00	0.00	0.00
To	02	2	6.15	50.00	50.00	0.00	0.00
To	04	33	5.50	48.48	39.39	6.06	6.06
To	05	5	2.18	100.00	0.00	0.00	0.00
Tos	03	4	33.60	50.00	0.00	0.00	50.00
Tos	04	3	15.40	33.33	33.33	0.00	33.33
Tpl	03	1	3.50	100.00	0.00	0.00	0.00
Tpl	05	1	2.50	100.00	0.00	0.00	0.00
TRPjs	05	1	3.00	100.00	0.00	0.00	0.00
TRPll	05	2	1.95	100.00	0.00	0.00	0.00
TRd	04	1	0.80	100.00	0.00	0.00	0.00
TRd	05	3	2.13	100.00	0.00	0.00	0.00
TRd	06	3	1.70	100.00	0.00	0.00	0.00
Tt	04	5	9.20	40.00	40.00	0.00	20.00
Tt	05	1	2.10	100.00	0.00	0.00	0.00
Tw	04	2	1.05	100.00	0.00	0.00	0.00
Two	03	13	3.09	76.92	23.08	0.00	0.00
Two	04	6	3.27	50.00	50.00	0.00	0.00
Two	05	1	2.50	100.00	0.00	0.00	0.00

APPENDIX I - Continued

RADON RESULTS BY GEOLOGIC FORMATION AND HOUSE LEVEL TESTED

Geology*	Test Level	No. of Samples	Average pCi/l	≥0<4	≥4<10	≥10<20	≥20
				Percentage in each range			
Twr	04	3	2.37	66.67	33.33	0.00	0.00
Xb	02	10	20.66	20.00	30.00	10.00	40.00
Xb	03	44	5.22	45.45	40.91	11.36	2.27
Xb	04	14	10.34	57.14	21.43	14.29	7.14
Xb	05	6	12.98	33.33	33.33	0.00	33.33
Xfh	03	11	3.55	72.73	27.27	0.00	0.00
Xfh	04	2	2.70	100.00	0.00	0.00	0.00
Xfh	05	2	6.40	0.00	100.00	0.00	0.00
Xfh	06	1	1.10	100.00	0.00	0.00	0.00
Xg	02	2	14.80	0.00	50.00	0.00	50.00
Xg	03	5	5.68	60.00	20.00	20.00	0.00
Xg	04	9	8.67	22.22	44.44	22.22	11.11
Xg	05	2	8.55	0.00	50.00	50.00	0.00
Xq	03	2	28.00	0.00	0.00	0.00	100.00
YXg	06	1	1.10	100.00	0.00	0.00	0.00
Yg	03	8	3.61	50.00	50.00	0.00	0.00
Yg	04	4	30.30	50.00	25.00	0.00	25.00
Yg	05	2	8.85	50.00	0.00	50.00	0.00
Yp	03	6	41.30	0.00	66.67	16.67	16.67
Yp	04	1	0.00	100.00	0.00	0.00	0.00
Kc	05	3	11.17	33.33	33.33	0.00	33.33

APPENDIX J

DESCRIPTION OF GEOLOGIC SYMBOLS

Qa	Modern Alluvium (Piney Creek Alluvium) sand and gravel
Qe	Eolian Deposits dune sand, silt, loess
Qd	Glacial Drift (Pinedale and Bull Lake) sand and gravel
Qg	Gravel and Alluvium (Pinedale and Bull Lake) sand and gravel
Qgo	Older Gravels and Alluvium (Pre-Bull Lake) sand and gravel
QTsa	Unclassified Surficial Deposits gravel, sand, and silt
Ta	Arikaree Formation sandstone; contains abundant volcanically derived material
Taf	Ash-Flow Tuff welded volcanic ash
Tbb	Basalt Flows Tuff, Breccia, Conglomeratic basalt
Tbp	Brown's Park Formation sandstone and siltstone
Tt	Troublesome Formation sandstone and siltstone
Tw	Wasatch Formation claystone, shale, and sandstone
Two	Wasatch Formation/Ohio Creek Formation claystone, shale, and sandstone/mudstone and conglomerate
Twr	White River Formation ashy claystone and sandstone; conglomerate
Tc	Coalmont Formation arkosic sandstone, conglomerate, and shale; coal in lower units
Tcu	Cuchara Formation sandstone and shale
Tdu	Dawson Arkose (Upper Part) arkosic sandstone, conglomerate, and shale
Th	Huerfano Formation shale and sandstone; conglomerate
Tial	Intra-Ash Flow Lavas andesitic lavas

DESCRIPTION OF GEOLOGIC SYMBOLS

Tki	Laramide Intrusive Rocks intermediate to felsic, some mafic, porphyritic plutons, sills, and dikes
Tm	Middle Park Formation arkosic sandstone and conglomerate containing abundant volcanic material
Tmi	Middle Tertiary Intrusive Rocks intermediate to felsic, porphyritic plutons, sills, and dikes
To	Ogallala Formation loose to well cemented sand and gravel
Tos	Oligocene Sedimentary Rocks tuffaceous siltstone, sandstone, and conglomerate;
Tpl	Pre-Ash Flow Lavas, Breccia Tuff, Conglomerate andesitic
TKa	Animas Formation arkosic sandstone, shale, and conglomerate; contains abundant volcanic material
TKda	Denver and Arapahoe Formations sandstone, mudstone, claystone, and conglomerate
TKdl	Denver Formation/Dawson Arkose arkosic sandstone, shale, mudstone, conglomerate, and local coal beds
Kc	Colorado Group calcareous shale and limestone
Kcg	Carlile/Greenhorn/Graneros Formations shale/limestone/shale
Kd	Dakota Sandstone sandstone
Kdb	Dakota Sandstone/Burro Canyon Formation sandstone/sandstone, shale, and conglomerate
Kdp	Dakota Sandstone/Purgatoire Formation sandstone/sandstone and shale
Ki	Iles Formation sandstone, shale, and coal beds
Kl	Laramie Formation shale, claystone, sandstone, and major coal beds
Klf	Laramie Formation/Fox Hills Sandstone shale, claystone, sandstone, and major coal beds/sandstone
Kls	Lewis Shale shale

APPENDIX J - Continued

DESCRIPTION OF GEOLOGIC SYMBOLS

Km	Mancos Shale calcareous shale and sandstone
Kn	Niobrara Formation calcareous shale and limestone
Kp	Pierre Shale-Undivided shale and sandstone
Kpl	Pierre Shale-Lower unit organic-rich shales and numerous bentonite beds
Kpm	Pierre Shale-Middle unit sandstone and shale
Kpu	Pierre Shale-Upper unit shale
Kvt	Vermejo Formation/Trinidad Sandstone shale, sandstone, and major coal beds/sandstone
KJdm	Dakota/Morrison Formations sandstone, shale, and conglomerate/variegated claystone, mudstone, sandstone, and local limestone
KJds	Dakota/Morrison/Sundance Formations sandstone, shale, and conglomerate/variegated claystone, mudstone, sandstone, and local limestone
PPf	Fountain Formation arkosic sandstone and conglomerate
PPm	Maroon Formation arkosic sandstone, siltstone, conglomerate, and local limestone
PPs	Sangre De Cristo Formation arkosic conglomerate, sandstone, and siltstone
PPwm	Weber Sandstone/Maroon Formation sandstone/arkosic sandstone, siltstone, conglomerate, and local limestone
IPb	Belden Formation shale, limestone, and sandstone
Pc	Cutler Formation arkosic sandstone, siltstone, and conglomerate
IPee	Evaporitic Facies gypsum, siltstone, and shale; salt present in deep borings
IPm	Minturn Formation arkosic sandstone, conglomerate, shale, and limestone
IPrh	Rico and Hermosa Formations arkosic sandstone, conglomerate, shale, and limestone

APPENDIX J - Continued

DESCRIPTION OF GEOLOGIC SYMBOLS

ĀPjs	Jelm-Lykins-Lyons-Satanka Formations red siltstone, shale, and sandstone
ĀPll	Lykins Formation/Lyons Sandstone red siltstone, shale, and limestone/red sandstone and conglomerate
Ād	Dolores Formation red siltstone, shale, sandstone, and limestone-pellet conglomerate
MЄ	Leadville Limestone/Sawatch Quartzite marine limestone/pure quartzite
MD	Leadville Limestone and associated formations limestone, sandstone, shale, and quartzite
Yg	Granitic Rocks (Age 1350-1480 m.y.) plutonic granites of predominantly intermediate compositions
Yp	Granitic Rocks of the Pikes Peak Batholith age: 1000 m.y.; granitic rocks of intermediate to alkalic composition
YXg	Granitic Rocks (Undivided) granites: rocks with characteristics of Xg but with U-Th-Pb ages of Yg rocks
Xg	Granitic Rocks (Age 1650-1730 m.y.) plutonic granites of predominantly intermediate composition
Xb	Meta-sedimentary Rocks (Age 1700-1800 m.y.) biotitic gneiss, schist, and migmatite: derived principally from sedimentary rocks
Xfh	Meta-volcanic Rocks (Age 1700-1800 m.y.) felsic and hornblendic gneisses: derived principally from volcanic rocks
Xq	Metamorphic Rocks (Age 1700-1800 m.y.) quartzite, conglomerate, and interlayered mica schist