



## Environmental Safety Radon

- In 1988, the EPA passed the Indoor Radon Abatement Act (of 1988). It was designed to gain knowledge and set a national goal to reduce the annual average indoor radon concentrations to as close to outdoor levels as possible, between 0.2-0.7 pCi/L (picocuries per liter). The acceptable action level being no greater than 4 picocuries/L.
- In 1989, The EPA administrator recommended the school systems test their facilities. That recommendation went out on April 20, 1989.
- Central York School District received the letter on July 6, 1989. Although, it was as early as April 24, 1989, the district started its paperwork with the EPA.
- The district proceeded with testing and contracted Tri-Tech Environmental Services out of Gap, PA. The testing started late December 1989, and continued through early 1992 due to many construction projects at various schools. The final testing came late 3/1992 at the completion of new Roundtown.
- At that time CYSD had old Roundtown, Hayshire, Stonybrook, North Hills, North Hills Jr. High, and the old High School at 300 E. 7<sup>th</sup> Ave.
- At this time, there are no guidelines or rules on frequency of testing.
- The matter was brought to the districts attention again in the summer of 2012.
- The district thought it prudent to update the testing, and ran multitudes of tests from August 31 through mid October 2012. Testing was ran through Airborne Contamination Identification Associates (ACIA), whom contracted Central Penn Radon, Inc. to complete the testing. ACIA is also the company who tests our Indoor Air Quality (IAQ).
- The testing data is attached for review.

# Radon Testing Report of Findings



Prepared for:

Central York School District

Radon Testing

August 31, 2012 – September 3, 2012

Re-Testing: September 28<sup>th</sup>- 30<sup>th</sup> 2012

Re-Testing: October 5<sup>th</sup> – 8<sup>th</sup> 2012

Prepared by:

Central Penn Radon Inc.

And

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# Sampling Information



Samples Collected by:

Central Penn Radon Inc.

Bob Meyer License Number: 1800

Dates Sampled :

\*August 31, 2012 – September 3, 2012

Ventilation Systems were in energy saving mode (HVAC off) during this test period.

Second Sample Dates:

\*September 28<sup>th</sup>- 30<sup>th</sup> 2012

Re-tested areas where high levels were found. Ventilation systems were in occupied (HVAC pulling outside air) mode this test period.

Third Sample Dates:

\*October 5<sup>th</sup>- 8<sup>th</sup> 2012

Re-tested areas where high levels were found in Stonybrook Elementary. Ventilation systems were in occupied (HVAC pulling outside air) mode this test period.

# Sample Locations and Averages of First Test Period



Location	Sampled	<4.0	>4.0	Average
Admin	4	4	--	--
Farm House	2	2		
High School	35	21	14	4.71
Middle School	30	30		

The following charts are a breakdown of sample locations with a normal levels below 4.0 pCi/L and marginal areas above 4.0 pCi/L.

# Sample Locations and Averages of First Test Period



Location	Sampled	<4.0	>4.0	Average
Sinking Spring	20	20		
Stonybrook	22	7	15	8.15
Roundtown	20	20		
North Hills	22	22		
Hayshire	23	23		

The following charts are a breakdown of sample locations with a normal levels below 4.0 pCi/L and marginal areas above 4.0 pCi/L.

# Radon Findings of Hayshire Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181569	Nurses Suite	.05 pCi/L	
2181570	Music	1.1 pCi/L	
2181571	Room 108	.08 pCi/L	
2181572	Room 107	.07 pCi/L	
2181573	Faculty Room	< 0.4pCi/L	
2181574	Room 102	< 0.4 pCi/L	
2181575	Room 104	<0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Hayshire Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181576	Room 508	<0.4 pCi/L	
2181577	Room 007	< 0.4pCi/L	
5181578	Room 002	< 0.4 pCi/L	
2181579	Room 004	<0.4 pCi/L	
2181580	Room 005	<0.4 pCi/L	
2181577	Room 007	< 0.4pCi/L	
5181578	Room 002	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.



# Radon Findings of Hayshire Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181579	Room 004	<0.4 pCi/L	
2181580	Room 005	<0.4 pCi/L	
2181581	Room 504	< 0.4pCi/L	
2181582	Room 207	0.8pCi/L	
2181583	Room 205	0.4 pCi/L	
2181584	Room 204	0.5 pCi/L	
2181585	Room 202	0.6 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Hayshire Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181586	Room 304	1.1 pCi/L	
2181587	Room 302	0.6 pCi/L	
2181588	Room 305	0.8 pCi/L	
2181589	Room 307	1.1 pCi/L	
2181590	Conference Room	0.9 pCi/L	
2181591	Office	1.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Roundtown Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181621	Nurses Office Room 416	0.9 pCi/L	
2181622	Room 106	0.4 pCi/L	
2181623	Room 105	1.1 pCi/L	
2181624	Room 411/413	0.6 pCi/L	
2181625	Room 418	< 0.4pCi/L	
218626	Room 005	1.6 pCi/L	
2181627	Room 008	1.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Roundtown Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181628	Room 002	0.4 pCi/L	
2181629	Media Center	< 0.4 pCi/L	
2181630	Office	0.9 pCi/L	
2181631	Room 305	0.4 pCi/L	
2181632	Room 304	1.1 pCi/L	
2181633	Room 301	0.8 pCi/L	
2181634	Room 402	3.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Roundtown Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181635	Faculty Room	1.6 pCi/L	
2181636	Room 408	< 0.4 pCi/L	
2181637	Room 205	0.7 pCi/L	
2181638	Room 207	1.3 pCi/L	
2181639	Room 204	1.0 pCi/L	
2181640	Room 206	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Sinking Springs Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181601	Office	< 0.4 pCi/L	
2181602	Room 130	< 0.4 pCi/L	
2181603	Room 124	< 0.4 pCi/L	
2181604	Room 121	< 0.4 pCi/L	
2180605	Room 125	< 0.4 pCi/L	
2180606	Media Center	1.1 pCi/L	
2180607	Room 227	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Sinking Springs Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2180608	Room 226	< 0.4 pCi/L	
2180609	Room 222	< 0.4 pCi/L	
2180610	Room 221	< 0.4 pCi/L	
2181611	Room 105	0.4 pCi/L	
2181612	Room 104	1.0 pCi/L	
2181613	Room 101	1.1 pCi/L	
2181614	Room 112	0.5 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Sinking Springs Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181615	Art Room	1.4 pCi/L	
2181616	Room 208	< 0.4pCi/L	
2181617	Room 202	0.6 pCi/L	
2181618	Room 203	0.7 pCi/L	
2181619	Room 211	0.4 pCi/L	
2181620	Room 232	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.



# Radon Findings of Stonybrook Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181547	Room 302	3.8 pCi/L	
2181548	Room 304		6.5 pCi/L
2181549	Room 305	3.7 pCi/L	
2181550	Room 307		4.6 pCi/L
2181551	Room 308		5.2 pCi/L
2181552	Room 201	3.6 pCi/L	
2181553	Room 203	3.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Stonybrook Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181554	Room 204		4.3 pCi/L
2181555	Room 205		4.0 pCi/L
2181556	Room 207	1.5 pCi/L	
2181557	Room 208	1.8 pCi/L	
2181558	Room 101		7.7 pCi/L
2181559	Room 102		10.5 pCi/L
2181560	Room 104		4.3 pCi/L

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Stonybrook Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181561	Room 105		11.0 pCi/L
2181562	Room 108	3.7 pCi/L	
2181563	Room 001		9.7 pCi/L
2181564	Room 004		23.5 pCi/L
2181565	Room 005		8.2 pCi/L
2181566	Room 007		7.2 pCi/L
2181567	Room 008		6.0 pCi/L

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Stonybrook Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181568	Library		9.6 pCi/L

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of North Hills Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181525	Main Entrance	< 0.4 pCi/L	
2181526	Main Office	< 0.4 pCi/L	
2181527	Nurse	1.1 pCi/L	
2181528	Faculty Lounge	1.7 pCi/L	
2181529	Storage	< 0.4 pCi/L	
2181530	Music	< 0.4 pCi/L	
2181531	Room 19	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of North Hills Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181532	Room 20	< 0.4 pCi/L	
2181533	Room 23	< 0.4 pCi/L	
2181534	Room 24	< 0.4 pCi/L	
2181535	Room 26	< 0.4 pCi/L	
2181536	Room 29	< 0.4 pCi/L	
2181537	Library	< 0.4 pCi/L	
2181538	Room 2	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of North Hills Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181539	Room 3	< 0.4 pCi/L	
2181540	Room 6	< 0.4 pCi/L	
2181541	Room 7	< 0.4 pCi/L	
2181542	Room 9	< 0.4 pCi/L	
2181543	Room 12	< 0.4 pCi/L	
2181544	Room 11	< 0.4 pCi/L	
2181545	Room 15	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of North Hills Elementary



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181546	Room 18	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.



# Radon Findings of Middle School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181495	Office	< 0.4 pCi/L	
2181496	Room 62	< 0.4 pCi/L	
2181497	Room 4	< 0.4 pCi/L	
2181498	Room 6	0.7 pCi/L	
2181499	Room 8	< 0.4 pCi/L	
2181500	Room 49	0.8 pCi/L	
2181501	Room 10	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Middle School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181502	Room 11	< 0.4 pCi/L	
2181503	Room 14	< 0.4 pCi/L	
2181504	Room 15	0.6 pCi/L	
2181505	Room 20	< 0.4 pCi/L	
2181506	Room 22	< 0.4 pCi/L	
2181507	Room 28	< 0.4 pCi/L	
2181508	Room 32	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Middle School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181509	Room 36	0.4 pCi/L	
2181510	Room 37	< 0.4 pCi/L	
2181511	Room 41	< 0.4 pCi/L	
2181512	Room 44	< 0.4 pCi/L	
2181513	Room 51	0.4 pCi/L	
2181514	Room 53	< 0.4 pCi/L	
2181515	Room 56	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Middle School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181516	Room 58	1.6 pCi/L	
2181517	Room 65	0.4 pCi/L	
2181518	Room 63	< 0.4 pCi/L	
2181519	Room 69	0.5 pCi/L	
2181520	Room 67	<0.4 pCi/L	
2181521	Room 74 Fitness	0.4 pCi/L	
2181522	Room 76	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Middle School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181523	Room 78	< 0.4 pCi/L	
2181524	Room 80	<0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of High School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181456	Room 706		4.0 pCi/L
2181457	Room 704	2.1 pCi/L	
2181458	Room 702	1.8 pCi/L	
2181459	Room 73 Theater	2.3 pCi/L	
2181460	Room 701	3.4 pCi/L	
2181461	Room 131	2.9 pCi/L	
2181462	Main Office	2.5 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of High School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181463	Room 126		5.8 pCi/L
2181464	Room 600		4.5 pCi/L
2181465	Room 610		4.4 pCi/L
2181466	SWA C&D		4.6pCi/L
2181467	Room 608		4.2 pCi/L
2181468	Room 606	3.4 pCi/L	
2181469	Room 604		4.1 pCi/L

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of High School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181470	Room 500		4.1 pCi/L
2181471	Room 521		4.7 pCi/L
2181472	Room 519		4.8 pCi/L
2181473	Room 515		4.7 pCi/L
2181474	Room 512	3.9 pCi/L	
2181475	Room 509		4.7 pCi/L
2181476	Room 506		4.7 pCi/L

Ventilation System in unoccupied mode during sampling period.



# Radon Findings of High School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
4181477	Room 516		6.7 pCi/L
4181478	Room 504	2.5 pCi/L	
2181479	Room 502	2.5 pCi/L	
2181480	Room 413	1.8 pCi/L	
2181481	Room 400	2.6 pCi/L	
2181482	Room 411	3.2 pCi/L	
2181483	Room 407	2.3 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of High School



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181484	Room 406	3.9 pCi/L	
2181485	Room 404	3.5 pCi/L	
2181486	Room 303 Mech	.06 pCi/L	
2181487	Room 231	< 0.4 pCi/L	
2181488	Room 209	1.6 pCi/L	
2181489	Room 217	1.9 pCi/L	
2181490	Room 220	2.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Farm House



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181451	Food Service Director	1.4 pCi/L	
2181452	Main Office	2.0 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Radon Findings of Administration Building



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181491	Room 36	.09 pCi/L	
2181492	Room 25	1.0 pCi/L	
2181493	Room 20	< 0.4 pCi/L	
2181494	Room 11	< 0.4 pCi/L	

Ventilation System in unoccupied mode during sampling period.

# Re-Testing of Stonybrook Elementary 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183501	Library	9.6 pCi/L	5.0 pCi/L
2183502	Room 008	6.0 pCi/L	2.7 pCi/L
2183503	Room 001	9.7 pCi/L	2.5 pCi/L
2183504	Room 007	7.2 pCi/L	5.0 pCi/L
2183505	Room 005	8.2 pCi/L	14.2 pCi/L
2183506	Room 004	23.5 pCi/L	18.1 pCi/L
2183507	Room 101	7.7 pCi/L	3.4pCi/L

Ventilation System in occupied mode during sampling period.

# Re-Testing of Stonybrook Elementary 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183508	Room 102	10.5 pCi/L	4.9 pCi/L
2183509	Room 104	4.3 pCi/L	1.1 pCi/L
2183510	Room 105	11.0 pCi/L	1.8 pCi/L
2183511	Room 204	4.3 pCi/L	1.2 pCi/L
2183512	Room 205	4.0 pCi/L	2.2 pCi/L
2183513	Room 308	5.2 pCi/L	5.9 pCi/L
2183514	Room 307	4.6 pCi/L	2.3 pCi/L

Ventilation System in occupied mode during sampling period.

# Re-Testing of Stonybrook Elementary 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183515	Room 304	6.5 pCi/L	2.5 pCi/L

Ventilation System in occupied mode during sampling period.

# Re-Testing of High School

## 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183516	Room 706	4.0 pCi/L	< 0.4 pCi/L
2183517	Room 126	5.8 pCi/L	1.8 pCi/L
2183518	Room 600	4.5 pCi/L	< 0.4 pCi/L
2183519	Room 610	4.4 pCi/L	< 0.4 pCi/L
2183520	SWAC&D	4.6pCi/L	0.6 pCi/L
2183521	Room 608	4.2 pCi/L	< 0.4 pCi/L
2183522	Room 604	4.1 pCi/L	< 0.4 pCi/L

Ventilation System in occupied mode during sampling period.



# Re-Testing of High School

## 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183523	Room 500	4.1 pCi/L	0.9 pCi/L
2183524	Room 521	4.7 pCi/L	1.1 pCi/L
2183525	Room 519	4.8 pCi/L	1.3 pCi/L
2183526	Room 515	4.7 pCi/L	1.2 pCi/L
2183527	Room 509	4.7 pCi/L	< 0.4 pCi/L
2183528	Room 506	4.7 pCi/L	0.8 pCi/L
2183529	Room 516	6.7 pCi/L	3.7 pCi/L

Ventilation System in occupied mode during sampling period.

# Re-Testing of High School

## 09/30/2012



<b>Sample #</b>	<b>Location</b>	<b>Unoccupied Mode</b>	<b>Occupied Mode</b>
2183530	Room 406	3.9 pCi/L	1.1 pCi/L

Ventilation System in occupied mode during sampling period.

# Re-Testing of Stonybrook Elementary 10/08/2012



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181453	Library	2.2 pCi/L	
2181592	Room 008	0.8 pCi/L	
2181593	Room 001	1.6 pCi/L	
2181594	Room 007	0.5 pCi/L	
2181595	Room 002	0.5 pCi/L	
2181596	Room 006	1.6 pCi/L	
2181597	Room 003	<0.4 pCi/L	

Ventilation System in occupied mode during sampling period.

# Re-Testing of Stonybrook Elementary 10/08/2012



<b>Sample #</b>	<b>Location</b>	<b>Average Levels</b>	<b>Marginal Levels</b>
2181598	Room 005	<0.4 pCi/L	
2181599	Room 004	<0.4 pCi/L	
2181600	Room 107	2.8 pCi/L	

Ventilation System in occupied mode during sampling period.

# Recommendations



September 5<sup>th</sup>, 2012 Recommendations: Airborne Contamination Identification Associates Ltd. would recommend re-testing all areas over 4.0 pCi/L with the HVAC system in occupied mode.

October 2<sup>nd</sup>, 2012 Recommendations: Airborne Contamination Identification Associates Ltd. would assist in evaluating all rooms that are still over the 4.0 pCi/L to insure mechanical operation for proper ventilation of outside air.

October 10<sup>th</sup>, 2012 Recommendations: Airborne Contamination Identification Associates Ltd. is pleased to announce that after re-testing all the rooms while the HVAC system was in occupied mode, the class rooms were below the 4.0 pCi/L.

Regards,

Randall R. Leaman  
ACIA  
C.I.A.Q.P