



2432 S. Downing Street, Denver, Colorado 80210 • 303.722.2973 • Fax: 303.722.2974

February 23, 2026

Mr. Geoff Mills  
Adams 12 Five Star Schools  
1500 E. 128th Avenue  
Thornton, CO 80241

**Subject: Long Term Radon Sampling Results for Adams 12 Five Star Schools, Thunder Vista P-8 School located at 3461 Preble Creek Parkway, Broomfield, Colorado 80023.**

**Project Number: E25.901**

Dear Mr. Mills,

**Introduction:**

Environmental Technical Solutions, LLC (ETS) performed long term radon testing within specified rooms at Thunder Vista P-8 School located at 3461 Preble Creek Parkway, Broomfield, Colorado 80023, using Alpha Track radon detector kits. Testing was performed under normal building conditions. The school has a crawlspace and does not have a radon mitigation system.

Radon is a naturally occurring colorless, odorless gas that is a by-product of the decay of radioactive materials potentially present in the bedrock and soil. The Environmental Protection Agency (EPA) guidance action level for annual exposure to radon is 4.0 picocuries per Liter of air (pCi/L) for frequently occupied rooms of a building.

**Work Activity Summary:**

ETS' technician performed long term radon testing within rooms that had results above 4.0 pCi/L following the initial short term radon sampling episode. ETS utilized a qualified measurement professional meeting the certification requirements set forth in the National Radon Proficiency Program (NRPP), certificate number 114117-RMP, and is a State of Colorado Radon Measurement Professional, RME number 0000515.

Testing was performed using Alpha-Track radon test kits. Room number, testing information and test kit information were recorded manually. Once the data was recorded the technician opened the test kit. The technician then placed the test kit within specified rooms or test areas, away from HVAC systems, doors, windows, direct sunlight, away from perimeter walls and no less than 24" from the floor.

After the collection period the technician retrieved the kits and recorded stop times before leaving the test area. Sampling was performed in general conformance with the Indoor Environments Association (IEA), formerly the American Association of Radon Scientists and Technicians (AARST) Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, Schools, Commercial, and Mixed-Use Buildings (ANSI/AARST MA-MFLB-2023).

### **Analytic Procedures:**

Alpha Track radon detector test kits were used to perform long term radon testing. When a radon atom decays inside the detector, it releases high energy alpha particles. When alpha particles strike the foil inside the test kits, they leave microscopic tracks on the surface of the foil. When the test kit is returned for analysis, the foil is placed in a caustic solution to enhance the alpha tracks, then analyzed utilizing a computer imaging microscope which is used to determine the total amount of radon the foil was exposed to. The analysis is consistent with the EPA's Indoor Radon and Radon Decay Product Measurement Device Protocols (EPA 402-R-92-004), Section 2.2.

RSSI, the laboratory that analyzed the long term radon test kits is accredited with the National Radon Proficiency Program (NRPP), reference number 101198-AL and the National Environmental Laboratory Accreditation Program (NELAP), reference number 11970.

### **Analytic Results:**

A total of 26 samples were deployed throughout the school. No samples were at or above 4 pCi/L. All sample results have been calculated based on an allowance of  $\pm 4\%$  to 11% pCi/L. This analytical range accounts for the potential influence of external factors on the radon concentrations of each sample during shipping. The provided analytical results should be interpreted with reference to this margin of error.

Total Number of Long Term Samples	26
Total Number of Samples $>10\text{pCi/L}$	0
Total Number of Samples $\geq 4\text{pCi/L}$	0
Total Number of Samples $<4\text{pCi/L}$	12
Total Number of Samples Between $2\text{pCi/L}$ and $4\text{pCi/L}$	1
Total Number of Samples Missing	14

### **Recommendations:**

The IEA recommends taking action to reduce the level of radon when levels are 4 pCi/L or higher. If initial tests are above 4 pCi/L but less than 8 pCi/L the IEA recommends follow-up short term or long term testing. If initial tests are above 8 pCi/L the IEA recommends short term, follow-up testing immediately. If follow-up tests are above 4 pCi/L, the IEA recommends a mitigation strategy be implemented to reduce radon levels.

IEA formerly AARST Protocol for Conducting Measurements of Radon and Radon Decay Products in Multifamily, Schools, Commercial, and Mixed-Use Buildings recommends that results indicating greater than half the action level (between 2 and 4 pCi/L) consider fixing. Note that reducing and accurately confirming radon concentrations of about 2 pCi/L or below may be difficult.

“Fixing” could consist of the installation of an active sub-slab depressurization radon mitigation system, sealing cracks and other openings in the foundation, room pressurization to prevent radon from entering the building, increased air exchanges throughout the building, and natural ventilation such as opening doors and windows.

If test results are below the action level, the AARST recommends confirming the low results by testing again, at least every 5 years and whenever significant changes to the building’s structure or mechanical systems occur. Below is a list of those modifications.

- When a new addition is constructed, or significant renovations occur.
- When heating or cooling systems are significantly altered resulting in changes to air pressure or distribution.
- When ventilation is significantly altered by extensive weatherization or changes to the mechanical system.
- When a significant opening to the soil occurs.

The IEA protocol also recommends additional testing to assess differences between radon concentrations during occupied and unoccupied periods. Table 1 below details the sample locations, kit numbers, sample start and end dates and the test kit result for each sample location. Attached to the end of this document are the RSSI long term radon results.

**Table 1: Radon Results – Thunder Vista P-8 School**

Drawing Location Number	Room Number	Kit Number	Start Date	End Date	Notes	Results pCi/L	Variance
	1	846896	03/07/2025	01/08/2026	Blank	0.3	8%
	2	849696	03/07/2025	01/08/2026	Blank	0.2	11%
1	B156	846894	03/07/2025	01/08/2026		1.9	4%
2	B156	846895	03/07/2025	01/08/2026	Duplicate	2.1	4%
					Average	2.0	4%
	A132	846897	03/07/2025	01/08/2026	Tampered		
	A130A	849676	03/07/2025	01/08/2026	Tampered		
	A162	849677	03/07/2025	01/08/2026	Tampered		
3	A162	849678	03/07/2025	01/08/2026		1.3	5%
	A162	849679	03/07/2025	01/08/2026	Tampered		
4	B256	849680	03/07/2025	01/08/2026	2 <sup>nd</sup> Floor	1.8	4%
	B251B	849681	03/07/2025	01/08/2026	Tampered		
	B249	849682	03/07/2025	01/08/2026	Tampered		
	B249	849683	03/07/2025	01/08/2026	Tampered		
	A220	849684	03/07/2025	01/08/2026	Tampered		
	A217	849685	03/07/2025	01/08/2026	Tampered		
	A213	849686	03/07/2025	01/08/2026	Tampered		
5	A207	849687	03/07/2025	01/08/2026	2 <sup>nd</sup> Floor	1.1	5%
	A206	849688	03/07/2025	01/08/2026	Tampered		
	A202	849689	03/07/2025	01/08/2026	Tampered		
	A201	849690	03/07/2025	01/08/2026	Tampered		
6	A241	849691	03/07/2025	01/08/2026	2 <sup>nd</sup> floor	1.5	4%
7	A245	849692	03/07/2025	01/08/2026	2 <sup>nd</sup> Floor	1.4	4%
8	C281	849693	03/07/2025	01/08/2026	2 <sup>nd</sup> Floor	1.8	4%
9	C281	849694	03/07/2025	01/08/2026	Duplicate	1.8	4%
					Average	1.8	4%
10	B352	849695	03/07/2025	01/08/2026	3 <sup>rd</sup> Floor	1.5	4%

Drawing Location Number	Room Number	Kit Number	Start Date	End Date	Notes	Results pCi/L	Variance
	A203	849697	03/07/2025	01/08/2026	Tampered		

**Limitations:**

There is an uncertainty with any measurement result due to statistical variations and other factors such as daily and seasonal variations in radon concentrations. Variations may be due to changes in weather, operation of the dwelling, or possible interference with the necessary test conditions. Classrooms and offices that were utilized for storage rooms were not sampled. Additionally, mechanical rooms, restrooms, kitchens and storage closets were not sampled.




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Daniel Wolf  
Environmental Scientist  
NRPP certificate number: 114117-RMP  
State of CO RME number: 0000515

Attachments:

Laboratory Radon Results

## Laboratory Radon Results



6312 Oakton Street  
 Morton Grove, IL 60053-2723  
 847-965-1999



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Environmental Technical  
 Solutions  
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 2432 S. Downing Street  
 Denver, CO 80210 USA

**Alpha Track Radon Results**

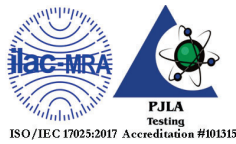
Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849687	1.1 pCi/L ± 5%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: A207				
Test Floor: 2nd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

RSSI operates as an analytical laboratory and is certified by the NRPP under certification # 101198 AL  
 RSSI is approved as an environmental laboratory in accordance with the NELAC 2016 standard as New York lab ID 11970. RSSI is accredited to the ISO/IEC 17025:2017 standard by PJLA under accreditation number 101315.  
 Analytical results showing the radon concentration relate only to the device(s) tested in the condition as received by RSSI. Results were calculated based on information provided by the client. Report shall not be reproduced except in its entirety without the approval of RSSI.



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847-965-1999



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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849694	1.8 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3463 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: C281				
Test Floor: 2nd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

Analyzed By::

Michal Praczuk

1/15/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
846894	1.9 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO Room Type: B156 Test Floor: 1st/Ground Foundation Type: Crawl Space Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
846895	2.1 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: B156				
Test Floor: 1st/Ground				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
846896	.3 pCi/L ± 8%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: 1				
Test Floor: 1st/Ground				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date 1/16/2026    Data Entry Date 1/16/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849678	1.3 pCi/L ± 5%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: A162				
Test Floor: 1st/Ground				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849680	1.8 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: B256				
Test Floor: 2nd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849691	1.5 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: A241				
Test Floor: 2nd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

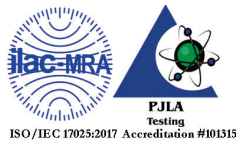
Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849692	1.4 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: A245				
Test Floor: 2nd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

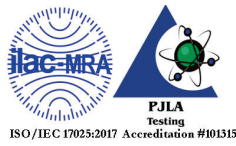
Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849693	1.8 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO Room Type: C281 Test Floor: 2nd Foundation Type: Crawl Space Building Type: School				

Receipt Date                      Data Entry Date 1/13/2026

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849695	1.5 pCi/L ± 4%	3/7/2025	1/8/2026	Thunder Vista ES 3462 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: B352				
Test Floor: 3rd				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date 1/13/2026    Data Entry Date 1/13/2026

The following issues were found when the detector arrived at RSSI, if these issues were present during the test your results may be inaccurate. Issue(s) found: Loose Foil

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**Alpha Track Radon Results**

Detector	Concentration Uncertainty	Start Date	End Date	Test Address
849696	.2 pCi/L ± 11%	3/7/2025	1/8/2026	Thunder Vista ES 3461 Preble Creek Pkwy Broomfield, CO 80023 USA
TESTING INFO				
Room Type: 2				
Test Floor: 1st/Ground				
Foundation Type: Crawl Space				
Building Type: School				

Receipt Date 1/13/2026    Data Entry Date 1/13/2026

The following issues were found when the detector arrived at RSSI, if these issues were present during the test your results may be inaccurate. Issue(s) found: Loose Foil

Analyzed By::

Michal Praczuk

1/16/2026

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## Figures



**Long Term Radon Test  
Results**

Thunder Vista Elementary  
School  
3641 Preble Creek Parkway,  
Broomfield, CO 80023

All results are reported in  
pCi/L (picocuries per liter)

**Legend:**

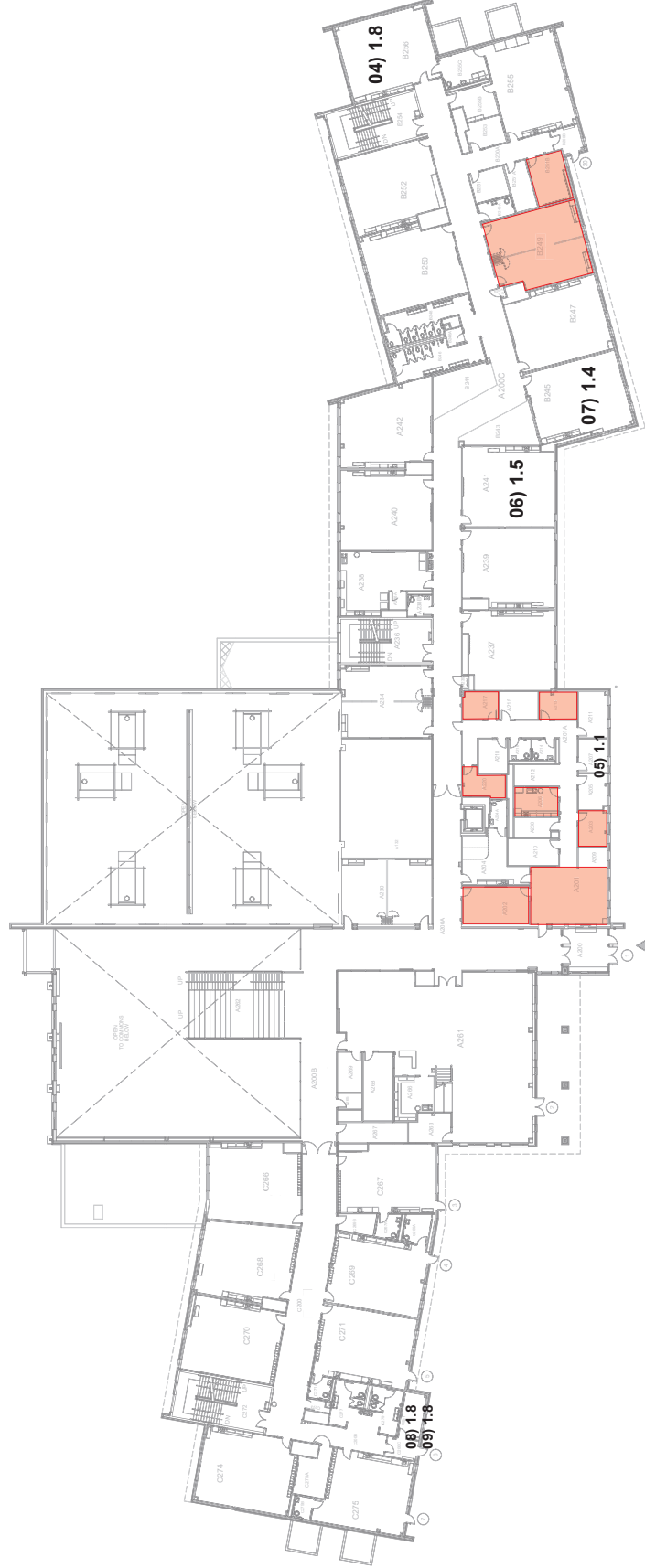
Samples between 2.0 and 4.0 pCi/L  
Samples 4.0 pCi/L or above



= Tampered/Missing

Second Floor

**Figure 1-2**



**Notes:**  
Samples 01-02 are blanks  
All sample results have been calculated  
based on an allowance of  $\pm 4\%$  to  $11\%$  pCi/L

**Long Term Radon Test  
Results**

Thunder Vista Elementary  
School  
3641 Preble Creek Parkway,  
Broomfield, CO 80023

All results are reported in  
pCi/L (picocuries per liter)

**Legend:**

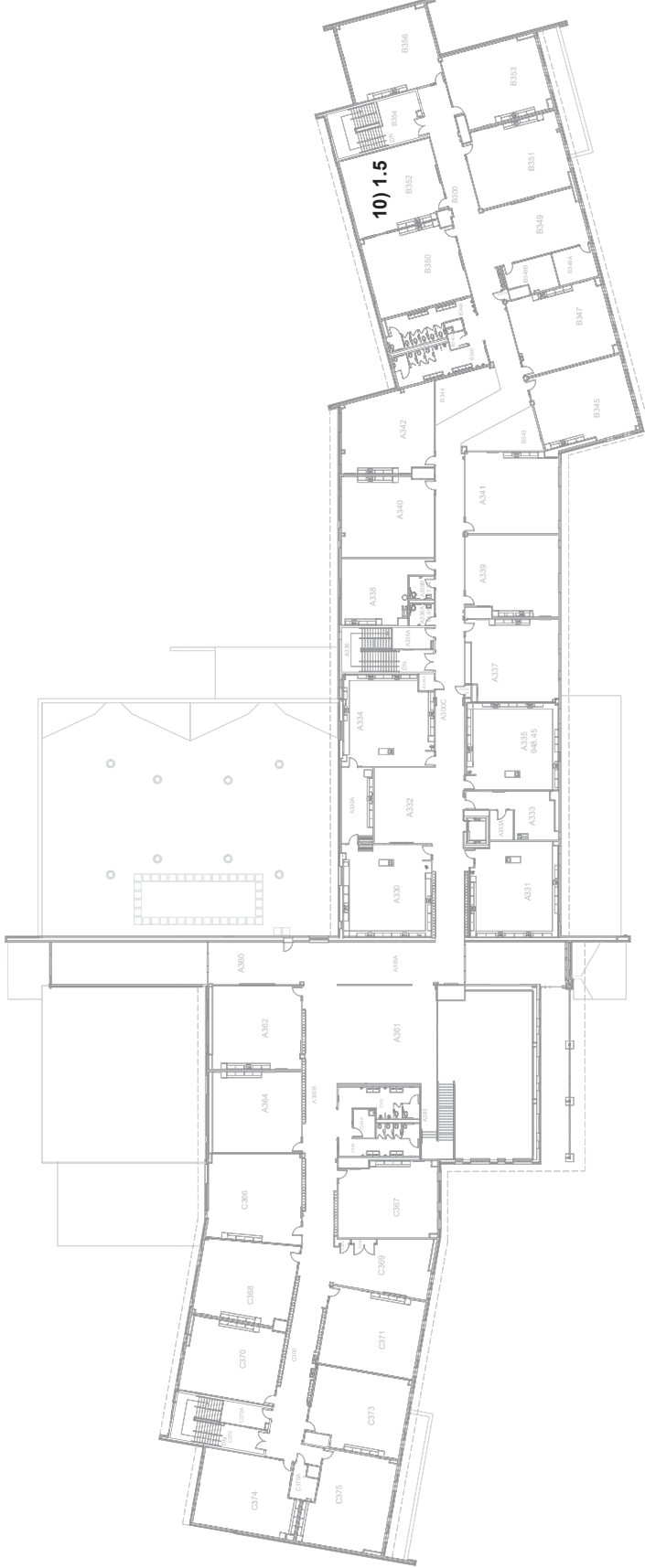
Samples between 2.0 and 4.0 pCi/L  
Samples 4.0 pCi/L or above



= Tampered/Missing

Third Floor

**Figure 1-3**



**Notes:**  
Samples 01-02 are blanks  
All sample results have been calculated  
based on an allowance of  $\pm 4\%$  to  $11\%$  pCi/L