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# HSWMR

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**TO:** Laymon Gray  
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**DATE:** 21 August 2023 (*updated from 10 August 2022*)

**SUBJECT:** FSU Landis Hall - Radon Evaluation (*Annual Follow-up Testing*)

The Landis Hall residence hall building (Landis) at Florida State University (FSU) has been evaluated for radon content due to indoor air quality questions that have been raised regarding other buildings on the FSU campus. Initial radon testing was conducted from May 2 to May 4, 2022, at thirteen (13) locations at Landis. The 48-hour charcoal canister measurements were collected by a state-certified radon contractor, in accordance with standard protocols of the United States Environmental Protection Agency (USEPA) and the Florida Department of Health (FDOH). One of the radon values was slightly greater than the 4 picoCurie/liter (pCi/L) USEPA Action Level (4.2 pCi/L), and one result was equal to the Action Level. The remaining results ranged from 0.8 pCi/L to 3.7 pCi/L. From May 23 to May 25, 2022, 9 additional 48-hour charcoal canister measurements were collected at previously unsampled locations at Landis, and four locations were resampled. The results for one of the newly sampled locations (4.7 pCi/L) and one of the resampled locations (4.1 pCi/L) exceeded the 4 pCi/L Action Level.

The initial May 2022 sampling results reflected a condition that was consistent with many buildings in Florida and throughout the United States, and the radon conditions at Landis did not represent a significant health concern. However, due to the radon detections at slightly greater than the USEPA Action Level, Landis Hall was further evaluated to determine the appropriate degree and methods for mitigation.

In July 2022, the University proactively contracted for installation of a subslab depressurization radon mitigation system in Landis. The system was completed in late July 2022 and post-mitigation clearance sampling was conducted from August 5 to August 8, 2022, in accordance with USEPA and FDOH protocols. All post-mitigation sampling results were below the USEPA Action Level. Based on the initial exceedances of the Action Level, the mitigation system installation, and post-mitigation clearance testing, Landis was placed on the annual maintenance and monitoring program with respect to radon, in accordance with FDOH guidance and FSU policy.

That agency guidance and FSU policy dictate that annual follow-up testing be conducted in the areas of previously elevated (greater than the Action Level) radon levels. The 2023 annual testing for Landis was completed from May 23 to 25 at three locations (2 on the ground floor and 1 on the first floor). All 2023 annual testing results were less than the USEPA Action Level of 4 pCi/L. The attached table summarizes the initial testing from May 2022, the results of the July 2022 post-mitigation clearance testing, and the 2023 annual follow-up testing.

Detectable radon levels are ubiquitous throughout the state, with most areas of Florida exhibiting low radon. Outdoor levels typically are in the 0.4 to 0.5 pCi/L range, and indoor levels regularly range from 1 to 2 pCi/L. Radon comes from decay of natural radium, and elevated indoor radon is related to local geology. Radon often is present in clays, phosphate rock, and igneous rocks, like granite, and can originate from bedrock far below land surface. Because it is a naturally occurring substance, exposure is common and unavoidable.

## RADON MEASUREMENTS - Landis Hall, Florida State University

Location	Sampling Dates	Number of Samples	Min pCi/L	Max pCi/L	Notes
GF	2 to 4 May 2022	5	2.8	4.2	One result > Action Level 4.0 pCi/L
1st Floor	2 to 4 May 2022	8	0.8	4.0	One result = Action Level 4.0 pCi/L
GF (new locations)	23 to 25 May 2022	3	3.0	4.7	One result > Action Level 4.0 pCi/L
GF (resamples)	23 to 25 May 2022	2	3.7	4.1	One result > Action Level 4.0 pCi/L
1st (new locations)	23 to 25 May 2022	7	0.9	3.3	No results > Action Level
1st (resamples)	23 to 25 May 2022	1	2.6	2.6	No results > Action Level
GF (post-mitigation)	5 to 8 August 2022	1	1.0	1.0	No results > Action Level
1st (post-mitigation)	5 to 8 August 2022	1	2.2	2.2	No results > Action Level

### *Annual Follow-Up Testing*

2023 (May 23-25): 3 of 3 samples < 4 pCi/L (range 1.7 to 2.1 pCi/L)

pCi/L = picocuries per liter

Shaded results indicate the post-mitigation clearance sampling.