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DATE: 04 January 2024 (*updated from 18 November 2022*)

SUBJECT: FSU Carraway Building - Radon Evaluation

The Carraway Building (Carraway) at Florida State University (FSU) has been evaluated for radon content as part of ongoing university-wide indoor air quality assessments. Initial radon testing was conducted from October 24 to October 26, 2022, at 11 locations at Carraway. 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). Four of the 11 basement samples exceeded the 4 picoCurie/liter (pCi/L) USEPA Action Level (range 8.2 to 9.3 pCi/L) for radon, with all four of those samples (3 locations and 1 duplicate analysis) in the same large room (the former Antarctic Research Facility). The remaining seven samples in the principal use area of Carraway all were below 4 pCi/L. It is noted that the Action Level primarily is directed at evaluation of indoor air in residential circumstances when 24-hour exposures are assumed. The Action Level is employed by FSU here as a conservative point-of-departure. The workplace protection level from OSHA (Occupational Safety and Health Administration) is 100 pCi/L.

Because of the Action Level exceedances, Carraway was placed on the annual maintenance and monitoring program with respect to radon, in accordance with FDOH guidance and FSU policy. The 2023 annual follow-up testing for Carraway was conducted in November 2023. Two of the three original elevated testing locations, all of which are located within the former Antarctic Research Facility, showed results less than the Action Level, and the result for one location was equal to the 4.0 pCi/L Action Level. The attached table summarizes all of the radon testing that has been conducted at Carraway to date.

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.

The data summarized herein reflect a condition that is consistent with many buildings in Florida and throughout the United States. The limited area of elevated results and the occupational nature of potential exposures suggests no significant health concern at the Carraway Building for faculty, students, or visitors. The annual testing program for Carraway will be continued per FSU policy.

RADON MEASUREMENTS - Carraway Building, Florida State University

Location	Sampling Dates	Number of Results	Min *pCi/L*	Max *pCi/L*	Notes
Basement	24 to 26 Oct 2022	11	<0.4	9.3	Four results (3 locations and 1 duplicate) in one large room exceed 4 pCi/L
Annual Follow-Up Testing					
2023	Original three elevated locations tested for follow-up in November 2023: results were 4.0 pCi/L, 3.6 pCi/L, and 3.6 pCi/L				

pCi/L = picocuries per liter