

NSAW Radon Assessment 2017

QUESTIONS AND ANSWERS

Q. Why are you testing for radon?

A. Testing is a key component of the Navy Radon Assessment and Mitigation Program.

Q. Can you simply test for radon outside to see if we are exposed to high levels?

A. Radon levels in the outdoors pose a relatively low threat to human health. Radon is an indoor air quality concern because it can accumulate to dangerous levels.

Q. Is there an issue with radon?

A. At this time there are no known issues with radon in the occupied buildings and areas at NSAW.

Q. Is my health at risk if I work or worked in a building at NSAW?

A. The assessment will help us determine if there are any above normal levels of radon. Long term exposure to elevated levels of radon gas can lead to an increased risk of developing lung cancer. The key word here is “long term” as how long an individual is exposed is a key factor in increasing the risk of developing lung cancer. The second factor is the exposure level or concentration of radon in the air to which an individual is exposed. But again, at this time there are no known issues with radon in the occupied buildings/ areas at NSAW.

Q. Where can I find additional information about the radon testing happening at NSAW?

A. We have established a website at: www.cnmc.navy.mil/NSAWRadon

UNDERSTANDING RADON

Q. What is radon?

A. Radon is a colorless, odorless, tasteless gas that is produced by the radioactive decay of naturally occurring uranium which is a common component of the soil and rocks under all homes and buildings around the world. Outdoors, radon is harmlessly diluted by the atmosphere. However, sometimes in enclosed places, radon can accumulate to levels prompting corrective action. It's a colorless, odorless, tasteless gas that is produced by the radioactive decay of naturally occurring uranium and thorium found in soils and rocks such as granite and shale. For instance, the uranium (found in soils throughout the world) decays into other elements, one of them being radon gas. The gas molecules work their way up through the rock fissures and soils to escape into our air. We breathe small concentrations of it every time we step outdoors, where it is relatively harmless. [Analogy: Drop of water in the ocean.] Radon undergoes several more radioactive decays, creating radioactive substances known as radon

daughters or progeny. The atom finally decays into a stable atom. As radon progeny undergo radioactive decay, radiation is released in forms that include

- High-energy alpha particles,
- Beta particles, and
- Gamma radiation.

Radon is present in outdoor air but may collect in basements or ground level spaces. Thus, indoor environments are commonly studied to determine whether radon is present at high concentrations. Long-term exposure to radon gas at high concentrations can potentially impact health over time. Wherever air or moisture seeps into buildings through drains, joints, pores, cracks, foundations or exterior walls, radon levels can increase.

Q. Is radon dangerous?

A. Long term exposure to elevated levels of radon gas can lead to an increased risk of developing lung cancer.

Q. How does radon enter a building?

A. There are a variety of ways in which radon may enter a building. Most commonly by simple diffusion through building materials, cracks and structural openings, drainage pipes, etc. In addition, improperly balanced or designed HVAC systems, use of exhaust systems with insufficient make-up air (negative pressure) and building envelope tightness.

Q. How common is radon?

A. Radon comes from natural breakdown (radioactive decay) of uranium. It is usually found in rock and soil uranium in varying amounts throughout the earth's crust, and has been found in all 50 U.S. States, Guam, Europe, Asia and elsewhere.

Q. Can it be completely removed from indoor spaces?

A. Radon is a naturally occurring gas that can exist in the air we breathe. Unlike other environmental hazards, radon cannot be permanently removed. However, with the installation and proper maintenance of a mitigation system, radon levels can be controlled.

RADON TESTING REQUIREMENTS FOR NAVY FACILITIES

Q. What is NAVRAMP?

A. The Navy Radon Assessment and Mitigation Program (NAVRAMP) is the Navy's plan to identify, mitigate and prevent radon in Navy-occupied buildings.

Q. What buildings will be tested?

A. NSAW has identified approximately 75 buildings within NSAW fence lines that are currently occupied (or areas readily occupiable per the NAVRAMP guidance). The basements and ground floors of these buildings will be tested.

Q. Who is responsible for conducting radon tests in NSAW buildings?

A. NAVFAC Washington Environmental has overall environmental monitoring responsibilities for all NAVFAC facilities. NSAW PWD in coordination with NAVFAC Washington will conduct this round of tests.

RADON GUIDELINES PER EPA AND OSHA

Q. What is the EPA action level for radon?

A. The U.S. EPA has a recommended action level of 4 picoCuries per liter (pCi/L). This action level is for residential exposure. EPA recommends mitigation of any home or school whose radon level is above 4 pCi/L. EPA has no guidance that applies directly to the workplace. The Navy, however, adheres to its Environmental Readiness Program Manual (OPNAV M- 5090.1) and the Navy Radon Assessment and Mitigation Program (NAVRAMP) for standards and guidance on radon and has adopted the EPA action level for its buildings, including office buildings at 4 pCi/L.

Q. What is the OSHA Permissible Exposure Limit for Radon?

A. For work areas occupied for 40 hours per week, with an exposure to radon greater than 100 pCi/L, OSHA requires employers to take action (either by eliminating the hazard, affecting mitigation or reducing the number of hours worked in the area).

MITIGATION AND NOTIFICATION

Q. What is the plan to mitigate the exceedances found during the testing?

A. Pending results of testing to be completed around June 2018, we will identify next steps at that time.

The only mitigation techniques allowed under NAVRAMP are those that prevent radon gas from entering the building or those that dilute the gas by use of supplemental ventilation. Radon mitigation can be divided into two basic categories: passive and active. Passive mitigation is defined as a nonmechanical means of radon abatement or control by the use of sealing cracks, balancing an existing mechanical system, installing a passive stack vent pipe during construction, or increasing the natural ventilation rate of the building substructure (i.e., the crawlspace). The other category, active mitigation, entails using mechanical means, such as a fan or blower, to either dilute or control the entry of radon into the living area. Because of the diversity in style and construction of naval installation buildings, a single mitigation approach for all buildings at an installation is highly unlikely.

Q. How will employees and other stakeholders of NSAW be notified of the testing and results?

A. NSAW is using a variety of means to notify all concerned including email, web postings, and outreach sessions. Outreach Sessions will be held during each phase of the assessment for facility maintenance representatives, janitorial/custodial staff, recycling collection staff, and NSAW personnel through their respective building managers. Email notices will be/were sent out to employees and tenant commands.

An information session, jointly hosted by NSAW and NAVFAC Washington, will be/was held 19 May and follow-up communications will be planned as required for the duration of this effort. Information including fact sheets about radon and other materials have been posted on the CNIC website where personnel can learn more about radon and radon testing if they choose. A link to the NAVRAMP, which discusses procedures for testing can be found at: www.cnic.navy.mil/NSAWRadon.

HR CONCERNS/WORKERS' COMPENSATION AND REASONABLE ACCOMMODATIONS

Q. During the testing period or while this issue is being mitigated, will you offer affected employees alternate work sites or allow them to telework?

A. At this current time there is no known issue with radon in the occupied buildings at NSAW. As soon as the radon testing results are in, we will be in a better position to make a determination on the next steps, if any. The Assessment itself will have no impact on employees.

Q. What more can and should be done to minimize exposure?

A. At this current time there is no known issue with radon in the occupied buildings at NSAW.

Q. Will Workers Compensation pay for employee treatment or other measures designed to protect themselves from radon exposure?

A. Workers Compensation is an insurance provided by the employer that is designed to reimburse employees for medical expenses and or lost wages incurred due to work-related injuries. Worker's Compensation is neither funded nor intended to pay for preventive or protective measures.

Q. Will Workers Compensation pay for an employee to be tested for radon exposure?

A. There are no recommended or accepted medical tests for radon exposure. Furthermore, the law (29 CFR 1910.1096, Ionizing Radiation Standard) does not recommend medical surveillance or monitoring following radon exposure in the workplace. The Federal Employee Compensation Act (FECA) does not provide for routine examination of an employee who has been exposed to

hazards of the workplace unless it is part of a diagnostic work-up leading to medical diagnosis of a causally work related disease

Q. Who may I contact for additional information about radon or the tests that are being conducted?

A. You are encouraged to follow the appropriate chain of command and speak to your supervisor about any questions or concerns. You can find additional information on the NSAW website: www.cnmc.navy.mil/NSAWRadon In addition, some helpful information may be found on the US EPA website (radon homepage) at: <http://www.epa.gov/radon>.

HEALTH CONCERNS

Q. How do we really know the workforce is doing fine until such time that they have been given all the information (levels over time, in each room, what if any mitigation efforts have been implemented and on what schedule, level of knowledge regarding radon and its health effects, etc.,).

A. There is no indication of increased levels of Radon in occupied areas at this time. Leadership is committed to being completely open and transparent with regard to the radon levels in Naval facilities. We will continue the communication efforts and provide updates via email and on the internet page as we receive results in about a year.

Q. Can and should I wear a mask?

A. At this current time there is no known issue with radon in the occupied buildings at NSAW.

Q. How long of an exposure must a person be subjected to before he/she passes the "safe" exposure limits?

A. The OSHA standard for workplace exposure to radon is 100 pCi/L for a 40 hour work week for a year.

Q. Can we get a copy of the results of the radon-measuring/detection devices that are placed in our immediate areas?

A. Yes, the results from the testing will be made available on the NSAW Radon page and communicated to all personnel once the results have been determined.

Q. What are the health concerns or hazards for the employees who have been exposed to elevated levels of radon?

A. Occupational exposure to radon would fall under the Department of Labor-OSHA standards. Under this standard, the Permissible Exposure Limit (PEL) for Radon is 100 pCi/L for an adult worker during a 40-hour work week. (Source: EPA, A Citizen's Guide to Radon, OPA-86-004,

1986) There are no immediate health concerns. Radon exposure poses an increased risk to the individual of developing lung cancer later in life. There is no known issue with radon in the occupied buildings at NSAW; however, testing is a key component of the Navy Radon Assessment and Mitigation Program