



SCHOOL OF OCEAN AND EARTH SCIENCE AND TECHNOLOGY

Press Release

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## UH Mānoa will deploy state-of-the-art technologies to investigate military munitions and chemical warfare material, disposed of off Pearl Harbor

A full array of state-of-the-art technologies, owned and operated by UH Mānoa's School of Ocean Earth Science and Technology (SOEST), will be used over the next two and a half weeks to investigate the location and condition of military munitions, which may include chemical munitions and containers of bulk chemical agent (referred to as chemical warfare material), disposed of at a deep water site (Site HI-05) south of Pearl Harbor in 1944. (Chemical warfare material is known to have been sea disposed in Hawaiian waters between 1933 and 1946.) The Department of Defense (DoD) disposed excess, obsolete or unserviceable munitions, including chemical warfare material, in coastal waters off the United States prior to 1970, at which time it discontinued this practice. Congress subsequently prohibited sea disposal of waste materials into the ocean 1972.

A UH research vessel will be used to deploy remotely operated underwater vehicles and three-man research submersibles that will observe material UH has identified as potential chemical munitions. On board scientists and technicians will collect water and seafloor sediment samples in the vicinity of identified disposal sites and at control sites that are away from the identified disposal sites. A separate vessel will collect fish and shrimp from the same areas. Chemical analysis for munitions constituents, including explosives and chemical agents, will be performed to assess any potential impact on human health and the environment.

This work is being conducted as part of a \$3 million (approximate) award, which was made possible through the efforts of Hawaii's Congressional delegation, by the DoD through its National Defense Center for Energy and the Environment. UH is undertaking the project in partnership with DoD; DoD's National Defense Center for Energy and the Environment; and Environet, Inc., a local environmental consulting firm. In addition, the National Oceanic and Atmospheric Administration is consulting with the University of Hawaii on scientific matters and the U.S. Army's Edgewood Chemical Biological Center is providing chemical safety and analytical support for the expedition.

"UH is a recognized leader in the field of underwater research. We possess the vessels, underwater vehicles, equipment and experience required to search for munitions that were disposed in very deep water (e.g., over 1,000 feet deep) and we have the technical expertise and scientific support needed to investigate the area once munitions are located. We have successfully partnered with DoD on previous research efforts, and are confident we can provide the scientific data required to assess the potential impact of sea disposed munitions on human health and the environment," states UH's Principal Investigator, Dr. Margo Edwards.

As part of the project, UH will also develop and demonstrate methodologies for surveying and sampling other historic munitions sea disposal sites.

For further information about the project, see [www.hummaproject.com](http://www.hummaproject.com)

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The *Pisces V*, one of two deep-diving submersibles operated by the Hawaii Undersea Research Laboratory at the University of Hawaii at Manoa. Image credit SOEST/ University of Hawaii at Manoa.