

PUBLIC WITNESS TESTIMONY by the HEALTH PHYSICS SOCIETY

Testimony written by David Connolly on behalf of the Health Physics Society, approved by Health Physics Society Leadership, and submitted to the Appropriations Committee of the U.S. Congress on March 29, 2013.

This written testimony for the record for fiscal year 2014 is submitted on behalf of the Health Physics Society (HPS). By this testimony, HPS stresses the critical importance of continued funding for the Integrated University Program (IUP) appropriated to the Nuclear Regulatory Commission (NRC) to support health physics training programs, students, and faculty. This continued support is necessary to address the shortage of health physicists, which is an issue of extreme importance to the safety of our nation's workers, members of the public, and our environment.

Health Physics is the profession that specializes in radiation safety, which is necessary for the safe and successful operation of the nation's energy, healthcare, homeland security, defense, environmental protection and regulatory programs. Although radiation safety is fundamental to each of these vital national programs, there is no single federal agency that serves as a home and champion for the health physics profession as this profession cuts across all these sectors. However, health physics is necessary for all these sectors to exist as it supports the principle disciplines in these programs that are championed by multiple federal agencies, such as engineers, medical professionals, law enforcement professionals, military personnel, and environmental scientists.

As the nation's development and use of radioactive materials grew following the end of World War II, the nation's demand for health physicists increased in the areas of energy, defense, public health, and environmental protection. This need was largely supported by student fellowships and scholarships mainly from the Atomic Energy Commission (energy and defense) and Public Health Service (public health and environmental protection). However, over the years agencies and their missions changed, the nuclear power industry faltered and the Department of Energy (DOE)

nuclear weapons complex downsized following the end of the cold war. This resulted in a dwindling of the academic program support from federal agencies until the last remaining support from DOE was terminated in FY99. The result was a decline in the supply of new health physicists, and the age of existing health physics workforce increased despite the continued need for health physicists in energy, defense, public health, and environmental protection programs as well as an exponential growth in the medical and academic communities. This resulted in a human capital crisis in health physics.

With the realization of the growing health physics human capital crisis in the early years of the 21st century, Congress and the DOE took action to add support to the nuclear engineering academic programs through DOE programs in the Office of Nuclear Energy (NE) and eventually agreed that this was an appropriate support mechanism for health physics academic programs in institutions across the country. In fiscal year 2005, Congress appropriated money to DOE-NE for a health physics fellowship and scholarship program as part of the University Reactor Fuel Assistance and Support budget item. Shortly thereafter, Congress reinforced its position that DOE needed to support the health physics academic programs in provisions of Section 954 of the Energy Policy Act of 2005.

Despite the need for an increased supply of health physics professionals, the DOE ceased funding the Congressionally authorized DOE-NE health physics fellowship and scholarship program after only two fiscal years of funding the programs at minimal levels.

In fiscal year 2008, Congress, led by the House Subcommittee on Energy and Water Development, and Related Agencies, transferred appropriations for a Nuclear Education Program, including health physics programs, to the NRC. The Health Physics Society applauds this insightful action. The NRC does have a vested interest in radiation safety due to its own activities associated with most of the sectors covered by the health physics profession. The NRC quickly addressed the demands

of starting a new education support program by opening two grant opportunities for student and faculty support. Not only has the NRC ably administered this program but also it has brought needed assistance to both students and academic programs at colleges and universities throughout the entire country.

In order for the Committee to be able to put a human face on this program, Nicole Martinez, MA, a recent recipient of funding under this program, offers the following testimonial for your consideration.

“I attended Texas A&M University for my undergraduate degree and graduated Summa Cum Laude in December 2004 with a B.S. degree in Applied Mathematical Sciences. Upon graduation, I was commissioned in the United States Navy and became an instructor at Navy Nuclear Power training Command in Goose Creek, South Carolina. After separating from the USN in 2008, I took a job with General Physics Corporation in Montrose, Colorado. After a little over a year of working for GP, I decided to attend graduate school for health physics at Colorado State University.

After my first semester, my original advisor left the university and there was no longer funding available for me. As such, I began looking for jobs and was planning on leaving the program. However, a grant funded by the Nuclear Regulatory Commission under the Integrated University Program came in, which enabled me to remain in school. My master’s research focused on the occupational radiation dose received by persons working with veterinary positron emission tomography at CSU’s veterinary teaching hospital. I defended my thesis in the summer of 2011 and decided to continue on for a PhD. As part of a collaborative effort with scientists at Savannah River Site, I spent a little over a year in an internship at Savannah River National Laboratory, which included data collection for my dissertation project; my current research is in the remote sensing of plant stress, specifically reflectance spectroscopy, which has potential applications in phytoremediation. I passed my

preliminary exams during the summer of 2012, and I returned to Fort Collins in January 2013 to begin data analysis and the writing process at CSU.”

Without assistance from the NRC, our country would not have the benefit of Ms. Martinez’s talents, and those of her fellow scholarship recipients, in the field of health physics for the future. Only with support from the NRC will we be able to continue to be able to maintain the academic infrastructure and scholarship funding that will train tomorrow’s health physicists.

The Committee’s favorable consideration of this request will help meet our nation’s radiation safety needs of the future.