



HEALTH  
PHYSICS  
SOCIETY

## HUMAN CAPITAL CRISIS IN RADIATION SAFETY

### POSITION STATEMENT OF THE HEALTH PHYSICS SOCIETY\*

Adopted: August 2001

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The Health Physics Society (HPS) recommends significant financial support by the Congress and federal agencies for health physics programs in academic institutions to support faculty, students, and research associated with these programs and thus ensure an adequate supply of qualified radiation safety professionals.

A critical shortage exists in the supply of qualified radiation safety professionals throughout a broad spectrum of activities within the United States including medical practice and research, regulatory oversight, academic research, environmental protection, occupational safety, and the research and application of nuclear technologies. The public and occupational health, and environmental protection concern created within the HPS by this growing shortage is the potential for unnecessary radiation exposure of workers, the general public, and the environment. Further, with expanding uses of radiation in diagnostic and therapeutic medical applications and the potential expansion of nuclear technology to meet the nation's future energy needs, it is clear to the radiation safety community that the current imbalance between supply and demand will significantly worsen in the near term after which it will soon become untenable. The shortage of qualified radiation safety professionals will compromise the rigorous oversight necessary for the continued safe use of radiation for the benefit of the citizens of the United States. Although the existing academic programs have the potential to expand and meet the current demand for graduates in health physics, this potential cannot be realized without rapid and substantial investment by the Congress and the federal agencies responsible for the stewardship of radiation safety in the United States.

A recent survey conducted by the Health Physics Society indicates that present demand for radiation safety professionals is approximately 130% of supply.<sup>1</sup> Demand during the next five years, which appears to be related solely to attrition, outstrips supply by nearly 160%. Anecdotal information from

health physics academic program directors indicates that current requests for graduating students far outstrips supply. HPS membership data indicate that demand produced by attrition is not being met by supply based upon the decline in membership. It is anticipated that 15% of the membership of the HPS are within five years of retirement age. Faced with growing retirement eligibility approximately 35% of the fiscal year 1998 federal workforce will be eligible for regular retirement by 2006 – agencies may have difficulties replacing the loss of skilled and experienced staff.<sup>2</sup> Moreover, some agencies face an imposing challenge in attempting to fill certain mission-critical occupations because of increasing competition in the labor market. The Nuclear Regulatory Commission, for example, must deal with declining enrollments in nuclear engineering and other fields related to nuclear safety.<sup>3</sup>

The rigorous oversight of both private and public endeavors involving radiation exposure cannot be ensured with a shortage of qualified radiation safety professionals. The consequence of these conditions range from unnecessary radiation exposures to inappropriate expenditures of limited resources. Pre-emptive federal support within the Public Health Service, Department of Energy, and Nuclear Regulatory Commission, as examples, was successful in avoiding such shortages in the past.

The HPS has, for many years, provided support to students in health physics. Many members of the Society donate time and effort to health physics academic programs, in addition to their substantial effort in providing radiation fundamentals training to Science Teachers. However, the critical human capital shortage in radiation safety is overwhelming the Society's efforts to help respond to this crisis.

Accordingly, the Health Physics Society recommends substantial financial support of academic related health physics programs and to students enrolled in these programs.

## REFERENCES

<sup>1</sup> The Health Physics Society's *Newsletter*, Volume XXIX, Number 8, August 2001.

<sup>2</sup> Human Capital: Meeting the Government Wide High-Risk Challenge (GAO-01-357T, February 2001).

<sup>3</sup> Major Management Challenges and Program Risks: Nuclear Regulatory Commission (GAO-01-259, January 2001).

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\* The Health Physics Society is a non-profit scientific professional organization whose mission is to promote the practice of radiation safety. Since its formation in 1956, the Society has grown to approximately 6,000 scientists, physicians, engineers, lawyers, and other professionals representing academia, industry, government, national laboratories, the department of defense, and other organizations. Society activities include encouraging research in radiation science, developing standards, and disseminating radiation safety information. Society members are involved in understanding, evaluating, and controlling the potential risks from radiation relative to the benefits. Official position statements are prepared and adopted in accordance with standard policies and procedures of the Society. The Society may be contacted at: 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101; phone: 703-790-1745; FAX: 703-790-2672; email: HPS@BurkInc.com.