HEALTH PHYSICS SOCIETY

RADIATION SAFETY CULTURE

POSITION STATEMENT OF THE HEALTH PHYSICS SOCIETY*

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The position of the Health Physics Society is that users of radiation and radioactive material should establish a collective commitment by their managers and employees to emphasize safety over competing goals to ensure protection of people and the environment. The precepts of this position are:

1. Individuals and organizations performing activities with radioactive materials and radiation-producing machines should establish and maintain a positive radiation safety culture commensurate with the safety and security significance of their actions and the nature and complexity of their organizations and functions.

2. The responsibility for establishing a radiation safety culture is a shared responsibility by management and workers. The active participation of both is essential for success.

3. Management should establish incentives and sanctions to reinforce desired positive radiation safety behaviors. Management communications of expectations must be continual and clear.

4. Federal, state, and local regulatory agencies cannot successfully regulate workplace culture. Their role should be to encourage and mentor the development of a robust safety culture, rather than to attempt to impose and enforce specific behaviors appropriate to radiation safety culture.

5. Resources should be effectively allocated by management to address safety and schedule. Protecting workers, the public, and the environment must be the top priorities whenever work activities are planned and performed.

6. The role of radiation protection professionals and their scientific and professional societies is to promote a positive radiation safety culture in the workplace.

The Health Physics Society adopts the definition of Nuclear Safety Culture established by the United States Nuclear Regulatory Commission (U.S. NRC) (NRC 2011) and expanded its applicability to non-NRC regulated sources of radiation such as machine-produced radiation and natural background sources of radiation. The Health Physics Society's definition of radiation safety culture:

> *"Radiation Safety Culture is the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment."*

The Health Physics Society believes that certain individual and organizational traits are present in a positive radiation safety culture. A trait is a pattern of thinking, feeling, and behaving that emphasizes safety, particularly in goal conflict situations, e.g., production versus safety, schedule versus safety, and cost versus safety. There are several manifestations of these traits. In developing their definition, the U.S. NRC solicited inputs from licensees and scientific and professional organizations on which traits are most dominant or important in demonstrating the existence of a positive radiation safety culture. Although the matrix of nine traits shown below is a compilation of those inputs, these nine traits may not be all inclusive. Nevertheless, the matrix of nine traits below represents an excellent cross section of thought from industries and organizations having responsibilities for radiation safety (DOE 2011, NRC 2011).

Leadership Safety Values and Actions	**Problem Identification and Resolution**	**Personal Accountability**
Leaders demonstrate a commitment to safety in their decisions and behaviors.	Promptly and fully identify, evaluate, and correct safety issues commensurate with significance.	Take personal responsibility for safety.
Work Processes	**Continuous Learning**	**Environment for Raising Concerns**
Plan, implement, and control work activities so that safety is maintained.	Seek out opportunities to learn and implement ways to ensure safety.	Encourage raising safety concerns without fear of retaliation, intimidation, harassment, or discrimination.
Effective Safety Communications	**Respectful Work Environment**	**Questioning Attitude**
Maintain a focus on safety.	Permeate trust and respect through the organization.	Avoid complacency and continually challenge existing conditions to identify discrepancies that might result in inappropriate action.

References

U.S. Department of Energy. Integrated safety management system guide. DOE G 450.4-1C. Washington, DC: U.S. Department of Energy, Office of Health, Safety and Security; 2011.

U.S. Nuclear Regulatory Commission. Final safety culture statement. NRC-2010-0282. Federal Register 76:34773–34778; 2011.

*The Health Physics Society is a nonprofit scientific professional organization whose mission is excellence in the science and practice of radiation safety. Since its formation in 1956, the Society has represented the largest radiation safety society in the world, with a membership that includes scientists, safety professionals, physicists, engineers, attorneys, and other professionals from academia, industry, medical institutions, state and federal government, the national laboratories, the military, 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.