HEALTH PHYSICS SOCIETY

Specialists in Radiation Safety

Health Physics Society Comments to the

**National Institute for Occupational Safety and Health;
Advisory Board on Radiation and Worker Health**

presented by

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President**

at the public meeting held at the

**Westin Casuarina,
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Good evening. My name is Brian Dodd, and I am the President of the Health Physics Society as well as a Las Vegas resident. I want to thank the National Institute for Occupational Safety and Health's (NIOSH), Advisory Board on Radiation and Worker Health (ABRWH) for holding this public meeting and for providing me with the opportunity to make some comments on behalf of the members of the Health Physics Society.

For those not familiar with the Health Physics Society (HPS), it is an independent scientific organization whose members are professionals in the field of radiation safety. The Society's mission is excellence in the science and practice of radiation safety. HPS activities include encouraging research in radiation science, developing standards, and disseminating radiation safety information.

By way of background on my comments today, I would like to quickly review the Society's Position Statement entitled "Compensation For Diseases That Might Be Caused By Radiation Must Consider The Dose" (available on the HPS's web site http://hps.org/documents/Compensation.pdf) . This statement was first adopted in March 2000 and states that the HPS believes that a person's radiation dose must be considered in determining whether to provide compensation for a disease that could have been caused by radiation. It also states that there should be no compensation for persons whose lifetime doses are less than approximately 0.1 Sv (10 rem, 10,000 mrem).

The Health Physics Society strongly supports compensation for workers who are likely to have been harmed by occupational radiation exposure. Our knowledge about the potential health effects of ionizing radiation is extensive. It is known that radiation cannot cause all types of disease. It is also known that for those diseases observed to be caused by radiation, the likelihood that radiation will cause the disease increases as the dose increases. In other words, any particular disease's likelihood to have been caused by radiation is dependent on the dose to the individual. This relationship of increasing likelihood of disease with increasing dose has only been observed for doses greater than approximately 0.1 Sv. The likelihood of radiation-induced disease below this level, if it exists at all, is so small that it is not measurable, it is not

a matter of scientific fact, and it can only be estimated utilizing hypothetical mathematical dose-response models. Presumption of causation has no scientific or medical basis without consideration of dose. That is, the simple fact that some radiation exposure occurred is not a measure of hazard. The amount of exposure (i.e., the dose) is the only measure of the hazard and the only measure of the likelihood a disease or injury has been caused by radiation.

It is with this background that the HPS is concerned with the pressure on the ABRWH to make every facility and cohort a Special Exposure Cohort (SEC). The Society is concerned because of the presumption that a cancer in a member of a designated SEC is caused by radiation, and is paid compensation without regard to the dose. The HPS would urge the ABRWH to resist the pressure and use dose reconstruction as the basis for compensation, except in very extraordinary situations where even broad ceilings on an individual's dose cannot be estimated. It is feared that there may be a tendency for the ABRWH to take the easy path and perhaps save the money of a dose reconstruction by generously granting SEC status. However, the causation of a caner by radiation is a question of science and the science should be followed whenever possible.
Abandoning science in a scientific issue can set a precedence that could result in a mis-appropriation of public money and could reinforce the common fear that any level of radiation will cause cancer, thereby influencing society to abandon beneficial uses of radiation technology.

I want to reiterate the Health Physics Society’s fundamental position that it strongly supports compensation for any worker that is likely to have been harmed by occupational radiation exposure. However, it also strongly believes that such a determination should be informed by the science.

That concludes my comments for today. Once again, thank you for the opportunity to provide them in this forum.