

Dr. Noill K. Weaver, director of health affairs for the American Petroleum Institute, said, "The petroleum industry has recognized for many years that adverse effects occur from benzene only at what are now considered high exposure levels, and are readily prevented by controlling exposures in accordance with the present standard. Currently available evidence does not provide a rational basis for reducing this standard. Additional research is needed to better establish dose-response relationships before regulatory actions with such costly, far-reaching consequences are considered."

Dr. Rulon W. Rawson, a professor at the University of Texas System Cancer Center in Houston, rebutted OSHA's contention that scientific evidence indicates there is no safe level for exposure to a cancer-causing agent. Dr. Rawson pointed out that there are safe levels of exposure and perhaps the best example is provided by sunlight. "If there were no safe levels for exposure [to sunlight]," he said, "then we would all get skin cancer. But that clearly is not what happens."

Agreeing with Dr. Rawson's testimony, Dr. Arthur Furst, dean of the graduate division and director of the Institute of Chemical Biology of the University of San Francisco, also testified that OSHA is wrong in claiming that there is no safe level for exposure to cancer-causing agents. "Experimentally," Dr. Furst said, "that assertion cannot hold up. ...as you go lower and lower in concentration with a chemical that has been shown to produce tumors in a specific species of animal, you will find that the latent period becomes longer and longer until finally you get a dose level where no animal dies of cancer within the entire life span of the animal. So, the idea of no threshold really cannot hold up."

William R. Gaffey, senior epidemiologist at the Stanform Research Institute, in his testimony, reported on a study of refinery workers health prepared in 1974-75 by Tabershaw/Cooper Associates, Inc., for the American Petroleum Institute. The study covered every eligible worker in 17 representative refineries. "We found," Dr. Gaffey said, "no excess mortality from leukemia in refinery workers. Leukemia mortality is actually slightly less than one would expect in a comparable sample of the general population, although that is not an unexpected finding in an employed population. Worker mortality rates will generally tend to be less than the general population."

Also submitting testimony was Dr. Robert E. Eckhardt, director of the research and environmental health division of the medical department of the Exxon Corp., who is also clinical associate professor of environmental medicine at the New York University Medical School and clinical associate professor of medicine at Cornell Medical School. He emphasized that "the awareness of the petroleum industry to the serious toxic properties of benzene has led this industry to institute careful controls so that exposures for many years have been maintained at quite low levels. Thus, acknowledging that exposure levels above 100 parts per million [parts of air] may lead to leukemia, the data suggests that levels below this, but above one part per million, do not lead to leukemia."

As it now stands, the proposed OSHA standard would apply not only to refinery and pipeline workers, but also to production workers in oil fields. However, it was noted that oil wells and related systems are "closed systems," and thus loss of hydrocarbons such as benzene are normally kept to a minimum. Moreover, there is no evidence that benzene poses a health hazard to production workers.

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