

July 20, 2000

MEMORANDUM TO: Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan  
Commissioner Merrifield

FROM: Dennis K. Rathbun, Director **/RA/**  
Office of Congressional Affairs

SUBJECT: HOUSE SCIENCE HEARING CONCERNING GAO REPORT ON  
RADIATION STANDARDS

On July 18, 2000, the House Science Committee's Subcommittee on Energy and Environment held a hearing to re-examine the scientific basis for the Linear No-Threshold (LNT) model of low-dose radiation. The hearing was chaired by Representative Ken Calvert (R-CA) and in attendance were Ranking Member Jerry Costello (D-IL) and Representative Vernon Ehlers (R-MI). The basis for the hearing was a General Accounting Office (GAO) report, "Radiation Standards: Scientific Basis Inconclusive, and EPA and NRC Disagreement Continues," which was prepared at the request of Senator Pete Domenici (R-NM) and released at a press conference on July 13, 2000.

Chairman Calvert and Ranking Minority Costello both noted in their opening remarks that costs need to be considered in setting standards and cleaning up contaminated sites with Representative Calvert stating that the costs for cleaning up West Valley, NY, have escalated from \$1 billion to \$4 billion due to DOE reliance on the LNT. Representative Costello, however, noted that the science is inconclusive and that doses to workers at Paducah, KY, and Portsmouth, OH, have led to deleterious health effects. He also cautioned that no dollar value can be placed on human health.

GAO Associate Director Ms. Gary Jones summarized their report saying U.S. radiation standards for public protection lack a verified scientific basis, below certain exposure levels (100 millirem per year from human-generated sources) the effects of radiation are unproven, and the LNT is useful and simple but controversial. She pointed out that, absent conclusive evidence, NRC and EPA have set sometimes differing exposure limits and continue to be in disagreement. The disagreement being over policy judgments and not scientific judgments. This has complicated cleanup efforts where nationwide, long-term overall costs are higher due to more stringent standards. It also complicates setting standards for a Yucca Mountain high-level waste repository especially relating to groundwater protection. In light of its findings, GAO recommends Congressional action to resolve the NRC-EPA differences.

Dr. Paul Rohwer, on behalf of the Health Physics Society, expressed no opinion on the LNT but said there is no evidence of adverse health effects below 10 rem. He criticized setting limits based on fractions of background radiation and called use of the LNT under 10 rem

“inappropriate” and a “waste of money.” Dr. Charles Meinhold, representing the National Council on Radiation Protection, testified that the problem in setting radiation standards stems from Congress’ establishment of risk limits of  $1 \times 10^{-4}$  and  $1 \times 10^{-6}$  for Superfund cleanups. He proposed that the International Council on Radiation Protection recommendation of  $5 \times 10^{-4}$  would be more appropriate.

Dr. Steven Wing of the University of North Carolina, relying on his studies of Oak Ridge, TN, workers and questioning the use of bomb survivor data, said that there are adverse health effects at low radiation doses. He believes current standards aren’t protective and the U.S. should consider setting standards based on protecting the most vulnerable individuals (e.g., elderly, children, etc.) He advised against having a single x-ray when pregnant. When asked whether he supported a zero exposure standard, he responded that zero is most protective but ultimately it is up to the people to determine a suitable standard.

Representative Shelley Berkley (D-NV), although not a member of the Committee, presented a statement that cautioned against setting new, less stringent standards for Yucca Mountain calling such an effort “radiation exposure discrimination.” She said that past assurances of safety during atomic testing proved false and have undermined the public’s trust in government especially in setting standards for radiation protection.

Subcommittee staff indicated that a follow-up hearing is likely to be held in September that would include NRC, EPA, and National Academy of Sciences.

Copies of the testimony are available in OCA.

cc: OEDO  
NRR  
NMSS  
RES  
OGC  
OGC (Cyr)  
OPA  
SECY  
OIG  
ACNW  
OCIO  
OCFO  
OCAA

CONTACT: Tom Combs, 415-1776