



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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MEMORANDUM FOR: E. J. McAlpine, Acting Chief, Material  
Control Licensing Branch

FROM: Manfred von Ehrenfried, Chief, Test  
and Evaluation Branch


SUBJECT: RESPONSE TO BOB SHEPARD'S PAPER ON BIAS CORRECTIONS

We found the subject paper useful and instructive. It provides good insight into factors concerning bias corrections. Particularly significant was the delineation of the limitations of current NRC regulations and standards on bias corrections - showing that we often miss the forest for the trees. The paper correctly points out that data outside of reasonable control limits is often a much more significant problem than bias.

We also appreciated the realization that present NRC criteria induce the licensee to keep his sample size small in order to reduce the likelihood of having to make bias corrections. From the point of view of safeguards, this should be corrected.

The suggested licensee alternatives presented by Shepard need further investigation prior to NRC acceptance. We would suggest investigation of other possibilities also.

Shepard's paper is important in clearly pointing out that bias is only one element of interest to Safeguards. In order to develop an effective Safeguards system, it is essential that proper emphasis be placed on all elements of the system. We feel that the role of bias has been overly exaggerated frequently in the past.

  
Manfred von Ehrenfried, Chief,  
Test and Evaluation Branch,  
Division of Safeguards

cc: R. A. Brightsen