Center for Nuclear Waste Regulatory Analyses

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September 18, 1992 Contract No. NRC-02-88-005 Account No. 20-3702-062

U. S. Nuclear Regulatory Commission Attn: Mr. R. Neel Mail Stop 4-H-3 Washington, D. C. 20555

Subject:

Submittal of Paper on Expert Judgment: Intermediate Milestone (IM) 3702-062-210-010

Dear Mr. Neel:

The paper on elicitation of expert judgment was recently completed. The paper was prepared by Drs. Robert L. Winkler, Duke University, and Stephen C. Hora, University of Hawaii. The content of the paper reflects the authors' understanding of the study requirements, which were outlined in meetings with the NRC staff. A copy of the final paper is enclosed for your review and acceptance. Submittal of this paper fulfills IM 3702-062-210-010, which was scheduled for September 21, 1992.

In preparing the subject paper, Drs. Hora and Winkler conducted a broad survey of literature on evaluations of expert judgments that were elicited to establish probability distributions. The paper provides persualive evidence that high quality probability information can be obtained when elicited through a formal, systematic, and careful manner. In addition, the elicitation approach provides step-bystep documentation so that the basis for the experts' judgments can be reviewed (i.e., audited and traced) and understood.

In addition to the paper, Drs. Hora and Winkler have completed two draft manuscripts on techniques for: (1) combining expert judgments; and (2) validation of combining techniques. These manuscripts are expected to be finalized and used in future papers on this topic.

If you have any questions, please call me at (512) 522-3805.

Very truly yours, RG-Bac .-

Robert G. Baca, Manager

Performance Assessment & Hydrologic

Transport

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