



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
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SEP 27 1995

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OBSERVATIONS ON TECHNICAL REPORTS AND SUPPORTING ACTIVITIES
(SCPB: N/A)

During the last year, the Office of Quality Assurance (OQA) has observed an increasing number of lapses from good technical practice appearing in both reports and, more seriously, in the technical work supporting these reports. This awareness has resulted from the use of performance-based audits, the large number of surveillances, and review of the growing flow of technical reports to the Yucca Mountain Site Characterization Office.

OQA views this situation as an opportunity to improve our processes and products. Therefore, we are providing a list of our observations (Enclosure 1) in the form of 13 good practices that can prevent most of the observed lapses.

We strongly recommend that the contents of the enclosure be brought to the attention of your technical staff and their direct management since OQA intends to incorporate these 13 good practices into the checklists used as part of our verification activities. With your cooperation, the potential for significant technical improvement can be increased and achieved.

If you have any questions, please contact either Mario R. Diaz at 794-7974 or Charles C. Warren at 794-7248.

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Enclosure:
Observations on Technical
Reports and Supporting
Activities

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**OBSERVATIONS ON TECHNICAL REPORTS AND
SUPPORTING ACTIVITIES**

1. References and citations within a document must be literally accurate.
2. References and citations to other documents must be literally accurate and provide complete information about the source (e.g., no abbreviations for journals used, addresses of small or foreign publishing companies provided, etc.).
3. Data with large uncertainties cannot serve as the basis for models that must be robust.
4. Data imported for use must be appropriate and have stated uncertainties.
5. Uncertainties in data used in calculations must be propagated through to the results.
6. Results and conclusions must be consistent with input data and models used.
7. Conclusions drawn from the use of models cannot have broader application than the scope of those models.
8. The details of analytical processes must be sufficient to enable a knowledgeable reader to arrive at an independent conclusion.
9. Input data must not be filtered, tempered, or suppressed to steer a conclusion in a desired direction. Questionable data may be so identified provided that reasons, backed up by evidence for the doubts, are provided.
10. Geologic data must be adequately described to enable a knowledgeable reader to arrive at an independent conclusion.
11. "Major comment" has a technical definition. Failure to label a comment as major does not demote it from major status.
12. No mechanism exists for administrative or management reduction of a legitimate major comment to a lesser status.
13. Discussions of uncertainties, as in planning documents, must include commentary on the propagation of errors to the final result.