

WM Record File
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WM Project 11
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MEMORANDUM FOR: Robert E. Browning, Director
Division of Waste Management

FROM: Paul T. Prestholt, Sr. OLR - NNWSI

Subject: Technical and Non-technical Issues - NNWSI

I. TECHNICAL ISSUES:

1. How is the geology at Yucca Mountain related to Basin and Range tectonics. Consideration of this issue includes the history of faulting and volcanism, and the probability of future activity.
2. The behavior of water in the unsaturated zone, both matrix flow and probable fracture flow resulting from the "pulsing" of the system by storm action. We have had a dramatic demonstration of "pulsing" during the last month.
3. The state and local communities are concerned about the effect of possibly contaminated groundwater on downstream population centers. There are a number of such contours in the Amargosa Desert and Death Valley.
4. The need for a thorough understanding of the local and regional stress regime

There are a number of specific issues under the headings of geology, geohydrology, and geochemistry. However, the four issues mentioned above are, in my opinion, basic to an understanding of the site as a system and in gaining general acceptance of the site.

II. NON-TECHNICAL ISSUES:

The following do not necessarily have a direct relationship to public health and safety but may relate to "doing business" with the NNWSI until submission of a license application.

1. Quality Assurance: QA is a continuing problem. The NNWSI has a QA program directed by WMPO consisting of separate QA organizations at each of the participating National Labs,

Westinghouse, and the USGS (the USGS DA is co-ordinated by the LANL). There is some cooperation between the participants and there is improvement in the DA programs of participating organizations, but it is slow. There is little effective leadership from DOE Hq. Without a strong and effective (with teeth) commitment by the DOE (WMFO with back up by DOE Hq), it seems unlikely that the NNWSI DA organization will be fully effective by the start of the site characterization work.

2. There are a number of terms used in regulatory documents and siting guidelines, such as "disturbed zone" and "conceptual design", that need specific definitions. Many of these definitions, such as "disturbed zone", will be very site specific. Who should define these terms NRC or DOE? Where? In what time frame?

3. There is a need for a better understanding by the DOE project participants of the NRC mission and how the NRC proposes to accomplish this mission. How can this improvement in understanding be accomplished? When?

4. The development of a protocol describing how the NRC On-site Representative may obtain access to DOE project participants and documents. Writing a generic protocol (appendix to the Site Specific Agreement) may be difficult or impossible as there is a significant difference between projects. Should such a protocol be generic? Site specific with NRC concurrence?

5. The same questions as in 4 above, for general access by NRC to workshops, data reviews, etc. Does the Site Specific Agreement address the problem fully? Do all signatories interpret the agreement the same way?

6. Is there adequate co-ordination between technical investigators, who design and write the specs. for construction on the NTS to support experiments, and the contractors (REECO, Holms & Narver) who do the constructing? Example: The thousands of gallons of water sprayed on the U2-a drill pad for dust control. U2-6 is an unsaturated zone experiment, and was to be free of man-added moisture.

This is not an exhaustive list by any means, but are issues and problems that have "immediacy".