Sandia National Laboratories
Albuquerque, New Mexico 87185

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Mysore S. Nataraja
Waste Management Engineering Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
7915 Eastern Avenue
Silver Spring, MD 20910

Dear Dr. Nataraja:

A report is enclosed that summarizes the activities of a meeting between NRC and certain contractors, including Sandia, that took place in Silver Spring, Maryland on May 24 and 25, 1984. At NRC's request, two Sandia representatives (J. Daemen and I) participated in this meeting.

If you have any questions or comments concerning this trip report, please call me (FTS 844-6268) or Dr. Chu (FTS 844-9931).

Sincerely,

Krishan Wahi

Krishan Wahi
Waste Management Systems
Division 6431

KW:6431:vr

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Trip Report (Silver Spring, Maryland)

At NRC's request, K. Wahi (SNLA) traveled to Silver Spring, Maryland to participate in a meeting between NRC and its contractors. The meeting was held on May 24-25, 1984 to discuss the following:

a) Status of key document reviews and data inventory efforts.

b) Provide guidance on review of Salt Repository data base.

c) Review identification and prioritization of Umbrella Site Technical Position on design issues.

d) Technical issues related to exploratory shaft construction and sealing.

Other participants included Engineers International (EI) and U.S. Bureau of Mines. The meeting began with a presentation by J. Greeves (NRC) on NRC's "Revised EA Review Plan". A handout summarizes the scope of NRC's EA review and provides guidelines for performing the reviews. Next, EI and SNLA summarized the progress on their reviews of the key documents and data inventory. J. Daemen (SNLA) pointed out the difficulties in confining oneself to strictly rock mechanics type of data when reviewing a document for data inventory. J. Pearring (NRC) emphasized the need to complete and transmit these reviews as soon as possible. EI handed out revised lists of key documents, data review documents, and directly relevant documents. K. Wahi gave Pearring a list of documents that he had reviewed in the past for NRC under a different project and offered to send in complete reviews, if desired. A suggestion was made that we should look at documents other than ONWI's. EI was asked to go through the references in the draft EA for potential review. J. Pearring had a package for each contractor that contained selected chapters from the draft EA documents for the various salt sites. The primary purpose at this time is to familiarize oneself with the form and content of these EA's. A brief presentation was given by EI on the Umbrella Site Technical Position (USTP) on repository design issues, their revisions and prioritization. A revised list of EI's prioritized STP issues was handed out. J. Daemen had sent in his commments and prioritization list to NRC before the meeting. NRC needs to combine the two lists and inject its own input in arriving at the final USTP, which must be completed by August 1, 1984. Contractors were asked to quickly review NRC's latest draft of the USTP and call in the comments to NRC. Pearring cited the "Hydrology Data Presentation" in Columbus as

a model of what to expect for the July 9 meeting and asked the contractors to have their list of desired data or documents ready before the meeting. He also asked the contractors to identify references (cited in the draft EA's) that have not been provided and to submit that information to NRC by June 6.

The remainder of the meeting was devoted to a group discussion on "Exploratory Shaft Construction and Sealing Considerations". Based on comments from each individual, a joint response was formulated during the meeting in draft form. J. Daemen and K. Wahi had submitted written (draft) comments on the January 11, 1984 letter from J. Neff (DOE). EI presented their comments verbally. On Friday morning (May 25), K. Wahi presented his analysis method and preliminary results from a shaft seal failure analysis performed during April and May of this year. SNLA's DNET code was used to simulate two types of failure in or along a shaft. In one case a "damaged rock zone" with enhanced hydraulic conductivity provided increased flow after seal degradation. In the other case, salt dissolution due to the water intrusion resulting from a failed seal near an aquifer was modeled. Variations were considered in which creep was also included. The primary finding was that salt dissolution can become a significant problem if the data utilized in these calculations are representative. More analyses with better data were proposed.

The meeting was concluded after each individual had offered his critique of the January 11, 1984 letter and its attachment. NRC will consolidate the information and comments provided by the contractor into a summary response and send it to each meeting participant for consensus.