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PDR- Wm-10 (2)
Wm-11 (2)
Wm-16 (2)

102
WM Record File
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WM Project 11
Docket No. _____
PDR ✓
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MAY 14 1987

✓ DG/NNWSI/5/5/87

- 1 -

MEMORANDUM FOR: John J. Linehan, Acting Chief
Operations Branch, DHLWM

Distribution: _____

(Return to WM, 623-SS)

FROM: Ronald L. Ballard, Chief
Technical Review Branch, DHLWM

SUBJECT: STATUS OF NNWSI ESF OPEN ITEMS - COMMENTS ON DOE'S
POSITION, DATED APRIL 15, 1987

REFERENCE 1: Attachment No. 7 to the "Summary of Meeting on Proposed
Changes to the NNWSI ESF, April 14-15, 1987," Status of
Open Items - April 15, 1987.

During the DOE/NRC meeting at Las Vegas, NV on April 14-15, 1987, the DOE made a presentation on the status of NNWSI ESF open items (Reference 1). At that time, the NRC staff agreed to review the DOE's plan to close out the open items and provide its comments to the DOE by June 1, 1987.

Dr. Dinesh Gupta and John Peshel of my staff have reviewed the DOE's response plan (Reference 1) outlining the DOE's position on the subject. Based on this review, we have prepared the attached comments for your transmittal to the DOE.

In the attachment, we have stated that the NRC staff basically agrees with the DOE's response plan to close out the NNWSI ESF open items with a few exceptions. The comments in the attachment include:

- (i) We recommend that the DOE should close out the most significant open items before the release of the NNWSI SCP,
- (ii) Open items nos. 5 and 11 from the August 27-28, 1985, NRC/NNWSI Project meeting are now closed based on the information provided by the DOE since our letter of October 31, 1986 to the NNWSI Project, and
- (iii) We cannot agree at this time that the DOE has provided adequate bases to close out open item nos. 10 and 18 from the DOE/NRC August 1985 meeting minutes.

If you have any questions on the attached comments, please contact Dinesh Gupta, x74742.

RLB
Ronald L. Ballard, Chief
Technical Review Branch, DHLWM

Attachment:
As stated

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ATTACHMENTNRC STAFF UPDATE OF THE STATUS
OF OPEN ITEMS SINCE OCTOBER 31, 1986

The NNWSI Project has submitted additional information since our letter of October 31, 1986 (References 1, 2 and 3). Based on a review of this information, we consider that the open item nos. 5 and 11 of the list of open items from August 27-28, 1985, NRC/NNWSI Project meeting have been closed. We, however, do not agree with the NNWSI Project's position outlined in Reference 4 that the item numbers 10 and 18 have been closed. Our comments on the status of these items are as follows.

Open Item No. 5: Need to establish an authoritative set of references on the subject of rock damage around openings in the earth.

NRC Staff Comment

The NRC staff has reviewed the bibliography on rock damage caused by blasting provided by the NNWSI Project in appendix B to the Sandia National Laboratories report SAND86-7001, March 1987 (Reference 2). We consider that the set of references contained in the said bibliography include many authoritative publications and the bibliography provides a reasonable basis for literature review on the subject of rock damage around openings in the earth. We consider this item to be closed.

Open Item No. 10: Need to review section 60.21(c) to determine NRC's expectations regarding the information of fracture characteristics to be obtained from the exploratory shaft.

NRC Staff Comment

In the summary status of April 15, 1987, the NNWSI Project has updated the status of this open item to be closed. The basis for this update is given in the letter from D. Vieth to J. Linehan, NRC, dated December 26, 1986 (Reference 3). The NRC staff has reviewed the letter and based on this review, we agree for the need to further discuss the subject with the NNWSI Project in a future meeting on this topic as proposed by the NNWSI. We, however, can not consider this item to be closed at this time. Pending further clarification and discussions with the NNWSI, we consider this item to be open.

Open Item No. 11: NRC staff concerned about the fact that the second exploratory shaft was located outside of the preferred area, needs to more thoroughly explain his logic as to why this is a significant point. Is it an issue related to validity of testing data or radiological health and safety?

NRC Staff Comment

Since this issue was raised, the NNWSI Project has proposed to relocate both the exploratory shafts away from the main wash area (Reference 1). Although the second shaft is still proposed to be located outside of the preferred area, it has been moved out of the main area of the Coyote wash. The NNWSI Project has agreed (with respect to proposed new locations of both the shafts) to demonstrate that flooding and erosion do not adversely affect long-term repository performance. In addition, the NRC staff has asked DOE to provide reasonable assurance that the shafts are adequately separated so that construction in one shaft does not adversely affect ability to obtain required data in the second shaft and adjacent test areas. In view of the NNWSI Project's proposed changes and NRC staff's request for additional assurances with respect to adequacy of the new shaft locations, this open item is closed.

Open Item No. 18: The DOE will provide the NRC with the data (e.g., RQD's, stresses, hydraulic conductivities) used to get the results presented during the DOE presentation on damaged zone model for tuff.

NRC Staff Comment

In the summary status of April 15, 1987 (Reference 4), the NNWSI Project has updated the status of this open item to be closed. The basis for this update is given as Sandia National Report SAND86-7001 (Reference 2). The NRC staff has reviewed the report SAND86-7001 and find that this report does not provide adequate justification for the damaged zone model used by the DOE for the August 1985 presentation of the performance assessment. Rather a different model is given in the report.

The NRC staff recommends that the NNWSI Project provide a clarification as to what rock damaged zone model is intended to be used in the performance assessment and provide necessary data to support the model. Based on our review of SAND86-7001, we cannot agree with the NNWSI Project's position at this time that this item is closed. We consider this item to be open.

The NRC staff emphasizes the need for an early closure of some of the most significant open items related to exploratory shaft design and construction. These significant items include the revised performance analysis, test plan for underground testing, plans and procedures for excavating the exploratory shafts and drifts and the QA procedures for design, construction and testing activities. We consider that DOE should address these issues far in advance of the NNWSI SCP release, so that we can review these items prior to the SCP release and effectively account for the DOE position on these issues in our SCP review.

In Reference 4, the NNWSI Project has indicated that many of these open items are scheduled to be addressed by November 1987. The NRC staff considers that since the planned release date for the NNWSI SCP is August 21, 1987, the

scheduled date for addressing most of the significant open items is not appropriate and attempts should be made to advance it sufficiently ahead of the planned SCP release date. This should facilitate an early NRC staff review of the most significant items related to ESF design and construction in a timely manner.

REFERENCES:

1. Background Paper for the USNRC and the State of Nevada Agency for Nuclear Projects, Nuclear Waste Project Office, dated March 1987, Subject, "Proposed Changes to the NNWSI Project ESF."
2. J.B. Case and P.C. Kelsall, "Modification of Rock Mass Permeability in the Zone Surrounding a Shaft in Fractured, Welded Tuff, "Sandia National Laboratories Report SAND86-7001, March 1987.
3. Letter from Don Vieth, WMPO, to J.J. Linehan, NRC, dated December 26, 1986, Subject, "Closure of Open Items and Status of Commitments from the NNWSI Project/NRC meeting of August 27-28, 1985.
4. Attachment No. 7 to the "Summary of Meeting on Proposed Changes to the NNWSI ESF, April 14-15, 1987," - Status of Open Items, April 15, 1987.

MAY 14 1987

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Operations Branch, DHLWM

FROM: Ronald L. Ballard, Chief
Technical Review Branch, DHLWM

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DATE:

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(original not received in the WMDCC)
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