



United States Department of the Interior  
WM DOCKET CONTROL CENTER BUREAU OF MINES

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Denver Research Center  
Advanced Mining Systems Division

October 7, 1986

Mr. Banad Jagannath, Project Manager  
Engineering Branch  
Division of Waste Management  
Nuclear Regulatory Commission  
1920 Norfolk Avenue  
Bethesda, MD 20814

WM-RES  
WM Record File  
86934  
BOM

WM Project 10,11,16  
Docket No. \_\_\_\_\_  
PDR   
LPDR BMS

Distribution:  
Jagannath \_\_\_\_\_  
Lynihan \_\_\_\_\_  
Stables \_\_\_\_\_  
(Return to WM, 623-SS) Hill \_\_\_\_\_

Dear Mr. Jagannath:

The enclosed comments pertain to our review of the document, "Open Items, Exploratory Shaft Design and Construction for the NNWSI Project".

If we can provide further assistance for this review, please phone Kanaan Hanna at FTS 776-0724, or Dave Conover at 776-0755.

Sincerely,

*R. L. Mundell*

R. L. Mundell  
Supervisory Mining Engineer

Attachment

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## NNWSI--OPEN ITEMS

Comments on draft letter from John T. Linehan to Dr. Donald L. Vieth regarding: Status of Open Items - Exploratory Shaft Design and Construction letter from NRC, dated April 14, 1983, and NNWSI Project/NRC meeting of August 27-28, 1985.

Reviewers: D. Connover, and K. Hanna

Review Completed: October 6, 1986

### General Comment:

Based on our review of the draft letter (and four enclosures), we do not have any comments that disagree with NRC's position toward the status of any open items. Our comments pertain to the level of detail required to properly evaluate two open items: shaft construction and sealing.

### Detail Comment: Shaft Construction

Section II.B of Enclosure I responds to the contention of DOE that construction controls applicable to short-term stability are adequate for the exploratory shaft. We agree with the response from NRC that such controls may not be adequate because of the potential for radionuclide migration through fractures and interference with testing activities. In addition, since the shaft liner and seal affect the repository containment performance, designs based on short-term stability may not be sufficient to properly protect the integrity of these containment structures.

We disagree with the paragraph regarding the ventilation performance of the shaft and believe that conventional short-term stability controls should be adequate to maintain the functional capability of the shaft for ventilation. We recommend the paragraph (para. 5) be deleted from the final version of the letter.

### Detail Comment: Shaft Seals

There is some confusion as to the type of seals discussed in Section III. It appears that DOE's position is based on seals that would be installed during shaft construction, whereas NRC's response appears to be based on long-term seals which would be installed during repository closure. As described in Section I, the long-term-seal issue is still open, pending future design discussion between NRC and DOE.

The issue of construction-phase seals, to control perched water or other inflows, has not been addressed completely by DOE and further information is required. Although DOE claims that seals will not be required in the exploratory shaft, contingency plans and design specifications should be provided for such seals and the impact of the seals on exploratory shaft testing activities, repository operations, and repository closure should be discussed.