



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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M E M O R A N D U M

DATE: JUNE 16, 1993

TO: Joseph Holonich, Director  
Repository Licensing and Quality Assurance Project Directorate

FROM: John W. Gilray, Sr. On-Site Licensing Representative, HLPD

SUBJECT: YMP SITE REPORT

1. ESF Title II Design Packages 1B and 2

The 50% design review of Package 1B which pertains to the North Portal surface facilities resulted in approximately 590 comments. All comments except 30 have been dispositioned and accepted by the commenters.

The 50% design review of Package 2 which pertains to the North Portal subsurface facilities (i.e., the surface material handling system, the north ramp general arrangement, and the subsurface ventilation, electrical distribution and instrumentation systems) resulted in approximately 610 comments. All comments except 20 have been dispositioned and accepted by the commenters.

There appear to be no comments on the above reviews of major substance other than the one that addresses a lower inclination of the North Ramp. This comment is being escalated to upper levels of Management for resolution.

The 90% design reviews of ESF title II package 1B and 2 have been rescheduled and will consist of selected designs from each package. A portion of design package 1B is scheduled for August 2, 1993, and a portion of design package 2 is scheduled for July 19, 1993.

The ORs discussed with Ted Petrie, YMPO Division Deputy Director for Engineering and Development, the feasibility of submitting to NRC the 90% design review packages for 1B and 2 prior to the 90% scheduled design reviews. This would enable the engineering staff of the NRC Division of High Level Waste to perform a more efficient review and to better identify those technical staff members who should attend the 90% design reviews. Ted Petrie indicated that if at all possible

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he would make available the subject design packages to NRC prior to the scheduled 90% reviews.

The M&O contractor in conjunction with the YMPO is developing clearer guidelines and procedural controls describing in more detail the step by step design control process including the configuration management controls for design inputs and outputs. The results of this effort will be presented at the ESF Technical Exchange meeting with NRC and others at Las Vegas on July 27 and 28th, 1993.

## 2. Excavation and Mapping of the ESF North Portal Tunnel

The OR office continues to regularly monitor the technical and QA related activities associated with the drilling, blasting, mucking, shotcreting and mapping of the ESF North Portal tunnel. The depth of the pilot drift and the side slashes are at 104'. Excavation is on a 3 shift operation. Through observations of these activities and discussions with the on-site construction and QA personnel, it appears that the overall activities are being performed in an acceptable manner and in accordance with appropriate procedures. Other related North Portal Tunnel items of interest are:

- I pointed out to the YMPO QA organization the possible need for more direct USGS QA surveillances of inspection of the USGS mapping of the North Portal Tunnel walls including the reviews and control of the associated records. Richard Spence, YMPO Division QA Manager, stated he has taken action to have more USGS QA involvement with the mapping activities and other USGS on-site activities.
- The YMPO QA organization is working closely with the REECo construction and the M&O design organization to resolve QA concerns pertaining to qualification of rock bolts suppliers and the specification requirements of rock bolts.
- Considerable attention is being devoted by the on site Engineering and QA staff in locating an acceptable and qualified concrete batch plant for the North Portal concrete work.
- The YMP awarded a contract to design and manufacture a tunnel boring machine (TBM) to Construction Tunneling Services, Inc. at a cost of \$12.8 million. The TBM will be used to excavate the subsurface exploratory studies facilities (ESF) at Yucca Mountain. The delivery date for the TBM is mid-March 1994, and the TBM is expected to be operational at the ESF north portal approximately April 15, 1994. The contractor and the YMP are currently investigating features to mitigate grease and oil leakage from the TBM to the underground facilities. The TBM will be capable of boring a tunnel 25 feet in diameter at an approximate speed of 8 feet per hour.

The OR office will closely follow the progress of the above issues and accordingly report to the NRC staff as appropriate.

### 3. On-Site Drilling and Testing Activities

- UZ-14 LM-300 drilling and coring of UZ-14 is at a depth of 762'. The planned depth is 2000'.
- UZ-16 Drilling, and coring is completed at a depth of 1686'. Geophysical logging is expected to start the week of June 28, 1993.
- C-well In accordance with Study Plan 8.3.1.2.3.1 C-well pump Testing testing is expected to start mid-July.
- North and South Ramp Boreholes Status
  - NRG-1 Drilling complete
  - NRG-2 Extending drillhole depth to 294' completed
  - NRG-2A Drilling complete
  - NRG 3 Drilling complete
  - NRG 4 Drilling started June 5, 1993
  - NRG 5 Extended drilling hole depth to 1300' expected to be completed June 10, 1993
  - SRG 5 Drilling expected to start in July of 1993
- All above work has been observed by the ORs on a regular basis and work appears to be well controlled under qualified personnel and QA controlled procedures.

### 4. Geophysics Activities

As a followup to the DOE/NRC Technical Exchange on Geophysics Integration, the ORs met with the YMPO staff to determine the extent QA controls were applied to the geophysics program. Geophysical activities are guided by Study Plans (QA approved) and YMPO recognizes that the implementation of activities addressed in Study Plans are required to be performed under QA controls. The ORs are continuing discussions and reviews with YMPO technical and QA staff to gain a clear understanding of what QA controls are actually being applied to the ongoing and planned geophysics tests and studies. The results of this effort will be reported in a later report.

### 5. Archiving

The YMPO is revising the procedure for the storage, release and control of core samples to require unused core samples be returned to the Sample Management Facility after completion of scientific investigations and tests.

### 6. OCRWM Quality Concerns Program

OCRWM instituted a Quality Concerns Program July 1991 whereby all OCRWM, participants and contract personnel are encouraged to report any concern that may have an effect on the quality and acceptability of the Yucca Mountain Program. Personnel reporting concerns are treated in a confidential manner. Concerns are investigated, documented and reported

to top management within OCRWM by Nancy Voltura, Manager of Quality Concerns Program. The ORs meet periodically with Nancy Voltura to keep abreast of types of concerns under investigation. In this regard, the OR office reports the status of Quality Concerns Program investigation to Ken Hooks on a monthly basis. Since July, 1991, 47 quality concerns have been reported. During the month of May 1993, 4 quality concern investigations were completed and a final report issued on 7 quality concern investigations are either in process or the report is in preparation.

7. M&O Internal Audit

The M&O Vienna office is conducting an audit of the M&O activities at Las Vegas the week of June 28, 1993. As a result of discussions with Ken Hooks, I plan on observing this audit and will report on this audit accordingly.

8. General

The YMPO has agreed to allow the NRC, county and state representatives to gain access to their software program which provides the updated status of Corrective Action Reports and the QARD Requirements Traceability Network. This would require the use of a modem to existing NRC computers and some training on how to gain access to the codes. I will be working with Ken Hooks regarding what further action should be taken regarding this issue.

There are no new issues that this office has identified that have not been brought to management's attention.

cc: C. Gertz, DOE  
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