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MEMORANDUM FOR: Robert E. Browning, Director
 Division of Waste Management

THRU: John J. Linehan, Acting Chief
 Repository Projects Branch
 Division of Waste Management

FROM: James E. Kennedy, Section Leader
 Repository Projects Branch
 Division of Waste Management

SUBJECT: SUMMARY OF MANAGEMENT MEETING WITH DOE HEADQUARTERS,
 JUNE 5, 1986

Background:

NRC staff met with DOE Headquarters personnel on Thursday, June 5, 1986 to discuss staff concerns with the DOE repository QA program. The meeting was held in room 7F-059 of the Forrestal Building from 3:00 p.m. to 5:00 p.m. In attendance were:

| <u>NRC</u> | <u>DOE</u> |
|-----------------|-------------|
| M. Bell, DWM | W. Purcell |
| J. Miller, IE | J. Knight |
| J. Linehan, DWM | M. Langston |
| T. Ankrum, IE | C. Newton |
| J. Kennedy, DWM | |
| S. Bilhorn, DWM | |

Summary:

The NRC staff made a presentation on concerns it has with the DOE repository program (a staff handout from the meeting is attached as enclosure 1). Specific problems observed by the staff in the last 1½ years were reviewed. While the presentation and concerns focused on QA, they generally apply equally as well to DOE's technical program. NRC staff believes that three management issues are in part responsible for these specific problems: DOE's need to rely heavily on contractors, a lack of centralized management within the DOE repository program, and the lack of an effective QA program. Although the staff has had only limited review of the DOE program, a significant number of problems have been identified. The staff therefore believes that the extent of problems may be much larger. These problems will need to be addressed and

WM Record File 405

WM Project 1

Docket No. _____

PDR

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resolved before submission of the SCP's for review and comment if DOE is to meet its commitment to have a fully qualified program in place prior to submittal of the SCP's.

Regarding DOE's reliance on contractors, DOE has a small staff relative to those of their contractors. While the staff believes this practice can work, DOE cannot abrogate responsibility to contractors and must have sufficient numbers of qualified staff to oversee the work of contractors.

The staff indicated that given the need to rely on contractors, the other two issues become even more important. Past experience has shown that a lack of centralized management makes project success more difficult to achieve. The findings of the Ford Study (NUREG-1055) and an EPRI study (see page 3-18 of NUREG-1035 for the correct reference) on construction lead times for nuclear power plants, and the DOE experience with the FFTF project support this conclusion. The NRC staff believes that centralized management in which OCRWM has direct control over the project offices and the project offices have direct control over their contractors, or some other organizational arrangement that would provide similar control, would increase the likelihood of success for the project. The staff discussed specific evidence of the lack of centralized control making management of the program more difficult. For example, the NNWSI project cannot directly issue stop work orders to certain contractors, but must coordinate them with the contracting officer who is an employee of the field office. Such an arrangement was a factor in the long time needed for NNWSI to issue stop work orders to site contractors in the last year. DOE indicated that they believe the present organizational arrangement is working adequately.

The staff also discussed how an effective QA program can help to minimize the impact of reliance on contractors and reduce the number of quality problems in the program. It provides a means to assess the performance of contractors and a basis for taking corrective action. Along with the additional control mentioned above, it is a part of a closed loop management system in which problems are identified and the authority to correct them given to the responsible managers.

The staff indicated that it was raising management concerns with the DOE now before major problems had occurred so that appropriate action can be taken by DOE.

The staff proposed several NRC actions that would allow the NRC to provide additional feedback to DOE on their QA program and provide DOE with a better understanding of what NRC expects at the time NRC audits DOE's program. First, the staff will carry out its existing plans for observing how well and quickly

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| DATE | :86/12/ | :86/12/ | : | : | : | : | : |

the DOE program is developing. These plans were discussed in detail during the December 4-5, 1985 meeting with DOE and are described in the minutes for that meeting. Second, the staff proposed that it conduct mini-audits of discrete program areas as soon as possible. This would also give DOE and understanding of the expectations of the NRC in its audits. DOE staff indicated that no other NRC audits, other than those currently planned at the time of SCP issuance, would be requested or permitted. The staff also proposed observing the lifting of stop work orders that have recently been imposed on several contractors. DOE headquarters indicated that staff observations would not be practical in all cases. Stop work orders will be lifted when the DOE projects have completed the necessary readiness reviews and concluded that the quality problems identified in the stop work orders have been adequately addressed. DOE headquarters does not plan to audit readiness to lift the stop work orders. The NRC staff pointed out that DOE was at risk with such an approach in that later staff audits could find quality assurance and/or technical programs to be unacceptable.

The NRC staff again highlighted the need for the DOE to establish detailed schedules and milestones so that the NRC and DOE can determine when and where specific interactions are needed. DOE indicated that they are working on this in response to several other NRC letters on this topic but that it would be some time before a meeting to lay out milestones and schedules and agree on consultation points could take place.

Follow-up Actions

The NRC staff committed to documenting the concerns identified in the meeting. This memorandum, and the letter forwarding it to DOE, constitute the necessary documentation.



James E. Kennedy, Section Leader
Repository Projects Branch
Division of Waste Management

Record note: This memorandum was reviewed by T. Ankrum, IE, and J. Knight, DOE/OGR who (following revision to page 3, paragraph 1, sentence 8-10) agreed that it was an accurate account of the discussions during the meeting. It supersedes that released September 8, 1986 on the same subject.

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Briefing of OGR
on Staff Views of DOE
QA Program and Proposed
Staff Actions

JKennedy
June 6, 1986

Purpose:

- o Describe specific problems staff has observed to date**
- o Relate these to broader concerns/management issues**
- o Propose staff actions to help mitigate/eliminate concerns**

Specifics

- o BWIP Meeting on Hydrologic Testing, December 3-4, 1985
 - "A sound technical rationale for the purpose and timing of the proposed testing was not presented..."
 - "...testing procedures and quality assurance plans had not been finalized."
 - "...BWIP could not demonstrate how the testing strategy was being integrated with other site characterization activities."
 - The staff believes these shortcomings are due in part to an ineffective QA program

- o Core library at NNWSI
 - "Of greatest concern was the unavailability of procedures...for collecting and handling core..."
March 28, 1985 letter to Don Vieth (gives results of 9/84 data review)
 - "...core custody is supported by documentation of questionable adequacy..." (November 13, 1985 letter to Don Vieth based on 9/85 site visit)
 - "...questions concerning handling and documentation of core samples may ultimately affect licensability of NNWSI site. (Same as above)

- o NNWSI data review of rock mechanics/design testing procedures
 - "Regarding the data, one point recurs in a number of the attached comments: namely, inadequate documentation of various items, including calibration data, acceptance/rejection criteria, and data reduction and test procedures." Letter to Vieth of March 28, 1985

- o USGS
 - "...some project participants [viz., USGS] hold a view of QA as unnecessary, burdensome, and an imposition." Minutes of NNWSI QA meeting, 12/84
 - "DOE indicated that USGS has not accepted the project QA requirements. Follow-up on this item is needed by DOE." Minutes of BWIP QA meeting, 12/84
 - March 28, 1985 letters on NRC data reviews (see above and previous slide) re USGS
 - SAIC audit, Spring 1986 - Stop work order required due to problems identified at USGS

- o Effectiveness of Audits
 - "In summary, I do not believe the audit [by MAC] of Rockwell's audit and surveillance program was effective... My conclusions as to the effectiveness of the Rockwell audit and surveillance program are diametrically opposed to those reached by MAC." internal report (in preparation) by NRC staff on MAC audit of Rockwell, March 25-28, 1986
 - "...the observed audit (by MAC on behalf of DOE/RL) was not capable of detecting whether or not the RKE/PB may be able to ensure that its engineering products can be demonstrated to have the required quality." From NRC staff evaluation of MAC audit of Kaiser Engineers, April 15-17, 1986.

o HQ QA Organization

- Extensive staff comments in October, 1985
- No response to date. Due 7/86

Summary of Specific Concerns:

- o Staff has had limited review of program - handful of areas/organizations. Yet, significant concerns identified. Actual extent is likely much larger
- o Staff acknowledges actions taken by DOE recently (stop work orders), but is concerned about timing of corrective actions and overall effectiveness of program.
- o Staff concerned that these specific problems are caused in part by management issues which need examination.

Management Issues

- o Reliance on contractors
- o Lack of centralized management - project offices not solely responsible to OCRWM, but also to field offices. Also, project offices control over contractors is limited
- o QA program effectiveness

Reliance on Contractors

- o Substantial change in current practice not practicable
- o Makes other two concerns even more important - DOE needs to effectively measure performance of contractors (thru QA program) and exercise control over them thru centralized management responsibility

Lack of Centralized Management

- o Involvement of field offices
 - Project offices report to field office and are influenced by field office priorities
 - Contracts are administratively controlled by field offices; NNWSI, e.g., can only "monitor" and "coordinate" work of H&N, Reeco, and F&S

- o Past experiences with similar arrangements
 - FFTF - direct control given to HQ program office in 1975 from field office after problems occurred
 - Ford Study - successful projects created separate division with both administrative and functional control. Unsuccessful utilities split administrative and functional responsibilities
 - EPRI Study, 1983 - most utilities eventually adopted independent project form of organization

QA Program Effectiveness

- o QA program is performance standard for contractors and measurement tool for DOE to assess contractors' performance
- o Improvements still needed

Staff Philosophy on Management Issues

- o For repository, staff will point out management issues now which have contributed to past failures
- o DOE to determine what corrective action is needed since regulations do not cover management issues except those inherent to QA program.
- o For reactors, NRC has been forced to deal with management issues after major QA problems uncovered

Proposed NRC Actions

- o Carry out existing plans-GTP's, document reviews, and audits at time of SCP. Add mini-audits and observation of lifting of stop work orders to plans
- o Continue to trace specific problems to broader issues
- o Document concerns, both specific and broad