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November 8, 1984 '84 DEC -3 P4:03

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

FROM: F. Robert Cook, Senior On-Site Licensing
Representative, Basalt Waste Isolation Project
(BWIP)

SUBJECT: REPORT OF ACTIVITIES, OBSERVATIONS AND COMMENTS
FOR THE PERIOD SEPTEMBER 17, TO OCTOBER 31, 1984

1. My access to meetings among program participants became an issue during the subject period. In four cases (noted in attachment A) I was informed by DOE that I would not be allowed to attend specific meetings concerning BWIP project activities. (One case, a meeting of the Licensing Coordinating Group at Richland, the DOE/BWIP project decision was overruled by DOE headquarters. However, as a result of not attending the other meetings I have not been able to review pertinent actions and plans associated with issues I consider of key importance to potential future licensing or other regulatory actions by the NRC. In addition I have been inhibited in fulfilling my own planning as to future on-site activities.

The reason which the DOE/BWIP project stated for denying me attendance was that in each case the meetings in question involved, in part, "management" issues.

This points up a basic issue concerning On-site Representatives (OR) actions, namely what are pertinent activities and concerns for OR attention. I consider in order to resolve this issue, activities non-pertinent to licensing, engaged in by DOE or other program participants, whether in a technical area or an area which DOE considers "management", should be itemized so that there is clear understanding at NRC/DOE management levels what information and activities are not pertinent to licensing or other regulatory activities. An alternative is to allow OR's to attend any and all meetings whether or not they be management or technical in nature.

Concerning this item, the meetings from which I was excluded, included prime contractors, subcontractors, other government agencies, prospective contractors and other non-DOE personnel. None of the meetings were solely among DOE personnel. It would appear all the meetings included information pertinent to NRC's potential future actions. Aside from the strictly technical nature of some of the items discussed at the meetings, the nature of the interactions among the various contractors and subcontractors was also of interest. For example, the DOE/RHO

summary meeting among cognizant DOE and RHO managers at the end of DOE's audit of RHO's design control actions was of key interest. My attendance would have allowed first hand observation of the DOE audit wrap-up and RHO's responses. Understanding the findings discovered by DOE and RHO commitments, if any, for corrective actions is of obvious importance to potential licensing.

Since the meetings with the USGS provided technical input to DOE's tectonic modeling plans and seismic evaluation planning for the SCP, they were also of obvious interest and importance to the Staff in its construction authorization and licensing roles.

2. During the period I negotiated provisions of an agreement concerning NRC On-Site Representative OR interactions with program participants. These are included as Attachment B. Note that the issue discussed above concerning OR attendance at meetings is only partially resolved, since the meaning of "management meetings" is not mutually accepted. As can be seen in reviewing Attachment B, this issue remains to be resolved on a case-by-case basis.

Also at issue as indicated by comments on items 3 and 4 of Attachment B was: 1) Access to program participants and 2) Availability of completed records. The latter item is discussed in 3 below.

3. I reviewed the method of documentation of information (preparation and completion of records) at RHO. I have not found a definition of what constitutes a "complete record" which is hence stored in the RHO document control system. It appears many records, particularly records generated by subcontractors, are not submitted to RHO's document control center in a timely manner or may never be submitted to the control center. Some subcontractor documents which are years old are still not in the document control system, even though the contract has been closed out. I consider this a major problem at RHO which we should address in a future BWIP QA program review. (It still remains a secondary issue, however, compared to the issue of general management practices and the designation of responsibilities and authorities and the qualifications of personnel vis-a-vis their responsibilities.)

My comment concerning item 4 in Attachment B further addresses the question of what constitutes a completed record.

4. During this period I attended an evening meeting of the American Society of of Water Resource Users at which Bill Meyer of the USGS talked about ground water usage past, present and future, in the Columbia Basin. He emphasized the rapid increase in ground usage in regions to the Northeast, East and West of the Hanford Reservation. He highlighted the effect of usage on the height of the water table and noted 200-300 foot drops in the Quincy Basin. He noted consideration of ground water usage,

likely in the future, should significantly affect long-term performance predictions for a potential repository at Hanford.

In this regard I asked RHO whether or not SCP planning considers scenarios which account for possible ground water usage in the future in the accessible environment around the potential repository. To date the answer appears to be no. This issue should be considered by the Staff. Of particular concern would be pumping for irrigation purposes from water bearing zones below depths at which site characterization testing is now planned. In this regard I note that records of hydrologic tests in DC-1 indicate highly permeable water bearing zones below the Umtanum basalt flow. These zones and lower zones may become the target for ground water development as ground water is depleted from the upper strata.

5. Notes containing information on the Licensing Coordinating Group meeting in September are contained in Attachment C. Most of these items have been discussed in telecons with cognizant Staff.

6. On October 18, I met with DOE (Lawrence and Antonnen). Issues which I brought to their attention are listed in Attachment D.

7. On October 22, 1984, R. J. Wright and I conferred with DOE Antonnen and Olsen concerning various administrative items. The items discussed are contained in Attachment E. No NRC/DOE agreements were made at this meeting, however, Antonnen (DOE) did commit to identify a schedule for responding to various letters from the Staff in the past. These letters are identified in Attachment E.

8. I attended a meeting at PNL reviewing a MRS design. NRC (Rouse and Clark) were in attendance. I forwarded the series of view graphs presented at the meeting by the MRS designers (Westinghouse, Parsons and others) to the Engineering Branch by separate correspondence.

There appears to be insufficient coordination between repository waste package design and handling requirements and MRS waste package design, inspection, handling etc. This would appear to be an area which warrants coordination within NMSS as well as within the DOE circles to avoid wasted effort in generating incompatible designs and handling schemes for processed waste forms and packages, as well as spent fuel and its waste packages.

9. During the period I reviewed new drill core taken from the South side of Gable Mountain during drilling to check out apparatus for horizontal at depth coring operations. The drilled holes which extended up to about 1000 feet from a drift in the NSTF were held within the desired 3 degree declination from horizontal.

The shortest hole was drilled completely through the hard rock of

the South side of Gable Mountain, a distance of about 550 feet from the east-west drift where waste package handling operations have been checked-out in the past. The core from this hole may contain material representative of a fault in the zone of about 360 to 410 feet from the drift. This core was not logged by BWIP since it was obtained in connection with the apparatus checkout. The Staff should consider reviewing this practice (i.e. not logging cores) and advising DOE/RHO if it appears ill advised from the standpoint of gaining experience in interpreting core samples from horizontal drilling operations. Such horizontal coring is a planned potential activity during at depth sampling.

In addition it may be warranted for the Staff to review the core samples to ascertain whether or not a fault, heretofore unidentified, is in fact present in the Gable Mountain structure.

10. During the week of October 21, I accompanied the NRC team reviewing geologic mapping in the field. I have given my comments on the nature of the interactions between NRC and the BWIP Project personnel to cognizant Staff. The guidelines prepared by C. Glenn dated 9/13/84 appear well founded and complete. I recommend that they be implemented for future data reviews as completely as possible.

F. Robert Cook
Senior On-Site
Licensing
Representative
BWIP

Attachments A thru E ^{not} included.

cf:
JOBunting
HJMiller
MRKnapp
JMHoffman
TRVerma
FTPrestholt
JKennedy
JTGreeves
RJWright
LHBarrett
FRCook

ATTACHMENT A [MEMO 11/8/1984]

MEETINGS TO WHICH OR'S ATTENDANCE WAS QUESTIONED OR DENIED

1. Licensing Coordinating Group meeting at Richland, 9/26/84
2. DOE/RL meeting with RHO to discuss findings during a design control audit--[This was a wrap-up session with RHO management.] at Richland, 10/11/84
3. USGS Tectonics Discussion at Richland, 10/17-18/84
4. USGS Seismicity and In-situ Stress meeting at Richland, 11/1-2/84*

* For this meeting DOE (Saget) told the OR that the USGS did not want to meet if the OR were to attend the meeting.

5. USGS Hydrology Overview meeting at Richland, November 27-28/1984. This meeting was attended by G. Faulkner of the USGS who is working as a technical advisor for DOE at the DOE headquarters. The meeting was a review of current hydrologic data and a discussion of issues associated with modeling the region and the RRL. Plans for future actions in these areas were also apparently discussed