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

NOV 30 1979

MEMORANDUM FOR: James C. Malero, Chief
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FROM: Julie D'Ambrosia
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SUBJECT: TRIP REPORT ON NATIONAL WASTE TERMINAL STORAGE INFORMATION
MEETING, OFFICE OF NUCLEAR WASTE ISOLATION, COLUMBUS, OHIO

On October 30-November 1, 1979, Julie D'Ambrosia and Edward Hawkins attended the subject meeting to become aware of the DOE program and aid in the NRC assessment of that program. The purpose of the meeting was to inform the attendees of the ONWI program and the current progress of specific projects within the program.

On Tuesday, October 30, the meeting began with a general session which gave an overview of the overall National Waste Terminal Storage (NWTS) Program. This session included presentations on the DOE Commercial Waste Management Program, the ONWI program, the Basalt Waste Isolation Program (BWIP) at Hanford, Washington, and the Nevada Nuclear Waste Storage Investigations (NNWSI) Program at the Nevada Test Site.

Three concurrent sessions were held on October 31 and November 1. To cover as many of the sessions as possible, Julie D'Ambrosia concentrated on those sessions discussing various aspects of the in-situ testing program, and Ed Hawkins attended those sessions addressing geologic studies and licensing programs. Each session attended is briefly described below.

Session IIb. Geologic Studies in the NWTS/ONWI Site Identification Program (Hawkins)

This session covered those projects dealing with geologic studies and site identification. The subjects included the development of NWTS Program Site Qualification Criteria, geologic and hydrologic studies for the Salina Basin in New York and Ohio, regional geologic screening studies for the Paradox Basin in Utah, geologic and hydrologic studies for the Palo Duro Basin in northwest Texas, and Gulf coast salt domes evaluations being performed in Texas, Louisiana and Mississippi. Additionally, short presentations were given on siting projects just beginning on subregions of the southeastern United States, crystalline intrusives, and argillaceous basins throughout the United States.

Session IIc. Technical Studies in the NWTs/ONWI Process/Engineering Development Program (D'Ambrosia)

Major emphasis was placed on in-situ testing in this session. Very little new information was revealed in most talks. One that addressed work (or results) new to the author is discussed here.

Lee VanSambeek (RE/SPEC, Inc.) described the Dome Salt Thermomechanical Experiments at Avery Island, Louisiana, in which three heaters were placed in the domed salt. The description of the experiment did not disclose any new data, but the slides accompanying the presentation showed the extent of corrosion caused in these tests. This was especially striking due to the fact that the heaters had been in place for less than two years. Some encouraging results of this experiment were that the thermal conductivity values measured in the test were within 20% of those measured in the laboratory.

Other presentations discussed retrievability and the instrumentation required, and borehole sealing.

Session IIIa. Technical Studies in the NWTs/ONWI Systems Analysis Program (D'Ambrosia)

This session contained mostly overviews and program plans. Some items of interest were discussions of space disposal (not a major project at this time), and assessment of alternative waste disposal concepts (a rehash of the GEIS) with geologic disposal the most likely, followed far behind by deep hole, rock melting, sub seabed, and space disposal (solar orbit). Also discussed (in another paper) were the costs of (and methods of financing) the waste disposal program. Twenty papers presented at various sessions of this meeting have been requested.

Session IIIb. Technical Studies in the NWTs/ONWI Site and Repository Licensing Program (Hawkins)

This session was directed at ONWI programs dealing with site qualification and licensing activities. The subjects included ONWI's plan for the procedure that would be followed in licensing geologic repositories, and plans for conducting environmental surveys for various study areas. The most interesting presentation was on ONWI's plan to produce a Preliminary Information Report (PIR). ONWI is in the process of developing the PIR which will be similar to a Preliminary Safety Analysis Report (PSAR) for a hypothetical salt dome site. The intent of the report will be to presentation of what information is presently known and what needs to be developed for a complete PSAR. The purpose is to provide a vehicle for integrating the technical programs from a licensing perspective, to identify where additional emphasis may be required and to aid in identifying and resolving licensing

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issues. Another major purpose is to promote meaningful discussions between NRC and DOE with regard to licensing a geologic repository. From that standpoint, the PIR could also be a valuable tool for NRC to test against the draft 10 CFR Part 60 regulation.

The tentative schedule established by ONWI is:

Working papers	6/30/79
Working draft	9/30/79
Preliminary draft completed by ONWI	12/31/79
Review of draft by DOE	3/31/80
Second Preliminary draft	June 1980
Final PIR published by DOE	9/30/80

I recommend that we pursue this project and utilize it for our and DOE's mutual benefit.

Session IIIId. Discussion of NWTs/ONWI Technical Program (Hawkins and D'Ambrosia)

The final session of the meeting was a panel composed of the session chairmen and representatives of DOE, BWIP and NNWSI. The purpose was to respond to questions generated by the attendees. Most of the questions and ensuing discussions were a repeat of material that had been covered previously.


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