

101

LRD/WM-10 (2)

# CONVERSATION RECORD

TIME  
PM

DATE

February 11, 1987

TYPE

VISIT

CONFERENCE

TELEPHONE

INCOMING

OUTGOING

ROUTING

NAME/SYMBOL	INT
See	
Attached	
Sheet	
101.0	

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

Lee Merkhofer, Ph.D

ORGANIZATION (Office, dept., bureau, etc.)  
Applied Decision Analysis, Inc. (ADA)

TELEPHONE NO.  
(415)  
864-7101

SUBJECT

Hanford Site hydrology - Inferences regarding effective porosity

SUMMARY

Dr. Merkhofer was contacted regarding his letter to Mark Logsdon of NWC (Nuclear Waste Consultants), dated Jan. 23, 1987. This letter was written to Logsdon following Merkhofer's examination of NWC's review of Clifton, 1986 (SD-BWI-TI-303). Merkhofer was asked to clarify a number of points either noted in or inferred from his letter. These are as follows:

- Merkhofer noted that they (ADA) neither support nor contradict NWC's conclusions regarding Clifton, 1986.
- Available data from Hanford are not sufficient in quantity or quality to currently estimate or infer, using statistical analyses, the governing probability distribution for effective porosity in the Grande Ronde basalts. Thus, at the present time expert judgement must be relied on to estimate the nature of the distribution for effective porosity.

Merkhofer noted that ADA, Inc. was involved in work supporting DOE's Hanford FEA. They had applied formal probability encoding methods to judgements of a panel of experts assembled to estimate hydrologic parameters. The panel sought to obtain "quantitative" probability distributions that could serve as inputs to probabilistic assessments.

Merkhofer expressed a concern that NWC misinterpreted the source of the distribution that DOE used for effective porosity in its analyses of groundwater travel time at Hanford. NWC apparently thought that Clifton used the results of the expert panel judgements in deriving the effective porosity distribution. As stated in his letter to Logsdon, "Thus, our panel of experts endorsed neither the narrower range referenced by Peter Clifton and cited by you [NWC], nor the assumption of normality [for the distribution of effective porosity]."

In closing, Merkhofer offered to send to NRC a copy of ADA's report documenting the probability encoding exercise, along with draft copies of several relevant professional manuscripts.

ACTION REQUIRED

*Follow-up on documents being forwarded to NRC by Merkhofer.*

WM Record File

WM Project 10

Docket No. \_\_\_\_\_

NAME OF PERSON DOCUMENTING CONVERSATION

Neil M. Coleman

SIGNATURE

*Neil M. Coleman*

DATE PDR

FEB 11, 1987

B703160484 B70219  
PDR WASTE  
WM-10 PDR

2336

(Return to WM, 623-SS)

ACTION TAKEN

The documents forwarded by Markhofer have been received & filed in the PDR.

SIGNATURE

*Neil M. Chan*

TITLE

HYDROGEOLOGIST

DATE

Feb. 19, 1987

50271-101

U.S. G.P.O. 1983-381-526/8346

CONVERSATION RECORD

OPTIONAL FORM 271 (12-76)  
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