

NOV 4 1981

Docket Nos: 50-390/391

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OIE (3)  
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NRC/PDR  
NSIC/TIC/TERA  
ACRS (16)



APPLICANT: Tennessee Valley Authority  
FACILITY: Watts Bar Nuclear Plant, Units 1 and 2  
SUBJECT: SUMMARY OF MEETING TO DISCUSS THE LIQUEFACTION POTENTIAL BENEATH THE ERCW PIPELINES AND CLASS IE ELECTRICAL CONDUIT FOR THE WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2.

On September 3, 1981, the Hydrologic and Geotechnical Engineering Staff met with TVA at Bethesda, Maryland to discuss the potential for liquefaction beneath the ERCW pipelines and Class IE electrical conduit for the Watts Bar Nuclear Plant, Units 1 and 2. A technical meeting was held in the morning and a management meeting was held in the afternoon to establish the positions of both the NRC and TVA in this matter. Meeting attendees are listed in Enclosure (1). The NRC staff summarized their concerns in Enclosure (2)

TVA agreed to further study the problem from two different approaches; (1) to reanalyze the problem to determine the possibility of liquefaction and; (2) to study possible remedial repairs to prevent a problem in the event of liquefaction.

TVA agreed to prepare for a meeting to be scheduled by the end of September.

Thomas J. Kenyon, Project Manager  
Licensing Branch No. 4  
Division of Licensing

Enclosure(s):  
As stated

cc: See next page

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OFFICE	DL:LB#4	LA:DL:LB#4	DL:LB#4				
SURNAME	TKenyon:eb	MDuncan	EAdensam				
DATE	10/3/81	10/3/81	10/3/81				

WATTS BAR

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400 Chestnut Street, Tower II  
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ENCLOSURE 1

MEETING REGARDING LIQUEFACTION POTENTIAL  
BENEATH ERCW PIPELINES AND ELECTRICAL CONDUIT  
WATTS BAR NUCLEAR PLANT

MEETING ATTENDEES

<u>NAME</u>	<u>ORGANIZATION</u>
T. Kenyon	NRC/DL
E. Adensam	NRC/DL
J. Cox	TVA/OEDC Licensing
V. Bianco	TVA/OEDC Licensing
R. Pierce	TVA/WBN Project Manager
R. Barnett	TVA/Chief, Civil Engr. Br.
F. Hond	TVA/Civil Engr. Br.
S. Kim	NRC/SEB
R. Hunt	TVA/Civil Engr. Br.
L. Heller	NRC/HGEB
D. Gupta	NRC/HGEB
G. Lears	NRC/HGEB
D. Ormsby	TVA/Power Managers Office
J. Knight	

ADDITIONAL ATTENDEES - MANAGEMENT MEETING

L. Mills	TVA/Manager of Nuclear Power
R. Vollmer	NRC/Director for the Division of Engineering
R. Tedesco	NRC/AD for Division of Licensing
D. Eisenhut	NRC/Director for Division of Licensing

ENCLOSURE 2

Concerns Leading to the Conclusion  
that Unacceptable Liquefaction  
Potential Exists at Watts Bar

1. Deposition of sediments in alluvial areas
2. Consistent low blow count - SPT
3. Undisturbed Samples not obtained.
4. Testing technique questionable, i.e.: not representative of in situ stress conditions during earthquake (Anisotropic consolidation rather than isotropic consolidation).
5. High dynamic strengths from triaxial cyclic tests would be representative of denser material which are not indicated by SPT blow counts.
6. Uncertainty in test results, i.e.: scatter of data from tri-axial cyclic tests.