



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

February 22, 1988

Docket Nos. 50-327/328

LICENSEE: TENNESSEE VALLEY AUTHORITY (TVA)

FACILITY: SEQUOYAH NUCLEAR PLANT, UNIT 2

SUBJECT: SUMMARY OF MEETING - FEBRUARY 11, 1988 REGARDING DIESEL GENERATOR  
LOAD SEQUENCING

On February 11, 1988, members of the NRC staff met with representatives of TVA to discuss load sequencing of the Sequoyah diesel generators. A list of attendees is provided in Enclosure 1; the handout material used during the meeting is provided in Enclosure 2.

This meeting was a followup to discussions held at the Sequoyah site regarding conformance with Regulatory Guide 1.9 guidance for voltage and frequency limits during load sequencing.

TVA has performed tests on all four of the diesel generators to monitor voltage and frequency response as loads are sequenced. Some of the loads, such as safety injection pumps, cannot be run in a full-flow condition during such testing. Thus, the test running load is somewhat less than the actual worst-case accident loading. TVA performed calculations for both the test condition and the actual loading conditions to develop a "compensation factor" to account for the additional loading. The difference from the calculations was then added to the voltage drop from the test case to represent the actual voltage drop.

The staff raised concerns because the analysis results did not bound the test results; that is, the calculated voltage drop was not as large as the measured value. TVA has argued that the running load at the time of pump start does not have a significant effect on the voltage dip at that point. However, since in some cases, there is not a large margin between the calculated voltages and the equipment requirements, the staff needs further assurance that the true response of the diesels to a full load has been considered.

One alternative discussed at the meeting was to examine the ratio of currents for the test and actual loads and to adjust the test value of voltage drop accordingly. An adequate demonstration of equipment functionality with a safety

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factor applied to provide margin, would then resolve this concern. TVA agreed to evaluate this approach and will meet with the staff shortly to continue discussions on this issue.

Original Signed by  
Eileen McKenna, Project Manager  
TVA Projects Division  
Office of Special Projects

Enclosures:  
As stated

cc w/enclosures:  
See next page

DISTRIBUTION  
Docket File  
NRC PDR  
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See Those on Attached List

QSP:DTVA/LA  
CJamerson  
2/17/88

QSP:DTVA/PM  
EMcKenna  
2/17/88

OSR:DTVA/BC  
EMarinos  
2/18/88

OSR:DTVA/P  
GZeck  
2/21/88

Tennessee Valley Authority

Sequoyah Nuclear Plant

cc:

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Committee on Interior  
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ENCLOSURE 1

TVA/NRC MEETING

FEBRUARY 11, 1988

Name

Affiliation

Eileen McKenna	NRC/OSP
Ed Goodwin	NRC/OSP
T. A. Ippolito	TVA/Licensing
Mark Burzynski	SQ Licensing
John Kirkebo	TVA Director of Engineering
William Raughley	TVA - Chief Electrical Engineer
Jim Hutson	TVA - DNE
Steve Richardson	NRC/OSP
A. Kuske	NRC Consultant
A. Marinos	NRC/OSP
B. D. Liaw	NRC/OSP
Paul Gill	NRC/NRR/SELB
Suheil Z. Haddad	SAL/EAD
M. Sedlacik	TVA/DNE
G. L. Nicely	TVA/DNE
Barry A. Kimsey	TVA SQN Reg. Licensing
R. E. Allen	UE&C
G. M. Aggarwal	UE&C

DIESEL GENERATOR INFORMATION PROVIDED TO NRC

Diesel Load Analysis Calculation (SQN-E3-002)

DG Rating - Tech Specs

Letter - Regulatory Guide 1.9

Diesel Test Results/Voltage Profile Calculation  
(SQN-E3-011)

SEQUOYAH DIESEL GENERATORS

- Reg Guide 1.9
- Diesel Generator Testing
- Calculations
  - Methodology
  - Reviews
- Results
  - Testing
  - Calculations
  - Equipment Performance
  - Safety System Performance

## SEQUOYAH

### ENGINEERED SAFEGUARDS SYSTEM PERFORMANCE

- o Testing
  - Actual Loads
- o Calculations
  - IEEE Methodology
  - Utilized Field Data
  - Locked Rotor

DISTRIBUTION FOR MEETING SUMMARY DATED: February 22, 1988

Facility: Sequoyah Nuclear Plant, Unit 2\*

**Docket File**

NRC PDR

Local PDR

Projects Reading

S. Ebnetter/J. Axelrad

S. Richardson

B. D. Liaw

G. Zech

E. McKenna

C. Jamerson

OGC

J. Rutberg

F. Miraglia

E. Jordan

J. Partlow

E. Goodwin

A. Kusko

A. Marinos

P. Gill

ACRS(10)

Hon. M. Lloyd

Hon. J. Cooper

Hon. D. Sundquist

Hon. A. Gore

Mr. R. King, GAO

P. Gwynn

J. Scarborough

G. Marcus

C. Miller

T. Elsasser

C. Ader

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\*Copies sent to persons on facility service list