

October 9, 1996

Tennessee Valley Authority  
ATTN: Mr. Oliver D. Kingsley, Jr.  
President, TVA Nuclear and  
Chief Nuclear Officer  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: MEETING SUMMARY - SEQUOYAH NUCLEAR PLANT, DOCKET NOS. 50-327, 50-328

Dear Mr. Kingsley:

On October 8, 1996, at the request of the licensee, the NRC staff met at the Region II office with representatives of the Tennessee Valley Authority's Sequoyah Nuclear Plant staff. The purpose of this meeting was for the licensee to brief the NRC staff on the circumstances surrounding a failure of a switchyard potential transformer on October 5, 1996. The licensee provided details surrounding the failure, immediate actions taken, short term and long term switchyard program changes. The NRC issued Preliminary Notification 2-96-69 for this failure on October 7, 1996.

Enclosure 1 is a list of the individuals who attended the meeting, and Enclosure 2 contains a copy of the material supplied by the licensee at the meeting.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10 Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this letter, please contact us.

Sincerely,

**Original Signed by**

**M. S. Lesser**

Mark S. Lesser, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-327, 50-328  
License Nos. DPR-77, DPR-79

Enclosures: 1. List of Attendees  
2. Handout Material

cc w/encls: (See page 2)

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cc w/ encls:

Mr. O. J. Zeringue, Senior Vice President  
Nuclear Operations  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Ralph H. Shell, Manager  
Licensing & Industry Affairs  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Soddy Daisy, TN 37379

Dr. Mark O. Medford, Vice President  
Engineering and Technical Services  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. Michael H. Mobley, Dir.  
Div., of Radiological Health  
3rd Floor, L and C Annex  
401 Church Street  
Nashville, TN 37243-1532

Mr. R. J. Adney, Site Vice President  
Sequoyah Nuclear Plant  
Tennessee Valley Authority  
P. O. Box 2000  
Soddy Daisy, TN 37379

County Executive  
Hamilton County Courthouse  
Chattanooga, TN 37402-2801

Distribution w/encls: (See page 3)

General Counsel  
Tennessee Valley Authority  
ET 11H  
400 West Summit Hill Drive  
Knoxville, TN 37902

Mr. R. R. Baron, General Manager  
Nuclear Assurance & Licensing  
4J Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Mr. P. Salas, Manager  
Licensing and Industry Affairs  
Tennessee Valley Authority  
4J Blue Ridge  
1101 Market Street  
Chattanooga, TN 37402-2801

Distribution w/encls:

E. W. Merschhoff, RII  
 M. S. Lesser, RII  
 S. E. Sparks, RII  
 F. J. Hebdon, NRR  
 R. W. Hernan, NRR  
 H. L. Whitener, RII  
 C. F. Smith, RII  
 D. H. Thompson, RII  
 J. H. Moorman, RII  
 D. W. Jones, RII  
 PUBLIC

NRC Resident Inspector  
 U. S. Nuclear Regulatory Commission  
 2600 Igou Ferry  
 Soddy-Daisy, TN 37379

NRC Resident Inspector  
 U. S. Nuclear Regulatory Commission  
 1260 Nuclear Plant Road  
 Spring City, TN 37381

OFFICE	DRP/RII					
SIGNATURE	<i>S. Sparks</i>					
NAME	S. Sparks: vvg					
DATE	10 / 8 / 96	10 / / 96	10 / / 96	10 / / 96	10 / / 96	10 / / 96
COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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DOCUMENT NAME: G:\BR6\SQ\MM1008.SUM

## LIST OF ATTENDEES

### NRC

S. D. Ebnetter, Regional Administrator, Region II (RII)  
L. A. Reyes, Deputy Regional Administrator, RII  
J. R. Johnson, Acting Director, Division of Reactor Projects (DRP), RII  
M. S. Lesser, Branch Chief, Reactor Project Branch 6, DRP, RII  
S. E. Sparks, Project Engineer, DRP, RII  
C. A. Casto, Engineering Branch Chief, Division of Reactor Safety (DRS), RII  
H. O. Christensen, Maintenance Branch Chief, DRS, RII  
H. L. Whitener, Reactor Inspector, Maintenance Branch, DRS, RII  
P. J. Fillion, Reactor Inspector, Engineering Branch, DRS, RII  
R. W. Hernan, Senior Licensing Project Manager, NRR (telecon)

### Licensee Attendees:

J. T. Herron, Plant Manager, Sequoyah  
R. H. Shell, Site Licensing Manager  
T. A. Flippo, Site Support Manager  
D. C. Craven, Transmission and Power Supply Manager

**Tennessee Valley Authority**  
Sequoyah Nuclear Plant  
TVA/NRC Meeting  
Switchyard Status  
October 8, 1996

Sequoyah Nuclear Plant  
Switchyard Status  
October 8, 1996  
Agenda

Introduction	R. H. Shell
October 5, 1996 Potential Transformer Failure	D. C. Craven
Switchyard Program Changes	D. C. Craven
Review of Actions Taken/In Progress	D. C. Craven
Closing	J. T. Herron

# Sequoyah Nuclear Plant Switchyard Status

- October 5, 1996 Event
  - Failure of potential transformer (500 kv bus 1, section 2)
  - 500 kv bus differential relay operation
  - Combustible gases rose to intertie feeders
  - 500/161kv intertie bank overcurrent relay operation
- Immediate actions taken/recovery
  - Potential transformer replacement
  - Repair/restoration of bus
  - Failure Evaluation Team in progress
  - All corrective and preventive maintenance to be completed



## Sequoyah Nuclear Plant Switchyard Status

- Quality Improvement Team formed following the December 1995 plant trip
- TVA has recently implemented significant organizational changes to provide better control of nuclear plant switchyard activities
  - A single point of management focus has been assigned
  - A Transmission and Power Supply (TPS) manager has been assigned to each nuclear site, functionally reporting to the site maintenance manager
  - Switchyard responsibility is now in the same organization with its engineering technical support



# Sequoyah Nuclear Plant Switchyard Status

- Additionally, several major initiatives have commenced
  - Switchyard design review
  - A 'vertical slice' of one offsite power feed into the plant
  - A recent independent management oversight review
  - Initiation of a Reliability Improvement Plan for the switchyards
  - Initial EPRI survey of the Sequoyah switchyards and transformers
- Additional management focus is being placed on the switchyard activities

# Sequoyah Nuclear Plant Switchyard Status

- Actions taken since August 1996
  - Briefing in Daily Status Meeting by TPS Supervisor
  - Incorporation of switchyard activities into the daily schedule
  - Appointment of Senior site manager to oversee switchyard improvement activities (routine schedule review meetings)
  - Evaluation of outstanding preventive/corrective maintenance items in switchyards (“white/yellow/red” chart)

# Sequoyah Nuclear Plant Switchyard Status

- Actions completed since August 1996
  - Four of five 161kv motor-operated disconnect (MOD) radius arm problems corrected
  - PCB 5018 and line relays tested
  - CCVTs on WBN Unit 2 and bus 2 section 2 tested
  - Several hotspots on 161kv MODs and 500kv wavetrapped connection found and corrected
  - Replacement of main bank transformer cooling fan motors with new design initiated
  - CSST B maintenance outage completed
  - PCB 1008 for 161kv capacitor bank restored
  - Sudden pressure relay protection to Unit 1 main bank transformers restored

«date/time»

# Sequoyah Nuclear Plant

## Switchyard Status

- Switchyards (Units 1 and 2) now classified as 10CFR50.65(a) (1) under Maintenance Rule due to exceeding goals
  - Threshold of switchyard goal lowered/standards raised
  - Now trending any switchyard challenges
- Maintenance Rule goal for switchyard
  - FY '97 first quarter 4
  - FY '97 second quarter 4
  - FY '97 third quarter 3
  - FY '97 fourth quarter 2
  - FY '98 first quarter 1

# Sequoyah Nuclear Plant Switchyard Status

- July 1, 1996 - September 30, 1996 - Five challenges  
(Maintenance Rule 10CFR50.65 (a) (1) Category)
  - Power Circuit Breaker (PCB) 998 air system
  - PCB 998 air system
  - PCB 998 current transformer (CT) failure
  - Mod 995 overheating
  - PCB 5018 wavetrap “hotspot”

# Sequoyah Nuclear Plant Switchyard Status

- Long-term corrective actions
  - Completion of outstanding preventive maintenance items
  - Acceleration of three Hitachi air-blast breaker replacement
  - Acceleration of replacement of PCB 974
  - Systematic replacement/rebuilding of obsolete high maintenance air compressors

# SEQUOYAH 500KV SWITCHYARD

