

OFFICIAL

July 2, 1992

Docket Nos. 50-327, 50-328  
License Nos. DPR-77, DPR-79  
EA 92-104

Tennessee Valley Authority  
ATTN: Dr. Mark O. Medford  
Vice President,  
Nuclear Assurance, Licensing & Fuels  
3B Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Gentlemen:

SUBJECT: ENFORCEMENT CONFERENCE SUMMARY  
(NRC INSPECTION REPORT NOS. 50-327/92-14 AND 50-328/92-14)

This refers to the enforcement conference held at our request on June 23, 1992. This meeting concerned activities authorized for your Sequoyah facility. The issues discussed at this conference related to the high pressure fire protection system. A list of attendees, a summary, and a copy of your handout are enclosed. We have completed our review of the fire protection issues and determined that the potential violation did not meet the threshold of a programmatic breakdown. This is based in part on information presented during the enforcement conference that indicated your Licensee Event Report concerning the failure of the high pressure fire protection system was in error. After careful consideration we have determined that the fire protection issues are more appropriately addressed as two non-cited violations. The non-cited violations, one for inadequate high pressure fire protection system testing, and the other for inadequate fire watches and fire barriers, which were categorized as Severity Level IV, are not being cited because the criteria specified in Section VII.B.(2) of the Enforcement Policy were satisfied.

In accordance with Section 2.790(a) of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC's Public Document Room.

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

Sincerely,

Original Signed By Albert L. Gibson  
For  
Stewart D. Ebnetter  
Regional Administrator

Enclosure: (See Page 2)

9208070063 920702  
PDR ADOCK 05000327  
PDR

111  
IE01

July 2, 1992

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

Tennessee Valley Authority  
ATTN: Dr. Mark O. Medford  
Vice President,  
Nuclear Assurance, Licensing & Fuels  
3B Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Gentlemen:

SUBJECT: ENFORCEMENT CONFERENCE SUMMARY  
(NRC INSPECTION REPORT NOS. 50-327/92-14 AND 50-328/92-14)

This refers to the Enforcement conference held at our request on June 23, 1992. This meeting concerned activities authorized for your Sequoyah facility. The issues discussed at this conference related to the high pressure fire protection system. A list of attendees, a summary, and a copy of your handout are enclosed. We have completed our review of the fire protection issues and determined that the potential violation did not meet the threshold of a programmatic breakdown. This is based in part on information presented during the enforcement conference that indicated your Licensee Event Report concerning the failure of the high pressure fire protection system was in error. After careful consideration we have determined that the fire protection issues are more appropriately addressed as two non-cited violations. The non-cited violations, one for inadequate high pressure fire protection system testing, and the other for inadequate fire watches and fire barriers, which were categorized as Severity Level IV, are not being cited because the criteria specified in Section VII.B.(2) of the Enforcement Policy were satisfied.

In accordance with Section 2.790(a) of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC's Public Document Room.

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

Sincerely,

Stewart D. Ebnetter  
Regional Administrator

Enclosure:

1. List of attendees
2. Enforcement Conference Summary
3. Handout

R11:DRS <i>LM</i> LMellen 06/30/92	R11:DRS <i>TP</i> TPeebles 06/30/92	R11:DRS <i>AP</i> APobson 06/30/92	R11:DRP JJohnson 06/ /92	R11:ETCS <i>JK</i> GJenkins 06/30/92	R11:ORA LReyes 06/ /92
---	--	---	--------------------------------	---	------------------------------

*See Summary Corrections*

July 2, 1992

Enclosures:

1. List of Attendees
2. Enforcement Conference Summary
3. Handout

cc w/encls:

J. B. Waters, Director  
Tennessee Valley Authority  
ET 12A  
400 West Summit Hill Drive  
Knoxville, TN 37902

J. R. Bynum, Vice President  
Nuclear Operations  
Tennessee Valley Authority  
3B Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

Mark J. Burzynski, Manager  
Nuclear Licensing and  
Regulatory Affairs  
Tennessee Valley Authority  
5B Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

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

Marci Cooper  
Site Licensing Manager  
Sequoyah Nuclear Plant  
P.O. Box 2000  
Soddy-Daisy, TN 37379

TVA Representative  
Rockville Office  
11921 Rockville Pike  
Suite 402  
Rockville, MD 20852

cc cont'd: (see page 3)

Tennessee Valley Authority

3

July 2, 1992

cc cont'd:  
General Counsel  
Tennessee Valley Authority  
ET 11H  
400 West Summit Hill Drive  
Knoxville, TN 37902

County Judge  
Hamilton County Courthouse  
Chattanooga, TN 37402

Michael H. Mobley, Director  
Division of Radiological Health  
T.E.R.R.A. Building, 6th Floor  
150 -9th Avenue North  
Nashville, TN 37219-5404

bcc w/encls:

L. A. Reyes, RII  
J. R. Johnson, RII  
G. C. Lainas, NRR  
F. J. Hebdon, NRR  
P. J. Kellogg, RII  
E. E. Labarge, NRR  
J. Lieberman, OE

X NRC Document Control Desk

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

\*FOR PREVIOUS CONCURRENCE SEE ATTACHED COPY

RII:DRS	RII:DRS	RII:DRS	RII:DRP	RII:EICS
*LMellen	*TPeebles	*AGibson	*JJohnson	*GJenkins
06/ /92	06/ /92	06/ /92	07/ /92	06/ /92

cc cont'd:  
General Counsel  
Tennessee Valley Authority  
ET 11H  
400 West Summit Hill Drive  
Knoxville, TN 37902

cc w/encl:  
County Judge  
Hamilton County Courthouse  
Chattanooga, TN 37402

Michael H. Mobley, Director  
Division of Radiological Health  
T.E.R.R.A. Building, 6th Floor  
150 -9th Avenue North  
Nashville, TN 37219-5404

bcc w/encls:  
L. A. Reyes, RII  
J. R. Johnson, RII  
G. C. Lainas, R  
F. J. Hebdon, NRR  
P. J. Kellogg, RII  
E. E. Labarge, NRR  
J. Lieberman, OE  
NRC Document Control Desk

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

\*FOR PREVIOUS CONCURRENCE SEE ATTACHED COPY

RII:DRS      RII:DRS      RII:DRS      RII:DRP      RII:EICS      RII:ORA

\*LMellen      \*TPeebles      \*AGibson      JJohnson      Jenkins      LReyes  
06/ /92      06/ /92      06/ /92      07/ /92      06/ /92      07/ /92

ENCLOSURE 1

LIST OF ATTENDEES

U. S. Nuclear Regulatory Commission

S. D. Ebnetter, Regional Administrator, Region II  
L. A. Reyes, Deputy Regional Administrator, Region II  
J. R. Johnson, Acting Director, Division of Reactor Projects (DRP), Region II  
E. W. Merschoff, Deputy Director, Division of Reactor Safety (DRS), Region II  
F. J. Hebdon, Director, Project Directorate II-4, Nuclear Reactor Regulation (NRR)  
G. R. Jenkins, Director, Enforcement and Investigations Coordination Staff (EICS), Region II  
S. M. Shaeffer, Resident Inspector, Region II  
B. A. Wilson, Chief, Reactor Projects Branch 4, (DRP), Region II  
D. E. LaBarge, Senior Project Manager, NRR (by telephone)  
B. Uryc, Senior Enforcement Specialist, (EICS), Region II  
C. E. Evans, Regional Counsel, Region II  
G. R. Wiseman, Fire Protection Engineer, Region II  
L. S. Mellen, Acting Operational Programs Section Chief, Region II

Tennessee Valley Authority

M. O. Medford, Vice President, Nuclear Assurance, Licensing and Fuels  
J. L. Wilson, Vice President, Sequoyah  
R. J. Beecken, Plant Manager  
M. A. Cooper, Site Licensing Manager  
T. A. Flippo, Site Quality Manager  
P. G. Trudel, Engineering Manager  
Y. Ryan, Fire Protection Manager



ENCLOSURE 2

Licensee: Tennessee Valley Authority

Date of Conference: June 23, 1992

Facility: Sequoyah

IR Nos.: 50-327/92-14 AND 50-328/92-14

Location: NRC Regional Office, Atlanta, Georgia

Subject: High Pressure Fire Protection System

NRC Inspection Report 50-327/92-14 and 50-328/92-14 described a potential violation involving a programmatic breakdown of the fire protection system at Sequoyah. The licensee described background for the fire protection system problems, detailed the apparent system failure in May 1991 and then described their efforts since May 1991. The licensee presented information that indicated the LER which described the events on May 6, 1991, was in error. After an extensive evaluation the licensee concluded that the system would have performed its intended function. The licensee stated that the LER would be revised.

**TVA/NRC  
ENFORCEMENT CONFERENCE**

**SEQUOYAH NUCLEAR PLANT  
FIRE PROTECTION  
IR 50-327, 328/92-14**

**JUNE 23, 1992**



AGENDA

SN FIRE PROTECTION PROGRAM ENFORCEMENT CONFERENCE

INTRODUCTION	M. MEDFORD
DISCUSSION OF FINDINGS	J. WILSON
- CAUSE	
- CORRECTIVE ACTIONS	R. BEECKEN
SAFETY SIGNIFICANCE	P. TRUDEL
LICENSING IMPLICATIONS	M. COOPER
CLOSING REMARKS	M. MEDFORD

I. INTRODUCTION - M. MEDFORD

## INTRODUCTION

- \* IN LATE 1990, TVA IDENTIFIED WEAKNESSES IN THE FIRE PROTECTION PROGRAM--EFFORTS INITIATED TO ASSESS SCOPE OF DEFICIENCIES
- \* IN MARCH 1991, PERFORMED AN INTEGRATED REVIEW OF EVENTS, FINDINGS, AND CORRECTIVE ACTIONS
- \* HYDRAULIC PERFORMANCE TEST EVENT, WHICH OCCURRED WHILE DIAGNOSIS EFFORTS WERE ONGOING, WAS CONFIRMATION THAT FIRE PROTECTION PROGRAM DEFICIENCIES EXISTED
- \* PERSONAL INVOLVEMENT OF SENIOR TVA MANAGEMENT IN FIRE PROTECTION PROGRAM UPGRADE - CLEAR RECOGNITION OF IMPORTANCE OF TVA FIRE PROTECTION PROGRAMS
- \* TVA/SQN IMPROVEMENT EFFORTS MORE CLEARLY FOCUSED SINCE MAY 1991
- \* SCOPE OF "GET WELL" EFFORTS DISCUSSED WITH NRC AT AN AUGUST 19, 1991 MEETING--NRC CONCURRED WITH APPROACH AND WAS SATISFIED WITH STATUS
- \* NRC HAS BEEN KEPT INFORMED OF PROGRESS DURING THE PAST YEAR
- \* RECENT NRC INSPECTION REPORT INDICATED THAT TVA WAS TAKING APPROPRIATE ACTIONS REGARDING FIRE PROTECTION

II. DISCUSSION OF FINDINGS - J. WILSON/R. BEECKEN

## CAUSES OF FIRE PROTECTION PROGRAM DEFICIENCIES

### SIGNIFICANT CONTRIBUTORS

- (1) INADEQUATE SITE MANAGEMENT OVERSIGHT
  - ORGANIZATION AND RESPONSIBILITIES NOT ADEQUATELY DEFINED
  - FAILURE TO ADEQUATELY OVERSEE REORGANIZATION
  - LACK OF ADEQUATE EMPHASIS ON IMPORTANCE OF FIRE PROTECTION
  - PERSONNEL CHANGES
  - PERSONNEL PERFORMANCE
- (2) INADEQUATE KNOWLEDGE/TRAINING

### LIMITED CONTRIBUTORS

- (1) DESIGN DEFICIENCIES
- (2) INSTALLATION DEFICIENCIES
- (3) DESIGN DOCUMENT WEAKNESSES
- (4) ADMINISTRATIVE CONTROLS/PROCEDURES WEAKNESSES

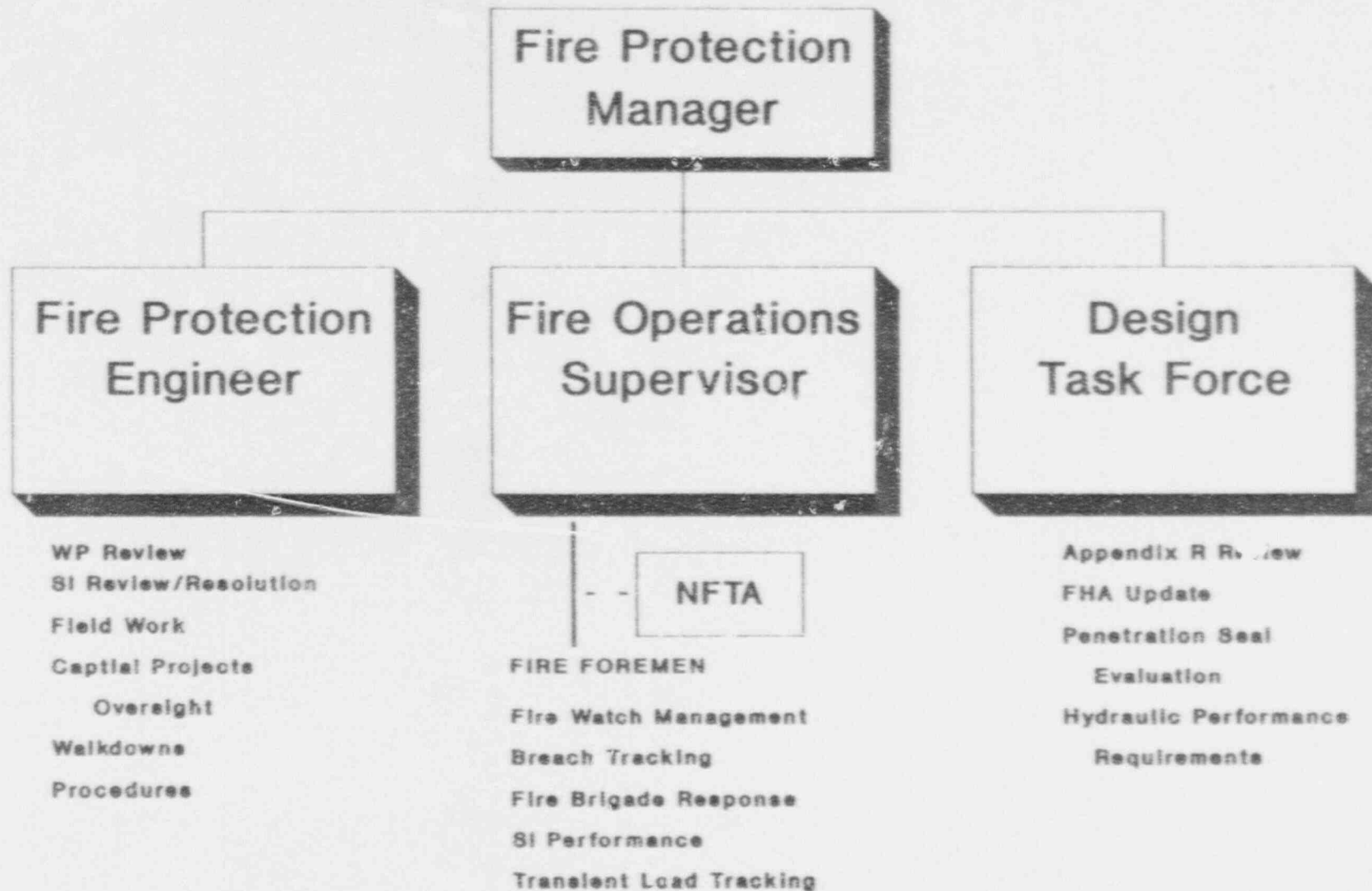
IMMEDIATE ACTIONS (1991)

- \* INTERIM ORGANIZATION ESTABLISHED WITH AUGMENTED FIRE PROTECTION EXPERTISE
- \* RESPONSIBILITIES CLARIFIED
- \* MANAGEMENT OVERSIGHT AND SUPERVISION INCREASED
- \* HARDWARE PERFORMANCE AND OPERABILITY CONFIRMED OR INTERIM MEASURES ESTABLISHED
- \* PROCESS AND PROCEDURE UPGRADES INITIATED

SIGNIFICANT IMPROVEMENT IN FIRE PROTECTION PROGRAM IMPLEMENTATION SINCE MAY 1991



# FIRE PROTECTION ORGANIZATION



FOUR PHASE FIRE PROTECTION IMPROVEMENT PROGRAM  
(PREVIOUSLY DOCKETED)

- \* IMPLEMENTS COMPLETE PROGRAM RECOVERY - ADDRESSES IMMEDIATE NECESSARY ACTIONS
- \* PHASE I (CLOSED) - FIRE PROTECTION PROGRAM STABILIZATION AND IMMEDIATE ITEM RESOLUTION - ACTIONS INCLUDED:
  - STRENGTHENING ADMINISTRATIVE CONTROLS AND OVERSIGHT TO MONITOR DAY-TO-DAY FIRE PROTECTION ACTIVITIES
  - EVALUATING HYDRAULIC PERFORMANCE OF THE SUPPRESSION SYSTEM
- \* PHASE II (ONGOING) - FIRE PROTECTION PROGRAM DESIGN DOCUMENTATION REVIEW AND WALKDOWN INITIATION (TARGETED COMPLETION 10/1/92) - ACTIONS INCLUDE:
  - INITIATION OF WALKDOWNS TO UPDATE FIRE HAZARDS ANALYSIS AND PENETRATION SEAL DOCUMENTATION
  - EVALUATION OF DESIGN CHANGE DOCUMENTS RELATIVE TO APPENDIX R REQUIREMENTS - REVISE DESIGN CHANGE PROCESS, IF NECESSARY
- \* PHASE III - DESIGN DOCUMENT OUTPUT AND ISSUANCE - TARGETED COMPLETION DATE 10/1/93 - ACTIONS INCLUDE:
  - ISSUING REVISED FIRE HAZARDS ANALYSIS AND PENETRATION SEAL DOCUMENTATION
  - ISSUING DESIGN CHANGE TO UPGRADE THE HIGH PRESSURE FIRE PROTECTION SYSTEM AND SEPARATE RAW SERVICE WATER LOADS FROM SYSTEM
- \* PHASE IV - FINAL DESIGN DOCUMENTATION ISSUANCE AND FIRE PROTECTION REPORT COMPILATION - TARGETED COMPLETION DATE 10/1/94 - ACTIONS INCLUDE:
  - CONSOLIDATING FIRE PROTECTION PLAN REQUIREMENTS

III. SAFETY SIGNIFICANCE - P. TRUDEL

SAFETY SIGNIFICANCE OF HYDRAULIC PERFORMANCE EVENT

- \* ORIGINAL SURVEILLANCE INSTRUCTION TECHNIQUES OVERLY CONSERVATIVE AND ACCEPTANCE CRITERIA BASIS INADEQUATELY DEVELOPED
- \* CURRENT SURVEILLANCE INSTRUCTION IS TECHNICALLY APPROPRIATE AND WELL FOUNDED -- DEMONSTRATES SYSTEM PERFORMANCE IS ADEQUATE AND SYSTEM IS OPERABLE
- \* AS A RESULT OF THE ONGOING FIRE PROTECTION IMPROVEMENT PLAN, HAVE DEVELOPED THE CAPABILITY TO PERFORM SYSTEM HYDRAULIC ANALYSIS
- \* ANALYSIS PERFORMED FOR AS-FOUND CONDITION OF FIRE SUPPRESSION SYSTEM AS OF APRIL 1991
- \* DEMONSTRATES THAT THE SYSTEM WAS OPERABLE AND MET DESIGN BASES AT THE TIME OF THE SURVEILLANCE INSTRUCTION PERFORMANCE
- \* CAPABILITY TO ANALYZE SYSTEM PERFORMANCE RESULTS IN ABILITY TO ACCURATELY DETERMINE IMPACT OF FUTURE DEGRADED CONDITIONS

CONCLUSION: SYSTEM DEGRADATION WOULD NOT HAVE PREVENTED FIRE PROTECTION SYSTEMS FROM PERFORMING INTENDED SAFETY FUNCTIONS

- PLANT WOULD HAVE BEEN ABLE TO REACH SAFE SHUTDOWN
- ADEQUATE MARGIN EXISTED

IV. LICENSING PERSPECTIVE - M. COOPER

## LICENSING PERSPECTIVE

- \* WHENEVER DEFICIENCIES POINT TO A PROGRAMMATIC PROBLEM, THEY ARE BY DEFINITION, SIGNIFICANT
  
- \* TVA HAD ONGOING FIRE PROGRAM ASSESSMENT EFFORTS WHEN HYDRAULIC PERFORMANCE TEST EVENT OCCURRED
  - EVENT WAS CONFIRMATION THAT PROBLEMS EXISTED
  
- \* TVA CONCLUDED IN EARLY 1991 THAT PROGRAMMATIC PROBLEMS EXISTED RE FIRE PROTECTION--REACTED PROMPTLY, ONCE IDENTIFIED (WITHOUT NRC PROMPTING)
  
- \* NRC HAS REVIEWED AND CONCURRED WITH IMPROVEMENT PROGRAM SCOPE, TIMING, AND PROGRESS TO DATE REGARDING CORRECTIVE ACTIONS
  
- \* NRC HAS BEEN, AND WILL CONTINUE TO BE KEPT INFORMED OF STATUS
  
- \* FIRE PROTECTION-RELATED PERFORMANCE HAS IMPROVED:
  - CLEARER ORGANIZATIONAL DIRECTION/FOCUS
  
  - MORE PERSONNEL, MANAGEMENT ATTENTION DEVOTED TO NEEDS OF PROGRAM FOR COMPLIANCE AND MAINTENANCE
  
  - FEWER LERs/SPECIAL REPORTS
  
  - IMPROVED SURVEILLANCE INSTRUCTIONS/PROCESSES



ENFORCEMENT DISCRETION

- \* "SPECIAL CIRCUMSTANCES" DISCRETION APPROPRIATE  
[ENFORCEMENT POLICY, SECTION VII.B(6)]
  - AGE OF FINDINGS (OVER A YEAR OLD)
  - SAFETY SIGNIFICANCE OF THE EVENT (MINIMAL)
  - OVERALL PERFORMANCE OF LICENSEE (TVA FIRE PROTECTION PROGRAM HAS IMPROVED SIGNIFICANTLY SINCE MAY 1991)
  
- \* ALL FACTORS FOR "SPECIAL CIRCUMSTANCES" DISCRETION HAVE BEEN SATISFIED

V. CLOSING REMARKS - M. MEDFORD

## SQN INITIATIVES TO IMPROVE EFFECTIVENESS

SQN HAS ACHIEVED SIGNIFICANT PROGRESS SINCE RESTART AND IS STRIVING TO IMPROVE PERFORMANCE AND TAKE THE NEXT STEP

ACCOMPLISHING THIS IMPROVEMENT WILL REQUIRE SELF-CRITICAL EVALUATIONS AS A PREVENTIVE MEASURE -- ELIMINATE REACTIONARY MODE

- \* IMPROVEMENTS WILL REQUIRE SEVERAL ACTIONS
  - ESTABLISH FORWARD-LOOKING OPERATING ENVIRONMENT
  - CONTINUALLY ASSESS PROGRAM/ORGANIZATIONAL EFFECTIVENESS
  - FOCUS ON OPTIMIZING PERFORMANCE AND IMPLEMENTATION
- \* CURRENT METHODS FOR ACHIEVING ABOVE GOALS INCLUDE:
  - BACKLOG REDUCTION
  - SQN ASSESSMENT
  - EMPLOYEE SURVEY
  - QA EFFECTIVENESS
- \* REGARDING FIRE PROTECTION, IDENTIFIED DEFICIENCIES AND INITIATIVES RESULTED FROM LICENSEE ACTION; HOWEVER, SQN REACTED TO PROBLEMS, RATHER THAN PREVENTING THEM

## CLOSING REMARKS

### REGULATORY PURPOSE

- \* THERE IS MINIMAL REGULATORY BENEFIT (FOR SQN OR INDUSTRY) FROM ISSUING ESCALATED ENFORCEMENT AT THIS TIME
  
- \* TVA WILL CONTINUE TO IMPROVE THE SQN FIRE PROTECTION PROGRAM AND WILL MAINTAIN PROGRAM QUALITY ONCE IT HAS REACHED DESIRED LEVEL
  
- \* AS A RESULT OF ONGOING CORRECTIVE ACTION EFFORTS, TVA MAY IDENTIFY ADDITIONAL DEFICIENCIES IN THE FIRE PROTECTION PROGRAM—HOWEVER, SCREENING EFFORTS INDICATE THAT IDENTIFICATION OF SIGNIFICANT DEFICIENCIES UNLIKELY
  
- \* WHILE TVA RECOGNIZES NRC REGULATORY RESPONSIBILITIES, ESCALATED ENFORCEMENT AT THIS TIME WOULD SEND A CONFLICTING MESSAGE TO TVA AND INDUSTRY REGARDING THE PURPOSE OF ENFORCEMENT – WELL AFTER LICENSEE IDENTIFICATION, CORRECTIVE ACTION, PROGRAM UPGRADES, AND CONFIRMATORY NRC REVIEW AND ACCEPTANCE

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE I - CLOSED

HARDWARE

- \* DEVELOPED PLAN TO ADDRESS FIRE HAZARDS ANALYSIS UPDATE AND PENETRATION SEAL DOCUMENTATION
  
- \* RESTORED HIGH PRESSURE FIRE PROTECTION SYSTEM TO NORMAL OPERATING DESIGN PRESSURE AND DETERMINED ADDITIONAL CLEANING WAS NOT NECESSARY
  
- \* VERIFIED SPRINKLER SYSTEM BY COMPARING INSTALLED EQUIPMENT, SURVEILLANCE INSTRUCTION AND DRAWING ACCURACY
  
- \* WALKED-DOWN FIRE BARRIER WALLS TO CONFIRM FUNCTIONALITY
  
- \* REPLACED DETECTION SYSTEM CENTRAL ALARM SYSTEM
  
- \* EVALUATED RADIO COMMUNICATIONS SYSTEM
  
- \* PROCEEDED IN EFFORT TO UPGRADE HPFP SYSTEM AND SPLIT FIRE PROTECTION SYSTEM FROM RAW SERVICE WATER SYSTEM - DESIGN PACKAGE TO BE ISSUED IN PHASE III
  
- \* EVALUATED AND PRIORITIZED RECOMMENDATIONS BY AMERICAN NUCLEAR INSURERS

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE I (CONT'D)

PROCESS

- \* REVISED ADMINISTRATIVE INSTRUCTIONS TO IMPROVE EFFECTIVENESS OF IMPAIRMENT TRACKING AND RESOLUTION
- \* ASSESSED AND REVISED, AS APPROPRIATE, FIRE PROTECTION PROCEDURES - ONGOING EFFORT
- \* ENSURED COMPENSATORY MEASURES ADDRESSED IN "OPEN" ADVERSE CONDITION DOCUMENTS ARE ADEQUATE AND TRACKED
- \* INCREASED FIRE PROTECTION ENGINEER INVOLVEMENT IN WORK REQUESTS/MODIFICATIONS
- \* EVALUATED MAINTENANCE RESOURCES RELATED TO FIRE PROTECTION
- \* REVISED PREVENTATIVE MAINTENANCE INSTRUCTION TO ENSURE PROPER STORAGE OF APPENDIX R, CASUALTY-RELATED EQUIPMENT



ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE I - (CONT'D)

ENGINEERING

- \* EVALUATED HYDRAULIC SYSTEM PERFORMANCE
- \* INCREASED APPENDIX R COORDINATOR INVOLVEMENT IN DESIGN PHASES OF PROJECTS
- \* UPDATED CERTAIN APPENDIX R CALCULATIONS

ADMINISTRATIVE

- \* DOCUMENTED FIRE PROTECTION FUNCTIONAL RESPONSIBILITIES FOR ENGINEERING POSITIONS
- \* FIRE PROTECTION-RELATED TRAINING UPGRADES
  - GENERAL REQUIREMENTS
  - OPERATIONAL ASPECTS
  - FIRE BRIGADE
  - ENGINEERING
  - TECHNICAL SUPPORT
  - MODIFICATIONS
  - PERSONNEL PERFORMING SURVEILLANCE INSTRUCTION

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE II - ONGOING (TARGETED COMPLETION 10/1/92)

ENGINEERING

- \* REVIEW POINTS IN HIGH PRESSURE FIRE PROTECTION SYSTEM REQUIRING ADDITIONAL ANALYSIS/MONITORING AS IDENTIFIED IN PHASE I
- \* EVALUATE IMPLEMENTATION OF A TOTAL FIRE BARRIER PROGRAM
- \* CONFIRM SAFETY CLASSIFICATION OF FIRE PROTECTION COMPONENTS
- \* CONFIRM FIRE PROTECTION SYSTEM DESIGN AND SITE SPECIFIC IMPLEMENTING INSTRUCTIONS RELATIVE TO CORPORATE SPECIFICATIONS AND DESIGN DOCUMENTATION
- \* APPENDIX R-RELATED EFFORTS
  - INCORPORATE SAFETY FUNCTION POSITION STATEMENTS INTO CONTROLLED RECORDS
  - CONFIRM INTERACTION DISPOSITIONS IN CALCULATION ADDRESSING POWER CABLES FOR HIGH PRESSURE/LOW PRESSURE INTERFACE
  - COMPLETE EVALUATION OF TURBINE TRIP LOGIC
  - REVIEW SAMPLE OF DESIGN CHANGE DOCUMENTS AND EVALUATE IMPLEMENTATION OF APPENDIX R REQUIREMENTS; REVISE PROCESS/TRAINING, AS NECESSARY
- \* EVALUATE PLANT MODIFICATIONS REQUIRED TO SUPPORT MAIN SYSTEM DRAIN TESTING AT KEY PLANT LOCATIONS

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE II (CONT'D)

OPERATIONS/PROCESS

- \* CONTINUE PROCEDURE UPGRADES
- \* INCORPORATE PRE-FIRE PLANS INTO A PRE-FIRE PLAN MANUAL TO ADD AND CLARIFY INFORMATION, AS NECESSARY
- \* UPGRADE THE PREVENTATIVE MAINTENANCE PROGRAM FOR THE HIGH PRESSURE FIRE PROTECTION SYSTEM

HARDWARE

- \* INVESTIGATE METHODS TO PROTECT RACEWAY FIRE BARRIER ASSEMBLIES AGAINST CONDENSATION DAMAGE
- \* INSPECT FIRE RETARDANT CABLE COATINGS THROUGHOUT THE PLANT FOR WATER DAMAGE. REPAIR DAMAGED COATINGS, AS NECESSARY
- \* EVALUATE IMPLEMENTATION OF INSPECTION AND MAINTENANCE PROGRAM FOR FIRE BARRIER CABLE COATINGS

ADMINISTRATIVE

- \* CONFIRM PHASE I IMPLEMENTATION
- \* PROVIDE RECOMMENDATION TO PLANT MANAGEMENT REGARDING PERMANENT FIRE PROTECTION ORGANIZATION TO MAINTAIN THE SQN FIRE PROTECTION PROGRAM

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE III (TARGETED COMPLETION DATE 10/1/93)

ADMINISTRATIVE/ENGINEERING/PROCESS

- \* ENSURE THAT PHASE II ACTIONS PROPERLY IMPLEMENTED
  
- \* FIRE HAZARDS/PENETRATION SEAL ANALYSIS EFFORTS
  - ISSUE UPDATED FIRE HAZARDS ANALYSIS
  
  - COMPLETE THE EVALUATION OF MECHANICAL AND ELECTRICAL FIRE BARRIER PENETRATION SEALS
  
  - EVALUATE FIELD VERIFICATION EFFORTS AND ASSESS VERIFICATION METHODS
  
- \* PERFORM LIFE-CYCLE ANALYSIS ON HPFP COMPONENTS AND RECOMMEND REPLACEMENT FREQUENCIES, AS APPROPRIATE
  
- \* ISSUE DESIGN CHANGE TO UPGRADE THE HPFP SYSTEM AND SEPARATE IT FROM THE RAW SERVICE WATER SYSTEM

ATTACHMENT - ADDITIONAL FIRE PROTECTION IMPROVEMENT PLAN DETAIL

PHASE IV (TARGETED COMPLETION DATE 10/1/94)

ADMINISTRATIVE/PROCESS

- \* ENSURE THAT PHASE III ACTIONS PROPERLY IMPLEMENTED
- \* ISSUE REMAINING DESIGN DOCUMENTATION (IF REQUIRED)
- \* ISSUE FINAL FIRE PROTECTION REPORT
  - CONCISE FIRE PROTECTION PLAN REQUIREMENTS
  - COMPILATION OF SUBMITTED PLANS, REVISIONS AND NRC SERs
  - LIST OF REQUIREMENTS FOR APPENDIX A AND APPENDIX R AND METHOD OF COMPLIANCE FOR EACH REQUIREMENT
- \* ESTABLISH A PROCESS TO MAINTAIN FIRE PROTECTION REPORT CURRENT