



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

December 2, 1992

Docket Nos. 50-259, 50-260,  
and 50-296

LICENSEE: Tennessee Valley Authority

FACILITY: Browns Ferry Nuclear Plant, Units 1, 2, and 3

SUBJECT: SUMMARY OF A MEETING WITH THE LICENSEE REGARDING  
COMBINED ZONE SECONDARY CONTAINMENT

On September 29, 1992, representatives of the Tennessee Valley Authority (TVA) met with the NRC staff in Rockville, Maryland, to discuss their plans for changing the way in which they had been complying with the Technical Specifications (TS) operability and surveillance requirements (i.e., TS 3.7.C) for secondary containment integrity at the Browns Ferry Nuclear Plant (BFN).

Meeting attendees are listed in Enclosure 1. A copy of TVA's presentation handouts is provided as Enclosure 2 which includes TVA's responses to prior staff questions.

Historically, TVA considered the BFN secondary containment volume to be segregated into four distinct zones - Unit 1 Reactor Zone, Unit 2 Reactor Zone, Unit 3 Reactor Zone, and Refueling Zone. Each zone was assigned a portion of the total Standby Gas Treatment System (SGTS) flowrate (i.e., secondary containment inleakage) that would still allow the system to draw down and maintain the secondary containment at -0.25 inch of pressure. However, due to scheduler constraints on Unit 3, TVA notified the staff that it intended to combine the allowed inleakage of all zones into one aggregate sum that would be representative of the secondary containment at large. This would, in effect, provide TVA with the flexibility to breach the walls of the Unit 3 Reactor Zone up to 189 square inches and still maintain secondary containment integrity. TVA intended to use this allowed breach margin to expedite modifications of secondary containment penetrations into the Unit 3 Reactor Zone while Unit 2 was still operating.

During the meeting, the staff expressed a number of reservations regarding TVA's proposed "combined zone secondary containment configuration." The staff was particularly concerned about TVA's ability to comply with the TS surveillance requirement for secondary containment (i.e., TS 4.7.C). The staff was not at all certain that the previous surveillance test for confirming secondary containment integrity would be relevant for the combined zone configuration. Further complicating this concern were the difficulties associated with conducting this kind of surveillance during plant operation. In all likelihood, such testing would cause a reactor scram.

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At the conclusion of the meeting, the staff indicated that it would need additional time to further review TVA's proposed secondary containment configuration change, and to examine TVA's calculations for assigning allowable breach margin, including procedures for controlling breaches in secondary containment.

It should be noted that shortly after this meeting, Region II conducted a special inspection (see Inspection Report 50-259, 50-260, and 50-296/92-36 dated October 29, 1992) of TVA's proposed configuration change of secondary containment and TVA's method for determining total allowable breach margin. Region II concluded that TVA's proposed configuration changes and breach margin methodology were acceptable.

Original signed by  
Frederick J. Hebdon, Project Director  
Project Directorate II-4  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:  
1. Attendees  
2. Agenda

cc w/enclosures:

See next page

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F. Hebdon

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J. Williams

M. Sanders

OGC 15-B-18

E. Jordan MNBB-3302

J. Hayes 10-D-4

B. Wilson RII

P. Kellogg RII

C. Patterson RII

E. Christnot RII

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DATE	12/1/92	12/2/92	12/2/92 <i>for</i>	12/2/92	

Browns Ferry Nuclear Plant

cc:

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E. Rodrick

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J. Schiffgens

10-E-4



ATTENDEESBROWNS FERRY EXPANDED INDIVIDUAL PLANT EXAMINATION MEETINGOCTOBER 15, 1992

<u>Name</u>	<u>Organization</u>
Thierry Ross	NRR/PDII-4
William Beckner	NRR/SPSB
John Schiffgens	NRR/SPSB
Ron Hernan	NRR/PDI-4
Paul Kellogg	Region II (Phone conferee)
Duke Wheeler	RES/SAIB
John Flack	RES/SAIB
Ed Rodrick	RES/SAIB
Greg Pierce	TVA/BFN Licensing
Mike Hellums	TVA/Corporate Licensing
Henry Jones	TVA/BFN Engineering
Richard McMahon	TVA/Corporate PRA

AGENDA FOR TVA/NRC MEETING  
OCTOBER 15, 1992  
EXPANDED INDIVIDUAL PLANT EXAMINATIONS FOR BROWNS FERRY

<u>TOPIC</u>	<u>SPOKESMAN</u>
BACKGROUND	G. D. PIERCE
NRC COMMENTS (NRC's 7/22/92 LETTER)	H. L. JONES
RESPONSE TO NRC COMMENTS	H. L. JONES
CONCLUSION	G. D. PIERCE

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	TOPIC	SPOKESMAN
BACKGROUND		G. D. PIERCE

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OCTOBER 15, 1992  
EXPANDED INDIVIDUAL PLANT EXAMINATIONS FOR BROWNS FERRY

TOPIC	SPOKESMAN
NRC COMMENTS (NRC's 7/22/92 LETTER)	H. L. JONES
<ul style="list-style-type: none"><li>• UNITS 1 AND 3 SUFFICIENTLY SIMILAR TO UNIT 2 SUCH THAT UNIT 2 IPE IS APPLICABLE TO UNITS 1 AND 3</li><li>• SIGNIFICANT VULNERABILITIES ENVELOPED BY THE ANALYSIS OF THE TEN SHARED SYSTEMS<ul style="list-style-type: none"><li>- SYSTEMATIC EVALUATION OF SHARED SYSTEMS AND BASIS FOR ELIMINATION</li></ul></li><li>• ANALYSIS LIMITED TO TWO INITIATING EVENTS<ul style="list-style-type: none"><li>- BASIS FOR ELIMINATING ANY INITIATORS</li></ul></li><li>• EFFECT OF SHUT DOWN UNITS ON OPERATING UNITS</li></ul>	



TVA/NRC MEETING  
OCTOBER 15, 1992  
EXPANDED INDIVIDUAL PLANT EXAMINATIONS FOR BROWNS FERRY

TOPIC	SPOKESMAN
RESPONSE TO NRC COMMENTS	H. L. JONES
COMMENT: UNITS 1 AND 3 SUFFICIENTLY SIMILAR TO UNIT 2 SUCH THAT UNIT 2 IPE IS APPLICABLE TO UNITS 1 AND 3	
RESPONSE:	
• ALL THREE UNITS HAVE A HIGH DEGREE OF SIMILARITY AND SHARE A COMMON FSAR	
• OVERALL REGULATORY FRAMEWORK FOR UNITS 1 AND 3 IS BASED ON SIMILARITY IN PLANT CONFIGURATION AND REQUIRED CORRECTIVE ACTIONS	
• DESIGN BASELINE PROGRAM FOR UNITS 1 AND 3 WILL VERIFY CRITERIA ARE ADEQUATE AND PROPERLY IMPLEMENTED PRIOR TO THE RESTART OF EACH UNIT	
• DIFFERENCES BETWEEN UNITS 1 AND 3 SYSTEMS AND SYSTEM MODELS IN THE IPE WILL BE EVALUATED, AND MODELED, IF SIGNIFICANT	
• PROCEDURAL CONTROLS	

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OCTOBER 15, 1992  
EXPANDED INDIVIDUAL PLANT EXAMINATIONS FOR BROWNS FERRY

TOPIC	SPOKESMAN
RESPONSE TO NRC COMMENTS	H. L. JONES
 COMMENT: SIGNIFICANT VULNERABILITIES ENVELOPED BY THE ANALYSIS OF THE TEN SHARED SYSTEMS  (SYSTEMATIC EVALUATION OF ALL SHARED SYSTEMS AND BASIS FOR ELIMINATION)	
 RESPONSE: • ENCLOSURE 2 TO TVA'S 2/07/92 LETTER:	
<ul style="list-style-type: none"><li>- PROVIDED CRITERIA USED FOR DESIGN OF SHARED SYSTEMS</li><li>- IDENTIFIED SHARED SYSTEMS</li><li>- DESCRIBED SHARED FUNCTIONS</li><li>- JUSTIFIED THE ELIMINATION OF ANY SHARED SYSTEM</li></ul>	
<ul style="list-style-type: none"><li>• TOP SYSTEMS IN UNIT 2 IPE WILL BE MODELED</li></ul>	

TVA/NRC MEETING  
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TOPIC	SPOKESMAN
RESPONSE TO NRC COMMENTS	H. L. JONES
COMMENT: ANALYSIS LIMITED TO TWO INITIATING EVENTS (BASIS FOR ELIMINATING ANY INITIATORS)	
RESPONSE: • LOSS OF OFFSITE POWER AND LOSS OF PLANT AIR CONSIDERED REASONABLE AND REPRESENTATIVE INITIATING EVENTS	
- BOTH EVENTS DIRECTLY RESULT IN THE SHUTDOWN OF ALL THREE UNITS	
- LOSS OF OFFSITE POWER WAS LEADING INITIATING EVENT FOR UNIT 2 IPE (69 PERCENT OF CDF)	

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TOPIC	SPOKESMAN
RESPONSE TO NRC COMMENTS	H. L. JONES
COMMENT: EFFECT OF SHUT DOWN UNITS ON OPERATING UNITS	
RESPONSE: <ul style="list-style-type: none"><li>• BFN IPE CONSIDERED EFFECTS OF UNITS 1 AND 3 SHUTDOWN AND UNIT 2 IN OPERATION</li><li>• TVA'S 2/07/92 LETTER JUSTIFIED THREE UNIT OPERATION AS MOST LIMITING CASE</li></ul>	

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OCTOBER 15, 1992  
EXPANDED INDIVIDUAL PLANT EXAMINATIONS FOR BROWNS FERRY

TOPIC	SPOKESMAN
CONCLUSION	G. D. PIERCE
<ul style="list-style-type: none"><li>• EVALUATION OF SYSTEMS SHARED BETWEEN UNITS WAS NOT REQUIREMENT OF GENERIC LETTER 88-20</li><li>• NUREG-1335 STATES THAT ONLY POWER OPERATION AND HOT STANDBY NEED BE CONSIDERED FOR THE PURPOSES OF THE IPE</li><li>• BFN'S PROPOSAL IS PROACTIVE, RESPONSIVE TO NRC COMMENTS, AND IS A GOOD FAITH EFFORT</li></ul>	