May 24, 2000

Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: BROWN FERRY, UNITS 2 AND 3 - AMENDMENTS RE: CONTAINMENT AIR DILUTION SYSTEM TECHNICAL SPECIFICATIONS (TAC NO. MA8471 AND MA8472)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment Nos. 265 and 225 to Facility Operating Licenses Nos. DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 2 and 3, respectively. These amendments are in response to your application dated March 15, 2000 (TS-401). They change to the Technical Specifications to provide a 7-day limiting condition for operation when two trains of the Containment Air Dilution System are inoperable.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

William O. Long, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management

Docket Nos. 50-260 and 50-296

Enclosures: 1. Amendment No. 265 to License No. DPR-52
2. Amendment No. 225 to License No. DPR-68
3. Safety Evaluation

cc w/enclosures: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 24, 2000

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William O. Long, Senior Project Manager, Section 2
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 24

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 265
License No. DPR-52

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated March 15, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 265 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: May 24, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 265

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.6-40	3.6-40
B 3.6-93	B 3.6-93
B 3.6-94	B 3.6-94
B 3.6-95	B 3.6-95
B 3.6-96	B 3.6-96

3.6 CONTAINMENT SYSTEMS

3.6.3.1 Containment Atmosphere Dilution (CAD) System

LCO 3.6.3.1 Two CAD subsystems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CAD subsystem inoperable.	A.1	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- Restore CAD subsystem to OPERABLE status.	 30 days
B. Two CAD subsystems inoperable.	B.1	Verify by administrative means that the hydrogen control function is maintained.	1 hour AND Once per 12 hours thereafter
	AND		
	B.2	Restore one CAD subsystem to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	12 hours

BASES (continued)

ACTIONS

A.1

If one CAD subsystem is inoperable, it must be restored to OPERABLE status within 30 days. In this Condition, the remaining OPERABLE CAD subsystem is adequate to perform the oxygen control function. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in reduced oxygen control capability. The 30 day Completion Time is based on the low probability of the occurrence of a LOCA that would generate hydrogen and oxygen in amounts capable of exceeding the flammability limit, the amount of time available after the event for operator action to prevent exceeding this limit, and the availability of the OPERABLE CAD subsystem and other hydrogen mitigating systems.

Required Action A.1 has been modified by a Note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when one CAD subsystem is inoperable. This allowance is provided because of the low probability of the occurrence of a LOCA that would generate hydrogen and oxygen in amounts capable of exceeding the flammability limit, the low probability of the failure of the OPERABLE subsystem, the amount of time available after a postulated LOCA for operator action to prevent exceeding the flammability limit, and the presence of an inerted containment atmosphere during normal operations.

B.1 and B.2

With two CAD subsystems inoperable, the ability to control the hydrogen control function via alternate capabilities must be verified by administrative means within 1 hour. The alternate hydrogen control capabilities are provided by the Primary Containment Inerting System. The 1 hour Completion Time

(continued)

BASES

ACTIONS

B.1 and B.2 (continued)

allows a reasonable period of time to verify that a loss of hydrogen control function does not exist. In addition, the alternate hydrogen control system (Primary Containment Inerting) capability must be verified once per 12 hours thereafter to ensure its continued availability. Both the initial verification and all subsequent verifications may be performed as an administrative check by examining logs or other information to determine the availability of the alternate hydrogen control system (Primary Containment Inerting). If the ability to perform the hydrogen control function is maintained via the Primary Containment Inerting System, continued operation for up to 7 days is permitted with two CAD subsystems inoperable.

The Completion Time of 7 days is a reasonable time to allow continued reactor operation with two CAD subsystems inoperable because the hydrogen control function is maintained (via the Primary Containment Inerting System) and because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit.

C.1

If any Required Action cannot be met within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. The allowed Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.3.1.1

Verifying that there is ≥ 2500 gal of liquid nitrogen supply in each nitrogen storage tank will ensure at least 7 days of post-LOCA CAD operation. This minimum volume of liquid nitrogen allows sufficient time after an accident to replenish the nitrogen supply for long term inerting. This is verified every 31 days to ensure that the system is capable of performing its intended function when required. The 31 day Frequency is based on operating experience, which has shown 31 days to be an acceptable period to verify the liquid nitrogen supply and on the availability of other hydrogen mitigating systems.

SR 3.6.3.1.2

Verifying the correct alignment for manual, power operated, and automatic valves in each of the CAD subsystem flow paths provides assurance that the proper flow paths exist for system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing.

A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position within the time assumed in the accident analysis. This is acceptable because the CAD System is manually initiated. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.3.1.2 (continued)

The 31 day Frequency is appropriate because the valves are operated under procedural control, improper valve position would only affect a single subsystem, the probability of an event requiring initiation of the system is low, and the system is a manually initiated system.

REFERENCES

1. AEC Safety Guide 7, Control of Combustible Gas Concentrations in Containment Following a Loss-of-Coolant Accident, March 10, 1971.

2. FSAR, Section 5.2.6.

3. NRC No. 93-102, "Final Policy Statement on Technical Specification Improvements," July 23, 1993.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 225
License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated March 15, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-68 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 225, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: May 24, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 225

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.6-40	3.6-40
B 3.6-93	B 3.6-93
B 3.6-94	B 3.6-94
B 3.6-95	B 3.6-95
B 3.6-96	B 3.6-96

3.6 CONTAINMENT SYSTEMS

3.6.3.1 Containment Atmosphere Dilution (CAD) System

LCO 3.6.3.1 Two CAD subsystems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CAD subsystem inoperable.	A.1	----------NOTE---------- LCO 3.0.4 is not applicable. ---------- Restore CAD subsystem to OPERABLE status.	30 days
B. Two CAD subsystems inoperable.	B.1	Verify by administrative means that the hydrogen control function is maintained.	1 hour AND Once per 12 hours thereafter
	AND		
	B.2	Restore one CAD subsystem to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	12 hours

BASES (continued)

ACTIONS

A.1

If one CAD subsystem is inoperable, it must be restored to OPERABLE status within 30 days. In this Condition, the remaining OPERABLE CAD subsystem is adequate to perform the oxygen control function. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in reduced oxygen control capability. The 30 day Completion Time is based on the low probability of the occurrence of a LOCA that would generate hydrogen and oxygen in amounts capable of exceeding the flammability limit, the amount of time available after the event for operator action to prevent exceeding this limit, and the availability of the OPERABLE CAD subsystem and other hydrogen mitigating systems.

Required Action A.1 has been modified by a Note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when one CAD subsystem is inoperable. This allowance is provided because of the low probability of the occurrence of a LOCA that would generate hydrogen and oxygen in amounts capable of exceeding the flammability limit, the low probability of the failure of the OPERABLE subsystem, the amount of time available after a postulated LOCA for operator action to prevent exceeding the flammability limit, and the presence of an inerted containment atmosphere during normal operations.

B.1 and B.2

With two CAD subsystems inoperable, the ability to control the hydrogen control function via alternate capabilities must be verified by administrative means within 1 hour. The alternate hydrogen control capabilities are provided by the Primary Containment Inerting System. The 1 hour Completion Time

(continued)

BASES

ACTIONS

B.1 and B.2 (continued)

allows a reasonable period of time to verify that a loss of hydrogen control function does not exist. In addition, the alternate hydrogen control system (Primary Containment Inerting) capability must be verified once per 12 hours thereafter to ensure its continued availability. Both the initial verification and all subsequent verifications may be performed as an administrative check by examining logs or other information to determine the availability of the alternate hydrogen control system (Primary Containment Inerting). If the ability to perform the hydrogen control function is maintained via the Primary Containment Inerting System, continued operation for up to 7 days is permitted with two CAD subsystems inoperable.

The Completion Time of 7 days is a reasonable time to allow continued reactor operation with two CAD subsystems inoperable because the hydrogen control function is maintained (via the Primary Containment Inerting System) and because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit.

C.1

If any Required Action cannot be met within the associated Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours. The allowed Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

(continued)

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.3.1.1

Verifying that there is ≥ 2500 gal of liquid nitrogen supply in each nitrogen storage tank will ensure at least 7 days of post-LOCA CAD operation. This minimum volume of liquid nitrogen allows sufficient time after an accident to replenish the nitrogen supply for long term inerting. This is verified every 31 days to ensure that the system is capable of performing its intended function when required. The 31 day Frequency is based on operating experience, which has shown 31 days to be an acceptable period to verify the liquid nitrogen supply and on the availability of other hydrogen mitigating systems.

SR 3.6.3.1.2

Verifying the correct alignment for manual, power operated, and automatic valves in each of the CAD subsystem flow paths provides assurance that the proper flow paths exist for system operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves were verified to be in the correct position prior to locking, sealing, or securing.

A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position within the time assumed in the accident analysis. This is acceptable because the CAD System is manually initiated. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.3.1.2 (continued)

The 31 day Frequency is appropriate because the valves are operated under procedural control, improper valve position would only affect a single subsystem, the probability of an event requiring initiation of the system is low, and the system is a manually initiated system.

REFERENCES

1. AEC Safety Guide 7, Control of Combustible Gas Concentrations in Containment Following a Loss-of-Coolant Accident, March 10, 1971.

2. FSAR, Section 5.2.6.

3. NRC No. 93-102, "Final Policy Statement on Technical Specification Improvements," July 23, 1993.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 265 TO FACILITY OPERATING LICENSE NO. DPR-52

AND AMENDMENT NO. 225 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 2, AND 3

DOCKET NOS. 50-260, AND 50-296

1.0 INTRODUCTION

By letter dated March 15, 2000, the Tennessee Valley Authority (the licensee) submitted a request for changes to the Browns Ferry Nuclear Plant (BFN), Units 2 and 3 Technical Specifications (TS). The requested changes would provide a 7-day limiting condition for operation (LCO), applicable when both subsystems of the Containment Air Dilution (CAD) System are inoperable.

The licensee's submittal is not applicable to Unit 1, as the CAD system connection to Unit 1 is presently capped-off. Unit 1 is defueled and in an outage of indefinite duration.

2.0 DISCUSSION AND EVALUATION

2.1 Hydrogen Control Systems

2.1.1 CAD System

General Design Criterion 41 and Title 10, *Code of Federal Regulations* (10 CFR), Part 50, Section 44, require that reactor facilities be provided with a means for post-accident control of combustible gases in the containment. To meet these requirements, the BFN facilities are provided with a shared, redundant (i.e., two trains or "subsystems"), safety-grade CAD system as described in Section 5.2.6 of the Updated Final Safety Analysis Report and reported in the staff's December 21, 1972 Safety Evaluation Supplement No. 1.

The CAD system is classified as an engineered safety feature. During a postulated design basis loss-of-coolant accident (LOCA), hydrogen, a combustible gas would be generated by metal-water reaction, radiolysis and corrosion. If hydrogen and oxygen are present in the containment at sufficient concentration the containment barrier and equipment within the containment are threatened by the possibility of excessive temperature and pressure due to hydrogen combustion. The CAD system is designed to provide the capability to prevent a combustible hydrogen/oxygen mixture from forming during a design basis LOCA. Assuming the hydrogen and oxygen generation rates as specified in Regulatory Guide 1.7 "Control of

Combustible Gas Concentrations in Containment Following a Loss-of-Coolant Accident," the concentration of combustible gases in containment following a LOCA can be controlled by the CAD system. This is accomplished by maintaining an inert containment during normal operation, and, in the event of an accident, using the CAD system to inject nitrogen gas into the containment to dilute any oxygen generated by the LOCA, venting the containment atmosphere as necessary, for pressure control, through the standby gas treatment system.

Each subsystem of the CAD system is capable of keeping the concentration of oxygen in the containment atmosphere below 5 percent. In the event that post-accident monitoring instruments indicated that hydrogen and oxygen concentrations are in the flammability range, a CAD subsystem could be operated as necessary to maintain either the hydrogen concentration below 4 percent or the oxygen concentration below 5 percent. The time required to produce significant amounts of oxygen through radiolysis is lengthy and use of the CAD system would not be required until at least 42 hours after a design basis LOCA.

The CAD system can also be used to provide a non-safety grade, backup pneumatic supply to the drywell control air system, primarily for the purpose of increasing the availability of long-term main steam relief valve (MSRV) operation for beyond design basis events such as those associated with Appendix R. This control air backup capability is not addressed in the TS, and the Appendix R program allows the use of alternate methods and/or compensatory measures such as nitrogen bottles in instances where normal drywell control air equipment is not available. Selected MSRVs are equipped with safety grade accumulators which are designed to ensure each MSRV can be opened five times as discussed in FSAR Section 4.4.5 on the Automatic Depressurization System description.

The CAD system also provides a backup pneumatic source for operation of the hardened wetwell vent valves and the torus vacuum breaker isolation valves. The current TS allows for a single CAD subsystem to be inoperable for 30 days, where, in the case of CAD Subsystem A, this backup function is not available. Therefore the requested TS LCO of allowing both CAD subsystems to be inoperable for 7-days does not extend the period that this backup function may be unavailable.

2.1.2 Alternate Hydrogen Control Capability

BFN is provided with a normal containment inerting system which is separate from the CAD system. The normal containment inerting system provides an alternate means of injecting nitrogen into the containment. The normal containment inerting system is used during the initial purging of the primary containment to establish an inerted containment, and it also provides a supply of make up nitrogen during reactor operation. The system consists of a liquid nitrogen storage tank, a purge vaporizer, a makeup vaporizer, pressure-reducing valves and controllers, and instrumentation, valves, and associated piping. The BFN Emergency Operating Instructions (EOIs) preferentially direct the use of the normal primary containment inerting system for purging and venting during emergency conditions. The EOI procedural policy, which is in accordance with industry emergency procedure guidelines, recognizes that the inerting system is well suited for use under emergency conditions since it is routinely used for purge and vent operations under normal operations. Under this procedural direction, the CAD system serves as the backup method rather than the primary means to mitigate any combustible mixture formation.

2.2 Current and Proposed Technical Specifications

The current TS require two (both) CAD subsystems to be operable during operation in Modes 1 and 2. If one subsystem is found or made to be inoperable (Condition A), a 30-day completion time is specified to restore operability. If this condition is not met (Condition B), the facility must be in Mode 3 within 12 hours. No LCO is specified for the condition wherein both CAD subsystems are inoperable. Therefore, for that condition, TS 3.0.3 applies, requiring shutdown to commence within 1 hour.

The TS changes requested by the licensee would revise Condition B. The new Condition B would state that with two CAD subsystems inoperable, the Required Action is "B.1 Verify by administrative means that the hydrogen control function is maintained with a Completion Time of 1 hour and once per 12 hours thereafter; and B.2 Restore one CAD subsystem to OPERABLE status with a Completion Time of 7 days." The existing Condition B would then become Condition C.

[Record Note: The March 10, 2000 application proposed that B.2 read as follows: "B.2 Restore CAD subsystem nitrogen admission flowpath to OPERABLE status." When the staff questioned the licensee about the non-standard wording, the licensee (Mr. T. Abney) replied that it was an error and that the staff should issue new TS pages with the standard NUREG-1433 wording. The staff considers this to be a minor editorial change in the application which is within the scope of the Federal Register Notice (65 FR 17919).]

2.3 Conformance to Staff Guidance and Regulatory Criteria

The staff has issued guidance for reviewers and utilities for TS that will meet the requirements of 10 CFR 50.36. The staff guidance applicable to boiling water reactors with Mark I containments, such as BFN, is promulgated as NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4." The guidance for Condition B, including reviewer notes follows:

> [Reviewer's Note: This Condition is only allowed for plants with an alternate hydrogen control system acceptable to the technical staff.] With two CAD subsystems inoperable, the ability to perform the hydrogen control function via alternate capabilities must be verified by administrative means within 1 hour. The alternate hydrogen control capabilities are provided by the [Primary Containment Inerting System or one hydrogen recombiner and one Drywell Cooling System fan]. The 1 hour Completion Time allows a reasonable period of time to verify that a loss of hydrogen control function does not exist. [Reviewer's Note: The following is to be used if a non-Technical Specification alternate hydrogen control function is used to justify this Condition: In addition, the alternate hydrogen control system capability must be verified once per 12 hours thereafter to ensure its continued availability.] [Both] the [initial] verification [and all subsequent verifications] may be performed as an administrative check by examining logs or other information to determine the availability of the alternate hydrogen control system. It does not mean to perform the surveillances needed to demonstrate OPERABILITY of the alternate hydrogen control system. If the ability to perform the hydrogen control function is maintained, continued operation is permitted with two CAD subsystems inoperable for up to 7 days. Seven days is a reasonable time to allow two CAD subsystems to be inoperable because the hydrogen control function is maintained and because of the low probability of the occurrence of a LOCA that would generate hydrogen in amounts capable of exceeding the flammability limit.

With two CAD subsystems inoperable, one CAD subsystem must be restored to OPERABLE status within 7 days. The 7 day Completion Time is based on the low probability of the occurrence of a LOCA that would generate hydrogen in the amounts capable of exceeding the flammability limit, the amount of time available after the event for operator action to prevent exceeding this limit, and the availability of other hydrogen mitigating systems.

The staffs review of the information provided by the licensee confirmed that: (1) the proposed TS are consistent with the staff's NUREG-1433, Rev.1, guidance, (2) the normal containment inerting system provides a reliable means of alternate post-accident containment atmosphere dilution, and (3) the reliability of other services supported by the CAD system (i.e., instrument/control air, hardened wetwell vent capability, vacuum breaker isolation valves) would not be adversely affected. Based on this, the staff finds the proposed TS changes to be acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Alabama State official was notified on April 5, 2000, of the proposed issuance of the amendment. The State official, Mr. Kirk Whatley, had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (65 FR 17919). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: W. Long, NRR/DLPM

Date: May 24, 2000

Mr. J. A. Scalice
Tennessee Valley Authority

BROWNS FERRY NUCLEAR PLANT

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