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 FACIL: 50-259 Browns Ferry Nuclear Power Station, Unit 1, Tennessee 05000259  
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 50-296 Browns Ferry Nuclear Power Station, Unit 3, Tennessee 05000296  
 AUTH. NAME AUTHOR AFFILIATION  
 DOMER, J.A. Tennessee Valley Authority  
 RECIP. NAME RECIPIENT AFFILIATION  
 VASSALLO, D.B. Operating Reactors Branch 2

SUBJECT: Application for amend to License DPR-33, DPR-52 & DPR-68,  
 incorporating integrated mod. schedule. Proposed determination  
 NSHC & revised program description encl. Fee paid.

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TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

April 12, 1985

Director of Nuclear Reactor Regulation  
Attention: Mr. Domenic B. Vassallo, Chief  
Operating Reactor Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Vassallo:

In the Matter of the ) Docket Nos. 50-259  
Tennessee Valley Authority ) 50-260  
50-296

By TVA letter from L. M. Mills to H. R. Denton dated August 14, 1984, we submitted Revision 4 of the Browns Ferry Nuclear Plant Integrated Schedule and requested that it be incorporated by amendment into the licenses. That submittal was comprised of eight separate enclosures. It was supplemented by L. M. Mills' letter to H. R. Denton dated September 21, 1984, which submitted the proposed license amendment for incorporation of the integrated schedule into the license.

Based on discussions with the NRC staff, we made revisions to the proposed license amendment which is provided as enclosure 1 to this letter. In accordance with 10 CFR 50.91(a)(1) the determination of no significant hazards consideration is provided as enclosure 2 to this letter. The category definition and listing of commitments by categories is provided in enclosure 3. The revised Program Description is provided as enclosure 4.

The August 14, 1984 submittal contained the integrated schedule in bar chart form. The decision to keep Browns Ferry units 1 and 2 shutdown to complete certain modifications will result in extensive changes to that schedule. The impact of the units 1 and 2 outages on the schedule is being evaluated. The revised schedule will be finalized as quickly as possible and submitted to you for review.

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Director of Nuclear Reactor Regulation

April 12, 1985

The license amendment application fee of \$150 required by 10 CFR Part 170 was provided by TVA's application submittal dated August 14, 1985.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*J. A. Domer*

J. A. Domer  
Nuclear Engineer

Subscribed and sworn to before  
me this 12<sup>th</sup> day of April 1985.

*Paulette J. White*  
Notary Public  
My Commission Expires 8-24-88

Enclosures

cc (Enclosures):

U.S. Nuclear Regulatory Commission  
Region II  
ATTN: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

Mr. R. J. Clark  
Browns Ferry Project Manager  
U.S. Nuclear Regulatory Commission  
7920 Norfolk Avenue  
Bethesda, Maryland 20814

ENCLOSURE 1

PROPOSED LICENSE AMENDMENT FOR  
INCORPORATION OF THE BROWNS FERRY  
INTEGRATED SCHEDULE

It is proposed to add a new paragraph to the license for each unit to read as follows:

TVA (the licensee) shall follow the plan for implementing an integrated schedule for modifications at Browns Ferry Nuclear Plant as described in enclosure 4, "Program Description," of licensee submittal dated April 12, 1985.

- a. The "Program Description" shall be followed by the licensee from and after the effective date of this amendment.
- b. Change to dates for completion of items identified in Categories 2 and 3 of the "Program Description" do not require a license amendment. Dates specified in Category 1 shall be changed only in accordance with applicable NRC procedure.

ENCLOSURE 2

PROPOSED DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS

DESCRIPTION OF AMENDMENT REQUEST

Incorporation of a license condition requiring Tennessee Valley Authority to follow its plan for implementing the Integrated Schedule for Browns Ferry Nuclear Plant (BFN). The proposed amendment provides for changes to the schedule for planned plant modifications covered by the licensee's Integrated Schedule including those required by NRC, as well as those modifications deemed desirable by the licensee.

BASIS FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has provided guidance for the application of the standards for determining whether a significant hazards consideration exists by providing examples of amendments that are considered not likely to involve significant hazards consideration (48 FR 14870). One of the examples of actions involving no significant hazards considerations relates to a purely administrative change to the technical specifications. The incorporation of a license condition requiring use of a plan to provide for scheduling modifications and notification of scheduling changes is purely administrative.

Therefore, since the application for amendment involves proposed changes that are similar to an example for which no significant hazards consideration exists, TVA has made a proposed determination that the application for amendment involves no significant hazards consideration.

ENCLOSURE 3

(REVISED ENCLOSURE 3 FROM AUGUST 14, 1984 SUBMITTAL)

DEFINITION AND LISTING OF COMMITMENTS BY CATEGORIES

All NRC commitments requiring modifications have been reviewed and grouped into categories 1 or 2. Commitments to organizations other than NRC requiring modifications and major plant improvement/maintenance items will be placed in category 3. The categories are defined as follows:

Category 1. Commitments required by the NRC and enforced by the CODE OF FEDERAL REGULATION or Confirmatory Orders.

Category 2. Commitments TVA voluntarily makes to the NRC. These commitments usually come from IE bulletins, IE notices, NUREGs, generic letters, and licensee event reports.

Category 3. Category 3 items are items mandated by agencies other than NRC or major TVA-initiated plant improvement/maintenance items.

This integrated schedule DOES NOT include those regulatory agenda items that are in the information stage now or that can be foreseen as required in the future. Items such as the ATWS rule, mechanical qualification of equipment, unresolved safety issues resolutions, etc., will have a marked effect on this list in the coming months.

The modification work items listed in Category 1, 2, and 3 are listed in order of priority, with the highest priority item given first.

CATEGORY 1

ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT (10 CFR 50.49)

IE BULLETIN 80-17 CRD SDIV AND PIPING (NRC ORDERS DATED JUNE 24, 1983)

\*TORUS (NRC ORDERS DATED JANUARY 19, 1982)

Modifications for long-term torus integrity program.

Long-term torus integrity modifications--piping--PSC.

Long-term torus integrity modifications piping--MSDs.

Design, procure, and install a torus temperature monitoring system.

Modify drywell/torus vacuum breakers. Parts to be modified will include the hinge arms, hinge pin, bushing and others necessary to improve strength and reliability of the valves.

Install new hinge arm, hinge shift, bearing and associated components to increase the strength of the vacuum breaker valves, etc.

\*NOTE: Items in each major heading are of equal priority.

CATEGORY 1 cont.

\*NUREG-0737 (NRC Order dated March 25, 1983, revised February 12, 1985)

II F.1.1 Noble Gas and II F.1.2 Iodine

II F.1.3 Containment Hi Radiation

II F.1.4 Containment Pressure

II F.1.5 Containment Level

\*APPENDIX R (10 CFR 50, Appendix R)

Install emergency lighting units with an 8-hour battery power supply in all areas for operation of safe shutdown equipment, in access and egress routes.

Rework electrical backup controls to comply with 10 CFR-50, appendix R.

Upgrade or add circuit protection to comply with 10 CFR-50, appendix R.

Modify conduit and cable runs to existing equipment (install, reroute, and wrap) to comply with 10 CFR-50, appendix R.

Install preaction sprinkler system on entire floor elevation 550 of the intake pumping station and add a water spray system.

Install a 3-hour fire barrier in shutdown board rooms, A, C, E, and RX building, elevation 621, etc.

Modify existing fire suppression and detection system.

Seal the annular space between the exterior of the pipe or conduit and the penetration sleeve such that the fire rating for the seal is equivalent to the fire rating of the wall.

Add backfeed switches to each unit to reduce the number of breaker manipulators required of unit operation, etc.

Install fire dampers at each penetration (HVAC ducts) in fire walls.

Separate the HPCI steam supply inboard isolation valve division I cable from the ADS division I cable.

Provide a one-hour fire rating seal limited to pipes and conduits installed in sleeved penetrations, HVAC ducts, and cable trays which penetrate the floor slab of units 1, 2 and 3 of the reactor building at elevations 565, 593, 621 and 639.

Install a preaction sprinkler system over the floor of elevation 621 in units 1, 2, and 3 of the reactor building, to cover all areas of elevation 621.

\*NOTE: Items in each major heading are of equal priority.

CATEGORY 1 cont.\*APPENDIX R cont.

The radio repeater system is currently powered from offsite power because of appendix R, it needs a backup power supply. Therefore, to meet this requirement a battery and charger should be added to the radio repeater system to guarantee a power system during loss of offsite power. The battery should be capable of supplying three hours of operation of the radio repeater system.

\*NOTE: Items in each major heading are of equal priority.

CATEGORY 2

Replace the existing jet pump holddown beam assemblies with improved holddown assemblies.

Undervoltage Modifications

Instrument and control bus problems.

MSIV Modifications

Process computer system for each unit.

IEB 79-14 Modify Hangers

NRC IE Bulletin 79-02

IEB 80-11 Masonry Walls

Feedwater nozzle temperature

Modify FCV 76-18 and -19 to allow the flange side that cannot be isolated from primary containment to be testable.

Valves 64-17, -18, -19, -20, -21, -29, -30, -31, -32, and -33. Modify seating surface on each side by welding stainless steel onto seating area of the disc.

Modify valves FCV -64-18, -19, -20, -21, and -31 to allow the flange side that cannot be isolated from primary containment to be testable.

Modify valves FCV -84-88A through D to allow the flange side that cannot be isolated from primary containment to be testable.

NUREG 0737 II.B.3 - PASF

NUREG 0737 II.K3.13 RCIC restart.

NUREG 0737 II.E4.1 - dedicated H2 penetrations.

NUREG 0737 III.A.1.2 - Emergency support.

Provide a safety-grade, long-term depressurization capability to the ADS by installing a line from each of the 2 CADs nitrogen supply trains, etc.

Install redundant air supply to the drywell from plant control air and drywell control air system.

Rewire diesel generator protective circuitry to enable diesel generator loss of field trip to be bypassed when in emergency mode.

IEB 79-18 Emergency evacuation.

Provide substitute for Walter Kidde Model FT200, CPD 1212, and CPD 1201 smoke detectors.

CATEGORY 2 cont.

Replace vent and drain line restraints.

Install instrument on HPCI for special test procedure.

Provide a circuit change to the RPS shutdown scram reset interlocks which prevents the backup manual scram capability to the RX mode switch from being bypassed upon loss of power with subsequent restoration.

Install permanent wind monitor recorders.

Investigate soil settlement condition the south side of the reactor building.

Add devices in the sample lines for panels 25-340, 25-341.

Relocate and add new flow switches to replace FS-65-20A, FS-65-20B, FS-65-42A, and FS-65-42B on standby gas treatment trains A and B similar to those used on train C.

Provide for distinct annunciation in control room for process radiation monitor.

Install pressure switch on oil feed line to HPCI pump to give alarm in control room panel 9-3 on low pressure to bearings.

Heat trace and insulate sample lines and chamber to CAM-90-250.

Replace existing sensing panels with solid state speed sensing panels on all eight diesel generators.

Install sludge traps in the EECW piping upstream of each RHR pump seal water heat exchanger. This trap should be of sufficient volume and internal design to permit precipitation of suspended solids from the cooling water prior to entering the seal heat exchanger.

Remove all carbon steel piping, valves (except header isolation valves), and fittings four inches and smaller that are safety-related and/or seismically qualified and replace with type 316 stainless steel.

Replace the HPCI 14-inch valve 73-45 and the RCIC 6-inch valve 71-40. These are containment isolation testable check valves.

Make changes to the BFN HPCI turbine controls in conjunction with part of a steer 8211.

CATEGORY 3

Recirculation Piping Replacement

Buildings to support reorganization

Barge Docking Facility

Install a permanent monorail and five-ton trolley hoist in drywell.

Security Modifications

Construct a concrete pad and provide necessary monitoring instrumentation for two spent fuel casks at the dry spent fuel storage facility.

Use BWR-6 control rod drives to replace existing BWR-4 control rod drives.

Turbine work

Replace the main turbine oil centrifuge with a 600 GPH vacuum type oil purifier.

SJAE modifications

ENCLOSURE 4  
PROGRAM DESCRIPTION

(REVISED ENCLOSURE 8 OF AUGUST 14, 1984 SUBMITTAL)

I. Program Description

Upon completion of the complete work listing, TVA determined that detailed and integrated schedules were required for the major work items. Upon completing the comprehensive listing of major work items, the tasks were organized into categories 1, 2, and 3. All categories are briefly described below:

Category 1

All items which have implementation dates mandated by NRC rules, orders, or license conditions.

Category 2

Regulatory items (of either a generic or plant specific nature) identified by NRC which have implementation dates committed to by TVA and which would result in plant modifications.

Category 3

All other major tasks resulting from mandates of agencies other than NRC and TVA-initiated system upgrades for availability improvement.

Category 1 dates may be delayed only with the prior approval of NRC, in accordance with existing NRC procedures. Delays in Category 2 dates require written notification to NRC, as described in Section III.

Categories 1, 2, and 3, taken together, provide a basis for assessing the overall effects of changes to schedules and a departure point for discussion between NRC and the licensee regarding such changes, as discussed below.

II. Schedule Changes

An important aspect of TVA's planning effort is the recognition that the integrated schedules will need to be modified at times to reflect changes in regulatory requirements, to accommodate those activities that TVA finds necessary to improve plant efficiency and reliability, and to take

into account delays resulting from events beyond TVA's control. It is important that the procedure used by TVA for changing the schedules be documented. In addition, NRC must play a role in the oversight of the scheduling process (and must, in fact, judge the acceptability of proposed date changes in Category 1). Accordingly, it is important that NRC's role and the interaction between NRC and TVA be clearly defined as discussed below.

### III. TVA Responsibilities

The integrated schedule requires that TVA monitor the progress of all work undertaken, manage its activities to maintain the schedule, and act promptly to take necessary actions when a schedule change is needed.

#### A. Periodic Updating

TVA will update schedule Categories 1, 2, and major Category 3 items semi-annually and submit the revised schedules to NRC, beginning six months following NRC concurrence in the plan. In addition to updating the schedules, TVA will:

1. Identify changes since the last report.
2. Provide the reasons for schedule delays associated with NRC regulatory requirements.

#### B. Changes to Schedules

Changes to the schedules may arise from a variety of reasons, such as new work activities; modifications in the scope of scheduled work; problems in delivery; procurement, etc.; changes in NRC rules and regulations; or other NRC or TVA actions.

Where it is necessary to add a new work item or to change the schedule for an item, the following general guidance will be utilized to the extent appropriate:

1. Assess the priority of the work items and its safety significance.
2. Schedule the new or changed item to avoid rescheduling other items, if it can be reasonably achieved.
3. Alter Category 2 items before Category 1 items.
4. Select a schedule for the new or changed items which will help in maintaining an optimum integrated program of work.

As noted above, no delays will be made in the Category 1 schedule without prior NRC approval. Should a delay become necessary, it will only be proposed after TVA has determined that rescheduling of non-NRC required work items either will not significantly assist in maintaining Category 1 without a delay; or that the safety, cost, or schedule penalties from rescheduling non-NRC required work significantly outweigh the delay in a Category 1 completion date.

TVA will inform the NRC Project Manager when serious consideration is given to requesting a schedule delay in a Category 1 item. If TVA determines that a delay in a Category 1 is necessary, it will submit a written request for NRC approval in accordance with applicable procedure.

TVA will notify NRC in writing at least 30 days (unless otherwise agreed to by the NRC Project Manager or unless circumstances beyond TVA's control arise within 30 days of the scheduled date) before adopting a planned delay for an item in Category 2. Such notification will also include the reasons for the delay and describe any compensatory actions indicated.

The revised date proposed by TVA will go into effect unless NRC, in writing, request further explanation or discussion concerning such delay. If NRC makes such a request, it will be made in writing within 15 days of receipt of TVA's written notification. In this event, discussions will be initiated to promptly develop a schedule date which is mutually acceptable to TVA and the NRC Project Manager while considering overall program impact. The written notification by NRC will serve to extend the schedule date for the period of time required for such discussions. If a new date is established in these discussions, such date will supersede the date set forth in the integrated schedule for that Category 2 item. The new date will be incorporated in a revised integrated schedule in the next schedule update submitted to NRC. If a new date cannot be established in these discussions, TVA changes in scheduled dates will be effective unless subsequently modified by NRC Order.

In the event of unplanned delays, or circumstances beyond TVA control, TVA shall promptly notify the NRC Project Manager of the new date and incorporate it in a revised integrated schedule in the next integrated schedule update submitted to NRC.

#### IV. NRC Review

As pointed out in Section II.B above, changes to the schedules are inevitable. Action required by NRC is discussed below:

##### A. TVA Originated Changes

1. Upon receipt from TVA of a request for delay of a Category 1 item, NRC will act promptly (consistent with resource availability and priority of other work) to consider and decide on the request in accordance with applicable procedures.
2. If the request for a modification of Category 1 is denied, NRC shall promptly inform TVA and provide the reasons for denial.
3. NRC consideration of TVA delays for non-Category 1 items is covered by III.B.

B. NRC-Originated Changes (Category 1)

It is recognized that formal NRC regulatory actions may:

(1) impose a new regulatory requirement with a fixed date, or (2) establish a firm date for a previously identified regulatory requirement. In taking any such action NRC, to the extent consistent with its overall regulatory responsibilities and, unless public health, safety, or interest require otherwise, will take into account the impact of such action on TVA's ability to complete effectively the items on Categories 1 and 2, and in consultation with TVA, will try to minimize such impact. Although, any formal regulatory action taken by NRC will be effective in accordance with its term without inclusion in Category 1, NRC and TVA recognize the desirability of incorporating such actions into Category 1, particularly in order to incorporate at the same time any other appropriate changes in the total integrated schedule program. Accordingly, once such formal regulatory action is taken (or earlier, if practicable), NRC will provide TVA a reasonable schedule program which would most effectively accommodate such requirements. Any resulting delays in items in Category 1, will be approved by NRC in accordance with established procedures, and will thereupon be reflected in a revised Category 1 schedule submittal by TVA. TVA will inform NRC of any resulting delays in Category 2 in accordance with Section III above.

C. New NRC Issues (Category 2)

NRC may, from time to time, identify new regulatory issues which may result in plant modifications. For issues as to which NRC requests scheduling information, these issues may be included in Category 2 in accordance with the date commitment developed in discussions between TVA and the NRC staff. As for the case of NRC-originated changes to Category 1 items, NRC will provide TVA a reasonable opportunity to propose overall changes in the total integrated schedule program which would not effectively accommodate such issues. Any resulting changes in integrated program schedules will thereupon be reflected in a revised Category 2 schedule submitted by TVA.

V. Modifications To The Program

The license and NRC recognize that the program itself may require future modifications. Accordingly, TVA will draft proposed modifications and submit a license amendment application for approval of the proposed changes. The changes will be made effective within 90 days of amendment issuance by NRC.