



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379

August 4, 2000

TVA-SQN-TS-99-20

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - TECHNICAL SPECIFICATION (TS) CHANGE NO. 99-20, "REVISE SECTION 6.2.2, FACILITY STAFF, TO ADDRESS SHIFT MANNING AND THE SHIFT TECHNICAL ADVISOR (STA) POSITION AS DESCRIBED IN THE STANDARD TECHNICAL SPECIFICATIONS"

In accordance with the provisions of 10 CFR 50.4 and 50.90, TVA is submitting a request for an amendment to SQN's Licenses DPR-77 and 79 to change the TSs for Units 1 and 2. The proposed change to various sections of TS 6.0 will change the title of "Shift Operations Supervisor" to "Shift Manager" and revise Sections 6.2.2, Facility Staff; and 6.2.4, Shift Technical Advisor, to align with the latest revision of the Westinghouse Standard Technical Specification. The major changes are the deletion of the table delineating the shift crew composition and assigning the role of Shift Technical Advisor (STA) to a qualified individual in the operating crew.

The elimination of the title of STA will require a change to TVA's Radiological Emergency Plan (REP) organization description. TVA plans to make the REP changes following NRC approval of this TS change.

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). The SQN Plant

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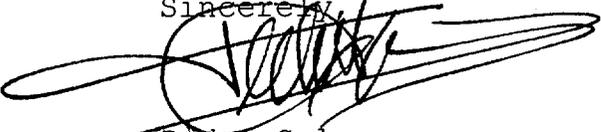
Operations Review Committee and the SQN Nuclear Safety Review Board have reviewed this proposed change and determined that operation of SQN Units 1 and 2, in accordance with the proposed change, will not endanger the health and safety of the public. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter to the Tennessee State Department of Public Health.

Enclosure 1 to this letter provides the description and evaluation of the proposed change. This includes TVA's determination that the proposed change does not involve a significant hazards consideration, and is exempt from environmental review. Enclosure 2 contains copies of the appropriate TS pages from Units 1 and 2 marked up to show the proposed change.

Please note that the proposed changes are consistent with the NRC guidance contained in Generic Letter 86-04 pertaining to engineering expertise on shift and TSTF-258, Revision 4 as it applies to the Standard TSS dated February 3, 1999.

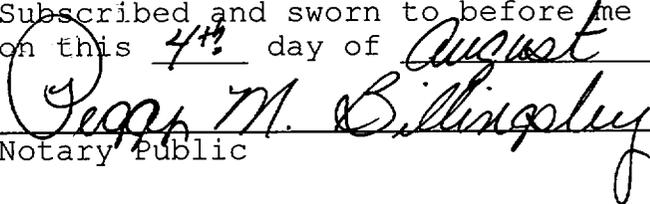
TVA requests that the revised TS be made effective within 45 days of NRC approval. If you have any questions about this change, please telephone me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,



Pedro Salas
Licensing and Industry Affairs Manager

Subscribed and sworn to before me
on this 4th day of August



Peggy M. Billingsley
Notary Public

My Commission Expires October 9, 2002

Enclosures
cc: See page 3

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ENCLOSURE 1

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2
DOCKET NOS. 327 AND 328**

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE NO. 99-20, "REVISE SECTION 6.2.2, FACILITY STAFF, TO ADDRESS SHIFT MANNING AND THE SHIFT TECHNICAL ADVISOR (STA) POSITION AS DESCRIBED IN THE STANDARD TECHNICAL SPECIFICATIONS"

DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

I. DESCRIPTION OF THE PROPOSED CHANGE

TVA proposes to revise the SQN Units 1 and 2 TSs to replace the title of "Shift Operations Supervisor" (SOS) with "Shift Manager" (SM) in Section 6.0. Additionally, TVA proposes to eliminate duplication between 10 CFR 50.54 and the TSs and to implement the optional guidance of Generic Letter (GL) 86-04 concerning engineering expertise on shift.

The specific changes are as follows:

1. Unit 1 License Condition 2.C.(23)A, Shift Technical Advisor (Section 22.3, I.A.1.1) and Unit 2 License Condition 2.C.(16)a, Shift Technical Advisor (Section 22.2, I.A.1.1), is deleted.
2. "Shift Operations Supervisor" is replaced with "Shift Manager" in TSs 6.1.2 and 6.12.2.
3. TS 6.2.2.a is revised to read: "A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned to each unit for which a reactor is operating in MODES 1, 2, 3, or 4. With both units in shutdown or defueled, a total of three non-licensed operators are required for the two units." In addition, the detailed staffing requirements of Table 6.2-1 is deleted.
4. TS 6.2.2.b which currently states: "At least one licensed Reactor Operator shall be in the Control Room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator shall be in the Control Room"

is deleted. A new TS 6.2.2.b is inserted as follows: "Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 6.2.2.a and 6.2.2.h for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements."

5. TS 6.2.4.1 which currently states: "The STA shall serve in an advisory capacity to the Shift Operations Supervisor on matters pertaining to the engineering aspects of assuring safe operation of the unit" is deleted. TS 6.2.4.1 is replaced with a new TS 6.2.2.h which states: "An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift."

II. REASON FOR THE PROPOSED CHANGE

The proposed change to replace the title of "Shift Operations Supervisor" with "Shift Manager" is an administrative change that is needed to provide consistency with titles contained in TVA's Organizational Topical Report. The deletion of the License Condition and the revision to Section 6.2.2, Facility Staff, is being pursued to allow additional flexibility in control room staffing.

III. SAFETY ANALYSIS

The change of title from "Shift Operations Supervisor" to "Shift Manager" is an administrative change. This position remains unchanged with regard to qualifications, training, and required experience.

The proposed deletion of both unit's License Condition and the revision to TS Section 6.2.2, Facility Staff, is being revised to eliminate duplication between the TSs and the staffing requirements of 10 CFR 50.54. This TS section and Section 6.2.4 is consistent with Option 1 of the Commission Policy Statement on Engineering Expertise on Shift (GL 86-04).

The requirements of 10 CFR 50.54(m)(2)(iii) and 50.54(k) adequately provide for shift manning of licensed operators. 10 CFR 50.54(m)(2)(iii) states: "when a nuclear plant is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical

specifications, each licensee shall have a person holding a senior operator license for the nuclear power unit in the control room at all times. In addition to this senior operator, for each fueled nuclear power unit, a licensed operator or senior operator shall be present at the controls at all times." Further, 50.54(k) states: "An operator or senior operator licensed pursuant to part 55 of this chapter shall be present at the controls at all times during operation of the facility." Given the above requirements, it is reasonable that current TSs 6.2.2.a and 6.2.2.b may be replaced with the proposed language of TS 6.2.2.a which covers the requirements for non-licensed operators. The proposed TS 6.2.2.a is consistent with NUREG-1431, Revision 1, Section 5.2.2.a. With the exception that TVA's proposed language utilizes the term "unit" rather than "each control room." The basis for this exception is to provide clarification and eliminate any potential for misinterpretation relative to assigned areas.

10 CFR 50.54(m)(2)(i) contains a note that states "Temporary deviations from the numbers required by this table shall be in accordance with criteria established in the unit's technical specifications." This note is currently met by SQN's Table Notation for Table 6.2-1. TVA proposes to address this item in the new TS 6.2.2.b.

The proposed change also deletes the exception that the SOS (SM) may not be absent during the two hour less than minimum crew requirement and deletes the portion of the requirement that does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent. These constraints are considered overly conservative. For normal or emergency plant operation, the level of training for the SOS (SM) is the same as for the Senior Reactor Operator (SRO). Also, unexpected absences carry the same risk over the full shift. Thus, specifying the particular time this allowance can be used is unnecessary. The proposed change is consistent with Revision 1 of NUREG-1431.

Unit 1 License Condition 2.C.(23)A, Shift Technical Advisor (Section 22.3, I.A.1.1) and Unit 2 License Condition 2.C.(16)a, Shift Technical Advisor (Section 22.2, I.A.1.1), and Section 6.2.4.1 is being deleted and the new requirements for on-shift technical expertise is being proposed for a new Section 6.2.2.h. The proposed TS 6.2.2.h implements Option 1 of the Commission Policy Statement on Engineering Expertise on Shift, which is satisfied by assigning an individual with the specified educational qualifications to each operating crew. Under TVA's proposed change, the duty SRO required by 10 CFR 50.54(m)(2)(i) will serve as the individual that will

provide the technical expertise on shift. TVA is electing to implement Option 1 such that the technical expertise may be provided by an individual meeting the NRC policy statement. If that individual is not available, a dedicated individual will be assigned as the STA who meets the requirements specified in NUREG-0737, Item I.A.1.1. The proposed change is consistent with the applicable portions of NRC approved TSTF-258, Revision 4.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of SQN Units 1 and 2, in accordance with the proposed change to the technical specifications, does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

A. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The title change of Shift Operations Supervisor to Shift Manager is administrative. The elimination of TS 6.2.2.b and Table 6.2-1 is considered an administrative change. These two items contain similar requirements as those contained in 10 CFR 50.54(m)(2)(iii), 10 CFR 50.54(m)(2)(i), and 10 CFR 50.54(k). These sections are considered a duplicate of the requirements contained in the Code of Federal Regulations. This request also eliminates the title of Shift Technical Advisor (STA) but will not eliminate or reduce licensee responsibilities in this area. This request is based on an NRC policy statement, contained in Generic Letter 86-04, that supports the transition of engineering expertise from the STA position to another individual on shift who possesses the mandated education qualifications. The proposed administrative and organizational changes do not result in any increase in the probability or consequences of an accident previously evaluated.

B. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

As described above, the proposed changes are administrative and organizational in nature and cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

C. The proposed amendment does not involve a significant reduction in a margin of safety.

As described above, the proposed changes are administrative and organizational in nature. The proposed changes are based on approved NRC guidance. The margin of safety is therefore not reduced.

V. **ENVIRONMENTAL IMPACT CONSIDERATION**

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
SEQUOYAH PLANT (SQN)
UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE
MARKED PAGES

I. AFFECTED PAGE LIST

Unit 1

License Page 10

6-1
6-2
6-3
6-4
6-5
6-15

Unit 2

License Page 6

6-1
6-2
6-3
6-4
6-5
6-16

II. MARKED PAGES

See attached.

Add: This condition is deleted.

(23) TMI Action Plan Dated Conditions

Each of the following conditions shall be completed to the satisfaction of the NRC by the times indicated:

A. Shift Technical Advisor (Section 22.3, I.A.1.1)

~~TVA shall continue to provide an on-shift technical advisor to the shift operations supervisor.~~

~~All STAs shall be fully trained no later than by January 1, 1981. STAs shall complete eight weeks of mathematics, physics, thermodynamics, fluid flow, heat transfer, instrumentation and control, chemistry, materials and structural analysis. Following this, STAs shall receive two weeks of design review and five weeks of systems dynamic behavior including transient analysis and techniques for transient identification. The training program for engineers designated as STAs shall consist of three portions: academic training in thermodynamics, fluid flow, heat transfer and reactor theory; specific instruction in plant systems and Technical Specifications; and finally, simulator training.~~

~~The training shall be taught at the college level and be equivalent to about 60 semester hours.~~

Items for completion by January 1, 1981:

DELETE

B. Plant Shielding (Section 22.3, II.B.2)

TVA shall complete modification to assure adequate access to vital areas and protection of safety equipment following an accident resulting in a degraded core.

C. Auxiliary Feedwater Initiation and Indication (Section 22.3, II.E.1.2)

(a) TVA shall upgrade, as necessary, automatic initiation of the auxiliary feedwater system to safety-grade quality.

(b) TVA shall upgrade, as necessary, the indication of auxiliary feedwater flow to each steam generator to safety grade quality.

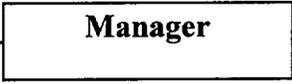
D. Additional Accident Monitoring Instrumentation (Section 22.3, II.F.1)

(1) TVA shall install interim noble gas monitors at the first outage of sufficient duration.

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

Manager



6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Operations Supervisor (or during his absence from the Control Room, a designated individual) shall be responsible for the Control Room command function.

6.1.3 The Chief Nuclear Officer is responsible for the safe operation of all TVA Nuclear Power Plants.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

An onsite and an offsite organization shall be established for unit operation and corporate management. The onsite and offsite organization shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Nuclear Power Organization Topical Report (TVA-NPOD89-A).
- b. The Chief Nuclear Officer shall have corporate responsibility for overall plant nuclear safety. This individual shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support in the plant so that continued nuclear safety is assured.
- c. The Plant Manager shall be responsible for overall unit safe operation and shall have control over those onsite resources necessary for safe operation and maintenance of the plant.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

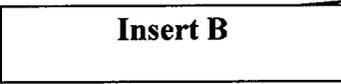
6.2.2 FACILITY STAFF

Insert A



- a. ~~Each on-duty unit shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.~~
- b. ~~At least one licensed Reactor Operator shall be in the unit Control Room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3 or 4, at least one licensed Senior Reactor Operator shall be in the Control Room.~~

Insert B



ADMINISTRATIVE CONTROLS

- c. A Radiological Control technician# shall be onsite when fuel is in the reactor.
- d. DELETED
- e. DELETED
- f. The Operations Superintendent shall hold a Senior Reactor Operator license.
- g. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions (i.e., senior reactor operators, reactor operators, assistant unit operators, Radiological Control, and key maintenance personnel).

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8-, 10-, or 12-hour day, nominal 40-hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modification, on a temporary basis the following guidelines shall be followed:

1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
3. A break of at least 8 hours should be allowed between work periods, including shift turnover time.
4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized in advance by the Plant Manager or his designee, in accordance with approved administrative procedures, or by higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Plant Manager or his designee to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

Add Insert C

#The Radiological Control technician may be offsite for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

Table 6.2-1
 MINIMUM SHIFT CREW COMPOSITION
 WITH UNIT 2 IN MODE 5 OR 6 OR DE-FUELED

Position	Number of individuals required to fill position	
	Modes 1, 2, 3, & 4	Modes 5 & 6
SOS	1 ^a	1 ^a
SRO	1	None
RO	2	1
AO	2	2 ^b
STA	1	None

WITH UNIT 2 IN MODES 1, 2, 3, or 4

Position	Number of individuals required to fill position	
	Modes 1, 2, 3, & 4	Modes 5 & 6
SOS	1 ^a	1 ^a
SRO	1 ^a	None
RO	2 ^b	1
AO	2 ^b	1
STA	1 ^a	None

^a Individual may fill the same position on Unit 2.

^b One of the two required individuals may fill the same position on Unit 2.

DELETE

TABLE 6.2-1 (Continued)

TABLE NOTATION

SOS - Shift Operations Supervisor with a Senior Reactor Operators License on Unit 1
SRO - Individual with a Senior Reactor Operators License on Unit 1
RO - Individual with a Reactor Operators License on Unit 1
AO - Auxiliary Operator
STA - Shift Technical Advisor

Except for the Shift Operations Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Operations Supervisor from the Control Room while the unit is in MODE 1, 2, 3 or 4, an individual (other than the Shift Technical Advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Operations Supervisor from the Control Room while the Unit is in Mode 5 or 6, an individual with a valid SRO or RO license (other than the Shift Technical Advisor) shall be designated to assume the Control Room command function.

DELETE

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING (ISE) (DELETED)

6.2.4 SHIFT TECHNICAL ADVISOR (STA) (DELETED)

ADD - "DELETED"

~~6.2.4.1 The STA shall serve in an advisory capacity to the Shift Operations Supervisor on matters pertaining to the engineering aspects of assuring safe operation of the unit.~~

DELETED

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions in Regulatory Guide 1.8, Revision 2 (April 1987) for all new personnel qualifying on positions identified in Regulatory Position C.1 after January 1, 1990. Personnel qualified on these positions prior to this date will still meet the requirements of Regulatory Guide 1.8, Revision 1-R (May 1977).

ADMINISTRATIVE CONTROLS

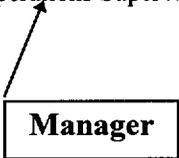
6.11 RADIATION PROTECTION PROGRAM (DELETED)

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601(a) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit* (RWP). Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility RADCON/Chemistry Control Manager in the RWP.

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Operations Supervisor on duty and/or the RADCON/Chemistry Control Manager



Manager

*Radiological Control personnel or personnel escorted by Radiological Control personnel in accordance with approved emergency procedures, shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

(13) Fire Protection

TVA shall implement and maintain in effect all provisions of the approved fire protection program referenced in Sequoyah Nuclear Plant's Final Safety Analysis Report and as approved in NRC Safety Evaluation Reports contained in NUREG-0011, Supplements 1, 2, and 5, NUREG-1232, Volume 2, NRC letters dated May 29, and October 6, 1986, and the Safety Evaluation issued on August 12, 1997, for License Amendment No. 218, subject to the following provision:

TVA may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

(14) Compliance With Regulatory Guide 1.97

TVA shall implement modifications necessary to comply with Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," dated December 1980 by startup from the Unit 2 Cycle 4 refueling outage.

(15) Corrosion of Carbon Steel Piping

TVA shall carry out a surveillance program on corrosion of carbon steel piping in accordance with TVA document SQRD-50-328/81-10 dated August 25, 1981, and procedures for implementation are to be submitted for NRC concurrence by October 15, 1981.

(16) NUREG-0737 Conditions (Section 22.2)

Each of the following conditions shall also be performed to the satisfaction of the NRC:

a. Shift Technical Advisor (Section 22.2, I.A.1.1)

~~TVA shall provide a fully-trained on-shift technical advisor to the shift operations supervisor.~~

DELETE

b. Independent Safety Engineering Group (Section 22.2, I.B.1.2)

This condition is deleted.

Add: This condition is deleted.

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Operations Supervisor (or during his absence from the Control Room, a designated individual) shall be responsible for the Control Room command function.

6.1.3 The Chief Nuclear Officer is responsible for the safe operation of all TVA Nuclear Power Plants.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

An onsite and an offsite organization shall be established for unit operation and corporate management. The onsite and offsite organization shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Nuclear Power Organization Topical Report (TVA-NPOD89-A).
- b. The Chief Nuclear Officer shall have corporate responsibility for overall plant nuclear safety. This individual shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support in the plant so that continued nuclear safety is assured.
- c. The Plant Manager shall be responsible for overall unit safe operation, and shall have control over those onsite resources necessary for safe operation and maintenance of the plant.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 FACILITY STAFF

- a. ~~Each on duty unit shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.~~
- b. ~~At least one licensed Reactor Operator shall be in the unit Control Room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3 or 4, at least one licensed Senior Reactor Operator shall be in the Control Room.~~

Insert A

Insert B

ADMINISTRATIVE CONTROLS

- c. A Radiological Control technician# shall be onsite when fuel is in the reactor.
- d. DELETED
- e. DELETED
- f. The Operations Superintendent shall hold a Senior Reactor Operator license.
- g. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions (i.e., senior reactor operators, reactor operators, assistant unit operators, Radiological Control, and key maintenance personnel).

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8-, 10-, or 12-hour day, nominal 40-hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modification, on a temporary basis the following guidelines shall be followed:

1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
2. An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
3. A break of at least 8 hours should be allowed between work periods, including shift turnover time.
4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Any deviation from the above guidelines shall be authorized in advance by the Plant Manager or his designee, in accordance with approved administrative procedures, or by higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation.

Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Plant Manager or his designee to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

Add Insert C

#The Radiological Control technician may be offsite for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.

Table 6.2-1
 MINIMUM SHIFT CREW COMPOSITION
 WITH UNIT 1 IN MODE 5 OR 6 OR DE-FUELED

Position	Number of individuals required to fill position	
	Modes 1, 2, 3, & 4	Modes 5 & 6
SOS	1 ^a	1 ^a
SRO	1	None
RO	2	1
AO	2	2 ^b
STA	1	None

WITH UNIT 1 IN MODES 1, 2, 3, or 4

Position	Number of individuals required to fill position	
	Modes 1, 2, 3, & 4	Modes 5 & 6
SOS	1 ^a	1 ^a
SRO	1 ^a	None
RO	2 ^b	1
AO	2 ^b	1
STA	1 ^a	None

^a Individual may fill the same position on Unit 1.

^b One of the two required individuals may fill the same position on Unit 1.

DELETE

TABLE 6.2-1 (Continued)

TABLE NOTATION

SOS - Shift Operations Supervisor with a Senior Reactor Operators License on Unit 2
SRO - Individual with a Senior Reactor Operators License on Unit 2
RO - Individual with a Reactor Operators License on Unit 2
AO - Auxiliary Operator
STA - Shift Technical Advisor

Except for the Shift Operations Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the Shift Crew Composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Operations Supervisor from the Control Room while the unit is in MODE 1, 2, 3 or 4, an individual (other than the Shift Technical Advisor) with a valid SRO license shall be designated to assume the Control Room command function. During any absence of the Shift Operations Supervisor from the Control Room while the Unit is in Mode 5 or 6, an individual with a valid SRO or RO license (other than the Shift Technical Advisor) shall be designated to assume the Control Room command function.

DELETE

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING (ISE) (DELETED)

ADD - "DELETED"

6.2.4 SHIFT TECHNICAL ADVISOR (STA) (DELETED)

6.2.4.1 ~~The STA shall serve in an advisory capacity to the Shift Operations Supervisor on matters pertaining to the engineering aspects of assuring safe operation of the unit.~~

DELETED

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications referenced for comparable positions in Regulatory Guide 1.8, Revision 2 (April 1987) for all new personnel qualifying on positions identified in Regulatory Position C.1 after January 1, 1990. Personnel qualified on these positions prior to this date will still meet the requirements of Regulatory Guide 1.8, Revision 1-R (May 1977).

6.4 TRAINING

6.4.1 DELETED

6.5 REVIEW AND AUDIT

6.5.0 DELETED

6.5.1 PLANT OPERATIONS REVIEW COMMITTEE (PORC) (DELETED)

6.5.1A TECHNICAL REVIEW AND CONTROL (DELETED)

6.5.2 NUCLEAR SAFETY REVIEW BOARD (NSRB) (DELETED)

6.5.3 RADIOLOGICAL ASSESSMENT REVIEW COMMITTEE (RARC) (DELETED)

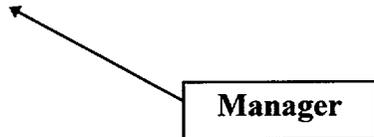
6.11 RADIATION PROTECTION PROGRAM (DELETED)

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601(a) (2) of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit* (RWP). Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.
- c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility RADCON/Chemistry Control Manager RWP.

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/ hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Operations Supervisor on duty and/or the RADCON/Chemistry Control Manager.



*Radiological Control personnel or personnel escorted by Radiological Control personnel in accordance with approved emergency procedures, shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas.

Insert A

A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator shall be assigned for each unit for which a reactor is operating in MODES 1, 2, 3, or 4. With both units shutdown or defueled, a total of three non-licensed operators are required for the two units.

INSERT B

Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and Sections 6.2.2.a and 6.2.2.h for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

INSERT C

6.2.2.h An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.