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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 233
License No. DPR-33

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

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated June 6, 1996, as supplemented by letters dated September 26, 1997, January 23, 1998, and May 19, 1998, 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-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 233 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

Frederick J. Hebdon

Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 9, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 233

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. *Overleaf pages are included to maintain document completeness.

REMOVE	INSERT
v	v
vi	vi*
1.0-9	1.0-9*
1.0-10	1.0-10
6.0-1	6.0-1
6.0-2	6.0-2
6.0-3	6.0-3
6.0-4	6.0-4*
6.0-5	6.0-5
6.0-6	6.0-6
6.0-7	6.0-7
6.0-8	6.0-8
6.0-9	6.0-9
6.0-10	6.0-10
6.0-11	6.0-11
6.0-12	6.0-12
6.0-13	6.0-13
6.0-14	6.0-14
6.0-15	6.0-15
6.0-16	6.0-16
6.0-17	6.0-17
6.0-18	6.0-18
6.0-19	6.0-19
6.0-20	6.0-20
6.0-21	6.0-21
6.0-22	6.0-22
6.0-23 through 6.0-34	------

LIST OF TABLES

9. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

10. Logic - A logic is an arrangement of relays, contacts, and other components that produces a decision output.

    (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.

    (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.

11. Channel Calibration - Shall be the adjustment, as necessary, of the channel output such that it responds with necessary range and accuracy to known values of the parameters which the channel monitors. The channel calibration shall encompass the entire channel including alarm and/or trip functions and shall include the channel functional test. The channel calibration may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated. Non-calibratable components shall be excluded from this requirement, but will be included in channel functional test and source check.

12. Channel Functional Test - Shall be:

    a. Analog/Digital Channels - the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

    b. Bistable Channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.

13. (Deleted)

W. Functional Tests - A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).

X. Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

Y. Engineered Safeguard - An engineered safeguard is a safety system the actions of which are essential to a safety action required in response to accidents.

Z. Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

AA. (Deleted)

BB. Offsite Dose Calculation Manual (ODCM) - Shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.9.1.5 and 6.9.1.8.

CC. Purge or purging - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is required to purify the containment.

DD. (Deleted)

EE. (Deleted)

FF. Venting - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is not provided or required. Vent, used in system names, does not imply a venting process.

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.

6.2 ORGANIZATION

6.2.1 Offsite and Onsite Organizations

An onsite and 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).

6.2.1 (Cont'd)

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 Plant Staff

a. Shift manning requirements, shall as a minimum, be as described in Table 6.2.A and below.

b. A licensed senior reactor operator shall be present at the site at all times when there is fuel in the reactor.

c. A licensed reactor operator shall be in the control room whenever there is fuel in the reactor.

6.2.2 (Cont.)

d. Two licensed reactor operators shall be in the control room during any cold startups, while shutting down the reactor, and during recovery from unit trip. In addition, a person holding a senior operator license shall be in the control room for that unit whenever it is in an operational mode other than cold shutdown or refueling.

e. A Health Physics Technician* shall be present at the facility at all times when there is fuel in the reactor.

f. (Deleted)

g. (Deleted)

*The Health Physics Technician may be absent from the facility for a period of time not to exceed 2 hours provided immediate action is taken to fill the required position.

Table 6.2.A

Minimum Shift Crew Requirements[b]

Position	Units in Operation				Type of License
	0	1	2[d]	3	
Senior Operator[a]	1	1	1	1	SRO
Senior Operator	0	1	2	2	SRO
Licensed Operators	3	3	3	3	RO or SRO
Additional Licensed Operators[c]	0	1	2	2	RO or SRO
Assistant Unit Operators (AUO)	4	4	5	5	None
Shift Technical Advisor (STA)	0	1	1	1	None
Health Physics Technician	1	1	1	1	None

Note for Table 6.2.A

a. A senior operator will be assigned responsibility for overall plant operation at all times there is fuel in any unit.

b. Except for the senior operator discussed in note "a", the shift crew composition may be one less than the minimum requirements of Table 6.2.A for a period of time not to exceed two 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.A. 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.

c. One of the Additional Licensed Operators must be assigned to each control room with an operating unit.

d. The number of required licensed personnel, when the operating units are controlled from a common control room, are two senior operators and four operators.

6.3 PLANT STAFF QUALIFICATIONS

Each member of the unit 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 (Deleted)

6.5 (Deleted)

6.6 (Deleted)

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Site Vice President and the NSRB shall be notified within 24 hours.

b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PORC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.

c. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB, and the Site Vice President within 14 days of the violation.

6.7.1 (Cont'd)

d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES/INSTRUCTIONS AND PROGRAMS

6.8.1 PROCEDURES

6.8.1.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

b. Limitations on the amount of overtime worked by individuals performing safety-related functions in accordance with NRC Policy statement on working hours (Generic Letter No. 82-12).

c. Surveillance and test activities of safety-related equipment.

d. (Deleted)

e. (Deleted)

f. Fire Protection Program implementation.

g. (Deleted)

h. (Deleted)

i. Offsite Dose Calculation Manual.

j. Administrative procedures which control technical and cross-disciplinary review.

6.8.1 (Cont'd)

6.8.1.2 (Deleted)

6.8.1.3 (Deleted)

DRILLS

6.8.2 Drills on actions to be taken under emergency conditions involving release of radioactivity are specified in the Radiological Emergency Plan and shall be conducted annually. Annual drills shall also be conducted on the actions to be taken following failures of safety-related systems or components.

RADIATION CONTROL PROCEDURES

6.8.3 Radiation Control Procedures shall be maintained and made available to all station personnel. These procedures shall contain radiation dose limits and shall be consistent with the requirements of 10 CFR 20. This radiation protection program shall be organized to meet the requirements of 10 CFR 20 except for the "control device" or "alarm signal" required by 20.1601(a).

6.8.3.1 Each high radiation area as defined in 10 CFR 20 shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiological Work Permit. Individuals qualified in radiation protection procedures (e.g., a radiological control technician) or personnel escorted by such individuals, shall be exempt from RWP requirements during the performance of their assigned duties in high radiation areas with radiation dose rates equal to or less

than 1 rem in 1 hour at 30 centimeters, provided they otherwise comply with approved radiation protection procedures for entry into high radiation areas. 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 radiation protection control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the Radiological Work Permit.

6.8.3.2 In addition, areas that are accessible to personnel and that have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source or from the surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry. The keys

6.8.3 (Cont'd)

shall be under the administrative control of the duty Shift Operations Supervisor, Radiological Control Manager or their respective designees. Doors shall remain locked except during periods of access by personnel under an approved RWP which specifies the dose rates in the immediate work areas and maximum allowable stay time for individuals in that area. In lieu of the stay time requirement of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by individuals qualified in radiation protection procedures to provide positive exposure control over the activities being performed in the area.

6.8.3.3 Individual radiation areas that are accessible to personnel, have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source, are located within large areas where no enclosure exists for the purpose of locking and where no enclosure can be reasonably constructed around the individual area, shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device whenever the dose rate in the area exceeds or will shortly exceed 1 rem in 1 hour.

6.8.4 RADIOACTIVE EFFLUENT CONTROLS/RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAMS

The following programs shall be established, implemented, and maintained.

6.8.4 (Cont'd)

6.8.4.1 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the OPERABILITY of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM.

b. Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times the concentration values stated in 10 CFR 20.1001-20.2401, Appendix B, Table 2, Column 2.

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM.

d. Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive

materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50.

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current year in accordance with the methodology and parameters in the ODCM at least every 31 days.

f. Limitations on the OPERABILITY and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:

1. For noble gas: less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and

2. For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.

6.8.4 (Cont'd)

h. Limitations of the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

i. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

j. Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

6.8.4.2 (Deleted)

6.8.4.3 PRIMARY CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test program, dated September 1995".

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a, is 49.6 psig.

6.8.4 (Cont'd)

The maximum allowable primary containment leakage rate, L_a, at P_a, shall be 2% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

a. Primary Containment leakage rate acceptance criterion is $\leq$ 1.0 L_a. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq$ 0.60 L_a for the Type B and Type C tests and $\leq$ 0.75 L_a for Type A tests;

b. Air lock testing acceptance criteria are:

(1) Overall air lock leakage rate is $\leq$ 0.05 L_a when tested at $\geq$ P_a,

(2) Air lock door seals leakage rate is $\leq$ 0.02 L_a when the overall air lock is pressurized to $\geq$ 2.5 psig for at least 15 minutes.

6.8.5 PROGRAMS

Postaccident Sampling

Postaccident sampling activities will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. These activities shall include the following:

(i) Training of personnel,
(ii) Procedures for sampling and analysis,
(iii) Provisions for maintenance of sampling and analysis.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Director of the Regional Office of NRC, unless otherwise noted.

6.9.1.1 (Deleted)

6.9.1.2 ANNUAL OPERATING REPORT*

a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) for whom monitoring was required receiving annual deep dose equivalent exposures greater than 100 mrem and their associated man rem exposure according to work and job functions, **e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on measurements obtained with self reading dosimeter, TLD, or film badge. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose equivalent exposure received from external sources shall be assigned to specific major work functions.

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*A single submittal may be made for a multiple unit station.

**This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20.

6.9.1 (Cont'd)

b. Any mainsteam relief valve that opens in response to reaching its setpoint or due to operator action to control reactor pressure shall be reported.

6.9.1.3 MONTHLY OPERATING REPORT

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Office, to be submitted no later than the fifteenth of each month following the calendar month covered by the report. A narrative summary of operating experience shall be submitted in the above schedule.

6.9.1.4 REPORTABLE EVENTS

Reportable events, including corrective actions and measures to prevent re-occurrence, shall be reported to the NRC in accordance with Section 50.73 to 10 CFR 50.

6.9.1.5 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. A single submittal may be made for a multi-unit station. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

6.9.1 (Cont'd)

6.9.1.6 SOURCE TESTS

Results of required leak tests performed on sources if the tests reveal the presence of 0.005 microcurie or more of removable contamination.

6.9.1.7 CORE OPERATING LIMITS REPORT

a. Core operating limits shall be established and shall be documented in the CORE OPERATING LIMITS REPORT prior to each operating cycle, or prior to any remaining portion of an operating cycle, for the following:

(1) The APLHGR for Specification 3.5.I

(2) The LHGR for Specification 3.5.J

(3) The MCPR Operating Limit for Specification 3.5.K/4.5.K

(4) The APRM Flow Biased Rod Block Trip Setting for Specification 2.1.A.1.c, Table 3.2.C, and Specification 3.5.L

(5) The RBM Upscale (Flow Bias) Trip Setting and clipped value for this setting for Table 3.2.C

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in General Electric Licensing Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin limits, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The CORE OPERATING LIMITS REPORT, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

6.9.1.8 THE ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year of operation shall be submitted by April 1, of each year. The report shall include summaries of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. A single submittal may be made for a multi-unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

6.9.2 SPECIAL REPORTS

Reports on the following areas shall be submitted in writing to the Director of Regional Office, Division of Reactor Projects:

1.	Fatigue Usage	6.10.1.q	Annual Operating Report
2.	Relief Valve Tailpipe	3.2.F	Within 30 days after inoperability of thermocouple and acoustic monitor on one valve.
3.	Seismic Instrumentation Inoperability	3.2.J.3	Within 10 days after 30 days of inoperability.
4.	Meteorological Monitoring Instrumentation Inoperability	3.2.I.2	Within 10 days after 7 days of inoperability.
5.	(Deleted)		

6. Data shall be retrieved from all seismic instruments actuated during a seismic event and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be submitted within 10 days after the event describing the magnitude, frequency spectrum, and resultant effect upon plant features important to safety.

6.9.2 (Cont'd)

7. Diesel Generator Reliability Improvement Program Report shall be submitted within 30 days of meeting failure criteria in Table 4.9.A. As a minimum, the Reliability Improvement Program report for NRC audit shall include:

   a. A summary of all tests (valid and invalid) that occurred within the time period over which the last 20/100 valid tests were performed.

   b. Analysis of failures and determination of root causes of failures.

   c. Evaluation of each of the recommendations of NUREG/CR-0660, "Enhancement of Onsite Emergency Diesel Generator Reliability in Operating Reactors," with respect to their application to the plant.

   d. Identification of all actions taken or to be taken to (1) Correct the root causes of failures defined in b above and (2) Achieve a general improvement of diesel generator reliability.

   e. A supplemental report shall be prepared for an NRC audit within 30 days after each subsequent failure during a valid demand, for so long as the affected diesel generator unit continues to violate the criteria (3/20 or 6/100) for the reliability improvement program remedial action. The supplemental report need only update the failure/demand history for the affected diesel generator unit since the last report for that diesel generator. The supplemental report shall also present an analysis of the failure(s) with a root cause determination, if possible, and shall delineate any

6.9.2 (Cont'd)

further procedural, hardware or operational changes to be incorporated into the site diesel generator improvement program and the schedule for implementation of those changes.

8. (Deleted)

9.	High Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10.	Wide Range Gaseous Effluent Radiation Monitor and Recorder	3.2.F	Within 7 days after 7 days of inoperability.

6.10 (Deleted)

6.11 (Deleted)

6.12 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

1. Shall be documented and records shall be kept in a manner convenient for review. This documentation shall contain:

   a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change.

6.12 (Cont'd)

b. A determination that the change will maintain the level of radioactive effluent control pursuant to 10 CFR 20.1302; 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

2. Shall become effective after review and acceptance by the process described in TVA-NQA-PLN89-A.

3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.13 (Deleted)

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 252
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 June 6, 1996, as supplemented by letters dated September 26, 1997, January 23, 1998, and May 19, 1998, 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.

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(2) Technical Specifications

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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

Frederick J. Hebdon

Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 9, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 252

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf pages are included to maintain document completeness.

REMOVE	INSERT
v	v
vi	vi*
1.0-9	1.0-9*
1.0-10	1.0-10
6.0-1	6.0-1
6.0-2	6.0-2
6.0-3	6.0-3
6.0-4	6.0-4*
6.0-5	6.0-5
6.0-6	6.0-6
6.0-7	6.0-7
6.0-8	6.0-8
6.0-9	6.0-9
6.0-10	6.0-10
6.0-11	6.0-11
6.0-12	6.0-12
6.0-13	6.0-13
6.0-14	6.0-14
6.0-15	6.0-15
6.0-16	6.0-16
6.0-17	6.0-17
6.0-18	6.0-18
6.0-19	6.0-19
6.0-20	6.0-20
6.0-21	6.0-21
6.0-22	6.0-22
6.0-23 through 6.0-34	------

LIST OF TABLES

9. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

10. Logic - A logic is an arrangement of relays, contacts, and other components that produces a decision output.

    (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.

    (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.

11. Channel Calibration - Shall be the adjustment, as necessary, of the channel output such that it responds with necessary range and accuracy to known values of the parameters which the channel monitors. The channel calibration shall encompass the entire channel including alarm and/or trip functions and shall include the channel functional test. The channel calibration may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated. Non-calibratable components shall be excluded from this requirement, but will be included in channel functional test and source check.

12. Channel Functional Test - Shall be:

    a. Analog/Digital Channels - the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

    b. Bistable Channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.

13. (Deleted)

AMENDMENT NO. 246

W. Functional Tests - A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).

X. Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

Y. Engineered Safeguard - An engineered safeguard is a safety system the actions of which are essential to a safety action required in response to accidents.

Z. Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

AA. (Deleted)

BB. Offsite Dose Calculation Manual (ODCM) - Shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.9.1.5 and 6.9.1.8.

CC. Purge or purging - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is required to purify the containment.

DD. (Deleted)

EE. (Deleted)

FF. Venting - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is not provided or required. Vent, used in system names, does not imply a venting process.

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.

6.2 ORGANIZATION

6.2.1 Offsite and Onsite Organizations

An onsite and 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).

6.2.1 (Cont'd)

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 Plant Staff

a. Shift manning requirements, shall as a minimum, be as described in Table 6.2.A and below.

b. A licensed senior reactor operator shall be present at the site at all times when there is fuel in the reactor.

c. A licensed reactor operator shall be in the control room whenever there is fuel in the reactor.

6.2.2 (Cont'd)

d. Two licensed reactor operators shall be in the control room during any cold start-ups, while shutting down the reactor, and during recovery from unit trip. In addition, a person holding a senior operator license shall be in the control room for that unit whenever it is in an operational mode other than cold shutdown or refueling.

e. A Health Physics Technician* shall be present at the facility at all times when there is fuel in the reactor.

f. (Deleted)

g. (Deleted)

*The Health Physics Technician may be absent from the facility for a period of time not to exceed 2 hours provided immediate action is taken to fill the required position.

Table 6.2.A
Minimum Shift Crew Requirements[b]

Position	Units in Operation				Type of License
	0	1	2[d]	3	
Senior Operator[a]	1	1	1	1	SRO
Senior Operator	0	1	2	2	SRO
Licensed Operators	3	3	3	3	RO or SRO
Additional Licensed Operators[c]	0	1	2	2	RO or SRO
Assistant Unit Operators (AUO)	4	4	5	5	None
Shift Technical Advisor (STA)	0	1	1	1	None
Health Physics Technician	1	1	1	1	None

Note for Table 6.2.A

a. A senior operator will be assigned responsibility for overall plant operation at all times there is fuel in any unit.

b. Except for the senior operator discussed in note "a", the shift crew composition may be one less than the minimum requirements of Table 6.2.A for a period of time not to exceed two 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.A. 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.

c. One of the Additional Licensed Operators must be assigned to each control room with an operating unit.

d. The number of required licensed personnel, when the operating units are controlled from a common control room, are two senior operators and four operators.

AMENDMENT NO. 145

6.3 PLANT STAFF QUALIFICATIONS

Each member of the unit 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 (Deleted)

6.5 (Deleted)

6.6 (Deleted)

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Site Vice President and the NSRB shall be notified within 24 hours.

b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PORC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.

c. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB, and the Site Vice President within 14 days of the violation.

d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES/INSTRUCTIONS AND PROGRAMS

6.8.1 PROCEDURES

6.8.1.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

b. Limitations on the amount of overtime worked by individuals performing safety-related functions in accordance with NRC Policy statement on working hours (Generic Letter No. 82-12).

c. Surveillance and test activities of safety-related equipment.

d. (Deleted)

e. (Deleted)

f. Fire Protection Program implementation.

g. (Deleted)

h. (Deleted)

I. Offsite Dose Calculation Manual.

j. Administrative procedures which control technical and cross-disciplinary review.

6.8.1 (Cont'd)

6.8.1.2 (Deleted)

6.8.1.3 (Deleted)

DRILLS

6.8.2 Drills on actions to be taken under emergency conditions involving release of radioactivity are specified in the Radiological Emergency Plan and shall be conducted annually. Annual drills shall also be conducted on the actions to be taken following failures of safety-related systems or components.

RADIATION CONTROL PROCEDURES

6.8.3 Radiation Control Procedures shall be maintained and made available to all station personnel. These procedures shall contain radiation dose limits and shall be consistent with the requirements of 10 CFR 20. This radiation protection program shall be organized to meet the requirements of 10 CFR 20 except for the "control device" or "alarm signal" required by 20.1601(a).

6.8.3.1 Each high radiation area as defined in 10 CFR 20 shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiological Work Permit. Individuals qualified in radiation protection procedures (e.g., a radiological control technician) or personnel escorted by such individuals, shall be exempt from RWP requirements during the performance of their assigned duties in high radiation areas with radiation dose rates equal to or less than 1 rem in 1 hour at 30 centimeters, provided they otherwise comply with approved radiation protection procedures

6.8.3 (Cont'd)

for entry into high radiation areas. 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 radiation protection control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the Radiological Work Permit.

6.8.3.2 In addition, areas that are accessible to personnel and that have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source or from the surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry. The keys shall be under the administrative control of the duty Shift Operations Supervisor, Radiological Control Manager or their respective designees. Doors shall remain locked except during periods of access by personnel under an approved RWP which specifies the dose rates in the immediate work areas and maximum allowable stay time for individuals in

6.8.3 (Cont'd)

that area. In lieu of the stay time requirement of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by individuals qualified in radiation protection procedures to provide positive exposure control over the activities being performed in the area.

6.8.3.3 Individual radiation areas that are accessible to personnel, have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source, are located within large areas where no enclosure exists for the purpose of locking and where no enclosure can be reasonably constructed around the individual area, shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device whenever the dose rate in the area exceeds or will shortly exceed 1 rem in 1 hour.

6.8.4 RADIOACTIVE EFFLUENT CONTROLS/RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAMS

The following programs shall be established, implemented, and maintained.

6.8.4.1 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

6.8.4 (Cont'd)

a. Limitations on the OPERABILITY of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM.

b. Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times the concentration values stated in 10 CFR 20.1001-20.2401, Appendix B, Table 2, Column 2.

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM.

d. Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50.

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current year in accordance with the methodology and parameters in the ODCM at least every 31 days.

f. Limitations on the OPERABILITY and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.

6.8.4 (Cont'd)

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:

1. For noble gas: less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and

2. For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.

h. Limitations of the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

I. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

j. Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

6.8.4 (Cont'd)

6.8.4.2 (Deleted)

6.8.4.3 PRIMARY CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test program, dated September 1995".

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a, is 49.6 psig.

The maximum allowable primary containment leakage rate, L_a, at P_a, shall be 2% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

a. Primary Containment leakage rate acceptance criterion is $\leq 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60\ L_a$ for the Type B and Type C tests and $\leq 0.75\ L_a$ for Type A tests;

b. Air lock testing acceptance criteria are:

(1) Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$,

(2) Air lock door seals leakage rate is $\leq 0.02\ L_a$ when the overall air lock is pressurized to ≥ 2.5 psig for at least 15 minutes.

6.8.5 PROGRAMS

Postaccident Sampling

Postaccident sampling activities will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. These activities shall include the following:

(i) Training of personnel,
(ii) Procedures for sampling and analysis,
(iii) Provisions for maintenance of sampling and analysis

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Director of the Regional Office of NRC, unless otherwise noted.

6.9.1.1 (Deleted)

6.9.1 (Cont'd)

6.9.1.2 ANNUAL OPERATING REPORT*

a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) for whom monitoring was required receiving annual deep dose equivalent exposures greater than 100 mrem and their associated man rem exposure according to work and job functions, **e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on measurements obtained with self reading dosimeter, TLD, or film badge. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose equivalent exposure received from external sources shall be assigned to specific major work functions.

b. Any mainsteam relief valve that opens in response to reaching its setpoint or due to operator action to control reactor pressure shall be reported.

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*A single submittal may be made for a multiple unit station.

**This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20.

6.9.1 (Cont'd)

6.9.1.3 MONTHLY OPERATING REPORT

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Office, to be submitted no later than the fifteenth of each month following the calendar month covered by the report. A narrative summary of operating experience shall be submitted in the above schedule.

6.9.1.4 REPORTABLE EVENTS

Reportable events, including corrective actions and measures to prevent re-occurrence, shall be reported to the NRC in accordance with Section 50.73 to 10 CFR 50.

6.9.1.5 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. A single submittal may be made for a multi-unit station. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

6.9.1 (Cont'd)

6.9.1.6 SOURCE TESTS

Results of required leak tests performed on sources if the tests reveal the presence of 0.005 microcurie or more of removable contamination.

6.9.1.7 CORE OPERATING LIMITS REPORT

a. Core operating limits shall be established and shall be documented in the CORE OPERATING LIMITS REPORT prior to each operating cycle, or prior to any remaining portion of an operating cycle, for the following:

(1) The rated APLHGR limit; the Flow-Dependent APLHGR Factor, MAPFAC(F); and the Power-Dependent APLHGR Factor, MAPFAC(P) for Specification 3.5.I.

(2) The LHGR limit for Specification 3.5.J.

(3) The rated MCPR Operating Limit; the Flow-Dependent MCPR Operating Limit, MCPR(F); and the Power-Dependent MCPR Operating Limit, MCPR(P) for Specification 3.5.K/4.5.K.

(4) The APRM flow biased rod block trip setting for Specification 2.1.A.1.c and Table 3.2.C.

(5) The RBM downscale trip setpoint, high power trip setpoint, intermediate power trip setpoint, low power trip setpoint, and applicable reactor thermal power ranges for each of the setpoints for Table 3.2.C.

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in General Electric Licensing Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).

6.9.1 (Cont'd)

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin limits, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The CORE OPERATING LIMITS REPORT, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

6.9.1.8 THE ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year of operation shall be submitted by April 1, of each year. The report shall include summaries of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. A single submittal may be made for multi-unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

6.9.2 SPECIAL REPORTS

Reports on the following areas shall be submitted in writing to the Director of Regional Office, Division of Reactor Projects:

6.9.2 (Cont'd)

1.	Fatigue Usage	6.10.1.q	Annual Operating Report
2.	Relief Valve Tailpipe	3.2.F	Within 30 days after inoperability of thermocouple and acoustic monitor on one valve.
3.	Seismic Instrumentation Inoperability	3.2.J.3	Within 10 days after 30 days of inoperability.
4.	Meteorological Monitoring Instrumentation Inoperability	3.2.I.2	Within 10 days after 7 days of inoperability.

5. (Deleted)

6. Data shall be retrieved from all seismic instruments actuated during a seismic event and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be submitted within 10 days after the event describing the magnitude, frequency spectrum, and resultant effect upon plant features important to safety.

7. Diesel Generator Reliability Improvement Program Report shall be submitted within 30 days of meeting failure criteria in Table 4.9.A. As a minimum, the Reliability Improvement Program report for NRC audit shall include:

6.9.2 (Cont'd)

a. A summary of all tests (valid and invalid) that occurred within the time period over which the last 20/100 valid tests were performed.

b. Analysis of failures and determination of root causes of failures.

c. Evaluation of each of the recommendations of NUREG/CR-0660, "Enhancement of Onsite Emergency Diesel Generator Reliability in Operating Reactors," with respect to their application to the plant.

d. Identification of all actions taken or to be taken to (1) Correct the root causes of failures defined in b above and (2) Achieve a general improvement of diesel generator reliability.

e. A supplemental report shall be prepared for an NRC audit within 30 days after each subsequent failure during a valid demand, for so long as the affected diesel generator unit continues to violate the criteria (3/20 or 6/100) for the reliability improvement program remedial action. The supplemental report need only update the failure/demand history for the affected diesel generator unit since the last report for that diesel generator. The supplemental report shall also present an analysis of the failure(s) with a root cause determination, if possible, and shall delineate any further procedural, hardware or operational changes to be incorporated into the site diesel generator improvement program and the schedule for implementation of those changes.

6.9.2 (Cont'd)

8.	(Deleted)		
9.	High-Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10.	Wide-Range Gaseous Effluent Radiation Monitor and Recorder.	3.2.F	Within 7 days after 7 days of inoperability.

6.10 (Deleted)

6.11 (Deleted)

6.12 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

1. Shall be documented and records shall be kept in a manner convenient for review. This documentation shall contain:

   a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change.

   b. A determination that the change will maintain the level of radioactive effluent control pursuant to 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

2. Shall become effective after review and acceptance by the process described in TVA-NQA-PLN89-A.

6.12 (Cont'd)

3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.13 (Deleted)

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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. 211
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 June 6, 1996, as supplemented by letters dated September 26, 1997, January 23, 1998, and May 19, 1998, 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. 211, 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

Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 9, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 211

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. *Overleaf pages are included to maintain document completeness.

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6.0-3	6.0-3
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6.0-8	6.0-8
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6.0-21	6.0-21
6.0-22	6.0-22
6.0-23 through 6.0-33a	------

ADMINISTRATIVE CONTROLS

LIST OF TABLES

9. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

10. Logic - A logic is an arrangement of relays, contacts, and other components that produces a decision output.

    (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.

    (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.

11. Channel Calibration - Shall be the adjustment, as necessary, of the channel output such that it responds with necessary range and accuracy to known values of the parameters which the channel monitors. The channel calibration shall encompass the entire channel including alarm and/or trip functions and shall include the channel functional test. The channel calibration may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated. Non-calibratable components shall be excluded from this requirement, but will be included in channel functional test and source check.

12. Channel Functional Test - Shall be:

    a. Analog/Digital Channels - the injection of a simulated signal into the channel as close to the sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

    b. Bistable Channels - the injection of a simulated signal into the sensor to verify OPERABILITY including alarm and/or trip functions.

13. (Deleted)

W. Functional Tests - A functional test is the manual operation or initiation of a system, subsystem, or components to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).

X. Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

Y. Engineered Safeguard - An engineered safeguard is a safety system the actions of which are essential to a safety action required in response to accidents.

Z. Reportable Event - A reportable event shall be any of those conditions specified in section 50.73 to 10 CFR Part 50.

AA. (Deleted)

BB. Offsite Dose Calculation Manual (ODCM) - Shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specifications 6.9.1.5 and 6.9.1.8.

CC. Purge or purging - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is required to purify the containment.

DD. (Deleted)

EE. (Deleted)

FF. Venting - The controlled process of discharging air or gas from the primary containment to maintain temperature, pressure, humidity, concentration, or other operating condition in such a manner that replacement air or gas is not provided or required. Vent, used in system names, does not imply a venting process.

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.

6.2 ORGANIZATION

6.2.1 Offsite and Onsite Organizations

An onsite and 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).

6.2.1 (Cont'd)

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 Plant Staff

a. Shift manning requirements, shall as a minimum, be as described in Table 6.2.A and below.

b. A licensed senior reactor operator shall be present at the site at all times when there is fuel in the reactor.

c. A licensed reactor operator shall be in the control room whenever there is fuel in the reactor.

6.2.2 (Cont'd)

d. Two licensed reactor operators shall be in the control room during any cold startups, while shutting down the reactor, and during recovery from unit trip. In addition, a person holding a senior operator license shall be in the control room for that unit whenever it is in an operational mode other than cold shutdown or refueling.

e. A Health Physics Technician* shall be present at the facility at all times when there is fuel in the reactor.

f. (Deleted)

g. (Deleted)

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*The Health Physics Technician may be absent from the facility for a period of time not to exceed 2 hours provided immediate action is taken to fill the required position.

Table 6.2.A
Minimum Shift Crew Requirements[b]

Position	Units in Operation				Type of License
	0	1	2[d]	3	
Senior Operator[a]	1	1	1	1	SRO
Senior Operator	0	1	2	2	SRO
Licensed Operators	3	3	3	3	RO or SRO
Additional Licensed Operators[c]	0	1	2	2	RO or SRO
Assistant Unit Operators (AUO)	4	4	5	5	None
Shift Technical Advisor (STA)	0	1	1	1	None
Health Physics Technician	1	1	1	1	None

Note for Table 6.2.A

a. A senior operator will be assigned responsibility for overall plant operation at all times there is fuel in any unit.

b. Except for the senior operator discussed in note "a", the shift crew composition may be one less than the minimum requirements of Table 6.2.A for a period of time not to exceed two 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.A. 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.

c. One of the Additional Licensed Operators must be assigned to each control room with an operating unit.

d. The number of required licensed personnel, when the operating units are controlled from a common control room, are two senior operators and four operators.

6.3 PLANT STAFF QUALIFICATIONS

Each member of the unit 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 (Deleted)

6.5 (Deleted)

6.6 (Deleted)

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Site Vice President and the NSRB shall be notified within 24 hours.

b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PORC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.

c. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB, and the Site Vice President within 14 days of the violation.

d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES/INSTRUCTIONS AND PROGRAMS

6.8.1 PROCEDURES

6.8.1.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978.

b. Limitations on the amount of overtime worked by individuals performing safety-related functions in accordance with NRC Policy statement on working hours (Generic Letter No. 82-12).

c. Surveillance and test activities of safety-related equipment.

d. (Deleted)

e. (Deleted)

f. Fire Protection Program implementation.

g. (Deleted)

h. (Deleted)

i. Offsite Dose Calculation Manual.

j. Administrative procedures which control technical and cross-disciplinary review.

6.8.1 (Cont'd)

6.8.1.2 (Deleted)

6.8.1.3 (Deleted)

DRILLS

6.8.2 Drills on actions to be taken under emergency conditions involving release of radioactivity are specified in the Radiological Emergency Plan and shall be conducted annually. Annual drills shall also be conducted on the actions to be taken following failures of safety-related systems or components.

RADIATION CONTROL PROCEDURES

6.8.3 Radiation Control Procedures shall be maintained and made available to all station personnel. These procedures shall contain radiation dose limits and shall be consistent with the requirements of 10 CFR 20. This radiation protection program shall be organized to meet the requirements of 10 CFR 20 except for the "control device" or "alarm signal" required by 20.1601(a).

6.8.3.1 Each high radiation area as defined in 10 CFR 20 shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiological Work Permit. Individuals qualified in radiation protection procedures (e.g., a radiological control technician) or personnel escorted by such individuals, shall be exempt from RWP requirements during the performance of their assigned duties in high radiation areas with radiation dose rates equal to or less than 1 rem in 1 hour at 30 centimeters, provided they otherwise comply with approved radiation

6.8.3 (Cont'd)

protection procedures for entry into high radiation areas. 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 radiation protection control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified in the Radiological Work Permit.

6.8.3.2 In addition, areas that are accessible to personnel and that have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source or from the surface which the radiation penetrates shall be provided with locked doors to prevent unauthorized entry. The keys shall be under the administrative control of the duty Shift Operations Supervisor, Radiological Control Manager or their respective designees. Doors shall remain locked except during periods of access by personnel under an approved RWP which specifies the dose rates in the immediate work areas and maximum allowable stay time for

6.8.3 (Cont'd)

individuals in that area. In lieu of the stay time requirement of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by individuals qualified in radiation protection procedures to provide positive exposure control over the activities being performed in the area.

6.8.3.3 Individual radiation areas that are accessible to personnel, have radiation levels greater than 1 rem in 1 hour as measured at 30 centimeters, but less than 500 rads in 1 hour at 1 meter from the radiation source, are located within large areas where no enclosure exists for the purpose of locking and where no enclosure can be reasonably constructed around the individual area, shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device whenever the dose rate in the area exceeds or will shortly exceed 1 rem in 1 hour.

6.8.4 RADIOACTIVE EFFLUENT CONTROLS/RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAMS

The following programs shall be established, implemented, and maintained.

6.8.4.1 RADIOACTIVE EFFLUENT CONTROLS PROGRAM

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBERS OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating

6.8.4 (Cont'd)

procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the OPERABILITY of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM.

b. Limitations on the concentrations of radioactive material released in liquid effluents to UNRESTRICTED AREAS conforming to 10 times the concentration values stated in 10 CFR 20.1001-20.2401, Appendix B, Table 2, Column 2.

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM.

d. Limitations on the annual and quarterly doses or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each unit to UNRESTRICTED AREAS conforming to Appendix I to 10 CFR Part 50.

e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current year in accordance with the methodology and parameters in the ODCM at least every 31 days.

f. Limitations on the OPERABILITY and use of the liquid and gaseous effluent treatment systems to ensure that the appropriate portions of these systems are used to reduce

6.8.4 (Cont'd)

releases of radioactivity when the projected doses in a 31-day period would exceed 2 percent of the guidelines for the annual dose or dose commitment conforming to Appendix I to 10 CFR Part 50.

g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY shall be limited to the following:

1. For noble gas: less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and

2. For Iodine-131, Iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: less than or equal to a dose rate of 1500 mrem/yr to any organ.

h. Limitations of the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

i. Limitations on the annual and quarterly doses to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released from each unit to areas beyond the SITE BOUNDARY conforming to Appendix I to 10 CFR Part 50.

6.8.4 (Cont'd)

j. Limitations on the annual dose or dose commitment to any MEMBER OF THE PUBLIC due to releases of radioactivity and to radiation from uranium fuel cycle sources conforming to 40 CFR Part 190.

6.8.4.2 (Deleted)

6.8.4.3 PRIMARY CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test program, dated September 1995".

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a, is 49.6 psig.

The maximum allowable primary containment leakage rate, L_a, at P_a, shall be 2% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

a. Primary Containment leakage rate acceptance criterion is $\leq 1.0\ L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60\ L_a$ for the Type B and Type C tests and $\leq 0.75\ L_a$ for Type A tests;

b. Air lock testing acceptance criteria are:

(1) Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$,

6.8.4 (Cont'd)

(2) Air lock door seals leakage rate is $\leq$ 0.02 L_a when the overall air lock is pressurized to $\geq$ 2.5 psig for at least 15 minutes.

6.8.5 PROGRAMS

Postaccident Sampling

Postaccident sampling activities will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. These activities shall include the following:

(i) Training of personnel,
(ii) Procedures for sampling and analysis,
(iii) Provisions for maintenance of sampling and analysis.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following identified reports shall be submitted to the Director of the Regional Office of NRC, unless otherwise noted.

6.9.1.1 (Deleted)

6.9.1 (Cont'd)

6.9.1.2 ANNUAL OPERATING REPORT*

a. A tabulation on an annual basis of the number of station, utility and other personnel (including contractors) for whom monitoring was required receiving annual deep dose equivalent exposures greater than 100 mrem and their associated man rem exposure according to work and job functions, **e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling. The dose assignment to various duty functions may be estimates based on measurements obtained with self reading dosimeter, TLD, or film badge. Small exposures totaling less than 20% of the individual total dose need not be accounted for. In the aggregate, at least 80% of the total deep dose equivalent exposure received from external sources shall be assigned to specific major work functions.

b. Any mainsteam relief valve that opens in response to reaching its setpoint or due to operator action to control reactor pressure shall be reported.

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*A single submittal may be made for a multiple unit station.

**This tabulation supplements the requirements of 20.2206 of 10 CFR Part 20.

6.9.1 (Cont'd)

6.9.1.3 MONTHLY OPERATING REPORT

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Office, to be submitted no later than the fifteenth of each month following the calendar month covered by the report. A narrative summary of operating experience shall be submitted in the above schedule.

6.9.1.4 REPORTABLE EVENTS

Reportable events, including corrective actions and measures to prevent re-occurrence, shall be reported to the NRC in accordance with Section 50.73 to 10 CFR 50.

6.9.1.5 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted before May 1 of each year. A single submittal may be made for a multi-unit station. The report shall include summaries, interpretations, and analysis of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlines in (1) the ODCM and (2) Sections IV.B.2, IV.B.3, and IV.C of Appendix I to 10 CFR Part 50.

6.9.1 (Cont'd)

6.9.1.6 SOURCE TESTS

Results of required leak tests performed on sources if the tests reveal the presence of 0.005 microcurie or more of removable contamination.

6.9.1.7 CORE OPERATING LIMITS REPORT

a. Core operating limits shall be established and shall be documented in the CORE OPERATING LIMITS REPORT prior to each operating cycle, or prior to any remaining portion of an operating cycle, for the following:

(1) The APLHGR for Specification 3.5.I

(2) The LHGR for Specification 3.5.J

(3) The MCPR Operating Limit for Specification 3.5.K/4.5.K

(4) The APRM Flow Biased Rod Block Trip Setting for Specification 2.1.A.1.c, Table 3.2.C, and Specification 3.5.L

(5) The RBM Upscale (Flow Bias) Trip Setting and clipped value for this setting for Table 3.2.C

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in General Electric Licensing Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).

6.9.1 (Cont'd)

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin limits, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The CORE OPERATING LIMITS REPORT, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

6.9.1.8 THE ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

The Annual Radioactive Effluent Release Report covering the operation of the unit during the previous calendar year of operation shall be submitted by April 1, of each year. The report shall include summaries of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. A single submittal may be made for a multi-unit station. The submittal should combine those sections that are common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit. The material provided shall be (1) consistent with the objectives outlined in the ODCM and PCP and (2) in conformance with 10 CFR 50.36a and Section IV.B.1 of Appendix I to 10 CFR Part 50.

6.9.2 SPECIAL REPORTS

Reports on the following areas shall be submitted in writing to the Director of Regional Office, Division of Reactor Projects:

6.9.2 (Cont'd)

1. Fatigue Usage	6.10.1.q	Annual Operating Report
2. Relief Valve Tailpipe	3.2.F	Within 30 days after inoperability of thermocouple and acoustic monitor on one valve.
3. Seismic Instrumentation Inoperability	3.2.J.3	Within 10 days after 30 days of inoperability.
4. Meteorological Monitoring Instrumentation Inoperability	3.2.I.2	Within 10 days after 7 days of inoperability.
5. (Deleted)		

6. Data shall be retrieved from all seismic instruments actuated during a seismic event and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be submitted within 10 days after the event describing the magnitude, frequency spectrum, and resultant effect upon plant features important to safety.

7. Diesel Generator Reliability Improvement Program Report shall be submitted within 30 days of meeting failure criteria in Table 4.9.A. As a minimum, the Reliability Improvement Program report for NRC audit shall include:

6.9.2 (Cont'd)

a. A summary of all tests (valid and invalid) that occurred within the time period over which the last 20/100 valid tests were performed.

b. Analysis of failures and determination of root causes of failures.

c. Evaluation of each of the recommendations of NUREG/CR-0660, "Enhancement of Onsite Emergency Diesel Generator Reliability in Operating Reactors," with respect to their application to the plant.

d. Identification of all actions taken or to be taken to (1) Correct the root causes of failures defined in b above and (2) Achieve a general improvement of diesel generator reliability.

e. A supplemental report shall be prepared for an NRC audit within 30 days after each subsequent failure during a valid demand, for so long as the affected diesel generator unit continues to violate the criteria (3/20 or 6/100) for the reliability improvement program remedial action. The supplemental report need only update the failure/demand history for the affected diesel generator unit since the last report for that diesel generator. The supplemental report shall also present an analysis of the failure(s) with a root cause determination, if possible, and shall delineate any further procedural, hardware or operational changes to be incorporated into the site diesel generator improvement program and the schedule for implementation of those changes.

6.9.2 (Cont'd)

8.	(Deleted)		
9.	High Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10.	Wide Range Gaseous Effluent Radiation Monitor and Recorder	3.2.F	Within 7 days after 7 days of inoperability.

6.10 (Deleted)

6.11 (Deleted)

6.12 OFFSITE DOSE CALCULATION MANUAL (ODCM)

Changes to the ODCM:

1. Shall be documented and records shall be kept in a manner convenient for review. This documentation shall contain:

   a. Sufficient information to support the change together with the appropriate analyses or evaluations justifying the change.

   b. A determination that the change will maintain the level of radioactive effluent control pursuant to 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I to 10 CFR Part 50 and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations.

2. Shall become effective after review and acceptance by the process described in TVA-NQA-PLN89-A.

6.12 (Cont'd)

3. Shall be submitted to the Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Annual Radioactive Effluent Release Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

6.13 (Deleted)

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