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

YANKEE ATOMIC ELECTRIC COMPANY

DOCKET NO. 50-29

YANKEE NUCLEAR POWER STATION (YANKEE-ROWE)

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 47
License No. DPR-3

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

   A. The application for amendment by Yankee Atomic Electric Company (the licensee) dated February 17, 1978, 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 License No. DPR-3 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 47, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 3, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 47

FACILITY OPERATING LICENSE NO. DPR-3

DOCKET NO. 50-29

Revise Appendix A as follows:

Remove	Insert
VI	VI*
XI	XI*
XV	XV
3/4 7-30	3/4 7-30*
3/4 7-31	3/4 7-31*
3/4 7-32	3/4 7-32*
3/4 7-33	3/4 7-33*
3/4 7-34	3/4 7-34*
3/4 7-35	3/4 7-35*
3/4 7-36	--
3/4 10-3	3/4 10-3
3/4 10-4	3/4 10-4
B 3/4 7-7	B 3/4 7-7*
B 3/4 7-8	--
6-12	6-12*
6-23	6-23
6-24	6-24
6-25	--
6-26	--
6-27	--
6-28	--
6-29	--

Marginal lines indicate revised area. Overleaf pages are provided for convenience.

*These pages are included to correct page numbering and other minor administrative errors which occurred with the issuance of Amendment No. 41 on August 18, 1977 and Amendment No. 46 on February 28, 1978.

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

BASES

PLANT SYSTEMS

3/4.7.10 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.10.1 The fire suppression water system shall be OPERABLE with;

a. Two high pressure pumps, each with a capacity of 1000 gpm, with their discharge aligned to the fire suppression header, and

b. An OPERABLE flow path capable of taking suction from the Sherman Pond and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves.

APPLICABILITY: At all times.

ACTION:

a. With one pump inoperable, restore the inoperable pump to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable:

1. Establish a backup fire suppression water system within 24 hours, and

2. Submit a Special Report in accordance with Specification 6.9.6;

a) By telephone within 24 hours,

b) Confirmed by telegraph, mailgram or facsimile transmission no later than the first working day following the event, and

LIMITING CONDITION FOR OPERATION (Continued)

c) In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.10.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump.

b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in its correct position.

c. At least once per 6 months by performance of a system flush.

d. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops at least 1000 gpm at a system head of 125 psig,

3. Verifying that each high pressure pump starts to maintain the fire suppression water system pressure $\geq$ 85 psig.

e. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.10.2 The Cable Tray House spray system shall be OPERABLE.

APPLICABILITY: Whenever equipment in the spray protected area is required to be OPERABLE.

ACTION:

a. With the above required spray system inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant t Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.2 The above required spray system shall be demonstrated OPERABLE:

a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

b. At least once per 18 months by:

1. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

2. Inspection of the spray headers to verify their integrity, and

3. By inspection of each nozzle to verify no blockage.

c. At least once per 3 years by performing an air flow test through each open head spray/sprinkler header and verifying each open head spray/ sprinkler nozzle is unobstructed.

PLANT SYSTEMS

HIGH PRESSURE CO_2 SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.10.3 The high pressure CO_2 system located in Manhole No. 3 shall be OPERABLE with at least 90% of full charge weight in the main and auxiliary CO_2 cylinders.

APPLICABILITY: Whenever equipment in the high pressure CO_2 protected area is required to be OPERABLE.

ACTION:

a. With the above required high pressure CO_2 system inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area within 1 hour; restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.6 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specific tions 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.3 The above required high pressure CO_2 systems shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying CO_2 cylinder weight.

b. At least once per 18 months by:

1. Verifying the system valves actuate manually.

2. Performance of a flow test through headers and nozzles to assure no blockage.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITIONS FOR OPERATION

3.7.10.4 The following fire hose stations shall be OPERABLE:

a. Outside of control room northwest door, and

b. Outside of control room northeast door.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the above required fire hose stations inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.4 Each of the above required fire hose stations shall be demonstrated OPERABLE:

a. At least once per 31 days by visual inspection of the station to assure all required equipment is at the station.

b. At least once per 18 months by:

1. Removing the hose for inspection and re-racking, and

2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years by:

1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose station.

PLANT SYSTEMS

3/4.7.11 PENETRATION FIRE BARRIERS

LIMITING CONDITIONS FOR OPERATION

3.7.11 All penetration fire barriers protecting safety related areas shall be functional.

APPLICABILITY: At all times.

ACTION:

a. With one or more of the above required penetration fire barriers non-functional, establish a continuous fire watch on at least one side of the affected penetration within 1 hour.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.11 Each of the above required penetration fire barriers shall be verified to be functional by a visual inspection;

a. At least once per 18 months, and

b. Prior to declaring a penetration fire barrier functional following repairs or maintenance.

SPECIAL TEST EXCEPTIONS

PRESSURE/TEMPERATURE LIMITATION - REACTOR CRITICALITY

LIMITING CONDITION FOR OPERATION

3.10.3 The minimum temperature and pressure conditions for reactor criticality of Specification 3.4.8.1 may be suspended during low temperature PHYSICS TESTS provided:

a. The THERMAL POWER does not exceed 2 percent of RATED THERMAL POWER,

b. The reactor low setpoint trips on the three OPERABLE Power Range Nuclear Channels are set at ≤25% of RATED THERMAL POWER, and

c. The Main Coolant System temperature and pressure are maintained ≥ 250°F and ≥ 300 psig, respectively.

APPLICABILITY: MODE 2.

ACTION:

a. With the THERMAL POWER > 2 percent of RATED THERMAL POWER, immediately open the reactor trip breakers.

b. With the Main Coolant System temperature and pressure < 250°F or < 300 psig, immediately open the reactor trip breakers and restore the temperature-pressure to within its limit within 30 minutes; perform the analysis required by Specification 3.4.8.1 prior to the next reactor criticality.

SURVEILLANCE REQUIREMENTS

4.10.3.1 The Main Coolant System Temperature and pressure shall be verified to be ≥ 250°F and 300 psig at least once per hour.

4.10.3.2 The THERMAL POWER shall be detemined to be ≤ 2% of RATED THERMAL POWER at least once per hour.

4.10.3.3 Each Power Range Nuclear Channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating low temperature PHYSICS TESTS.

SPECIAL TEST EXCEPTIONS

PHYSICS TESTS

LIMITING CONDITION FOR OPERATION

3.10.4 The limitations of Specification 3.1.1.4, 3.1.3.1, 3.1.3.4, and 3.1.3.5 may be suspended during the performance of PHYSICS TESTS provided:

a. The THERMAL POWER does not exceed 2% of RATED THERMAL POWER, and

b. The reactor low setpoint trips on the three OPERABLE Power Range Nuclear Channels are set at $\leq$ 25% of RATED THERMAL POWER.

APPLICABILITY: MODE 2.

ACTION:

With the THERMAL POWER > 2% of RATED THERMAL POWER, immediately open the reactor trip breakers.

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined to be $\leq$ 2% of RATED THERMAL POWER at least once per hour during PHYSICS TESTS.

4.10.4.2 Each Power Range Nuclear Channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating PHYSICS TESTS.

3/4.7.10 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occuring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, spray and/or sprinklers, CO_2, Halon and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

3/4.7.11 PENETRATION FIRE BARRIERS

The functional integrity of the pentration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving serveral areas of the facility prior to detection and extinguishment. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the barriers are not functional, a continuous fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

b. The performance, training and qualification of those members of the facility staff who have a direct relationship to operation, maintenance or technical aspects of the plant, at least once per 12 months, ± 25%.

c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per 6 months, ± 25%.

d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once pre 24 months, ± 25%.

e. The Facility Emergency Plan and implementing procedures at least once per 24 months, ± 25%.

f. The Facility Security Plan and implementing procedures at least once per 24 months, ± 25%.

g. The Facility Fire Protection Program and implementing procedures at least once per 24 months, ± 25%.

h. Any other area of facility operation considered appropriate by the NSAR Committee or the Vice President.

AUTHORITY

6.5.2.10 The NSAR Committee shall report to and advise the Vice President on those areas of responsibility specified in Sections 6.5.2.8 and 6.5.2.9.

RECORDS

6.5.2.11 Minutes of each NSAR Committee meeting shall be prepared and forwarded to the Vice President and each member of the Committee for review within 20 working days following each meeting. The meeting minutes shall include, where applicable, reports of reviews encompassed by Section 6.5.2.8; and reports of audits encompassed by Section 6.5.2.9. The review of the minutes shall be completed within 60 days of the date of their distribution.

6.5.3 INDEPENDENT AUDIT AND REVIEW

6.5.3.1 An independent fire protection and loss prevention program inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.

g. Records of training and qualification for current members of the plant staff.

h. Records of in-service inspections performed pursuant to these Technical Specifications.

i. Records of Quality Assurance activities required by the QA Manual.

j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.

k. Records of meetings of the PORC and the NSAR Committee.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposures.

6.12 HIGH RADIATION AREA

6.12.1 Paragraph 20.203 "Caution signs, labels, signals, and controls." In lieu of the "control device" or "alarm signal" required by paragraph 20.203(c)(2), each high radiation area in which the intensity of radiation is 1000 mrem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit.* An individual or group of individuals permitted to enter such areas shall be provided with 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 have been established and personnel have been made knowledgeable of them.

*Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, providing they are following plant radiation protection procedures for entry into high radiation areas.

c. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and who will perform radiation surveillance at the frequency specified in the RWP. The surveillance frequency will be established by the Plant Health Physicist.

The above procedure shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the key shall be maintained under the administrative control of the shift supervisor on duty and/or the Plant Health Physicist.