Proposed Change No. 139
Supplement No. 3

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B.3.2.1
WYR 78-101

YANKEE ATOMIC ELECTRIC COMPANY

20 Turnpike Road Westborough, Massachusetts 01581

November 24, 1978

United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Office of Nuclear Reactor Regulation

References: (1) License No. DPR-3 (Docket No. 50-29)
(2) Letter, YAEC to USNRC dated May 27, 1976;
Proposed Change No. 139
(3) Letter, YAEC to USNRC dated March 23, 1977;
Proposed Change No. 139, Supplement No. 1, (WYR-77-31)

Dear Sir:

Subject: Technical Specification Wording Changes and Clarifications

Pursuant to Section 50.59 of the Commission's Rules and Regulations, Yankee Atomic Electric Company hereby proposes the following amendment to the Facility License.

PROPOSED CHANGE: Reference is made to Operating License No. DPR-3 issued to Yankee Atomic Electric Company on the Yankee Rowe Plant. Reference (2) incorporated new Technical Specifications, rewritten into the Westinghouse Standard Technical Specifications Format, as Appendix A to this license. Reference (3) proposed some 60 minor changes which were subsequently incorporated into the License as Amendment No. 49. These changes were administrative in nature and were mostly wording changes or clarifying certain points of the Standard Technical Specification language. Yankee again feels the need for certain additional wording changes and clarifications to the Technical Specifications. These changes are listed as Attachment A to this letter and the affected pages are also attached.

REASON FOR CHANGE: The various reasons for the individual changes are presented as part of Attachment A.

SAFETY CONSIDERATIONS: The changes outlined in Attachment A are administrative in nature. Some of the changes serve to further align the Yankee Rowe Technical Specifications with the Westinghouse Standard Technical Specifications. The other changes either correct minor errors or clarify various words used in the specifications. None of these changes alter the scope or basis for any Technical Specification. This change will not endanger the health and safety of the public and has been reviewed by the Nuclear Safety Audit and Review Committee.

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W/CHECK
$1,200.00

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FEE DETERMINATION: This proposed change is pro forma, administrative in nature, and has no safety or environmental significance. For these reasons, Yankee Atomic Electric Company proposes this change as a Class II Amendment and a payment of $1,200.00 is enclosed.

Yankee Atomic Electric Company believes that the Commission's revised fee schedule is illegal, and has petitioned for review thereof to the U.S. Court of Appeals for the Fifth Circuit. Accordingly, the license fee filed herewith is submitted under protest, and without waiver of the Company's right to contend that it should be refunded in whole or in part.

SCHEDULE OF CHANGE: Yankee is requesting an expeditious review and approval of this change. This is due in part to our desire to have the new radiation monitoring channels operational for the Core XIV Startup. Secondly, Yankee wishes to eliminate several potential points of conflict which could be misinterpreted by an inspector from the NRC Office of Inspection and Enforcement.

We trust that you will find this information satisfactory; however, should you desire additional information, please contact us.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

D. E. Vandenburgh
Senior Vice President

COMMONWEALTH OF MASSACHUSETTS)
)ss.
COUNTY OF WORCESTER)

Then personally appeared before me, D. E. Vandenburgh, who being duly sworn did state that he is Vice President of Yankee Atomic Electric Company, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Yankee Atomic Electric Company and that the statements therein are true to the best of his knowledge and belief.

ROBERT H. GROCE
NOTARY PUBLIC
MASSACHUSETTS

Robert H. Groce Notary Public
My Commission Expires September 14, 1984

Attachment A

1. Page 3/4 3-18 & 3/4 3-19 Technical Specification Table 3.3-4

   Items: 2.a.1, 2.b.2.a, 2.b.2.b, 2.b.2.c, 2.c

   Change: Alarm set points to read "$\leq$ 2 x background"

   Reason: New channels are being installed whose calibration will result in new set points. Use of the $\leq$ 2x background set point conforms with the Westinghouse Standard Technical Specification format.

2. Page 3/4 3-18 Technical Specification Table 3.3-4

   Item: 2.a.1

   Change: Measurement range to read "$10-10^6$ cpm"

   Reason: Upgrading of two channels.

3. Page 3/4 3-18 Table 3.3-4

   Change: Eliminate Item 2.b.1 and re-number items 2.b.2.a, 2.b.2.b, and 2.b.2.c to 2.b.1.a, 2.b.1.b and 2.6.1.c respectively

   Reason: During the review of the Standard Technical Specification, the Loop Seal Monitor was incorrectly identified as a monitor which would detect a radioactive gaseous discharge to the environment. This is incorrect as this is only a local radiation monitor. Any release through the Loop Seal would be monitored by the Primary Vent Stack Monitors, Items 2a, b, and c. The Loop Seal is not a normal gaseous release path and the chances of a "release" via the pathway would be extremely remote. Furthermore, this "release" could be filtered by the primary exhaust ventilation system and finally would be monitored at the Primary Vent Stack. Yankee considers the Primary Vent Stack radiation monitors as the principal radioactive gaseous discharge monitors and therefore the Loop Seal monitor should not be considered instrumentation required by Technical Specifications.

4. Page 3/4 3-19 Technical Specification Table 3.3-4

   Item: 2.c

   Change: Measurement range to read "$10-10^4$ cpm or $10-10^6$ cpm".

   Reason: Upgrading of the channel.

5. Page 3/4 3-18 & 3/4 3-19 Technical Specification Table 3.3-4

Change: Action Statement numbers from "20, 21, 22, 23 & 24" to "11, 12, 13, 14 & 15" respectively.

Reason: To conform with the Westinghouse Standard Technical Specification format the Action Statements of Tables 3.3-1, 3.3-2 & 3.3-4 should be numbered consecutively.

6. Page 3/4 3-20 Technical Specification Table 3.3-4 Action Statements

Change: same as item 5.

Reason: same as item 5.

7. Page 3/4 3-20

Change: Remove "**With radioactive effluent in the Waste Gas Surge Drum"

Reason: This note refers to the loop seal monitor.

8. Page 3/4 3-21 Table 4.3-3

Change: Remove Item 2.b.1

Reason: Same as Item 3.

9. Page 3/4 3-22 Technical Specification Table 4.3-3

Item: 3.b

Change: Delete item 3.b

Reason: Amendment 49 removed item 3.b from Table 3.3-4. A similar change should have been made to Table 4.3-3. Item 3.b

10. Page 3/4 4-4 Technical Specification 4.4.1.3.1

Change: "20°F" to "30°F"

Reason: Amendment 49 changed TS3.4.1.3.a, 20°F to 30°F. A similar change should have been made to specification 4.4.1.3.1.

11. Page 3/4 4-8 Technical Specification 3.4.5.1.a

Change: From "The containment atmosphere..." to "At least one containment atmosphere..."

Reason: A redundant Containment Main Coolant System Leakage Air Particulate Monitor has been installed.

12. Page 3/4 4-10 & 3/4 4-11 Technical Specification 3.4.5.2 Action d

Change: Delete items d.1 and d.2 and change item d to read as follows: "With no Main Coolant System water inventory balance within the previous 24 hours, and with a containment atmosphere particulate radioactivity monitor indicating an unexplained increase corresponding to $\geq$ 1 gpm Main Coolant System unidentified leakage, immediately initiate an investigation within the containment vessel to locate the source of the high radioactivity level." If the investigation confirms the Main Coolant System leakage, be in at least HOT STANDBY within the next 6 hours.

Reason: Main Coolant System concentration may greatly vary during plant operations. Removal of the 30 & 45 cps setpoints will allow flexibility to adjust the parameter to changing plant conditions. Relationships will be developed (graphs, data which relate meter cpm to leak rate in gpm) to convert observed indications to leak rate.

Also, the existing channel has been replaced with two new channels. The 30 & 45 cps values are not valid for these new units.

13. Page 3/4 7-22 Technical Specification 4.7.7.2.2

Change: From "... any steam generator contains water". To "... any steam generator contains water and blow down is in progress".

Reason: To eliminate the need to sample blowdown when blowdown is not in progress. (e.g. during a 6 week refueling outage blowdown is non-existant.)

14. Page 3/4 7-24 Technical Specification 3.7.8 ACTION

Change: Table "3.7-4" to "4.7-4"

Reason: Typographical error.

15. Page 3/4 9-7 Technical Specification 3.9.6.b

Change: From "... limit $\leq$ 4800 pounds above base load." to "... limit $\leq$ 4800 pounds."

Reason: 4800 pounds above base load (2200 pounds base load) would result in exceeding the maximum range of the load cell indicating channel (range: 0-5000 pounds) and also exceeding the design overload limit of the tool boom (6200 pounds).

16. Page B3/4 0-1 Technical Specifications 3.0.3

Change: (7th line) From "... no charging pumps are inoperable, ..." to "... no charging pumps are operable, ..."

Reason: Typographical error.

TABLE 3.3-4

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Spent Fuel Pit Area					
1) Fuel Manipulator Gamma Guard	1	*	$\leq$ 5 mr/hr or 2 x background, whichever is greater	0.5 - 50 mr	11
b. Containment					
1) Fuel Manipulator Gamma Guard	1	*	$\leq$ 10 mr/hr or 2 x background, whichever is greater	0 - 1000 mr	12
2. PROCESS MONITORS					
a. Containment					
1) Main Coolant System Leakage Air Particulate Monitor	1	1,2,3, & 4	$\leq$ 2 x background	10 - 10^6cpm	13
b. Radioactive Gaseous Waste Monitor					
1) Primary Vent Stack Monitor					
a) Particulate Monitor	1	At all times	$\leq$ 2 x background	10 - 10^6 cpm	15

TABLE 3.3-4 (Continued)

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM SETPOINT	MEASUREMENT RANGE	ACTION
b) Iodine Montitor	1	At all times	$\leq$ 2 x background	10 - 10^6 cpm	15
c) Noble Gas Monitor	1	At all times	$\leq$ 2 x background	10 - 10^6 cpm	15
c. Radioactive Liquid Monitors					
1) Steam Generator Blowdown Monitor	1(1)	1,2,3 & 4	$\leq$ 2 x background	10 - 10^4 cpm or 10 - 10^6 cpm	14
3. ACCIDENT-EMERGENCY MONITORS					
a. High Level Radiation Monitor	1	At all times	$\leq$ 5 R/hr	0.01 - 1000 R/hr	14

TABLE 3.3-4 (Continued)

TABLE NOTATION

* When handling irradiated fuel, control rods, or sources.

** With radioactive effluent in the waste gas surge drum.

(1) Per steam generator in a non-isolated loop.

ACTION STATEMENTS

ACTION 11 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 12 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, suspend all operations involving CORE ALTERATIONS.

ACTION 13 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1.

ACTION 14 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, provide an OPERABLE temporary continuous monitor within 8 hours.

ACTION 15 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, suspend all planned releases and releases from the evaporator to the atmosphere through the primary vent stack.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. AREA MONITORS				
a. Spent Fuel Pit Area				
(1) Fuel Manipulator Gamma Guard	S	R	M	*
b. Containment				
(1) Fuel Manipulator Gamma Guard	S	R	M	*
2. PROCESS MONITORS				
a. Containment Main Coolant System Leakage Air Particulate Monitor	S	R	M	1,2,3,4
b. Radioactive Gaseous Waste Monitors				
(1) Primary Vent Stack Monitors	S	R	M	At all times
c. Radioactive Liquid Monitors				
(1) Steam Generator Blow-Down Monitor	S	R	M	1,2,3,4

TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
3. ACCIDENT-EMERGENCY MONITORS				
a. High Level Radiation Monitor	S	R	M	At all times

*When handling irradiated fuel, control rods or sources.

ISOLATED LOOP STARTUP

LIMITING CONDITION FOR OPERATION

3.4.1.3 A main coolant loop shall remain isolated until:

a. The temperature of the cold leg of the isolated loop is within $30^{o}F$ of the highest cold leg temperature of the operating loops.

b. The boron concentration of the isolated loop is not less than the main coolant system boron concentration, and

c. The reactor is subcritical by at least 1 percent $\Delta k/k$.

APPLICABILITY: All MODES.

ACTION:

With the requirements of the above specification not satisfied, suspend startup of the isolated loop.

SURVEILLANCE REQUIREMENTS

4.4.1.3.1 The isolated loop cold leg temperature shall be determined to be within $30^{o}F$ of the highest cold leg temperature of the operating loops within 30 minutes prior to opening the cold leg stop valve.

4.4.1.3.2 The isolated loop boron concentration shall be determined to be not less than the Main Coolant System boron concentration within 4 hours prior to opening the cold leg stop valve.

4.4.1.3.3 The reactor shall be determined to be subcritical by at least 1 percent $\Delta k/k$ within 30 minutes prior to opening the cold leg stop valve.

MAIN COOLANT SYSTEM

3/4.4.5 MAIN COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.5.1 The following Main Coolant System leakage detection systems shall be OPERABLE:

a. At least one containment atmosphere particulate radioactivity monitoring system,

b. The containment drain tank level monitoring system.

c. The incore detection system thimble leak alarm system.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With the above required radioactivity monitoring leakage detection system inoperable, operation may continue for up to 7 days provided:

   1. Main Coolant System water inventory balance is performed at least once per 24 hours,

   2. The other above required leakage detection systems are OPERABLE, and

   3. Appropriate grab samples are obtained and analyzed at least once per hour;

   otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the containment drain tank level monitoring system inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With the incore detection system thimble leak alarm system inoperable, restore the leak alarm system to OPERABLE status within 7 days or close all thimble isolation valves; restore the leak alarm system to OPERABLE status within 31 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.5.2 Main Coolant System leakage shall be limited to:

a. No PRESSURE BOUNDARY LEAKAGE,

b. 1 GPM UNIDENTIFIED LEAKAGE,

c. 1 GPM total primary-to-secondary leakage through all steam generators not isolated from the Main Coolant System

d. 4 GPM IDENTIFIED LEAKAGE from the Main Coolant System, and

e. A maximum of two leaking incore detection system thimbles which are valved off and not plugged, when in MODE 1.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With any Main Coolant System leakage greater than any one of the above limits, excluding PRESSURE BOUNDARY LEAKAGE, reduce the leakage rate to within limits within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With >6 gpm IDENTIFIED LEAKAGE from the Main Coolant System, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the next 30 hours.

d. With no Main Coolant System water inventory balance within the previous 24 hours, and with a containment atmosphere particulate radioactivity monitor indicating an unexplained increase corresponding to ≥1 gpm Main Coolant System unidentified leakage, immediately initiate an investigation within the containment vessel to locate the source of the high radioactivity level. If the investigation confirms the Main Coolant System leakage, be in at least HOT STANDBY within the next 6 hours.

LIMITING CONDITION FOR OPERATION (Continued)

e. With more than two leaking incore detection system thimbles which are valved off but not plugged when in MODE 1, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.5.2 Main Coolant System leakages shall be demonstrated to be within each of the above limits by:

a. Monitoring the containment atmosphere particulate radioactivity monitor at least once per 12 hours except when a Main Coolant System water inventory has not been performed within the previous 24 hours, then monitor the containment atmosphere particulate radioactivity monitor at least once per hour,

b. Monitoring the containment drain tank monitoring system at least once per 12 hours,

c. Performance of a Main Coolant System water inventory balance at least once per 24 hours during steady state operation, and

d. Monitoring the reactor head flange leakoff system at least once per 24 hours.

PLANT SYSTEMS

RADIOACTIVE LIQUID WASTE

LIMITING CONDITION FOR OPERATION

3.7.7.2 Radioactive liquid waste shall be discharged only when the activity of the waste, together with the activity being released from steam generator blowdown, is less than the maximum permissible concentration established in 10 CFR Part 20.

APPLICABILITY: At all times

ACTION:

With discharge of radioactive liquid waste in excess of the limits, immediately suspend the discharge. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.2.1 Radioactive liquid waste shall be determined to be within the above limits by radioactivity analysis prior to discharge.

4.7.7.2.2 Steam generator blowdown radioactivity shall be analyzed at least once every 7 days whenever any steam generator contains water and blowdown is in progress.

3/4.7.8 ENVIRONMENTAL MONITORING

LIMITING CONDITION FOR OPERATION

3.7.8 The environmental monitoring program shall be performed in accordance with Table 4.7-4.

APPLICABILITY: At all times

ACTION:

With the sampling and analysis program specified in Table 4.7-4 not satisfied, a special report shall be prepared and submitted to the Commission pursuant to Specification 6.9.6 within 90 days describing the circumstances of the violation and outlining plans to prevent re-occurence of the violation. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.8 The environmental monitoring samples shall be collected and analyzed in accordance with the requirements of Table 4.7-4.

REFUELING OPERATIONS

SHIELD TANK CAVITY

MANIPULATOR CRANE OPERABILITY

LIMITING CONDITION FOR OPERATION

3.9.6 Control rods and fuel assemblies shall be handled one-by-one with an OPERABLE shield tank cavity manipulator crane and universal handling tool with:

a. A minimum capacity of 900 pounds, and

b. An overload cut off limit $\leq$ 4800 pounds.

APPLICABILITY: During movement of control rods or fuel assemblies within the reactor pressure vessel.

ACTION:

With the requirements for crane and handling tool OPERABILITY not satisfied, suspend use of the inoperable manipulator crane or handling tool from operations involving the movement of control rods and fuel assemblies within the re actor pressure vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.6 The manipulator crane and handling tool used for movement of control rods or fuel assemblies within the reactor pressure vessel shall be demonstrated OPERABLE within 100 hours prior to the start of such operations by performing a load test of at least 900 pounds, demonstrating an automatic load cut-off when the crane exceeds 4800 pounds and verifying proper operation of the handling tool.

BASES

The specifications of this section provide the general requirements applicable to each of the Limiting Conditions for Operation and Surveillance Requirements within Section 3/4.

3.0.1 This specification defines the applicability of each specification in terms of defined OPERATIONAL MODES or other specified conditions and is provided to delineate specifically when each specification is applicable.

3.0.2 This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

3.0.3 This specification delineates the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of the specification. For example, Specification 3.1.2.6 calls for two charging pumps to be OPERABLE and provides explicit ACTION requirements when only one charging pump is OPERABLE. Under the terms of Specification 3.0.3, if no charging pumps are operable, the facility is required to be in at least HOT STANDBY within 1 hour and in COLD SHUTDOWN within the following 30 hours.

3.0.4 This specification provides that entry into an OPERATIONAL MODE or other specified applicability condition must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.

The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other specified limits being exceeded.

Exceptions to this provision have been provided for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.