

Attachment I to JPN-93-090

PROPOSED TECHNICAL SPECIFICATION CHANGES
RCS LEAK DETECTION LCO

(JPTS-92-031)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Docket No. 50-333

DPR-59

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3.6 (cont'd)

4. Except as specified in 3.6.C.3 above, the reactor coolant water shall not exceed the following limits with steaming rates greater than or equal to 100,000 lb/hr and during reactor shutdowns.

Conductivity	5 μ mho/cm
Chloride ion	0.5 ppm

5. If Specification 3.6.C cannot be met, the reactor shall be placed in a cold condition within 24 hours.

D. Coolant Leakage

1. Anytime irradiated fuel is in the reactor vessel and the reactor coolant temperature is above 212°F, the reactor coolant leakage into the primary containment shall be limited to:
 - a. 5 gpm unidentified leakage
 - b. 2 gpm increase in unidentified leakage within any 24 hour period. (This limitation shall apply only after a period of 24 hours at operating pressure.)
 - c. The total reactor coolant leakage into the primary containment shall not exceed 25 gpm.

4.6 (cont'd)

D. Coolant Leakage

1. Reactor coolant leakage rate inside the primary containment shall be monitored and recorded once every 4 hours utilizing the Primary Containment Sump Monitoring System (equipment drain sump monitoring and floor drain sump monitoring).

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3.6 (cont'd)

2. With reactor coolant system leakage greater than the limits specified in 3.6.D.1.a or 3.6.D.1.c, the leakage rate shall be reduced to within these limits within 4 hours or the reactor shall be in at least the hot standby condition within the following 12 hours and in cold condition within the next 24 hours.
3. With an increase in unidentified reactor coolant system leakage equal to or greater than the limit specified in 3.6.D.1.b, the source of the leakage shall be identified within 4 hours or the reactor shall be in at least hot standby condition within the next 12 hours and in cold condition within the following 24 hours.
4. The Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring and Floor Drain Sump Monitoring) and the Continuous Atmosphere Monitoring System (Gaseous and Particulate) shall be operable when the reactor coolant leakage limits of Specification 3.6.D.1 are in effect.

4.6 (cont'd)

2. Not Used
3. Not Used
4. The Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring and Floor Drain Sump Monitoring) instrumentation shall be calibrated and checked as specified in Surveillance Requirement 4.2.E. Continuous Atmosphere Monitoring System (Gaseous and Particulate) instrumentation shall be functionally tested and calibrated as specified in Table 4.6-2.

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3.6 (cont'd)

5. With the Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring or Floor Drain Sump Monitoring) inoperable, restore the system to operable status within 24 hours or be in at least hot shutdown within the next 12 hours and in the cold condition within the following 24 hours.
6. With the Continuous Atmosphere Monitoring System (gaseous) or the Continuous Atmosphere Monitoring System (particulate) inoperable, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours. Otherwise be in at least hot shutdown within the next 12 hours and in cold shutdown within the following 24 hours.

4.6 (cont'd)

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TABLE 4.6-2Minimum Test and Calibration Frequency for Continuous Atmosphere Monitoring System

Inst. Channel	Inst. Functional Test	Calibration	Sensor Check
1. Air Particle Analyzer	None	Once / 3 mos.	once / day
2. Gaseous Activity Analyzer	None	Once / 3 mos.	once / day
3. Iodine Analyzer	None	Once / 3 mos.	once / day

**SAFETY EVALUATION FOR
PROPOSED TECHNICAL SPECIFICATION CHANGES
RCS LEAK DETECTION LCO (JPTS-92-031)**

I. DESCRIPTION OF THE PROPOSED CHANGES

The proposed changes to the James A. FitzPatrick Technical Specification revise Reactor Coolant System (RCS) Specifications 3.6.D and 4.6.D on coolant leakage as addressed below.

Minor changes in format, such as type font, margins or hyphenation, are not described in this submittal. These changes are typographical in nature and do not affect the content of the Technical Specifications.

RCS Leak Detection LCO Clarification

Page 141a, Specification 3.6.D.4 Replace the phrase:

"during reactor power operation"

with:

"when the reactor coolant leakage limits of Specification 3.6.D.1 are in effect."

Editorial Changes

1. Page vi, List of Tables Delete the words "Drywell" and "Radioactivity" from the title for Table 4.6-2.
2. Page 141, Specifications 3.6.D and 4.6.D
 - a. Move Specification 3.6.D.2 to the top of the left column of page 141a and append to the remainder of the specification while replacing the following portion:

"With any reactor coolant system leakage greater than any one of the limits specified in 3.6.D.1.a or 3.6.D.1.c above"

with:

"With reactor coolant system leakage greater than the limits specified in 3.6.D.1.a or 3.6.D.1.c."
 - b. Replace specification identifier "4.6.D" with "D."
 - c. In Specification 4.6.D, add a "1." to properly identify the first paragraph as Specification 4.6.D.1.

SAFETY EVALUATION

Page 2 to 6

3. Page 141a, Specifications 3.6.D and 4.6.D

- a. In Specification 3.6.D.3, replace the phrase:

"If the increase in unidentified leakage as specified in 3.6.D.1.b is exceeded"

with:

"With an increase in unidentified reactor coolant system leakage equal to or greater than the limit specified in 3.6.D.1.b."

- b. Renumber Surveillance Requirement "4.6.D.3" as "4.6.D.4" and relocate from page 142 to the end of the right column on page 141a. At the beginning of the specification, insert the following:

"The Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring and Floor Drain Sump Monitoring) instrumentation shall be calibrated and checked as specified in Surveillance Requirement 4.2.E."

- c. In Specification 3.6.D.4 replace the first usage of the word "primary" with "Primary." Also in Specification 3.6.D.4, replace the words "Primary Containment Atmosphere" with "Continuous Atmosphere."
- d. Replace the right column heading "4.5" with "4.6."
- e. Add Specifications "4.6.D.2" and "4.6.D.3" each containing the words "Not Used."

- f. In revised Specification 4.6.D.4, replace the phrase:

"Drywell Continuous Atmosphere Radioactivity Monitoring System"

with the phrase:

"Continuous Atmosphere Monitoring System (Gaseous and Particulate)."

Also in revised Specification 4.6.D.4, replace Table identifier "4.6.2" with "4.6-2."

4. Page 142, Specification 3.6.D

In Specification 3.6.D.5 replace the phrase "Primary Containment Atmosphere Radioactivity" with the phrase "Continuous Atmosphere" in two locations.

5. Page 162a, Table 4.6-2

Delete from the title the words "Drywell" and "Radioactivity."

SAFETY EVALUATION

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II. PURPOSE OF THE PROPOSED CHANGES**RCS Leak Detection LCO Clarification**

The RCS leakage detection system is comprised of the Primary Containment Sump Monitoring system and the Continuous Atmosphere Monitoring (CAM) system. The purpose of the proposed change is to eliminate an inconsistency between the RCS leakage detection and operability requirements in Limiting Conditions for Operation (LCO) 3.6.D.1 and 3.6.D.4.

LCO 3.6.D.1 currently requires that RCS leakage be below specified limits when there is irradiated fuel in the reactor vessel and reactor coolant temperature is greater than 212°F. LCO 3.6.D.4 requires the leakage monitoring systems to be operable during power operation (i.e., when the mode switch is in the Startup/Hot Standby position or the Run position with the reactor critical above 1 percent rated power, as defined per Specification 1.0.0). These two LCOs are not consistent. The proposed revision of LCO 3.6.D.4 will take the more conservative approach of requiring the leakage monitoring systems to be operable when the leakage limits of LCO 3.6.D.1 are in effect.

Editorial Changes

The proposed changes make editorial corrections which are considered administrative in nature. These will improve the overall quality and consistency within the Technical Specifications. The purpose of each editorial change identified in Section I of this Safety Evaluation are discussed sequentially as follows:

- Changes 1, 3.c, 3.f, 4, and 5 correct the system name for the Primary Containment Sump Monitoring System and the Continuous Atmosphere Monitoring System. The renaming of the CAM system is consistent with established usage (Reference 1).
- Change 2.a relocates Specification 3.6.D.2 to line up with Specification 4.6.D.2 (inserted by Change 3.e) to be consistent with Technical Specification format between LCOs and Surveillance Requirements and makes minor editorial changes.
- Change 3.a is a minor editorial change for purposes of clarification.
- Changes 2.b and 2.c correct the numbering of Specification 4.6.D to be consistent with the numbering patterns used elsewhere in the Technical Specifications.
- Change 3.b renumbers Surveillance Requirement 4.6.D.3 to correspond with the appropriate LCO and clarifies the Surveillance Requirement by referring to Surveillance Requirement 4.2.E. Surveillance Requirement 4.6.D.3 does not currently mention instrument calibration and checking requirements for the Primary Containment Sump Monitoring System.

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- Change 3.d corrects an editorial error by replacing column heading "4.5" with the correct heading "4.6."
- Change 3.e clarifies the Technical Specifications by indicating where LCOs do not have a corresponding Surveillance Requirement.

III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

RCS Leak Detection LCO Clarification

The proposed changes will not require modification of any plant structures, systems or components and will not alter the conclusions of the plant accident analyses as documented in the FSAR or the NRC staff SER. These changes will have no adverse safety implications.

The proposed changes to LCO 3.6.D.4 make the plant conditions for leakage detection system operability consistent with the plant conditions when leakage limits apply, LCO 3.6.D.1. As currently written LCO 3.6.D.4 requires RCS leakage detection systems to be operable during "reactor power operation." This would not require the systems to be operable under all conditions when LCO 3.6.D.1 requires leakage monitoring. The proposed changes have revised LCO 3.6.D.4 to refer to LCO 3.6.D.1. LCO 3.6.D.1 will require leakage detection systems to be operable during plant conditions consistent with the Standard Technical Specifications (STS) (Reference 2). Removal of the inconsistency provides a positive safety benefit.

Editorial Changes

These changes are administrative in nature and can have no adverse effects on plant safety. These changes will improve the overall quality and consistency within the Technical Specifications.

IV. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Operation of the FitzPatrick plant in accordance with the proposed Amendment would not involve a significant hazards consideration as defined in 10 CFR 50.92, since it would not:

1. involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment involves no hardware changes, no changes to the operation of any systems or components and no changes to structures. It alters an LCO to require plant leakage detection systems to be operable during the same plant conditions that RCS leakage limits apply. The revised LCO requires leakage detection systems in operational modes consistent with other portions of the Technical Specifications. Additional changes include editorial corrections such as correct specification numbering, proper system identification, and clarification of a

SAFETY EVALUATION

Page 5 to 6

surveillance requirement cross reference. Since the change to the LCO for leakage detection will require operability under a greater range of plant conditions to be consistent with detection requirements, there is no change to previously determined accident probabilities or consequences. The editorial changes have no adverse safety implications.

2. create the possibility of a new or different kind of accident from those previously evaluated.

The proposed amendment involves no hardware changes, no changes to the operation of any systems or components and no changes to structures. It alters the Technical Specifications only to the extent of making two LCOs consistent by requiring the leakage detection system to be operable when leakage limits apply and making editorial changes. Editorial changes and increasing the plant conditions for leakage system operability can not create the possibility of a new or different kind of accident from those previously evaluated since the editorial changes have no safety significance and the operability changes are being made for consistency with the modes when leakage detection is required to function.

3. involve a significant reduction in the margin of safety.

The proposed amendment revisions involve no hardware changes, no changes to the operation of any systems and no changes to structures. The revised LCO criteria for RCS leakage detection system operability has increased the plant conditions when operability is required to match the plant conditions when leakage limits apply. Editorial changes and expanded operability requirements in the LCOs will not result in any change to existing safety margins.

V. IMPLEMENTATION OF THE PROPOSED CHANGES

Implementation of the proposed changes will not adversely affect the ALARA or Fire Protection Program at the FitzPatrick plant, nor will the changes impact the environment. These changes will not result in any new releases to the environment since there are no hardware, structural, or operational changes. For these same reasons, the changes pose no radiological or fire hazards. The changes do not alter the goals or intent of the relevant LCOs or Surveillance Requirements.

VI. CONCLUSION

The changes, as proposed, do not constitute an unreviewed safety question as defined in 10 CFR 50.59. That is, they:

1. will not change the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report;

SAFETY EVALUATION

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2. will not increase the possibility of an accident or malfunction of a type different from any previously evaluated in the Safety Analysis Report; and
3. will not reduce the margin of safety as defined in the basis for any technical specification.

The changes involve no significant hazards consideration, as defined in 10 CFR 50.92.

VII. REFERENCES

1. NYPA letter, R. E. Beedle to NRC, dated September 25, 1992 (JPN-92-058) "Proposed Changes to the Technical Specifications Primary Containment Iodine Monitoring Specifications (JPTS-91-006)."
2. NRC NUREG-1433 "Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/4)," Revision 0, dated September 1992.
3. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report Section 4.10.3.4, "Leakage Detection System," through Revision 5, dated January 1992.
4. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER), dated November 20, 1972, and Supplements.

Attachment III to JPN-93-090

PROPOSED TECHNICAL SPECIFICATION CHANGES
RCS LEAK DETECTION LCO
MARKUP OF TECHNICAL SPECIFICATION PAGES

(JPTS-92-031)

New York Power Authority

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4.12-2	Carbon Dioxide System Tests	244r
4.12-3	Manual Fire Hose Station Tests	244s
6.2-1	Minimum Shift Manning Requirements	260a
6.10-1	Component Cyclic or Transient Limits	261

3.6 (cont'd)

4. Except as specified in 3.6.C.3 above, the reactor coolant water shall not exceed the following limits with steaming rates greater than or equal to 100,000 lb/hr and during reactor shutdowns.

Conductivity	5 μ mho/cm
Chloride ion	0.5 ppm

5. If Specification 3.6.C cannot be met, the reactor shall be placed in a cold condition within 24 hours.

D. Coolant Leakage

1. Anytime irradiated fuel is in the reactor vessel and the reactor coolant temperature is above 212°F, the reactor coolant leakage into the primary containment shall be limited to:

- 5 gpm unidentified leakage
- 2 gpm increase in unidentified leakage within any 24 hour period. (This limitation shall apply only after a period of 24 hours at operating pressure.)
- The total reactor coolant leakage into the primary containment shall not exceed 25 gpm.

2. With any reactor coolant system leakage greater than any one of the limits specified in 3.6.D.1.a or 3.6.D.1.c above, the leakage rate shall be reduced to within these limits

4.6 (cont'd)

4.6.D

Coolant Leakage

1. Reactor coolant leakage rate inside the primary containment shall be monitored and recorded once every 4 hours utilizing the Primary Containment Sump Monitoring System (equipment drain sump monitoring and floor drain sump monitoring).

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next
page

3.6 (cont'd)

4.6
4.5 (cont'd)

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within 4 hours or the reactor shall be in at least the hot standby condition within the following 12 hours and in cold condition within the next 24 hours.

without

reactor coolant system

3. If the increase in unidentified leakage specified in 3.6.D.1.b is exceeded, the source of the leakage shall be identified within 4 hours or the reactor shall be in at least hot standby condition within the next 12 hours and in cold condition within the following 24 hours.

4. The primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring and Floor Drain Sump Monitoring) and the primary Containment Atmosphere Monitoring System (Gaseous and Particulate) shall be operable during reactor power operation.

when the reactor coolant leakage limits of Specification 3.6.D.1 are in effect.

2. Not Used

3. Not Used

4. The Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring and Floor Drain Sump Monitoring) instrumentation shall be calibrated and checked as specified in Surveillance Requirement 4.2.E.

INSERT from page 142

3.6 (con'd)

5. With the Primary Containment Sump Monitoring System (Equipment Drain Sump Monitoring or Floor Drain Sump Monitoring) inoperable, restore the system to operable status within 24 hours or be in at least hot shutdown within the next 12 hours and in the cold condition within the following 24 hours.

6. With the ^{Continuous} Primary Containment Atmosphere Radioactivity Monitoring System (gaseous) or the ~~Primary Containment~~ ^{Continuous} Atmosphere Radioactivity Monitoring System (particulate) inoperable, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours. Otherwise be in at least hot shutdown within the next 12 hours and in cold shutdown within the following 24 hours.

4.6 (cont'd)

3. Drywell Continuous Atmosphere Radioactivity Monitoring System instrumentation shall be functionally tested and calibrated as specified in Table 4.6.2 ← 4.6-2
(Gaseous and Particulate)

Table 4.6-2

Minimum Test and Calibration Frequency for Drywell Continuous Atmosphere Radioactivity Monitoring System

Inst. Channel	Inst. Functional Test	Calibration	Sensor Check
1. Air Particle Analyzer	None	Once/3 mos.	once/day
2. Gaseous Activity Analyzer	None	Once/3 mos.	once/day
3. Iodine Analyzer	None	Once/3 mos.	once/day