

REVISED TECHNICAL SPECIFICATION PAGES

**PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS**

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Docket No. 50-333

DPR-59

JAFNPP

TABLE 3.2-7

ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS

Minimum Number of Operable Instrument Channels Per Trip System (Notes 1 & 2)	Trip Function	Trip Level Setting	Applicable Modes
2	Reactor Pressure - High	≤ 1120 psig, or ≤ 1155 psig (Note 3)	Run
2	Reactor Water Level - Low Low	≥ 126.5 in. above TAF	Run

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TABLE 3.2-7 (cont'd)

ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS

NOTES FOR TABLE 3.2-7

1. There shall be two operable or tripped trip systems for each Trip Function, except as provided for below:
 - a. For each Trip Function with one less than the required minimum number of operable instrument channels, place the inoperable instrument channel and/or its associated trip system in the tripped condition* within 72 hours. Otherwise, place the reactor in the start-up/hot standby mode within the next 6 hours.
 - b. For each Trip Function with two or more channels less than the required minimum number of operable instrument channels:
 - 1) Within one hour, verify sufficient instrument channels remain operable or tripped* to maintain trip capability in the Trip Function, and
 - 2) Within 6 hours, place the inoperable instrument channel(s) in one trip system and/or that trip system** in the tripped condition*, and
 - 3) Within 24 hours, restore the inoperable instrument channel in the other trip system to an operable status.If any of these three conditions cannot be satisfied, place the reactor in the start-up/hot standby mode within the next 6 hours.
- * An inoperable instrument channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, if the inoperable instrument channel is not restored to operable status within the required time, place the reactor in the start-up/hot standby mode within the next 6 hours.
- ** This action applies to that trip system with the greatest number of inoperable instrument channels. If both systems have the same number of inoperable instrument channels, the ACTION can be applied to either trip system.
2. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated Limiting Conditions for Operation and required actions may be delayed for up to 6 hours provided the associated Trip Function maintains ATWS RPT initiation capability.

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TABLE 3.2-7 (cont'd)

ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS

NOTES FOR TABLE 3.2-7 (cont.)

3. The ATWS Reactor Pressure High Recirculation Pump Trip setpoint shall be ≤ 1155 psig when either zero or one SRVs are out of service. The setpoint shall be ≤ 1120 psig when two or more SRVs are out of service.

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Attachment II to JPN-96-026

SAFETY EVALUATION FOR
PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS

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**SAFETY EVALUATION
PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
ATWS RECIRCULATION PUMP TRIP INSTRUMENTATION REQUIREMENTS**

I. DESCRIPTION OF THE PROPOSED CHANGES

The following proposed changes to the James A. FitzPatrick Technical Specifications establish a revised ATWS Recirculation Pump Trip Reactor Pressure - High setpoint when either zero or one Safety Relief Valves (SRVs) are out of service.

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Change Trip Level Setting for Reactor Pressure - High to " ≤ 1155 psig, or ≤ 1120 psig (Note 3)" in Table 3.2-7. Delete lines stating, "**NOTES FOR TABLE 3.2-7** See next page for Notes 1 and 2."

Page 76b

Add a new page 76b which contains the text presently on page 77.

Page 76c

Add a new page 76c which contains the headings of present page 77 along with new note 3. Text for note 3 is, "The ATWS Reactor Pressure High Recirculation Pump Trip setpoint shall be ≤ 1155 psig when either zero or one SRVs are out of service. The setpoint shall be ≤ 1120 psig when two or more SRVs are out of service."

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Replace text on page 77 with "This page intentionally blank."

II. PURPOSE OF THE PROPOSED CHANGES

The purpose of the proposed changes is to limit the potential for reactor water recirculation (RWR) pump trips on high reactor pressure vessel (RPV) pressure. This will limit the potential for rapid RPV lower head cooldown associated with loss of forced circulation.

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III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

The proposed changes make the ATWS Recirculation Pump Trip Reactor Pressure - High setpoint dependent on the number of SRVs out of service. The peak RPV pressure resulting from an ATWS with Main Steam Isolation Valve (MSIV) closure (the limiting transient) is dependent on the power produced during the transient (which is sensitive to the RWR pump trip setpoint) and the capability to remove heat from the RPV (which is sensitive to the number of SRVs out of service). The reference 1 analysis for ATWS RWR pump trip setpoint assumed 2 SRVs were out of service. When fewer SRVs were assumed to be out of service, the capability to remove heat from the RPV increased, which allowed raising the high RPV pressure setpoint.

Reference 2 reports the results of an analysis which demonstrates that for a high RPV pressure setpoint of 1155 psig, with one or zero SRVs out of service, the peak RPV pressure for the worst case MSIV closure ATWS is 1430 psig. The allowable RPV pressure for this event is 1500 psig, therefore adequate margin exists with the revised setpoint. Reference 1 documents the acceptability of the 1120 psig RPV pressure setpoint for the case of MSIV closure with 2 SRVs out of service (peak RPV bottom pressure for this case is 1495.3 psig).

The analyses reported in references 1 and 2 are applicable to operation at power uprate conditions. Implementation of an ATWS high RPV pressure RWR trip setpoint which is dependent on the number of SRVs out of service provides a Technical Specification setpoint value which is above the Technical Specification SRV lifting setpoint when zero or one SRVs are out of service. This will limit the potential for RWR pump trips during transients which result in high RPV pressure.

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 because:

A change in the ATWS Recirculation Pump Trip Reactor Pressure - High setpoint does not affect initiation of any accident. Operation in accordance with the revised setpoints ensures the consequences of previously analyzed accidents are not changed.

**SAFETY EVALUATION
PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
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2. create the possibility of a new or different kind of accident from any accident previously evaluated because:

RPV pressure following an ATWS with MSIV closure event (worst case transient for RPV pressurization) remains within acceptable limits with the revised setpoint. Therefore changing the setpoint will not lead to a new type of accident.

3. involve a significant reduction in a margin of safety because:

The analyses performed to determine the revised ATWS Recirculation Pump Trip Reactor Pressure - High setpoint assure maintenance of the same margin of safety as presently exists for limiting RPV pressure following an ATWS with MSIV closure (limiting transient).

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.

VI. CONCLUSION

Based on the discussions above, implementation of an ATWS Recirculation Pump Trip Reactor Pressure - High setpoint of ≤ 1155 psig for zero or one SRVs out of service does not involve a significant hazards consideration, or an unreviewed safety question, and will not endanger the health and safety of the public. The Plant Operating Review Committee and Safety Review Committee have reviewed this proposed Technical Specification change and agree with this conclusion.

VII. REFERENCES

- (1) FitzPatrick Power Uprate Impact Study, Engineering Report: Section 9.3.1, ATWS Analyses for the James A. FitzPatrick Nuclear Power Plant, GE-NE-187-59-1191, November 1991.
- (2) GE letter, C. H. Stoll to Robert Penny (CHS-96-05), "FitzPatrick Nuclear Power Plant ATWS Analysis for Recirculation Pump Trip Setpoint Changes High Pressure Trip Setpoint Evaluation," dated May 23, 1996.

MARKUP OF TECHNICAL SPECIFICATION PAGE CHANGES

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NOTES FOR TABLE 3.2-7

See next page for Notes 1 and 2.

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TABLE 3.2-7 (cont'd)

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 - b. For each Trip Function with two or more channels less than the required minimum number of operable instrument channels:
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 - 2) Within 6 hours, place the inoperable instrument channel(s) in one trip system and/or that trip system** in the tripped condition*, and
 - 3) Within 24 hours, restore the inoperable instrument channel in the other trip system to an operable status.

If any of these three conditions cannot be satisfied, place the reactor in the start-up/hot standby mode within the next 6 hours.

* An inoperable instrument channel or trip system need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, if the inoperable instrument channel is not restored to operable status within the required time, place the reactor in the start-up/hot standby mode within the next 6 hours.

** This action applies to that trip system with the greatest number of inoperable instrument channels. If both systems have the same number of inoperable instrument channels, the ACTION can be applied to either trip system.

2. When a channel is placed in an inoperable status solely for performance of required surveillances, entry into associated Limiting Conditions for Operation and required actions may be delayed for up to 6 hours provided the associated Trip Function maintains ATWS RPT initiation capability.

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TABLE 3.2-7 (cont'd)

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Amendment No.

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