

Attachment I to JPN-98-004

REVISED TECHNICAL SPECIFICATION PAGES

PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
REACTOR PROTECTION SYSTEM (RPS) NORMAL SUPPLY
ELECTRICAL PROTECTION ASSEMBLY (EPA) UNDERVOLTAGE
TRIP SETPOINT (JPTS-97-003)

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New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333
DPR-59

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3.9 (cont'd)

3. From and after the time both power supplies are made or found inoperable the reactor shall be brought to cold condition within 24 hours.

G. REACTOR PROTECTION SYSTEM ELECTRICAL PROTECTION ASSEMBLIES

Two RPS electrical protection assemblies for each inservice RPS MG set and inservice alternate source shall be operable except as specified below:

1. With one RPS electrical protection assembly for an inservice RPS MG set or an inservice alternate power supply inoperable, restore the inoperable channel to operable status within 72 hours or remove the associated RPS MG set or alternate power supply from service.
2. With two RPS electrical protection assemblies for an inservice RPS MG set or an inservice alternate power supply inoperable, restore at least one to operable status within 30 minutes or remove the associated RPS MG set or alternate power supply from service.

4.9 (cont'd)

G. REACTOR PROTECTION SYSTEM ELECTRICAL PROTECTION ASSEMBLIES

The RPS electrical protection assemblies instrumentation shall be determined operable by:

1. Performing a channel functional test each time the plant is in cold shutdown for a period of more than 24 hours, unless performed in the previous 6 months.
2. Once per 24 months, demonstrating the operability of over-voltage, under-voltage and under-frequency protective instrumentation by performance of a channel calibration including simulated automatic actuation of the protective relays, tripping logic and output circuit breakers and verifying the following setpoints:

	<u>RPS MG SET SOURCE</u>
OVER-VOLTAGE	≤132V ≤4 second Time Delay
UNDER-VOLTAGE	≥112.5V for "A" Channel ≥113.9V for "B" Channel ≤4 second Time Delay
UNDER-FREQUENCY	≥57Hz ≤4 second Time Delay

Attachment II to JPN-98-004

SAFETY EVALUATION

PROPOSED TECHNICAL SPECIFICATION CHANGES REGARDING
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SAFETY EVALUATION

**PROPOSED TECHNICAL SPECIFICATION CHANGES
REGARDING REACTOR PROTECTION SYSTEM (RPS)
NORMAL SUPPLY ELECTRICAL PROTECTION ASSEMBLY (EPA)
UNDERVOLTAGE TRIP SETPOINT (JPTS-97-003)**

I. DESCRIPTION OF THE PROPOSED CHANGES

The following are proposed changes to the James A. FitzPatrick Technical Specifications.

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Specification 4.9.G.2 has been revised. The undervoltage value for the RPS MG Set source has changed from $\geq 112.3V$ to $\geq 112.5V$ for Channel "A"
 $\geq 113.9V$ for Channel "B"

II. PURPOSE OF THE PROPOSED CHANGES

The proposed change revises the RPS-EPA undervoltage trip setpoint as a result of a reanalysis based on the most limiting voltage requirement of the applied loads.

III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

Changes to the RPS Normal Supply EPA Undervoltage Trip Setting in SR 4.9.G.2

A calculation (Reference 1) was performed to determine the total channel uncertainties associated with the Normal RPS EPA trip setpoints over a 24-month operating cycle. This calculation also considered the results of a voltage drop evaluation performed on the RPS system (Reference 2). Based on the results of this calculation, the RPS MG Set Source Undervoltage (UV) setpoint specified in SF 4.9.G.2 requires revision from its present value $\geq 112.3V$ to $\geq 112.5V$ for the "A" channel and $\geq 113.9V$ for the "B" channel. The field trip setpoint for the Normal RPS EPA UV trip has been raised to address the issue of voltage drop, however, the setpoint specified in SR 4.9.G.2 requires revision to correct the present Technical Specification limit. The new setpoint was calculated using the methodology of Reference 3. The referenced calculations are included as an Attachment to this submittal.

The RPS instrumentation bus is a 120 VAC power distribution bus which mainly supplies power to instrument power supplies and normally energized relay coils and solenoids. The EPA trip settings have time delays to prevent transients from de-energizing the bus.

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The Reference 2 calculation analyzed the impact of the voltage drop from the EPAs to the scram pilot valve solenoids and other relays, based on actual voltage measurements taken at RPS System loads. The calculation concluded that the RPS scram pilot valve solenoids are the components that require the highest minimum voltage to ensure proper operation. Due to the location of the Normal supply EPAs (Turbine Building Electric Bays), the feeder cable run between the supply and the scram pilot valve solenoids results in a significant voltage drop. The voltage drop assessment calculated the "A" and "B" channels separately due to their applicable differences.

The calculation has determined that the minimum UV trip values to assure the Normal supply EPAs provide minimum allowable voltage at the scram pilot valve solenoids are 112.5 and 113.9 volts for the "A" and "B" side EPAs respectively.

The proposed Normal Supply EPA UV setpoint ensures adequate protection for the RPS, and other essential components, from undervoltage conditions on the RPS power supplies. These changes are necessary to correct the Technical Specification setpoint that did not adequately consider allowances for temperature effect uncertainty associated with determining the minimum allowable voltage for the RPS instrument buses.

The proposed instrument setpoint changes ensures that plant safety limits are not exceeded for the most limiting voltage requirements. The type of testing and the corrective actions required if the subject surveillances fail remains the same. The proposed changes do not adversely affect the reliability of these systems or affect the ability of the systems to meet their design objectives. A historical review of surveillance test results supports these conclusions.

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 10CFR 50.92, since it would not:

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

The proposed setpoint change evaluated in Section III does not involve any physical changes to the plant, does not alter the way these systems function, and will not degrade the performance of the plant safety systems. The proposed instrument setpoint changes ensures that plant safety limits are not exceeded for the most limiting voltage requirements. The type of testing and the corrective actions required if the subject surveillances fail remains the same. The proposed changes do not adversely affect the reliability of these systems or affect the

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ability of the systems to meet their design objectives. A historical review of surveillance test results supports these conclusions.

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

The proposed setpoint change evaluated in Section III does not modify the design or operation of the plant, therefore, no new failure modes are introduced. The proposed instrument setpoint change ensures that plant safety limits are not exceeded for the most limiting voltage requirements. No changes are proposed to the type and method of testing performed. A historical review of surveillance test results supports these conclusions.

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

The proposed setpoint change evaluated in Section III results in minimal impact on system reliability in the interval between surveillance tests. This is based on the redundant design of the evaluated systems. A review of past surveillance history has shown no evidence of failures which would significantly impact the reliability of these systems. Operation of the plant remains unchanged by this proposed setpoint change. The assumptions in the Plant Licensing Basis are not adversely impacted. Therefore, the proposed changes do not result in a significant reduction in the margin of safety.

VI. IMPLEMENTATION OF THE PROPOSED CHANGE

Implementation of the proposed changes will not adversely affect the ALARA or Fire Protection Programs at the FitzPatrick plant, nor will the changes affect the environment.

Implementation of this proposed Amendment requires changes to the RPS EPA undervoltage trip setpoints. The affected setpoints have been identified in Section III of the safety evaluation.

VII. CONCLUSION

The Plant Operating Review Committee (PORC) and the Safety Review Committee (SRC) have reviewed these proposed changes to the Technical Specifications and have concluded that they do not involve an unreviewed safety question, or a significant hazards consideration, and will not endanger the health and safety of the public.

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VIII. REFERENCES

1. NYPA Calculation JAF-CALC-ELEC-00757, Revision 8, "EPA for Normal Supply Feeder Channel Uncertainty and Setpoint Calculation"
2. NYPA Calculation JAF-CALC-RPS-01516, Revision 2, "RPS Voltage Drop Assessment"
3. NYPA Engineering Standard IES-3A, Revision 1, "Instrument Loop Accuracy and Setpoint Calculation Methodology (JAF)"

MARKUP OF TECHNICAL SPECIFICATION PAGE CHANGES

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