

ATTACHMENT I to JPN-93-005

PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL

(JPTS-91-010)

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. At least once per operating cycle, 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 set points:

	<u>RPS MG SET SOURCE</u>
OVER-VOLTAGE	$\leq 132V$ ≤ 4 second Time Delay
UNDER-VOLTAGE	$\geq 108V$ ≤ 4 second Time Delay
UNDER-FREQUENCY	$\geq 57HZ$ ≤ 4 second Time Delay

4.9 BASES (con't)

D. Battery System

Measurements and electrical tests are conducted at specified intervals to provide indication of cell condition and to determine the discharge capability of the batteries. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

E. LPCI MOV Independent Power Supply

Measurement and electrical tests are conducted at specified intervals to provide indication of cell condition, to determine the discharge capability of the battery. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

F. Reactor Protection Power Supplies

Functional tests of the electrical protection assemblies are conducted at specified intervals utilizing a built-in test device and once per operating cycle by performing an instrument calibration which verifies operation within the limits of Section 4.9.G.

**SAFETY EVALUATION FOR
PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL (JPTS-91-010)**

I. DESCRIPTION OF THE PROPOSED CHANGES

The proposed change to the James A. FitzPatrick Technical Specifications revises the surveillance interval for electrical protective assemblies (EPAs) for the Reactor Protection System (RPS). The proposed change is 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 Specification.

Page 222c, Specification 4.9.G.1.

Replace the specification:

"At least once every 6 months, performing a channel functional test."

with:

"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."

Page 222c, Specification 4.9.G.2.

Replace "s" with "second" in three locations.

Page 226, Bases 4.9.F

In the first sentence, replace the phrase "once each six (6) months" with the phrase "at specified intervals."

II. PURPOSE OF THE PROPOSED CHANGES

Electrical protective assemblies (EPAs) are used in the power supplies for the Reactor Protective System (RPS). The EPAs ensure that RPS components are protected from abnormal voltages or frequencies from the RPS motor generator (MG) set or the alternate power supplies. The EPAs protect the RPS components by tripping a breaker between the MGs and the RPS when abnormal voltages or frequencies are encountered.

Generic Letter 91-09 (Reference 1) encouraged Licensees to propose Technical Specification changes to modify the surveillance interval of EPAs used in power supplies for the RPS. Standard Technical Specifications (Reference 2) require channel functional testing of EPAs at six month intervals. The Generic Letter allows changing the test interval to require testing every time the plant is in cold shutdown for more than 24 hours, unless testing was performed in the previous 6 months. This change was identified as a line item improvement in the STS.

SAFETY EVALUATION

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The purpose of this Technical Specification change request is to implement the guidance of the Generic Letter at the FitzPatrick plant. Technical Specification 4.9.G.1 currently requires a channel functional test every 6 months regardless of whether or not the plant is operating. A minor editorial change is also being made for clarity by changing an "s" to "second."

III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

The Authority has reviewed plant design and operating event reports to assess the effects on plant safety associated with a change to the testing interval. The small risks of the increased testing period are outweighed by the reduced possibility of inadvertent trips that challenge safety systems. The Generic Letter and its conclusions are applicable to the FitzPatrick plant.

Generic Letter 91-09 identifies a safety concern with the transfer of power supplies to the RPS when testing an EPA channel. The transfer is a dead-bus transfer and the momentary interruption of power results in a half scram and half isolation. The Generic Letter notes that many plants have encountered problems with the reset of the half trip resulting in inadvertent scrams and group isolations that challenge safety systems during power operation. Testing during cold shutdown eliminates this safety concern.

If there is no cold shutdown of 24 hours or more during a fuel cycle, the proposed change can result in an increase in the testing period from 6 months up to 18 months. The Generic Letter concluded that the increased testing period would be of small risk to safety and that the limitation of testing to periods of cold shutdown would provide a positive safety benefit by reducing the possibility of inadvertent trips and challenges to safety systems. The benefit to safety of eliminating testing during power operation more than offsets the risk to safety from relaxing the surveillance test interval.

The results of a review by the Authority indicate that the conclusions of the Generic Letter are applicable to the FitzPatrick plant. The review identified the following factors:

- The plant is designed so that interruption of power results in a half scram and half isolation. The plant procedure for functionally testing an EPA channel (Reference 3) requires transfer of power sources resulting in a momentary half scram and half isolation. The situation identified in the Generic Letter is, therefore, applicable.
- No plant events have been identified where testing the EPAs at power has resulted in a scram. This does not mean that such an event will not occur in the future. The Generic Letter is, therefore, applicable.
- Testing at cold shutdown does not present the risk of reactor scram with a resulting challenge to safety systems. This provides a positive safety benefit.
- The HPCI, RCIC, RWCU and shutdown cooling systems are designed with a one-out-of-two or more isolation logic. These systems receive an isolation signal during the test. The proposed change provides a positive safety benefit because the HPCI, RCIC and RWCU systems are not required in cold shutdown.

SAFETY EVALUATION

Page 3 of 5

- During cold shutdown and refueling, the shutdown cooling function is required. Shutdown cooling is isolated with the de-energization of a RPS bus. Shutdown cooling isolation valve 10-MOV-18 closes with a loss of RPS bus "A" and valve 10-MOV-17 closes with a loss of RPS bus "B." There have been events (References 4, 5 and 6) where momentary power interruption to the isolation logic resulted in shutdown cooling isolation during cold shutdown. Corrective action has been taken to prevent a recurrence.

The potential for isolation of shutdown cooling exists every refueling outage. The potential for isolation of shutdown cooling is slightly increased by the new requirement for testing during periods of cold shutdown that exceed 24 hours. This can occur up to two times (after the first and second six months of a fuel cycle) between refuel outages. Planned mid cycle maintenance outages will be one time when testing is required. If inadvertent isolation occurs during this testing, the isolation is readily correctable. The event requires operator action (reset the isolation and reopen valves) and is less significant than a scram and/or isolation at power which challenges safety systems. The potential for isolation of shutdown cooling does not change the conclusions of the Generic Letter that the benefit to safety of eliminating testing at power offsets the risk to safety of relaxing the test interval.

- The changes do not effect the conclusions of the plants accident analyses as documented in the updated FSAR or the NRC staff SER.

The editorial change has no safety significance. It serves to clarify the Specification since "s" is not a common abbreviation for second.

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 changes revise the testing frequency for the electrical protective assemblies (EPAs) for the Reactor Protection System (RPS). These changes are in accordance with Generic Letter 91-09. There are no changes to plant design or operation. Increasing the test interval up to 18 months produces a small increase in probability that an inoperable EPA would not be detected. Increased testing during cold shutdown produces a small increase in probability that shutdown cooling can be isolated. These risks are offset by eliminating the possibility of trips due to testing during power that would challenge safety systems.

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

The proposed change will not change design, operation or the testing process. The

SAFETY EVALUATION

Page 4 of 5

change to testing intervals will not effect any condition that could result in a new or different type of accident.

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

The testing of each EPA channel involves a dead-bus transfer and the momentary interruption of power results in a half scram and half isolation. Generic Letter 91-09 notes that many plants have encountered problems with the reset of the half trip resulting in inadvertent scrams and group isolation that challenge safety systems during power operation. Eliminating EPA testing at power operation increases the margin of safety by eliminating the potential for trips due to testing that challenge safety systems. An insignificant reduction in the margin of safety is introduced by increasing the test interval up to 18 months producing a small increase in risk that an inoperable EPA would not be detected. The elimination of potential challenges to safety systems provides a safety benefit that offsets the increased risks of component failure and shutdown cooling isolation.

V. IMPLEMENTATION OF THE PROPOSED CHANGES

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. The proposed changes involve a change to the frequency of testing. The testing is not performed in high radiation areas, will involve no modifications to plant systems or components and results in no plant discharges.

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;
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. NRC Generic Letter 91-09, "Modification of Surveillance Interval for the Electrical Protective Assemblies in Power Supplies for the Reactor Protection System," dated June 27, 1991.

SAFETY EVALUATION

Page 5 of 5

2. NRC NUREG-1433, "Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/4)," dated September 1992.
3. James A. FitzPatrick Nuclear Power Plant Instrument Surveillance Procedure (ISP) 94, "Reactor Protection System Electrical Protection Assembly Functional Test/Calibration.
4. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 92-047, "Automatic Shutdown Cooling Isolation Due to Voltage Transient," dated December 4, 1992.
5. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 92-046, "Automatic Shutdown Cooling Isolation Due to Procedure Deficiency," dated November 16, 1992.
6. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 90-013, Revision 0, "Isolation of Shutdown Cooling System Due to Test Jumper Falling Off of Isolation Logic Circuit," dated May 9, 1990.
7. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 90-022, Revision 1, "Engineered Safety Feature Actuation Due to Low Voltage Trip of Power Supply to Reactor Protection System," dated June 19, 1991.
8. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report, Sections 4.8.6, 7.2.4, 7.3.4, 8.9 and Chapter 14.
9. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER), dated November 20, 1972, and Supplements.

ATTACHMENT III to JPN-93-005

PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL
MARKUP OF TECHNICAL SPECIFICATION PAGES

(JPTS-91-010)

New York Power Authority

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

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)

Insert A

G. REACTOR PROTECTION SYSTEM ELECTRICAL PROTECTION ASSEMBLIES

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

1. At least once every 6 months, performing a channel functional test.
2. At least once per operating cycle, 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 set points:

	RPS MG SET SOURCE
OVER-VOLTAGE	$\leq 132V$ $\leq 4S$ Time Delay
UNDER-VOLTAGE	$\geq 108V$ $\leq 4S$ Time Delay
UNDER-FREQUENCY	$\geq 57Hz$ $\leq 4S$ Time Delay

INSERT A

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.

4.9 BASES (cont'd)

D. Battery System

Measurements and electrical tests are conducted at specified intervals to provide indication of cell condition and to determine the discharge capability of the batteries. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

E. LPCI MOV Independent Power Supply

Measurement and electrical tests are conducted at specified intervals to provide indication of cell condition, to determine the discharge capability of the battery. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

F. Reactor Protection Power Supplies

Functional tests of the electrical protection assemblies are conducted once each six (6) months utilizing a built-in test device and once per operating cycle by performing an instrument calibration which verifies operation within the limits of Section 4.9.G.

at specified intervals

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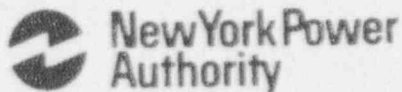
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Ralph E. Beedle
Executive Vice President
Nuclear Generation

February 22, 1993
JPN-93-005

U.S. Nuclear Regulatory Commission
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SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Proposed Change to the Technical Specifications
Electrical Protective Assemblies (EPAs)
Surveillance Interval (JPTS-91-010)

REFERENCE: 1. NRC Generic Letter 91-09, "Modification of Surveillance Interval for the Electrical Protective Assemblies in Power Supplies for the Reactor Protection System," dated June 27, 1991.

Dear Sir:

This application for an amendment to the James A. FitzPatrick Technical Specifications proposes to revise Surveillance Requirement 4.9.G.1 and associated Bases using the guidance of Generic Letter 91-09 (Reference 1). The Generic Letter allows a line item Technical Specification improvement by the elimination of testing for electrical protective assemblies (EPAs) during power operation. This change reduces the possibility of inadvertent reactor trips caused by testing of EPAs during power operation.

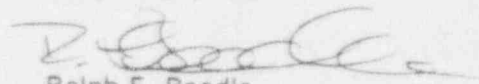
The signed original of the Application for Amendment to Operating License is enclosed for filing. Attachments I and II to this application contain the proposed changes to the Technical Specifications and the associated Safety Evaluation.

In accordance with 10 CFR 50.91, a copy of this application and the associated attachments are being provided to the designated New York State official.

9303010381 2 pp.

If you have any questions regarding the proposed changes, please contact Mr. J. A. Gray, Jr.

Very truly yours,


Ralph E. Beedle

att: as stated

cc: Regional Administrator
U.S. Nuclear Regulatory Commission
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King of Prussia, PA 19406

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BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the matter of)
NEW YORK POWER AUTHORITY) Docket No. 50-333
James A. FitzPatrick Nuclear Power Plant)

APPLICATION FOR AMENDMENT TO OPERATING LICENSE

The New York Power Authority requests an amendment to the Technical Specifications contained in Appendix A to Facility Operating License DPR-59 for the James A. FitzPatrick Nuclear Power Plant. This application is filed in accordance with Section 10 CFR 50.90 of the Nuclear Regulatory Commission's regulation.

This application for an amendment to the James A. FitzPatrick Technical Specifications proposes to revise Surveillance Requirement 4.9.G.1 and associated Bases using the guidance of Generic Letter 91-09. The Generic Letter allows a line item Technical Specification improvement by the elimination of testing for electrical protective assemblies (EPAs) during power operation. This change reduces the possibility of inadvertent reactor trips caused by testing of EPAs during power operation.

The proposed change to the Technical Specifications is Attachment I to this Application for Amendment to the Operating License. The Safety Evaluation for the proposed change is included as Attachment II.

New York Power Authority



Ralph E. Beedle
Executive Vice President
Nuclear Generation

STATE OF NEW YORK
COUNTY OF WESTCHESTER

Subscribed and sworn to before me
this 22nd day of February 1993.


Notary Public

KATHLEEN D. GALLAGHER
Notary Public, State of New York
No. 5004481
Qualified in Westchester County
Commission Expires Nov. 16, 1994

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ATTACHMENT I to JPN-93-005

PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL

(JPTS-91-010)

New York Power Authority

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

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3.9 (cont'd)

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4.9 (cont'd)

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**SAFETY EVALUATION FOR
PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL (JPTS-91-010)**

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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 Specification.

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Replace the specification:

"At least once every 6 months, performing a channel functional test."

with:

"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."

Page 222c, Specification 4.9.G.2.

Replace "s" with "second" in three locations.

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The results of a review by the Authority indicate that the conclusions of the Generic Letter are applicable to the FitzPatrick plant. The review identified the following factors:

- The plant is designed so that interruption of power results in a half scram and half isolation. The plant procedure for functionally testing an EPA channel (Reference 3) requires transfer of power sources resulting in a momentary half scram and half isolation. The situation identified in the Generic Letter is, therefore, applicable.
- No plant events have been identified where testing the EPAs at power has resulted in a scram. This does not mean that such an event will not occur in the future. The Generic Letter is, therefore, applicable.
- Testing at cold shutdown does not present the risk of reactor scram with a resulting challenge to safety systems. This provides a positive safety benefit.
- The HPCI, RCIC, RWCU and shutdown cooling systems are designed with a one-out-of-two or more isolation logic. These systems receive an isolation signal during the test. The proposed change provides a positive safety benefit because the HPCI, RCIC and RWCU systems are not required in cold shutdown.

SAFETY EVALUATION

Page 3 of 5

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The potential for isolation of shutdown cooling exists every refueling outage. The potential for isolation of shutdown cooling is slightly increased by the new requirement for testing during periods of cold shutdown that exceed 24 hours. This can occur up to two times (after the first and second six months of a fuel cycle) between refuel outages. Planned mid cycle maintenance outages will be one time when testing is required. If inadvertent isolation occurs during this testing, the isolation is readily correctable. The event requires operator action (reset the isolation and reopen valves) and is less significant than a scram and/or isolation at power which challenges safety systems. The potential for isolation of shutdown cooling does not change the conclusions of the Generic Letter that the benefit to safety of eliminating testing at power offsets the risk to safety of relaxing the test interval.

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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:

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The proposed changes revise the testing frequency for the electrical protective assemblies (EPAs) for the Reactor Protection System (RPS). These changes are in accordance with Generic Letter 91-09. There are no changes to plant design or operation. Increasing the test interval up to 18 months produces a small increase in probability that an inoperable EPA would not be detected. Increased testing during cold shutdown produces a small increase in probability that shutdown cooling can be isolated. These risks are offset by eliminating the possibility of trips due to testing during power that would challenge safety systems.

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SAFETY EVALUATION

Page 4 of 5

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V. IMPLEMENTATION OF THE PROPOSED CHANGES

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. The proposed changes involve a change to the frequency of testing. The testing is not performed in high radiation areas, will involve no modifications to plant systems or components and results in no plant discharges.

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;
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. NRC Generic Letter 91-09, "Modification of Surveillance Interval for the Electrical Protective Assemblies in Power Supplies for the Reactor Protection System," dated June 27, 1991.

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2. NRC NUREG-1433, "Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/4)," dated September 1992.
3. James A. FitzPatrick Nuclear Power Plant Instrument Surveillance Procedure (ISP) 94, "Reactor Protection System Electrical Protection Assembly Functional Test/Calibration.
4. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 92-047, "Automatic Shutdown Cooling Isolation Due to Voltage Transient," dated December 4, 1992.
5. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 92-046, "Automatic Shutdown Cooling Isolation Due to Procedure Deficiency," dated November 16, 1992.
6. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 90-013, Revision 0, "Isolation of Shutdown Cooling System Due to Test Jumper Falling Off of Isolation Logic Circuit," dated May 9, 1990.
7. James A. FitzPatrick Nuclear Power Plant Licensee Event Report 90-022, Revision 1, "Engineered Safety Feature Actuation Due to Low Voltage Trip of Power Supply to Reactor Protection System," dated June 19, 1991.
8. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report, Sections 4.8.6, 7.2.4, 7.3.4, 8.9 and Chapter 14.
9. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER), dated November 20, 1972, and Supplements.

ATTACHMENT III to JPN-93-005

PROPOSED TECHNICAL SPECIFICATION CHANGES
ELECTRICAL PROTECTIVE ASSEMBLIES (EPAs)
SURVEILLANCE INTERVAL
MARKUP OF TECHNICAL SPECIFICATION PAGES

(JPTS-91-010)

New York Power Authority

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

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)

Insert A

G. REACTOR PROTECTION SYSTEM ELECTRICAL PROTECTION ASSEMBLIES

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

1. At least once every 6 months, performing a channel functional test.
2. At least once per operating cycle, 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 set points:

	RPS MG SET SOURCE
OVER-VOLTAGE	$\leq 132V$ ≤ 40 Time Delay
UNDER-VOLTAGE	$\geq 108V$ ≤ 40 Time Delay
UNDER-FREQUENCY	$\geq 57Hz$ ≤ 40 Time Delay

INSERT A

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.

4.9 BASES (cont'd)

D. Battery System

Measurements and electrical tests are conducted at specified intervals to provide indication of cell condition and to determine the discharge capability of the batteries. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

E. LPCI MOV Independent Power Supply

Measurement and electrical tests are conducted at specified intervals to provide indication of cell condition, to determine the discharge capability of the battery. Performance and service tests are conducted in accordance with the recommendations of IEEE 450-1987.

F. Reactor Protection Power Supplies

Functional tests of the electrical protection assemblies are conducted once each six (6) months utilizing a built-in test device and once per operating cycle by performing an instrument calibration which verifies operation within the limits of Section 4.9.G.

at specified intervals