

ATTACHMENT I TO JPN-91-016

**PROPOSED TECHNICAL SPECIFICATION CHANGES
REGARDING ENVIRONMENTAL ENCLOSURES**

(JPTS-86-002)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Docket No. 50-333

DPR-59

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3.11 (cont'd)

E. Intake Deicing Heaters

Intake heaters are required to be operable when intake water temperature is less than or equal to 37°F. A minimum of 18 out of 88 heaters are required to be operable to maintain the required flow for the ESW and RHRSW Systems.

1. If specification 3.11.E above cannot be met, the reactor shall be placed in a cold condition within 24 hours.

F. Environmental Enclosure Ventilation and Cooling (HVAC)

At least one HVAC unit for each environmental enclosure shall be operable whenever the reactor is in the run, startup/hot standby, or hot shutdown mode.

1. When it is determined that both HVAC units for one environmental enclosure are inoperable, restore one HVAC unit for the affected environmental enclosure to an operable status within 7 days.
2. When it is determined that both HVAC units for more than one environmental enclosure are inoperable, restore HVAC units as necessary such that no more than one environmental enclosure has both HVAC units inoperable within 24 hours.
3. If Specification 3.11.F.1 or 3.11.F.2 above cannot be met, place the reactor in the cold shutdown or refuel mode within the following 24 hours.

4.11 (cont'd)

E. Intake Deicing Heaters

1. The six heater feeder ammeters shall be checked weekly whenever the intake water temperature is less than or equal to 37°F.
2. The individual heaters shall be monitored once/6 months for rated heater current or as required by large deviations in the feeder checks in 3.11.E.1 above.
3. Resistance to ground shall be checked once/year.

F. Environmental Enclosure Ventilation and Cooling (HVAC)

Environmental enclosure HVAC units shall be checked for operability once/week.

1. When it is determined that both HVAC units for any environmental enclosure are inoperable, the HVAC units for the remainder of the environmental enclosures shall be checked for operability once/day to ensure that at least one HVAC unit per environmental enclosure is operable.
2. Control instrumentation for environmental enclosure HVAC units shall be calibrated once/operating cycle.

3.11 and 4.11 BASES (cont'd)

E. Intake Deicing Heaters

The general objective of this specification is to ensure adequate water (30,000 gpm Ref. FSAR Q.2.1) is available to the ESW and RHRSW systems to fulfill the cooling requirements of the associated ECCS loads. Since it is required that an opening large enough to satisfy the demand (10% of the total area) be preserved, it is justifiable to assume that no more than 20% of the heaters be available at anytime.

The weekly check of 6 heater feeder ammeters shall be made to prove that the system is supplying adequate heat to the bar racks. If a major deviation from rated current is detected, heater breakers can be checked to see if they have tripped or the individual heaters can be tested for open circuits.

The semiannual check of each heater will verify that the weekly tests have been adequate. The annual check of circuit meggar readings will check against long term degradation of circuit insulations.

F. Environmental Enclosure Ventilation and Cooling (HVAC)

Environmental enclosures, each with two redundant 100% capacity HVAC units, are installed around the two LPCI motor operated valve independent power supply (LPCI MOV IPS) charger-inverters and around two 600 VAC busses (load centers L-15 and L-16). The operability requirements for the environmental enclosure HVAC units ensure the operability of the charger-inverters and 600 VAC busses by providing a controlled mild environment under normal, high energy line break, and post-LOCA conditions. The enclosures also provide radiation shielding. During time periods when the reactor is in the cold shutdown or refuel modes, the low reactor pressure and temperature

conditions preclude conditions which require the environmental enclosures. Therefore, the enclosures' HVAC units are not required to be operable in these operating modes.

Should both of the HVAC units for one environmental enclosure become inoperable, continued operability of the redundant LPCI MOV IPS charger-inverter or 600 VAC bus is assured by the continued operability of the other environmental enclosure's HVAC units. Seven days are allowed for repairs to restore at least one of the redundant HVAC units to an operable status.

Should both HVAC units become inoperable for more than one environmental enclosure, 24 hours are allowed for repairs. Repair of at least one HVAC unit per environmental enclosure restores that environmental enclosure to an operable condition. If within this 24-hour period, only one environmental enclosure continues to have both HVAC units inoperable, operation of the plant may continue for the balance of the 7-day period permitted by Specification 3.11.F.1.

Environmental enclosure HVAC units are checked for proper operation once each week when the reactor is in the run, startup/hot standby, or hot shutdown mode. An operability check consists of verifying that the HVAC system pressures, temperatures, and fan operation on both the cooling coils and the condenser coils are performing normally. Operability checks are performed once a day on operable HVAC units when both HVAC units for one or more environmental enclosures are inoperable to provide greater assurance that the remaining HVAC units are functioning normally.

Calibration of the control instrumentation (HVAC system pressure and temperature indicators and switches) once each operating cycle ensures that the HVAC units are operating within their design limits.

ATTACHMENT II TO JPN-91-016

**SAFETY EVALUATION FOR
PROPOSED TECHNICAL SPECIFICATION CHANGES
REGARDING ENVIRONMENTAL ENCLOSURES**

(JPTS-86-002)

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I. DESCRIPTION OF THE PROPOSED CHANGES

The proposed change to the James A. FitzPatrick Technical Specifications adds two new specifications, 3.11.F and 4.11.F, Bases for these specifications, and a corresponding entry in the Table of Contents. This amendment would change pages iii, 242, and 244. A minor administrative change is also being made to page iii. The changes are described below.

Page iii - Table of Contents

Add a new line entry to reflect Specifications 3.11.F and 4.11.F, "Environmental Enclosure Ventilation and Cooling (HVAC)" on page 242.

In the entries for Emergency Service Water System and Intake Deicing Heaters add a "D." and "E." respectively in the surveillance requirements column to note existing specifications 4.11.D and E.

Page 242 - Add new specification 3.11.F to read:

F. Environmental Enclosure Ventilation and Cooling (HVAC)

At least one HVAC unit for each environmental enclosure shall be operable whenever the reactor is in the run, startup/hot standby, or hot shutdown mode.

1. When it is determined that both HVAC units for one environmental enclosure are inoperable, restore one HVAC unit for the affected environmental enclosure to an operable status within 7 days.
2. When it is determined that both HVAC units for more than one environmental enclosure are inoperable, restore HVAC units as necessary such that no more than one environmental enclosure has both HVAC units inoperable within 24 hours.
3. If Specification 3.11.F.1 or 3.11.F.2 above cannot be met, place the reactor in the cold shutdown or refuel mode within the following 24 hours.

Page 242 - Add new specification 4.11.F to read:

F. Environmental Enclosure Ventilation and Cooling (HVAC)

Environmental enclosure HVAC units shall be checked for operability once/week.

1. When it is determined that both HVAC units for any environmental enclosure are inoperable, the HVAC units for the remainder of the environmental

enclosures shall be checked for operability once/day to ensure that at least one HVAC unit per environmental enclosure is operable.

2. Control instrumentation for environmental enclosure HVAC units shall be calibrated once/operating cycle.

Page 244 - Bases for Specifications 3.11 and 4.11

Bases are added discussing the safety function of the environmental enclosures and justification for the proposed Technical Specifications. The complete text of the proposed Bases is contained in Attachment I.

II. PURPOSE OF THE PROPOSED CHANGES

A description of the four environmental enclosures and the operation of their HVAC systems is presented in Section 9.9.3.3 of the Updated FitzPatrick FSAR (Reference 1, pages 9.9-6 and 9.9-7). Their location is shown on FSAR Figure 12.3-3 for the 600 VAC load centers, and on Figure 12.3-5 for the LPCI charger/inverters. The enclosures maintain a mild operating environment for the enclosed safety-related electrical equipment during routine and accident conditions. The mild environment will be maintained for all postulated reactor building ambient conditions by operation of the enclosures' ventilation and air conditioning (HVAC) units.

The proposed changes will ensure the operability of the safety-related electrical equipment contained within the environmental enclosures by specifying operability and testing requirements for the HVAC units associated with the enclosures.

III. IMPACT OF THE PROPOSED CHANGES

Documentation is not available to show that the equipment listed below is qualified to IEEE-323 and 10 CFR 50.49 for harsh environmental conditions.

1. LPCI Uninterruptable Power Supply Charger/Inverter System "A"("B"), 71-INV-3A(B)
2. 600 VAC Emergency Power Switchgear Substation - Division I(II), 11500(11600), 71-L-15(16)

Enclosures, each having two 100% capacity HVAC units, were constructed around this equipment to provide sufficient cooling and radiation shielding to maintain a mild operating environment during both normal and post-accident conditions. The HVAC units are QA Category 1 and have environmental and seismic qualification for continuous operation under the Operating Basis Earthquake and limiting high-energy-line break (HELB).

When any of these electrical components is energized, it generates heat. This heat must be removed from the enclosure to maintain a normal operating temperature. This heat can be removed by operation of either one of the enclosure's two 100% capacity HVAC systems or by having a door to the enclosure blocked open and providing forced circulation of the reactor building air into the enclosure. However, when the reactor is in other than cold condition (hot shutdown, startup/hot standby, or run modes) the doors to each enclosure are closed to protect the equipment from postulated post-accident (HELB or LOCA) environmental conditions. Therefore, the proposed technical specifications require at least one HVAC unit for each enclosure to be operable whenever the reactor is in any of the modes listed above.

Should both HVAC units for an enclosure be unavailable, adequate heat removal can be maintained by opening the access door as described above. The equipment inside the enclosure would remain operable. However, in the highly unlikely event of an accident (HELB or LOCA), this equipment would be vulnerable to the high temperature and/or radiation conditions which may exist in the reactor building. Therefore, only 7 days is allowed for restoration. This provides adequate time to allow repairs to an inoperable HVAC system while minimizing the probability of exposure to a postulated accident. During this time, redundant electrical equipment within the operable enclosure remains fully protected and is available under post-accident conditions. This 7 day LCO period is consistent with the LCO period for ECCS systems with a single train out of service.

If both HVAC units for more than one enclosure are inoperable, insufficient electrical equipment remains fully protected against the environmental effects of an accident. Since this may result in redundant ECCS equipment becoming unavailable to mitigate the accident, a much shorter, 24 hour LCO period is appropriate.

The environmental effects in the reactor building of HELB and LOCA accidents depend on the pressure and temperature conditions of the reactor coolant system and not the reactor power level. Therefore, should insufficient HVAC systems be restored in the specified time, the action statement requires the reactor to be placed in cold shutdown or refuel mode. An additional 24 hour period is allowed to bring the reactor quickly to the cold condition under normal shutdown procedural control.

The proposed surveillance requirements are adequate to ensure continuous operability of the HVAC systems. Should both HVAC systems for an enclosure be inoperable, daily operability checks of all other HVAC systems would ensure that redundant equipment would be available under post-accident conditions.

The heat rejected from the HVAC units to the reactor building also has been analyzed. The additional heat load on the reactor building cooling system is well within its design capability and has an insignificant effect on both normal and post-accident ambient building temperatures.

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 stated 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 technical specifications add operability and surveillance requirements to ventilation and air conditioning equipment associated with four environmental enclosures within the reactor building. These structures ensure the availability of the enclosed safety-related electrical equipment under postulated accident conditions. No accidents as analyzed in the FSAR are affected by these changes.
2. create the possibility of a new or different kind of accident from any accident previously evaluated. The enclosures and their associated HVAC units can not initiate any type of reactor transient. No postulated failure mode or combination of failures of the HVAC systems can initiate an accident.
3. involve a significant reduction in a margin of safety. The proposed changes maintain all existing margins of safety by ensuring the availability of safety-related equipment under accident conditions.

In the April 6, 1983 FEDERAL REGISTER (48FR14870), the NRC published examples of license amendments that are not likely to involve significant hazards considerations. Example number (ii) of that list is applicable to this proposed change and states:

"A change that constitutes an additional limitation, restriction, or control not presently included in the technical specifications: for example, a more stringent surveillance requirement."

V. IMPLEMENTATION OF THE PROPOSED CHANGE

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

VI. CONCLUSION

The change, as proposed, does not constitute an unreviewed safety question as defined in 10 CFR 50.59. That is, it:

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 different type from any previously evaluated in the Safety Analysis Report;

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3. will not reduce the margin of safety as defined in the basis for any technical specification;
4. does not constitute an unreviewed safety question; and
5. involves no significant hazards consideration, as defined in 10 CFR 50.92.

VII. **REFERENCES**

1. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report, (FSAR Section 9.9).
2. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER).