ATTACHMENT I TO IPN-93-020

PROPOSED TECHNICAL SPECIFICATION CHANGES

RELATED TO

PRIMARY AUXILIARY BUILDING AREA TEMPERATURE SENSOR TESTING TO ACCOMMODATE A 24 MONTH OPERATING CYCLE

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

TABLE 4.1-1 (Sheet 3 of 5)

Channel Description	Check	Calibrate	Test	Remarks
23. Temperature Sensor in Auxiliary Boiler Feedwater Pump Building	N.A.	N.A.	18M	
24. Temperature Sensors in Primary Auxiliary Building				
a. Piping Penetration Area	N.A.	N.A.	24M	
b. Mini-Containment Area	N.A.	N.A.	24M	
c. Steam Generator Blowdown Heat Exchanger Room	N.A.	N.A.	24M	
25. Level Sensors in Turbine Building	N.A.	N.A.	18M	
26. Volume Control Tank Level	N.A.	18M	N.A.	
27. Boric Acid Makeup Flow Channel	N.A.	18M	N.A.	
28. Auxiliary Feedwater:				
a. Steam Generator Level	S	18M	Q	Low-Low
b. Undervoltage	N.A.	18M	18M	
c. Main Feedwater Pump Trip	N.A.	N.A.	18M	
29. Reactor Coolant System Subcooling Margin Monitor	D	18M	N.A.	
30. PORV Position Indicator	N.A.	N.A.	24M	Limit Switch
31. PORV Position Indicator	D	24M	24M	Acoustic Monitor
32. Safety Valve Position Indicator	D	24M	24M	Acoustic Monitor
33. Auxiliary Feedwater Flow Rate	N.A.	18M	N.A.	

ATTACHMENT II TO IPN-93-020

SAFETY EVALUATION

RELATED TO

PRIMARY AUXILIARY BUILDING AREA TEMPERATURE SENSOR TESTING TO ACCOMMODATE A 24 MONTH OPERATING CYCLE

TECHNICAL SPECIFICATION CHANGES

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
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Section I - Description of Changes

This application for amendment to the Indian Point 3 Technical Specifications proposes to change the frequency of Primary Auxiliary Building (PAB) area temperature sensor testing to accommodate operation with a 24 month operating cycle.

Section II - Evaluation of Changes

Starting with cycle nine (August, 1992), Indian Point 3 began operating on 24 month cycles, instead of 18 month cycles. The temperature sensors can be tested at power, so there is no burden for testing the Primary Auxiliary Building area temperature sensors at power. However, past test results, on-line testing, and redundant sensors provide adequate assurance that this surveillance can safely be extended. Extending the surveillance interval will decrease the overall burden of testing. In order to justify extending surveillance intervals to be consistent with the length of the operating cycle, the following factors were considered: the importance of the refueling tests (i.e., does on-line testing demonstrate operability, or are failures only being detected during the refueling tests?), and past equipment performance (and the effect on system safety functions). Starting below is an evaluation for the technical specification that this application proposes to change.

Area Temperature Sensors in PAB - Functional Test

Four individual blowdown headers are routed from the respective steam generators through the PAB. Each header contains two air operated containment isolation valves. Each blowdown header downstream of the containment isolation valves contains a tee connection allowing flow to be diverted to either the blowdown flash tank or the blowdown recovery system.

Redundant area temperature sensors are provided at three selected locations in the PAB in the vicinity of the blowdown recovery piping for detection and mitigation of a high energy line break. Specifically, two resistance temperature detectors (RTD's) are located in each of the following areas:

1) 55'-0" elevation of the piping penetration area
2) 35'-0" piping tunnel (mini-containment area), and
3) 18'-0" elevation of the heat exchanger room

These RTD's are electrically interlocked with the actuation circuitry for the blowdown containment isolation valves and will automatically close these valves upon detection of high temperature in any of these areas. In addition, these RTD's will initiate an alarm in the Central Control Room upon high temperature detection.

The purpose of the surveillance test is to functionally test the temperature sensors and associated circuitry. The temperature sensors are considered operable if the appropriate Steam Generator blowdown containment isolation valves close upon detection of high temperature and the alarm activates in the control room.

A review of surveillance test records shows satisfactory test results for the tests conducted on August 22, 1987, June 8, 1989, December 13, 1990, and April 24, 1992. An evaluation of calibration data for the PAB temperature sensors revealed that "as-found" values (at the actuation point) were within the expected calibration tolerances 100% of the time. These results confirm the reliability of the temperature sensors since their installation in 1987 and support extension of the calibration interval since RTD drift is considered negligible. Additionally, a review of operating occurrence reports and work request databases also confirms the reliability of the temperature sensors.

In addition to the refueling interval surveillance, operability of the steam generator blowdown containment isolation valves is demonstrated quarterly. This test cycles the valves open and closed, and verifies stroke times. This test also checks for any unusual noises (chatter, clicking, etc.), checks limit switches for physical damage, inspects tubing, and ensures that remote indication agrees with local observation. On-line testing and inspection of the containment isolation valves would detect problems with the valves and related equipment.

The functional test for area temperature sensors in the PAB can be safely extended with the longer operating cycle because: 1) a review of surveillance test records, work requests and operating occurrence reports confirms the reliability of the RTD's, 2) an evaluation of past calibration data for the temperature sensors revealed that "as-found" values at the actuation point were within the expected calibration tolerance every time and instrument drift was negligible, 3) redundant temperature sensors in each area provide assurance that a high energy line break would be detected, and 4) quarterly stroke testing and inspection of the containment isolation valves would reveal any operability problems with the valves or related equipment.

Section III - No Significant Hazards Evaluation

Consistent with the criteria of 10 CFR 50.92, the enclosed application is judged to involve no significant hazards based on the following information:

(1) Does the proposed license amendment involve a significant increase in the probability or consequences of any accident previously evaluated?

Response:

The proposed change does not involve a significant increase in the probability or consequences of any accident previously analyzed. This change proposes extending the surveillance intervals for the functional test in the PAB area temperature sensors. The change does not involve any physical changes to the plant, nor does it alter the way any equipment functions. An evaluation of past equipment performance and other system testing (e.g., quarterly tests) provides assurance that the longer surveillance intervals will not degrade system performance. Regarding the probability of equipment malfunctions:

The functional test for area temperature sensors in the PAB can be safely extended with the longer operating cycle for the following reasons: 1) a review of

surveillance test records, work requests and operating occurrence reports confirms the reliability of the RTD's, 2) an evaluation of past calibration data for the temperature sensors revealed that "as-found" values at the actuation point were within the expected calibration tolerance every time and instrument drift was negligible, 3) redundant temperature sensors in each area provide assurance that a high energy line break would be detected, and 4) quarterly stroke testing and inspection of the containment isolation valves would reveal any operability problems with the valves or related equipment.

(2) Does the proposed license amendment create the possibility of a new or different kind of accident from any previously evaluated?

Response:

The possibility of an accident or malfunction of a different type than evaluated previously in the safety analysis report is not created.

The proposed change extends surveillance test intervals. The proposed change does not change the manner in which these systems function. An evaluation of past equipment performance, system redundancy and on-line testing show the longer surveillance test intervals will not degrade equipment covered by these tests. Therefore, the proposed change does not create any new failure modes or a new accident.

(3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response:

The margin of safety as defined in the bases for any technical specification is not reduced.

The proposed change does not reduce the margin of safety as defined in the bases for any Technical Specifications. The proposed change extends surveillance test intervals. Evaluation of the past performance of the equipment indicates that the effects of extending the surveillance test intervals would not involve a significant reduction in the margin of safety.

Section IV - Impact of Changes

These changes will not adversely impact the following:

ALARA Program
Security and Fire Protection Programs

Emergency Plan
FSAR and SER Conclusions
Overall Plant Operations and the Environment

Section V - Conclusions

The incorporation of this change: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any technical specification; d) does not constitute an unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

Section VI - References

1) IP3 SER
2) IP3 FSAR Section 10.2.1