September 2, 1988

Docket No. 50-461

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Mr. Frank Spangenberg
Manager - Licensing and Safety
Clinton Power Station
Post Office Box 678
Mail Code V920
Clinton, Illinois 61727

Dear Mr. Spangenberg:

SUBJECT: TECHNICAL SPECIFICATION CHANGE REQUEST TO INCREASE THE TRIP SETPOINT AND ALLOWABLE VALUE FOR TURBINE BUILDING TEMPERATURE MONITORS (TAC NO. 67163)

Re: Clinton Power Station, Unit 1

The Commission has issued the enclosed Amendment No. 9 to the Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 5, 1988, as supplemented July 27, 1988.

This amendment revises Technical Specification Table 3.3.2-2, item 2.h, concerning the Trip Setpoint and Allowable Value for Turbine Building Temperature Monitors. The current effective setpoint value represents a small operating margin and thus could result in an unwanted trip.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

151

Janice A. Stevens, Project Manager
Project Directorate III-2
Division of Reactor Projects - III, III, IV, V and Special Projects

Enclosures:
1. Amendment No. 9 to License No. NPF-62
2. Safety Evaluation

cc:
See next page

DFO1

PDIII-2:PM	PDIII-2:LA	SPLB	OGC-Rock	PDIII-2 PD
JStevens:bj	LLuther	for JWCraig		DMuller
8/29/88	8/29/88	8/29/88	8/31/88	8/30/88

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Janice A. Stevens

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Project Directorate III-2
Division of Reactor Projects - III,
III, IV, V and Special Projects

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1. Amendment No. 9 to
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2. Safety Evaluation

cc:
See next page

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Illinois Power Company

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ILLINOIS POWER COMPANY, ET AL

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 9
License No. NPF-62

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Illinois Power Company* (IP), Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. (the licensees) dated February 5, 1988, as supplemented July 27, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-62 is hereby amended to read as follows:

   (2) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised

*Illinois Power Company is authorized to act as agent for Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

through Amendment No. 9, are hereby incorporated into this license. IP shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 2, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 9

FACILITY OPERATING LICENSE NO. NPF-62

DOCKET NO. 50-461

Replace the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identifed by amendment number and contains vertical lines indicating the area of change.

Remove	Insert
3/4 3-21	3/4 3-21

TABLE 3.3.2-2 (Continued)

CRVICS INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. PRIMARY AND SECONDARY CONTAINMENT ISOLATION (Continued)		
k. Containment Pressure - High	≤ 2.62 psid	≤ 3.00 psid
l. Main Steam Line Radiation - High	≤ 3.0 x full power background	≤ 3.6 x full power background
m. Fuel Building Exhaust Radiation - High	≤ 10 mR/hr	≤ 17 mR/hr
n. Manual Initiation	NA	NA
2. MAIN STEAM LINE ISOLATION		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥ -145.5 in.*	≥ -147.7 in.
b. Main Steam Line Radiation - High	≤ 3.0 x full power background	≤ 3.6 x full power background
c. Main Steam Line Pressure - Low	≥ 849 psig	≥ 837 psig
d. Main Steam Line Flow - High	≤ 170 psid**	≤ 178 psid**
e. Condenser Vacuum - Low	≥ 8.5 in. Hg vacuum	≥ 7.6 in. Hg vacuum
f. Main Steam Line Tunnel Temp. - High	≤ 165°F	≤ 176°F
g. Main Steam Line Tunnel Δ Temp. - High	≤ 54.5°F	≤ 60°F
h. Main Steam Line Turbine Bldg. Temp. - High		
(1) 1E31 - N559 A, B, C, D 1E31 - N560 A, B, C, D 1E31 - N561 A, B, C, D 1E31 - N562 A, B, C, D	≤ 131.2°F	≤ 138°F
(2) 1E31 - N563 A, B, C, D	≤ 143.2°F	≤ 150°F
i. Manual Initiation	NA	NA
3. REACTOR WATER CLEANUP SYSTEM ISOLATION		
a. Δ Flow - High	≤ 59 gpm	≤ 66.1 gpm
b. Δ Flow Timer	≥ 45 sec.	≤ 47 sec.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY, ET AL.

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated February 5, 1988, as supplemented July 27, 1988, the Illinois Power Company (IP), et al. (the licensees) requested an amendment to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit 1. The proposed amendment consists of a change to Technical Specification Table 3.3.2-2, item 2.h, concerning the Trip Setpoint and Allowable Value for Turbine Building Temperature Monitors. The proposed change would increase the Trip Setpoint from less than or equal to 131.2°F to less than or equal to 143.2°F and the Allowable Value from less than or equal to 138°F to less than or equal to 150°F for Turbine Building Temperature Monitors 1E31-N563A, B, C, and D. The instrument setpoint calculations, performed in accordance with Regulatory Guide 1.105 "Instrument Setpoints", established the current setpoint of 131.2°F for these instruments. A maximum normal operating temperature of 122°F was assumed for the setpoint calculations. Operating experience to date has shown that the ambient temperature that typically exists in the area of the subject instruments is 120-125°F when the reactor is operating at 90-100% rated thermal power. Since Clinton has not yet operated at a sustained full reactor power level during summer conditions, the peak normal operating temperature in the applicable area may be higher. Based on the currently specified setpoint of 131.2°F and the drift allowance of plus or minus 6.8°F, the resulting effective setpoint is 124.4°F. The licensees stated that this effective setpoint value, which represents a very small operating margin, could result in an unwanted trip.

2.0 EVALUATION

The licensees stated that a maximum normal operating temperature of 122°F was assumed for the original setpoint calculations according to the design basis provided by the Architectural Engineer (AE) for Clinton. The current setpoint of 131.2°F for the 1E31-N563A, B, C and D instruments was established based on a maximum normal operating temperature of 122°F, a temperature increase of 16°F resulting from a steam leak equivalent to 25 gpm after two minutes, and a drift allowance of ±6.8°F. The AE indicated that radiological considerations were not included in the determination of this setpoint since it was not the bounding concern in

this situation and since radiation monitors are installed in the exhaust ductwork from the tunnel and in the common station vent to which the exhaust is directed.

The proposed setpoint of 143.2°F has the same analytical basis as the original setpoint with the exception that the new setpoint corresponds to a temperature increase of 28°F resulting from a steam leak equivalent to 25 gpm after five minutes (instead of two minutes). The licensees stated that the time limit for the assumed leakage rate was established by striking a balance between the minimum time needed before a leak can be detected without causing an inadvertent or unwanted isolation and the maximum time allowed for the leakage condition to be recognized. A leakage time of five minutes is still considered acceptable and consistent with this intent. The applied setpoint methodology, utilizing the actual temperature data, accounts for instrument inaccuracies and drift to ensure that the margin of safety is maintained.

The licensees also stated that the only safety-related components located in the vicinity of the Turbine Building Steam Tunnel in which ambient temperatures are monitored by temperature monitors 1E31-N563A, B, C, and D, are these four temperature monitors themselves. These four monitors are designed to measure ambient air temperatures from 0°F to 500°F. The results of this evaluation were that localized temperatures of 150°F cause no adverse environmental impact on safety-related systems, structures, or components.

Finally, by telephone conference on August 26, 1988, the licensees stated that the maximum temperature that will occur at the location where these temperature sensors are installed will be 250°F. In addition, by letter dated July 27, 1988 the licensees committed to add these sensors to the Clinton Power Station environmental qualification program. This commitment requires that a record of qualification, which includes a temperature profile of 250°F and a qualified life be established for each sensor, i.e., qualification must be in compliance with 10 CFR 50.49. This effort must be completed by no later than September 30, 1988.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have determined that the amendment involves no significant increase in the amounts, and no significant changes in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding.

Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The proposed change to Technical Specification Table 3.3.2-2, Item 2.h, concerning the Trip Setpoint and Allowable Value for Turbine Building Temperature Monitors is acceptable since the margin of safety as defined in the technical bases is maintained and the equipment in the area is qualified for the environment to which it would be exposed.
We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Janice A. Stevens, NRR/PDIII-2

Dated: September 2, 1988