

June 14, 1993

Docket No. 50-461

Mr. Richard F. Phares
Director - Licensing
Clinton Power Station
P. O. Box 678
Mail Code V920
Clinton, Illinois 61727

DISTRIBUTION:

Docket File
NRC & Local PDRs
PDIII-2 p/f
J. Roe
J. Zwolinski
J. Dyer
C. Moore
D. Pickett
R. Laufer

OGC
G. Hill (2)
W. Jones
C. Grimes
ACRS (10)
OPA
OC/LFDCB
B. Clayton RIII
D. Hagan
T. Dunning

Dear Mr. Phares:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M82014)

The U. S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 77 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. The amendment is in response to your application dated October 22, 1991 (U-601892) as supplemented February 17, 1993 (U-602095).

The amendment modifies the Clinton Power Station Technical Specifications by: (1) revising Specification 3/4.8.3.1, "Onsite Power Distribution Systems, Distribution - Operating," to resolve inconsistencies and remove duplications with Specification 3/4.8.4.3, and (2) revising Specification 3/4.8.4.3, "Reactor Protection System Electric Power Monitoring," to implement the recommendations of NRC Generic Letter 91-09, "Modification of Surveillance Interval for the Electrical Protective Assemblies in Power Supplies for the Reactor Protection System."

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

Sincerely,

Original Signed By:

Douglas V. Pickett, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 77 to NPF-62
2. Safety Evaluation

cc w/enclosures:
see next page

*See previous concurrence

*DVP *LA:PDIII-2 CMOORE 5/24/93	*PE:PDIII-2 RLAUER 5/24/93	*DVP PM:PDIII-2 DPICKETT 5/24/93	*BC:EELB CBERLINGER 05/24/93	HICB JWERMIEL 1/93 Per HICB	OTSB CGRIMES 5/27/93 TGD#93-83	D:PDIII-2 JDYER 6/13/93	OGC 16/1/93
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Original Signed By:

Douglas V. Pickett, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

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						TGD#93-83	



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

June 14, 1993

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Mr. Richard F. Phares
Director - Licensing
Clinton Power Station
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Clinton, Illinois 61727

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Sincerely,

A handwritten signature in dark ink, appearing to read "Douglas V. Pickett".

Douglas V. Pickett, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 77 to NPF-62
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Frank A. Spangenberg
Illinois Power Company

Clinton Power Station
Unit No. 1

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ILLINOIS POWER COMPANY

SOYLAND POWER COOPERATIVE, INC.

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 77
License No. NPF-62

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Illinois Power Company* (IP), and Soyland Power Cooperative, Inc. (the licensees) dated October 22, 1991, as supplemented February 17, 1993, 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:

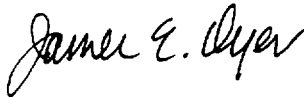
*Illinois Power Company is authorized to act as agent for Soyland Power Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

(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 through Amendment No. 77 , are hereby incorporated into this license. Illinois Power Company 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



James E. Dyer, Director
Project Directorate III-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 14, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 77

FACILITY OPERATING LICENSE NO. NPF-62

DOCKET NO. 50-461

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove Pages

3/4 8-19

3/4 8-20

3/4 8-27

Insert Pages

3/4 8-19

3/4 8-20

3/4 8-27

ELECTRICAL POWER SYSTEMS

DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION (Continued)

3.8.3.1 ACTION (Continued):

3. a) With one of the above required inverters associated with 1C71-S001A or B inoperable, energize the associated distribution panel within 8 hours; restore the inoperable inverter to OPERABLE and energized status within 24 hours, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b) With one of the above required inverters associated with 1C71-S001C or D inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.1.
4. For RPS Solenoid Buses:
 - a) With one RPS Solenoid Bus not energized, operation may continue.
 - b) With an RPS Solenoid Bus inverter inoperable, transfer the bus to the alternate power source, provided the other RPS Solenoid Bus is not being supplied from its alternate source, or de-energize the bus.
 - c) With both RPS Solenoid Bus inverters inoperable, de-energize one RPS Solenoid Bus.
 - d) With the frequency of the 120V AC supply to the RPS Solenoid buses A or B ≤ 57 Hz, demonstrate the OPERABILITY of all equipment which could have been subjected to the abnormal frequency for all Class 1E loads connected to the associated buses, by performance of a CHANNEL FUNCTIONAL TEST or CHANNEL CALIBRATION, as required, within 24 hours.
- b. For DC power distribution:
 1. With either Division I or Division II of the above required DC distribution system not energized, re-energize the division within 2 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 2. With Division III or Division IV of the above required DC distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specifications 3.5.1 and 3.8.4.1.

SURVEILLANCE REQUIREMENTS

4.8.3.1.1 Each of the above required power distribution system divisions shall be determined energized at least once per 7 days by verifying correct breaker alignment and voltage on the buses/MCCs.

ELECTRICAL POWER SYSTEMS

DISTRIBUTION - OPERATING

SURVEILLANCE REQUIREMENTS (Continued)

4.8.3.1.2 Whenever an RPS Solenoid Bus is energized from the alternate source, verification shall be made once per 8 hours that the supply frequency is ≥ 57 Hz.

ELECTRICAL POWER SYSTEMS

REACTOR PROTECTION SYSTEM ELECTRIC POWER MONITORING

LIMITING CONDITION FOR OPERATION

3.8.4.3 One RPS electric power monitoring channel for each inservice RPS special solenoid power supply or alternate power supply shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

With the RPS special solenoid electric power monitoring channel for an inservice RPS special solenoid power supply or alternate power supply inoperable, restore the power monitoring channel to OPERABLE status within 30 minutes or remove the associated RPS special solenoid power supply or alternate power supply from service.

SURVEILLANCE REQUIREMENTS

4.8.4.3 The above specified RPS special solenoid electric power monitoring channels shall be determined OPERABLE:

- a. By performance of 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 six months, and
- b. At least once per 18 months by demonstrating the OPERABILITY of over-voltage, undervoltage and underfrequency 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>EPA-INVERTER A</u>	<u>EPA-INVERTER B</u>
1. Overvoltage	$\leq 134.2 + 0, -3 \text{ VAC}$	$\leq 133.6 + 0, - 3 \text{ VAC}$
2. Undervoltage	$\geq 114.2 - 0, + 3 \text{ VAC}$	$\geq 113.2 - 0, + 3 \text{ VAC}$
3. Underfrequency	$> 57 - 0 + 1.2 \text{ Hz}$	$> 57 - 0 + 1.2 \text{ Hz}$



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 77 TO FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY

SOYLAND POWER COOPERATIVE, INC.

CLINTON POWER STATION, UNIT NO. 1

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated October 22, 1991, as supplemented February 17, 1993, the Illinois Power Company (IP, the licensee) requested an amendment to Facility Operating License No. NPF-62 for the Clinton Power Station (CPS). The proposed amendment would modify the Clinton Power Station Technical Specifications (TS) by: (1) revising Specification 3/4.8.3.1, "Onsite Power Distribution Systems, Distribution - Operating," to resolve inconsistencies and remove duplications with Specification 3/4.8.4.3, and (2) revising Specification 3/4.8.4.3, "Reactor Protection System Electric Power Monitoring," to implement the recommendations of 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. The February 17, 1993, submittal provided additional clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Technical Specification 3.8.3.1

Technical Specification 3.8.3.1, Limiting Condition for Operation (LCO), item a.5 requires each Reactor Protection System (RPS) solenoid bus to be energized from its associated inverter. Action statement a.4 of this TS addresses an inoperable RPS solenoid bus inverter(s) and requires that with one RPS solenoid bus inverter inoperable, the RPS solenoid bus be transferred to the alternate source, provided the other RPS solenoid bus is not being supplied from its alternate source. If both inverters are inoperable, one bus is required to be de-energized. No Action Statement is provided if the RPS solenoid bus is de-energized or if the other RPS solenoid bus is already being supplied from its alternate source. As a result, TS 3.8.3.1 does not address de-energization of the bus to perform maintenance or testing on the RPS power monitor.

The licensee's proposal modifies Action Statement a.4 to address inoperability of the RPS solenoid buses (rather than only the inverters) and adds a new Action a.4.a to address continued operation with one RPS solenoid bus de-energized.

Continued operation with one RPS solenoid bus de-energized is currently allowed when both inverters are inoperable and is acceptable because the associated RPS scram solenoids and main steam isolation valve (MSIV) solenoids would be de-energized and actuation would occur upon de-energization of the remaining solenoids. This proposed change provides Action Statements to address the condition when the RPS solenoid bus is de-energized to perform testing of the RPS power monitor or as required by TS 3.8.4.3 if the power monitor becomes inoperable. The staff has reviewed this proposed TS change and finds it acceptable.

The proposal also reletters the remaining subparts to reflect the addition of the new Action a.4.a and adds an option to the current Action a.4.a (relettered Action a.4.b) to allow the solenoid bus to be de-energized when the associated inverter is inoperable. Commas and wording changes are being made to current Actions a.4.a and a.4.b (relettered as Actions a.4.b and a.4.c, respectively) to provide additional clarification.

The licensee's proposal to add an option to the current Action a.4.a (relettered a.4.b) that allows the solenoid bus to be de-energized when the associated inverter is inoperable provides for this Action Statement to be met in the event that the alternate supply is also unavailable or the other RPS solenoid bus is already being supplied by its alternate source. As discussed above, with one RPS solenoid bus de-energized the associated RPS scram solenoids and MSIV solenoids would be de-energized and actuation would occur upon de-energization of the remaining solenoids. The staff has reviewed this proposed TS change and finds it acceptable.

The remaining proposed changes to Action a.4 are editorial in nature and do not result in any change in the intent or technical content of these Action requirements. The staff has reviewed these proposed TS changes and finds them acceptable.

Technical Specification 4.8.3.1.2

The proposed change to Surveillance Requirement (SR) 4.8.3.1.2 consists of the deletion of inoperability of the RPS bus power monitor as a condition which requires the supply frequency to be monitored once per eight hours.

Operability of the power monitor is not addressed in the associated LCO (TS 3.8.3.1), but is addressed by TS 3.8.4.3. Notwithstanding, in the event the power monitor becomes inoperable, the Action Statement for TS 3.8.4.3 requires the RPS solenoid bus to be de-energized within 30 minutes. As a result, the RPS solenoid bus would be de-energized before the supply frequency would have

to be verified per SR4.8.3.1.2. The staff has reviewed this proposed TS change and finds it acceptable.

Technical Specification 4.8.3.1.3

The licensee is proposing the deletion of SR 4.8.3.1.3 which specifies that "A CHANNEL FUNCTIONAL TEST shall be performed on each RPS Solenoid Bus Power Monitor at the frequency required by Specification 4.8.4.3.a."

TS 3.8.3.1 does not address operability of the RPS power monitor and SR 4.8.3.1.3 unnecessarily cross-references SR 4.8.4.3. Since the testing specified in SR 4.8.3.1.3 is still required by SR 4.8.4.3, the deletion of SR 4.8.3.1.3 will not result in any change to the requirement to perform this test. The staff has reviewed this proposed TS change and finds it acceptable.

Technical Specification 4.8.3.1.4

The licensee is proposing the deletion of SR 4.8.3.1.4 which specifies that "at least once per 18 months a CHANNEL CALIBRATION shall be performed on each RPS Solenoid Bus Power Monitor of Specification 4.8.4.3.b and associated power supply Regulating Transformer."

With regard to the testing of the RPS Solenoid Bus Power Monitor, TS 3.8.3.1 does not address operability of the RPS power monitor and SR 4.8.3.1.4 unnecessarily cross-references SR 4.8.4.3. Since the testing of the RPS Solenoid Bus Power Monitor specified in SR 4.8.3.1.4 is still required by SR 4.8.4.3, the deletion of this portion of SR 4.8.3.1.4 will not result in any change to the requirement to perform this test.

With regard to the testing of the power supply Regulating Transformer, TS definition 1.4 specifies that a channel calibration requires the performance of a channel functional test which requires verification of channel operability, including alarm and/or trip functions and channel failure trips. RPS Solenoid Bus power supply Regulating Transformers do not provide any alarm or trip functions and their vendor manual does not recommend field adjustment subsequent to initial installation verification testing. SR 4.8.3.1.4, therefore, leads to confusion and is inappropriate.

The staff has reviewed this proposed TS change and finds it acceptable.

Technical Specification 4.8.4.3.a

The licensee has proposed to modify the 6-month surveillance interval for performing channel functional tests of the RPS electric power monitoring channels as specified in TS 4.8.4.3.a to state that they are to be performed when "the plant is in COLD SHUTDOWN for a period of more than 24 hours, unless performed in the previous six months." This change is consistent with the guidance provided in Generic Letter 91-09 since the RPS electric power monitoring channels activate the associated electrical protective assemblies (EPAs).

The Niagara Mohawk Power Corporation provided an analysis in a proposal submitted on December 15, 1988, that calculated the safety risks and benefits of this TS change. The staff reviewed and concurred with the conclusions of this analysis that this TS change will produce a net safety benefit. Because the EPAs for all boiling-water reactors (BWRs) are primarily the same, the staff finds that this analysis applies generically to all BWRs. In addition, it is the staff's qualitative judgement that the proposed increase in the surveillance interval is not safety significant because of the diverse protection that exists, the number of failures that have to occur to have an adverse impact on safety, and the potential for detecting a degraded condition of the RPS through on-line testing. Therefore, the staff finds that the licensee's proposed TS change is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding (56 FR 66922). Accordingly, the 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 the amendment.

5.0 CONCLUSION

The staff has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Laufer, PDIII-2
T. Dunning, OTSB

Date: June 14, 1993