January 13, 1997

Mr. Paul J. Telthorst
Director - Licensing
Clinton Power Station
P. O. Box 678
Mail Code V920
Clinton, IL 61727

Distribution w/encls:

Docket File	GHill(2)
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JCaldwell, R3	GMarcus

SUBJECT: ISSUANCE OF AMENDMENT NO. 112 TO FACILITY OPERATING LICENSE NO. NPF-62 - CLINTON POWER STATION, UNIT 1 (TAC NO. M95289)

Dear Mr. Telthorst:

The U. S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 112 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. The amendment is in response to your application dated April 19, 1996 (U-602569) and as supplemented by letter dated August 15, 1996 (U-602623).

The amendment introduces new Technical Specification (TS) 3.10.10, "Single Control Rod Withdrawal - Refueling," under TS 3.10, "SPECIAL OPERATIONS." The purpose of this Special Operations LCO is to permit the withdrawal of a single control rod for testing in MODE 5 without imposing the requirements for establishing the secondary containment and main control room boundaries as normally required during CORE ALTERATIONS.

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, Senior Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-461
Enclosures: 1. Amendment No. 112 to NPF-62
2. Safety Evaluation

cc w/encls: See next page
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NAME	DFoster-Curseen		DPickett:		RJones*		CMiller*	
DATE	11/4/96		11/4/96		10/04/96		9/17/96	

OFFICE	BC:SCSB		OGC	
NAME	CBerlinger*			
DATE	9/25/96		11/5/96	

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*See previous concurrence

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

January 13, 1997

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Clinton Power Station
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Douglas V. Pickett

Douglas V. Pickett, Senior Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-461

Enclosures: 1. Amendment No. 112 to NPF-62
2. Safety Evaluation

cc w/encls: See next page

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Clinton Power Station
Unit No. 1

cc:

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

ILLINOIS POWER COMPANY, ET AL.

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 112
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 April 19, 1996, and as supplemented by letter dated August 15, 1996, 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.

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(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. 112 , 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

Douglas V. Pickett

Douglas V. Pickett, Senior Project Manager
Project Directorate III-3
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: January 13, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 112

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	Insert Pages
---	3.10-25
---	3.10-26

3.10 SPECIAL OPERATIONS

3.10.10 Single Control Rod Withdrawal - Refueling

LCO 3.10.10 The requirements applicable during CORE ALTERATIONS of LCO 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation"; LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation"; LCO 3.3.7.1, "Control Room Ventilation System Instrumentation"; LCO 3.6.1.2, "Primary Containment Air Locks"; LCO 3.6.1.3, "Primary Containment Isolation Valves"; LCO 3.6.4.1, "Secondary Containment"; LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDs)"; LCO 3.6.4.3, "Standby Gas Treatment (SGT) System"; LCO 3.7.3, "Control Room Ventilation System"; and LCO 3.7.4, "Control Room Air Conditioning (AC) System" may be suspended in MODE 5 with a single control rod withdrawn from a core cell containing one or more fuel assemblies, provided the following requirements are met:

a. All other control rods remain fully inserted; and

b. No other CORE ALTERATIONS are in progress.

APPLICABILITY: MODE 5 with a control rod withdrawn from a core cell containing one or more fuel assemblies.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each requirement of the LCO.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the above requirements not met.	A.1 Suspend CORE ALTERATIONS except for control rod insertion. AND A.2 Initiate action to fully insert all control rods.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.10.10.1	Verify all control rods other than the control rod being withdrawn, are fully inserted	24 hours
SR 3.10.10.2	Verify no other CORE ALTERATIONS are in progress.	24 hours

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 112 TO FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY, ET AL.

CLINTON POWER STATION, UNIT NO. 1

DOCKET NO. 50-461

1.0 INTRODUCTION

During MODE 5 (Refueling) operations, movement of a control rod is defined as a Core Alteration. Many systems and functions are normally required to be operable during Core Alterations. These include requirements on secondary containment operability, secondary containment penetrations and associated automatic isolation instrumentation, secondary containment bypass leakage path penetrations and associated automatic isolation instrumentation, the Standby Gas Treatment System, and the main control room ventilation, air conditioning, and associated automatic isolation instrumentation. These requirements are provided to protect the public and the main control room personnel from the release of radioactive material in the event of a fuel handling accident.

In addition, there are a number of requirements that apply in MODE 5 with a control rod withdrawn. These include requirements on shutdown margin, source range neutron monitoring, Reactor Protection System (RPS) instrumentation, RPS power monitoring, control rod operability, and operability of the refuel position one-rod-out interlock. These requirements are provided to preclude an inadvertent criticality from the withdrawal of multiple control rods and cause automatic insertion of the control rods in the event of an inadvertent criticality event.

There are circumstances while in MODE 5 that present the need to withdraw a single control rod for various tests (e.g., friction tests, scram timing, drive venting and coupling integrity checks). By letter dated April 19, 1996, and supplemented by letter dated August 15, 1996, the licensee proposed new Technical Specification (TS) 3.10.10, "Single Control Rod Withdrawal - Refueling," under TS 3.10, "SPECIAL OPERATIONS." The purpose of this Special Operations LCO is to permit the withdrawal of a single control rod for testing in MODE 5 without imposing the requirements for establishing the secondary containment and main control room boundaries as normally required during Core Alterations. Implementation of this new Special Operation will permit the licensee greater scheduling efficiencies and the saving of several hours of critical path outage time.

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2.0 EVALUATION

As discussed above, technical specifications (TSs) require a number of systems and functions to be operable during Core Alterations. These include:

TS 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation;"
TS 3.3.6.2, "Secondary Containment Isolation Instrumentation;"
TS 3.3.7.1, "Control Room Ventilation System Instrumentation;"
TS 3.6.1.2, "Primary Containment Air Locks;"
TS 3.6.1.3, "Primary Containment Isolation Valves;"
TS 3.6.4.1, "Secondary Containment;"
TS 3.6.4.2, "Secondary Containment Isolation Dampers;"
TS 3.6.4.3, "Standby Gas Treatment;"
TS 3.7.3, "Control Room Ventilation;" and
TS 3.7.4, "Control Room AC System."

The purpose of the above TSs is to either:

1) Limit the release of fission products following a design basis accident (DBA)-LOCA or DBA-fuel handling accident,
2) Reduce the activity level of fission products following a DBA-LOCA or DBA-fuel handling accident, or
3) Provide a habitable environment for the control room operators following a DBA-LOCA or DBA-fuel handling accident.

The proposed Special Operation TS 3.10.10 states that the requirements applicable during Core Alterations for the above TSs may be suspended in MODE 5 with a single control rod withdrawn from a core cell containing one or more fuel assemblies, provided the following requirements are met:

a. All other control rods remain fully inserted; and

b. No other Core Alterations are in progress.

Core Alterations are defined as the movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. Therefore, Core Alterations can only apply during MODE 5 when refueling activities are taking place. The proposed Special Operation will allow certain activities, such as control rod venting, to be performed without entering TS ACTION statements. Control rod venting involves complete withdrawal and insertion of individual control rods within the core and thus, by definition, is considered a Core Alteration in MODE 5. The proposed Special Operation does not affect the requirements associated with handling of fuel in primary or secondary containment, nor those associated with Operations with the Potential for Draining the Reactor Vessel (OPDRVs). In addition, the proposed Special Operation does not affect those TSs for monitoring and controlling reactivity changes in the reactor core during MODE 5 (e.g., requirements for operability of the source range monitors and one-rod-out interlock and for maintaining shutdown margin).

The staff's evaluation addressed the impact that the proposed technical specification changes would have on the DBA-LOCA, DBA-fuel handling accident, or any other event that may be postulated to occur during Core Alterations. The following summarizes the staff's findings:

Loss-of-Coolant Accident

The proposed Special Operation TS does not impact any assumption or requirement related to prevention or mitigation of the DBA-LOCA. All systems or functions required to be operable during MODES 1, 2, and 3 will be unaffected by the proposed changes. In addition, the probability and consequences of a LOCA are significantly reduced during MODES 4 and 5 such that the technical specifications allow for a significant relaxation in the operability requirements for the ECCS and RCIC systems. Therefore, the staff concludes that the proposed Special Operation TS will not impact any assumptions or requirements related to mitigation of a LOCA.

Fuel Handling Accident

The proposed Special Operation TS does not impact any assumption or requirement related to prevention or mitigation of the DBA-fuel handling accident. All current plant requirements relating to movement of fuel remain unchanged. Therefore, the staff concludes that the proposed Special Operation TS will not impact the analysis of a fuel handling accident.

Operations with a Potential for Draining the Reactor Vessel

The proposed Special Operation TS does not impact any assumption or requirements related to OPDRVs. During shutdown conditions, reactor vessel draindown events can be postulated that could lead to a LOCA. However, maintaining those systems or functions required to be operable during OPDRVs is sufficient for mitigation purposes. Therefore, the staff concludes that the proposed Special Operation TS will not impact any assumptions or requirements related to mitigation of OPDRVs.

Core Alterations

The staff considered other credible scenarios or conditions leading to a significant radiological release. With respect to reactivity changes in the reactor due to movement of fuel, sources, or reactivity control components (control rods), the current TS requirements for the source range monitors, one-rod-out interlock, shutdown margin, and scram capability remain unchanged. In addition, those requirements of TS Section 3.9, Refueling Operations, are unaffected by the proposed changes. This includes TS 3.9.1 which requires that refueling equipment interlocks will continue to be operable during in-vessel fuel movement to ensure prevention of inadvertent criticality. In addition, TS 3.9.3 will continue to require that all control rods be fully inserted into the vessel when fuel assemblies are loaded into the core. Therefore,

> the staff concludes that the proposed Special Operation TS will not impact any other credible scenario or conditions leading to a significant radiological release.

The proposed Special Operation will permit the licensee to perform individual control rod venting without entering TS ACTION statements. As previously stated, control rod venting requires individual rods to be fully inserted and withdrawn from the reactor vessel. Since such movement can represent movement of "reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel," this constitutes Core Alterations. However, as previously stated, the controls for prevention of reactivity events remain unchanged.

As described in the licensee's submittal, one of the major conditions or restraints that is factored into the planning of refueling outages is when secondary containment is required since this condition affects ingress and egress into the secondary containment (i.e., what doors and penetrations can be open to support work activities). Tasks and activities to be performed during an outage must be planned within certain "windows" of opportunity when secondary containment is not required. Since control rod venting during MODE 5 (one rod at a time with the one-rod-out interlock in effect) is an operation that constitutes Core Alterations, control rod venting under the current TSs requires secondary containment to remain operable. The proposed Special Operation 3.10.10, as described in the licensee's submittal, would permit greater scheduling efficiencies and the saving of several hours of critical path outage time.

LCO 3.0.7 of the Clinton Power Station Technical Specifications describes the purpose and intent of Special Operations LCOs. LCO 3.0.7, which is located under TS 3.0, Limiting Condition for Operation (LCO) Applicability, states the following:

> Special Operations LCOs in Section 3.10 allow specified Technical Specifications (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with the other applicable Specifications.

As stated above, Special Operations LCOs provide flexibility to perform certain operations and compliance is optional.

The staff has reviewed the licensee's submittal and concludes that the proposed Special Operation 3.10.10 will not impact any assumptions or mitigating functions for the design basis LOCA, fuel handling accident, or OPDRV. All TSs involving movement of fuel remain unchanged. In addition movement of individual control rods will continue to be monitored for reactivity changes and those associated TSs (i.e., the current TS requirements

for the source range monitors, one-rod-out interlock, shutdown margin and scram capability) remain unchanged. Based on the above information, the staff concludes that the proposed change has a negligible impact on reactor safety. Therefore, the staff finds the proposed change 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 or changes a surveillance requirement. 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 (61 FR 25707 and 61 FR 50344). 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: Douglas V. Pickett

Date: January 13, 1997