September 2, 1994

Docket No. 50-461

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

Dear Mr. Phares:

SUBJECT: ISSUANCE OF AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. NPF-62 - CLINTON POWER STATION, UNIT 1 (TAC NO. M89325)

The U. S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 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 18, 1994 (U-602254).

The amendment corrects overlooked references associated with License Amendment No. 81 issued on July 15, 1993. Amendment No. 81 renumbered Surveillance Requirement 4.1.3.2, "Control Rod Maximum Scram Insertion Times," but did not renumber corresponding references. This amendment renumbers references included in Technical Specification Sections 3/4.1.3.1, "Control Rod Operability," 3/4.1.3.2, "Control Rod Maximum Scram," and 3/4.10.2, "Rod Pattern Control System." In addition, this amendment includes corrections to typographical errors included on page 3/4 8-13 of Amendment No. 88 issued on February 2, 1994.

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

Enclosures:
1. Amendment No.92 to NPF-62
2. Safety Evaluation
cc w/enclosures:
see next page

LA:PD33:DRPW	PM:PD33:DRPW	D:PD33:DRPW	OGC-OWFN
MRushbrook	DPickett/	JHannon	
8/5/94	8/5/94	8/1/94	8/12/94

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

September 2, 1994

Docket No. 50-461

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Director - Licensing
Clinton Power Station
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Sincerely,

Douglas V Pickett

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

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1. Amendment No.92 to NPF-62
2. Safety Evaluation

cc w/enclosures:
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. 92
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 18, 1994, 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. 92 , 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

John N. Hannon, Director
Project Directorate III-3
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 2, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 92

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. The corresponding overleaf pages, indicated by an asterisk, are provided to maintain document completeness.

Remove Pages	Insert Pages
3/4 1-5	3/4 1-5
3/4 1-6	3/4 1-6
3/4 1-7	3/4 1-7
3/4 1-8*	3/4 1-8*
3/4 8-13	3/4 8-13
3/4 8-14*	3/4 8-14*
3/4 10-1*	3/4 10-1*
3/4 10-2	3/4 10-2

SURVEILLANCE REQUIREMENTS (Continued)

4.1.3.1.2 When above the low power setpoint of the RPCS, all withdrawn control rods not required to have their directional control valves disarmed electrically or hydraulically shall be demonstrated OPERABLE by moving each control rod at least one notch:

a. At least once per 7 days and

b. At least once per 24 hours when any control rod is immovable as a result of excessive friction or mechanical interference.

4.1.3.1.3 All control rods shall be demonstrated OPERABLE by performance of Surveillance Requirements 4.1.3.2.1, 4.1.3.2.2, 4.1.3.3, 4.1.3.4 and 4.1.3.5.

4.1.3.1.4 The scram discharge volume shall be determined OPERABLE by demonstrating the scram discharge volume drain and vent valves are OPERABLE at least once per 18 months, by verifying that the drain and vent valves:

a. Close within 30 seconds after receipt of a signal for control rods to scram and

b. Open when the scram signal is reset.

CONTROL ROD MAXIMUM SCRAM INSERTION TIMES

LIMITING CONDITION FOR OPERATION

3.1.3.2 The maximum scram insertion time of each control rod from the fully withdrawn position, based on deenergization of the scram pilot valve solenoids as time zero, shall not exceed the following limits:

Reactor Vessel Dome Pressure (psig)*	Maximum Insertion Times to Notch Position (Seconds) 43	29	13
950	0.31	0.81	1.44
1050	0.32	0.86	1.57

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

a. With the maximum scram insertion time of one or more control rods exceeding the maximum scram insertion time limits of Specification 3.1.3.2 as determined by Surveillance Requirement 4.1.3.2.1.a or 4.1.3.2.2, operation may continue provided that:

1. For all "slow" control rods, i.e., those which exceed the limits of Specification 3.1.3.2, the individual scram insertion times do not exceed the following limits:

Reactor Vessel Dome Pressure (psig)*	Maximum Insertion Times to Notch Position (Seconds) 43	29	13
950	0.38	1.09	2.09
1050	0.39	1.14	2.22

2. For "fast" control rods, i.e., those which satisfy the limits of Specification 3.1.3.2, the average scram insertion times do not exceed the following limits:

Reactor Vessel Dome Pressure (psig)*	Maximum Average Insertion Times to Notch Position (Seconds) 43	29	13
950	0.30	0.78	1.40
1050	0.31	0.84	1.53

*For intermediate reactor vessel dome pressure, the scram time criteria are determined by linear interpolation at each notch position.

LIMITING CONDITION FOR OPERATION (Continued)

3.1.3.2 ACTION (Continued):

3. The sum of "fast" control rods with individual scram insertion times in excess of the limits of ACTION a.2 and of "slow" control rods does not exceed 5.

4. No "slow" control rod, "fast" control rod with individual scram insertion time in excess of the limits of ACTION a.2, or otherwise inoperable control rod occupy adjacent locations in any direction, including the diagonal, to another such control rod.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

b. With a "slow" control rod(s) not satisfying ACTION a.1, above:

1. Declare the "slow" control rod(s) inoperable and

2. Perform the Surveillance Requirements of Specification 4.1.3.2.1.b at least once per 60 days when operation is continued with three or more "slow" control rods declared inoperable.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

c. With the maximum scram insertion time of one or more control rods exceeding the maximum scram insertion time limits of Specification 3.1.3.2 as determined by Specification 4.1.3.2.1.b, operation may continue provided that:

1. "Slow" control rods, i.e., those which exceed the limits of Specification 3.1.3.2, do not make up more than 20% of the 10% sample of control rods tested.

2. Each of these "slow" control rods satisfies the limits of ACTION a.1.

3. The eight adjacent control rods surrounding each "slow" control rod are:

a) Demonstrated through measurement within 12 hours to satisfy the maximum scram insertion time limits of Specification 3.1.3.2 and

b) OPERABLE.

4. The total number of "slow" control rods as determined by Specification 4.1.3.2.1.b, when added to the sum of ACTION a.3 as determined by Specification 4.1.3.2.1.a and 4.1.3.2.2, does not exceed 5.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.

d. The provisions of Specification 3.0.4 are not applicable.

CONTROL ROD MAXIMUM SCRAM INSERTION TIMES

SURVEILLANCE REQUIREMENTS

4.1.3.2.1 The maximum scram insertion time of the control rods shall be demonstrated through measurement with reactor coolant pressure greater than or equal to 950 psig and, during single control rod scram time tests, the control rod drive pumps isolated from the accumulators:

a. For all control rods prior to THERMAL POWER exceeding 40% of RATED THERMAL POWER following CORE ALTERATIONS or after a reactor shutdown that is greater than 120 days,

b. For at least 10% of the control rods, on a rotating basis, at least once per 120 days of POWER OPERATION.

4.1.3.2.2 The maximum scram insertion time for specifically affected individual control rods following maintenance on or modification to the control rod or control rod drive system which could affect the scram insertion time of those specific control rods shall be demonstrated through measurement with reactor coolant pressure greater than or equal to 950 psig.* Alternatively, those specific control rods may be determined OPERABLE with reactor coolant pressure less than 950 psig by demonstrating an acceptable scram insertion time to notch position 13. The scram time acceptance criteria for this alternate test shall be determined by linear interpolation between 0.95 seconds at a reactor coolant pressure of 0 psig and 1.40 seconds at 950 psig. If this alternate test is utilized, the individual scram time shall also be measured with reactor coolant pressure greater than or equal to 950 psig prior to exceeding 40% of RATED THERMAL POWER. For each of the above single control rod scram time tests, the control rod drive pumps shall be isolated from the accumulators.

*The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 2 provided this surveillance requirement is completed prior to entry into OPERATIONAL CONDITION 1.

Corrected per Amdt. 82
(8-5-93)

SURVEILLANCE REQUIREMENTS (Continued)

4.8.2.1 (Continued)

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

   1. The parameters in Table 4.8.2.1-1 meet the Category B limits,

   2. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than 150×10^{-6} ohms, and

   3. The average electrolyte temperature of the pilot cells and representative cells* of connected cells is above 65°F.

c. At least once per 18 months by verifying that:

   1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,

   2. The cell-to-cell and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material,

   3. The resistance of each cell-to-cell and terminal connection is less than or equal to 150×10^{-6} ohms, and

   4. The battery charger will supply at least 300 amperes for Divisions I and II and 100 amperes for Division III and IV at a minimum of 125 volts for at least 4 hours.

d. At least once per 18 months, during shutdown#, by verifying that either:

   1. The battery capacity is adequate to supply and maintain in OPERABLE status all of the actual emergency loads for the design duty cycle when the battery is subjected to a battery service test, or

   2. The battery capacity is adequate to supply a dummy load of the following profile while maintaining the battery terminal voltage greater than or equal to 105 volts.

      a) Division I

         $\geq$ 561 amperes for the first 60 seconds
         $\geq$ 239 amperes for the next 59 minutes
         $\geq$ 159 amperes for the next 180 minutes

*IEEE-450 shall be used for the purpose of defining representative cells.
#This surveillance may be performed during power operation on a one-time basis to support replacement of the Division IV battery in February 1994.

SURVEILLANCE REQUIREMENTS (Continued)

4.8.2.1 (Continued)

b) Division II

$\geq$ 462 amperes for the first 60 seconds
$\geq$ 296 amperes for the next 59 minutes
$\geq$ 108 amperes for the next 180 minutes

c) Division III

$\geq$ 112 amperes for the first 60 seconds
$\geq$ 52 amperes for the next 239 minutes

d) Division IV

$\geq$ 127 amperes for the first 60 seconds
$\geq$ 117 amperes for the next 59 minutes
$\geq$ 44 amperes for the next 180 minutes

e. At least once per 60 months, during shutdown#, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval, this performance discharge test may be performed in lieu of the battery service test.

f. At least once per 18 months, during shutdown, performance discharge tests of battery capacity shall be given to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

#This surveillance may be performed during power operation on a one-time basis to support replacement of the Division IV battery in February 1994.

3/4.10 SPECIAL TEST EXCEPTIONS

3/4.10.1 PRIMARY CONTAINMENT INTEGRITY/DRYWELL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.10.1 The provisions of Specifications 3.6.1.1, 3.6.1.3, 3.6.2.1, 3.6.2.3, and 3.9.1 and Table 1.2 may be suspended to permit the reactor pressure vessel closure head and the drywell head to be removed and the containment and drywell air lock doors to be open when the reactor mode switch is in the Startup position during low power PHYSICS TESTS with THERMAL POWER less than 1% of RATED THERMAL POWER and reactor coolant temperature less than 200°F.

APPLICABILITY: OPERATIONAL CONDITION 2, during low power PHYSICS TESTS.

ACTION:

With THERMAL POWER greater than or equal to 1% of RATED THERMAL POWER or with the reactor coolant temperature greater than or equal to 200°F, immediately place the reactor mode switch in the Shutdown position.

SURVEILLANCE REQUIREMENTS

4.10.1 The THERMAL POWER and reactor coolant temperature shall be verified to be within the limits at least once per hour during low power PHYSICS TESTS.

SPECIAL TEST EXCEPTIONS

3/4.10.2 ROD PATTERN CONTROL SYSTEM

LIMITING CONDITION FOR OPERATION

3.10.2 The sequence constraints imposed on control rod groups by the rod pattern control system (RPCS) per Specification 3.1.4.2 may be suspended by means of the individual rod position bypass switches for the following tests:

a. Shutdown margin demonstrations, Specification 4.1.1.
b. Control rod scram, Specification 4.1.3.2.1 and 4.1.3.2.2.
c. Control rod friction measurements.
d. Startup Test Program with the THERMAL POWER less than 20% of RATED THERMAL POWER.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With the requirements of the above specification not satisfied, verify that the RPCS is OPERABLE per Specification 3.1.4.2.

SURVEILLANCE REQUIREMENTS

4.10.2 When the sequence constraints imposed on control rod groups by the RPCS are bypassed, verify:

a. With 8 hours prior to bypassing any sequence constraint and at least once per 12 hours while any sequence constraint is bypassed, that movement of the control rods from 75% ROD DENSITY to the RPCS low power setpoint is limited to the established control rod sequence for the specified test, and

b. Conformance with this specification and test procedures by a second licensed operator or other technically qualified member of the unit technical staff.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 92 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

License Amendment No. 81, issued by the staff on July 15, 1993, made several changes to the technical specifications that were intended to reduce the overall burden placed on control room operators during plant startup. Surveillance Requirement (SR) 4.1.3.2, which was modified by this amendment, includes requirements to periodically verify control rod maximum scram insertion times. Part of this SR includes identifying those control rods that have received maintenance or have been modified such that their scram insertion times could be affected. These control rods must have their scram insertion times measured and verified operational prior to entering Operational Condition 1. Measurements are not permitted until the reactor coolant system pressure reaches a minimum of 950 psig which is the same time that initiates the 12-hour time clock to test the Automatic Depressurization System Safety/Relief Valves (SRVs) and perform SRV acoustic monitoring calibrations.

The ability to perform these tasks in a timely manner becomes particularly difficult if a significant number of control rods fall into this category. Thus, these actions were perceived by the licensee as placing considerable stress on control room operators. As a result, License Amendment No. 81 introduced SR 4.1.3.3 that permitted an alternative action to test those specifically affected control rods. SR 4.1.3.3 provided the option to test these control rods at low reactor coolant system pressure thus balancing the overall work scope for the control room operators as the facility approached Operational Condition 1.

Subsequent to the issuance of License Amendment No. 81, the licensee determined that the existing technical specifications contained two separate surveillance requirements numbered 4.1.3.3. Therefore, as part of License Amendment No. 82 issued on August 5, 1993, SR 4.1.3.2 and 4.1.3.3 associated with control rod maximum scram insertion times, were renumbered 4.1.3.2.1 and 4.1.3.2.2, respectively.

By letter dated April 18, 1994, the licensee identified several technical specifications that incorrectly reference the surveillance requirements covering control rod maximum scram insertion times. These references had not been revised to reflect the renumbering that had occurred as a result of License Amendment Nos. 81 and 82. Therefore, the licensee has requested to correct these previously overlooked references located in Technical

Specifications 3/4.1.3.1, "Control Rod Operability," 3/4.1.3.2, "Control Rod Maximum Scram," and 3/4.10.2, "Rod Pattern Control System."

2.0 EVALUATION

Prior to License Amendment Nos. 81 and 82, SR 4.1.3.2 was subdivided into parts a, b, and c. Subsequent to these amendments, the following renumbering occurred:

Previous Designation	New Designation
SR 4.1.3.2.a	SR 4.1.3.2.1.a
SR 4.1.3.2.b	SR 4.1.3.2.2
SR 4.1.3.2.c	SR 4.1.3.2.1.b

The licensee has proposed editorial changes to properly reflect the renumbering of SR 4.1.3.2.a, b, and c. Appropriate changes have been proposed for previously overlooked references found in Technical Specifications 3/4.1.3.1, "Control Rod Operability," 3/4.1.3.2, "Control Rod Maximum Scram," and 3/4.10.2, "Rod Pattern Control System." The staff has reviewed these proposed changes and finds them acceptable because they now correctly reference the surveillance requirements on control rod maximum scram insertion times.

The staff is also reissuing Technical Specification page 3/4 8-13 to correct typographical errors introduced by the staff. Surveillance Requirement 4.8.2.1.d.2 is being reissued to correct misspellings.

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. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 (59 FR 24749). 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: September 2, 1994