Docket No. 50-461

Mr. Frank A. Spangenberg Licensing and Safety Clinton Power Station P. O. Box 678 Mail Code V920 Clinton, Illinois 61727 DISTRIBUTION Docket File NRC & Local PDRs J. Roe J. Zwolinski J. Dyer C. Moore D. Pickett D. Hagan OGC

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Dear Mr. Spangenberg:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M85233)

The U. S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 72 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. The amendment is in response to your application dated December 15, 1992 (U-602075).

The amendment modifies Technical Specifications 3/4.7.1.1, "Shutdown Service Water System (Loops A, B, C)," and 3/4.7.2, "Control Room Ventilation System," to add exceptions to Technical Specification 3.0.4 to permit tensioning and detensioning of the reactor pressure vessel head with one of the required divisions of the systems addressed by these Technical Specifications inoperable.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly <u>Federal Register</u> 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. 72 to NPF-62

2. Safety Evaluation

cc w/enclosures: see next page

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Mr. Frank A. Spangenberg Illinois Power Company

cc:

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

ILLINOIS POWER COMPANY

SOYLAND POWER COOPERATIVE, INC.

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 72 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 December 15, 1992, 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) <u>Technical Specifications and Environmental Protection Plan</u>

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 72 , 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

amer E. Oyer

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: April 9, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 72

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 are provided to maintain document completeness.

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 7-1	3/4 7-1
3/4 7-3	3/4 7-3

3/4.7 PLANT SYSTEMS

3/4.7.1 SERVICE WATER SYSTEMS

SHUTDOWN SERVICE WATER SYSTEM (LOOPS A, B, C)

LIMITING CONDITION FOR OPERATION

3.7.1.1 The shutdown service water (SX) loop(s) shall be OPERABLE during times when its associated system(s) or components are required to be OPERABLE. Each OPERABLE SX loop shall be comprised of:

- a. One OPERABLE SX pump, and
- b. An OPERABLE flow path capable of taking suction from ultimate heat sink and transferring water through the associated system(s) and components that are required to be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5, and *.

ACTION:

With a shutdown service water loop(s) inoperable and with its associated system(s) or component(s) required to be OPERABLE, declare the associated system(s) or component(s) inoperable and take the ACTION required by Specification(s) 3.4.9.1, 3.4.9.2, 3.5.1, 3.5.2, 3.8.1.1, 3.8.1.2, 3.9.11.1, and 3.9.11.2, as applicable. The provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 4 or 5 with one required shutdown service water loop inoperable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 The above required shutdown service water system loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown by verifying that each automatic valve servicing safety related and non-safety related equipment actuates to the correct position and that each shutdown service water pump starts on a LOCA test signal.

^{*}When handling irradiated fuel in the Fuel Handling Building or primary containment.

PLANT SYSTEMS

ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.1.2 The ultimate heat sink (UHS) shall be OPERABLE and shall be maintained with a contained water volume of > 593 acre feet (excluding sediment).

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5, *.

ACTION:

With the contained water volume < 593 acre feet, restore the UHS to operable status within 90 days or

- In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- 2. In OPERATIONAL CONDITIONS 4, 5, *, declare the SX system inoperable and take the ACTION of Specifications 3.7.1, 3.8.1.1, and 3.8.1.2.

SURVEILLANCE REQUIREMENTS

4.7.1.2 The UHS shall be demonstrated OPERABLE in accordance with the Ultimate Heat Sink Erosion, Sediment Monitoring and Dredging Program established in Specification 6.8.4.d.

*When irradiated fuel is being handled in the primary or secondary containment.

CLINTON - UNIT 1

3/4 7-2

PLANT SYSTEMS

3/4.7.2 CONTROL ROOM VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.2 Two independent Control Room Ventilation Systems shall be OPERABLE.t

APPLICABILITY: All OPERATIONAL CONDITIONS and *.

ACTION:

- a. In OPERATIONAL CONDITION 1, 2 or 3 with one Control Room Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. In OPERATIONAL CONDITION 4, 5, or *:
 - 1. With one Control Room Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the OPERABLE system in the high radiation mode of operation. The provisions of Specification 3.0.4 are not applicable for entry into OPERATIONAL CONDITION 4 or 5.
 - 2. With both Control Room Ventilation Systems inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.
- c. The provisions of Specification 3.0.3 are not applicable in OPERATIONAL CONDITION *.

SURVEILLANCE REQUIREMENTS

4.7.2 Each Control Room Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 86°F.
- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the makeup filter system operates continuously for at least 10 hours with the heaters operating; and with flow through the recirculation charcoal adsorber for at least 15 minutes.

^{*}When irradiated fuel is being handled in the secondary containment. †Automatic transfer to the chlorine mode is not required when chlorine containers having a capacity of 150 pounds or less are stored 100 meters or more from the control room or its fresh air inlets.

PLANT SYSTEMS

CONTROL ROOM VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.7.2 (Continued)

- At least once per 18 months or (1) after any structural maintenance on the makeup or recirculation HEPA filters or charcoal adsorber housings, or
 (2) following painting, fire or chemical release in any ventilation zone communicating with the makeup or recirculation filter system by:
 - Verifying that the makeup filter system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978*, and the system flow rate is 3000 cfm ± 10%.
 - 2. Verifying that the recirculation filter system satisfies bypass leakage testing acceptance criteria of less than 2% total bypass and uses test procedure guidance in Regulatory Positions C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978*, and the system flow rate is 64,000 cfm ± 10%.
 - 3. Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978*, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978*, for a methyl iodide penetration of less than 0.175% for makeup filter system carbon adsorber and 6% for recirculation filter system carbon adsorber when tested; in accordance with ASTM D3803-79 methods, with the following parameters:

Make Up Filter System

a)	Bed Depth	-	4 inches
b)	Velocity	-	40 fpm
c)	Temperature	-	30°C
d)	Relative Humidity	-	70%

Recirculation Filter System

a)	Bed Depth	-	2 inches
b)	Velocity	-	80 fpm
c)	Temperature	-	30°C
d)	Relative Humidity	-	70%

4. Verifying flow rate of 3000 cfm \pm 10% for the makeup filter system and 64,000 cfm \pm 10% for the recirculation filter system during operation when tested in accordance with ANSI N510-1980.

CLINTON - UNIT 1

^{*}ANSI N510-1980 shall be used in place of ANSI N510-1975 as referenced in Regulatory Guide 1.52, Revision 2, March 1978.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 72 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

The Shutdown Service Water (SX) system at the Clinton Power Station (CPS) provides cooling water to support multiple systems during all Operational Conditions. This also includes those times when the reactor vessel is defueled and irradiated fuel is being handled in the Fuel Handling Building or primary containment. The SX system consists of three loops (A, B and C) and is generally aligned to electrical distribution Divisions I, II, and III. The SX system provides cooling water to safety-related heat exchangers in support of emergency core cooling systems (ECCS), diesel generators, and residual heat removal (RHR) shutdown cooling. In addition, the SX system provides room cooling for safety-related systems such as the control room ventilation system, DC battery rooms, and electrical distribution rooms.

The CPS Technical Specifications (TS) require that the SX loops be operable during all times when associated system(s) or components are required to be operable. Since safety-related systems are required to be operable during power operation, routine preventive maintenance and testing of the SX system is typically deferred to refueling outages. Taking an SX loop out-of-service for maintenance and testing requires declaring the associated RHR shutdown cooling loop, ECCS, and main control room ventilation system inoperable. Such actions must be factored into the outage schedule.

Technical Specification 3.0.4 states that entry into a new Operational Condition shall not be made unless the conditions for the Limiting Condition for Operation (LCO) are met without reliance on the provisions contained in the Action requirements. When the first reactor vessel head closure bolt is detensioned, the facility makes a "mode" change from Operational Condition 4 (COLD SHUTDOWN) to Operational Condition 5 (REFUELING). Since the current CPS TSs 3/4.7.1.1 ,"Shutdown Service Water System (Loops A, B and C)," and 3/4.7.2, "Control Room Ventilation System," do not have exceptions to TS 3.0.4, these systems must remain fully operable for the above "mode" change.

The licensee's letter of December 15, 1992, states that critical path time must be added to the refueling outage schedule to account for the requirement

to delay the start of SX system maintenance until the reactor pressure vessel head has been removed and to account for delaying the reactor pressure vessel reassembly until required activites on the SX system have been completed. The licensee states that this causes unnecessary restrictions on the refueling outage schedule and that the elimination of these restrictions will result in an approximate two-day savings in the duration of an average refueling outage. Therefore, the licensee has requested to add an exception to TS 3.0.4 to modify TSs 3/4.7.1.1 and 3/4.7.2 to permit tensioning and detensioning of the reactor vessel head with one of the required divisions of the systems addressed by these TSs inoperable.

2.0 EVALUATION

The proposed change to TS 3/4.7.1.1, "Shutdown Service Water System (Loops A, B, C)," will only allow one required SX system loop to be inoperable while entering Operational Conditions 4 or 5. The proposed change does not increase the amount of time that a SX system loop is inoperable during a refueling outage. In addition, all three SX loops must still be operable prior to plant restart from the refueling outage.

The proposed change to TS 3/4.7.2, "Control Room Ventilation System," will only allow one of the two redundant systems to be inoperable while entering Operational Conditions 4 or 5. The proposed change does not increase the amount of time that a control room ventilation system is inoperable during a refueling outage.

The impact of the proposed changes is limited to the potential effect on main control room air conditioning system availability and core decay heat removal during removal or installation of the reactor pressure vessel head. While the proposed changes will permit mode changes (via the reactor pressure vessel head removal/installation) without the full complement of SX systems or control room ventilation systems, the licensee will still maintain one SX loop associated with an operable diesel generator, DC power source, electrical power distribution system, and a control room ventilation system. In addition, the TSs require two RHR shutdown cooling mode loops (or their alternates) while removing or installing the reactor pressure vessel head.

The licensee has made a thorough examination of the CPS TSs to identify those systems that are supported by SX systems. Most of the systems are only required to be operable during Operational Conditions 1, 2, and 3, or they already have exceptions to TS 3.0.4. The licensee has determined that the proposed changes are consistent with allowances for plant mode changes provided in NRC Generic Letter 87-09, which addressed unnecessary restrictions on mode changes by Specification 3.0.4.

The staff finds that issues associated with shutdown risk are not affected by the proposed changes. The proposed changes do not permit the initiation of handling irradiated fuel in the secondary containment with one or more main control room ventilation systems inoperable. In addition, the proposed changes do not change the shutdown operability requirements of the diesel generators, safety-related batteries, or the electrical distribution systems. The licensee has also addressed the design basis accident analyses associated with plant shutdown conditions and concluded that the proposed changes do not affect them.

Based on our review, the staff finds that the licensee has adequately addressed the safety significance of the proposed changes and, therefore, finds them 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. 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 (58 FR 6999). 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: April 9, 1993