

August 3, 1990

Docket No. 50-461

Mr. Frank A. Spangenberg
Licensing and Safety
Clinton Power Station
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Dear Mr. Spangenberg:

SUBJECT: AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE NO. NPF-62
(TAC NOS. 76819 AND 76820)

The Commission has issued the enclosed Amendment No. 43 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. This amendment revises the Technical Specifications in response to your application dated April 25, 1990.

The amendment revises the SURVEILLANCE REQUIREMENTS to Technical Specification 4.9.6.1 for the refueling platform main hoist, subsequent to the replacement of the main hoist mast; and the SURVEILLANCE REQUIREMENTS to Technical Specification 4.7.4 to apply a consistent methodology, for increasing sample size of snubber functional inspections, for all three types of sampling plans.

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

John B. Hickman, Project Manager
Project Directorate III-3
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 43 to License No. NPF-62
2. Safety Evaluation

cc w/enclosures:
See next page

DOCUMENT NAME: 76820/19 AMD

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Surname: PKreutzer
Date: 6/19/90

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6/19/90

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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. 43
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 25, 1990, 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.

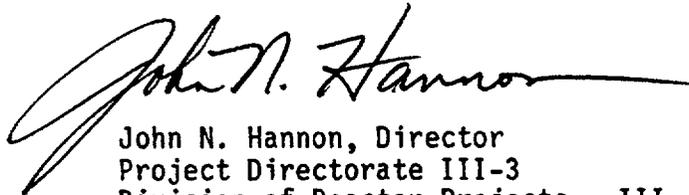
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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 43, 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, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of issuance: August 3, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 43

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. Corresponding overleaf pages are provided to maintain document completeness.

Remove

3/4 7-11

3/4 9-8

Insert

3/4 7-11

3/4 9-8

PLANT SYSTEMS

SNUBBERS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.4 (Continued)

e. Functional Tests

During the first refueling shutdown and at least once per 18 months thereafter during shutdown, a representative sample of snubbers shall be tested using one of the following sample plans for each type of snubber. The sample plan shall be selected prior to the test period and cannot be changed during the test period. The NRC Regional Administrator shall be notified in writing of the sample plan selected prior to the test period or the sample plan used in the prior test period shall be implemented:

1. At least 10% of the total of each type of snubber shall be functionally tested either in-place or in a bench test. For each snubber of a type that does not meet the functional test acceptance criteria of Specification 4.7.4.f, an additional 5% of that type of snubber shall be functionally tested until no more failures are found or until all snubbers of that type have been functionally tested; or
2. A representative sample of each type of snubber shall be functionally tested in accordance with Figure 4.7.4-1. "C" is the total number of snubbers of a type found not meeting the acceptance requirements of Specification 4.7.4.f. The cumulative number of snubbers of a type tested is denoted by "N". At the end of each day's testing, the new values of "N" and "C" (previous day's total plus current day's increments) shall be plotted on Figure 4.7.4-1. If at any time the point plotted falls in the "Reject" region all snubbers of that type shall be functionally tested. If at any time the point plotted falls in the "Accept" region, testing of snubbers of that type may be terminated. When the point plotted lies in the "Continue Testing" region, additional snubbers of that type shall be tested until the point falls in the "Accept" region or the "Reject" region, or all the snubbers of that type have been tested; or
3. An initial representative sample of 55 snubbers of each type shall be functionally tested. For each snubber type which does not meet the functional test acceptance criteria, another sample of at least one-half the size of the initial sample shall be tested until the total number tested is equal to the initial sample size multiplied by the factor, $1 + C/2$, where "C" is the number of snubbers found which do not meet the functional test acceptance criteria. The results from this sample plan shall be plotted using an "Accept" line which follows the equation $N = 55(1 + C/2)$. Each snubber point should be plotted as soon as the snubber is tested. If the point plotted falls on or below the "Accept" line, testing of that type of snubber may be terminated. If the point plotted falls above the "Accept" line, testing must continue until the point falls in the "Accept" region or all the snubbers of that type have been tested.

PLANT SYSTEMS

SNUBBERS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.4 (Continued)

Testing equipment failure during functional testing may invalidate that day's testing and allow that day's testing to resume anew at a later time, providing all snubbers tested with the failed equipment during the day of equipment failure are retested. The representative sample selected for the functional test sample plans shall be randomly selected from the snubbers of each type and reviewed before beginning the testing. The review shall ensure as far as practical that they are representative of the various configurations, operating environments, range of size, and capacity of snubbers of each type. Snubbers placed in the same locations as snubbers which failed the previous functional test shall be retested at the time of the next functional test but shall not be included in the sample plan. If during the functional testing, additional sampling is required due to failure of only one type of snubber, the functional testing results shall be reviewed at the time to determine if additional samples should be limited to the type of snubber which has failed the functional testing.

f. Functional Test Acceptance Criteria

The snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range in both tension and compression;
2. Snubber bleed, or release rate where required, is present in both tension and compression, within the specified range;
3. For mechanical snubbers, the force required to initiate or maintain motion of the snubber is within the specified range in both directions of travel; and
4. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement.

Testing methods may be used to measure parameters indirectly or parameters other than those specified if those results can be correlated to the specified parameters through established methods.

g. Functional Test Failure Analysis

An engineering evaluation shall be made of each failure to meet the functional test acceptance criteria to determine the cause of the failure. The results of this evaluation shall be used, if applicable, in selecting snubbers to be tested in an effort to determine the OPERABILITY of other snubbers irrespective of type which may be subject to the same failure mode.

REFUELING OPERATIONS

3/4.9.6 FUEL HANDLING EQUIPMENT

REFUELING PLATFORM

LIMITING CONDITION FOR OPERATION

3.9.6.1 The refueling platform shall be OPERABLE and used for handling fuel assemblies or control rods within the reactor pressure vessel.

APPLICABILITY: During handling of fuel assemblies or control rods within the reactor pressure vessel.

ACTION:

With the requirements for refueling platform OPERABILITY not satisfied, suspend use of any inoperable refueling platform equipment from operations involving the handling of control rods and fuel assemblies within the reactor pressure vessel after placing the load in a safe condition.

SURVEILLANCE REQUIREMENTS

4.9.6.1 Each refueling platform crane or hoist used for handling of control rods or fuel assemblies within the reactor pressure vessel shall be demonstrated OPERABLE within 7 days prior to the start of such operations with that crane or hoist by:

- a. Demonstrating operation of the overload cutoff on the main hoist when the load exceeds 1600 ± 50 pounds.
- b. Demonstrating operation of the overload cutoff on the frame mounted and monorail hoists when the load exceeds 500 ± 50 pounds.
- c. Demonstrating operation of the uptravel interlock when uptravel brings the top of the irradiated fuel or control rods to 8 feet 6 inches below the water level.
- d. Demonstrating operation of the downtravel mechanical cutoff on the main hoist when grapple hook down travel reaches 2-4 inches below fuel assembly handle.
- e. Demonstrating operation of the slack cable cutoff on the main hoist when the load is less than 50 ± 10 pounds.
- f. Demonstrating operation of the loaded interlock on the main hoist when the load exceeds 700 ± 50 pounds.
- g. Demonstrating operation of the main hoist raise power cutoff when the refueling platform area radiation monitor dose rate exceeds 10 mR/hr.
- h. Demonstrating operation of the redundant loaded interlock (rod block) on the main hoist when the load exceeds 700 ± 50 pounds.

REFUELING OPERATIONS

3/4.9.5 COMMUNICATIONS

LIMITING CONDITION FOR OPERATION

3.9.5 Direct communication shall be maintained between the control room and refueling platform personnel.

APPLICABILITY: OPERATIONAL CONDITION 5, during CORE ALTERATIONS*.

ACTION:

When direct communication between the control room and refueling platform personnel cannot be maintained, immediately suspend CORE ALTERATIONS.

SURVEILLANCE REQUIREMENTS

4.9.5 Direct communication between the control room and refueling platform personnel shall be demonstrated within one hour prior to the start of and at least once per 12 hours during CORE ALTERATIONS.*

*Except movement of control rods with their normal drive system.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 43 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

By letter dated April 25, 1990, 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 would revise the SURVEILLANCE REQUIREMENTS to Technical Specification 4.9.6.1 for the refueling platform main hoist, and the SURVEILLANCE REQUIREMENTS of Technical Specification 4.7.4 to apply a consistent methodology for increasing the sample size for snubber functional inspections, for all three types of sampling plans.

2.0 EVALUATION

At Clinton, the main hoist installed on the refueling platform is utilized to move fuel inside the reactor vessel. The main hoist currently consists of a three segment, open frame, triangular mast (General Electric Model NF400). To improve contamination control and to increase the rigidity of the mast, so as to improve the licensee's ability to precisely locate the hoist over the proper fuel assembly, the licensee is replacing the Model NF400 mast with a Model NF500 mast. The Model NF500 is a three segment, solid, cylindrical telescoping mast.

The utilization of this new mast will not affect the function nor operation of the main hoist of the refueling platform. The auxiliary hoists of the refueling platform will also remain unchanged. However, the new mast does weigh more than the previous mast; consequently, certain overload and interlock load limits must be revised, as these load limits utilized the weight of the mast in the establishment of the limits.

Three setpoints would be revised. The first setpoint deals with the main hoist overload cutoff being raised from 1200 ± 50 to 1600 ± 50 pounds. This increased value is still bounded by the 3g load limit of 2000 pounds lifting force for fuel bundle damage. The second and third setpoints deal with main hoist, loaded interlock. They are being raised from 485 ± 50 and 550 ± 50 to 700 ± 50 pounds. These interlocks are activated when a fuel assembly is suspended from the mast and prevent certain movements of the refueling machine and withdrawal of control rods. These increased values are due to the higher weight of the new mast and the two interlocks are being set to the same value as they are both required to be activated when a fuel bundle is grappled to the mast.

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As the design basis fuel handling accident (described in the Clinton USAR, Section 15.7.4) occurs in the spent fuel building, any fuel handling accidents occurring in containment are bounded. The new mast is similar in design and function to the old mast and exceeds all design requirements. Therefore, this new mast cannot create a new or different kind of accident. Since the overload cutoff and the loaded interlock still perform their design function there is no reduction in the margin of safety. Consequently, the proposed change is acceptable.

The SURVEILLANCE REQUIREMENTS of Technical Specification 4.7.4.e prescribes the sampling plans for snubber functional testing. Three possible plans are listed, which are statistically equivalent. Plan 1 requires 10% for initial sample size and an additional 10% increase due to failures. Plans 2 and 3 have an equivalent initial sample size; however, the additional sample size is only one-half of the initial sample size. The reduction in the additional sample size from 10% to 5% would make Plan 1 statistically consistent with Plans 2 and 3 and will ensure that each snubber is tested at least once every 15 years. Testing and evaluation of failed snubbers will still be accomplished as required by Technical Specifications 4.7.4.f, g, and h. The reduction in additional sample size has been incorporated into the 1989 Edition of the ASME Boiler and Pressure Vessel Code, Section XI. Since the reduction in additional sample size will make the three sampling plans statistically equivalent, while still ensuring that all snubbers are tested at least every 15 years, the proposed change is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change to a surveillance requirement. The 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 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 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, 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: P. Brochman, RIII/DRP

Dated: August 3, 1990