November 21, 1988

Docket No.: 50-461

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Plant file

Mr. Dale L. Holtzscher
Acting Manager - Licensing and Safety
Clinton Power Station
P. O. Box 678
Mail Code V920
Clinton, Illinois 61727

Dear Mr. Holtzscher:

SUBJECT: TECHNICAL SPECIFICATION CHANGE REQUEST TO DELETE THE REQUIREMENT FOR THE CHLORINE DETECTION SYSTEM (TAC NO. 69550)

Re: Clinton Power Station, Unit No. 1

The Commission has issued the enclosed Amendment No. 12 to the Facility Operating License No. NPF-62 for the Clinton Power Station, Unit No. 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 18, 1988.

This amendment revises Technical Specification Sections 3/4.3.7.8 and 4.7.2.e.2 and BASES Section 3/4.3.7.8 in order to delete the requirement for the chlorine detection system. This revision is based on the fact that the chlorine hazard is being removed from the site.

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

Sincerely,

Janice Stevens, Project Manager
Project Directorate III-2
Division of Reactor Projects - III, IV, V and Special Projects

Enclosures:
1. Amendment No. 12 to License No. NPF-62
2. Safety Evaluation

cc w/enclosures:
See next page

PDIII	PDIII-2	SPLB	OGC-Rockville	PDIII-2
JStevens:km	LLuther	JWCraig	R. Bachmann	DMuller
10/ 1 /88	10/22/88	10/ 7 /88	10/ 10 /88	10/7 /88

P.S. for

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P.S. for

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
November 21, 1988

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Division of Reactor Projects - III, IV, V and Special Projects

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cc w/enclosures:
See next page

cc:

Mr. D. P. Hall
Vice President
Clinton Power Station
P. O. Box 678
Clinton, Illinois, 61727

Mr. R. D. Freeman
Manager-Nuclear Station Engineering Dept.
Clinton Power Station
P. O. Box 678
Clinton, Illinois 61727

Sheldon Zabel, Esquire
Schiff, Hardin & Waite
7200 Sears Tower
233 Wacker Drive
Chicago, Illinois 60606

Resident Inspector
U. S. Nuclear Regulatory Commission
RR 3, Box 229 A
Clinton, Illinois 61727

Mr. L. Larson
Project Manager
General Electric Company
175 Curtner Avenue, N/C 395
San Jose, California 95125

Regional Administrator, Region III
799 Roosevelt Road, Bldg. #4
Glen Ellyn, Illinois 60137

Chairman of Dewitt County
c/o County Clerk's Office
DeWitt County Courthouse
Clinton, Illinois 61727

Illinois Department
of Nuclear Safety
Division of Engineering
1035 Outer Park Drive, 5th Floor
Springfield, Illinois 62704

Mr. Donald Schopfer
Project Manager
Sargent & Lundy Engineers
55 East Monroe Street
Chicago, Illinois 60603

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. 12
License No. NPF-62

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Illinois Power Company* (IP), Soyland Power Cooperative, Inc., and Western Illinois Power Cooperative, Inc. (the licensees) dated May 18, 1988 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 Western Illinois Power Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No.12, 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

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 21, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 12

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	Insert
3/4 3-92	3/4 3-92
3/4 7-5	3/4 7-5
B 3/4 3-7	B 3/4 3-7

INSTRUMENTATION

CHLORINE DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.8 Two independent chlorine detection channels shall be OPERABLE with their trip setpoints adjusted to actuate at a chlorine concentration of $\leq$ 5 ppm.

APPLICABILITY: All OPERATIONAL CONDITIONS and *.#

ACTION:

a. With one chlorine detection channel inoperable, restore the inoperable detection channel to OPERABLE status within 7 days, or within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine mode of operation.

b. With both chlorine detection channels inoperable, within 1 hour initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine mode of operation.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.8 Each of the above required chlorine detection channels shall be demonstrated OPERABLE by performance of a:

a. CHANNEL CHECK at least once per 12 hours,
b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
c. CHANNEL CALIBRATION at least once per 18 months.

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

#This specification is not applicable after all chlorine containers having a capacity of 100 pounds or greater are removed from the site including the chlorine containers located at the site sewage treatment plant.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.2 (Continued)

d. After every 720 hours of charcoal adsorber operation, by 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 the makeup filter system carbon adsorber and 6% for the 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%

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the makeup filter system at a flow rate of 3000 cfm ± 10%.
2. Verifying that on a high chlorine actuation** and a manual initiation test signal, the system automatically** switches to the chlorine mode of operation and the dampers close within 2 seconds.***
3. Verifying that the control room leak rate is limited to ≤ 4000 cfm ± 10% at ≥ 1/8-inch Water Gauge (W.G.) with respect to adjacent areas.
4. Verifying that on a smoke mode actuation test signal, the system automatically switches to the smoke mode of operation at a flow rate less than or equal to 64,000 cfm ± 10%.
5. Verifying that on a high radiation actuation test signal, the system automatically switches to the high radiation mode of operation and

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

**Automatic transfer to the chlorine mode is not required when chlorine containers having a capacity of 150 pounds or less are stored 100 meters from the control room or its fresh air inlets.

***This specification is not applicable after all chlorine containers having a capacity of 100 pounds or greater are removed from the site including the chlorine containers located at the site sewage treatment plant.

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM (Continued)

by comparing the detector(s) output with data obtained during the previous LPRM calibrations.

3/4.3.7.8 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection system ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. 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. Upon detection of a high concentration of chlorine, the control room ventilation system will automatically be placed in the chlorine mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," January, 1977.*

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

Deleted

3/4.3.7.10 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

* This specification is not applicable after all chlorine containers having a capacity of 100 pounds or greater are removed from the site including the chlorine containers located at the site sewage treatment plant.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 12 TO FACILITY OPERATING LICENSE NO. NPF-62

CLINTON POWER STATION, UNIT NO. 1

ILLINOIS POWER COMPANY, ET. AL.

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated May 18, 1988 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 Technical Specification Sections 3/4.3.7.8 and 4.7.2.e.2 and BASES Section 3/4.3.7.8 in order to delete the requirement for the chlorine detection system. The proposed revision is based on the fact that the chlorine hazard has been removed from the site, i.e., all liquid chlorine in containers having a capacity of 100 pounds or greater have been removed from the site and there are no other significant depots of chlorine within a five mile radius of the site. Furthermore, there is negligible transportation of chlorine in the vicinity of the site.

2.0 EVALUATION

The licensees have replaced the existing chlorination system on site and at the site sewage treatment plant, the only other location within a 5 mile radius of the control room in which chlorine was stored, with a sodium hypochlorite system that obviates the use of liquid chlorine for water treatment. Thus, the threat to control room habitability from an accidental release of chlorine on site has been removed.

Regulatory Guide 1.78 states that if hazardous chemicals, such as chlorine, are frequently shipped by routes within a 5 mile radius of the plant, consideration should be give to such shipments (as a potential hazard) in the evaluation of the control room habitability. The licensees stated that the transportation survey last performed for Clinton in 1985 indicated an annual truck and rail shipment frequency for chlorine of zero and 17 respectively. This is considerably less than the threshold limits of 10 and 30 shipments by truck and rail, respectively, as stated in Regulatory Guide 1.78. Therefore, transportation of chlorine gas in the immediate vicinity does not pose a threat to control room habitability and chlorine monitors are not necessitated. In IP letter U-600175, dated July 9, 1985, IP committed to perform a transportation survey every 3 years in order to detect any changes in hazardous material shipping patterns.

All major depots or storage tanks of chlorine that constitute a hazard as described in Regulatory Position C.1 of Regulatory Guide 1.78 have been removed. This in conjunction with the negligible risk associated with a transportation accident in the vicinity of Clinton (as determined according to the guidelines of Regulatory Position C.2 of Regulatory Guide 1.78), makes the probability or consequences of a chlorine accident negligible for Clinton.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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 proposed change to Technical Specification Sections 3/4.3.7.8 and 4.7.2.e.2 and BASES Section 3/4.3.7.8 in order to delete the requirement for the chlorine detection system is acceptable since the margin of safety with respect to a chlorine gas release has been maximized by the removal of chlorine gas from the site. The only safety contribution of the chlorine detection system was in the detection of a chlorine release. With no chlorine source present, deletion of the chlorine detection system can not affect the margin of safety.

We have 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 to the public.

Principal Contributor: Janice A. Stevens, NRR/PDIII-2

Dated: November 12, 1988