

March 8, 1999

Distribution w/encls:

Mr. Joseph V. Sipek  
Director - Licensing  
Clinton Power Station  
P.O. Box 678  
Mail Code V920  
Clinton, IL 61727

Docket File  
PUBLIC  
PDIII-2 r/f  
ACRS  
GGrant, RIII  
SEDB

GHill (2)  
JZwolinski  
WBeckner  
OGC

SUBJECT: ISSUANCE OF AMENDMENT NO.121 TO FACILITY OPERATING LICENSE NO.  
NPF-62 - CLINTON POWER STATION, UNIT 1 (TAC NO. MA3754)

Dear Mr. Sipek:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No.121 to Facility Operating License No. NPF-62 for the Clinton Power Station, Unit 1. The amendment is in response to your application dated October 5, 1998.

The amendment allows deferral of the next scheduled local leak rate test for valve 1MC-042 until the seventh refueling outage.

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:

Jon B. Hopkins, Senior Project Manager  
Project Directorate III-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-461

Enclosures: 1. Amendment No.121 to NPF-62  
2. Safety Evaluation

cc w/encls: See next page

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\*No major changes to SE.

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NAME	EBarnhill		JHopkins		CBerlinger	Cmarco	SRichards	
DATE	2/18/99		2/19/99		2/9/99	3/1/99	3/1/99	

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

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Clinton Power Station  
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NPF-62 - CLINTON POWER STATION, UNIT 1 (TAC NO. MA3754)

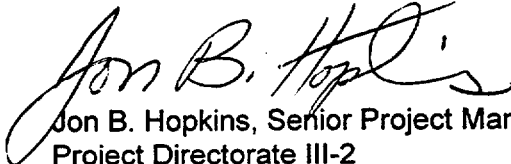
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Docket No. 50-461

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cc w/encls: See next page

Joseph V. Sipek  
Illinois Power Company

Clinton Power Station, Unit 1

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**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

ILLINOIS POWER COMPANY

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 121

License No. NPF-62

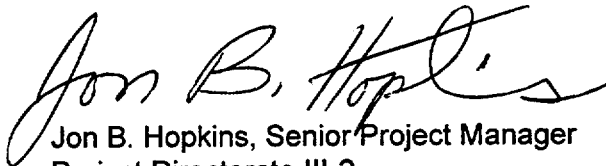
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Illinois Power Company (the licensee), dated October 5, 1998, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules 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:

(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. 121, 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 and shall be implemented within 45 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Jon B. Hopkins, Senior Project Manager  
Project Directorate III-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: March 8, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 121

FACILITY OPERATING LICENSE NO. NPF-62

DOCKET NO. 50-461

Replace the following page of the Appendix "A" Technical Specifications with the attached pages. The revised page is identified by amendment number and contains vertical lines indicating the area of change.

Remove Page

5.0-16a

Insert Page

5.0-16a

## 5.5 Programs and Manuals (continued)

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### 5.5.13 Primary Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, as modified by the following exceptions: (1) Bechtel Topical Report BN-TOP-1 is also an acceptable option for performance of Type A tests, and (2) the leakage rate testing of primary containment penetration IMC-042 may be deferred until the seventh refueling outage.

The peak calculated containment internal pressure for the design basis loss of coolant accident,  $P_a$ , is 9.0 psig.

The maximum allowable primary containment leakage rate,  $L_a$ , at  $P_a$ , shall be 0.65% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

- a. Primary containment leakage rate acceptance criterion is  $\leq 1.0 L_a$ . During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are  $\leq 0.60 L_a$  for the Type B and Type C tests and  $\leq 0.75 L_a$  for Type A tests;
- b. Air lock testing acceptance criteria are:
  - 1) Overall air lock leakage rate is  $\leq 5$  scfh when tested at  $\geq P_a$ ,
  - 2) For each door, leakage rate is  $\leq 5$  scfh when the gap between door seals is pressurized to  $\geq P_a$ .

The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of SR 3.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 12 TO FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated October 5, 1998, the licensee for the Clinton Power Station submitted an application to amend the operating license. The proposed amendment would extend the interval for the next local leakage rate test (Appendix J, Type C test) for the containment isolation valves (CIVs) in the reactor pressure vessel head spray line, until the seventh refueling outage (RF-7). The plant is currently in its sixth refueling outage (RF-6). This would require an exception to be taken from the guidelines of Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which govern the Primary Containment Leakage Rate Testing Program in accordance with Technical Specification (TS) 5.5.13.

2.0 BACKGROUND

On September 26, 1995, the NRC published a revision to 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." The revision added Option B, "Performance-Based Requirements," to Appendix J to allow licensees to voluntarily replace the prescriptive testing requirements of Appendix J with testing requirements based on both overall and individual component leakage rate performance.

Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, was developed as a method acceptable to the NRC staff for implementing Option B. This regulatory guide states that the Nuclear Energy Institute (NEI) guidance document NEI 94-01, Rev. 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," provides methods acceptable to the NRC staff for complying with Option B with four exceptions which are described therein.

Option B requires that Regulatory Guide 1.163 or another implementation document used by a licensee to develop a performance-based leakage testing program must be included, by general reference, in the plant TS. The licensee has referenced Regulatory Guide 1.163 in TS 5.5.13.

In the case of the CIVs in the reactor pressure vessel head spray line (containment penetration 1MC-042), Regulatory Guide 1.163, through NEI 94-01, allows a nominal 30-month test interval. It further allows an increase in the test interval to 60 months if a CIV has shown good performance. "Good performance" is achieved when the CIV passes its two most recent as-found Type C tests. "As-found" testing means testing before any repairs, adjustments, or replacements are made.

There are four CIVs in containment penetration 1MC-042, designated 1E12-F061, 1E12-F023, 1E51-F013, and 1E51-F391. Due to the piping configuration at the penetration, the four valves are tested as a group. Although the testing history of these valves is excellent, one of the valves, 1E12-F023, was adjusted during RF-5 without first being given an as-found test. At the time, which was before Appendix J was revised, there was no requirement for an as-found test. Thus, this one valve has passed one, but not two, consecutive as-found tests, and has to stay on a 30-month test interval. Due to the group-testing configuration, the licensee is seeking relief for the whole penetration, even though only one valve needs it.

RF-6 has lasted more than 2 years and is still on-going. Containment penetration 1MC-042 was tested early in the outage, on December 8, 1996. Due to a lack of block valves and test, vent, and drain connections in the penetration, the testing is done by disassembling the head spray piping and installing a blind flange. This can readily be done only while the drywell head is off and the reactor cavity pool is drained. As the licensee did not expect such a long delay in restarting the plant, the piping has long since been reassembled and the drywell closed up. Now, the 30-month test interval will expire before the next refueling outage is reached, and the licensee must either retest now or shut down during the next fuel cycle especially to run the test, absent granting of the requested relief. Testing in the normal manner, either now or during the next fuel cycle, would require a significant expenditure in time, money, and radiation exposure, without, the licensee asserts, a significant improvement in safety.

### 3.0 ALTERNATIVES

The licensee has considered several alternative approaches to conducting the test without disassembling equipment as it normally does; these are detailed in the submittal, and summarized below.

#### 1) Applying a freeze seal

This approach has several disadvantages. The pipe must be cooled below its brittle transition temperature and temporary supports must be installed to keep it immobile during the test. Also, experience has shown that freeze seals do not work well and sometimes air will leak past them, which could fail a leakage rate test unfairly. Finally, considerable time and expense would be involved.

## 2) Flooding the reactor vessel

Although this can establish a test boundary to be pressurized for the test, it would include several additional valves not normally included in the test boundary. Their leakage could potentially make the test appear to fail, even though the CIVs might leak very little. Further, this complex evolution would be time-consuming and expensive.

## 3) Installing a blind flange with the piping in place

Due to the cramped space with the drywell head in place, and the radiation present, it would be difficult and dangerous to attempt this approach, not to mention costly.

## 4.0 EVALUATION

First, three of the four CIVs in containment penetration 1MC-042 have passed their last two consecutive as-found tests and qualify for a 60-month test interval, so they do not, in fact, need any relief. Second, the remaining valve, along with the other valves, has an excellent testing history. In RF-4, -5, and -6, the valves never leaked more than 1% of their allowable administrative limit, either as-found or as-left. Third, in the one case where valve 1E12-F023 was adjusted without first being tested in the as-found condition, the licensee's records indicate that it was scheduled maintenance and testing and there was no indication that the valve was leaking excessively in its as-found state. The as-left leakage rate, as stated before, was less than 1% of the allowable. Finally, the most recent tests for these valves, in RF-6, were as-found tests and they passed easily, with leakage rates, again, less than 1% of allowable.

Based on the above, the staff finds that deferring the leakage rate testing of containment penetration 1MC-042 until RF-7 will not negatively impact containment integrity; and therefore, the change is acceptable.

## 5.0 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.

## 6.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a surveillance requirement 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 (63 FR 56949). 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.

## 7.0 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: J. Pulsipher

Date: March 8, 1999