

U-601130
L30-88(01-29)-LP
1A.120

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

January 29, 1988

10CFR50.90
10CFR50.12

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station
Request for Additional Information on Testing of
Containment Isolation Valves and Pressure Isolation Valves

Dear Sir:

By letter dated December 10, 1987 (U-601084) and January 13, 1988 (U-601117), Illinois Power Company (IP) requested a change to the Clinton Power Station-Technical Specifications (CPS-TS) of the Facility Operating License (NPF-62) and an exemption to the requirements of 10CFR50, Appendix J.

At the request of J. Kudrick and J. Stevens, per a telephone conversation held January 27, 1988, IP is providing supplemental testing information, based on actual plant leakage tests, and recent industry experience on the specific types of valves being deferred for the Clinton Power Station.

Table 1 provides a listing of the subject valves identified in the aforementioned letters and lists the leakage rates obtained from actual testing performed at Clinton. Figure 1 provides a simplified diagram of the valve arrangement for primary containment penetration IMC-42 including the two primary containment isolation valves (1E12-F023 and 1E51-F013) and the six Test Connections, Vents and Drains (1E12-F061, 1E12-F062, 1E51-F034, 1E51-F035, 1E51-F390, and 1E51-F391) subject to 10CFR50, Appendix J and CPS-TS 3/4.6.1.2 requirements.

Table 2 provides calculated percentages of the leakage contribution of the subject valves to the allowable leakage limit (0.6La) and the Type B and C leakage values. The total of the Type C leakage rates for the subject valves is not a significant portion of the Type B and C allowable leakage (0.6La).

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In the aforementioned letters, IP indicated the need for a one-time exception to the 10CFR50, Appendix J and Technical Specification requirements until prior to startup from the first refueling outage. Upon additional evaluation, IP is requesting relief from the Technical Specification 4.4.3.2.2 Pressure Isolation Valve leak testing of 395 days for valves 1E51-F013 and 1E12-F023 and 255 days for valve 1E51-F066, and relief from Technical Specification 4.6.1.2.d and 10CFR50 Appendix J leak rate testing for Containment Isolation Valve testing for 238 days for valves 1E12-F023, 1E51-F034, 1E51-F035, 1E51-F390, 1E51-F391, 1E12-F061, 1E12-F062, and 1E51-F013.

An inspection of industry related information on failure of Anchor-Darling and Yarway valves has been performed. Information on past performance of these valve types gathered through the Nuclear Plant Reliability Data System (NPRDS) shows that: Anchor-Darling 6" gate valves have a 1.5% probability of a leakage related failure during the 238 day extension requested, Anchor-Darling 4" globe valves have a 0.84% probability of a leakage related failure during the 238 day extension requested, and Yarway Globe valves (1/2" to 2.0") have a 0.045% probability of failure during the 238 day extension requested. No previous failures of 3/4" Yarway globe valves were reported.

Specific leakage information from the previous Pressure Isolation Valve Leak testing is as follows:

1E12-F023

The actual leakage collected during the previous test was 0.0 gpm. The acceptance criteria is 2.0 gpm.

1E51-F013

The actual leakage collected during the previous test was 0.0026 gpm. The acceptance criteria is 3.0 gpm.

1E51-F066

The actual leakage collected during the previous test was 1.27 gpm. The acceptance criteria is 2.0 gpm.

Should IP encounter a problem which would entail removal of the drywell head and disassembly of the reactor head spray piping, IP will perform the required leakage tests and return to full compliance with the regulations and CPS-TS.

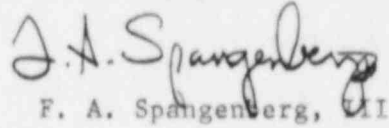
IP has reviewed the proposed Technical Specification change against the criteria of 10 CFR 51.22 for the environmental considerations. The requested amendment concerns relief for surveillance testing of a limited number of containment and pressure isolation valves. As shown in a previous letter, the proposed change does not involve a significant hazards consideration, nor significantly increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, IP concludes that the proposed Technical Specification change

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meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.

Should you have any questions or require additional information, please contact me.

Sincerely yours,


F. A. Spangenberg, III

RFP/krm

Attachment

cc: NRC Resident Office
NRC Region III, Regional Administrator
NRC Clinton Licensing Project Manager
Illinois Department of Nuclear Safety

TABLE 1
Appendix J
Valve Leakage Data

| Valve Number | Description | Type | Manufacturer | Size | Preoperational Test Leakage Data for 12/6/85 | Surveillance Leakage Data for 10/21/86 | % of current .6La for 10/21/86 Data | % of Current Observed B&C Leakage for 10/21/86 Data |
|--------------|--------------------|-------|----------------|------|--|--|-------------------------------------|---|
| 1E51-F013 | RCIC Head Spray | Gate | Anchor-Darling | 6" | | | | |
| 1E12-F023 | RHR Head Spray | Globe | Anchor-Darling | 4" | 20 sccm# ±5.14 sccm | 600 sccm# ±22.5 sccm | 0.27%# | 1.7%# |
| 1E51-F391* | Head Spray | Globe | Yarway | 3/4" | | | | |
| 1E12-F061* | Head Spray | Globe | Yarway | 1/4" | | | | |
| 1E51-F390* | Head Spray | Globe | Yarway | 3/4" | 20 sccm## ±5.14 sccm | 525 sccm## ±22.5 sccm | 0.24%## | 1.5%## |
| 1E12-F062* | Head Spray | Globe | Yarway | 3/4" | | | | |
| 1E51-F034* | Head Spray | Globe | Yarway | 3/4" | 20 sccm ±5.14 sccm | 20 sccm ±5.14 sccm | 0.009% | 0.06% |
| 1E51-F035* | Head Spray | Globe | Yarway | 3/4" | 20 sccm ±5.14 sccm | 20 sccm ±5.14 sccm | 0.009% | 0.06% |

* Vent, Drain or Test Connection

Values based on combined leakage from valves 1E51-F013, 1E12-F023, 1E51-F391, and 1E12-F061

Values based on combined leakage from valves 1E51-F390, 1E12-F062, 1E51-F013, and 1E12-F023

Table 2
Appendix J
Leakage Comparison Data

| <u>Parameter</u> | <u>Value</u> |
|---|-------------------------|
| 0.6La (Type B&C Allowable Leakage) | 222,288 sccm |
| Current Total Type B Leakage | 1994.73 ± 47.06 sccm |
| Current Total Type C Leakage | 33,212.48 ± 425.3 sccm |
| Current Total Type B&C Leakage | 35,207.21 ± 472.36 sccm |
| Total Type C Leakage for Containment Penetration IMC-42 | 620 ± 27.64 sccm |
| Total Type B&C Leakage excluding contribution from Containment Penetration IMC-42 | 34,587.21 ± 500 sccm |
| % Contribution from Containment Penetration IMC-42 to 0.6La | 0.28% |
| % Contribution from Containment Penetration IMC-42 to Total Type B&C Leakage | 1.76% |

Figure 1

