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ILLINOIS POWER COMPANY



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

November 11, 1985

Docket No. 70-2947

Mr. Richard E. Cunningham  
Director, Division of Fuel Cycle  
and Material Safety  
Office of Nuclear Material Safety and Safeguards  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Clinton Power Station  
SNM-1886

Dear Mr. Cunningham:

Enclosed are eight copies of an amendment to Illinois Power Company's Special Nuclear Materials License No. SNM-1886 dated August 7, 1985. This amendment is being filed pursuant to 10CFR Part 70 authorizing receipt, possession, inspection and storage of unirradiated fuel assemblies and neutron sources.

Requested in this amendment is an exemption from the provisions of 10CFR70.24, "Criticality Accident Requirements", pursuant to 10CFR70.24(d). The basis for this exemption is explained in the attachment to this letter.

If you have any questions, please contact us.

Sincerely yours,

D. P. Hall  
Vice President



Attachment

cc: B. L. Siegel, NRC Clinton Licensing Project Manager  
NRC Resident Office  
Regional Administration, Region III, USNRC  
Illinois Department of Nuclear Safety

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Justification for Exemption from Provisions  
of 10CFR70.24, "Criticality Accident Requirements"

Pursuant to 10CFR70.24(d), Illinois Power Company requests exemption from 10CFR70.24, "Criticality Accident Requirements." Regulatory Guide 8.12 Position C.1 states in part:

"If such an evaluation does not determine that a potential for criticality exists, as for example where the quantities or form of special nuclear material make criticality practically impossible, or where geometric spacing is used to preclude criticality, such as in some storage spaces for unirradiated nuclear power plant fuel, it is appropriate to request an exemption from 70.24."

The following reasons are sufficient to justify this exemption.

1. Fuel assemblies are handled as discrete items, i.e., only one fuel bundle is handled at one time and only three bundles can be out of approved storage at any one time. Therefore, the likelihood of an accidental criticality is not possible.
2. There are engineering controls for fuel assembly spacing, i.e., the spacing and materials of the spent fuel storage racks preclude accidental criticality under all conditions. The spacing and administrative controls in place for the new fuel storage vault ensure that an accidental criticality is not possible.
3. Normally the new fuel assemblies are stored dry, and under these conditions, an infinite number of assemblies cannot be made critical, independent of the spacing between bundles.
4. Further, under accident conditions, such as flooding or fire, administrative controls are in place such that a limited number of assemblies can be moderated at any one time. Control of combustibles in the new fuel storage vault, equipping fire hose stations with solid stream nozzles and plastic packaging of the fuel assemblies open at both ends are administrative measures to prevent the possibility of an accidental criticality.

Illinois Power Company believes that the storage areas described above and in the Special Nuclear Materials License No. SNM-1886 are such that an accidental criticality is virtually impossible. Therefore, it is appropriate to request an exemption from 10CFR70.24 in its entirety.

DOCKET NO. 70-2947

CONTROL NO. 26039

DATE OF DOC. 11/11/85

DATE RCVD. 11/14/85

FCUF ☒ PDR ☒

FCAF ☐ LPDR ☐

WM ☐ I&E REF. ☒

WNJR ☐ SAFEGUARDS ☒

PCTC ☐ OTHER ☐

DESCRIPTION:

request amendment

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