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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 30 TO FACILITY OPERATING LICENSES

NOS. NPF-37 AND NPF-66

BYRON STATION, UNITS 1 AND 2

DOCKET NOS. 50-454 AND 50-455

AND

SUPPORTING AMENDMENT NO. 19 TO FACILITY OPERATING LICENSES

NOS. NPF-72 AND NPF-77

BRAIDWOOD STATION, UNITS 1 AND 2

DOCKET NOS. 50-456 AND 50-457

1.0 INTRODUCTION

By letter dated May 22, 1989, Commonwealth Edison Company submitted a request for changes to the Technical Specifications to revise Technical Specification 5.3.2, "Control Rod Assemblies," to allow the use of hafnium or silver-indium-cadmium (Ag-In-Cd) as the absorber material in the rod cluster control assemblies (RCCA). This specification would permit the use of all hafnium RCCA's, as at the present; all Ag-In-Cd RCCAs, or a mixture of both.

2.0 DISCUSSION

Byron and Braidwood currently use hafnium as the absorber material in RCCA's Hafnium was approved for use in the operating licenses issued for Byron and Braidwood. Prior to use of hafnium, Ag-In-Cd was the material most widely used in RCCA's for Westinghouse plants. Ag-In-Cd has continued to be and is currently used in many plants. As such, a large amount of operating experience has been gained with Ag-In-Cd used as an absorber material. Ag-In-Cd has proved to be an effective absorber material and RCCA's with Ag-In-Cd have shown very good operating results.

3.0 EVALUATION

Hafnium and Ag-In-Cd RCCA's are interchangeable. The physical dimensions of the RCCA's are identical as are the materials of the spider assembly and the rodlet cladding. The rod drop times and the rod worths for the two absorber types are equivalent. As additional assurance, both the rod drop times and rod worths are verified by testing during startup tests following each

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refueling outage. The use of Ag-In-Cd absorber material in RCCA's is consistent with all assumptions of the transient and accident analyses of record for Byron and Braidwood since the RCCA's will meet the same mechanical, nuclear and thermal hydraulic limits as the original RCCA's. Since they are equivalent, a mixture of absorber types is permitted with no adverse impact on plant safety.

4.0 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. 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.

5.0 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: L. N. Olshan

Dated: July 17, 1989

July 17, 1989

Docket Nos. 50-454, 50-455
and 50-456, 50-457

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Mr. Thomas J. Kovach
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Thomas J. Kovach

The Commission has issued the enclosed Amendment No. 30 to Facility Operating License No. NPF-37 and Amendment No. 30 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively, and Amendment No. 19 to Facility Operating License No. NPF-72, and Amendment No. 19 to Facility Operating License No. NPF-77 for Braidwood Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated May 22, 1989.

These amendments approve changes that modify Technical Specification 5.3.2 to allow the use of hatnium, or silver-indium-cadmium, or a combination of both, as the absorber material in the rod control cluster assemblies.

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

Sincerely,

/S/

Stephen P. Sands, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

/S/

Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
1. Amendment No. 30 to NPF-37
2. Amendment No. 30 to NPF-66
3. Amendment No. 19 to NPF-72
4. Amendment No. 19 to NPF-77
5. Safety Evaluation

cc w/enclosures:
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