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 FACIL: 50-315 Donald C. Cook Nuclear Power Plant, Unit 1, Indiana & 05000315
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 HUNTER, R. S. Indiana & Michigan Power Co.
 RECIP. NAME RECIPIENT AFFILIATION
 DENTON, H. R. Office of Nuclear Reactor Regulation

SUBJECT: Updates 781220 & 790418 ltrs re placement of fuel assemblies
 for Cycle 4. Discusses changes due to damage to Exxon Nuclear
 fuel assemblies during refueling outage & reinsertion of two
 assemblies into core.

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July 16, 1979
AEP:NRC:00212

Donald C. Cook Nuclear Plant Unit No. 1
Docket No. 50-315
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REGULATORY DOCKET FILE COPY

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton:

This letter contains information to update our letters of April 18, 1979 (AEP:NRC:00151A) and December 20, 1978 (AEP:NRC:00108) which described the placement of fuel assemblies in the Donald C. Cook Nuclear Plant Unit 1 for Cycle 4. Due to the damage of two Exxon Nuclear Company (ENC) fuel assemblies during the refueling outage, two previously exposed Westinghouse assemblies were reinserted into the core. The changes made were as follows:

1. Assembly D19 which had contained a secondary source has been replaced by Assembly A06 which does not contain a source in core location C8,
2. Assembly D41 which had contained a secondary source has been replaced by Assembly A16 which does not contain a source in core location N8,
3. A new secondary source has been placed in Assembly F37 in core location P9,
4. The secondary source from Assembly D41 has been placed in Assembly F34 in core location B7.

The replacement assemblies were selected so as to minimize the impact on the cycle neutronic characteristics. ENC has evaluated the effect on core neutronics of the changes and found that the change in relative power distribution is expected to be about 2.5% in the affected locations. The power peaking factors are changed by less than 1%. Finally, the assembly interchange is calculated to change the control rod worth of banks A, B, C, and D by a maximum of 4 pcm. On this basis, Exxon has concluded that the neutronic parameters of the core are essentially unaffected by the changes. ENC's analysis has also concluded

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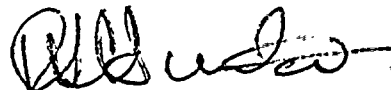
that the original safety analysis (1) performed for Cycle 4 operation is still applicable.

The use of the secondary source removed from Assembly D41 was judged to be acceptable by Westinghouse Corporation based on favorable results of dye penetrant and drag force check tests.

We do not plan to perform any revised ECCS analysis with respect to the two Westinghouse assemblies now being used in Cycle 4 because the previously submitted analysis for Unit 1 is conservative. These conservatisms have been discussed in detail in our letter of January 24, 1979 (AEP:NRC:00136).

This event was described in IE Information Notice No. 79-17 "Source Holder Assembly Damage From Misfit Between Assembly and Reactor Upper Grid Plate". The safety implications of this occurrence and its remedy were reviewed by AEPSC's NSDRG and their review concluded that this event did not deleteriously impact the health and safety of the public.

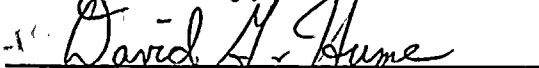
Very truly yours,



R. S. Hunter
Vice President

RSH/emc

Sworn and subscribed to before me
this 16th day of July, 1979 in
New York County, New York


Notary Public

DAVID G. HUME
NOTARY PUBLIC, State of New York
No. 60-4808113
Qualified in Westchester County
Certificate filed in New York County
Commission Expires March 30, 1981

- (1) M. R. Killgore, "D. C. Cook Unit 1, Cycle 4 Safety Analysis Report, XN-NF-78-10" Exxon Nuclear Company, February 23, 1979.

cc: R. C. Callen
G. Charnoff
D. V. Shaller - Bridgman
R. W. Jurgensen



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