



March 20, 1997

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Byron Nuclear Power Station, Units 1 and 2
Facility Operating Licenses NPF-37 and NPF-66
NRC Docket Numbers: 50-454 and 50-455

Braidwood Nuclear Power Station, Units 1 and 2
Facility Operating Licenses NPF-72 and NPF-77
NRC Docket Numbers: 50-456 and 50-457

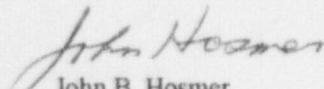
Tendon Grease Amendment RAI Response

- Reference:
1. J. Hosmer (ComEd) Letter to USNRC, Tendon Grease Amendment, dated November 4, 1996.
 2. NRC Request for Additional Information Regarding Removal of Tendon Sheathing Filler Grease, dated February 10, 1997.

In Reference 1, ComEd submitted a License Amendment Request to the NRC to allow removal of grease from the tendon sheathing to facilitate tendon removal during the Steam Generator Replacement. In Reference 2, NRC requested additional information concerning schedules and preventing the ingress of moisture, water and damaging airborne elements while the grease is removed. The answers to the specific questions raised in the RAI are contained in Attachment 1.

Please address any questions or comments to Marcia Lesniak, Nuclear Licensing Administrator, at 630-663-6484.

Sincerely,


John B. Hosmer
Engineering Vice President

Attachments

cc: A. B. Beach, Regional Administrator - RIII
G. Dick, Byron/Braidwood Project Manager - NRR
C. Phillips, Senior Resident Inspector - Braidwood
S. Burgess, Senior Resident Inspector - Byron
Office of Nuclear Safety - IDNS

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RAI Item 1:

Please provide detailed schedules for replacement of steam generators in Unit 1 of Byron and Braidwood. Include the following information in the schedules: (1) time (month and year) when the grease will be removed from the specific tendons (2) the period during which the tendons will be without grease coverage, (3) the plant status (operating, hot shutdown, cold shutdown, etc.) during the time when the tendons will be without grease, (4) schedule for tendon removal concrete cutting, containment reconstruction, tendon installation, and grease installation.

Response:

The following tabulation is based on current schedule development for the Byron Unit 1 steam generator replacement outage (SGRO). As discussed in our project presentation meeting to the NRC Staff on January 22, 1997, the schedule for the Byron SGRO has been accelerated from the date described in our November 4, 1996 request. The dates and durations depicted are based on current planning and scheduling.

Activity	Plant Status	Byron Schedule	Braidwood Schedule
Mobilize contractor	NA	May 1997	Note 1
Begin grease removal	power operation	June 1997	
Complete grease removal	power operation	August 1997	
Plant shutdown for SGRO		November 7, 1997	
Tendon detensioning/removal	cold shutdown and refueling	Outage days 1 thru 10	
Concrete removal, rebar cutting, liner plate removal for the containment opening (CO)	defueled	Outage days 11 thru 18	
Steam generator changeout, fitup	defueled	Outage days 19 thru 67	
Restore liner plate	defueled	Outage days 53 thru 59	
Replace rebar and concrete in CO	defueled	Outage days 60 thru 73	
Reinstall tendons, including grease replacement	defueled or refueling	Outage days 68 thru 73	
Retention tendons	cold shutdown	Outage days 74 thru 77	
Containment restored	cold shutdown	Outage day 78	

Note 1: The durations shown for Byron are expected to be representative of those for Braidwood; detailed planning for the Braidwood outage has not been initiated, but the overall outage is expected to be slightly shorter and lag the Byron outage by approximately one year.

Therefore, the currently planned period during which the tendons will be without grease coverage is about eight months.

RAI Item 2:

Please provide information regarding protecting the tendons from ingress of moisture, water, and damaging airborne elements, such as chlorides, and sulfides, during the time when the tendons are not covered with grease. Some of the methods used in the past have been filling the ducts with an inert gas at a slightly positive pressure or filling the grease caps with fresh grease after removing the grease from the tendons.

Response:

As stated in ComEd's submittal, the grease removal operation, even when assisted by the introduction of dry air, is not expected to remove the entire grease inventory in the tendon sheathing. As a minimum, a residual layer of grease will remain on the tendon wire surface, providing protection against the elements. Use of dry air will ensure that no moisture is introduced into the tendon sheathing. The tendon end anchors/grease caps are not directly exposed to the weather elements because the existing buttress and dome walkway enclosures at Byron/Braidwood Stations provide protection for the tendon end anchor/grease caps.

Any opening used for the introduction of air or for grease outflow will be resealed following the grease removal operation. Therefore, ComEd has concluded that the tendons would be adequately protected from the effects of moisture, water, and any damaging airborne elements while the grease is being removed and during the limited time when the grease is removed from the tendon sheathing void.