



ARKANSAS POWER & LIGHT COMPANY

POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 371-4000

June 3, 1988

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

Attn: Mr. Jose A. Calvo, Director
Project Directorate IV
Division of Reactor Projects
III, IV, V and Special Projects

SUBJECT: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Response to Questions on ANO-1
Tendon Surveillance

Gentlemen:

On March 29 and 30, 1988 Mr. John Ma of the Nuclear Regulatory Commission (NRC) conducted an on-site visit to review the tendon surveillance work being performed on Arkansas Nuclear One - Unit 1 (ANO-1). During that review three (3) items were identified for which Mr. Ma asked that the Arkansas Power & Light Company (AP&L) provide additional information for clarification.

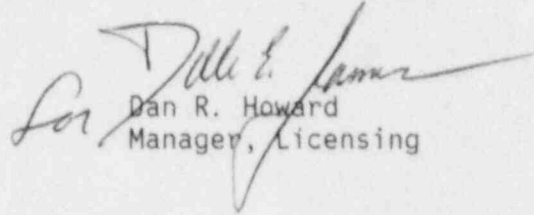
On April 25, 1988 a conference call was conducted between Messers. John Ma and Craig Harbuck of the NRC and Messers. Mike Coombs and Martin Tull of AP&L to provide the additional information requested during the on-site visit. The information was discussed and no additional items were identified. Mr. Harbuck requested that we provide the same information under cover letter to close out the action on the tendon surveillance visit. This correspondence is to transmit the responses previously discussed on April 25, 1988.

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June 3, 1988

As mentioned during the conference call, the ANO-1 Tendon Surveillance Report will be submitted to the NRC, per Technical Specifications, following receipt from the contractor.

Very truly yours,


Dan R. Howard
Manager, Licensing

DRH/MT/de

Attachment

ATTACHMENT

I. Question #1:

What is AP&L's acceptance criteria regarding grease replacement? Why in several instances, specifically 1D303 and 3D102, was less grease noted replaced than removed?

Answer #1:

AP&L acceptance criteria with regard to grease replacement is specifically addressed in Procedure Section 5.3 (p. B-7) and 8.3 (p. B-13) for vertical tendons. Section 8.2 of the Surveillance Procedure does not specifically state that the amount replaced shall equal the amount removed. It is strongly implied in Section 8.2.2 (p. B-13) that this be done. AP&L intends to revise the tendon surveillance procedures to more clearly define how to determine the amount of grease removed and replaced. This should eliminate any confusion in the future.

It is suspected that less grease was replaced in tendons 1D303 and 3D102 than what was removed because the methods for measurement of grease removed are not clearly identified in the surveillance procedures. This situation is being resolved through the procedure revision process.

However, at the conclusion of this surveillance AP&L added 4 gallons to 1D303; 4 to 2D228; and 4 to 3D102. These were the dome tendons that were inspected during the ANO-1 10th Year Surveillance in 1983.

II. Question #2:

On p. 16 of ANO-1's 10th Year Report under Section VI, "Wire Inspection and Testing" a statement "A before-vs-after comparison shows the jack's (Jack #7702) ram area to apparently increase by .51% which is considered normal and acceptable" is made. Why is this increase "normal and acceptable"?

Answer #2:

The difference in the ram area of .51% between before and after calibration is considered acceptable because it is within the total error allowed by the ASME Code, Section III, Division 2, Section CC-4464.1 (1986) which requires that "the tensioning load be measured by load cells or equivalent means having an accuracy not less than $\pm 2\%$ of the required tensioning force". Since .51% is less than 2%, it is considered acceptable.

III. Question #3:

Data from the 1st Year and 3rd Year Surveillances indicates a 10% loss in stress in Tendon 31H40 over a two year period. Is it possible to do a liftoff on this tendon or a tendon ± 2 tendons from this location during the ANO-1 15th Year Surveillance to verify that nothing abnormal is occurring in this region?

Answer #3:

AP&L performed a liftoff measurement on Tendon 31H42 on April 12, 1988. The mean normalized liftoff force was determined to be 1319 kips or 7.09 kips/wire which is considerably above the minimum expected prestress force for a hoop tendon at the 15th Year Surveillance (6.65 kip/wire).