

April 14, 2010

MEMORANDUM TO: File

FROM: Brian K. Harris, Project Manager */RA/*
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: DOCKETING OF APRIL 6, 2010, NUCLEAR REGULATORY
COMMISSION TELECONFERENCE NOTES PERTAINING TO
THE LICENSE RENEWAL OF THE DUANE ARNOLD ENERGY
CENTER

This memorandum makes the following enclosed correspondence publicly available:

- **NRC License Renewal Teleconference – April 6, 2010**

Docket No. 50-331

Enclosure:
As stated

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ADAMS Accession No: MI101031000

OFFICE	LA:DLR	PM:RPB2:DLR
NAME	IKing	BHarris
DATE	04/14/10	04/14/10

OFFICIAL RECORD COPY

Summary of Discussion

Date: 4/6/2010

Time: 2:00 EST

Location: Telephone

Participants:

NRC

Brian Harris
On Yee
Allen Hiser

FPLE/DAEC

Ken Putnam
Clara Rushworth

Topic: License renewal questions from the U.S. Nuclear Regulatory Commission (NRC) review of the license renewal application (LRA)

References: None

Main Points of Discussion:

Metal Fatigue of Reactor Vessel Coolant Pressure Boundary Program

Based on a teleconference with the NRC Staff on April 6, 2010, the following is provided as clarification to the Duane Arnold Energy Center (DAEC) response to RAI 4.3.4-3, Item 2.

The numbers of vessel thermal and pressure transient cycles are tracked via a surveillance test procedure that is performed on a cyclic basis. Cycles that are inputs to the vessel fatigue evaluations are manually counted to ensure that the actual numbers of these cycles are less than the numbers used to determine the usage factors. This ensures that the usage factors remain below the calculated values and that design limits on fatigue usage are not exceeded. If the number of transient cycles approaches the number of cycles used in the fatigue calculation, the fatigue calculation would be evaluated and revised as needed.

As shown in LRA Table 4.3.6-1, Summary of EAF Evaluation Results for DAEC, the Recirculation Inlet Nozzle Safe End, Feedwater Nozzle Safe End, and Core Spray Nozzle Safe End are Nickel Alloy components. In the future, if the environmental fatigue calculations for these three Safe Ends are revised or updated, F_{en} data for Nickel Alloy from the methodology that is described in NUREG/CR-6909 will be used in the determination of usage factors.

ENCLOSURE

Item No.	System, Component or Program	Commitment	Section	Schedule
51	Metal Fatigue of Reactor Vessel Coolant Pressure Boundary Program	Future revisions/updates to the environmental fatigue calculations for the Recirculation Inlet Nozzle Safe End, Feedwater Nozzle Safe End, and Core Spray Nozzle Safe End will use F_{en} data for Nickel Alloy from the methodology that is described in NUREG/CR-6909 in the determination of usage factors.	18.2.2	Upon calculation revision.