

June 28, 2002

LICENSEE: Arizona Public Service Company

FACILITIES: Palo Verde Nuclear Generating Station

SUBJECT: MEETING WITH REPRESENTATIVES OF ARIZONA PUBLIC SERVICE COMPANY FOR PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3

A meeting was held on Thursday, May 30, 2002, between the Nuclear Regulatory Commission (NRC) staff and the licensee for Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (Palo Verde). The meeting was held at the request of the licensee to inform the NRC about the current status of fuel performance, control element assembly (CEA) replacement, and implementation of the NRC-approved CENTS computer code for the three units. The notice for the meeting was issued on May 2, 2002.

Enclosure 1 is the list of attendees. Enclosure 2 is the slides handed out by the licensee, and the acronyms in Enclosure 2 are spelled out in the following meeting summary. There was no handout from the NRC staff. The agenda for the meeting is the following, from the third slide of Enclosure 2 (there are two slides for each page of the enclosure):

- Review of Unit 2 Cycle 11 (Slides 4 and 5)
- CENTS Implementation and Licensing (Slides 6 through 9)
- Integrated Clad Performance Strategy (Slides 10 through 16)
- Update on CEA Investigation (Slides 17 through 20)
- Dry Cask Storage Update (Slide 21)

Before addressing the agenda, the licensee initially presented an overview of what had happened in 2001 (Slide 2 of Enclosure 2) with respect to the fuel for the three units. The licensee's references to (1) new minimum departure from nuclear boiling ratio (MDNBR) limit, (2) CENTS computer code added to the core operating limits report (COLR), and (3) ZIRLO fuel cladding technical specification submitted are references to licensing amendments approved by NRC for the three units. The amendments were issued March 28, 2001, October 15, 2001, and March 12, 2002, respectively. The reference to Alloy A lead fuel assembly (LFA), or lead test assembly (LTA), approved for the fourth burn was the exemption approved October 16, 2001, by NRC to allow the continued testing of the LFA, or LTA, in Unit 3 for a fourth operating cycle.

The licensee presented the information in its handout, and the NRC staff asked questions. For the steam generator tube rupture and CEA ejection event consequences in Slides 8 and 9, the licensee stated that the CENTS computer code will be replacing the current use of the CESEC computer code in the analyses of record (AOR) for the units, and that this replacement of codes will not impact the replacement steam generator and power uprate amendment (RSG/PUR) request that the licensee submitted to NRC on December 21, 2001.

The integrated fuel clad strategy (Slides 10 through 16) involves advanced clad alloys with the first full batch of fuel using the new ZIRLO clad in Unit 2 Cycle 11 (U2C11), which ended with

the refueling outage just completed in the spring 2002, and the Alloy A LTA in Unit 3 Cycle 10 (U3C10), which will end next year in spring 2003. The operating cycle of the unit is numbered in sequence (i.e., the first operating cycle or number 1, the second or number 2, etc), which is also the number of the refueling outage for the unit at the end of the operating cycle. The primary chemistry, modeling, and low duty core designs are addressed in Slides 13 through 15, with CRUD referring to material deposits adhering to the fuel cladding and FDI standing for fuel duty index. Slide 16 shows the decline in the total crud volume predicted by the licensee for different unit cores.

In the update on the CEA investigation (Slides 17 through 20), the licensee stated that there was less than adequate design testing of the pellet-fuelmetal interaction in the tip of the CEAs, and that there was a possible CEA re-design for the future. The reference to YGN in the slide stands for a plant in South Korea.

The last slide on the Palo Verde dry cask storage was a reference to the meeting that the licensee held with NRC on May 2, 2002, on the independent spent fuel storage installation facility planned by the licensee for the Palo Verde site. The summary of this previous meeting was issued on June 24, 2002 (ADAMS Accession No. ML021700715).

The licensee completed its presentation and the meeting was closed.

/RA/

Jack Donohew, Senior Project Manager, Section 2
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-528, 50-529, and 50-530

Enclosures: 1. List of Meeting Attendees
2. Licensees' Handout (ADAMS Accession No. ML021510020)

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OFFICE	PDIV-2/PM	PDIV-1/LA	PDIV-2/SC
NAME	JDonohew:as	MMcAllister	SDembek
DATE	6/27/02	6/27/02	6/27/02

LIST OF ATTENDEES AT MEETING OF MAY 30, 2002

STATUS OF FUEL PERFORMANCE AND CEA REPLACEMENT

<u>NAME</u>	<u>AFFILIATION</u>
J. Donohew	NRC/NRR/PDIV-2
R. Caruso	NRC/NRR/SRXB
U. Shoop	NRC/NRR/SRXB
S.L. Wu	NRC/NRR/SRXB
A. Passarelli	NRC/NRR/SRXB
T. Weber	APS
J. Proctor	APS
R. Bandere	APS
P. Crawley	APS
D. Sipes	Westinghouse
I. Richard	Westinghouse

Where:

APS	= Arizona Public Service Company
NRC	= Nuclear Regulatory Commission
NRR	= Office of Nuclear Reactor Regulation
PDIV-2	= Project Directorate IV-2
SRXB	= Reactor Systems Branch

Palo Verde Generating Station, Units 1, 2, and 3

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April 2002

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