



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

August 25, 2004

Gregg R. Overbeck, Senior Vice
President, Nuclear
Arizona Public Service Company
P.O. Box 52034
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SUBJECT: PALO VERDE NUCLEAR GENERATING STATION - PUBLIC MEETING WITH
ARIZONA PUBLIC SERVICE COMPANY

Dear Mr. Overbeck:

This refers to the meeting conducted in the Region IV office on August 20, 2004. This meeting related to issues and concerns regarding fuel handling operations at Palo Verde Nuclear Generating Station. Enclosed with this letter is the attendance list (Enclosure 1) and the presentation (Enclosure 2).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/ REL for

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

Enclosures:

1. Attendance List
2. Licensee Presentation

Dockets: 50-528; 50-529; 50-530
Licenses: NPF-41; NPF-51; NPF-74

Arizona Public Service Company

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cc:

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 DRS Director (**DDC**)
 Senior Resident Inspector (**GXW2**)
 Branch Chief, DRP/D (**TWP**)
 Senior Project Engineer, DRP/D (**CJP**)
 Staff Chief, DRP/TSS (**PHH**)
 RITS Coordinator (**KEG**)

ADAMS: Yes No Initials: _____
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ENCLOSURE 1

Attendance List

MANAGEMENT MEETING ATTENDANCE		
LICENSEE/FACILITY	Arizona Public Service Company Palo Verde Nuclear Generating Station	
DATE/TIME	1500 -1630 August 20, 2004	
CONFERENCE LOCATION	NRC RIV OFFICE, SUITE 400 TRAINING CONFERENCE ROOM 611 RYAN PLAZA DRIVE ARLINGTON, TEXAS 76011	
NAME (PLEASE PRINT)	ORGANIZATION	TITLE
M. Dwayne Carnes	APS	Director Reg. Affairs/Nuc. Assurance
Scott Bauer	APS	Dept. Ldr Regulatory Affairs
Craig Seaman	APS	Director Nuclear Fuel
Gregg Overbeck	APS	SR VP
Rick Huffman	APS	Section Leader Nuclear Fuel
Michael T. Berryman	APS	Team Leader NFM
Michael O'Connor	APS	Team Leader NFM
Dave Wright	APS	Shift Manager
Jay Gutierrez	APS	Counsel
Jim Drake	NRC	Operations Engineer
Chuck Paulk	NRC	Acting Chief, Projects Branch D
Art Howell	NRC	DRP
Bruce Mallett	NRC	RA
Dwight Chamberlain	NRC	DRS
Vonna Ordaz	NRC	DRS
Dale Powers	NRC	Sr. Tech. Analyst
Michael Vasquez	NRC RIV	Enforcement Specialist
Nancy Salgado	NRC	Sr RI Palo Verde
Greg Werner	NRC	Sr Ops Engineer
Kelly Clayton	NRC	OPS Engineer
Victor Dricks	NRC	RIV - Public Affairs
Ryan Lantz	NRC	RIV-SR. EP Insp.

ENCLOSURE 2

Licensee Presentation

PVNGS Fuel Handling



PV/NRC Management meeting

August 20, 2004

Agenda

- ◆ **Organizational history**
- ◆ **Issues**
- ◆ **Actions taken**
- ◆ **Results and remaining challenges**

Organizational History

1990 - 1993

- ◆ **Refuel team formed to address lengthy outages and equipment maintenance**
- ◆ **15 team members**
 - 1 manager
 - 4 engineers
 - 1 foreman
 - 2 advisors
 - 7 team members
- ◆ **Assigned to Engineering**

Organizational History

1993 – 2000

Reengineering

- ◆ **Engineering staff removed**
- ◆ **Maintenance staff removed**
- ◆ **Team reduced from 15 to 7**
 - **1 team leader**
 - **6 frontline**
- ◆ **Assigned to mechanical maintenance**

Organizational History

August 2000 - Present

- ◆ **Refuel team assigned to Nuclear Fuel Management**
- ◆ **NFM became one stop shop for Fuel**
- ◆ **Anticipated Dry Cask Storage project implementation**
- ◆ **Staff size remained the same**

Issues

Self Identified (2000-2001)

- ◆ **Resources inadequate (Leaders, staff, support)**
- ◆ **Limited management oversight**
- ◆ **Lack of formality / procedure use**
- ◆ **Reliance on single operator (no peer checking)**

Issues Self Identified (2000-2001)

- ◆ **Refuel equipment concerns**
- ◆ **Issues not always identified or receiving proper review and evaluation**
- ◆ **Use of corrective actions program inconsistent**

Issues

NAD Identified

- ◆ **NFM placed on NAD Top Ten September 2001**
 - **Resource concerns**
 - **Processes relied on highly trained staff**
 - **Processes lack formality**
 - **Role & Responsibility not clearly defined**
 - **Training program weak**
 - **Self assessment excellent/implementation of recommended weak**

Actions Taken

- ◆ **Performed O&P Assessment**
- ◆ **Resources added**
 - **2 Department leaders**
 - **Section leader**
 - **Planner/Procedure writer**
 - **Training coordinator**
 - **Team leader**
- ◆ **Current Refuel Team support**
 - **34 people**

Actions Taken

- ◆ **Level 1 action plan**
- ◆ **Defined NFM organizational structure & responsibilities**
- ◆ **Training enhancement**
 - **2 LSRO classes**
 - **5 in first class and 7 in second class**
 - **Developed training program description**

Actions Taken

◆ Formality increased

- Peer checker
- Pre job briefings
- Enhanced procedures
- Standard and expectations
- Communication required
- Formal LSRO turnover with control room staff
- Use of OP's tailboard database for formal briefings

Actions Taken

Equipment Reliability

- ◆ **Created system team for refueling equipment**
- ◆ **Addition of maintenance personnel (6) to refueling team approved**
- ◆ **Refueling machines upgrade scheduled**
 - **Engineering 2005**
 - **Implementation 2006/2007**
- ◆ **PAR contract**
- ◆ **Interlock added**

Results

◆ CRDRs

- More consistent use of program
- Initiation threshold lowered
- Culture improved

Results

- ◆ **NAD reports NFM use of CRDR program vastly improved**
 - **Self initiation index**
 - **Since October 2002 over 200 CRDRs generated**

Results

- ◆ **Since October 4, 2002 over 9000 fuel assemblies moved safely**
 - Includes offload/reload
 - Fuel inspections
 - Fuel pool reshuffles
 - Dry cask canister loading

Results

Communication Enhancements

- ◆ **Established direct control room communication for critical events**
- ◆ **Procedure changes**
 - **Spent fuel handling machine**
 - **Refueling machine operations STATE:**
 - **If fuel damage is suspected or confirmed, contact the control room**
 - **If an off normal situation occurs during fuel handling operations THEN:**
 - **STOP and establish direct communications with control room supervisor**
 - **The CRS/SM has to give approval for manual operation of the SFHM**

Results

Communication Enhancements

- ◆ **Movement of a difficult assembly requires control room supervisor approval**
- ◆ **Core Reloading**
 - **Direct communications with the CRS/SM shall be established for any off normal fuel handling event**

Results

Dry Cask Storage Operations

- ◆ **10 Canisters loaded & placed on pad in 2003**
- ◆ **Anticipate 12 per year in future**
- ◆ **Presently 19 canisters safely on the pad working on #20**
- ◆ **Steady improvement in dose for dry storage**
 - **1st Canister loaded - 505mr**
 - **Last canister exposure - 137 mr, we believe an industry record**

Results

Dry Cask Storage Operations

- ◆ **NRC inspection performed November 2002 (insert from executive summary)**
 - **“The Palo Verde staff functioned professionally and performed their assigned functions safely. The staff was well trained and had committed significant resources and time to preparing for the critical activities associated with safely moving spent fuel. Personnel interviewed during the inspections were enthusiastic about the effort at Palo Verde and presented a positive attitude toward safety.”**

Remaining Challenges

◆ Refueling equipment

- Parts
- Aging equipment
- Reliability
- Training on old & new equipment

◆ Organizational issues

- Addition of maintenance team with team leader

Remaining Challenges

- **Continued communication improvement**
- **CRDRs**
- **Use NAD & self assessment for critical assessments of refuel team**