



Scott A. Bauer  
Department Leader  
Regulatory Affairs  
Palo Verde Nuclear  
Generating Station

Tel: 623/393-5978  
Fax: 623/393-5442  
e-mail: sbauer@apsc.com

**10 CFR 50.59**

Mail Station 7636  
P.O. Box 52034  
Phoenix, AZ 85072-2034

102-05386-SAB/TNW/CJJ  
December 5, 2005

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2, & 3  
Docket Nos. STN 50-528/529/530  
10 CFR 50.59 Report (January – December 2004)**

Pursuant to 10 CFR 50.59(d)(2), Arizona Public Service Company is submitting the enclosed report. This report contains a brief description of each change and a brief summary of the evaluation required by 10 CFR 50.59(d)(1) for each change. This report contains all evaluations written during 2004, regardless of the implementation status of the evaluated action.

There were no NRC Commitment changes during 2004.

No commitments are being made to the NRC by this letter. Should you have any questions, please contact Thomas N. Weber at (623) 393-5764.

Sincerely,

SAB/TNW/CJJ/ca

Enclosure

cc: B. S. Mallett (all w/enclosure)  
M. B. Fields  
G. G. Warnick

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance

Callaway ☐ Comanche Peak ☐ Diablo Canyon ☐ Palo Verde ☐ South Texas Project ☐ Wolf Creek

IE47

**ENCLOSURE**

**PALO VERDE NUCLEAR GENERATING STATION**

**ACRONYM/ABBREVIATION LIST**

**AND**

**10 CFR 50.59 REPORT**

**JANUARY – DECEMBER 2004**

## ACRONYM/ABBREVIATION LIST

AOR	-	Analysis of Record
AS	-	Auxiliary Steam
ASME	-	American Society of Mechanical Engineers
Calc.	-	Calculation
CENTS	-	Combustion Engineering Nuclear Transient Simulation
CIAS	-	Containment Isolation Activation Signal
COLSS	-	Core Operating Limit Supervisory System
DMWO	-	Design Modification Work Order
EAB	-	Exclusion Area Boundary
EOP	-	Emergency Operating Procedure
FWIVs	-	Feedwater Isolation Valves
FWLB	-	Feedwater Line Break
IOSGADVLOP	-	Inadvertent Opening of a Steam Generator Atmospheric Dump Valve with Loss of Offsite Power
LDCR	-	Licensing Document Change Request
LOCA	-	Loss of Coolant Accident
LPZ	-	Low Population Zone
MSFIS	-	Main Steam and Feedwater Isolation System
MSIVs	-	Main Steam Isolation Valves
MSLB	-	Main Steam Line Break
NKLPL	-	Power Indication License Power Limit
NQR	-	Non-Quality Related
OD	-	Operability Determination
PUR	-	Power Uprate
RSG	-	Replacement Steam Generator
RTP	-	Rated Thermal Power
SC	-	Secondary Chemistry
SER	-	NRC Safety Evaluation Report
SG	-	Steam Generator
SGTR	-	Steam Generator Tube Rupture
SGTRLOP	-	Steam Generator Tube Rupture with Loss of Offsite Power
TMWO	-	Temporary Modification Work Order
TS	-	Technical Specifications
UFSAR	-	Updated Final Safety Analysis Report

## 10 CFR 50.59 Annual Report (January - December 2004)

Log Number	Doc Type	Doc Number	Description	Summary
E-04-0001	DMWO	2646151	This modification installed a restraining mechanism to enable the reactor coolant pump bay personnel access doors located on the 80-ft level of containment to be restrained opened to eliminate potential for debris accumulation on the pump bay personnel access doors in response to NRC Bulletin 2003-01.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0002	LDCR	03-F051	This revision to the UFSAR applies Unit 2 power uprate methodology (crediting refilling the faulted SG during a sheared shaft event) to Units 1 and 3 so the LPZ doses remain bounded by the EAB doses. This will result in the UFSAR description for sheared shaft not having to include different methodologies (operator action) for the different power levels.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0003	TMWO	2691309	This Temporary Modification installed power from normal lighting panel 1E-QAN-D08A, through a temporary 480/120VAC step down transformer to essential lighting panel 1E-QBN-D81. The temporary power maintained power to fire protection panels and control room lighting while the PBA-S03 and NAN-S01 (normal permanent power) buses were de-energized at the same time for maintenance.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0004	TMWO	2696713	This Temporary Modification removed the Refueling Machine hoist box spreader and associated limit switches, and jumpered the spreader "UP" interlock to enable operation of the bridge and trolley.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0005	Calc	TA-13-C00-2004-003	This Calculation revision applied Unit 2 power uprate methodology to Units 1 & 3 so the methodology between the Units remains consistent. This revision also resulted in changes to the UFSAR description for IOSGADVLOP/MSLB/FWLB not having to include different methodologies for the different power levels.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0006	CENTS	03355	This revision to the CENTS code method of evaluation incorporated version updates from Westinghouse (CENTS code versions 03230, 03230m1 and 03355). These can be categorized as: code cleanup, correction to code errors, addition of new optional features, etc. This 50.59 addressed all the changes made since CENTS version 02020.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).

Log Number	Doc Type	Doc Number	Description	Summary
E-04-0008	DMWO	2717767	This modification relocated the Reactor Head vent line orifice to a new location downstream of the Reactor Vessel Head nozzle and reclassified all Reactor Head vent line components between the nozzle in the Reactor Vessel Head and the first flange on the removable spool in the vent line as ASME Section III, Class 1 components. These components are currently classified as ASME Section III, Class 2.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0009	DMWO	2417258	This modification on all four Main Steam Isolation Valves (MSIVs) and all four Feedwater Isolation Valves (FWIVs) installed a second, redundant "Close" solenoid configured so that both the existing and the new solenoid must actuate to fast-close the valve. In both train MSFIS logic cabinets, new logic modules were installed along with other changes to drive the redundant solenoid, improving reliability and maintainability.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0010	LDCR	04-F022	This revision to the UFSAR modified section 7.7.1.3.1.2 to accurately reflect the current methodology used to determine NKLPL which is the COLSS Licensee Power Limit Alarm setpoint. This 50.59 also addresses a minor calculation error in procedure 72OP-9ZZ01.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0011	DMWO	2666379	This modification installed new piping to connect the Secondary Chemistry (SC) system to the Auxiliary Steam (AS) system. It is designed to transfer warm condensate drained from the steam generators of a unit in either operational mode 5 (when the primary system pressure is less than or equal to the secondary system pressure), mode 6, or defueled to either or both of the operating units for reuse, processing, or disposal, depending on conditions.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0012	EOPs	40EP-9EO03, -9EO04, -9EO06, -9EO07, -9EO09	This revision to the EOP procedures incorporated guidance for opening the Auxiliary Feedwater Pump 'A' steam supply trap isolation valves to maintain AFA-P01 functional and/or operable following a Main Steam Isolation Signal (MSIS).	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0015	DMWO	2739742	This modification installed additional vent and fill/drain piping and isolation valves and the associated supports to the recirculation sump containment penetration piping. These components were added to facilitate the filling, draining, venting, and testing of the post-LOCA recirculation piping located between the inboard and outboard containment isolation valves and the recirculation check valve.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).

Log Number	Doc Type	Doc Number	Description	Summary
E-04-0016	OD	2722278 (278)	This Operability Determination credited manual compensatory action by the Control Room Operator to override and open the following valves within 10 minutes of a CIAS actuation: 12JHPAUV0001 and 12JHPBUV0002. This compensatory action is necessary to prevent a failure mode of these valves that can occur after 10 minutes of valve actuator exposure to temperatures above 176 F.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0017	DMWO	2521955	This modification replaced steam generator level transmitters as a result of dimensional differences in the replacement SGs. The span of the original level transmitters would not accommodate the new larger SGs.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0019	DMWO	2752630/2513813	This modification involved the "Use As Is" disposition of foreign materials (such as particulate residue and graphite gasket materials) that have been identified in the interior portions of the Unit 3 Pressurizer lower shell region.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).
E-04-0021	LDCR	03-F056	This revision to the UFSAR incorporates the new Steam Generator Tube Rupture (SGTR) event safety analyses into UFSAR Section 15.6.3. The SGTR analysis were performed in support of PVNGS Unit 2 Power Uprate (PUR) license amendment request for operation at 3990 MWt Rated Thermal Power (RTP) with Replacement Steam Generators (RSG). The analyses were reviewed and approved by the NRC in the SER for TS Amendment #149 for Unit 2. Later, analysis of SGTR with Loss of Off-site Power (SGTRLOP) was revised in Reference 2 to correct an error in the original Analyses of Record (AOR) and became the AOR for that event.	This change does not require prior NRC approval in accordance with 10CFR50.59(c)(1).