Power Reactor Event # 52670

Site: PALO VERDE **Notification Date / Time:** 04/07/2017 14:49 (EDT)
Unit: 1 2 3 **Region:** 4 **State :** AZ **Event Date / Time:** 04/05/2017 (MST)
Reactor Type: [1] CE,[2] CE,[3] CE **Last Modification:** 04/07/2017
Containment Type: DRY AMB DRY AMB DRY AMB

NRC Notified by: DAVID HECKMAN **Notifications:** MICHAEL VASQUEZ R4DO
HQ Ops Officer: JEFF ROTTON PART 21/50.55 REACTOR EMAIL
Emergency Class: NON EMERGENCY
10 CFR Section:
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE

Unit	Scram Code	RX Crit	Init Power	Initial RX Mode	Curr Power	Current RX Mode
1	N	Yes	100	Power Operation	100	Power Operation
2	N	Yes	100	Power Operation	100	Power Operation
3	N	Yes	100	Power Operation	100	Power Operation

PART 21 - CIRCUIT BREAKER DEFECT DISCOVERED DURING CURRENT INJECTION TESTING

"On April 5, 2017, Arizona Public Service Company (APS) completed an evaluation of a deviation, and concluded the condition represented a defect under 10 CFR 21. APS previously submitted an interim report (ADAMS Accession Number ML 16344A118) for this condition pursuant to 10 CFR 21.21(a)(2).

"A GE-Hitachi Type AKR-2BE-50, 2000 Amp circuit breaker (used to connect Class 1E batteries to the related Class 1E 125 VDC busses) exhibited arcing and smoking during current injection testing performed to test the overcurrent trip setpoint prior to installation. Arcing occurred at one of two hex bolts anchoring the protective trip device to the line side bus. The electrical arcing resulted from inadequate tightening of both hex bolts which caused a loose electrical connection on the bus within the breaker.

"APS concluded this condition could result in the breaker failing to perform its safety function and thus could create a substantial safety hazard. The breaker had been refurbished by GE-Hitachi and was received by APS and tested on October 13, 2016. Following the test failure, the damaged bolt was replaced, both bolts were tightened, and the breaker was retested and installed.

"Pre-installation inspection and testing that includes current injection testing, recommended in GEH document GEK-64459, should, and did, detect faults such as the condition identified in this notification. GE-Hitachi entered this failure into their corrective action program.

"Vendor: GE HITACHI NUCLEAR ENERGY, 3901 CASTLE HAYNE RD., WILMINGTON, NC 28402-2819

"Device: Breaker Model AKR-2BE-50, 2000 Amp, Serial No. N8682600001

IE19
NRR

"The NRC Resident Inspector has been informed."

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From: David.Heckman@aps.com
To: Hoc, HOO X
Subject: [External_Sender] RE: ENS call reporting Part 21 Defect
Date: Friday, April 07, 2017 2:47:05 PM
Attachments: Final Scanned.pdf

ATTACHED is the Form 361 worksheet.

From: Heckman, David J
Sent: Friday, April 07, 2017 11:46 AM
To: 'hoo.hoc@nrc.gov'
Subject: ENS call reporting Part 21 Defect

Good afternoon,
I will be placing a call within the next 15 minutes. It is currently 11:44 MST. Attached is the Form 361 worksheet.

David Heckman
Palo Verde Nuclear Generating Station
Regulatory Affairs

NRC FORM 361 (12-2000)

REACTOR PLANT EVENT NOTIFICATION WORKSHEET

U.S. NUCLEAR REGULATORY COMMISSION OPERATIONS CENTER

EN #

NRC OPERATION TELEPHONE NUMBER: PRIMARY -- 301-816-5100 or 800-532-3469*, BACK UPS -- [1st] 301-951-0550 or 800-449-3694*, [2nd] 301-415-0550 and [3rd] 301-415-0553 *Licensees who maintain their own ETS are provided these telephone numbers.

NOTIFICATION TIME	FACILITY OR ORGANIZATION	UNIT	NAME OF CALLER	CALL BACK #
ET / MST	Palo Verde Nuclear Generating Station	1, 2, 3	David Heckman	(623) 393-5932

EVENT TIME & ZONE	EVENT DATE	POWER/MODE BEFORE	POWER/MODE AFTER
n/a MST	n/a	n/a / n/a	n/a / n/a

EVENT CLASSIFICATIONS		1-Hr. Non-Emergency 10 CFR 50.72(b)(1)			(v)(A) Safe S/D Capability AINA
☐ GENERAL EMERGENCY	GEN/AAEC	☐ TS Deviation		ADEV	☐ (v)(B) RHR Capability AINB
☐ SITE AREA EMERGENCY	SIT/AAEC	4-Hr. Non-Emergency 10 CFR 50.72(b)(2)			☐ (v)(C) Control of Rad Release AINC
☐ ALERT	ALE/AAEC	☐ (i)	TS Required S/D	ASHU	☐ (v)(D) Accident Mitigation AIND
☐ UNUSUAL EVENT	UNU/AAEC	☐ (iv)(A)	ECCS Discharge to RCS	ACCS	☐ (xii) Offsite Medical AMED
☐ 50.72 NON-EMERGENCY	(see next columns)	☐ (iv)(B)	RPS Actuation (scram)	ARPS	☐ (xiii) Loss Comm/Asmt/Resp ACOM
☐ PHYSICAL SECURITY (73.71)	DDDD	☐ (xi)	Offsite Notification	APRE	60-Day Optional 10 CFR 50.73(a)(1)
☐ MATERIAL/EXPOSURE	B???	8-Hr. Non-Emergency 10 CFR 50.72(b)(3)			☐ Invalid Specified System Act AINV
☐ FITNESS FOR DUTY	HFIT	☐ (ii)(A)	Degraded Condition	ADEG	Other Unspecified Requirement (Identify)
☒ OTHER UNSPECIFIED REQMT	(see last column)	☐ (ii)(B)	Unanalyzed Condition	AUNA	☒ 10 CFR 21.21(d)(3)(i) NONR
☐ INFORMATION ONLY	NNF	☐ (iv)(A)	Specified System Actuation	AESF	☐ NONR

DESCRIPTION

Include: Systems affected, actuations and their initiating signals, causes, effect on plant, actions taken or planned, etc. *(Continue on back)*

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The NRC resident inspector has been informed.

Vendor: GE HITACHI NUCLEAR ENERGY
3901 CASTLE HAYNE RD
WILMINGTON, NC 28402-2819

Device: Breaker Model AKR-2BE-50,2000 Amp
Serial No N8682600001

NOTIFICATIONS	YES	NO	WILL BE
NRC RESIDENT	☒	☐	☐
STATE(s)	☐	☒	☐
LOCAL	☐	☒	☐
OTHER GOV AGENCIES	☐	☒	☐
MEDIA/PRESS RELEASE	☐	☒	☐

ANYTHING UNUSUAL OR NOT UNDERSTOOD? ☐ YES (explain above) ☒ NO

DID ALL SYSTEMS FUNCTION AS REQUIRED? ☐ YES ☐ NO (explain above)

MODE OF OPERATION UNTIL CORRECTED:

ESTIMATE FOR RESTART DATE:

ADDITIONAL INFO ON BACK ☐ YES ☐ NO