10 CFR 21.21

**BRUCE J RASH**
Vice President
Nuclear Engineering

**Palo Verde**
**Nuclear Generating Station**
P.O. Box 52034
Phoenix, AZ 85072
Mail Station 7602
**Tel** 623 393 5102

102-07393-BJR/DCE
December 9, 2016

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

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2, and 3**
**Docket No. STN 50-528, STN 50-529, and STN 50-530**
**License No. NPF 41, NPF 51, and NPF 74**
**Interim 10 CFR 21 Report for General Electric Hitachi Model AKR-2BE-50 Breaker**

Enclosed please find an interim report for an apparent deviation related to a workmanship problem on a basic component identified during pre-installation testing of a refurbished General Electric Hitachi Model AKR-2BE-50 breaker. This report is being submitted pursuant to 10 CFR 21.21(a)(2).

In accordance with 10 CFR 50.4, copies of this notification are being forwarded to the NRC Regional Office, NRC Region IV and the Senior Resident Inspector.

Arizona Public Service Company makes no commitments in this letter. If you have questions regarding this submittal, please contact Mark McGhee, Nuclear Regulatory Affairs Department Leader, at (623) 393-4972.

Sincerely,

for Bruce Rash

BJR/DCE/akf

Enclosure: Interim 10 CFR 21 Report for General Electric Hitachi Model AKR-2BE-50 Breaker

cc: K. M. Kennedy NRC Region IV Regional Administrator
S. P. Lingam NRC NRR Project Manager for PVNGS
C. A. Peabody NRC Senior Resident Inspector PVNGS

# Enclosure

## Interim 10 CFR 21 Report for General Electric Hitachi Model AKR-2BE-50 Breaker

# Enclosure

Interim Part 21 Report for General Electric Hitachi Model AKR-2BE-50 Breaker

On October 13, 2016, Arizona Public Service Company (APS) identified an apparent deviation related to a workmanship problem identified during pre-installation testing of a refurbished General Electric (GE)-Hitachi Model AKR-2BE-50 breaker. This interim report is being submitted pursuant to 10 CFR 21.21(a)(2).

APS does not have sufficient information to determine if the deviation could result in a substantial safety hazard and is working with the vendor to complete the evaluation. The evaluation is expected to be completed by February 17, 2017.

Pursuant to 10 CFR 21.21(a)(2), the following information is provided related to the apparent deviation:

> A GE-Hitachi Model AKR-2BE-50, 250 VDC, 2000 amp circuit breaker exhibited arcing during long-time current injection testing which is used to test the overcurrent trip setpoint prior to breaker installation. The arcing occurred between a loose hex bolt, which anchors a protective trip device (EC-1) to an internal bus bar on the breaker, and the internal bus bar. The loose hex bolt is not observable during external inspection of the breaker.
>
> The breaker is used by APS at the Palo Verde Nuclear Generating Station (PVNGS) to provide isolation between the Class 1E 125 VDC batteries and the associated Class 1E 125 VDC electrical distribution system.
>
> Information and analysis is needed from the vendor to determine whether the behavior exhibited by the breaker could result in a failure of the breaker to perform its credited safety function.
>
> The breaker was refurbished by GE-Hitachi and received by APS and tested on October 13, 2016.
>
> The breaker was repaired in consultation with GE-Hitachi staff, satisfactorily retested, and installed in PVNGS Unit 3.

The following information is provided:

> Vendor:
> GE-Hitachi Nuclear Energy
> 3901 Castle Hayne Rd
> WILMINGTON, NC 28402-2819
>
> Device:
> Breaker Model AKR-2BE-50, 2000 Amp, 250 VDC
> Serial No N8682600001