

From: Marc Ferdas , RI  
To: Glenn Meyer; Mel Gray  
Date: 3/29/04 4:06PM  
Subject: Alleger's Concerns ??

I think this is the issue that the alleger was referring to. Arrival of parts will take several weeks.

During the 10 year oil tank inspection of the HC 13KV 9-10 breaker, PSEG found all 6 bushings degraded. Each bushing had visible pitting and burns.

The bushings are constructed of a plastic/polymer material made by Westinghouse in the late 70's. According to PSEG, HC is the only place using these type of bushings. These type of bushings are very expensive compared to the standard bushings made of porcelain. The bushings have been inservice the life of the breaker and manufactured in 1982.

Power factor testing results indicated results were over the established threeshold rating of .55. PSEG has identified that the acceptance criteria being used don't apply to the type of bushings HC has. HC has contacted Doble Engineering to get additional information on what is an acceptable power factor. Doble engineering has provided historical performance data, but is not willing to formally establish an acceptance criteria. PSEG review of the data is leaning toward an acceptance range of 1-2% (HC is reviewing previous power factor data and taking some new data and has established an acceptance criteria of 1.5%. Doble Engineering is not aware of any failures of the type of bushings at HC.

The current status of the breakers:

9-10 Breaker <1.5%  
7-8 Breaker <1.5% - Looks to be in worse condition  
1-2 & 6-7 Breaker (non 1E) <1.5% based on 2003 & 2003 data  
4-5 Breaker (non 1E) <1.5% based on 1998 data

PSEG is looking to purchase bushings of each of the 6 breakers (each breaker consists of 6 bushings). PSEG is estimating that the first bushings would be available in 10 weeks.

This item is being considered a restart item, and will require SORC approval.

As new information is gathered I will keep the region informed. I am hoping to get my hands on a "white paper" late tommorrow which better summarizes the issue. At that time I would like to get someone in DRS electrical branch to take a look at it.

Thanks  
Marc S. Ferdas  
Resident Inspector - HC

CC: A. Randolph Blough

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