Halter, Mandy

From: Chan, Tat
Sent: Thursday, January 13, 2011 8:41 AM
To: Halter, Mandy
Cc: Anderson, Harry R; Burroni, Richard J
Subject: RE: Unit 3 480V Switchgear Flood Protection

Mandy,

The system interaction study was performed under the Project Identification PASN IP-3 SIS. Copy of the cover sheet is attached below. Please let me know if I can be of further assistance.

Tat

A-17

From: Halter, Mandy
Sent: Thursday, January 13, 2011 6:58 AM
To: Chan, Tat
Subject: RE: Unit 3 480V Switchgear Flood Protection

Hi Tat,

Can you please provide the document ID number, revision number (or date of document, if appropriate), and complete title name of the system interaction study that you referenced below? I will use this information for documentation purposes in our quarterly inspection report.

Thanks and kind regards,
Mandy

From: Chan, Tat
Sent: Monday, December 20, 2010 9:27 AM
To: Halter, Mandy; Cataldo, Paul C
Cc: Anderson, Harry R; Walpole, Robert W; Conroy, Patric W; Burroni, Richard J; Prussman, Stephen G
Subject: Unit 3 480V Switchgear Flood Protection

Mandy / Paul,

Information regarding Unit 3 480V Switchgear Flood Protection. The analysis between Unit 2 & Unit 3 is slightly different in addressing this issue. For Unit 3, the study is done as part of the Chapter 6 of the System Interaction Study. See attached excerpts and the relevant sections of the FSAR are Chapters 9.6.2.9, 10.2.4 and 16.1.3. Basically, the concern for flooding at Unit 3 480V Switchgear stem from a postulate failure of the Seismic III circulating water pump / piping. Mitigation strategy involves installation of a 4' barrier at the entrance of the cell from the turbine hall and level switches in the piping tunnel. See excerpts of Chapter 16.1.3 below. Please let me know if I can be of further assistance.

<< File: Unit 3 Flooding System Interaction.pdf >>

Tat

Excerpts of FSAR Chapter 16.1.3

No safety related equipment is located in the Turbine Hall. However, flooding from the Turbine Hall could potentially affect the performance of the 480 volt switchgear located in the Control Building at Elevation 15' only if the water reached the elevation of 15'6". Since the Circulating Water System is an open system having absolutely no valves, and therefore no means of producing a high dynamic head, the probability of a failure is practically zero. However, to assure that the 480 volt switchgear would not be adversely affected by flooding , redundant level alarm switches were installed in the pipe tunnel at Elevation 3'3" of the Turbine Hall. These switches sense high water in the pipe tunnel and give an indication to the Control Room. In addition, a barrier was installed at the doorway to the switchgear room to provide protection from flooding up to 19'. The operators have ample time to investigate any flooding problem and take appropriate action by shutting down the circulating pumps to prevent flooding to Elevation 19'.

A DBE seismically induced break of the Turbine Hall Elevation 15'-0" fire protection header could result in flooding of the 480 volt switchgear with a potential loss of all four 480 volt emergency buses. Modification 93-3-433 FRW added six seismic Safety Related supports so that the portion of the Augmented Quality Related piping and deluge valves for the water spray systems for Main, Station, Auxiliary, and Unit Auxiliary Transformers, located in the Control Building, will be capable of withstanding a Design Basis seismic event.

Inadvertent actuation of the Fire Protection System in the electrical tunnels will not potentially affect the performance of safety-related equipment in the Control Building. The electrical tunnels are provided with floor drains to handle water from the cable tray fire protection spray system. These drains discharge to grade outside the tunnel.