

3.13 Secondary Containment and Divisional Separation Zones – Barrier Considerations

The information in this section of the reference ABWR DCD, including all subsections, is incorporated by reference the following departure.

STD DEP T1 3.4-1

3.13.4.1 Overall Perspective

STD DEP T1 3.4-1

The same subject structures, systems and barriers are also evaluated for less probable and more severe consequence events. These include unrecoverable breaks inside containment, breaks outside containment without immediate isolation, SBO events, loss of all ~~MUX~~ data communication, ATWS, Loss of Immediate Core Cooling, etc. All of these events were treated with probabilistic analysis methodologies in Section 19.

3.13.7.1 Overview

STD DEP T1 3.4-1

Special attention has been given to environmentally sensitive equipment, especially to equipment located with the Reactor Building, the Secondary Containment or the Divisional Separation Zones which are required or utilized in safe shutdown operations. Certain digital, solid-state electronic I&C equipment falls into this category, (e.g. safety-related remote ~~multiplex units (RMUs)~~ digital logic controllers (RDLCs)).

3.13.7.2 Reactor Building Housed Equipment

STD DEP T1 3.4-1

Safety-related ~~RMUs~~ RDLCs and other ~~MUX~~ data communication equipment are housed in EEE rooms. Severe plant event effects do not effect their safety functions. They are inherently unaffected by their own heat sources. They are also capable of prolonged loss of HVAC services due to their environmental locations and their low self heatup characteristics. Since there are three I&C divisions, environmental effects in one will not negate any demanded safety functions from the other locations.

3.13.7.3 Secondary Containment Housed Equipment

STD DEP T1 3.4-1

No safety-related environmentally sensitive I&C equipment resides inside Secondary Containment (e.g. ~~RMUs~~ ECFs). Some non-safety related operational ~~MUX~~ Plant Data Network (PDN) equipment (e.g. ~~RMUs~~) are is housed in the Secondary Containment. Their failure or mal-operation due to abnormal secondary containment conditions will not negate safety-related equipment abnormal event functions. The safety-related equipment in the RB/EEE rooms and the qualified safe shutdown equipment in the secondary containment will accomplish their safety function regardless of any non-safety system failures due to environmental conditions.

