2.5.6 Combined License Information for Embankments and Dams

Site-specific information about the static and dynamic stability of embankments and dams, the failure of which could adversely affect the nuclear island is addressed below.

Figure 2.5.4-245 shows the combined power block and cooling tower area positioned on a roughly triangular-shaped cut and filled area that is approximately 2,800 feet x 5,400 feet in maximum plan dimensions. This area is discussed in Subsection 2.5.5.1.1. The ground slopes away from the perimeter of the area except toward Unit 1, (*i.e.,* the power block area is generally higher than its immediate surroundings) (see Figure 2.5.4-245). Thus, there are no dams or embankments required to protect this area. There are no water bodies within or adjacent to the power block area that would require dams or embankments. There are several run-off basins at low spots around the site. These are excavated ponds and thus any failure would involve internal collapse with no adverse effect on safety-related structures. Where these basins are near the edge of external slopes, any failure of the slope would send water away from the plant.

Subsections 2.4.3 and 2.4.4 discuss the maximum flood elevation of the Parr Reservoir due to the probable maximum flood and the failure of upstream dams on the Broad River. The resulting maximum flood elevations are considerably lower than the design plant grade elevation of 400 feet. In addition, Subsection 2.4.3 demonstrates that under maximum wind setup and wave run-up in the Monticello Reservoir, flooding protection measures for Unit 1 and natural swales between the Monticello Reservoir and Units 2 and 3 will prevent flooding. Therefore, no dams or embankments are necessary for flood protection of Units 2 and 3.

2.6 References

1. American Concrete Institute (ACI), “Building Code Requirements for Structural Concrete,” ACI 318-02.

2. NUREG/CR-0693, “Seismic Input and Soil Structure Interaction,” February 1979.

3. APP-GW-GLR-115, “Effect of High Frequency Seismic Content on SSCs,” Westinghouse Electric Company LLC.