CHAPTER 2 UNRESOLVED RAIS

UR-SRP2.4-RHEB-01-01

The first groundwater question in RAI-SRP2.4-RHEB-01 asked the applicant to clarify their definition of normal groundwater elevation in Tier 2 of the DCD. In letter DCP/NRC2264, the applicant stated that Table 5.0-1 of Tier 1 defines the maximum ground level as plant elevation 98 ft and that Table 5.0-1 of Tier 1 defines the Maximum Flood Level as Plant elevation 100 ft. The applicant also stated that the reference to normal ground water is to all times except when there is surface water flooding. The NRC Staff find this response to be unacceptable because the applicant does not specify the maximum groundwater level, but instead allows an exception to the groundwater level under certain conditions. This issue is unresolved RAI **UR-SRP2.4-RHEB-01-01**.

UR-SRP2.4-RHEB-01-02

The third groundwater question in RAI-SRP2.4-RHEB-01 asked the applicant to specify the maximum allowed water table elevation and how long this elevation be sustained without an increase in safety risk. The applicant responded to this question in letter DCP\NRC2264, by stating that the normal water table elevation is expected to be exceeded only during surface water flooding events and that while surface water flooding may impede access to the AP1000, the AP1000 is designed to cope with impeded access for a period of seven days. The NRC staff finds this response unacceptable and this is unresolved RAI **UR-SRP2.4-RHEB-01-02**.

UR-SRP 2.5-RGS1-03

In response to RAI-SRP 2.5-RGS1-03, the applicant revised DCD Section 2.5.2.1 by eliminating the sentence containing “thin soil layer” and “soft soil layer,” and replacing “median estimate” with “minimum estimate.” The applicant also referred detailed information regarding acceptance criteria for foundation soil to Section 3.7.1.4 of the DCD. After review of these revisions to the DCD, as well as the acceptance criteria for foundation soils found in Section 3.7.1.4 of the DCD, the staff determines that this information is insufficient to resolve the issues of RAI-SRP 2.5-RGS1-03 because the acceptance criteria and basis are inadequate to show the comparison of the acceptance criteria and the sixth screening requirement. Therefore, the staff considers this issue as unresolved RAI **UR-SRP 2.5-RGS1-03**.

UR-SRP2.5-RGS1-04

The staff considered these revisions of the AP1000 DCD, and finds that although the revised DCD added two separate sections to define when a 2D or 3D analysis would be required, it did not fully address the concerns of the staff, as described in RAI-SRP 2.5-RGS1-04, as well as in RAI TR85-SEB1-07 and RAI TR01-015, on why 2D SSI analysis would be adequate for AP1000 structure where loads are not evenly applied on its foundation - the 3D effect obviously needs to be considered in site-specific analysis for site conditions outside the certified design, therefore the staff considers this to be unresolved RAI **UR-SRP 2.5-RGS1-04**.

UR-SRP2.5-RGS1.09

After reviewing the applicant's response, including the revision of the DCD, explanation of the allowable bearing capacity and the site-specific nature of the factor of safety, the staff concludes that the applicant provided adequate information to address all three areas of concern identified in RAI-SRP 2.5-RGS1-09. However, since RAI-SRP 2.5-RGS1-09 also relates to structural engineering related RAI (RAI –TR85-SEB1-03), the staff does not consider the RAI resolved until the structural engineering concerns have been adequately addressed. This is unresolved RAI **UR- SRP 2.5-RGS1-09**.

UR-SRP 2.5-RGS1-15

Based on review of the applicant's responses to the five issues of Question 6 of RAI-SRP 2.5-RGS1-15, including the revisions to the DCD and the resolution of the referenced RAI-SRP 2.5-RGS1-02, RAI-SRP 2.5-RGS1-03, and RAI-SRP 2.5-RGS1-04, the staff concludes that although the applicant provided adequate resolutions on all staff's concerns identified in Issue 6 of Question 3 of RAI-SRP 2.5-RGS1-15, the AP1000 DCD Rev. 17, Tier 2 Table 2-1 does not completely reflect the resolution, therefore, the staff considers RAI-SRP 2.5-RGS1-15 is unresolved RAI **UR-SRP 2.5-RGS1-15**.