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UNITED STATES NUCLEAR REGULATORY COMMISSION
Protecting People and the Environment

Vogtle ESP Mandatory Hearing

March 23-25, 2009

NRC Staff Presentation Topic #10

Proposed Permit Conditions

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Permit Conditions

Definition:

The Commission's regulations at 10 CFR 52.24 require an ESP to specify any terms and conditions of the ESP the Commission deems appropriate. A permit condition is not needed when an existing NRC regulation requires a future regulatory review of a matter to ensure adequate safety during design, construction, or inspection activities for a new plant.

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Examples of when to use a Permit Condition:

- The staff's evaluation in the SER rests on an assumption that is not currently supported, and which is practicable to support only after ESP issuance (e.g., subsurface condition discovered upon excavation for foundation construction)
- A site physical attribute is not acceptable for the design of systems, structures, and components (SSCs) important to safety (such a condition may call for action to remedy the deficiency. e.g., cracked or weathered rock that is not acceptable for bearing foundation loads is replaced or filled with lean concrete or otherwise treated so as to be acceptable)
- The staff's evaluation depends on a future act (e.g., a state regulatory approval may be called for)

Permit Conditions

Vogtle ESP FSER Permit Conditions

- PC 1: The ESP holder shall either remove and replace, or shall improve, the soils directly above the Blue Bluff Marl for soils under or adjacent to Seismic Category 1 structures, to eliminate any liquefaction potential.
  - The ESP application states that portions of the soil above the Blue Bluff Marl are susceptible to liquefaction. In order to support the applicant's proposed site characteristic that there is no liquefaction potential at the VEGP ESP site, the applicant stated that it would need to remove the soil directly above the Blue Bluff Marl. Therefore the staff is proposing a permit condition to ensure this future act occurs.

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- PC 2 and 3: An applicant for a combined license (COL) referencing this early site permit shall revise the EALs for both Units 3 and 4 to reflect the final revision of NEI 07-01.
  - The applicant submitted its EALs for Units 3 and 4 based on guidelines in NEI 07-01, "Methodology for Development of Emergency Action Levels (EALs), Advanced Passive Light Water Reactors." NEI 07-01 proposes EAL guidelines for passive plant designs, including the AP1000. The Staff is reviewing NEI 07-01, and while changes to NEI 07-01 may result from this review, the Staff anticipates that it will endorse the final version of the NEI 07-01 guidelines in RG 1.101. The applicant indicated its intention to revise the EALs as NEI 07-01 is revised. Permit Conditions 2 and 3 therefore require that a COL applicant referencing this ESP update the EALs using the final revision of the EAL guidelines.

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- PC 4 and 5: An applicant for a combined license (COL) referencing this early site permit shall submit a fully developed EAL scheme for both Units 3 and 4 that reflects the completed AP1000 design details, subject to allowable ITAAC.
  - Since EALs rely on specific design details that are unavailable at the ESP stage, these permit conditions require that the applicant's EAL scheme be consistent with the final AP1000 certified design that is referenced in any COL application referencing the ESP.

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- PC 6 and 7: An applicant for a combined license (COL) referencing this early site permit shall complete a fully developed set of EALs for both Units 3 and 4, which are based on in-plant conditions and instrumentation, including onsite and offsite monitoring, and which have been discussed and agreed on by the applicant or licensee and State and local governmental authorities, and shall include the full set of EALs in the COL application. If the EALs are not fully developed, the COL application shall contain appropriate ITAAC for the fully developed set of EALs for both Units 3 and 4.
  - The purpose of these conditions is to ensure that the EAL scheme submitted meets the requirements of 10 CFR 50.47 and 10 CFR Part 50 Appendix E.

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- PC 8: An applicant for a combined license (COL) referencing this early site permit shall resolve the difference between the VEGP Units 3 and 4 common Technical Support Center (TSC), and the TSC location specified in the AP1000 certified design.
  - In the ESP application, the applicant has proposed a common TSC for VEGP Units 3 and 4. The staff has reviewed and approved the common TSC for the VEGP site, but recognizes that the AP1000 certified design has a separate TSC for each reactor and that design amendments to the AP1000 under consideration could affect the basis for the Staff's ESP determination. Therefore a COL applicant referencing this ESP and the AP1000 certified design will need to address this difference.

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- PC 9: If a COL or CP application referencing this ESP also references a certified design, the COL or CP applicant may demonstrate compliance with the radiological consequence evaluation factors in 10 CFR 52.79(a)(1) or 10 CFR 50.34(a)(1), respectively, by demonstrating that the site-specific χ/Q values determined in the ESP fall within those evaluated in the approval of the referenced certified design. However, if a COL or CP referencing this ESP does not reference a certified design, the applicant would still need to demonstrate that its source term is bounded by the source term values included in the ESP.
  - The purpose of this condition is to allow a COL applicant referencing the ESP and a certified design to rely on the radiological consequence evaluation approved in the certified design if the design certification χ/Q values are bounding, but to require a COL applicant that references a custom design to demonstrate that the source term values for the custom design are bounded by those included in the ESP.

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