From: "Taplett, Kenneth" <kjtaplett@STPEGS.COM>
To: "Mohan Thadani" <MCT@nrc.gov>
Date: 09/13/2007 1:36:29 PM
Subject: FW: Emailing: STP AST LAR RAI Submittal 2.wpd

Mohan,

Here is the one from the TS Branch.

Ken

From: Mohan Thadani [mailto:MCT@nrc.gov]
Sent: Tuesday, July 24, 2007 10:23 AM
To: Harrison, Albon; Taplett, Kenneth
Cc: Aron Lewin; David Nold; Timothy Kobetz
Subject: Emailing: STP AST LAR RAI Submittal 2.wpd

Ken/Wayne:

By letter dated March 22, 2007, STP Nuclear Operating Company (STPNOC), the licensee for South Texas Project, Units 1 and 2, submitted proposed amendments to Technical Specifications related to the application for the alternate source term (ML070890474). The NRC staff has reviewed the STPNOC submittal and has determined that additional information is needed to complete its review. A preliminary request for Additional Information (RAI) is attached. I request that you provide an estimated date by which you can provide your response. I will document this request by regular mail.

Thanks.

Mohan

South Texas Project (STP) Units 1 and 2 Nuclear Power Plant
License Amendment Request (LAR)
Preliminary Request for Additional Information (RAI)
Regarding, "Request for License Amendments Related to
Application for the Alternate Source Term" (MD4996 and MD4997)

1. Discuss how the proposed amendment request satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii), since there is no TS that assures that fuel will not be handled prior to the decay time assumed in the Fuel Handling Accident analysis, or that mitigating systems will be in place if fuel is handled prior to this decay time.

   Background: The STP Nuclear Operating Company (STPNOC) LAR states that the Fuel Handling Accident (FHA) analysis was performed with a decay time such that the impacted engineered safety features are not required at any time that fuel is being moved. The LAR also states that the decay time is listed in the Technical Requirements Manual which precludes the movement of irradiated fuel until a 42 hour decay time has occurred following the achievement of subcriticality. As a result, the STPNOC LAR deletes the Technical Specification (TS) requirements for various engineered safety features and systems associated with the movement of irradiated fuel.

   Specifically, the LAR proposes:

   ●Modes 5 and 6 for Functional Unit 3.b.4, "Containment Ventilation Isolation RCB Purge Radioactivity - High," are deleted as APPLICABLE MODES in Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," because automatic isolation is no longer required during core alterations or movement of irradiated fuel within containment to meet the AST design basis accident analysis. ACTION 18 is modified appropriately.

   ●Modes 5 and 6 for Functional Unit 10, "Control Room Ventilation," are deleted as APPLICABLE MODES in Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," because the accident mitigation capabilities of this system are no longer credited in AST design basis accident analysis for activities performed during these MODES.

   ●The ACTION 28 requirement for Functional Unit 10.d, "Control Room Intake Air Radioactivity - High," in Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," is modified to delete suspension of core alterations, movement of irradiated fuel, and crane operation with loads over the spent fuel pool because the accident mitigation capabilities of this system are no longer credited in AST design basis accident analysis during these activities.

   ●The requirement for an operable Functional Unit 11, Fuel Handling Building (FHB) Heating, Ventilation and Air Conditioning (HVAC), actuation instrumentation is deleted in Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," since the accident mitigation capabilities of the FHB HVAC system are no longer credited in AST design basis accident analysis.

●The trip setpoints and allowable values for Functional Unit 11.a, “FHB HVAC,” are deleted in Table 3.3-4, “Engineered Safety Features Actuation System Instrumentation Trip Setpoints,” since the accident mitigation capabilities of this system are no longer credited in AST design basis accident analyses.

●Modes 5 and 6 for Functional Unit 3.b.4, “Containment Ventilation Isolation RCB Purge Radioactivity - High,” are deleted as APPLICABLE MODES in Table 4.3-2, “Engineered Safety Features Actuation System Instrumentation Surveillance Requirements,” because automatic isolation is no longer required during core alterations or movement of irradiated fuel within containment to meet the AST design basis accident analysis.

●Modes 5 and 6 for Functional Unit 10, “Control Room Ventilation,” are deleted as APPLICABLE MODES in Table 4.3-2, “Engineered Safety Features Actuation System Instrumentation Surveillance Requirements,” because the accident mitigation capabilities of this system are no longer credited in AST design basis accident analysis for activities performed during these MODES.

●The requirement for performing surveillances for Functional Unit 11, Fuel Handling Building (FHB) Heating, Ventilation and Air Conditioning (HVAC), actuation instrumentation is deleted in Table 4.3-2, “Engineered Safety Features Actuation System Instrumentation Surveillance Requirements,” because the accident mitigation capabilities of the FHB HVAC system are no longer credited in AST design basis accident analysis.

●The APPLICABILITY for Modes 5 and 6 is deleted in TS 3/4.7.7, “Control Room Makeup and Cleanup Filtration System.” Requirements to suspend all operations during core alterations, movement of irradiated fuel, and crane operation with loads over the spent fuel pool are deleted because the accident mitigation capabilities of this system are no longer credited in AST design basis accident analysis during these activities.

●ACTION C for MODES 1, 2, 3,and 4 in TS 3/4.7.7, “Control Room Makeup and Cleanup Filtration System,” is modified to delete the requirements to suspend all operations involving movement of spent fuel and crane operations with loads over the spent fuel pool because the accident mitigation capabilities of this system are no longer credited in AST design basis accident analysis.

●TS 3/4.7.8, “Fuel Handling Building (FHB) Exhaust Air System,” is deleted because the accident mitigation capabilities of the FHB Exhaust Air HVAC system are no longer credited in AST design basis accident analysis.

●The actions to suspend movement of irradiated fuel or crane operation with loads over the spent fuel pool if the Limiting Condition for Operation is not met are deleted in TS 3.8.1.2, “A.C. Sources Shutdown,” TS 3.8.1.3, “A.C. Sources Shutdown,” TS 3.8.2.2, “D.C. Sources Shutdown,” and TS 3.8.2.3, “Onsite Power Distribution Shutdown,” because the fuel handling accident analysis no longer credits the mitigation systems that are dependent upon these sources of electrical power.

●TS 3/4.9.4, “Containment Building Penetrations during Refueling Operations,” and TS 3/4.9.9, “Containment Ventilation Isolation during Refueling Operations,” are deleted because containment isolation is no longer credited in AST design basis accident analysis during core alterations or movement of irradiated fuel.

●TS 3/4.9.12, “Fuel Handling Building Exhaust Air System during Refueling Operations,” is deleted because the accident mitigation capabilities of the FHB HVAC system are no longer credited in AST design basis accident analysis.

Although the Technical Requirements Manual precludes the movement of irradiated fuel until a 42 hour decay time has occurred following the achievement of subcriticality, Criterion 2 of 10 CFR 50.36(c)(2)(ii) states that a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier requires the establishment of a technical specification limiting condition for operation. Since the FHA analysis assumes a decay time prior to fuel handling, a TS that provides assurances that fuel will not be handled prior to this decay time, or that mitigating systems will be in place if fuel is handled prior to this decay time, is required by Criterion 2 of 10 CFR 50.36(c)(2)(ii).

As a reference, NUREG-1431, “Westinghouse Plants, Rev. 3 STS Vol. 1, Specifications,” contains various LCOs and CONDITIONS that are only applicable during the movement of recently irradiated fuel. Some examples include TS 3.3.6, “Containment Purge and Exhaust Isolation Instrumentation,” TS 3.3.7, “Control Room Emergency Filtration System (CREFS) Actuation Instrumentation,” TS 3.3.8, “Fuel Building Air Cleanup System (FBACS) Actuation Instrumentation,” TS 3.8.2, “AC Sources - Shutdown,” and TS 3.9.4, “Containment Penetrations.”

2. Discuss how Regulatory Commitment #8 is an appropriate corrective action for ensuring that the dosage limits in 10 CFR 50.67 are not exceeded.

   Background: The STPNOC LAR states that Westinghouse Electric Company Nuclear Safety Advisory Letter NSAL-06-15, dated December 13, 2006, advised operators of Westinghouse plants that the single failure scenario for the steam generator tube rupture (SGTR) analysis may not be limiting. The STP current SGTR analysis and the SGTR analysis presented in the safety evaluation for the LAR assumes a failed open SG power operated relief valve as the limiting single failure as far as assumed total steam release. The LAR also states that an evaluation of NSAL-06-15 has resulted in a revised conclusion that the failed open MSIV results in the greater steam release at STP.

   Due to the above non conforming condition, STP is currently operating under an administrative limit for reactor coolant system dose equivalent iodine that is lower than the Technical Specification limit. Regulatory Commitment #8 states that until a plant modification is completed for supporting the limiting single failure assumptions in the SGTR analysis, STP will maintain an administrative limit for reactor coolant system dose equivalent iodine so that the radiological dose limits for the SGTR analysis remain bounding.

NRC Administrative Letter 98-10 states that “Imposing administrative controls in response to an improper or inadequate TS is considered an acceptable short-term corrective action. The staff expects that, following the imposition of administrative controls, an amendment to the TS, with appropriate justification and schedule, will be submitted in a timely fashion.” Administrative Letter 98-10 references NRC staff positions in Generic Letter 91-18, which has since been superceded by Regulatory Issue Summary (RIS) 05-020. RIS 05-020 states that “In determining whether the licensee is making reasonable efforts to complete corrective actions promptly, the NRC will consider safety significance, the effects on operability, the significance of the degradation, and what is necessary to implement the corrective action. The NRC may also consider the time needed for design, review, approval, or procurement of the repair or modification; the availability of specialized equipment to perform the repair or modification; and whether the plant must be in hot or cold shutdown to implement the actions.”

In order to determine whether the licensee is making reasonable efforts to complete corrective actions promptly, and to determine if a Regulatory Commitment is appropriate, the NRC staff require the following:

1.With respect to 10 CFR 50.67, discuss the dosage that a Control Room Operator and a person at the Exclusion Area Boundary (EAB) or Low Population Zone (LPZ) would currently receive during a SGTR with a failed open MSIV as the limiting single failure assumption, assuming that the RCS specific activity was at the TS 3.4.8, “RCS Specific Activity” limits.

2.In further detail, discuss the proposed plant modification stated in Regulatory Commitment #8 so that the SGTR accident analysis performed for the LAR will be consistent with the plant response to this event after the modification is completed.

3.Discuss any expected timelines associated with completing the plant modification so that the SGTR accident analysis performed for the LAR will be consistent with the plant response to this event after the modification is completed.

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