From: Vaidya, Bhalchandra
Sent: Thursday, April 08, 2010 7:24 AM
To: 'Dorman, Eugene'; 'Pechacek, Joseph'
Cc: Salgado, Nancy; Kemper, William; Chung, Pong; Rahn, David
Subject: James A. FitzPatrick Nuclear Power Plant, ME1819, LAR-Follow-up Request for Information (RAIs) from EICB

By application dated July 31, 2009, Entergy proposed license amendment to change James A Fitzpatrick Nuclear Power Plant (JAFNPP), Technical Specifications (TSs). The proposed change revises the TS and associated Bases to modify the TS Surveillance Requirements (SR) for testing of
the Residual Heat Removal System Shutdown Cooling (SDC) mode Containment Isolation, Reactor Pressure – High Function by replacing the current requirement to perform TS SR 3.3.6.1.3, perform channel calibration with TS SRs 3.3.6.1.1 perform channel check, 3.3.6.1.2, perform channel functional test, 3.3.6.1.4, calibrate the trip units, and 3.3.6.1.5, perform channel calibration. This change was needed to support the plant modification to increase the reliability of SDC isolation logic by changing the source of the reactor pressure high input signal.

The NRC Instrumentation and Controls Branch (EICB) has reviewed the supplemental submission dated March 5, 2010, responding to the previous RAIs and has determined that the following additional information is needed to complete the review. There was a tele-conference between the NRC staff and JAFNPP on April 5, 2010, and the staff's concerns regarding follow-up RAIs were discussed.
The follow-up RAIs are provided below:

JAMES A FITZPATRICK NUCLEAR POWER PLANT, REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT RELATED TO SDC SYSTEM ISOLATION, REACTOR PRESSURE - HIGH (TAC NO. ME1819)

1. In attachment 1, on page 3, of the licensee's RAI response letter dated March 5, 2010 (JAFP-10-0033), it states in the first paragraph:

   "Following performance…to review the completed procedure to ensure acceptance criteria was satisfied and that "As-Found" and "As-left" values are within their required tolerance."

   And in the second paragraph, it states:

   "If a Condition Report documents that an instrument failed to meet Level 1 acceptance criteria and could not be restored to within tolerance, the instrument would be declared INOPERABLE and the appropriate Condition associated with the applicable Limiting Condition for Operation (LCO) would be entered."

   a. Clarify the use of the terms and provide the values of the "acceptance criteria", the "required tolerances", and "Level 1 acceptance criteria."

   b. Provide the detailed calculation and/or determination of "As-Found" and "As-Left" setting tolerances of the entire instrument loop.

2. In attachment 2, section 8.2.3, of the licensee's RAI response, it states:

"Use of the reactor steam dome pressure measurement (ATTS) to provide the SDC isolation function will result in the utilization of an instrument loop that has a larger instrument uncertainty than originally provided by the pressure switches."

The licensee calculated the allowable value (section 6.5, attachment 2 of the RAI response) by applying the "method 3" of ISA-RP67.04.02-2000. The licensee also calculated the limiting trip setpoint LTS = EAL – CU (section 6.4) with a round up margin of 0.72 psig (section 6.3.1). However, the round up of $AVTSM_{Channel}$ from ±14.67 psig to ±15 psig increases the allowance for instrument channel deviation (section 6.3.1); thus is less conservative and cannot be counted as an addition margin.

Explain how you can ensure that the field trip setpoint is conservative with respect to the analytical value (AL) with "method 3" and with such a small margin in the LTS calculation.

3. In attachment 2, Table 1, of the licensee's RAI response, it states that the humidity, radiation, and temperature effects for the total loop uncertainty calculation of pressure transmitters and ATTS under LOCA and HELB conditions are same as those under normal condition. This statement is based on assumption 1.2.6. Assumption 1.2.6 states that "DBD-010 (Ref 4.2.11) identifies the SDC Isolation function as not having any accident mitigating functions." However, according to TS Table 3.3.6.1-1 (page 5 of 6), function 6a "SDC Isolation, Reactor Pressure – Hi" is used to initiate a primary containment isolation function. Assumption 1.2.6 seems to contradict with this TS requirement. Please provide the following:

   a. Where the pressure transmitter 02-3PT-55A/D is located (inside or outside the primary containment)?

   b. What are the worst-case environmental conditions at the locations for the transmitters and ATTS?

   c. What are the worst-case environmental conditions under which the SDC isolation valves are required to be actuated?

   d. Provide a clarifying description regarding the conditions under which the function of this instrument channel is required when using the SDC line that resolves the apparent contradiction between assumption 1.2.6 and the TS requirement of function 6a in the TS Table 3.3.6.1-1 (page 5 of 6).

   e. Provide copies of the source documents that justify the values for seismic, radiation, humidity, and temperature values used in the calculation, JAF-CALC-NBS-02052.

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Please contact me, if you need additional clarification of this request. If not, provide a firm commitment for the response to this request.

Bhalchandra K. Vaidya
Licensing Project Manager
NRC/NRR/DORL/LPL1-1
(301)-415-3308 (O)
bhalchandra.vaidya@nrc.gov

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Subject: James A. FitzPatrick Nuclear Power Plant, ME1819, LAR-Follow-up Request for Information (RAIs) from EICB
Sent Date: 04/07/2010 3:15:13 PM
Received Date: 04/08/2010 7:23:00 AM
From: Vaidya, Bhalchandra

Created By: Bhalchandra.Vaidya@nrc.gov

Recipients:
EDorman@entergy.com ('Dorman, Eugene')
Tracking Status: None
JPechac@entergy.com ('Pechacek, Joseph')
Tracking Status: None
Nancy.Salgado@nrc.gov (Salgado, Nancy)
Tracking Status: None
William.Kemper@nrc.gov (Kemper, William)
Tracking Status: None
Pong.Chung@nrc.gov (Chung, Pong)
Tracking Status: None
David.Rahn@nrc.gov (Rahn, David)
Tracking Status: None

Post Office:

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