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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Response to a Request for Additional Information Regarding ANP-10275P "U.S. EPR Instrument Setpoint Methodology Topical Report" (TAC No. MD4976)

Ref. 1: Letter, Ronnie L. Gardner (AREVA NP Inc.) to Document Control Desk (NRC), "Request for Review and Approval of ANP-10275P, 'U.S. EPR Instrument Setpoint Methodology Topical Report'," NRC:07:009, March 26, 2007.

Ref. 2: Letter, Getachew Tesfaye (NRC) to Ronnie L. Gardner (AREVA NP Inc.), "Request for Additional Information Regarding ANP-10275P, 'U.S. EPR Instrument Setpoint Methodology Topical Report' (TAC No. MD4976)," July 25, 2007.

Ref. 3: Letter, Getachew Tesfaye (NRC) to Ronnie L. Gardner (AREVA NP Inc.), "Acceptance for Review of ANP-10275P, 'U.S. EPR Instrument Setpoint Methodology Topical Report' (TAC No. MD4976)," May 3, 2007.

AREVA NP Inc. (AREVA NP) requested the NRC's review and approval of ANP-10275P, "U.S. EPR Instrument Setpoint Methodology Topical Report" in Reference 1. The NRC provided a Request for Additional Information (RAI) regarding this topical report in Reference 2. The response to this RAI is enclosed with this letter, ANP-10275Q1, "Response to a Request for Additional Information ANP-10275P, 'U.S. EPR Instrument Setpoint Methodology Topical Report'."

The RAI response does not contain any information that AREVA NP considers to be proprietary.

AREVA NP plans to reference the topical report ANP-10275P in its Design Control Document (DCD) for the U.S. EPR. Reference 3 states that the NRC plans to complete its review of the topical report and issue the draft safety evaluation by October 31, 2007. AREVA NP understands that this timely response to the RAI supports the scheduled deliverable of the draft safety evaluation.

AREVA NP INC.
An AREVA and Siemens company

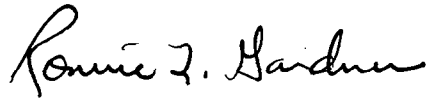
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MRO

If you have any questions related to this submittal, please contact Ms. Sandra M. Sloan, Regulatory Affairs Manager for New Plants Deployment. She may be reached by telephone at 434-832-2369 or by e-mail at sandra.sloan@areva.com.

Sincerely,

A handwritten signature in black ink, reading "Ronnie L. Gardner". The signature is written in a cursive, flowing style.

Ronnie L. Gardner, Manager
Site Operations and Corporate Regulatory Affairs
AREVA NP Inc.

Enclosures

cc: L. Burkhardt
G. Tesfaye
Project 733

Response to a Request for Additional Information – ANP-10275P
“U.S. EPR Instrument Setpoint Methodology Topical Report”
(TAC No. MD4976)

RAI 1: *The setpoint methodology added a margin to the instrument channel uncertainty (CU) to derive the nominal trip setpoint (NTSP) from the analytical limit (AL). Provide the criteria regarding how much the margin has been added to the CU.*

Response 1:

The amount of margin added to the channel uncertainty calculation is discretionary. There is no set value (e.g. 5% or 10%). Reasons for including margin range from simply rounding to the nearest engineering unit on the conservative side to a larger rounding of several engineering units. It takes into consideration the operating parameter values to avoid spurious trips. It may include room for some of the assumptions used for the development of initial uncertainty calculations. Calculations developed during detailed design will determine the plant specific values for the AL, limiting trip setpoint (LTSP), NTSP, and margin.

RAI 2: *This topical report states that the instrument is declared inoperable if the As-Found (AF) value exceeds the Allowable Value (AV). Difference between AF and AV is a value of the margin. Justify why the AF tolerance is not used to determine the operability of the channel (instrument).*

Response 2:

The statement in the topical report is consistent with the following guidance in RIS 2006-17 (starting in the last paragraph of page 3):

“The acceptance criteria band should be derived from the licensee’s setpoint methodology, including use of generic or plant-specific data. If the as-found TSP exceeds the AV in TSs the channel is inoperable and the associated action requirements are followed. If the change in the measured TSP exceeds the predefined limits but the measured TSP is conservative with respect to the AV, and the licensee determines during the surveillance that the instrument channel is functioning as expected and can reset the channel to within the setting tolerance (amount by which as-left setting value is permitted to differ from NSP) of the NSP, then the licensee may restore the channel to service and the condition is entered into the licensee’s corrective action program for further evaluation. However, if during the surveillance the change in the measured TSP exceeds the predefined limits and the licensee cannot determine that the instrument channel is functioning as required, then the instrument is declared inoperable and the associated TS actions are followed. It is NRC staff’s position that verifying that the as-found TSP is within the acceptance band limits during test or calibration is part of the determination that an instrument is functioning as required.”

The guidance cited in the above paragraph does not require the AF tolerance to be used for operability determination unless the licensee cannot determine that the instrument channel is functioning as required.

As proposed by the Combustion Engineering owners group, the following is the proposed bases change for technical specifications task force document TSTF 493, Rev. 2:

"However, use of the [LTSP] to define OPERABILITY in Technical Specifications would be an overly restrictive requirement if it were applied as an OPERABILITY limit for the "as -found" value of a protective device setting during a Surveillance. This would result in Technical Specification compliance problems, as well as reports and corrective actions required by the rule which are not necessary to ensure safety. For example, an automatic protective device with a setting that has been found to be different from the [LTSP] due to some drift of the setting may still be OPERABLE since drift is to be expected. This expected drift would have been specifically accounted for in the setpoint methodology for calculating the [LTSP] and thus the automatic protective action would still have ensured that the SL would not be exceeded with the "as -found" setting of the protective device. Therefore, the device would still be OPERABLE since it would have performed its safety function and the only corrective action required would be to reset the device to the trip setpoint to account for further drift during the next surveillance interval."

AREVA NP's proposed requirements are in accordance with those contained in TSTF 493, Rev. 2. AREVA NP will continue to monitor industry progress on the generic resolution of this issue. In addition, AREVA NP will evaluate the final TSTF change related to resolution of the setpoint issue within 90 days after its approval by the NRC. The determination of the as-found tolerance is based on a 95/95 tolerance limit; therefore, the instrument channel cannot be expected to perform within the calculated as-found tolerance 100% of the time. The 95/95 confidence limit is acceptable, in part, due to the inherent redundancy in the U.S. EPR Protection System. By entering the condition into the corrective action program, the licensee can perform an evaluation including checking for any similar performance failures. If multiple performance failures are observed, the channel would then be declared inoperable and maintenance personnel would troubleshoot and repair or replace the appropriate module(s).

The accident analysis assumes operation of the plant within the AL. The LTSP is the minimal setpoint that can be chosen to protect the AL. The AV is based on the uncertainties during testing; therefore, if the channel actuates at or below the AV as established from the LTSP, it satisfies the analysis and is operable. There is no requirement to add margin; however, the addition of any margin is conservative provided that operating margin is not compromised.