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**STRATEGIC TEAMING AND RESOURCE SHARING (STARS) COMMENTS ON DG-1225, "INSTRUMENT LINES PENETRATING THE PRIMARY REACTOR CONTAINMENT"**

Reference: 74 FR 48102, Notice of Issuance and Availability of Draft Regulatory Guide, DG–1225, dated September 21, 2009

Gentlemen,

The Strategic Teaming and Resource Sharing (STARS) [1] alliance is submitting comments in response to the referenced Federal Register notice soliciting comments on Draft Regulatory Guide DG-1225, "Instrument Lines Penetrating the Primary Reactor Containment." STARS appreciates the NRC request for comments on DG-1225.

STARS Alliance comments on DG-1225 are included in the attachment.

Thank you for your consideration of these comments. If there are any questions regarding these comments, please contact me at 254-897-0121, or carl.corbin@luminant.com, or Ken Petersen at 620-340-9406, or kepeter@wcnoc.com.

Sincerely,

Carl B. Corbin

Carl B. Corbin, Chairman
STARS Integrated Regulatory Affairs Group

[1] STARS consists of thirteen plants at seven stations operated by Luminant Power, AmerenUE, Wolf Creek Nuclear Operating Corporation, Pacific Gas and Electric Company, STP Nuclear Operating Company, Arizona Public Service Company, and Southern California Edison.



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Template = ADM-013

E-RIDS = ADM-03
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The STARS Alliance respectfully submits the following comments:

Comment No. 1 (instrument lines satisfying redundancy, independence, and testability requirements)

The following statement is contained on page 3 and is repeated in Regulatory Position C.1 on page 4:

"Lines connected to instruments that are part of the protection or safety systems are extensions of those systems and should satisfy the requirements for redundancy, independence, and testability for those systems to ensure that they accomplish their functions."

This statement implies that instrument lines should satisfy requirements for redundancy, independence, and testability. However, designs of sensing lines to instruments do not normally have redundant lines going to the same instrument, and if they did, they would not likely be independent. Similarly, testability does not appear to apply to the line connected to the instrument, but rather to the instrument itself or the systems that the instrument supports.

The paragraph on page 3 following the above statement discusses providing a higher degree of isolation capability for lines connected only to instruments that are not part of the protection or safety systems. The intent of the guidance appears to be focused on the capability of the systems supported by the instrument to perform their intended functions, instead of the requirements of the instrument sensing lines.

STARS recommends changing the wording to clarify the application of the guidance to the system function supported by the instrument, as follows:

"Lines connected to instruments that are part of the protection or safety systems are extensions of those systems and should ~~satisfy~~ not adversely impact the systems' requirements for redundancy, independence, and testability ~~for those systems~~ to ensure that ~~they~~ the systems supported by the instruments can accomplish their functions."

Comment No. 2 (normal reactor coolant makeup system capability)

DG-1225, Section B. Discussion, states (also included in Section C. Regulatory Position, item 2b):

"For those instrument lines that are part of the reactor coolant boundary, it is also important to ensure that the rate and the extent of coolant loss from the ruptured component are within the capability of the normal reactor coolant makeup system."

STARS recommends adding underlined words as follows:

"For those instrument lines that are part of the reactor coolant boundary, it is also important to ensure that the rate and the extent of coolant loss from the ruptured component at power are within the capability of the normal reactor coolant makeup system such that reactor trip would be avoided."

Flow though a ruptured instrument line could vary considerably depending on the state of the RCS system fluid. Standard Review Plan 3.6 considers the capability of the normal reactor coolant makeup system only during MODES 1 and 2. During non-power modes, methods other than normal reactor coolant makeup are allowed. Limiting the design of instrumentation tubing to conditions at power is also acceptable since the length of time at power is much longer than time at non-power (i.e., greatest probability of rupture).

Comment No. 3 (substantially below the guidelines of 10 CFR Part 100)

DG-1225, Section B. Discussion, states ( also similarly included in Section C. Regulatory Position, item 2d):

"Because the likelihood of such a rupture is assumed to be high, the system is designed to result in calculated radiation doses from just such an instrument line failure during normal operation being substantially below the guidelines of 10 CFR Part 100, "Reactor Site Criteria" (Ref. 2) and GDC 19, "Control Room."

STARS recommends making the following changes:

"Because the likelihood of such a rupture is assumed to be high, the system is designed to result in calculated radiation doses from just such an instrument line failure during normal operation being ~~substantially below~~ less than the guidelines of 10 CFR Part ~~100~~ 50 Appendix I , "~~Reactor Site Criteria" (Ref. 2) and GDC 19, "Control Room.~~ Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents."

The probability of a rupture is high and is consistent with the frequency of events categorized as PC-1 and PC-2 (ANSI / ANS 18.2) and is similar to the limits of 10 CFR 50 Appendix I. The limits of 10 CFR Part 100 are much higher than 10 CFR 50 Appendix I since they consider events of low probability with much greater consequence. These evaluations should use nominal plant and site parameters. Dose assessment should be based on realistic estimates.

Comment No. 4: High degree of assurance of retaining valve integrity

DG-1225, Section B. Discussion, page 3 contains a list of four actions to provide assurance that, for instrument lines without an isolation valve inside containment, the lines from the containment out to and including the outside valve retains its integrity during normal reactor operation and under accident conditions.

STARS recommends adding a fifth action to this list to provide additional emphasis to component level design for post accident environmental conditions, as follows:

1. locating the valve as close to containment as practical,
2. adopting a conservative approach in the design of this section of the line,
3. implementing suitable quality assurance provisions, and
4. performing suitable visual inservice inspections.
5. consider issues associated with environmental qualification, jet impingement and missile generation.