

**NRC REGULATORY ISSUE SUMMARY 2018-06
CLARIFICATION OF THE REQUIREMENTS FOR REACTOR
PRESSURE VESSEL UPPER
HEAD BARE METAL VISUAL EXAMINATIONS**

Stephen Cumblidge
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RIS on Upper Head Inspections

As discussed in the 2017 meeting, the NRC has published a RIS clarifying upper-head inspection requirements

The goal of the RIS is to reiterate that the VE examination acceptance criteria are not dependent on the material used for the upper head

The NRC has been enforcing N-729-4 as described in the RIS and the RIS does not describe new requirements

BMV Relevant Conditions

From N-729-4

“Relevant conditions for the purposes of the VE shall include areas of corrosion, boric acid deposits, discoloration, and other evidence of nozzle leakage”

“Components with relevant conditions require further evaluation. This evaluation shall include determination of the source of the leakage and correction of the source of leakage in accordance with -3142.3.”

Indications of Possible Nozzle Leakage

“A nozzle with relevant conditions indicative of possible nozzle leakage shall be acceptable for continued service if the results of supplemental examinations [-3200(b)] meet the requirements of -3130.”

“A component with relevant conditions indicative of possible nozzle leakage shall be acceptable for continued service if a repair/replacement activity corrects the defect in accordance with IWA-4000.”

Comments and Comment Resolution

The NRC received 10 Comments on the RIS

Several were clarifications- The NRC agreed or partially agreed with five comments

The NRC disagreed with five comments

The comments and recent proposed alternatives to N-729-1 point to possible useful code actions

Leaks From Above are not Relevant

Boric acid deposits from other sources are not considered relevant indications under the scope of N-729-4.

NRC- Paragraph -3141(c) states “Relevant conditions for the purposes of the VE shall include evidence of reactor coolant leakage, such as corrosion, boric acid deposits, and discoloration.” Leakage from any source can produce relevant indications.

“N-729-4 is too Strict”

If it is very clear that the leakage has come from sources other than the nozzle the requirements of the Code Case N-729-4 to perform a subsequent VE of previously obscured surfaces after cleaning prior to return to service and again in the subsequent refueling outage should be adequate

While the NRC may agree that this approach may be adequate in some cases, it is not currently in compliance with N-729-4, and would require a proposed alternative to be used

“More Guidance “

In lieu of this RIS, the ASME Code Committee should be engaged to revise Code Case N-729-4 to include additional details and to clarify the type of reactor head (i.e., replacement and material such as Alloy 690).

NRC Response- While clear definitions of cleaning methods in a future revision of ASME Code Case N-729 would provide improved guidance for licensees, future revisions of ASME Code Case N-729 are beyond the scope of the RIS

Path Forward

The NRC would review ASME Code Actions taken to add more detail to N-729-4

Different criteria for PWSCC-resistant and PWSCC-vulnerable heads may be useful