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Mr. Michael R. Johnson
Deputy Executive Director for Reactor and Preparedness Programs
Office of the Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: NRC Non-Cited Violations Related to Susceptibility to Baffle Bolt Degradation

Project Number: 689

References:

1. NRC letter from Glenn T. Dentel, NRC Region I, to Anthony Vitale, Entergy, Indian Point Nuclear Generating – Integrated Inspection Report, dated August 30, 2016.
2. NRC letter from Fred L. Bower, NRC Region I, to Peter Sena, III, PSEG Nuclear LLC, Salem Generating Station – Integrated Inspection Report, dated September 22, 2016.
3. NRC Draft Regulatory Issue Summary YYYY-####, Disposition of Information Related to the Time Period Safety-Related Structures, Systems or Components are Installed, dated May 10, 2016.

Dear Mr. Johnson:

The industry has often been reluctant to challenge small shifts in regulatory positions that are initiated through individual findings during the inspection and enforcement process. These shifts in position often go unchallenged due to their relatively low impact, but over time, due to the generic application and implications of those positions, they become collectively burdensome to the industry with no safety benefit. It is in the spirit of raising awareness of those types of issues, in a more real time fashion, that this letter is being respectfully submitted.

The industry intends to clarify the conditions/criteria that would lead to entry into the operability determination process as part of the industry effort to develop a standard process guideline. The need for this clarification is illustrated by the two non-cited violations (NCVs) associated with the baffle former plate bolt (BFB) issue documented in inspection reports issued to Indian Point 3 and Salem 2 (References 1 and 2). This need is also illustrated in a recent U.S. Nuclear Regulatory Commission (NRC) draft generic

communication (Reference 3) which proposes to introduce the term “credible information” when referring to external operating experience (OE). The examples proposed in the attachment to Reference 3 imply that receipt of such “credible information” is cause for invoking the operability determination process. For the reasons discussed in this letter, the industry strongly disagrees.

The Nuclear Energy Institute, Inc. (NEI)¹ has reviewed the two NCVs in References 1 and 2, and after consideration of the issues involved, has concluded that the position taken by the NRC regarding the applicability of the operability determination process is contrary to the original intent of the process and has generic implications for the industry that are unnecessarily burdensome, overly subjective and will not enhance nuclear safety in similar issues encountered at nuclear sites.

The referenced NCVs state that Entergy and PSEG violated NRC requirements by not documenting the final disposition of the impact of the OE gleaned from inspections of BFB at Indian Point 2 and Salem 1 using their operability determination procedures. The industry believes these NCVs represent an unwarranted and inappropriate expansion in the use of the operability determination process to disposition incoming OE. This will unnecessarily burden shift operations and plant technical staff. It also has the potential to cause confusion, as it did in these cases, around which is the appropriate process to use to assess the safety impact of external OE.

The OE extent-of-condition element of the industry’s corrective action programs is more appropriately suited to assess the impact of information obtained from another unit, particularly when the existence and/or extent of the degraded condition is speculative. The “susceptibility to known degradation,” as mentioned in Reference 2, does not equate to known degradation and should not be an entry criterion requiring disposition of an issue via an operability determination. The industry’s corrective action programs per 10 CFR 50, Appendix B, Quality Assurance, adequately fulfills this role. The regulatory oversight under 10 CFR 50, Appendix B, is sufficient to address the potential safety concerns related to applicable OE via the corrective action program. This method of addressing OE prioritizes and safely addresses issues without overly burdening shift operations on potential issues, and has been and continues to be effective at maintaining safety.

For these reasons, as elaborated further below, we believe our ongoing interactions to improve the clarity of guidance on the application of the operability determination process is a better means to address this generic concern rather than through plant-specific inspection and enforcement actions.

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI’s members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

The nuclear safety implications of continued operation in view of the susceptibility to BFB degradation were adequately dispositioned by technical evaluations of the extent-of-condition (EOC) performed under the licensees' corrective action/OE programs:

The susceptibility of BFB to degradation due to irradiated assisted stress corrosion cracking (IASCC) is a condition that has been known by the industry and NRC for several years. It has been the subject of significant technical analysis and evaluation, and has led to recommendations by the Pressurized Water Reactor Owners Group (PWROG) and the EPRI Materials Reliability Program (MRP) to implement enhanced in-service inspection protocols at potentially affected plants. All along, the susceptibility of BFB to degradation has been addressed by licensees using their corrective action programs.

The operability determination process is neither the appropriate nor the most effective process for evaluating the safety of continued operation in light of this issue:

The operability determination process was designed to address known and quantifiable nonconforming or degraded conditions actually affecting an installed system, structure or component (SSC), where that SSC is required to be operable for technical specification compliance.

In Reference 2, the NRC infers that since there was a "susceptibility to a known degradation mechanism," an operability determination was warranted and required. The industry does not agree. Susceptibility to a known degradation mechanism does not equal known degradation. Entry into the operability determination process requires some degree of knowledge of an actual degraded or nonconforming condition that lends itself to characterization by inspection, test or engineering analysis. In the case of the BFB degradation for Westinghouse four-loop "down flow" plants, there was an improving knowledge of the factors that would inform plant operators of the probability that the condition existed, but little information that would inform them on the extent of the condition (numbers, patterns and severity of corrosion) at the operating units that had not conducted recent inspections. In such cases, as discussed previously, an extent-of-condition evaluation under the corrective action process is more appropriate and allows the licensee to explore a wider range of possibilities and safety impacts than would be explored in an operability determination.

The industry agrees that there are circumstances when OE information received from sources external to an operating reactor needs to be dispositioned via an operability determination. For example, a 10 CFR 21 report received from a supplier that identifies a known defect in a component that is known to be installed in a licensee's plant needs to be evaluated for operability if that component is installed in a TS system.

In summary, the use of the operability determination process to disposition prospective problems or problems not associated with a defined condition is an inappropriate use of the process and an ineffective use of licensee resources.

The NRC position stated in References 1 and 2 represents an expansion of the application of operability determination process and will have deleterious unintended consequences:

The susceptibility of BFB to IASCC was known well before the recent inspection results from Indian Point 2 and Salem 1 had been assessed as OE and factored into existing technical evaluations and ISI programs supporting operational safety decisions at Westinghouse plants. The referenced NCVs would imply there is a threshold at which the process for this ongoing assessment of information obtained from other sources would shift from the technical evaluations performed under a licensee's corrective action/OE program to an operability determination. The industry is not aware of such a threshold in either the NRC's regulatory framework or in the affected licensee's plant procedures. The industry acknowledges that evaluation of operability is a continuous process. If at any time information is developed that leads to a conclusion that the presumption of operability is lost, then the conditions of the operating license must be satisfied.

Taken to its logical conclusion, the NRC positions stated in References 1 and 2 would infer that the NRC intends for all credible information received as OE, regardless of its source, to be evaluated at all sites under the operability determination process. In fact, since the NRC has issued non-cited violations, Entergy and PSEG must now enter these issues into their corrective action programs and take actions to restore compliance. This would likely entail revisions to procedures to require all incoming OE to be evaluated and dispositioned via operability determination. This would represent a very significant expansion in the scope of the process. Moreover, since these programs are fairly standard across the industry, these non-cited violations now have generic importance. As communicated in recent public meetings with the NRC, the industry feels the operability determination process is already heavily overused and overly cumbersome, and places an undue burden on both the plant technical staff and the operations shift in the control room. The NRC positions stated in References 1 and 2 will have the net effect of compounding this problem.

The regulatory basis for the NCVs cited in References 1 and 2 is debatable:

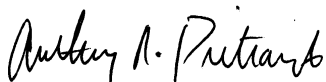
The NCVs refer to noncompliance with 10 CFR 50, Appendix B, Criterion V, for not following station procedures for conducting operability determinations. Criterion V is not an appropriate basis for the NCVs because there is nothing in the affected station procedures that would preclude the use of an OE extent-of-condition-style technical evaluation for this issue, nor is there anything in their procedures that would preclude exiting the operability determination procedure once entered. Since operability is a continuous process, it is the industry's view that the licensee appropriately entered the operability process when the immediate operability determinations were documented and then remained in that process while the safety concern was dispositioned by the technical evaluations within the corrective action program. Again, if confidence in the safety of continued plant operation had not been ultimately established, then this would be tantamount to losing the presumption of operability, and the licensees would have taken appropriate action.

The immediate conclusions around the presumption of operability that were made at an early stage at both Indian Point 3 and Salem 2 were appropriate. These conclusions were adequate to communicate the issue and its nuclear safety impact to the control room while further evaluation of the issue was completed under the corrective action program with input from Westinghouse. If there were technical shortcomings in the evaluations or conclusions reached by either Indian Point 3 or Salem 2, the licensees should instead be cited under Criterion XVI for failure to conduct an effective assessment of the OE and its impact on the safety of continuing to operate the units until the next scheduled refueling outage. The industry is not aware that the NRC has any concerns with the technical quality of the assessments documented in the licensees' corrective action programs.

Conclusion:

In conclusion, NEI believes there were no violations of NRC requirements at Indian Point 3 or Salem 2 in the conduct of the licensees' evaluations of the recently obtained BFB operating experience. The NRC should refrain from using the inspection and enforcement process to pursue the regulatory positions stated in References 1 and 2 and should instead address these issues through industry and stakeholder interactions as part of the ongoing effort to develop industry guidance on the application of the operability determination process.

Sincerely,

A handwritten signature in black ink, reading "Anthony R. Pietrangelo". The signature is written in a cursive, flowing style.

Anthony R. Pietrangelo

c: Mr. William M. Dean, NRR, NRC