

From: George Antaki <antaki@becht.com>
Sent: Thursday, October 25, 2018 10:23 PM
To: Holonich, Joseph
Subject: [External_Sender] Shortcomings in Draft NEI 18-03 related to ASME SSCs

Mr. Holonich,

This email is to point out shortcomings in the Sections of Draft NEI 18-03 "Operability Determination" related to ASME structures, systems, and components (SSCs).

The draft I am referring to is dated "month 2018" and was made available as part of the public meeting of June 2018.

In today's public meeting, October 25, 2018, it was indicated that the question of ASME SSCs will be treated at a later date.

It is possible that the shortcomings I point out have been rectified in a more recent draft that I am not aware of.

I submit this email to provide suggestions for the improvement of the following Sections of Draft NEI 18-03:

A.5 PIPING AND PIPE SUPPORT REQUIREMENTS

A.6 STRUCTURAL REQUIREMENTS

A.7 TECHNICAL SPECIFICATION OPERABILITY VS. ASME CODE CRITERIA

As written, these sections are a haphazard, unstructured set of pointers to documents such as the GIP, Reg. Guides on seismic design and tornado missiles, and other topics of secondary importance in the understanding of the cause of damage, and in the evaluation of adequacy of ASME SSCs.

NEI 18-03 should either address the evaluation of the integrity of ASME SSCs in a structured and correct manner, or 18-03 should simply defer to ASME III, ASME XI and ASME O&M.

If NEI 18-03 wants to address the integrity and adequacy of ASME III SSCs it should address, in a structured and technically correct manner, the following damage mechanisms and point to the agreed-upon methods of evaluation:

1. **Wall thinning** (erosion and/or corrosion), with reference to the applicable ASME III and ASME XI methods and criteria, including Code Cases and Reg. Guide 1.84 and 1.147 limitations, and EPRI guidance.
2. **Crack-Like Flaws** (weld fabrication flaw, or fatigue, or corrosion, or a combination), with reference to ASME XI methods and criteria, including Code Cases and Reg. Guide 1.84 and 1.147 limitations, and EPRI guidance.
3. **Embrittlement** (neutron, temperature, or environmental induced loss of physical or mechanical properties), with reference to ASME XI methods and criteria, including Code Cases and Reg. Guide 1.84 and 1.147 limitations, and EPRI guidance.
4. **Overload** (an accidental load that exceeds design basis, for example waterhammer, accidental over-temperature, thermal mixing, accidental interference, etc. or natural phenomena hazards that exceed the design basis, i.e. wind, earthquake, etc.), with reference to ASME III NB/NC-3200 (Appendix XIII in the 2017 edition), ASME III Appendix F (Appendix XXVII in the 2017 edition), and applicable NRC Bulletins, Generic Letters, NUREGs and Reg. Guides, and EPRI guidance.

5. **Loss of active function** (for active components as defined in ASME O&M, i.e. pumps/compressors, valve operators, snubbers), with reference to ASME O&M, and applicable NRC Bulletins, Generic Letters, NUREGs and Reg. Guides, and EPRI guidance.

Finally, I would hope that a shortcoming of both this NEI 18-03 draft and the current Inspection Manual 0326 would be corrected: The pressure boundary of all ASME III equipment, systems and components should be addressed: vessels, pumps, valves, piping, and tanks, and their support structures (ASME III NF); and not only piping as is currently the case.

Sincerely,

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