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Ms. Michele G. Evans, Director
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Subject: Response to letter from NRC to ASME on NDE Issues Relating to the ASME Boiler and Pressure Vessel Code

Reference: Letter from Michelle G. Evans, NRC, to Kevin Ennis, ASME, dated January 12, 2010, Subject: Issues Relating to the ASME Boiler and Pressure Vessel Code

Dear Ms. Evans:

The American Society of Mechanical Engineers (ASME) appreciates the subject letter referenced above from the Nuclear Regulatory Commission's (NRC's) Office of Nuclear Reactor Regulation (NRR) bringing to our attention your concerns and issues regarding NDE personnel certification and probability of detection (POD). Please see the attachment to this letter for specific responses to each of your questions under the issues addressed in your letter.

ASME Codes and Standards are products of industry subject matter experts working together to reach consensus in establishment of requirements leading to the safe and reliable operation of pressure retaining components. In keeping with this tradition and successful process of standards development, the information you have provided will be submitted to the appropriate ASME Code Committee for consideration and action.

The nuclear industry in cooperation with ASME has introduced an initiative to develop a third party NDE personnel certification program with the objective to consistently develop the technical workforce to meet current and future demands for NDE methods (UT, RT, MT, PT and VT) through a standardized centrally controlled process.

Again we thank you for bringing these issues to our attention

If you have any questions regarding the contents of this letter please contact me or Mr. Kevin Ennis, ASME Director, Nuclear Codes and Standards by telephone (212) 591-7075 or by e-mail *ennisk@asme.org*.

Very Truly Yours,

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cc: Members, ASME Board on Nuclear Codes and Standards
Members, ASME BPV Committee on Nuclear Inservice Inspection (XI)

ATTACHMENT

Response to NRC Questions Stated Under Issue 1

Question A: Are there deficiencies with the quality of qualification and certification of NDE personnel given that ASNT certifications (ANSI/ASNT CP-189, ACCP and SNT-TC-1A) may potentially fall short, specifically in regards to the methods implemented by ASNT to conduct testing, grade examinations and report results for interpretation by the Code?

Response:
All employers must certify their NDE personnel as meeting minimum Code requirements. However, employers may use outside agencies to administer some or all of the examinations. It is the employer's responsibility to audit third party providers of examination services to assure compliance to Code requirements.

Question B: How does ASME ensure that ASNT's processes meet the Code requirements including adjustments of test scores by use of psychometrics or other means?

Response:
The ASME BPV Code does not contain requirements related to adjustments of scores for examinations by use of psychometrics or other means. Outside agencies are allowed to issue pass/fail results in accordance with IWA-2323(f) and VII-4350(a) and employers shall assign 80% for passing results.

Question C: Has ASME audited ASNT's certification process to ensure compliance?

Response:
As stated above, audits are the responsibility of the employer.

Response to NRC Question Stated Under Issue 2

Question: NRC considers inservice inspection, and thus POD for the inservice inspection methods, to be important components of the defense-in-depth approach to nuclear power plant safety. As mentioned previously, POD may be as low as 50% using general methods. Please address how the POD is factored into the ASME Code's determination of Code criteria. For instance, since the joint efficiency (Section III, Paragraph UW-12) is based, in part, upon the degree of examination of the joint, is POD for radiographic examination a factor in determining the Code criteria?

Response: No, POD is not applied to the ASME radiographic examination criteria. This is because the weld must meet Section IX and NX-4000 which have been established as satisfactory. The history of safe and successful operation of pressure retaining components designed and constructed to ASME Code requirements is testimony to its sound approach to design, and its requirements for NDE.

There appears to be some confusion on this issue as indicated by the example presented, as UW-12 is a paragraph in Section VIII, not Section III.