

## **NRC FY03 ANNUAL AGENCY REPORTING ON STANDARDS ACTIVITIES**

- (1) Identify the specific government-unique standard used as well as the voluntary consensus standard that was not selected. State agency's rationale for such use.

No government unique standards were adopted.

- (2) A list by name and acronym of the voluntary consensus standards bodies in which your agency participated during the reporting period.

American Concrete Institute (ACI)  
American Institute of Steel Construction (AISC)  
American Society of Civil Engineers (ASCE)  
American Society of Mechanical Engineers (ASME)  
American Society for Quality (ASQ)  
American Society for Testing and Materials (ASTM)  
American Nuclear Society (ANS)  
American Nuclear Standards Institute (ANSI)  
American Society of Non-Destructive Testing (ASNDT)  
Health Physics Society (HPS)  
Institute of Electrical and Electronic Engineers (IEEE)  
Institute of Nuclear Materials Management (INMN)  
Instrumentation Society of America (ISA)  
National Council on Radiation Protection and Measurements (NCRP)  
National Fire Protection Association (NFPA)

- (3) The number of agency employees participating in voluntary consensus standards activities during this period.

136 employees

- (4) The number of voluntary consensus standards that your agency used during FY 2003 based upon procedures set forth in Sections 11 and 12 of the Circular.

117 consensus standards

IEEE-STD-500 Revision 1, 1984, "Guide to the Selection and Presentation of Electrical, Electronic and Sensing Component Reliability Data for Nuclear Power Generating Stations"

IEEE Standard 1012-1986, "IEEE Standard for Software Verification and Validation Plans"

ASME Code Case N-20-4, “SB-163, Cold Worked UNS N08800; and SB-163 UNS N06600, UNS N06690, and UNS N08800 to Supplementary Requirements S2 of SB-163, Section III, Division 1, Class 1”

ASME Code Case N-71-17, “Additional Materials for Subsection NF, Class 1, 2, 3, and MC Component Supports Fabricated by Welding, Section III, Division 1”

ASME Code Case N-171, “Postweld Heat Treatment of P-No. 1 Material, Section III, Division 2”

ASME Code Case N-198-1, “Exemption from Examination for ASME Class 1 and 2 Piping Located at Containment Penetrations, Section XI, Division 1”

ASME Code Case N-213, Welded Radial Shear Bar Assemblies, Section III, Division 2”

ASME Code Case N-319-3, “Alternate Procedure for Evaluation of Stresses in Butt Welding Elbows in Class 1 Piping, Section III, Division 1”

ASME Code Case N-307-2, “Revised Ultrasonic Examination Volume for Class 1 Bolting, Table IWB-2500-1, Examination Category B-G-1, When the Examinations Are Conducted from the Center-Drilled Hole, Section XI, Division 1”

ASME Code Case N-334, “Examination Requirements for Integrally Welded or Forged Attachments to Class 2 Piping at Containment Penetrations, Section XI, Division 1”

ASME Code Case N-373-1, “Alternative PWHT Time at Temperature for P-No. 5 Material, Section III, Division 1, Classes 1, 2, and 3”

ASME Code Case N-387, “Certification of Level III NDE Examiner, Section III, Division 2”

ASME Code Case N-391-2, “Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 1 Piping, Section III, Division 1”

ASME Code Case N-392-3, “Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Classes 2 and 3 Piping, Section III, Division 1”

ASME Code Case N-405-1, “Socket Welds, Section III, Division 1”

ASME Code Case N-416-2, "Alternative Pressure Test Requirements for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1"

ASME Code Case N-438-1, "UNS N08367, Section III, Division 1, Class 2 and 3 Construction"

ASME Code Case N-439-1, "Use of 20Cr-18Ni-6Mo (Alloy UNS S31254) Forgings, Plate, Seamless and Welded Pipe, and Welded Tube, Class 2 and 3 Construction, Section III, Division 1"

ASME Code Case N-440-1, "Use of 20Cr-18Ni-6Mo (Alloy UNS J93254) Castings, Class 2 and 3 Construction, Section III, Division 1"

ASME Code Case N-441-2, "Use of 20Cr-18Ni-6Mo (Alloy UNS S31254) Fittings, Class 2 and 3 Construction, Section III, Division 1"

ASME Code Case N-453-3, "Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) for Class 2 and 3 Construction, Section III, Division 1"

ASME Code Case N-458-1, "Magnetic Particle Examination of Coated Materials, Section XI, Division 1"

ASME Code Case N-461-1, "Alternative Rules for Piping Calibration Block Thickness, Section XI, Division 1"

ASME Code Case N-469-1, "Martensitic Stainless Steel for Class 1, 2, and 3 Components, Section III, Division 1"

ASME Code Case N-491-2, "Rules for Examination of Class 1, 2, 3, and MC Component Supports of Light-Water Cooled Power Plants, Section XI, Division 1"

ASME Code Case N-493, "Alternative Radiographic Acceptance Criteria for Vessels Used as Shipping Casks, Section III, Division 1, Class 1"

ASME Code Case N-494-3, "Pipe Specific Evaluation Procedures and Acceptance Criteria for Flaws in Class 1 Ferritic Piping that Exceed the Acceptance Standards of IWB-3514.2, Section XI, Division 1"

ASME Code Case N-500-1, "Alternative Rules for Standard Supports for Class 1, 2, 3, and MC, Section III, Division 1"

ASME Code Case N-504-2, "Alternative Rules for Repair of Class 1, 2, and 3 Austenitic Stainless Steel Piping, Section XI, Division 1"

ASME Code Case N-508-1, "Rotation of Serviced Snubbers and Pressure Relief Valves for the Purpose of Testing, Section XI, Division 1"

ASME Code Case N-512-1, "Assessment of Reactor Vessels With Low Upper Shelf Charpy Impact Energy Levels, Section XI, Division 1"

ASME Code Case N-513, "Evaluation Criteria for Temporary Acceptance of Flaws in Class 3 Piping, Section XI, Division 1"

ASME Code Case N-516-2, "Underwater Welding, Section XI, Division 1"

ASME Code Case N-517-2, "Quality Assurance Program Requirements for Owners, Section XI, Division 1"

ASME Code Case N-520-1, "Alternative Rules for Renewal of N-type Certificates for Plants Not in Active Construction, Section III, Division 1"

ASME Code Case N-523-2, "Mechanical Clamping Devices for Class 2 and 3 Piping, Section XI, Division 1"

ASME Code Case N-526, "Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels, Section XI, Division 1"

ASME Code Case N-528-1, "Purchase, Exchange, or Transfer of Material Between Nuclear Plant Sites, Section XI, Division 1"

ASME Code Case N-532, "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000, Section XI, Division 1"

ASME Code Case N-533-1, "Alternative Requirements for VT-2 Visual Examination of Class 1 Insulated Pressure-Retaining Bolted Connections, Section XI, Division 1"

ASME Code Case N-534, "Alternative Requirements for Pneumatic Pressure Testing, Section XI, Division 1"

Code Case N-535, "Alternative Requirements for Inservice Inspection Intervals, Section XI, Division 1"

ASME Code Case N-538, "Alternative Requirements for Length Sizing Performance Demonstration in Accordance with Appendix VIII, Supplements 2, 3, 10, 11, and 12, Section XI, Division 1"

ASME Code Case N-539, "UNS N08367 in Class 2 and 3 Valves, Section III, Division 1"

ASME Code Case N-543, "Alternative to Performing Periodic Calibration Checks, Section XI, Division 1"

ASME Code Case N-544, "Repair/Replacement of Small Items, Section XI, Division 1"

ASME Code Case N-545, "Alternative Requirements for Conduct of Performance Demonstration Detection Test of Reactor Vessel, Section XI, Division 1"

ASME Code Case N-546, "Alternative Requirements for Qualification of VT-2 Examination Personnel, Section XI, Division 1"

ASME Code Case N-548, "Air Cooling of SA-182 Grades F304, F304L, F316, F316L Forgings Instead of Liquid Quenching After Solution Heat Treatment, Class 1, 2, and 3, Section III, Division 1"

ASME Code Case N-550, "Alternative Rules for Examination of Welds in Instrument Tubing, Class 1 and 2, Section III, Division 1"

ASME Code Case N-552, "Alternative Methods - Qualification for Nozzle Inside Radius Section from the Outside Surface, Section XI, Division 1"

ASME Code Case N-553, "Inservice Eddy Current Surface Examination of Pressure Retaining Pipe Welds and Nozzle-to-Safe End Welds, Section XI, Division 1"

ASME Code Case N-554-2, "Alternative Requirements for Reconciliation of Replacement Items, Section XI, Division 1"

ASME Code Case N-555, "Use of Section II, V, and IX Code Cases, Section XI, Division 1"

ASME Code Case N-556, "Alternative Requirements for Verification of Acceptability of Replacements, Section XI, Division 1"

ASME Code Case N-557-1, "In-Place Dry Annealing of a PWR Nuclear Reactor Vessel, Section XI, Division 1"

ASME Code Case N-558, "Stamping of Class 2 Vessels Fabricated to Subsection NB, Section III, Division 1"

ASME Code Case N-563, "Grading of Examinations, IWA-2320, Section XI, Division 1"

ASME Code Case N-564-2, "UNS J93380, Alloy CD3MWCuN, Class 2 and 3 Construction, Section III, Division 1"

ASME Code Case N-566-1, "Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1"

ASME Code Case N-567-1, "Alternative Requirements for Class 1, 2, and 3 Replacement Components, Section XI, Division 1"

ASME Code Case N-569-1, "Alternative Rules for Repair by Electrochemical Deposition of Class 1 and 2 Steam Generator Tubing, Section XI, Division 1"

ASME Code Case N-570, "Alternative Rules for Linear Piping and Linear Standard Supports for Class 1, 2, 3, and MC"

ASME Code Case N-572, "Use of SB-425 (UNS N08825) Bar and Rod for Class 1 Construction, Section III, Division 1"

ASME Code Case N-573, "Transfer of Procedure Qualification Records Between Owners, Section XI, Division 1"

ASME Code Case N-576-1, "Repair of Class 1 and 2 SB-163, UNS N06600 Steam Generator Tubing, Section XI, Division 1"

ASME Code Case N-579, "Use of Nonstandard Nuts, Class 1, 2, and 3, MC, CS Components and Supports Construction, Section III, Division 1"

ASME Code Case N-580-1, "Use of Alloy 600 With Columbium Added, Section III, Division 1"

ASME Code Case N-588, "Attenuation to Reference Flaw Orientation of Appendix G for Circumferential Welds in Reactor Vessels, Section XI, Division 1"

ASME Code Case N-592, "ASNT Central Certification Program, Section XI, Division 1"

ASME Code Case N-593, "Alternative Examination Requirements for Steam Generator Nozzle to Vessel Welds, Section XI, Division 1"

ASME Code Case N-594, "Repairs to P-4 and P-5A Materials for Pumps and Valves Without Postweld Heat Treatment, Section III, Division 1"

ASME Code Case N-596, "Use of Alternative Reference Specimens, Section III, Division 1"

ASME Code Case N-597, "Requirements for Analytical Evaluation of Pipe Wall Thinning, Section XI, Division 1"

ASME Code Case N-598, "Alternative Requirements to Required Percentages of Examinations, Section XI, Division 1"

ASME Code Case N-599, "Alternatives to Qualification of Nondestructive Examination Personnel for Inservice Inspection of Metal (Class MC) and Concrete (Class CC) Containments, Section XI, Division 1"

ASME Code Case N-601, "Extent and Frequency of VT-3 Visual Examination for Inservice Inspection of Metal Containments, Section XI, Division 1"

ASME Code Case N-603, "Alternative to the Requirements of IWL-2421, Sites with Two Plants, Section XI, Division 1"

ASME Code Case N-604, "Alternative to Bolt Torque or Tension Test Requirements of Table IWE-2500-1, Category E-G, Item E8.20, Section XI, Division 1"

ASME Code Case N-605, "Alternative to the Requirements of IWE-2500(c) for Augmented Examination of Surface Areas, Section XI, Division 1"

ASME Code Case N-606-1, "Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique for BWR CRD Housing/Stub Tube Repairs, Section XI, Division 1"

ASME Code Case N-607, "Guidance on Implementation of NS Certificate of Accreditation, Section III, Division 1"

ASME Code Case N-608, "Applicable Code Edition and Addenda, NCA-1140(a)(2), Section III, Division 1"

ASME Code Case N-609, "Alternative Requirements to Stress-Based Selection Criteria for Category B-J Welds, Section XI, Division 1"

ASME Code Case N-610, "Alternative Reference Stress Intensity Factor ( $K_{IR}$ ) Curve for Class Components, Section III, Division 1"

ASME Code Case N-611, "Use of Stress Limits as an Alternate to Pressure Limits Subsection NC/ND-3500, Section III, Division 1"

ASME Code Case N-616, "Alternative Requirements for VT-2 Visual Examination of Classes 1, 2, 3 Insulated Pressure Retaining Bolted Connections, Section XI, Division 1"

ASME Code Case N-617, "Alternative Examination Distribution Requirements for Table IWE-2500-1, Examination Category C-G, Pressure Retaining Welds in Pumps and Valves, Section XI, Division 1"

ASME Code Case N-620, "Rules for Class 1 Type M Pumps, Section III, Division 1"

ASME Code Case N-621, "Ni-Cr-Mo Alloy (UNS N06022) Welded Construction to 800°F, Section III, Division 1"

ASME Code Case N-623, "Deferral of Inspections of Shell-to-Flange and Head-to-Flange Welds of a Reactor Vessel, Section XI, Division 1"

ASME Code Case N-624, "Successive Inspections, Section XI, Division 1"

ASME Code Case N-625, "Ni-Cr-Mo Alloy (UNS N06059) Welded Construction to 800°F, Section III, Division 1"

ASME Code Case N-626, "Use of Plastic Analysis for the Design of Type B Containment Components for Nuclear Material Transportation Casks, Section III, Division 3"

ASME Code Case N-627, "VT-1 Visual Examination in Lieu of Surface Examination for RPV Closure Nuts, Section XI, Division 1"

ASME Code Case N-629, "Use of Fracture Toughness Data to Establish Reference Temperature for Pressure Retaining Materials, Section XI, Division 1"

ASME Code Case N-630, "Alternatives to VT-1C and VT-3C Visual Examination for Inservice Inspection of Concrete and VT-1 Visual Examination for Inservice Inspection of Anchorage Hardware and Surrounding Concrete for Concrete Containments, Section XI, Division 1"

ASME Code Case N-631, "Use of Fracture Toughness Test Data to Establish Reference Temperature for Pressure Retaining Materials Other Than Bolting for Class 1 Vessels, Section III, Division 1"

ASME Code Case N-632, "Use of ASTM A 572, Grades 50 and 65 for Structural Attachments to Class CC Containment Liners, Section III, Division 2"

ASME Code Case N-635, "Use of 22Cr-5Ni-3Mo-N (Alloy UNS S31803) Forgings, Plate, Bar, Welded and Seamless Pipe, and/or Tube, Fittings, and Fusion Welded Pipe With Addition of Filler Metal, Classes 2 and 3, Section III, Division 1"



ASME Code Case N-636, "Use of 18Cr-13Ni-3Mo (Alloy UNS S31703), 19Cr-15Ni-4Mo (Alloy UNS S31725), and 18.5Cr-15.5Ni-4.5Mo-N (Alloy UNS S31726) Forgings, Seamless Tubing, Plate, Welded Tubing, Welded and Seamless Pipe, Welded Pipe With Addition of Filler Metal and Fittings, Classes 2 and 3, Section III, Division 1"

ASME Code Case N-637, "Use of 44Fe-25Ni-21Cr-Mo (Alloy UNS N08904) Plate, Bar, Fittings, Welded Pipe, and Welded Tube, Classes 2 and 3, Section III, Division 1"

ASME Code Case N-638, "Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique, Section XI, Division 1"

ASME Code Case N-639, "Alternative Calibration Block Material, Section XI, Division 1"

ASME Code Case N-640, "Alternative Reference Fracture Toughness for Development of P-T Limit Curves, Section XI, Division 1"

ASME Code Case N-641, "Alternative Pressure-Temperature Relationship and Low Temperature Overpressure Protection System Requirements, Section XI, Division 1"

ASME Code Case N-642, "Alternative Rules for Progressive Liquid Penetrant Examination of Groove Welds In P-No. 8 Materials 3/16 in. (5 mm) Thick and Less Made by Autogenous Machine or Automatic Welding, Section III, Division 1"

ASME Code Case N-643, "Fatigue Crack Growth Rate Curves for Ferritic Steels in PWR Water Environment, Section XI, Division 1"

ASME Code Case N-644, "Weld Procedure Qualification for Procedures Exempt From PWHT in Class 1, 2, and 3 Construction, Section III, Division 1"

ASME Code Case N-646, "Alternative Stress Intensification Factors for Circumferential Fillet Welded or Socket Welded Joints for Class 2 or 3 Piping, Section III, Division 1"

ASME Code Case N-647, "Alternative to Augmented Examination Requirements of IWE-2500, Section XI, Division 1"

ASME Code Case OMN-2, "Thermal Relief Valve Code Case"

ASME Code Case OMN-5, "Testing of Liquid Service Relief Valves Without Insulation"

ASME Code Case OMN-6, "Alternative Rules for Digital Instruments"

ASME Code Case OMN-7, "Alternative Requirements for Pump Testing"

ASME Code Case OMN-8, "Alternative Rules for Preservice and Inservice Testing of Power-Operated Valves That Are Used for System Control and Have a Safety Function per OM-10"

ASME Code Case OMN-13, "Requirements for Extending Snubber Inservice Visual Examination Interval at LWR Power Plants"

- (5) A description of how your agency currently reports its use of voluntary consensus standards. Specifically, please provide your agency's answers to the following questions:

Does your federal agency report (a) only the first-time use of standards, (b) continued uses of standards, or (c) both first-time and continued uses of standards?

The NRC reports only the first-time use of standards.

- (6) Does your agency report (a) the total number of standards it uses or (b) each instance where the agency uses (i.e., references) a standard?

The NRC reports the total number of standards.

- (7) Does your agency report multiple editions of a single standard as one standard used or as multiple standards used?

Multiple standards – some standards are significantly changed from one version to the next. Hence, each revision is reviewed on its own merits.

- (8) Does your federal agency report standards that it uses for guidance purposes (as opposed to compliance purposes)?

Yes.

- (9) Does your agency report use of standards from non-ANSI-accredited standards developers including industry consortia?

No.

- (10) Identification of voluntary consensus standards that have been substituted by your agency for government-unique standards during the reporting period as a result of an agency review under section 15b(7) of the Circular.

None.

- (11) An evaluation of the effectiveness of Circular A-119 policy and any recommendations for changes to the Circular.

The NRC believes that the circular provides appropriate direction and encouragement for federal agencies to develop internal agency-wide guidelines. The circular also provides sufficient and reasonable flexibility for each agency to make an independent determination relative to participation on voluntary consensus standards bodies and use of developed standards.