U.S. NUCLEAR REGULATORY COMMISSION

DRAFT REGULATORY GUIDE DG-1446

Proposed Revision 41 to Regulatory Guide RG 1.84

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DESIGN, FABRICATION, AND MATERIALS CODE CASE ACCEPTABILITY, ASME SECTION III

A. INTRODUCTION

Purpose

This regulatory guide (RG) lists the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section III, "Rules for Construction of Nuclear Power Plant Components," Division 1, "Rules for Construction of Nuclear Power Plant Components" (Ref. 1), code cases that the U.S. Nuclear Regulatory Commission (NRC) has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions that are incorporated by reference into Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities" (Ref. 2).

Applicability

This RG applies to reactor licensees and applicants subject to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a, "Codes and standards."

Applicable Regulations

- General Design Criterion (GDC) 1, "Quality standards and records," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 requires, in part, that structures, systems, and components important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety function to be performed. Where generally recognized codes and standards are used, GDC 1 requires that they be identified and evaluated to determine their applicability, adequacy, and sufficiency and be supplemented or modified as necessary to ensure a quality product in keeping with the required safety function.

- 10 CFR Part 50, Appendix A, GDC 30, "Quality of reactor coolant pressure boundary," requires, in part, that components that are part of the reactor coolant pressure boundary be designed, fabricated, erected, and tested to the highest quality standards practical.

This RG is being issued in draft form to involve the public in the development of regulatory guidance in this area. It has not received final staff review or approval and does not represent an NRC final staff position. Public comments are being solicited on this DG and its associated regulatory analysis. Comments should be accompanied by appropriate supporting data. Comments may be submitted through the Federal rulemaking website, http://www.regulations.gov, by searching for draft regulatory guide DG-1446. Alternatively, comments may be submitted to Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff. Comments must be submitted by the date indicated in the *Federal Register* notice.

Electronic copies of this DG, previous versions of DGs, and other recently issued guides are available through the NRC's public website under the Regulatory Guides document collection of the NRC Library at https://nrcweb.nrc.gov/reading-rm/doc-collections/reg-guides/. The DG is also available through the NRC's Agencywide Documents Access and Management System (ADAMS) at http://www.nrc.gov/reading-rm/adams.html, under Accession No. ML25079A307. The regulatory analysis is associated with rulemaking and may be found in ADAMS under Accession No. ML25182A128.

- 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Processing Plants," requires, in part, that measures be established for the control of special processing of materials and that proper testing be performed.

- 10 CFR 50.55a(c) requires, in part, that components of the reactor coolant pressure boundary be designed, fabricated, erected, and tested in accordance with the requirements for the Class 1 components of ASME BPV Code, Section III.

- 10 CFR 52.79(a)(11) (Ref. 3) requires the final safety analysis report to include a description of the program(s), and their implementation, necessary to ensure that the systems and components meet the requirements of the ASME BPV Code and the ASME Operation and Maintenance of Nuclear Power Plants (OM Code) in accordance with 10 CFR 50.55a.

Related Guidance

- RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1" (Ref. 4), lists the ASME BPV Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions incorporated in 10 CFR 50.55a.

- RG 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code" (Ref. 5), lists the ASME OM code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME OM Code provisions incorporated in 10 CFR 50.55a.

- RG 1.193, "ASME Code Cases Not Approved for Use" (Ref. 6), lists the ASME BPV Code Section III and Section XI code cases, and the ASME OM code cases, that the NRC has not approved for generic use.

- RG 1.136, "Design Limits, Loading Combinations, Materials, Construction, and Testing of Concrete Containments" (Ref. 7), endorses ASME BPV Code, Section III, Division 2, "Code for Concrete Containments," and addresses the acceptance of ASME BPV Code, Section III, Division 2, code cases.

- RG 1.87, "Acceptability of ASME Code, Section III, Division 5, 'High Temperature Reactors'" (Ref. 8), endorses ASME BPV Code, Section III, Division 5, "High Temperature Reactors," and addresses the acceptance of ASME BPV Code, Section III, Division 5, code cases.

- RG 1.262, "ASME Code Cases Approved for Use Without Conditions" (Ref. 9), lists the ASME code cases that the NRC has determined to be acceptable for use without conditions.

Purpose of this Regulatory Guide

The NRC incorporated this RG into 10 CFR 50.55a by reference. The RG contains new code cases and revisions to existing code cases that the NRC has approved for use, as listed in tables 1 and 2 of this guide. The RG also states the requirements that govern the use of code cases. Applicants and licensees may voluntarily use code cases approved by the NRC as an alternative to compliance with the ASME code provisions that have been incorporated by reference into 10 CFR 50.55a. Because the status of code cases continually changes, the staff plans to periodically update 10 CFR 50.55a and this guide to accommodate new code cases and any revisions to existing code cases.

Paperwork Reduction Act

This RG provides voluntary guidance for implementing the mandatory information collections in 10 CFR Parts 50, 50.55a, and 52 that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). These information collections were approved by the Office of Management and Budget (OMB), under control numbers 3150-0011, 3150-0264, and 3150-0151, respectively. Send comments regarding this information collection to the FOIA, Library, and Information Collections Branch, Mail Stop: T6-A10M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollects.Resource@nrc.gov, and to the OMB reviewer at: OMB Office of Information and Regulatory Affairs (3150-0011, 3150-0264, and 3150-0151), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street, NW, Washington, DC 20503.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

B. DISCUSSION

Reason for Revision

RG 1.84, Revision 41, includes new information reviewed by the NRC on the Section III code cases listed in Supplements 3 through 6 to the 2021 Edition, and Supplements 0 through 3 to the 2023 Edition of the ASME BPV Code. This revision updates and supersedes RG 1.84, Revision 40, which included information from Supplements 2 through 7 to the 2019 Edition and Supplements 0 through 3 to the 2021 Edition of the ASME BPV Code.

In previous rulemakings for ASME code cases, the NRC incorporated by reference revisions of three RGs (RG 1.84, 1.147, and 1.192) identifying ASME code cases that the NRC finds acceptable or conditionally acceptable for use. The NRC has also incorporated by reference RG 1.262, which identifies ASME code cases that the NRC has determined to be unconditionally acceptable for use. RG 1.262 supplements this RG by providing additional code cases that are acceptable for use. The NRC will also continue to update and incorporate by reference these four RGs on a recurring basis.

Background

Provisions of the ASME Code have been used since 1971 as one part of the framework to establish the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety. Among other things, ASME standards committees develop improved methods for the construction and inservice inspection of ASME Class 1, 2, 3, metal containment (MC), and concrete containment (CC) nuclear power plant components. A broad spectrum of stakeholders participates in the ASME process to help ensure consideration of various interests.

ASME publishes a new edition of the BPV Code, which includes Section III, every 2 years. In 10 CFR 50.55a(a)(1)(i), the NRC references the latest edition of Section III that the agency has approved for use. ASME also publishes code cases quarterly. Code cases provide alternatives developed and approved by ASME. This RG identifies the code cases that the NRC has determined to be acceptable alternatives to applicable parts of Section III. Under 10 CFR 50.55a(z), a licensee or applicant may request authorization to use Section III code cases that the NRC has not yet endorsed. In 10 CFR 50.55a(z), the NRC permits the use of alternatives to the code requirements referenced in 10 CFR 50.55a, provided that the proposed alternatives result in an acceptable level of quality and safety and their use is authorized by the Director of the Office of Nuclear Reactor Regulation.

The NRC incorporates the ASME BPV Code by reference into 10 CFR 50.55a. The NRC-approved code cases provide an acceptable voluntary alternative to the mandatory ASME Code provisions. The regulation at 10 CFR 50.55a(b)(4) provides the requirements related to the implementation of ASME BPV Code, Section III, code cases. When an applicant or licensee initially applies a code case listed in tables 1 or 2 of this guide, it must implement the most recent version of that code case incorporated by reference in 10 CFR 50.55a.

ASME may annul a code case because its provisions have been incorporated into the code, the application for which it was specifically developed no longer exists, or experience has shown that the design analysis or construction method is no longer required. After ASME annuls a code case and after the NRC amends 10 CFR 50.55a and this guide, applicants or licensees may not implement that code case for the first time. However, an applicant or licensee that implemented the code case before its annulment may continue to use that code case until it voluntarily updates its Section III Code of Record. If the NRC incorporated a code case by reference into 10 CFR 50.55a and ASME later annulled it because experience

has shown that the design analysis or construction method is no longer required, the NRC would amend 10 CFR 50.55a and this guide to remove the approval of the annulled code case. Applicants and licensees should not begin to implement such annulled code cases in advance of the rulemaking. Notwithstanding these requirements, the Commission may impose new or revised code requirements, including implementation schedules, that it determines are consistent with 10 CFR 50.109, "Backfitting."

ASME may revise a code case, for example, to incorporate user experience. The applicant or licensee may not apply the older or superseded version of the code case unless it was applied before it was superseded. If an applicant or a licensee applied a code case before it was listed as superseded, it may continue to use the code case until it updates its Construction Code of Record (an applicant would update its application). If the NRC incorporates a code case by reference into 10 CFR 50.55a and if ASME later issues a revised version of the code case because experience has shown that the design analysis, construction method, examination method, or testing method is inadequate, the NRC would amend 10 CFR 50.55a and the relevant RG to remove its approval of the superseded code case. Applicants and licensees should not begin to implement such superseded code cases in advance of the rulemaking.

With regard to the use of any code case, the user is responsible for ensuring that the provisions of the code case do not conflict with licensee commitments or other regulatory requirements.

C. REGULATORY POSITION

For RG 1.84, Revision 41, the NRC reviewed the ASME BPV Code, Section III, code cases listed in Supplements 3 through 6 to the 2021 Edition, and Supplements 0 through 3 to the 2023 Edition of the ASME BPV Code.[1] RG 1.84, Revision 41, supersedes the information in Revision 40. Appendix A to this guide lists the supplements reviewed by the NRC, the editions, the supplement numbers, and the numerical listing of Section III code cases in each supplement. Appendix B to this guide lists all current Section III code cases and the table where each code case is listed. The following five tables list the code cases addressed by this RG:

a. Table 1, "Acceptable Section III Code Cases," contains code cases that are acceptable for use by applicants and licensees for Section III construction.

b. Table 2, "Conditionally Acceptable Section III Code Cases," contains code cases that are acceptable as long as they are used with the identified conditions (i.e., the code case is generally acceptable; however, the NRC has determined that requirements in the code case, which are alternative requirements to the BPV Code, must be supplemented to provide an acceptable level of quality and safety).

c. Table 3, "Annulled Unconditionally Approved Section III Code Cases," contains ASME-annulled code cases that the NRC previously determined to be fully acceptable.

d. Table 4, "Annulled Conditionally Acceptable Section III Code Cases," contains code cases that the NRC found to be acceptable as long as the applicant or licensee used them with the identified conditions; however, ASME subsequently annulled them.

e. Table 5, "Section III Code Cases That Have Been Superseded by Revised Code Cases on or after July 1, 1974," contains code cases that have been superseded through revision.

[1] RG 1.136 and 1.87 address ASME BPV Code, Section III, Division 2 and 5, code cases, respectively. Future RGs may address code cases that pertain to Section III, Division 3.

1. Acceptable Section III Code Cases

The NRC determined that the ASME BPV Code, Section III, code cases listed in table 1 are acceptable for use by applicants and licensees for Section III construction. RG 1.193 lists the ASME code cases that the NRC determined to be unacceptable. ASME publishes the code cases quarterly in supplements to each edition. To assist users, new and revised code cases are shaded in grey to distinguish them from those approved in previous versions of this guide. Users should be aware that a code case approved in this RG may be a more recent version of a code case previously approved in RG 1.262. Applicants and licensees are required to follow 10 CFR 50.55a(b)(4) when applying the ASME BPV Code, Section III, code cases. For code cases previously listed in this guide, the third column of table 1 lists the dates of ASME approvals. For new or revised code cases, the third column of table 1 lists the supplement and edition in which each code case was published (e.g., "5/17E" means Supplement 5 to the 2017 Edition of the ASME BPV Code).

Table 1. Acceptable Section III Code Cases

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
N-4-13	*Special Type 403 Modified Forgings or Bars, Section III, Division 1, Class 1 and CS*	2/12/08
N-60-6	*Material for Core Support Structures, Section III, Division I*	12/6/11
N-131-1 (1759-1)	*Material for Internal Pressure Retaining Items for Pressure Relief Valves, Section III, Division 1, Class 1, 2, and 3*	2/3/03
N-133-3	*Use of SB-148 Alloys 952 and 954, Section III, Division 1, Class 3*	2/3/03
N-154-1	*Projection Resistance Welding of Valve Seats, Section III, Division 1, Classes 1, 2, and 3*	2/3/03
N-205	*Use of Ductile Iron SA-395, Section III, Division 1, Class 3*	2/25/02
N-249-17	*Additional Materials for Subsection NF, Classes 1, 2, 3, and MC Supports Fabricated without Welding, Section III, Division 1*	4/10/18
N-284-4	*Metal Containment Shell Buckling Design Methods, Class MC, TC, and SC Construction, Section III, Divisions 1 and 3*	10/8/12
N-315	*Repair of Bellows, Section III, Division 1*	2/3/03
N-319-3	*Alternate Procedure for Evaluation of Stresses in Butt Welding Elbows in Class 1 Piping, Section III, Division 1*	2/3/03
N-351-1	*Use of Standard Subsize Charpy V-Notch Impact Specimens, Section III, Division 1; Section III, Division 2; Section III, Division 3*	3/21E
N-369	*Resistance Welding of Bellows, Section III, Division 1*	5/9/03
N-373-3	*Alternative PWHT Time at Temperature for P-No. 5A or P-No. 5B Group 1 Material, Classes 1, 2, and 3*	10/8/04
N-405-1	*Socket Welds, Section III, Division 1*	2/20/04
N-452	*Specialized Subcontracted Welding Process (Electron Beam Welding), Section III, Division 1*	5/9/03
N-453-3	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) for Class 2 and 3 Construction, Section III, Division 1*	8/14/01

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
N-454-1	*Nickel-Chromium-Molybdenum-Copper Stainless Steels (UNS N08925 and N08926) Wrought Fittings for Class 2 and 3 Construction, Section III, Division 1*	6/17/03
N-455-1	*Nickel-Chromium-Molybdenum-Copper Stainless Steels (UNS N08925 and N08926) Forged Flanges and Fittings for Class 2 and 3, Section III, Division 1*	6/17/03
N-469-1	*Martensitic Stainless Steel for Class 1, 2, and 3 Components, Section III, Division 1*	2/3/03
N-500-4	*Alternative Rules for Standard Supports for Classes 1, 2, 3 and MC, Section III, Division 1*	10/14/11
N-505	*Alternative Rules for the Examination of Butt Welds Used as Closure Welds for Electrical Penetration Assemblies in Containment Structures, Section III, Division 1*	5/4/04
N-511	*Design Temperature for Atmospheric and 0–15 psi Storage Tanks, Section III, Division 1*	5/4/04
N-520-6	*Alternative Rules for Renewal of Active or Expired N-Type Certificates for Plants Not in Active Construction, Section III, Division 1*	12/11/12
N-525	*Design Stress Intensities and Yield Strength Values for UNS N06690 with a Minimum Specified Yield Strength of 30 ksi, Class 1 Components, Section III, Division 1*	7/23/02
N-539-1	*UNS N08367 in Class 2 and 3 Valves, Section III, Division 1*	8/16/16
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*	9/7/01
N-564-2	*UNS J93380, Alloy CD3MWCuN, Class 2 and 3 Construction, Section III, Division 1*	2/3/03
N-579	*Use of Nonstandard Nuts, Class 1, 2, and 3, MC, CS Components and Supports Construction, Section III, Division 1*	2/3/03
N-580-2	*Use of Alloy 600 with Columbium Added, Section III, Division 1*	1/4/08
N-594-1	*Repairs to P-4 and P-5A Castings without Postweld Heat Treatment Class 1, 2, and 3 Construction, Section III, Division 1*	10/14/11
N-610	*Alternative Reference Stress Intensity Factor (K_{IR}) Curve for Class Components, Section III, Division 1*	5/4/04
N-620	*Rules for Class 1 Type M Pumps, Section III, Division 1*	5/4/04
N-621-1	*Ni-Cr-Mo Alloy (UNS N06022) Welded Construction to 800°F, Section III, Division 1*	10/8/04
N-625-1	*Ni-Cr-Mo Alloy (UNS N06059) Welded Construction to 800°F, Section III, Division 1*	2/20/04
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*	7/23/02
N-635-1	*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 1, 2 and 3, Section III, Division 1*	2/14/03

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
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*	7/23/02
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*	2/3/03
N-644-1	*Weld Procedure Qualification for Procedures Exempt From PWHT in Classes 1, 2, and 3 Construction, Section III, Division 1*	3/28/01
N-650	*Use of SA-537, Class 2 Plate Material in Non-pressure Boundary Application Service 700°F to 850°F, Class 1 or CS, Section III, Division 1*	2/20/04
N-655-2	*Use of SA-738, Grade B, for Metal Containment Vessels, Class MC, Section III, Division 1*	6/6/10
N-692-1	*Use of Standard Welding Procedures, Section III, Division 1*	5/9/16
N-698	*Design Stress Intensities and Yield Strength for UNS N06690 with a Minimum Specified Yield Strength of 35 ksi (240 MPa), Class 1 Components, Section III, Division 1*	11/18/03
N-699	*Use of Titanium Grade 2 (UNS R50400) Tube and Bar, and Grade 1 (UNS R50250) Plate and Sheet for Class 1 Construction, Section III, Division 1*	1/5/06
N-703	*Use of Strain Hardened Austenitic Material at Lower Design Stress Values for Class 1 Valves, Section III, Division 1*	5/4/04
N-708	*Use of JIS G-4303, Grades SUS304, SUS304L, SUS316, and SUS316L, Section III, Division 1*	9/21/07
N-710	*Use of Zirconium Alloy UNS R60702, Bars, Forgings, Plate, Seamless and Welded Fittings, Seamless and Welding Tubing, and Seamless and Welded Pipe, for Class 3 Construction, Section III, Division 1*	5/4/04
N-721-1	*Alternative Rules for Linear Piping Supports, Section III, Division 1*	10/20/16
N-725	*Design Stress Values for UNS N06690 with Minimum Specified Yield Strength of 35 ksi (240 MPa), Classes 2 and 3 Components, Section III, Division 1*	1/12/05
N-727	*Dissimilar Welding Using Continuous Drive Friction Welding for Reactor Vessel CRDM/CEDM Nozzle to Flange/Adapter Welds, Classes 1, Section III, Division 1*	2/24/06
N-736	*Use UNS S32050 Welded and Seamless Pipe and Tubing, Forgings, and Plates Conforming to SA-249/SA-249M, SA-479/SA-479M, and SA-240/SA-240M, and Grade CK35MN Castings Conforming to ASTM A 743-03 for Construction of Class 1, 2, and 3 Components, Section III, Division 1*	1/5/06
N-738	*NDE of Full Penetration Butt Welds in Class 2 Supports, Section III, Division 1*	7/1/05
N-741	*Use of 22Cr-5Ni-3Mo-N (Alloy UNS S32205 Austenitic/ferritic Duplex Stainless Steel) Forging, Plate, Welded and Seamless Pipe Tubing, and Fittings to SA-240, SA-0789, A 790-04a, SA-815, Classes 2 and 3, Section III, Division 1*	10/11/05

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
N-746	*Use of 46Fe-24Ni-21Cr-6Mo-Cu-N (UNS N08367) Bolting Materials for Class 2 and 3 Components, Section III, Division 1*	1/5/06
N-756	*Alternative Rules for Acceptability for Class 1 Valves, NPS (DN 25) and Smaller with Nonwelded End connections Other Than Flanges, Section III, Division 1*	1/21/07
N-759-2	*Alternative Rules for Determining Allowable External Pressure and Comprehensive Stress for Cylinders, Cones, Spheres, and Formed Heads, Section III, Division 1*	1/4/08
N-760-2	*Welding of Valve Plugs to Valve Stem Retainers, Classes 1, 2, and 3, Section III, Division 1*	10/10/08
N-767	*Use of 21 Cr-6Ni-9Mn (Alloy UNS S21904) Grade GXM-11 (Conforming to SA-182/SA-182M and SA-336/SA-336M), Grade TPXM-11 (Conforming to SA-312/SA-312M) and Type XM-11 (Conforming to SA-666) Material, for Class-1 Construction, Section III, Division 1*	1/4/08
N-774	*Use of 13Cr-4Ni (Alloy UNS S41500) Grade F6NM Forgings Weighing in Excess of 10,000 lb (4,540 kg) and Otherwise Conforming to the Requirements of SA-336/SA-336M for Class 1, 2, and 3 Construction, Section III, Division 1*	9/3/08
N-777	*Calibration of C_v Impact Test Machines, Section III, Divisions 1, 2, and 3*	10/10/08
N-782	*Use of Editions, Addenda, and Cases, Section III, Division 1*	1/30/09
N-785	*Use of SA-479/SA-479M, UNS S41500 for Class 1 Welded Construction, Section III, Division 1*	10/12/09
N-815	*Use of SA-358/SA-358M Grades Fabricated as Class 3 or Class 4 Welded Pipe, Class CS Core Support Construction, Section III, Division 1*	12/6/11
N-816	*Use of Temper Bead Weld Repair Rules Adopted in 2010 Edition and Earlier Editions, Section III, Division 1*	12/6/11
N-817	*Use of Die Forgings, SB-247, UNS A96061, Class T6, with Thickness ≤ 4.000 in. Material, Class 2 Construction (1992 Edition or Later), Section III, Division 1*	12/6/11
N-819	*Use of Die Forgings, SB-247, UNS A96061, Class T6, with Thickness ≤ 4.000 in. Material, Class 2 Construction (1989 Edition with the 1991 Addenda or Earlier), Section III, Division 1*	12/6/11
N-822-4	*Application of the ASME Certification Mark, Section III, Divisions 1, 2, 3, and 5*	8/2/16
N-834	*ASTM A988/A988M-11 UNS S31603, Subsection NB, Class 1 Components, Section III, Division 1*	10/22/13
N-836	*Heat Exchanger Tube Mechanical Plugging, Class 1, Section III, Division 1*	10/22/13
N-841	*Exemptions to Mandatory Post Weld Heat Treatment (PWHT) of SA-738 Grade B for Class MC Applications, Section III, Division 1*	1/6/14
N-844	*Alternatives to the Requirements of NB-4250(c) Section III, Division 1*	2/9/14
N-855	*SB-148 C95800 Valves for Class 3 Construction, Section III, Division 1*	7/8/15
N-856	*SA-494 Grade CW-12MW (UNS N30002) Nickel Alloy Castings for Construction of NPS 2½ and Smaller Flanged Valves for Class 3 Construction, Section III, Division 1*	7/16/15

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
N-859	*Construction of ASME B16.9 Wrought Buttwelding Fittings and ASME B16.11 Forged Fittings Made From SB-366 UNS N04400 Material for Section III, Class 3 Construction, Section III, Division 1*	1/20/16
N-863-1	*Postweld Heat Treatment (PWHT) of Valve Seal Welds for P4 and P5A Materials, Section III, Division 1*	2/16/17
N-866	*Alternative Materials for Construction of Section III, Class 2 Vessels, Section III, Division 1*	11/14/16
N-870-1	*Rules for the Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report, Section III, Division 1*	11/2/17
N-879	*Use of Micro-Alloyed Carbon Steel Bar in Patented Mechanical Joints and Fittings, Classes 1, 2, and 3, Section III, Division 1*	5/10/17
N-884	*Procedure to Determine Strain Rate for Use With the Environmental Fatigue Design Curve Method and the Environmental Fatigue Correction Factor, F_{en}, Method as Part of an Environmental Fatigue Evaluation for Components Analyzed per the NB-3200 Rules, Section III, Division 1*	10/23/18
N-887	*Alternatives to the Requirements of NB-4424.2(a), Figure NB-4250-2, and Figure NB-4250-3, Section III, Division 1*	5/2/18
N-891	*Alternative Requirements to Appendix XXVI, XXVI-2400, XXVI-4130, and XXVI-4131 for Inspection and Repair of Indentations for Polyethylene Pipe and Piping Components, Section III, Division 1*	12/17/18
N-893	*Use of Alloy Steel Bar and Mechanical Tubing in Class 2 and 3 Patented Mechanical Joints and Fittings, Section III, Division 1*	4/19E
N-900	*Alternative Rules for Level D Service Limits of Class 1, 2, and 3 Piping Systems, Section III, Division 1*	3/19E
N-901	*Use of ASME SA-494 Grade M35-1 for Line Valve Bodies and Bonnets, and Bodies, Bonnets, and Yokes of Pressure Relief Valves for Class 2 and 3 Construction, Section III, Division 1*	4/19E
N-902	*Thickness and Gradient Factors for Piping Fatigue Analyses, Section III, Division 1*	5/19E
N-904	*Alternative Rules for Simplified Elastic–Plastic Analysis, Section III, Division 1*	6/19E
N-905	*Alternate Design Fatigue Curves to Those Given in For Section III Appendices, Mandatory Appendix I, Figures I-9.1 and I-9.1M, Section III, Division 1*	6/19E
N-908	*Use of Ferritic/Austenitic Wrought WPS32750/CRS32750 Fittings of Seamless or Welded Construction Conforming to SA-815, Class 3, Section III, Division 1*	7/19E
N-910	*Use of 25Cr-7Ni-4Mo-N (Alloy UNS S32750 Austenitic/Ferritic Duplex Stainless Steel) Forgings, Plate, and Welded and Seamless Pipe and Tubing Conforming to SA-182, SA-240, SA-789, or SA-790, Section III, Division 1*	7/19E
N-919	*Alternative Fatigue Evaluation Method to Consider Environmental Effects on Class 1 Components Section III, Division 1*	2/21E

CODE CASE NUMBER	TABLE 1 ACCEPTABLE SECTION III CODE CASES	DATE OR SUPPLEMENT/ EDITION
N-920	*Alternative Fatigue Design Curves for Ferritic Steels With Ultimate Tensile Strengths (UTS) ≤ 80 ksi (552 MPa) and Austenitic Steels, Section III, Division 1*	2/21E

2. Conditionally Acceptable Section III Code Cases

The NRC determined that the ASME BPV Code, Section III, code cases listed in table 2 are acceptable for use by applicants and licensees for Section III construction, within the limitations indicated by the NRC. Unless otherwise stated, limitations indicated by the NRC are in addition to the conditions specified in the code case. ASME publishes the code cases quarterly in supplements to each edition. To assist users, new and revised code cases are shaded in grey to distinguish them from those approved in previous versions of this guide. Users should be aware that a code case approved in this RG may be a more recent version of a code case previously approved in RG 1.262. Applicants and licensees are required to follow 10 CFR 50.55a(b)(4) when applying ASME BPV Code, Section III, code cases. For code cases previously listed in this guide, the third column of table 2 lists the date of ASME approval. For new or revised code cases, the third column of table 2 lists the supplement and edition in which each code case was published (e.g., "5/17E" means Supplement 5 to the 2017 Edition of the ASME BPV Code).

Table 2. Conditionally Acceptable Section III Code Cases

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	DATE OR SUPPLEMENT/ EDITION
N-62-7	*Internal and External Valve Items, Section III, Division 1, Classes 1, 2, and 3* The Code requires that Class 1 and Class 2 valve manufacturers to meet the provisions of Section III, Article NCA-4000, "Quality Assurance." Class 3 valve manufacturers must also meet the provisions of Article NCA-4000 because all Code Class valve items are subject to the licensee's 10 CFR Part 50, Appendix B, approved quality assurance program.	2/3/03
N-71-21	*Additional Materials for Subsection NF, Class 1, 2, 3, and MC Supports Fabricated by Welding, Section III, Division 1* (1) The maximum measured ultimate tensile strength (UTS) of the component support material must not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. (2) In the last sentence of Paragraph 5.2 of Code Case N-71-21, the evidence presented to and accepted by the Authorized Inspector concerning exposure of electrodes for a longer period of time must be consistent with Paragraph 5.3.2.3, "Alternative Atmosphere Exposure Time Periods Established by Test," of the AWS D1.1 Code. (3) Paragraph 16.2.2 of Code Case N-71-21 is replaced with the following: "When not exempted by 16.2.1 above, the post weld heat treatment must be performed in accordance with NF-4622 except that ASTM A-710 Grade A Material must be at least 1000°F (540°C) and must not exceed 1150°F (620°C) for Class 1 and 2 material and 1175°F (640°C) for Class 3 material." (4) The new holding time at temperature for weld thickness (nominal) must be 30 minutes for welds 0.5 inch or less; 1 hour per inch of thickness for welds over 0.5 inch to 5 inches; and for thicknesses over 5 inches, 5 hours plus 15 minutes for each additional inch over 5 inches. (5) The fracture toughness requirements as listed in this code case apply only to piping supports and not to Class 1, 2 and 3 component supports. (6) When welding P-number materials listed in the code case, the corresponding S-number welding requirements apply.	0/21E

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	DATE OR SUPPLEMENT/ EDITION
N-155-3	*Fiberglass Reinforced Thermosetting Resin Pipe, Section III, Division 1* (1) The design temperature for spray pond piping must be 100°C (212°F). (2) The allowable design stress must be the value obtained from the minimum hydrostatic design basis in Table 3611-1 of Code Case N-155-2 (Procedure A or B) or the value determined as one-sixth of the stress obtained from a short-time burst test for the pipe being qualified, whichever is lower. The short-time burst strength must be determined by bursting the pipe (ASTM D-1599-74) using free-end mounting after it has been exposed to $1x10^5$ pressure cycles from atmospheric to design pressure. (3) The value of "K" in Equation 9 of Paragraph 3652 must be limited to 1.2 unless it is demonstrated that, with the use of a large value of K_1, the functional capability of the system will not be impaired during upset and emergency conditions. (4) RTR piping must be uninsulated or uncovered and installed under conditions that make it readily accessible for inspection. (5) Preoperational and inservice inspections must be as follows: (a) During the preoperational testing period, tests must be made to verify that the piping is free of vibration induced by weather conditions or water flow that could fatigue the piping prematurely. (b) Fiberglass-reinforced piping components must be inspected in accordance with ASME Code, Section XI, for Code Class 3 components. In addition, all pipe supports must be inspected. (c) Inspection frequency for piping must be increased to once annually if an exterior weather-resistant coating is not provided.	2/11/16
N-570-3	*Alternative Rules for Linear Piping and Linear Standard Supports for Classes 1, 2, 3, and MC, Section III, Division 1* Design for strength using the Load and Resistance Factor Design method of ANSI/AISC N-690-2018 shall not be used.	0/21E
N-757-1	*Alternative Rules for Acceptability for Class 2 and 3 Valves (DN 25) and Smaller with Welded and Nonwelded End Connections Other Than Flanges, Section III, Division 1* The design provisions of ASME Section III, Division 1, Appendix XIII, shall not be used for Class 3 valves.	9/21/07
N-779	*Alternative Rules for Simplified Elastic-Plastic Analysis Class 1, Section III, Division 1* Acceptable for use with code editions Summer 1979 addenda and later.	1/26/09
N-852	*Application of the ASME NPT Stamp, Section III, Divisions 1, 2, 3, and 5* Licensees may use the NPT Code Symbol Stamp with the letters arranged horizontally as specified in ASME BPV Code Case N–852 for the service life of a component that had the NPT Code Symbol Stamp applied during the time period from January 1, 2005, through December 31, 2015.	2/9/15
N-883	*Construction of Items Prior to the Establishment of a Section III, Division 1 Owner, Section III, Division 1* This code case may only be used for the construction of items by a holder of a construction permit, operating license, or combined license under 10 CFR Part	1/29/18

CODE CASE NUMBER	TABLE 2 CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	DATE OR SUPPLEMENT/ EDITION
	50 or Part 52. This code case may not be used by a holder of a manufacturing license or standard design approval or by a design certification applicant.	
N-886	*Use of Polyethylene Pipe for Class 3, Section III, Division 1* For above ground applications, licensees must ensure the plant fire protection program addresses any HDPE consistent with the requirements of 10 CFR 50.48.	5/2/18

3. Annulled Unconditionally Approved Section III Code Cases

The NRC had previously approved the code cases listed in table 3 unconditionally; however, ASME has since annulled them. To assist users, new annulled code cases are shaded in grey to distinguish them from those listed in previous versions of this guide.

Table 3. Annulled Unconditionally Approved Section III Code Cases

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-1-7 (1332-7)	*Requirements for Steel Forgings, Section III, Division 1*	7/1/82
N-2 (1334-3)	*Requirements for Corrosion-Resisting Steel Bars and Shapes, Section III*	1/1/82
N-3-10 (1335-10)	*Requirements for Bolting Materials, Section III*	9/16/84
N-5-1	*Nickel Chromium Age Hardenable Alloys (Alloy X750), Section III, Division 1, Classes 1, 2, 3, MC, and CS*	12/13/85
N-6 (1345-2)	*Requirements for Nickel-Molybdenum-Chromium-Iron Alloys, Section III*	3/1/79
N-7-1	*High Yield Strength Steel, Class 1, Section III, Division 1*	2/22/05
N-9-4 (1395-4)	*SA-508, Class 2 Forgings with Modified Manganese Content, Section III*	7/1/82
N-10 (1407-3)	*Time of Examination for Classes, 1, 2, and 3, Section III Vessels*	9/17/87
N-15 (1456-2)	*Substitution of Ultrasonic Examination for Progressive Penetrant or Magnetic Particle Examination of Partial Penetration and Oblique Nozzle Attachment Welds, Section III*	3/1/79
N-17 (1474-1)	*Integrally Finned Tubes for Section III*	1/21/91
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*	9/18/01
N-22 (1498-1)	*SA-508-Class 2 and 3, Minimum Tempering Temperature, Section III*	7/1/82
N-24 (1516-2)	*Welding of Seats or Minor Internal Permanent Attachments in Valves for Section III Applications*	1/1/80
N-30-1 (1539-1)	*Metal Bellows and Metal Diaphragm Stem Sealed Valves, Section III, Division 1, Classes 1, 2, and 3*	1/1/81
N-32-3 (1541-3)	*Hydrostatic Testing of Embedded Class 2 and Class 3 Piping for Section III, Division 1 Construction*	7/1/79
N-33 (1542-1)	*Type 403 Forgings or Bars for Bolting Material, Section III*	1/21/85
N-35-1 (1552-1)	*Design by Analysis of Section III, Class 1 Valves*	7/1/79

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-37-3 (1557-3)	*Steel Products Refined by Secondary Remelting, Section III and VIII, Division 1 and 2*	7/1/82
N-41 (1571)	*Additional Material for SA-234 Carbon Steel Fittings, Section III*	1/21/85
N-43 (1578)	*SB-167 Nickel-Chromium-Iron (Alloy 600) Pipe or Tube, Section III*	7/1/82
N-46 (1588)	*Electro-Etching of Section III Code Symbols*	3/19/82
N-48-2	*Fabrication and Installation of Elevated Temperature Components, Section III, Division 1*	7/1/96
N-49-4	*Examination of Elevated Temperature Nuclear Components, Section III, Class 1*	7/1/96
N-50-1	*Testing of Elevated Temperature Components, Section III, Division 1, Class 1*	7/1/96
N-51-2	*Protection against Overpressure of Elevated Temperature Components, Section III, Division 1, Class 1*	7/1/96
N-55-1 (1609)	*Inertia and Continuous Drive Friction Welding, Section III, Division 1*	4/5/87
N-56 (1612)	*Use of Type 308 Stainless Steel Rod and Bar for Section III, Class 1, 2, 3, and CS Construction*	7/1/78
N-61 (1620)	*Stress Category for Partial Penetration Welded Penetrations, Section III, Class Construction*	1/8/82
N-65-1 (1626-1)	*Normalized and Tempered 1-1/4 Cr Low Alloy Steel Forgings, Section I and III*	1/21/85
N-66-1 (1630-1)	*External Pressure Charts for High Yield Strength Carbon Steels and Low Alloy Steels (Yield Strength above 38 ksi to 60 ksi Inclusive) For Section III, Class 1, 2, 3, and MC*	12/5/87
N-68 (1634-2)	*Use of SB-359 for Section III, Division, 1, Class 3 Construction*	7/1/78
N-77 (1660)	*Overpressure Protection under Emergency Operating Conditions for Section III, Class 1*	7/1/77
N-81 (1665)	*Pressure-Temperature Ratings for Class 1 Valves Made from 5 Cr-1/2 Mo, Section III*	7/1/78
N-82 (1677)	*Clarification of Flange Design Loads, Section III, Class 1, 2, and 3*	3/1/79
N-84 (1681-1)	*Organizations Accepting Overall Responsibility for Section III Construction*	3/1/79
N-90 (1692)	*Rules for Design of Welded Class 1 Pumps*	7/1/78
N-94 (1700)	*Determination of Capacities of Liquid Relief Valves, Section III, Division 1, Class 1, 2, and 3*	3/19/82
N-95-2 (1701-2)	*Determination of Capacities of Vacuum Relief Valves, Section III, Division 1, Classes 2, 3, and MC and Division 2 Concrete Containments*	7/9/82

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-96-1 (1702-1)	*Flanged Valves Larger than 24 Inches for Section III, Division 1, Class 1, 2, and 3 Construction*	1/1/80
N-101 (1712)	*Nameplates and Stamping for Section III, Division 1, Class 1, 2, 3 and MC Construction as Referenced in NA-8300*	3/1/79
N-102-2	*Postweld Heat Treatment of P-1 Material, Section III, Class MC*	6/30/84
N-107-1 (1722-1)	*Vacuum, Carbon Deoxidized SA-508 Forgings, Section III, Division 1*	1/8/82
N-108 (1724)	*Deviation from the Specified Silicon Ranges in ASME Material Specifications, Section III, Division 1, and VIII, Division 1 and 2*	7/1/78
N-109 (1726)	*Refinement of Low Alloy Steel Heat Affected Zone under Overlay Cladding, Section III, Division 1, Class 1 Components*	3/1/79
N-111 (1729)	*Minimum Edge Distance-Bolting for Section III, Division 1, Class 1, 2, and 3 and MC Construction of Component Supports*	3/1/79
N-114 (1732)	*Hardsurfaced Valves with Inlet Connections Less Than 2-in. Nominal Pipe Size for Section III, Division 1, Class 1 and 2 Construction*	1/1/79
N-115 (1733)	*Evaluation of Safe Shut Down Earthquake Loadings for Section III, Division 1, Class MC Containment Vessels*	1/1/78
N-119-6	*Pump Internal Items, Section III, Division 1, Class 1, 2, and 3*	3/14/94
N-121 (1744)	*Carbon Steel Pipe Flanges Larger than 24 in., Section III, Division 1, Class 2 and 3 Construction*	3/1/79
N-122-2	*Procedure for Evaluation of the Design of Rectangular Cross Section Attachments on Class 1 Piping, Section III, Division 1*	8/20/09
N-123 (1746)	*Leak Testing of Seal Welds, Section III, Division 1, Class 1, 2, and 3 Construction*	3/1/79
N-124 (1747)	*Requirements for Martensitic Stainless Forgings with 13% Chromium and 4% Nickel, Section III, Division 1*	7/13/87
N-125 (1748)	*Low Carbon Austenitic Stainless-Steel Pipe Welded with Filler Metal, Section III, Division 1, Construction*	7/1/78
N-126 (1754)	*Hard Surfacing by the Spray-Fuse Method, Section III, Class 1, 2, and 3 Construction*	7/1/88
N-127 (1755-1)	*Alternative Rules for Examination of Welds in Piping, Section III, Class 1 and 2 Construction*	2/20/92
N-139	*Testing of Electroslag Wire and Flux for Class 1, 2, 3, MC, and CS Construction, Section III, Division 1*	1/1/79
N-140 (1772)	*Use of SA-453 Bolts in Service below 800°F without Stress Rupture Tests, Section III, Division 1*	12/31/85
N-142-1 (1774-1)	*Minimum Wall Thickness for Class 2 and 3 Valves, Section III, Division 1*	1/1/80
N-147 (1781)	*Use of Modified SA-487 Grade CA6NM, Section III, Division 1, Class 1, 2, 3, MC, or CS*	7/1/78
N-148 (1782)	*Use of Copper-Nickel Alloy 962 for Castings, Section III, Division 1, Class 3 Construction*	6/30/83

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-156 (1793)	*Structural Steel Rolled Shapes, Section III, Division I, Class 2, 3, and MC*	2/14/86
N-157 (1794)	*Use of Seamless Al-Br, Alloy CDA 614 Pipe, Section III, Division 1, Class 3*	1/7/83
N-158 (1795)	*Examination of Weld Repairs in Forgings, Section III, Division 1, Class 1, 2, 3, MC, and CS*	7/1/78
N-159 (1796)	*Body Neck Thickness Determination for Valves with Inlet Connections 4-Inch Nominal Pipe Size and Smaller, Section III, Division 1, Class 1, 2, and 3*	7/1/78
N-160-1	*Finned Tubing for Construction, Section III, Division 1*	10/14/11
N-174 (1812)	*Size of Fillet Welds for Socket Welding of Piping, Section III, Division 1*	1/1/81
N-176-1 (1819-1)	*Use of Type XM-19 for Construction, Section III, Division 1, Class 1, 2, and 3*	8/25/83
N-177 (1820)	*Alternative Ultrasonic Examination Technique, Section III, Division 1*	1/1/84
N-178	*Use of ASTM B271, CDA 954, Alloy 9C for Class 3 Construction, Section III, Division 1*	1/1/80
N-179	*Openings in Valves for Section III, Division 1, Class 1, 2 and 3 Construction*	7/11/80
N-180	*Examination of Springs for Class 1 Component Standards Supports, Section III, Division 1*	7/1/78
N-181	*Steel Castings Refined by the Argon Decarburization Process, Section III, Division 1, Construction*	7/11/80
N-182	*Alternate Rules for Procedure Qualification Base Material Orientation, Section III, Division 1, Class 2 and 3 Construction*	7/1/81
N-183	*Use of Modified SA-182 Grade F22 for Section III, Division 1, Class 1, 2 and 3 Construction*	1/1/80
N-184	*Roll Threading of SA-453 Bolting for Section III, Division 1, Class 1, 2, 3, or CS Construction*	7/1/79
N-188-1	*Use of Welded Ni-Fe-Cr-Mo-Cu (Alloy 825) and Ni-Cr-Mo-Cb (Alloy 625) Tubing, Section III, Division 1, Class 2 and 3*	8/14/96
N-189	*Primary Membrane Plus Primary Bending Stress Intensity Limits Other Than Solid Rectangular Sections for Section III, Division 1, Class MC Construction*	7/1/79
N-190	*Use of SA-455 for Class 3 Components, Section III, Division 1*	7/1/78
N-192-3	*Use of Braided Flexible Connectors, Section III, Division 1, Class 2 and 3*	1/7/15
N-193	*Use of SB-61 and SB-62 Bronze for Section III, Division 1, Class 3 Flange and Socket Weld End Valves*	11/21/80
N-196-1	*Exemption from the Shakedown Requirements When Plastic Analysis Is Performed for Section III, Division 1, Class 1 and CS Construction*	7/1/92

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-204	*Use of Modified SA-508, Class 3, and SA-541, Class 3 for Section III, Division 1, Class 1, 2, and 3 Components*	1/1/81
N-206	*Use of ASTM B151-75 Copper-Nickel Alloy 706 Rod and Bar for Section III, Division 1, Class 3 Construction*	6/30/83
N-207-1	*Use of Modified SA-479 Type XM-19 for Section III, Division 1, Class 1, 2, 3, or CS Construction*	1/21/85
N-212 (1693)	*Welding Procedure Qualification of Dissimilar Metal Welds When "Buttering" with Alloy Weld Metal and Heat Treatment May Be Involved, Section III, Division 1, and Section IX*	1/1/81
N-214-2	*Use of SA-351 Grade CN7M, for Valves, Section III, Division 1*	12/31/83
N-215	*Integrally Finned Titanium Tubes, Section III, Division 1, Class 3 Construction*	5/15/81
N-217-1	*Postweld Heat Treatment of Weld Deposit Classes 1, 2, 3, MC, and CS Items, Section III, Division 1*	2/23/87
N-220	*Code Effective Date for Component Supports, Section III, Division 1*	7/13/81
N-223	*Requirements for Stainless Steel Precipitation Hardening, Section III, Division 1, Class MC*	11/20/81
N-224-1	*Use of ASTM A500 Grade B and ASTM A501 Structural Tubing for Welded Attachments for Section III, Class 2, 3, and MC*	4/5/90
N-225	*Certification and Identification of Material for Component Supports, Section III, Division 1*	1/1/81
N-226	*Temporary Attachment of Thermocouples, Section III, Division 1, Class 1, 2 and 3 Component Supports*	1/1/80
N-227	*Examination of Repair Welds, Section III, Class 2 and 3 Tanks*	7/9/82
N-228	*Alternate Rules for Sequence of Completion of Code Data Report Forms and Stamping for Section III, Class 1, 2, 3, and MC Construction*	3/19/82
N-229	*Alternate Rules for Fabrication Welding SB-148 Alloy CDA 954 for Section III, Division 1, Class 3 Construction*	1/21/88
N-231	*Alternate Methods for Leak Detection in the Attachment Welds of Leak Chase Channels, Section III, Division 2, Class CC*	7/1/92
N-233	*Alternate Rules for PWHT of P-No. 6, Group 4 Material for Section III, Division 1, Class 3 Construction*	9/17/87
N-237-2	*Hydrostatic Testing of Internal Piping, Section III, Division 1, Classes 2 and 3*	7/1/88
N-240	*Hydrostatic Testing of Open-Ended Piping, Section III, Division 1*	7/1/97
N-241	*Hydrostatic Testing of Piping, Section III, Division 1*	7/1/97
N-243	*Boundaries within Castings Used for Core Support Structures, Section III, Division 1, Class CS*	10/14/11
N-245	*Use of ASTM B61-76 and B62-76 Copper Alloy Castings for Section III, Division 1, Class 3 Construction*	7/17/85
N-246-2	*SB-169 Alloy C61400, Section III, Division 1, Class 3 Construction*	7/27/95

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-247	*Certified Design Report Summary for Component Standard Supports, Section III, Division 1, Class 1, 2, 3 and MC*	4/30/93
N-248	*Alternative Reference Radiographs, Section III, Division 1, Classes 1, 2, 3, MC, and CS Construction*	7/1/80
N-259	*Ni-Cu-Al Bolting Material SB 164 Modified, Section III, Division 1, Class 3*	1/1/84
N-261	*Weld Procedure Qualification for Materials with Impact Requirements for Section III, Division 1, Class 3 Construction*	12/13/82
N-262	*Electric Resistance Spot Welding for Structural Use in Component Supports, Section III, Division 1*	7/27/91
N-265-1	*Modified SA-487 Castings, Section III, Division 1, Class 1*	8/14/97
N-267	*Double-Wall Radiography, Section III, Division 1, Class 1 and 2*	7/1/81
N-271	*Simplified Method for Analyzing Flat Face Flanges with Metal-to-Metal Contact outside the Bolt Circle for Section III, Class 2, 3, and MC Construction*	2/14/86
N-272	*Compiling Data Report Forms, Section III, Division 1*	1/1/82
N-276	*Welding of SA-358 Pipe, Section III, Division 1*	2/14/86
N-277	*Use of Type XM-19 Austenitic Stainless Steel for Section III, Division 1, Class MC Construction*	9/17/80
N-280	*Alternate Rules for Examination of Welds in Section III, Class 3 Storage Tanks*	7/1/81
N-281	*Welding Operator Performance Qualification, Section III, Division 1*	7/1/81
N-282	*Nameplates for Valves, Section III, Division 1, Class 1, 2, and 3 Construction*	7/30/89
N-294	*SB-148 Alloys 952 and 954, and SB-62 Alloy 836 Fittings, Section III, Division 1, Class 2*	7/27/95
N-295	*NCA-1140, Materials, Section III, Division 1*	6/30/82
N-296	*Welding Material, Section III, Division 1 Construction*	12/1/83
N-298	*Examination of Component Supports, Section III, Division 1, Class 1, 2, 3, and MC*	12/1/83
N-299-1	*Use of Nickel-Chromium-Molybdenum-Columbium Alloy 625 Forgings, Section III, Division 1, Class 2 and Class 3 Components*	2/23/87
N-300	*Pressure-Temperature Ratings, Hydrostatic Tests, and Minimum Wall Thickness of Valves, Section III, Division 1, Class 1*	12/1/83
N-302	*Tack Welding, Section III, Division 1, Construction*	11/28/83
N-304-4	*Use of 20Cr-25Ni-6Mo (Alloy UNS N08366) Plate, Sheet, Strip, and Welded Pipe, Class 2 and 3, Section III, Division 1*	1/1/03
N-309-1	*Identification of Materials for Component Supports, Section III, Division 1*	7/1/95
N-313	*Alternative Rules for Half-Coupling Branch Connections, Section III, Division 1, Class 2*	7/1/96
N-316	*Alternative Rules for Fillet Weld Dimensions for Socket Welding Fittings, Section III, Division 1, Class 1, 2, and 3*	8/14/93

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-317	*ASTM A276 Bar, Section III, Division 1*	7/1/82
N-318-5	*Procedure for Evaluation of the Design of Rectangular Cross Section Attachments on Class 2 or 3 Piping, Section III, Division 1*	8/20/09
N-320	*Alternate PWHT for SA-487, Grade CA6NM, Section III, Division 1*	12/31/83
N-321-1	*Use of Modified SA-249, Grade TP 304, Section III, Division 1, Class 1*	12/85/88
N-324	*Qualification of Authorized Nuclear Inspector Supervisor (Concrete) and Authorized Nuclear Inspector (Concrete), Section III, Division 2, Classes CB and CC*	7/27/95
N-328	*Thermit Brazing or Welding of Nonstructural Attachments, Section III, Division 1*	9/17/87
N-329	*Examination of Bar Material, Section III, Division 1, Class 1*	10/14/11
N-336	*Examination of Welds Inaccessible during Pressure Test, Section III, Division 1, Class MC*	6/30/83
N-337-1	*Use of ASTM B 525-70 Grade II, Type II, Sintered Austenitic Stainless Steel for Classes 2, 3, and MC Component Standard Supports, Section III, Division 1*	3/14/94
N-339	*Examination of Ends of Fillet Welds, Section III, Division 1, Classes 1, 2, and MC*	9/17/84
N-341	*Certification of Level III NDE Examiner, Section III, Divisions 1 and 2*	7/1/88
N-342	*Use of SA-249 and SA-312 Type 317 Stainless Steel, Section III, Division 1, Classes 1, 2, and 3*	4/2/85
N-345-1	*Attachment of AMS 5382 Alloy 31 Seat Rings by Friction Welding, Section III, Division 1, Classes 1, 2, and 3*	3/28/01
N-346	*Explosive Welding, Section III, Division 1*	6/30/86
N-347	*Continuous Electric Resistance Seam Welding of P-No. 8 Materials for Component Supports, Section III, Division 1*	12/13/85
N-349	*Pressure Testing Piping Systems, Section III, Division 1, Classes 2 and 3*	12/13/85
N-352-1	*Use of SA-638 Grade 660 Forgings and Bars below 700°F without Stress Rupture Tests, Section III, Division 1*	6/30/86
N-353	*Marking of SA-354 Grade BD Bolting, Section III, Division 1*	9/5/88
N-354-1	*Subcontracted Service, Section III, Division 2*	8/14/94
N-355	*Calibration Block for Angle Beam Ultrasonic Examination of Large Fittings in Accordance with Appendix III-3410*	8/9/96
N-357	*Certification of Material for Component Supports, Section III, Division 1, Subsection NF*	7/1/88
N-359	*Weld Connection for Coaxial Cylinders, Section III, Division 1, Class 1*	12/31/84
N-362-2	*Pressure Testing of Containment Items, Section III, Division 1, Classes 1, 2, and MC*	7/1/88
N-367	*SA-372 Type V, Grade 1, Class B, Section III, Division 1*	2/19/89
N-368	*Pressure Testing of Pump Discharge Piping, Section III, Division 1, Classes 2 and 3*	7/1/95

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-370-2	*Modified SA-705 Type XM-13 Forgings, Section III, Division 1*	8/14/97
N-371-1	*12Cr-1W-1Mo-1/4V Martensitic Stainless Steel Valve Internals, Section III, Division 1*	7/18/88
N-372	*SB-163 Ni-Fe-Cr-Mo-Cu Alloy 825 (UNS N08825) Tubing, Section III, Division 1*	12/31/83
N-376	*Pressure Testing of Embedded Class 2 and 3 Piping, Section III, Division 1*	7/30/86
N-377	*Effective Throat Thickness of Partial Penetration Groove Welds, Section III, Division 1, Classes 1, 2, and 3*	12/31/83
N-378	*Examination of Piping Support Material, Section III, Division 1, Class 1*	10/28/86
N-379-1	*Bimetallic Tubing, Section III, Division 1, Class 1*	7/18/91
N-384-1	*Use of Prepackaged General Purpose Cement Grouts, Epoxy Grouts, and Epoxy Bonding, Section III, Division 2, Class CC*	7/27/91
N-387	*Certification of Level III NDE Examiner, Section III, Division 2*	9/18/01
N-388	*Component Support Bolting, Section III, Division 1, Classes 2, 3, and MC*	2/23/87
N-391-2	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 1 Piping, Section III, Division 1*	5/4/04
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*	5/4/04
N-393	*Repair Welding Structural Steel Bolted Shapes and Plates for Component Supports, Section III, Division 1*	7/27/95
N-394	*Restricting Lift to Achieve Reduced Relieving Capacities of Full Lift, Nozzle Type, and Flat Seated Safety and Safety Relief Valves for Compressible Fluid Applications, Section III, Division 1, Classes 2 and 3*	3/2/01
N-395	*Laser Welding, Section III, Division 1*	9/18/01
N-403	*Reassembly of Subsection NF Component and Piping Supports, Section III, Division 1*	7/1/95
N-410	*Certified Relieving Capacities of Pressure Relief Valves Having Set Pressure of 3 psig up to but Not Including 15 psig Installed for Overpressure Protection of Compressible Fluid Systems, Section III, Division 1, Classes 2 and 3*	3/14/00
N-412	*Alternative Rules for Witnessing the Piping System Pressure Tests of Classes 1, 2, and 3 Piping Systems, Section III, Division 1*	4/15/91
N-413	*Minimum Size of Fillet Welds for Subsection NF Linear Type Supports, Section III, Division 1*	2/14/88
N-414	*Tack Welds for Class 1, 2, 3 and MC Components and Piping Supports*	2/20/92
N-418-1	*Use of Seamless Ni-Fe-Cr-Mo-Cu Low Carbon (UNS N08028 and UNS N08904) Tubing, Section III, Division 1, Classes 2 and 3*	7/27/95
N-420	*Linear Energy Absorbing Supports for Subsection NF, Classes 1, 2, and 3 Construction*	1/1/99
N-421	*Brazing Using a Radiant Energy Source, Section III, Division 1*	6/30/86

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-433	*Non-Threaded Fasteners for Section III, Division 1, Class 1, 2, and 3 Components and Piping Supports*	12/16/95
N-438-4	*UNS N08367 Material, Section III, Division 1, Class 2 and 3 Construction*	7/1/98
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*	9/18/01
N-440-1	*Use of 20Cr-18Ni-6Mo (Alloy UNS J93254) Castings, Class 2 and 3 Construction, Section III, Division 1*	9/18/01
N-441-2	*Use of 20Cr-18Ni-6Mo (Alloy UNS S31254) Fittings, Class 2 and 3 Construction, Section III, Division 1*	9/18/01
N-442	*1977 Addendum to ANSI/ASME PTC 25.3-1976, Safety and Safety Relief Valves, Class 1, 2, 3, and MC, Section III, Division 1*	3/8/92
N-443-2	*High Yield Strength Cr-Mo Steel, Class 1 Components, Section III, Division 1*	1/1/01
N-451	*Alternative Rules for Analysis of Piping under Seismic Loading, Class 1, Section III, Division 1*	8/14/96
N-459	*SA-508 Basic Oxygen-Ladle Furnace Process for Code Construction, Section III, Division 1*	3/14/94
N-462	*Alternative Rules for Analysis of Piping Products under Seismic Loading, Class 2 and 3 Piping Systems, Section III, Division 1*	5/24/96
N-464	*Laser Welding of Lap Joints, Section III, Division 1, Classes 2 and 3 Construction*	5/9/03
N-466-1	*Modified 9Cr-1Mo Material, Section III, Division 1, Classes 1, 2, and 3*	8/14/97
N-468	*Alternative Method of Earthquake Description for Class 2 and 3 Piping of Low Seismicity Sites, Section III, Division 1*	1/1/92
N-470	*Class MC Material Requirements [NE-2121(c)], Section III, Division 1*	3/8/92
N-474-2	*Design Stress Intensities and Yield Strength Values for UNS N06690 with a Minimum Specified Yield Strength of 35 ksi, Class 1 Components, Section III, Division 1*	1/1/00
N-475	*Materials in Inventory, Section III, Division 1*	12/11/92
N-476	*Class 1, 2, 3, and MC Linear Component Supports—Design Criteria for Single Angle Members, Section III, Division 1, Subsection NF*	7/1/96
N-482	*Direct Quenched Stainless Bar, ASTM A 479-88b, Section III, Division 1*	3/5/93
N-484-1	*Real Time Radioscopic Examination of Welds, Section III, Division 1*	12/16/94
N-492-1	*Grade 9 Titanium Alloy Tubing, Section III, Division 1, Class 1, 2, and 3*	1/1/00
N-493	*Alternative Radiographic Acceptance Criteria for Vessels Used as Shipping Casks, Section III, Division 1, Class 1*	2/9/15
N-497-1	*Use of Fe-Ni-Cr-Mo-N (C-N-3MN) Cast Materials, Section III, Division 1, Class 2 and 3 Construction*	1/1/99
N-501	*Alternative Rules for NCA-3800, 1990 Addenda, Section III, Division 1*	12/31/93
N-502	*SA-268, Grade 26-3-3 (UNS S44660), Section III, Classes 2 and 3*	1/1/00

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
N-507	*Identification of Welders, Section III, Division 2*	7/27/05
N-540	*Guidance on Implementation of NCA-3800 Revisions in 1994 Addenda, Section III, Division 1*	6/30/98
N-549	*Stamping and Flow Certification of Rupture Disk Devices, Classes 2 and 3, Section III, Division 1*	3/19/99
N-550	*Alternative Rules for Examination of Welds in Instrument Tubing, Classes 1 and 2, Section III, Division 1*	5/20/01
N-551	*Alternative Methods of Analysis, NC/ND-3673.1, Class 2 and 3 Applications, Section III, Division 1*	8/14/97
N-558	*Stamping of Class 2 Vessels Fabricated to Subsection NB, Section III, Division 1*	2/11/16
N-559	*SA-203, Grade E (Plate) and SA-350, Grade LF3 (Forging), 3.5% Ni Nominal Composition Used in Class 1 Construction, Section III, Division 1*	5/24/99
N-572	*Use of SG-425 (UNS N08825) Bar and Rods for Class 1 Construction, Section III, Division 1*	5/24/99
N-596	*Use of Alternative Reference Specimens, Section III, Division 1*	2/20/04
N-607	*Guidance on Implementation of NS Certificate of Accreditation, Section III, Division 1*	3/17/22
N-608	*Applicable Code Edition and Addenda, NCA-1140(a)(2), Section III, Division 1*	5/20/01
N-611	*Use of Stress Limits as an Alternate to Pressure Limits Subsection NC/ND-3500, Section III, Division 1*	7/1/2013
N-646	*Alternative Stress Intensification Factors for Circumferential Fillet Welded or Socket Welded Joints for Class 2 or 3 Piping, Section III, Division 1*	11/10/14
N-657	*Use of the N-1A Data Report for Spent Fuel Canisters, Section III, Division 1*	2/9/15
N-732	*Magnetic Particles Examination of forgings for Construction, Section III, Division 1*	10/14/11
N-744	*Use of Metric Units Boiler and Pressure Vessel Code, Section III, Divisions 1 and 3, and Section V and IX*	2/11/16
N-802	*Rules for Repair of Stamped Components by the N-Certificate Holder That Originally Stamped the Component, Section III, Division 1*	8/12/12
1141-7	*Foreign Produced Steel*	7/23/76
1434-1	*Postweld Heat Treatment of SA-487 Class 8N Steel Castings, Section III*	1/1/78
1461-1	*Electron Beam Welding, Section I, III, and VIII, Division 1 and 2*	2/16/77
1470-2	*External Pressure Charts for High-Strength Carbon Steels and for Low-Alloy Steels, Section VIII, Division 1 and 2, and Section III*	11/4/74
1471-1	*Vacuum Electron Beam Welding of Tube Sheet Joints, Section III*	1/1/78
1475-1	*Ferritic-Austenitic Stainless Steel Seamless Tubes for Section III, Class 2 and 3 Construction*	7/1/75
1477-1	*Use of 1970 Addenda of ANSI B31.7, Section III*	1/1/78

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
1494-1	*Weld Procedure Qualification Test, Section III*	1/1/78
1506	*Stress Intensification Factors, Section III, Class 2 and 3 Piping*	1/1/78
1515	*Ultrasonic Examination of Ring Forgings for Shell Sections, Section III, Class 1 Vessels*	7/1/77
1529	*Materials for Instrument Line Fittings, Section III*	7/1/73
1531	*Electrical Penetrations, Special Alloys for Electrical Penetration Seals, Section III*	3/21/77
1532	*Section III, Class 3 Components Made of 8 Percent and 9 Percent Nickel Steel*	1/1/78
1533	*Pressure Temperature Ratings of SA-351 Grades CF8A, CF3, and CF3M, Section III*	7/1/75
1535-2	*Hydrostatic Testing of Section III, Class 1 Valves*	3/21/77
1536	*Closing Seam for Electrical Penetrations for Section III, Class 2, 3, and MC*	7/1/77
1553-1	*Upset Heading and Roll Threading of SA-453 for Bolting in Section III*	1/1/76
1555-1	*Certification of Safety Relief Valves, Section III, Division 1*	1/1/78
1567	*Testing Lots of Carbon and Low Alloy Steel Covered Electrodes, Section III*	1/1/78
1568	*Testing Lots of Flux Cored and Fabricated Carbon and Low Alloy Steel Welded Electrodes, Section III*	1/1/78
1573	*Vacuum Relief Valves, Section III*	1/1/78
1574	*Hydrostatic Test Pressure for Safety Relief Valves, Section III*	12/31/74
1580-1	*Buttwelded Alignment Tolerance and Acceptable Slopes for Concentric Centerlines for Section III, Class 1, 2, and 3 Construction*	1/1/78
1581	*Power-Operated Pressure Relief Valves, Section III*	3/1/79
1583	*Use of 80-40 Carbon Steel Castings, Section III*	3/21/77
1587	*SA-508 Class 3 Forgings with 0.4/1.0 Ni for Section III and VIII, Division 2 Construction*	12/31/75
1590	*Chemical Analysis Variations, Section III Construction*	3/21/77
1601	*Limits of Reinforcement for Two-Thirds Area, Section III, Class 1*	7/1/74
1602-1	*Use of SB-42 Alloy 122, SB-111 Alloys 122, 715 and 706 and SB-466 Alloys 706 and 715, Section III, Class 2 and 3 Components*	12/31/74
1603	*Toughness Tests When Cross-Section Limits Orientation and Location of Specimens*	7/1/74
1605	*Cr-Ni-Mo-V Bolting Material for Section III, Class 1 Components*	3/17/80
1608-1	*Use of ASME SB-265, SB-337, SB-338, and SB-381, Grades 1, 2, 3, and 7 Unalloyed Titanium and ASTM B-363 Titanium Welding Fittings, Section III, Class 2 and 3 Components*	3/21/77
1613	*Use of SA-372 Class IV Forgings, Section III Construction*	1/1/78
1614	*Hydrostatic Testing of Piping Prior To or Following the Installation of Spray Nozzles for Section III, Classes 1, 2, and 3 Piping Systems*	1/1/79

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
1615	*Use of A587-73, Section III, Class 3 Construction*	1/1/78
1616	*Ultrasonic Examination of Seamless Austenitic Steel Pipe, Section III, Class 1 Construction*	7/1/75
1622	*PWHT of Repair Welds in Carbon Steel Castings, Section III, Class 1, 2, and 3*	1/1/76
1623	*Design by Analysis for Section III, Class 1 Sleeve-Coupled and Other Patented Piping Joints*	3/1/79
1625	*Repair of Section III, Class 2 and 3 Tanks*	12/31/74
1633	*Brazing of Seats to Class 1, 2, and 3 Valve Body or Bonnets, Section III*	1/1/78
1637	*Effective Date for Compliance with NA-3700 of Section III*	1/1/75
1645	*Use of DeLong Diagram for Calculating the Delta Ferrite Content of Welds in Section III, Class 1, 2, and CS Construction*	1/1/76
1648	*SA-537 Plates for Section III, Class 1, 2, 3, and MC Components*	7/1/76
1649	*Modified SA-453-GR 660 for Class 1, 2, 3, and CS Construction*	1/1/76
1650	*Use of SA-414 Grade C for Class 2 and 3 Components, Section III, Division 1*	12/31/74
1651	*Interim Requirements for Certification of Component Supports, Section III, Subsection NF*	3/1/79
1657	*Stress Criteria for Class 2 and 3 Atmospheric and Low Pressure (0–15 psig) Steel Storage Tanks*	7/1/77
1659	*Interconnection of Two Piping Systems for Section III, Class 1, 2, and 3 Construction*	7/1/77
1661	*Postweld Heat Treatment P-No.1 Materials for Section III, Class 1 Vessels*	1/1/78
1662	*Shop Assembly of Components, Appurtenances, and Piping Subassemblies for Section III, Class 1, 2, 3, and MC Construction*	1/1/78
1664	*Use of Cr-Ni-Fe-Mo-Cu-Cb Stabilized Alloy Cb-3 for Section III, Class 2 and 3 Construction*	3/21/77
1666	*Use of SB-12, Alloy 122 for Class 2 and 3 Construction*	7/1/75
1672	*Nuclear Valves for Section III, Division 1, Class 1, 2, 3 Construction*	3/21/77
1675	*Tubesheet to Shell or Formed Head Weld Joints, Section III, Class 1 Vessels*	7/1/76
1676	*Clarification of Stress Intensities in Curved Pipe or Welded Elbows, Section III*	7/1/76
1678	*Butterfly Valves of Circular Cross Section Larger Than 24 in. NPS for Section III, Class 2 and 3 Construction*	1/1/80
1682-1	*Alternate Rules for Material Manufacturers and Suppliers, Section III, Subarticle NA-3700*	12/31/75
1683-1	*Bolt Holes for Section III, Class 1, 2, 3 and MC Component Supports*	7/1/76
1684	*A637 Grade 718 for Bolting Class 1 and 2 Construction*	1/1/76
1685	*Furnace Brazing Section III, Class 1, 2, 3 and MC Construction*	1/1/78

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
1686	*Furnace Brazing, Section III, Subsection NF, Component Supports*	1/1/78
1690	*Stock Materials for Section III Construction, Section III, Division 1*	1/1/77
1691	*Ultrasonic Examination in Lieu of Radiography of Repair Welds for Vessels, Section III, Class 1*	1/1/78
1703	*Brazing of Copper Alloys, Section III, Class 2*	1/1/78
1706	*Data Report Forms for Component Supports, Section III, Class 1, 2 and 3*	12/31/75
1713	*Small Material Items, Section III, Division 1, Class 1, 2, 3, CS and MC*	12/31/75
1718	*Design of Structural Connections for Linear Type Component Supports, Section III, Division 1, Class 1, 2 and 3 and MC*	7/1/76
1719	*Single-Welded, Full-Penetration Sidewall Butt Joints in Atmospheric Storage Tanks, Section III, Division 1, Class 2*	7/1/76
1728	*Steel Structural Shapes and Small Material Products for Components Supports, Section II, Division 1 Construction*	7/1/77
1740	*Weld Metal Test, Section III, Class 1, 2, 3, MC, and CS*	7/1/76
1741-1	*Interim Rules for the Required Number of Impact Tests for Rolled Shapes, Section III, Division 1, Subsection NF, Components Supports*	1/1/78
1742	*Use of SB-75 Annealed Copper Alloy 122, Section III, Division 1, Class 2 Construction*	7/1/76
1743	*Use of SB-98 Cu-SiB Rod CDA651 Section III, Division 1, Class 2 Components*	7/1/76
1760	*Maximum Dimensions for Isolated Pores in Welds—Class 1 Components, Section III, Division 1*	7/1/77
1765	*Machining after Hydrostatic Testing Class 2 and 3 Construction, Section III, Division 1*	7/1/77
1766	*Testing Requirements for Welding Materials, Class 1, 2, 3, MC, and CS Construction, Section III, Division 1*	7/1/77
1767	*Examination of Tubular Products without Filler Metal—Class 1 Construction, Section III, Division 1*	1/1/77
1768	*Permanent Attachments to Containment Vessels—Class MC, Section III, Division 1*	1/1/78
1769-1	*Qualification of NDE Level III Personnel, Section III, Division 1*	10/1/77
1773	*Use of Other Product Forms of Materials for Valves, Section III, Division 1*	7/1/77
1775	*Data Report Forms for Core Support Structures, Class CS, Section III, Division 1*	8/13/79
1777	*Use of SA-106, Grade C in Class MC Construction, Section III, Division 1*	7/1/77
1787	*Depth of Weld Repairs for Forgings, Section III, Division 1, Class 1, 2, 3, MC and CS Construction*	1/1/78
1798	*Use of ASTM A352-75, Grades LCA and LCC, Section III, Division 1, Class 1, 2, and 3*	1/1/78

CODE CASE NUMBER	TABLE 3 ANNULLED UNCONDITIONALLY APPROVED SECTION III CODE CASES	ANNULMENT DATE
1808	*F-Number Classification of Low Alloy and Carbon Steel Bare Rod Electrodes, Sections I, II, III, IV, V, VIII, and IX.*	1/1/78
1810	*Testing Lots of Carbon Steel Solid, Bare Welding Electrode or Wire, Section III, Division 1, Class 1, 2, 3, MC, and CS*	3/3/80
1819	*Use of Type XM-19 for Construction, Section III, Division 1, Class 1, 2, 3*	1/1/78

4. Annulled Conditionally Acceptable Section III Code Cases

The NRC conditionally approved the code cases listed in table 4; however, ASME subsequently annulled them. To assist users, new annulled code cases are shaded in grey to distinguish them from those listed in previous versions of this guide.

Table 4. Annulled Conditionally Acceptable Section III Code Cases

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
N-11-5 (1414-5)	*High Yield Strength Cr-Mo Steel for Section III, Division 1, Class 1 Vessels* Each referencing safety analysis report should provide the information required by Note 1 in the code case.	8/29/80
N-31-1	*Elastomer Diaphragm Valves, Section III, Division 1, Classes 2 and 3* Each applicant who applies the code case should indicate in the referencing safety analysis report that the service life of the elastomer diaphragm should not exceed the manufacturer's recommended service life. This recommended service life should not exceed one-third of the minimum cycle life as established by the requirements of Paragraph 3 of the code case. In addition, the service life of the elastomer diaphragm should not exceed 5 years, and the combined service and storage life of the elastomer diaphragm should not exceed 10 years.	7/1/93
N-32-4	*Hydrostatic Testing of Embedded Class 2 and Class 3 Piping for Section III, Division 1 Construction* The acceptance of Code Case N-32-4 was based on the following clarification and interpretation. Code Case N-32-4 does not replace Paragraph NC/ND-6129, "Provisions for Embedded or Inaccessible Welded Joints in Piping," of the Code. The intent of the code case is to (1) provide additional testing above Code requirements and (2) permit liquid penetrant or magnetic particle testing in place of radiographic testing for Class 3 piping with a 3/8-inch nominal wall thickness or less. Paragraph (1) contains an additional requirement to the Code. It was, therefore, acceptable but unnecessary to include in the code case. Paragraph (2) is a variation in the volumetric examination technique and was acceptable as written. Paragraph (3) contains an additional requirement and is not a relaxation of the Code. It was, therefore, acceptable but unnecessary to include in the code case.	3/16/84
N-92 (1698)	*Waiver of Ultrasonic Transfer Method, Section III, V, and VIII, Division 1* The material from which the basic calibration block is fabricated should be of the same product form, alloy, and heat treatment as the material being examined. Alloys of equivalent P-number groupings may be used for the fabrication of calibration blocks if adjustments to signal height can be made to compensate for sound beam attenuation difference between the calibration block and the material under examination by following the transfer method procedure in the 1977 Edition of ASME Code, Section V, Article 5, T-535.1(d).	7/13/81
N-100 (1711)	*Pressure Relief Valve Design Rules, Section III, Division 1, Class 1, 2 and 3* The safety analysis report should provide the following information: (1) If stress limits are used in excess of those specified for the upset operating condition, it should be demonstrated how the pressure relief function is ensured. Refer to paragraph 3.1, Section I, of the code case for Class and paragraph 3.2, Section II, of the code case for Class 2 and 3 pressure relief valves.	1/1/83

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
	(2) If Code Case 1660 is to be used in conjunction with the code case, it should be stated that the stress limits of Code Case 1660 supersede those of paragraph 3.2(b), Section I, of Code Case 1711. Functional assurance of (1) above is required in all situations.	
N-106-2 (1720-2)	*Weld End Preparation for Section III, Division 1 Construction* The acceptance of weld-end preparations other than those shown in Figures 1, 2, and 3 of the code case should be evaluated on a case-by-case basis.	8/14/93
N-110 (1727)	*Alternate Test Fluids, Section III, Division 1* The applicant should provide justification in the referencing safety analysis report for the fluid selected for use in the pressure test. The information provided should demonstrate that the fluid selected will not have deleterious effects on the material of the pressure boundary and that the fluid may be safely used at the specified temperature and pressure of the test. When the fluid selected for use is the operating fluid, additional information is not required.	1/1/79
N-116 (1734)	*Weld Design for Use for Section III, Division 1, Class 1, 2, 3 and MC Construction of Component Supports* If the configuration of Figure 1 of the code case is used for Class 1 and MC component supports, full-penetration welds should be used. The application of the configuration shown in Figures 2 and 3 should be restricted to the welding of cans for spring encapsulation in spring hangers. In Figure 3, the length of the leg of the fillet weld adjacent to the plate should be equal to the thickness of the exposed edge of the plate. In addition, the leg of the fillet weld adjacent to the shell should be equal to the thickness of the exposed end of the shell.	1/1/78
N-146-1 (1780-1)	*Hydrostatic Testing and Stamping of Components, Section III, Division 1, Construction* On a generic basis, the application of the code case is limited to pumps and valves. Application to other components should be treated on a case-by-case basis. Each licensing application in which the code case is to be used should contain information showing that, as a minimum, the closure fixture will impose loads that result in stresses equal to or greater than those induced during the hydrostatic test of a complete pump assembly. A closure fixture for the part being tested that is similar in size and shape to the actual mating part is considered adequate to impose these loads. It is not intended that the hydrostatic testing simulate piping reaction loadings.	1/1/82
N-175 (1818)	*Welded Joints in Component Standard Supports, Section III, Division 1* That portion of the unwelded housing that is limited to 90 degrees maximum should include a minimum of two sectors that are uniform in length.	7/1/79
N-199	*Intervening Elements, Section III, Division 1, Classes 1, 2, 3, and MC Component Construction* The applicants should provide information in the referencing safety analysis report that demonstrates that all intervening elements have been designed in compliance with the requirements of the respective design specification.	1/1/81

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
N-208-2	*Fatigue Analysis for Precipitation Hardening Nickel Alloy Bolting Material to Specification SB-637 N07718 for Class 1 Construction, Section III, Division 1* (1) In Figure A, the words "No mean stress" shall be implemented with the understanding that it denotes "Maximum mean stress." (2) In Figure A, σ_y shall be implemented with the understanding that it denotes σ_{max}.	10/14/11
N-238	*High Temperature Furnace Brazing of Seat Rings in Valve Bodies or Bonnets for Section III, Division 1, Class 1, 2, and 3 Valves* The furnace brazing process procedure qualification should verify nonsensitization, as given in Practices A or E of ASTM A 262-70, "Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels" (Ref. 10), or ASTM A 708-74, "Practice for Detection of Susceptibility to Intergranular Corrosion in Severely Sensitized Austenitic Stainless Steels" (Ref. 11), whenever materials subject to sensitization are to be brazed. Documentation is required for the use of a nonsensitizing brazing procedure for valves produced to this code case.	1/1/82
N-242-1	*Materials Certification, Section III, Division 1, Classes 1, 2, 3, MC, and CS Construction* Applicants should identify, in their safety analysis reports, the components and supports for which the code case is being applied and should specify the respective paragraphs of the code case.	6/30/84
N-252	*Low Energy Capacitive Discharge Welding Method for Temporary or Permanent Attachments to Components and Supports, Section III, Division 1, and XI* The applicant should indicate, in the safety analysis report, the application, the material, and the material thickness to which the strain gage or thermocouple will be attached by CD welding.	7/1/82
N-260-2	*Weld Repair of SA-182 Type 316 Forgings, Section III, Division 1, Classes 1, 2, 3, and MC* Type 308L welding materials should not be used to repair Grade F 316 N forgings because of the difference in strength levels.	12/5/88
N-263	*Alternate Thread Forms, Series and Fits for Component Supports, Section III, Division 1* The safety analysis report should do the following: (1) Describe the application. (2) Justify the need for the use of the code case. (3) Demonstrate that the support design will withstand maximum conditions of loading with the worst combination of thread tolerance.	3/17/83
N-274	*Alternative Rules for Examination of Weld Repairs for Section III, Division 1 Construction* The ultrasonic examination procedures shall be proven by actual demonstration to the satisfaction of the authorized nuclear inspector that the procedures are capable of detecting unacceptable cracks in accordance with Section XI, requirements.	6/30/86
N-275	*Repair of Welds, Section III, Division 1* Use of the code case applies only when the removal of an indication requires that the full weld thickness be removed and when the backside of the weld assembly	12/31/83

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
	joint is not accessible for the removal of examination material. If an indication is removed and weld-metal layers still remain, gouging through the wall to qualify for use of the code case is not acceptable. Instead, the cavity must be examined when such an indication has been removed.	
N-279	*Use of Torquing as a Locking Device for Section III, Division 1, Class 1, 2, 3, and MC Component Supports* When torquing or other preloading is used as a locking device and the joint is later unloaded or disassembled, the bolting should be replaced unless it can be demonstrated or proved to the authorized nuclear inspector that the original bolting has not been permanently strained.	7/13/81
N-292	*Depositing Weld Metal Prior to Preparing Ends for Welding, Section III, Division 1, Class 1, 2, and 3* Class 3 piping that is longitudinally welded and that has a weld efficiency factor of 1.0, as selected from ASME Code, Table ND-3613.4-1, "Weld Joint Efficiency Factor," must receive a 100-percent volumetric examination (radiographic testing or ultrasonic testing) of the deposited weld metal in accordance with ASME Code, ND-5000, "Examination."	2/20/04
N-310-1	*Certification of Bolting Materials, Section III, Division 1, Class 1, 2, 3, MC, and CS* Each applicant who applies the code case should include the answers to the following questions in the referencing safety analysis report: (1) Why does the bolting not meet ASME Code, NCA-3800 (or NA-3700)? (2) Where will the bolting be used in the plant? (3) How will the applicant show that the bolting material properties required by the equipment support design specification will be present in the actual bolting material?	7/1/82
N-314	*Alternate Rules for Thread Engagement, Section III, Division 1* Applicants should identify the following items in their safety analysis report: (1) the minimum length of thread engagement (2) the procedure used to establish thread engagement	5/11/84
N-348 N-348-1 N-348-2	*Use of SA-574 Socket Weld Head Cap Screws, Section III, Division 1* Applicants' safety analysis reports should justify why the use of these socket head cap screws will not result in early failure from stress-corrosion cracking.	9/7/85 2/20/89 8/14/93
N-350	*Postweld Heat Treatment Thickness of Material, Section III, Division 1* Applicants wishing to use this code case for materials other than P-1 materials should demonstrate that the use of this code case will not adversely affect the required material properties.	9/5/85
N-383-1	*Weld Repair of SA-182 Austenitic Forgings, Section III, Division 1, Classes 1, 2, and 3* Applicants who apply the provisions of this code case to permit material manufacturers to weld repair austenitic forgings without resolution heat treatment should give the NRC staff (through the safety analysis report) a justification as to why this is acceptable for their applications, including their evaluation of the susceptibility for stress-corrosion cracking.	9/5/85

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
N-397	*Alternative Rules to the Spectral Broadening Procedures of N-1226.3 for Classes 1, 2, and 3 Piping, Section III, Division 1* The code case is acceptable for specific plant applications on a case-by-case basis, pending revision of RG 1.122, "Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components" (Ref. 12).	2/20/87
N-398	*Reporting of Charpy-V Notch Test Results, Section III, Division 1* The code case is not acceptable for steam generator or reactor coolant pump supports. Applicants wishing to use this code case should indicate in the safety analysis report the component supports to which the code case is applied for review on a case-by-case basis.	2/20/87
N-404	*Annealed Alloy UNS N06625 Over UNS N06600 Bimetallic Tubing, Section III, Division 1, Class 1* The outside layer of the bimetallic tubing should be limited to a minimum of 5 percent and to a maximum of 40 percent of the wall thickness. The tolerance on the outside layer of material should not exceed -0.000 to +0.007 inch of the specified design wall thickness.	12/11/95
N-411-1	*Alternative Damping Values for Response Spectra Analysis of Class 1, 2, and 3 Piping, Section III, Division 1* (1) The code case damping should be used completely and consistently, if it is used at all. (For equipment other than piping, the damping values specified in RG 1.61, "Damping Values for Seismic Design of Nuclear Power Plants" (Ref. 13), should be used.) (2) The damping values specified may be used only in those analyses in which current seismic spectra and procedures have been employed. Such use is to be limited only to response spectral analyses [similar to that used in the study supporting its acceptance, NUREG/CR-3526, "Impact of Changes in Damping and Spectrum Peak Broadening on the Seismic Response of Piping Systems" (Ref. 14)]. The acceptance of the use with other types of dynamic analyses (e.g., time-history analyses or independent support motion method) is pending further justification. (3) When used for reconciliation work or for support optimization of existing designs, the effects of increased motion on existing clearances and online mounted equipment should be checked. (4) This code case is not appropriate for analyzing the dynamic response of piping systems using supports designed to dissipate energy by yielding (i.e., the design of which is covered by Code Case N-420). (5) This code case does not apply to piping in which stress corrosion-cracking has occurred unless a case-specific evaluation is made and is reviewed by the NRC staff.	5/5/00
N-430	*Alternative Requirements for Welding Workmanship and Visual Acceptance Criteria for Class 1, 2, 3 and MC Linear-Type and Standard Supports, Section III, Division 1* (1) The applicant should demonstrate that the applicable supports are not subject to cyclical loading in excess of 20,000 cycles. (2) The first sentence of 3.0(f)(1) should be replaced with the following: "For material 3/8 in. and less nominal thickness, undercut depth of 1/32 in. on one side of the member for the full length of the weld, or 1/32 in. on one	7/1/93

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
	side for one-half the length of the weld, and 1/16 in. for one-fourth of the length of the weld on the face of a rectangular tube or one-fourth the length of the weld on the same side of the member is acceptable."	
N-595-4	*Requirements for Spent Fuel Storage Canisters, Section III, Division 1* The canisters must be made from austenitic stainless steel Type 304 or 316.	10/14/11
N-656	*Rules for the Construction of Inner Transportation Containments, Section III, Division 3* The inner transportation containment must contain only solid and dry material.	5/11/10
N-755-4	*Use of Polyethylene (PE) Class 3 Plastic Pipe, Section III, Division 1* (1) When performing fusing procedure qualification testing in accordance with paragraphs -2420 and -4330 of this code case, the following essential variables must be used for butt fusion joints: (a) Joint Type: A change in the type of joint from that qualified, except that a square butt joint qualifies as a mitered joint. (b) Pipe Surface Alignment: A change in the pipe outside diameter (O.D.) surface misalignment of more than 10 percent of the wall thickness of the thinner member to be fused. (c) PE Material: Each lot of polyethylene source material to be used in production (as mentioned in paragraph (XXVI-2310(c)). (d) Wall Thickness: Each thickness to be fused in production (as mentioned in paragraph (XXVI-2310(c)). (e) Diameter: Each diameter to be fused in production (as mentioned in paragraph (XXVI-2310(c)). (f) Cross-sectional Area: Each combination of thickness and diameter (as mentioned in paragraph (XXVI-2310(c)). (g) Position: Maximum machine carriage slope when greater than 20 degrees from horizontal (as mentioned in paragraph (XXVI-4321(c)). (h) Heater Surface Temperature: A change in the heater surface temperature to a value beyond the range tested (as mentioned in paragraph (XXVI-2321). (i) Ambient Temperature: A change in ambient temperature to less than 50ºF (10ºC) or greater than 125ºF (52ºC) (as mentioned in paragraph (XXVI-4412(b)). (j) Interfacial Pressure: A change in interfacial pressure to a value beyond the range tested (as mentioned in paragraph (XXVI-2321). (k) Decrease in Melt Bead Width: A decrease in melt bead size from that qualified. (l) Increase in Heater Removal Time: An increase in heater plate removal time from that qualified. (m) Decrease in Cool-down Time: A decrease in the cooling time at pressure from that qualified. (n) Fusing Machine Carriage Model: A change in the fusing machine carriage model from that tested (as mentioned in paragraph (XXVI-2310(d)).	1/1/22

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
	(2) When performing procedure qualification for High Speed Tensile Impact testing of butt fusion joints in accordance with XXVI-2300 or XXVI-4330, if the specimen breaks away from the fusion zone it must be retested. When performing fusing operator qualification bend tests of butt fusion joints in accordance with XXVI-4342, guided side bend testing must be used for all thicknesses greater than 1.25 inches.	
1361-2	*Socket Welds, Section III* Code Case 1361-2 was acceptable when used in connection with Section III, Paragraph NB-3356, "Fillet Welds."	3/1/79
1412-4	*Modified High Yield Strength Steel for Section III, Division 1, Class 1 Vessels* Each referencing safety analysis report should provide the information required by Note 1 in the code case. The material given in the "Inquiry" section of the code case should be SA-508, Class 4b, instead of SA-508, Class 4.	1/1/77
1423-2	*Wrought Type 304 and 316 with Nitrogen Added, Sections I, III, VIII, Divisions 1 and 2* Code Case 1423-2 was acceptable subject to compliance with the recommendations in RG 1.31, "Control of Ferrite Content in Stainless Steel Weld Metal" (Ref. 15), and RG 1.44, "Control of the Use of Sensitized Stainless Steel" (Ref. 16).	7/1/77
1521-1	*Use of H-Grades of SA-240, SA-479, SA-336, and SA-358, Section III* Code Case 1521-1 was acceptable subject to compliance with the recommendations contained in RG 1.31 and RG 1.44.	1/1/78
1528-3	*High Strength Steel SA-508, Class 2 and SA-541, Class 2 Forgings, Section III, Class 1 Components* Each referencing safety analysis report should provide the information required by Note 1 in the code case.	1/1/78
1569	*Design of Piping for Pressure Relief Valve Station, Section III* Code Case 1569 was acceptable subject to compliance with the recommendations in RG 1.67, "Installation of Over-Pressure Protection Devices" (Ref. 17).	7/1/79
1606-1	*Stress Criteria Section III, Classes 2 and 3 Piping Subject to Upset, Emergency, and Faulted Operating Conditions* Code Case 1606-1 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	7/1/77
1607-1	*Stress Criteria for Section III, Classes 2 and 3 Vessels Designed to NC/NC-3300 Excluding the NC-3200 Alternate* Code Case 1607-1 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	7/1/77

CODE CASE NUMBER	TABLE 4 ANNULLED CONDITIONALLY ACCEPTABLE SECTION III CODE CASES TITLE/CONDITION	ANNULMENT DATE
1635-1	*Stress Criteria for Section III, Class 2 and 3 Valves Subjected to Upset, Emergency, and Faulted Operating Conditions* Code Case 1635-1 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	7/1/77
1636-1	*Stress Criteria for Section III, Class 2 and 3 Pumps Subjected to Upset, Emergency, and Faulted Operating Conditions* Code Case 1636-1 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	7/1/77
1689-1	*Alternate PWHT Time and Temperature for SA-182 Grade F-22, SA-387 Grade 22, Class 2, and SA-335 Grade P-22 Section III, Class 1, 2, 3 and CS* The alternate postweld heat treatment (PWHT) should be prequalified along with the applicable welding procedure in accordance with Section IX.	1/1/78
1783-1	*Qualification of Nondestructive Examination Personnel, Section III, Division 1* The first sentence of Paragraph 1 of the code case should be replaced with the following: "The certification of the Level III nondestructive examination personnel for the purpose of this Section of the Code will be the responsibility of the employer of the Level III individual. If the employer is not a Certificate Holder, then the verification of such certificate is the responsibility of the Certificate Holder."	1/1/79

5. Code Cases Superseded by Revised Code Cases

The code cases listed in table 5 were approved in prior versions of this guide and have since been superseded by revised code cases (on or after July 1, 1974). The third column of the table indicates the date on which ASME approved the revision to the code case. Note that the NRC unconditionally approved the code cases listed without conditions. The versions of the code cases listed in table 5 cannot be applied by the licensee or applicant for the first time after the effective date of this RG. To assist users, new superseded code cases are shaded in grey to distinguish them from those listed in previous versions of this guide. (Note: The NRC did not approve some of these code cases in previous versions of this guide.)

Table 5. Section III Code Cases That Have Been Superseded by Revised Code Cases on or after July 1, 1974

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
N-4-11 (1337-11) N-4-12	*Special Type 403 Modified Forgings or Bars, Section III, Division 1, Class 1 and CS*	1/12/05 2/12/08
N-5 (1344-5)	*Nickel-Chromium, Age-Hardenable Alloys (Alloy X750), Section III*	12/13/82
N-7 (1358-5)	*High Yield Strength Steel, Section III, Division 1, Class 1 Vessels* Each referencing safety analysis report should provide the information required by Note 1 in the code case.	12/13/82
N-20 (1484-3) N-20-1	*SB-163 Nickel-Chromium-Iron Tubing (Alloy 600 and 690) at Nickel-Iron-Chromium Alloy 800 at a Specified Minimum Yield Strength of 40.0 ksi, Section III, Division 1, Class 1*	9/5/85 12/7/87
N-20-2 N-20-3	*SB-163 Nickel-Chromium-Iron Tubing (Alloy 600 and 690) at Nickel-Iron-Chromium Alloy 800 at a Specified Minimum Yield Strength of 40.0-ksi and Cold Worked Alloy 800 at a yield strength of 47.0-ksi, Section III, Division 1, Class 1*	11/30/88 2/26/99
N-31 (1540-2)	*Elastomer Diaphragm Valves, Section III, Class 2 and 3* Each applicant who applies the code case should indicate in the referencing safety analysis report that the service life of the elastomer diaphragm should not exceed the manufacturer's recommended service life. This recommended service life should not exceed one-third of the minimum cycle life as established by the requirements of Paragraph 3 of the code case. In addition, the service life of the elastomer diaphragm should not exceed 5 years, and the combined service and storage life of the elastomer diaphragm should not exceed 10 years.	7/18/85
N-55 (1609-1)	*Inertia and Continuous Drive Friction Welding, Section I, III, IV, VIII, Division 1 and 2, and IX*	4/5/84
N-60 (1618-2) N-60-1	*Material for Core Support Structures, Section III, Division 1, Subsection NG* Welding of age-hardenable Alloy SA-453 Grade 660 and SA-637 Grade 688 should be performed when the material is in a solution-treated condition.	5/25/83 9/17/84
N-60-2 N-60-3 N-60-4	*Material for Core Support Structures, Section III, Division 1, Subsection NG* Welding of age-hardenable Alloy SA-453 Grade 660 and SA-637 Grade 688 should be performed when the material is in a solution-treated condition. For SA-479 material, the maximum yield strength should not exceed 90,000 pounds	9/5/85 5/13/91 2/15/94

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
	per square inch (psi) because of the susceptibility of this material to environmental cracking.	
N-60-5	*Material for Core Support Structures, Section III, Division 1, Class 1* The maximum yield strength of strain-hardened austenitic stainless steel shall not exceed 90,000 psi because of the susceptibility of this material to environmental cracking.	2/20/04
N-62-2 (1621-2) N-62-3 N-62-4 N-62-5 N-62-6	*Internal and External Valve Items, Section III, Division 1, Class 1, 2 and 3 Line Valves* The code case requires Class 1 and Class 2 valve manufacturers to meet the provisions of Section III, Article NCA-4000, and Class 3 valve manufacturers should also meet the provisions of Article NCA-4000.	7/18/85 9/5/85 7/24/89 12/11/89 5/11/94
N-71-7 (1644-7) N-71-8 (1644-8)	*Additional Materials for Component Supports, Section III, Division 1, Subsection NF, Class 1, 2, 3 and MC Component Supports* The maximum measured UTS of the component support material should not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. Certain applications may exist where a UTS value of up to 190 ksi could be considered acceptable for a material; under this condition, the design specification should specify impact testing for the material. For these cases, the applicant should demonstrate that (1) the impact test results for the material meet the Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service.	5/15/78 1/7/80
N-71-9 (1644-9)	*Additional Materials for Component Supports Fabricated by Welding, Section III, Division 1, Subsection NF, Class 1, 2, 3, and MC Component Supports* In the last sentence of Paragraph 5.3 of the code case, reference should be made to Paragraph 4.5.2.2, "Alternate Atmosphere Exposure Time Periods Established by Test," of the AWS D.1.1 Code for the evidence presented to and accepted by the authorized inspector concerning exposure of electrodes for longer periods of time.	5/11/81
N-71-10 N-71-11	*Additional Materials for Component Supports Fabricated by Welding, Section III, Division 1, Subsection NF, Class 1, 2, 3, and MC Component Supports* The maximum measured UTS of the component support material should not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. Certain applications may exist where a UTS value of up to 190 ksi could be considered acceptable for a material; under this condition, the design specification should specify impact testing for the material. For these cases, the applicant should demonstrate that (1) the impact test results for the material meet Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service. The last sentence of Paragraph 5.3 of the code case should reference Paragraph 4.5.2.2 of the AWS D.1.1 Code for the evidence presented to and accepted by the authorized inspector concerning exposure of electrodes for longer periods of time.	6/17/82 2/14/83
N-71-12	*Additional Materials for Component Supports Fabricated by Welding,*	2/20/84

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
	Section III, Division 1, Class 1, 2, 3 and MC The maximum measured UTS of the component support material should not exceed 170 ksi in view of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. Certain applications may exist where a UTS value of up to 190 ksi could be considered acceptable for a material; under this condition, the design specification should specify impact testing for the material. For these cases, the applicant should demonstrate that (1) the impact test results for the material meet Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service. The last sentence of Paragraph 5.3 of the code case should reference Paragraph 4.5.2.2 of the AWS D.1.1 Code for the evidence presented to and accepted by the authorized inspector concerning exposure of electrodes for longer periods of time. Paragraph 16.2.2 is not acceptable as written and should be replaced with the following: "When not exempted by 16.2.1, above, the postweld heat treatment shall be performed in accordance with NF-4622 except that for ASTM A-710 Grade A material, it should be at least 1000°F (540°C) and should not exceed 1150°F (620°C) for Class 1 and Class 2 material and 1175°F (640°C) for Class 3 material. The new holding time at temperature for weld thickness (nominal) should be 30 minutes for 2 inches or less, 1 hour per inch for thickness over 2 inches to 5 inches, and 5 hours plus 15 minutes for each additional inch over 5 inches."	
N-71-13 N-71-14 N-71-15 N-71-16 N-71-17 N-71-18	*Additional Materials for Subsection NF, Classes 1, 2, 3 and MC Component Supports Fabricated by Welding, Section III, Division 1* (1) The maximum measured UTS of the component support material must not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. (2) Certain applications may exist for which a UTS value of up to 190 ksi could be considered acceptable for a material; under this condition, the design specification must specify impact testing for the material. For these cases, the applicant must demonstrate that (1) the impact test results for the material meet the Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service. (3) In the last sentence of Paragraph 5.3 of the code case, reference must be made to Paragraph 5.3.2.3, "Alternative Atmosphere Exposure Time Periods Established by Tests," of the AWS D1.1 Code for the evidence presented to and accepted by the authorized inspector concerning exposure of electrodes for longer periods of time. (4) Paragraph 15.2.2 of the code case is not acceptable as written and must be replaced with the following: "When not exempted by 15.2.1 above, the postweld heat treatment must be performed in accordance with NF-4622 except that ASTM A-710 Grade A Material must be at least 1000°F (540°C) and must not exceed 1150°F (620°C) for Class 1 and Class 2 material and 1175°F (640°C) for Class 3 material."	12/5/85 12/16/86 2/12/93 12/31/96 12/8/00 11/8/12

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
	(5) The new holding time at temperature for weld thickness (nominal) must be 30 minutes for 2 inches or less; 1 hour per inch for thickness over 2 inches to 5 inches; and for thicknesses over 5 inches, 5 hours plus 15 minutes for each additional inch over 5 inches. The fracture toughness requirements as listed in this code case apply only to piping supports, not to Class 1, Class 2, and Class 3 component supports.	
N-71-19 N-71-20	*Additional Materials for Subsection NF, Classes 1, 2, 3 and MC Component Supports Fabricated by Welding, Section III, Division 1* (1) The maximum measured ultimate tensile strength (UTS) of the component support material must not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. (2) In the last sentence of Paragraph 5.2 of Code Case N-71-19, reference must be made to Paragraph 5.3.2.3, "Alternative Atmosphere Exposure Time Periods Established by Test," of the AWS D1.1 Code for the evidence presented to and accepted by the Authorized Inspector concerning exposure of electrodes for a longer period of time. (3) Paragraph 16.2.2 of Code Case N-71-19 is not acceptable as written and must be replaced with the following: "When not exempted by 16.2.1 above, the post weld heat treatment must be performed in accordance with NF4622 except that ASTM A-710 Grade A Material must be at least 1000°F (540°C) and must not exceed 1150°F (620°C) for Class 1 and 2 material and 1175°F (640°C) for Class 3 material." (4) The new holding time at temperature for weld thickness (nominal) must be 30 minutes for welds 0.5 inch or less; 1 hour per inch of thickness for welds over 0.5 inch to 5 inches; and for thicknesses over 5 inches, 5 hours plus 15 minutes for each additional inch over 5 inches. (5) The fracture toughness requirements as listed in this code case apply only to piping supports and not to Class 1, 2 and 3 component supports. (6) When welding P-number materials listed in the code case, the corresponding S-number welding requirements shall apply.	6/30/16 1/11/21
N-95-1 (1701-1)	*Determination of Capacities of Vacuum Relief Valves, Section III, Division 1 and 2, Class MC*	7/9/79
N-102-1 (1714-2)	*Postweld Heat Treatment of P-1 Material, Section III, Class MC*	8/28/78
N-119-2 (1739-2) N-119-3 (1739-3) N-119-4 (1739-4) N-119-5	*Pump Internal Items, Section III, Division 1, Class 1, 2, and 3*	8/25/80 12/1/80 7/18/85 9/5/85
N-122	*Stress Indices for Structural Attachments, Class 1, Section III, Division 1*	7/24/89
N-133 (1761-1)	*Use of SB-148 Alloy CA954 for Section III, Division 1, Class 2 or 3 Flanged End Valves*	1/14/77
N-133-1 N-133-2	*Use of SB-148 Alloys 952 and 954, Section III, Division 1, Class 3*	5/19/85 7/18/85
N-154 (1791)	*Projection Resistance Welding of Valve Seats, Section III, Division 1, Class 1, 2 and 3 Valves*	7/18/85

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
N-155-2	*Fiberglass Reinforced Thermosetting Resin Pipe, Section III, Division 1* (1) The design temperature for spray pond piping must be 100°C (212°F). (2) The allowable design stress must be the value obtained from the minimum hydrostatic design basis in Table 3611-1 of Code Case N-155-2 (Procedure A or B) or the value determined as one-sixth of the stress obtained from a short-time burst test for the pipe being qualified, whichever is lower. The short-time burst strength must be determined by bursting the pipe (ASTM D-1599-74) using free-end mounting after it has been exposed to $1x10^5$ pressure cycles from atmospheric to design pressure. (3) The value of "K" in Equation 9 of Paragraph 3652 must be limited to 1.2 unless it can be demonstrated that, with the use of a large value of K_1, the functional capability of the system will not be impaired during upset and emergency conditions. (4) RTR piping must be uninsulated or uncovered and installed under conditions that make it readily accessible for inspection. (5) Preoperational and inservice inspections must be as follows: (a) During the preoperational testing period, tests must be made to verify that the piping is free of vibration induced by weather conditions or water flow that could fatigue the piping prematurely. (b) Fiberglass-reinforced piping components must be inspected in accordance with ASME Code, Section XI, for Code Class 3 components. In addition, all pipe supports must be inspected. (c) Inspection frequency for piping must be increased to once annually if an exterior weather-resistant coating is not provided.	2/11/16
N-160 (1797)	*Finned Tubing for Construction, Section III, Division 1*	7/18/85
N-188	*Use of Welded Ni-Fe-Cr-Mo-Cu (Alloy 825) and Ni-Cr-Mo-Cb (Alloy 625) Tubing, Section III, Division 1, Class 3*	1/1/78
N-192 N-192-1 N-192-2	*Use of Flexible Hose for Section III, Division 1, Class 1, 2, and 3 Construction* The applicant should indicate the system application, design and operating pressure, and pressure-temperature rating of the flexible hose. Data to demonstrate compliance of the flexible hose with NC/ND-3649, particularly NC-ND-3649.4(e), are required to be furnished with the application.	8/30/79 9/16/81 7/23/02
N-196	*Exemption from the Shake-down Requirements When Plastic Analysis is Performed for Section III, Division 1, Class 1 Construction*	1/8/79
N-207	*Use of Modified SA-479 Type XM-19 for Section III, Division 1, Class 1, 2, or 3 Construction*	3/19/79
N-208-1	*Fatigue Analysis for Precipitation Hardening Nickel Alloy Bolting Material to Specification SB-637 N07718 for Section III Division 1, Class 1 Construction*	2/14/03
N-214 N-214-1	*Use of SA-351, Grade CN7M, for Valves for Section III, Division 1, Construction*	9/7/82 5/25/83
N-224	*Use of ASTM A500 Grade B and ASTM A501 Structural Tubing for Welded Attachments for Section III, Class 2 and 3 Construction*	5/11/81
N-237	*Hydrostatic Testing of Internal Piping, Section III, Division 1*	9/7/82
N-237-1	*Hydrostatic Testing of Internal Piping, Section III, Division 1, Classes 2 and 3*	5/25/83

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N-242	*Materials Certification, Section III, Division 1, Classes 1, 2, 3, MC, and CS Construction* Applicants should identify the components and supports that require the use of Paragraphs 1.0 through 4.0 of the code case in their safety analysis reports.	4/10/80
N-246	*Use of SB-169 Alloy CA614, Section III, Division 1, Class 3*	9/7/82
N-246-1	*SB-169, Alloy C 61400, Section III, Division 1, Class 3*	5/25/83
N-249	*Additional Materials for Component Supports Fabricated without Welding, Section III, Division 1, Subsection NF, Class 1, 2, 3, and MC Component Supports* Footnote 2 of the code case should apply to all materials listed in Tables 1, 2, 3, 4, and 5 of the code case and should be so indicated on line 5 of the "Reply."	5/11/81
N-249-1	*Additional Materials for Component Supports Fabricated without Welding, Section III, Division 1, Subsection NF, Class 1, 2, 3, and MC Component Supports* Paragraph 7 of the "Reply" should reference the requirements in Paragraph NF-2600 instead of those in Paragraph NF-2800. This is a typographical error because Paragraph NF-2800 does not exist.	6/17/82
N-249-2 N-249-3	*Additional Materials for Subsection NF Class 1, 2, 3, and MC Component Supports Fabricated without Welding, Section III, Division 1*	2/14/83 2/20/84
N-249-4 N-249-5	*Additional Material for Subsection NF, Classes 1, 2, 3, and MC Component Supports Fabricated without Welding, Section III, Division 1* The fracture toughness requirements, as listed in Code Case N-249-4, apply only to piping supports and not to Classes 1, 2, and 3 component supports. The fracture toughness of Classes 1, 2, and 3 component supports should be characterized in accordance with Section 5.3.4 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (SRP) (Ref. 18), or on a case-by-case basis.	9/17/84 4/8/85
N-249-6 N-249-7 N-249-8 N-249-9 N-249-10 N-249-11 N-249-12 N-249-13	*Additional Material for Subsection NF, Classes 1, 2, 3, and MC Component Supports Fabricated without Welding, Section III, Division 1* The fracture toughness requirements apply only to piping supports and not to Classes 1, 2, and 3 component supports. The fracture toughness of Classes 1, 2, and 3 component supports should be characterized in accordance with SRP Section 5.3.4, or on a case-by-case basis. The following should be added to Paragraph 5 of the code case: "For these cases, the owner should demonstrate that (1) the impact test results for the material meet Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service."	9/5/85 12/5/85 12/16/86 5/6/89 5/13/91 2/12/93 5/11/94 12/8/00
N-249-14	*Additional Materials for Subsection NF, Class 1, 2, 3, and MC Component Supports Fabricated without Welding, Section III, Division 1* (1) The fracture toughness requirements apply only to piping supports, not to Class 1, Class 2, and Class 3 component supports. (2) The following should be added to Paragraph (e) of the code case: "For these cases, the owner must demonstrate that (1) the impact test results for the material meet Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no	2/20/04

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	residual stresses or assembly stresses and it does not experience frequent sustained loads in service."	
N-249-15 N-249-16	*Additional Materials for Subsection NF, Classes 1, 2, 3, and MC Supports Fabricated without Welding, Section III, Division 1*	7/15/14 4/10/18
N-260	*Weld Repair of SA-182 Type 316 Forgings, Section III, Division 1, Classes 1, 2, 3, and MC*	7/18/85
N-260-1	*Weld Repair of SA-182 Type 316 Forgings, Section III, Division 1, Classes 1, 2, 3, and MC* Type 308L welding materials should not be used to repair Grade F 316 N forgings because of the difference in strength levels.	12/5/85
N-265	*Modified SA-487 Castings, Section III, Division 1, Class 1*	5/19/85
N-284-1	*Metal Containment Shell Buckling Design Methods, Section III, Division 1, Class MC* This code case is listed in RG 1.193.	10/2/00
N-284-2 N-284-3	*Metal Containment Shell Buckling Design Methods, Class MC, TC, and SC Construction, Section III, Divisions 1 and 3*	1/10/07 12/17/12
N-299	*Use of Nickel-Chromium-Molybdenum-Columbium Alloy 625 Forgings, Section III, Division 1, Class 2 and Class 3 Components*	7/18/85
N-304 N-304-1 N-304-2 N-304-3	*Use of 20 Cr-25Ni-6Mo (Alloy UNS N08366) Welded Tubes for Section III, Division 1, Classes 2 and 3 Construction*	7/12/84 5/19/85 12/5/85 2/23/87
N-309	*Identification of Materials for Component Supports, Section III, Division 1*	5/11/84
N-318 N-318-1 N-318-2 N-318-3 N-318-4	*Procedure for Evaluation of the Design of Rectangular Cross Section Attachments on Class 2 or 3 Piping, Section III, Division 1* Applicants should identify the following in their safety analysis report: (1) the method of lug attachment (2) the piping system involved (3) the location in the system where the code case will be applied	2/20/84 7/12/84 9/5/85 12/11/89 4/28/94
N-319 N-319-1 N-319-2	*Alternate Procedure for Evaluation of Stresses in Butt Weld Elbows in Class 1 Piping, Section III, Division 1*	7/24/89 8/14/90 1/17/00
N-321	*Use of Modified SA-249, Type 304, Section III, Division 1, Class 1 Construction*	12/5/85
N-337	*Use of ASTM B 525-70 Grade II, Type II, Sintered Austenitic Stainless Steel for Class 2, 3, and MC Component Standard Supports, Section III, Division 1*	7/18/85
N-345	*Attachment of AMS 5382 Alloy 31 Seat Rings by Friction Welding, Section III, Division 1, Classes 1, 2, and 3*	12/13/82
N-351	*Use of Subsize Charpy V-Notch Specimens, Section III, Division 1*	10/13/21
N-352	*Use of SA-638 Grade 660 Forgings and Bars below 700°F without Stress Rupture Tests, Section III, Division 1*	7/18/85
N-362	*Alternate Rules for Pressure Testing of Containment Items, Section III, Division 1*	12/13/82

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N-362-1	*Pressure Testing of Containment Items, Section III, Division 1, Classes 1, 2, and MC*	7/12/84
N-370 N-370-1	*Modified SA-705 Grade XM-13 Forgings, Section III, Division 1*	7/18/85 12/5/85
N-371	*12Cr-1W-1Mo-1/4V Martensitic Stainless Steel Valve Internals, Section III, Division 1*	7/18/85
N-373-1 N-373-2	*Alternative PWHT Time at Temperature for P-No. 5 Material, Section III, Division 1, Classes 1, 2, and 3*	9/7/01 11/2/04
N-379	*Bimetallic Tubing Section III, Division 1, Class 1*	7/18/85
N-383	*Weld Repair of SA-182 Austenitic Forgings, Section III, Division 1, Classes 1, 2, and 3* Applicants who apply the provisions of the code case to permit material manufacturers to weld repair austenitic forgings without resolution heat treatment should justify to the NRC staff (through the safety analysis report) why this is acceptable for their applications, including their evaluation of the susceptibility for stress-corrosion cracking.	7/18/85
N-391	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 1 Piping, Section III, Division 1*	7/24/89
N-391-1	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Class 1 Piping, Section III, Division 1* The following typographical errors need to be corrected: (1) In Equation 3, the + sign should be changed to an = sign. (2) In Equation 4, the first + sign should be changed to an = sign.	8/24/95
N-392	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Classes 2 and 3 Piping, Section III, Division 1*	12/11/89
N-392-1	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Classes 2 and 3 Piping, Section III, Division 1* Applicants should identify the following in their safety analysis report: (1) the method of lug attachment (2) the piping system involved (3) the location in the system where the code case will be applied	12/11/92
N-392-2	*Procedure for Evaluation of the Design of Hollow Circular Cross Section Welded Attachments on Classes 2 and 3 Piping, Section III, Division 1* Applicants should identify in their safety analysis report: (1) the method of lug attachment (2) the piping system involved (3) the location in the system where the code case will be applied	12/12/94
N-411	*Alternative Damping Values for Seismic Analysis of Classes 1, 2, and 3 Piping Sections, Section III, Division 1* (1) The damping values specified may be used to analyze piping response for seismic and other dynamic loads that are being filtered through building structures provided that the response mode frequencies are limited to 33 hertz and below. Within this range, the code case damping should be	2/20/86

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	used completely and consistently, if it is used at all. (For equipment other than piping, the damping values specified in RG 1.61, should be used.) (2) The damping values specified may be used only in those analyses in which current seismic spectra and procedures have been employed. Such use should be limited only to response spectral analyses (similar to that used in the study supporting its acceptance, NUREG/CR-3526). The acceptance of the use with other types of dynamic analyses (e.g., time-history analysis) is pending further justification. (3) When used for reconciliation work or for support optimization of existing designs, the effects of increased motion on existing clearances and online mounted equipment should be checked. (4) This code case is not appropriate for analyzing the dynamic response of piping systems that use supports designed to dissipate energy by yielding (i.e., the design of which is covered by Code Case N-420). (5) This code case does not apply to piping in which stress-corrosion cracking has occurred unless a case-specific evaluation is made and is reviewed by the NRC staff.	
N-418	*Use of Seamless Ni-Fe-Cr-Mo-Cu Low Carbon (UNS N08028 and UNS N08904) Tubing, Section III, Division 1, Classes 2 and 3*	7/30/86
N-438 N-438-1 N-438-2	*Fe-24.5Ni-21Cr-6.5 Mo-0.2N (Alloy UNS N08367) Seamless and Welded Pipe, Tube, Plate, Bar, Fittings, and Forgings, Class 2 and 3 Construction, Section III, Division 1*	3/8/89 Reinstated on 5/24/96 7/27/92
N-438-3	*UNS N08367 Material, Section III, Division 1, Class 2 and 3 Construction*	5/24/96
N-439	*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*	7/10/00
N-440	*Use of 20Cr-18Ni-6Mo (Alloy UNS J93254) Castings, Class 2 and 3 Construction, Section III, Division 1*	7/10/00
N-441 N-441-1	*Use of 20Cr-18Ni-6Mo (Alloy UNS S31254) Fittings, Class 2 and 3 Construction, Section III, Division 1*	11/25/92 7/10/00
N-443 N-443-1	*High Yield Strength Cr-Mo Steel, Class 1 Components, Section III, Division 1*	3/8/89 11/11/99
N-453	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) Welded Pipe for Class 2 and 3 Construction, Section III, Division 1*	11/30/88
N-453-1	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) Seamless and Welded Pipe for Class 2 and 3 Construction, Section III, Division 1*	4/30/92
N-453-2	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925 and N08926) Seamless and Welded Pipe for Class 2 and 3 Construction, Section III, Division 1*	12/12/95
N-454	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) Wrought Fittings for Class 2 and 3 Construction, Section III, Division 1*	4/30/92
N-455	*Nickel-Chromium-Molybdenum-Copper Stainless Steel (UNS N08925) Forged Flanges and Fittings for Class 2 and 3 Construction, Section III, Division 1*	4/30/92

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
N-466	*Modified 9Cr-1Mo Material, Section III, Division 1, Classes 1, 2, and 3*	4/30/90
N-469	*Martensitic Stainless Steel for Class 1, 2, and 3 Components, Section III, Division 1*	6/14/00
N-474	*Design Stress Intensities and Yield Strength Values for Alloy 690 with a Minimum Yield Strength of 35 ksi, Class 1 Components, Section III, Division 1*	3/5/90
N-474-1	*Design Stress Intensities and Yield Strength Values for UNS N06690 with a Minimum Specified Yield Strength of 35 ksi, Class 1 Components, Section III, Division 1*	12/9/93
N-484	*Real Time Radioscopic Examination of Welds, Section III, Division 1*	12/16/91
N-492	*Grade 9 Titanium Alloy Tubing, Section III, Division 1, Class 1, 2, and 3*	5/11/94
N-497	*Use of Fe-Ni-Cr-Mo-N (C-N-3MN) Cast Materials, Section III, Division 1, Class 2 and 3 Construction*	12/9/93
N-500 N-500-1 N-500-2 N-500-3	*Alternative Rules for Standard Supports for Classes 1, 2, 3, and MC, Section III, Division 1*	12/9/93 8/14/01 2/20/04 8/5/11
N-510	*Borated Stainless Steel for Class CS Core Support Structures and Class 1 Components, Section III, Division 1*	12/12/94
N-520 N-520-1 N-520-2 N-520-3 N-520-4 N-520-5	*Alternative Rules for Renewal of N-type Certificates for Plants Not in Active Construction, Section III, Division 1*	10/26/94 5/9/03 11/1/07 11/10/09 3/13/12 5/18/2012
N-539	*UNS N08367 in Class 2 and 3 Valves, Section III, Division 1*	8/16/16
N-564 N-564-1	*UNS J93380, Alloy CD3MWCuN, Class 2 and 3 Construction, Section III, Division 1*	7/30/98 12/31/96
N-570	*Alternative Rules for Linear Piping and Linear Standard Supports for Classes 1, 2, 3, and MC, Section, III, Division 1*	3/28/06 1/5/06
N-570-1	*Alternative Rules for Linear Piping and Linear Standard Supports for Classes 1, 2, 3, and MC, Section III, Division 1* The provisions of ANSI/AISC N690-1994 s2, "Supplement No. 2 to the Specification for the Design, Fabrication, and Erection of Steel of Safety-Related Structures for Nuclear Facilities," must be met.	1/5/06
N-570-2	*Alternative Rules for Linear Piping and Linear Standard Supports for Classes 1, 2, 3, and MC, Section, III, Division 1*	1/11/21
N-580 N-580-1	*Use of Alloy 600 with Columbium Added, Section III, Division 1*	5/26/97 5/20/98
N-594	*Repairs to P-4 and P-5A Castings without Postweld Heat Treatment Class 1, 2, and 3 Construction, Section III, Division 1*	3/2/98
N-595-3	*Requirements for Spent Fuel Storage Canisters, Section III, Division 1* The canisters must be made from austenitic stainless steel Type 304 or 316.	4/8/02

CODE CASE NUMBER	TABLE 5 CODE CASES THAT HAVE BEEN SUPERSEDED BY REVISED CODE CASES ON OR AFTER JULY 1, 1974	REVISION DATE
N-621	*Ni-Cr-Mo Alloy (UNS N06022) Welded Construction to 800°F, Section III, Division 1*	11/2/04
N-625	*Ni-Cr-Mo Alloy (UNS N06059) Welded Construction to 800°F, Section III, Division 1*	3/28/01
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*	2/14/03
N-637 N-637-1	*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*	9/20/10 1/12/22
N-644	*Weld Procedure Qualification for Procedures Exempt from PWHT in Class 1, 2, and 3 Construction, Section III, Division 1*	Reinstated 2/14/03
N-655	*Use of SA-738, Grade B, for Metal Containment Vessels, Class MC, Section III, Division 1* For metal containment vessels up to 1.75 inches thick, the following requirements apply: (1) Supplementary Requirement S17, "Vacuum Carbon-Deoxidized Steel," of Material Specification SA-738 must be applied to the material. (2) Supplementary Requirement S20, "Maximum Carbon Equivalent for Weldability," of Material Specification SA-738 must be applied to the material.	2/25/02
N-692	*Use of Standard Welding Procedures, Section III, Division 1*	5/9/16
N-755-3	*Use of Polyethylene (PE) Class 3 Plastic Pipe, Section III, Division 1*	5/11/17
N-757	*Alternative Rules for Acceptability for Class 2 and 3 Valves (DN 25) and Smaller with Welded and Nonwelded End Connections Other Than Flanges, Section III, Division 1*	1/21/07
N-759 N-759-1	*Alternative Rules for Determining Allowable External Pressure and Comprehensive Stresses for Cylinders, Cones, Spheres, and Formed Heads, Class 1, 2, and 3, Section III, Division 1*	10/4/06 10/19/07
N-760 N-760-1	*Welding of Valve Plugs to Valve Stem Retainers, Classes 1, 2, and 3, Section III, Division 1*	3/27/07 2/12/08
N-801 N-801-1 N-801-2 N-801-3	*Rules for Repair of N-Stamped Class 1, 2, and 3 Components, Section III, Division 1*	8/12/12 5/9/16 5/11/17 1/4/23
N-822 N-822-1 N-822-2 N-822-3	*Application of the ASME Certification Mark Section III, Divisions 1, 2, 3, and 5*	12/6/11 12/17/12 12/28/15 8/2/16
N-863	*Postweld Heat Treatment (PWHT) of Valve Seal Welds for P4 and P5A Materials, Section III, Division 1*	2/16/17
N-870	*Rules for the Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report, Section III, Division 1*	11/2/17

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1332-6	*Requirements for Steel Forgings, Section III, Division 1*	3/1/79
1335-9	*Requirements for Bolting Materials*	8/28/78
1337-9 1337-10	*Special Type 403 Modified Forgings or Bars, Section III*	4/28/75 5/15/78
1395-3	*SA-508, Class 2 Forgings with Modified Manganese Content, Section III or Section VIII, Division 2*	1/8/79
1407-2	*Time of Examination for Class 1, 2, and 3, Section III Vessels*	7/1/74
1414-3 1414-4	*High Yield Strength Cr-Mo Steel for Section III, Division 1, Class 1 Vessels* Each referencing safety analysis report should provide the information required by Note 1 in the code case.	3/1/76 8/9/77
1484-1	*SB-163 Nickel-Chromium-Iron Tubing (Alloy 600) at a Specified Minimum Yield Strength of 40.0 ksi, Section III, Class 1*	11/4/74
1484-2	*SB-163 Nickel-Chromium-Iron Tubing (Alloy 600 and 690) at a Specified Minimum Yield Strength of 40.0 ksi, Section III, Class 1*	8/13/76
1492	*Post Weld Heat Treatment, Section I, III, and VIII, Division 1 and 2*	3/3/75
1508	*Allowable Stresses, Design Intensity and/or Yield Strength Values, Section I, III, and VIII, Divisions 1 and 2*	6/30/75
1516-1	*Welding of Seats in Valves for Section III Applications*	8/11/75
1540-1	*Elastomer Diaphragm Valves, Section III, Classes 2 and 3*	1/14/77
1541-1	*Hydrostatic Testing of Embedded Class 2 and Class 3 Piping for Section III Construction*	9/30/76
1541-2	*Hydrostatic Testing of Embedded Class 2 and Class 3 Piping for Section III, Division 1 Construction*	5/15/78
1552	*Design by Analysis of Section III, Class 1 Valves*	8/29/77
1553	*Upset Heading and Roll Threading of SA-453 for Bolting in Section III*	3/3/75
1555	*Certification of Safety Relief Valves on Liquids*	1/14/77
1557-2	*Steel Products Refined by Secondary Remelting*	1/8/79
1606	*Stress Criteria for Section III, Class 2 and 3 Piping Subjected to Upset, Emergency, and Faulted Operating Conditions* Code Case 1606 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	12/16/74
1607	*Stress Criteria for Section III, Classes 2 and 3 Vessels Subjected to Upset, Emergency, and Faulted Operating Conditions* Code Case 1607 was acceptable subject to the interpretation that the stress limit designations of "Upset," "Emergency," and "Faulted" do not necessarily imply agreement with specified plant conditions that apply to ASME Code Class 2 and 3 components for fluid systems. The design specifications should establish and justify these designations.	11/4/74
1618	*Material for Core Support Structures, Section III, Subsection NG*	3/3/75

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	(1) Welding of age-hardenable Alloy SA-453 Grade 660 and SA-637 Grade 688 should be performed when the material is in a solution-treated condition. (2) Use of alloy ASTM A-564 Grade 631 is not acceptable on a generic basis.	
1618-1	*Material for Core Support Structures, Section III, Subsection NG* Welding of age-hardenable alloy SA-453 Grade 660 and SA-637 Grade 688 should be performed when the material is in a solution-treated condition.	3/1/76
1626	*Normalized and Tempered 1-1/4 Cr Low Alloy Steel Forgings, Section I, Section III, and Section VIII, Division 1 and 2*	1/8/79
1634 1634-1	*Use of SB-359 for Section III, Class 3 Construction*	8/12/74 8/13/76
1644 1644-1 1644-2 1644-3	*Additional Materials for Component Supports, Section III, Subsection NF, Class 1, 2, 3, and MC Construction* The maximum measured UTS of the component support material should not exceed 170 ksi.	4/28/75 6/30/75 11/3/75 3/1/76
1644-4 1644-5 1644-6	*Additional Materials for Component Supports and Alternate Design Requirements for Bolted Joints, Section III, Division 1, Subsection NF, Class 1, 2, 3, and MC Construction* The maximum measured UTS of the component support material should not exceed 170 ksi because of the susceptibility of high-strength materials to brittleness and stress-corrosion cracking. Certain applications may exist where a UTS value of up to 190-ksi could be considered acceptable for a material; under this condition, the design specification should specify impact testing for the material. For these cases, the applicant should demonstrate that (1) the impact test results for the material meet Code requirements and (2) the material is not subject to stress-corrosion cracking because a corrosive environment is not present and because the component that contains the material has essentially no residual stresses or assembly stresses and it does not experience frequent sustained loads in service.	8/13/76 3/3/77 11/21/77
1682	*Alternate Rules for Material Manufacturers and Suppliers, Section III, Subarticle NA-3700*	8/11/75
1683	*Bolt Holes for Section III, Division 1, Class 1, 2, 3 and MC Component Supports*	3/1/76
1689	*Alternate PWHT Time and Temperature for SA-182 Grade F22, Section III, Class 1, 2, 3 and CS* The alternate PWHT should be prequalified along with the applicable welding procedure in accordance with Section IX.	9/10/76
1695	*Brazing, Section III, Class 3*	11/3/75
1701	*Determination of Capacities of Vacuum Relief Valves, Section III, Class MC*	3/20/78
1702	*Flanged Valves Larger than 24 Inches for Section III, Class 1, 2 and 3 Construction*	7/11/77
1714	*Postweld Heat Treatment of P-1 Material, Section III, Class MC*	7/11/77
1720	*Weld End Preparation for Section III, Division Construction* Weld end preparations other than those shown in Figures 1, 2, and 3 of the code case are not acceptable on a generic basis. Such alternative end preparations should be treated on a case-by-case basis.	3/1/76

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1720-1	*Weld End Preparation for Section III, Division Construction* The acceptance of weld end preparations other than those shown in Figures 1, 2, and 3 of the code case should be evaluated on a case-by-case basis.	11/20/78
1722	*Vacuum, Carbon Deoxidized SA-508 Forgings, Section III, Division 1, and VIII, Division 1 and 2*	1/8/79
1741	*Interim Rules for the Required Number of Impact Tests for Rolled Shapes, Section III, Division 1, Subsection NF, Component Supports*	1/14/77
1755	*Alternate Rules for Examination of Welds in Piping, Class 1 and 2 Construction, Section III, Division 1*	1/14/77
1759	*Material for Internal Pressure Retaining Items for Pressure Relief Valves, Section III, Division 1, Class 1, 2, and 3* Applicants using this code case should also use Code Case 1711 for the design of pressure relief valves.	5/15/78
1761	*Use of SG-148 Alloy CA954 for Section III, Division 1, Class 2 or 3 Flanged End Valves*	1/14/77
1769	*Qualification of NDE Level III Personnel, Section III, Division 1*	2/16/77
1774	*Minimum Wall Thickness for Class 2 and 3 Valves, Section III, Division 1*	7/11/77
1780	*Hydrostatic Testing and Stamping of Pumps for Class 1 Construction, Section III, Division 1* Each licensing application in which the code case is to be used should present information that satisfactorily demonstrates that the subassembly tests adequately simulate the pressure loadings. In addition, the closure fixture for the test subassembly should adequately simulate the rigidity of adjacent subassemblies and also simulate the interface loadings from adjacent subassemblies that would result from a hydrostatic pressure test of a complete pump assembly. As a minimum, the closure fixture should impose loads that result in stresses equal to or greater than those induced during the hydrostatic test of a complete pump assembly. Hydrostatic testing should not simulate piping reactor loadings.	3/10/78
1783	*Qualification of Nondestructive Personnel, Section III, Division 1* The first sentence of Paragraph 1 of the code case should be replaced with the following: “The certification of the Level III nondestructive examination personnel for the purposes of this Section of the Code shall be the responsibility of the employer of the Level III individual. If the employer is not a Certificate Holder, then the verification of such certificate is the responsibility of the Certificate Holder.”	1/14/77

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees regarding the NRC staff's plans for using this RG. This RG lists the ASME BPV Code, Section III, code cases that the NRC has approved for use as voluntary alternatives to the mandatory ASME BPV Code provisions incorporated by reference into 10 CFR 50.55a. The requirements addressing implementation of Section III code cases are contained in 10 CFR 50.55a(b)(4). An applicant's or a licensee's voluntary application of an approved code case does not constitute backfitting, inasmuch as there is no imposition of a new requirement or new position. No backfitting is intended or approved in connection with the issuance of this guide.

REFERENCES[2]

1. American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section III, "Rules for Construction of Nuclear Power Plant Components."[3]

2. *Code of Federal Regulations* (CFR), "Domestic Licensing of Production and Utilization Facilities" Part 50, Chapter I, Title 10, "Energy."

3. CFR, "Licenses, Certifications, and Approvals for Nuclear Power Plants," Part 52, Chapter I, Title 10, "Energy."

4. U.S. Nuclear Regulatory Commission (NRC), Regulatory Guide (RG) 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1."

5. NRC, RG 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code."

6. NRC, RG 1.193, "ASME Code Cases Not Approved for Use."

7. NRC, RG 1.136, "Design Limits, Loading Combinations, Materials, Construction, and Testing of Concrete Containments."

8. NRC, RG 1.87, "Acceptability of ASME Code, Section III, Division 5, 'High Temperature Reactors.'"

9. NRC, RG 1.262, "ASME Code Cases Approved for Use Without Conditions."

10. American Society for Testing and Materials International (ASTM) A 262-70, "Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels."[4]

11. ASTM A 708-74, "Practice for Detection of Susceptibility to Intergranular Corrosion in Severely Sensitized Austenitic Stainless Steels."

12. NRC, RG 1.122, "Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components."

13. NRC, RG 1.61, "Damping Values for Seismic Design of Nuclear Power Plants."

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[2] Publicly available NRC published documents are available electronically through the NRC Library on the NRC's public website at http://www.nrc.gov/reading-rm/doc-collections/ and through the NRC's Agencywide Documents Access and Management System (ADAMS) at http://www.nrc.gov/reading-rm/adams.html. For problems with ADAMS, contact the Public Document Room staff at 301-415-4737 or (800) 397-4209, or email pdr.resource@nrc.gov. The NRC Public Document Room (PDR), where you may also examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to pdr.resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

[3] Copies of American Society of Mechanical Engineers (ASME) standards may be purchased from ASME, Two Park Avenue, New York, New York 10016-5990; telephone (800) 843-2763. Purchase information is available through the ASME web-based store at https://www.asme.org/Codes/Publications.

[4] Copies of American Society for Testing and Materials (ASTM) standards may be purchased from ASTM, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19428-2959; telephone (610) 832-9585. Purchase information is available through the ASTM web site at http://www.astm.org.

14. NUREG/CR-3526, “Impact of Changes in Damping and Spectrum Peak Broadening on the Seismic Response of Piping Systems,” March 1984. (ML20088A672)

15. NRC, RG 1.31, “Control of Ferrite Content in Stainless Steel Weld Metal.”

16. NRC, RG 1.44, “Control of the Processing and Use of Stainless Steel.”

17. NRC, RG 1.67, “Installation of Overpressure Protection Devices.”

18. NRC, NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition.”

APPENDIX A

SUPPLEMENTS ADDRESSED IN REVISION 41 OF REGULATORY GUIDE 1.84

EDITION	SUPPLEMENT NUMBER	NUMERICAL LISTING OF SECTION III CODE CASES IN SUPPLEMENT
2021	3	None
2021	4	N-637-2[1], N-607[2]
2021	5	N-924[3]
2021	6	N-861-2[3], N-862-2[3]
2023	0	N-801-4[1], N-898-1[3], N-928[1], N-929[4], N-931[1]
2023	1	None
2023	2	N-933[1]
2023	3	None

[1] This code case is approved without condition (see Regulatory Guide (RG) 1.262, "ASME Code Cases Approved for Use Without Conditions").

[2] Annulled.

[3] This is an American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section III, Division 5, "High Temperature Reactors," code case and is not addressed in this RG.

[4] This is an ASME BPV Code, Section III, "Rules for Construction of Nuclear Power Plant Components." Division 2, "Code for Concrete Containments," code case and is not addressed in this RG.

APPENDIX B

NUMERICAL LISTING OF CURRENT SECTION III CODE CASES AND TABLE WHERE EACH CODE CASE IS LISTED

Code Case Number	Approval Date	Table Where Code Case Is Listed
N-4-13	2/12/08	Table 1
N-60-6	12/6/11	Table 1
N-62-7	2/3/03	Table 2
N-71-21	1/11/21	Table 2
N-131-1	2/3/03	Table1
N-133-3	2/3/03	Table 1
N-154-1	2/3/03	Table 1
N-155-3	2/11/16	Table 2
N-205	2/25/02	Table 1
N-213-1	2/11/16	RG 1.136
N-249-17	4/10/18	Table 1
N-258-2	3/28/01	RG 1.136
N-284-4	10/8/12	Table 1
N-290-3	10/6/19	Division 5
N-312	3/28/01	RG 1.136
N-315	2/3/03	Table 1
N-319-3	2/3/03	Table 1
N-351-1	10/13/21	Table 1
N-369	5/9/03	Table 1
N-373-3	10/8/04	Table 1
N-405-1	2/20/04	Table 1
N-452	5/9/03	Table 1
N-453-3	8/14/01	Table 1
N-454-1	6/17/03	Table 1
N-455-1	7/17/03	Table 1
N-469-1	2/3/03	Table 1
N-500-4	10/14/11	Table 1
N-505	5/4/04	Table 1
N-511	5/4/04	Table 1
N-519-1	1/16/19	RG 1.193
N-520-6	12/11/12	Table 1
N-525	7/23/02	Table 1
N-530	2/3/03	RG 1.193

Code Case Number	Approval Date	Table Where Code Case Is Listed
N-539-1	8/16/16	Table 1
N-548	9/7/01	Table 1
N-564-2	2/3/03	Table 1
N-565	12/3/99	RG 1.193
N-570-3	1/11/21	Table 2
N-579	2/3/03	Table 1
N-580-2	1/4/08	Table 1
N-594-1	10/14/11	Table 1
N-610	5/4/04	Table 1
N-620	5/4/04	Table 1
N-621-1	10/8/04	Table 1
N-625-1	2/20/04	Table 1
N-631	7/23/02	Table 1
N-632	2/3/03	RG 1.136
N-633	6/14/02	RG 1.136
N-635-1	2/14/03	Table 1
N-636	7/23/02	Table 1
N-637-2	1/12/22	RG 1.262
N-642	2/3/03	Table 1
N-644-1	3/28/01	Table 1
N-650	2/20/04	Table 1
N-655-2	6/6/10	Table 1
N-659-3	10/12/17	RG 1.193
N-673	8/7/03	RG 1.193
N-692-1	5/9/16	Table 1
N-698	11/18/03	Table 1
N-699	1/5/06	Table 1
N-703	5/4/04	Table 1
N-707-2	1/11/21	Division 3
N-708	9/21/08	Table 1
N-710	5/4/04	Table 1
N-721-1	10/20/16	Table 1
N-725	1/12/05	Table 1

Code Case Number	Approval Date	Table Where Code Case Is Listed
N-727	2/24/06	Table 1
N-736	1/5/06	Table 1
N-738	7/1/05	Table 1
N-741	10/11/05	Table 1
N-746	1/5/06	Table 1
N-748	9/9/08	Division 3
N-756	1/21/07	Table 1
N-757-1	9/21/07	Table 2
N-759-2	1/4/08	Table 1
N-760-2	10/10/08	Table 1
N-761	9/20/10	RG 1.193
N-763	8/28/08	RG 1.136
N-767	1/4/08	Table 1
N-774	9/3/08	Table 1
N-777	10/10/08	Table 1
N-779	1/26/09	Table 2
N-782	1/30/09	Table 1
N-785	10/12/09	Table 1
N-791	9/20/10	RG 1.136
N-792-1	8/12/12	RG 1.193
N-793	9/20/10	RG 1.136
N-794	9/20/10	RG 1.136
N-796	10/18/10	RG 1.136
N-801-4	1/4/23	RG 1.262
N-804	10/14/11	RG 1.193
N-807	4/20/11	RG 1.136
N-811	8/5/11	RG 1.136
N-812-1	1/10/13	Division 5
N-815	12/6/11	Table 1
N-816	12/6/11	Table 1
N-817	12/6/11	Table 1
N-818-1	8/20/14	RG 1.193
N-819	12/6/11	Table 1
N-820	12/29/11	RG 1.136
N-822-4	8/2/16	Table 1
N-833	1/2/13	RG 1.136
N-834	10/22/13	Table 1
N-836	10/22/13	Table 1

Code Case Number	Approval Date	Table Where Code Case Is Listed
N-837	10/22/13	RG 1.193
N-841	1/6/14	Table 1
N-844	2/9/14	Table 1
N-846	7/25/14	RG 1.193
N-850	10/20/14	RG 1.136
N-852	2/9/15	Table 2
N-855	7/8/15	Table 1
N-856	7/16/15	Table 1
N-859	1/20/16	Table 1
N-861-2	7/20/22	Division 5
N-862-2	07/20/22	Division 5
N-863-1	2/16/17	Table 1
N-866	11/14/16	Table 1
N-870-1	11/2/17	Table 1
N-872	10/20/16	Division 5
N-879	5/10/17	Table 1
N-881	12/4/17	RG 1.193
N-883	1/29/18	Table 2
N-884	10/23/18	Table 1
N-886	5/2/18	Table 2
N-887	5/2/18	Table 1
N-891	12/17/18	Table 1
N-893	12/21/19	Table 1
N-898-1	11/29/22	Division 5
N-900	7/29/19	Table 1
N-901	12/21/19	Table 1
N-902	2/20/20	Table 1
N-903	4/28/20	Division 5
N-904	5/27/20	Table 1
N-905	5/27/20	Table 1
N-907	8/14/20	RG 1.193
N-908	9/2/20	Table 1
N-910	9/2/20	Table 1
N-915	5/7/21	RG 1.193
N-916	5/7/21	RG 1.193
N-919	8/23/21	Table 1
N-920	8/10/21	Table 1
N-924	1/12/22	Division 5

Code Case Number	Approval Date	Table Where Code Case Is Listed
N-928	12/6/22	RG 1.262
N-929	12/6/22	RG 1.136
N-931	12/19/22	RG 1.262
N-933	12/23/22	RG 1.262