



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

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10 CFR 50.55a

U. S. Nuclear Regulatory Commission
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South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Notification of Upgrading of the Inservice Inspection Program
for the Third Inspection Interval

Pursuant to 10 CFR 50.55a(g)(4)(ii), the STP Nuclear Operating Company (STPNOC) has updated the Inservice Inspection Program for South Texas Project Units 1 and 2. The updated Inservice Inspection Program will be conducted in accordance with the requirements of the 2004 Edition No Addenda of ASME Section XI except for alternatives presented in approved code cases, and 10 CFR 50.55a modifications and limitations, as listed in the attached tables. This update is applicable to the third inspection interval, which begins September 25, 2010, for Unit 1 and October 19, 2010, for Unit 2.

The third interval Inservice Inspection Program includes inspections, examinations, and tests of:

- Class 1, 2, and 3 component welds (and other examination areas) and component supports;
- Repair/replacement of Class 1, 2, and 3 components and their supports;
- Class 1 steam generator tubing; and
- System pressure testing and visual examination of Class 1, 2, and 3 components for leakage.

In addition to the Section XI Code inservice inspection activities and examinations, the South Texas Project will perform augmented inservice inspection examinations of:

- Reactor Coolant Pump flywheels in accordance with Regulatory Guide 1.14;
- Main Steam and Feedwater piping welds within the Break Exclusion Zone in accordance with Standard Review Plan 3.6.2;

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- Reactor Vessel Head Inspections in accordance with the requirements of Code Case N-729-1, "Alternate Examinations Requirements for PWR Reactor Vessel Upper Heads with Nozzles Having Pressure-Retaining Partial Penetration Welds," and 10 CFR 50.55a modifications and limitations; and
- Class 1 Welds Fabricated with Alloy 600/82/182 Material in accordance with the requirements of Code Case N-722, "Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated with Alloy 600/82/182 Materials," and 10CFR50.55a modifications and limitations.

STPNOC will also perform nondestructive examination of:

- Alloy 600/82/182 pressure boundary locations not specified in the Section XI Code in accordance with Material Reliability Program (MRP) requirements; and
- Normally stagnant non-isolable piping systems attached to reactor coolant system piping with the potential for thermal fatigue.

Alternative requirements to the 2004 Section XI No Addenda code incorporated into the third interval inservice inspection plan are:

- Section XI Code Cases currently approved in Regulatory Guide 1.147 listed in Table 1;
- Code cases available as alternatives to code requirements that provide an acceptable level of quality and safety [10 CFR 50.55a(a)(3)(i)] as listed in Table 2; and
- 10 CFR 50.55a modifications and limitations as listed in Table 3.

The Inservice Inspection Program Plan for the South Texas Project Units 1 and 2 addresses those items selected for inservice inspection examination, and provides examination scheduling information. The Inservice Inspection Program Plan and supporting documentation are available for inspection at the South Texas Project site.

There are no commitments in this correspondence.

If there are any questions, please contact either Mr. Philip Walker at (361) 972-8392 or me at (361) 972-7904.



Marco Ruvalcaba
Manager,
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PLW

Attachments: 1) Table 1 - Adopted Code Cases Approved In Regulatory Guide 1.147
2) Table 2 - Adopted Code Cases
3) Table 3 - Code of Federal Regulations 10 CFR 50.55a Limitations

cc:
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TABLE 1
ADOPTED CODE CASES APPROVED IN REGULATORY GUIDE 1.147

Code Case	Code Case Title	Affected Program
N-432-1	Repair Welding Using Automatic or Machine Gas Tungsten-Arc Welding (GTAW) Temper Bead Technique, Section XI, Division 1	Repair/Replacement - Welding
N-460	Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1. IWB-2500 & IWC-2500	Weld Examination Limitations - Class 1 & 2
N-504-3	Alternative Rules for Repair of Classes 1,2 and 3 Austenitic Stainless Steel Piping, Section XI, Division 1 IWA-4420, IWA-4520(a)	Repair/Replacement - weld overlay of defect
N-516-3	Underwater Welding, Section XI, Division 1	Repair/Replacement – Welding
N-517-1	Quality Assurance Program Requirements for Owners, Section XI, Division 1.	Repair/Replacement Program
N-526	Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels, Section XI, Division 1 IWB,IWC-2420(b)	Successive Weld Examinations - Class 1 & 2 Vessel
N-528-1	Purchase, Exchange, or Transfer of Material Between Nuclear Plant Sites, Section XI, Division 1	Repair/Replacement Program
N-532-4	Repair/Replacement Activity Documentation Requirements and Inservice Summary Report Preparation and Submission, Section XI, Division 1, IWA-6000	Repair/Replacement Program & ISI Summary Report
N-537	Location of Ultrasonic Depth-Sizing Flaws, Section XI, Division 1 Appendix VIII, Supp. 2, 4, 6, 10 & 11	Nondestructive Examination (NDE) - PDI
N-545	Alternative Requirements for Conduct of Performance Demonstration Detection Test of Reactor Vessel, Section XI, Division 1 Appendix VIII, Supp. 4, 5, 6 & 7	NDE - PDI
N-552	Alternative Methods - Qualification for Nozzle Inside Radius Section from the Outside Surface, Section XI, Division 1 Appendix VIII, Supp. 5	NDE - PDI
N-566-2	Corrective Action for Leakage Identified at Bolted Connections, Section XI, Division 1 IWA-5250(a)(2)	System Pressure Testing & Repair/Replacement Programs
N-586-1	Alternative Additional Examination Requirements for Classes 1, 2, and 3 Piping, Components, and Supports, Section XI, Division 1 IWB, IWC, IWD, IWF-2430(a)	Additional Examinations - Weld & Component Support
N-593	Alternative Examination Requirements for Steam Generator Nozzle to Vessel Welds, Section XI, Division 1 Exam Cat. B-D, Fig. IWB-2500-7(d)	NDE Examination Volume
N-600	Transfer of Welder, Welding Operator, Brazer, and Brazing Operator Qualifications Between Owners, Section XI, Division 1	Repair/Replacement – Welding
N-613-1	Ultrasonic Examination of Full Penetration Nozzles in Vessels, Examination Category B-D, Items No's. B3.10 and B3.90, Reactor Nozzle-to-Vessel Welds, Figs. IWB-2500-7(a), (b), and (c) Section XI, Division 1.	NDE Examination Volume – Class 1

TABLE 1 (Cont'd.)
ADOPTED CODE CASES APPROVED IN REGULATORY GUIDE 1.147

Code Case	Code Case Title	Affected Program
N-624	Successive Inspections, Section XI, Division 1. IWB, IWC, IWD, IWE, IWF-2420(a)	Successive Examinations - Weld, Component Support & Cont. Metal Liner
N-638-1	Similar and Dissimilar Metal Welding Using Ambient Temperature Machine GTAW Temper Bead Technique, Section XI, Division 1	Repair/Replacement – Welding
N-639	Alternative Calibration Block Material, Section XI, Division 1 Appendix I, supp. 1 & Section V, Article 4	Weld Examinations – Cal. Blocks
N-648-1	Alternative Requirements for Inner Radius Examination of Class 1 Reactor Vessel Nozzles, Section XI Division 1 Exam. Cat. B-D	Weld Examinations – Class 1 RPV
N-649	Alternate requirements for IWE-5240 Visual Examination, Section XI, Division 1	IWE
N-651	Ferritic and Dissimilar Metal Welding Using SMAW Temper Bead Technique Without Removing the Weld Bead Crown for the First Layer, Section XI Division 1	Repair/Replacement – Welding
N-658	Qualification requirements for UT Exam of wrought Austenitic piping welds, Section XI Division 1. Appendix VIII, Supp. 2	NDE – PDI
N-664	Performance Demonstration Requirements for Examination of Unclad Reactor Pressure Vessel Welds, Excluding Flange Welds, Section XI, Division 1. Appendix VIII, Supp. 6	NDE - PDI
N-683	Method for Determining Maximum Allowable False Calls When Performing Single-Sided Access Performance Demonstration in Accordance With, Appendix VIII, Supp. 4 & 6, Section XI Division 1	NDE - PDI
N-686	Alternative Requirements for Visual Examinations, VT-1, VT-2, and VT-3, Section XI Division 1 IWA-2210, Table IWA-2210-1	NDE - Visual Examinations
N-695	Qualification requirements for dissimilar metal piping welds, Section XI, Division 1, Appendix VIII, Supp. 10	NDE - PDI
N-696	Qualification Requirements for Appendix VIII Piping Examinations Conducted From the Inside Surface, Section XI, Division 1, Appendix VIII, Supp. 2, 3, & 10	NDE - PDI
N-706	Alternative Examination Requirements of Table IWB-2500-1 and Table IWC-2500-1 for PWR Stainless Steel residual and Regenerative Heat Exchangers, Section XI, Division 1 Exam. Cat. C-A & C-B	Weld Examinations – Class 2

TABLE 2
ADOPTED CODE CASES

TABLE 2a
ADOPTED CODE CASES APPROVED IN 10 CFR 50.55a FINAL RULE

Code Case	Code Case Title	Affected Program
N-722	Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated with Alloy 600/82/182 Materials	Weld Examinations Reference 50.55a(g)(6)(ii)(E)(1-4) requirements
N-729-1	Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds, Section XI, Division 1	Weld Examinations Reference 50.55a(g)(6)(ii)(D)(1-6) requirements

TABLE 2b
ADOPTED SECTION V CODE CASES

Code Case	Code Case Title	Affected Program
2476	Radiography Using Phosphor Imaging Plate, Section V	NDE

TABLE 2c
ADOPTED SECTION IX CODE CASES

Code Case	Code Case Title	Affected Program
2142-3	F-Number Grouping for Ni-Cr-Fe, Classification UNS N06052 Filler Metal, Section IX (Applicable to All Sections, including Section III, Division 1, and Section XI)	Repair/Replacement Program - Welding
2143-1	F-Number Grouping for Ni-Cr-Fe, Classification UNS W86152 Welding Electrode, Section IX (Applicable to All Sections, including Section III, Division 1, and Section XI)	Repair/Replacement Program - Welding

TABLE 3
CODE OF FEDERAL REGULATIONS 10 CFR 50.55a LIMITATIONS

10 CFR 50.55a Reference	Limitations, Modifications, and Clarifications
50.55a(b)(2)(viii)	<i>Examination of concrete containments:</i> Licensees applying Subsection IWL, 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, SHALL apply paragraphs (b)(2)(viii)(E) through (b)(2)(viii)(G).
50.55a(b)(2)(ix)	<i>Examination of metal containments and the liners of concrete containments.</i> Licensees applying Subsection IWE, 1998 Edition through the latest edition and addenda, SHALL satisfy the requirements of paragraphs (b)(2)(ix)(A), (b)(2)(ix)(B), and (b)(2)(ix)(F) through (b)(2)(ix)(I).
50.55a(b)(2)(x)	<i>Quality Assurance.</i> When applying Section XI editions and addenda later than the 1989 Edition, the requirements of NQA-1, "Quality Assurance Requirements for Nuclear Facilities," 1979 Addenda through the 1989 Edition, are acceptable as permitted by IWA-1400 of Section XI, if the licensee uses its 10 CFR Part 50, Appendix B, quality assurance program, in conjunction with Section XI requirements. Commitments contained in the licensee's quality assurance program description that are more stringent than those contained in NQA-1 must govern Section XI activities. Further, where NQA-1 and Section XI do not address the commitments contained in the licensee's Appendix B quality assurance program description, the commitments must be applied to Section XI activities.
50.55a(b)(2)(xii)	<i>Underwater Welding.</i> The provisions in IWA-4660, "Underwater Welding," of Section XI, 1997 Addenda through the latest Edition and Addenda incorporated by reference in Paragraph (b)(2) of this section, are NOT approved for use on irradiated material.
50.55a(b)(2)(xiv)	<i>Appendix VIII personnel qualification.</i> All personnel qualified for performing ultrasonic examinations in accordance with Appendix VIII SHALL receive 8 hours of annual hands-on training on specimens that contain cracks. Licensees applying the 1999 Addenda through the latest edition and addenda MAY use the annual practice requirements in VII-4240 of Appendix VII of Section XI in place of the 8 hours of annual hands-on training provided that the supplemental practice is performed on material or welds that contain cracks, or by analyzing prerecorded data from material or welds that contain cracks. In either case, training must be completed no earlier than 6 months prior to performing ultrasonic examinations at a licensee's facility.
50.55a(b)(2)(xvi)(A)	<i>Appendix VIII single side ferritic vessel and piping and stainless steel piping examination.</i> Examinations performed from one side of a ferritic vessel weld must be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations. To demonstrate equivalency to two sided examinations, the demonstration must be performed to the requirements of Appendix VIII as modified by this paragraph and §§ 50.55a(b)(2)(xv) (B) through (G), on specimens containing flaws with non-optimum sound energy reflecting characteristics or flaws similar to those in the vessel being examined.
50.55a(b)(2)(xvi)(B)	<i>Appendix VIII single side ferritic vessel and piping and stainless steel piping examination.</i> Examinations performed from one side of a ferritic or stainless steel pipe weld must be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations. To demonstrate equivalency to two sided examinations, the demonstration must be performed to the requirements of Appendix VIII as modified by this paragraph and § 50.55a(b)(2)(xv)(A).

TABLE 3 (Cont'd.)
CODE OF FEDERAL REGULATIONS 10 CFR 50.55a LIMITATIONS

10 CFR 50.55a Reference	Limitations, Modifications, and Clarifications
50.55a(b)(2)(xviii)(A)	<i>Certification of NDE personnel.</i> Level I and II nondestructive examination personnel SHALL be recertified on a 3-year interval in lieu of the 5-year interval specified in IWA-2314(b) of the 1999 Addenda through the latest Edition and Addenda.
50.55a(b)(2)(xviii)(B)	<i>Certification of NDE personnel.</i> Paragraph IWA-2316 of the 1998 Edition through the latest Edition and Addenda, MAY only be used to qualify personnel that observe for leakage during system leakage and hydrostatic tests conducted in accordance with IWA-5211(a) and (b).
50.55a(b)(2)(xviii)(C)	<i>Certification of NDE personnel.</i> When qualifying visual examination personnel for VT-3 visual examinations under paragraph IWA-2317 of the 1998 Edition through the latest Edition and Addenda, the proficiency of the training must be demonstrated by administering an initial qualification examination and administering subsequent examinations on a 3-year interval.
50.55a(b)(2)(xix)	<i>Substitution of alternative methods.</i> The provisions in IWA-2240, 1998 Edition through the latest Edition and Addenda are NOT approved for use.
50.55a(b)(2)(xx)(B)	<i>System leakage tests.</i> The NDE provision in IWA-4540(a)(2) of the 2002 Addenda of Section XI must be applied when performing system leakage tests after repair and replacement activities performed by welding or brazing on a pressure retaining boundary using the 2003 Addenda through the latest Edition and Addenda.
50.55a(b)(2)(xxi)(A)	<i>Table IWB-2500-1 examination requirements.</i> The provisions of Table IWB-2500-1, Examination Category B-D, Full Penetration Welded Nozzles in Vessels, Items B3.120 and B3.140 (Inspection Program B) in the 1998 Edition must be applied when using the 1999 Addenda through the latest Edition and Addenda. A visual examination with magnification that has a resolution sensitivity to detect a 1-mil width wire or crack, utilizing the allowable flaw length criteria in Table IWB-3512-1, 1997 Addenda through the latest Edition and Addenda, with a limiting assumption on the flaw aspect ratio (i.e., $a/l=0.5$), MAY be performed instead of an ultrasonic examination.
50.55a(b)(2)(xxii)	<i>Surface Examination.</i> The use of the provision in IWA-2220, "Surface Examination," of Section XI, 2001 Edition through the latest Edition and Addenda that allow use of an ultrasonic examination method is prohibited.
50.55a(b)(2)(xxiii)	<i>Evaluation of Thermally Cut Surfaces:</i> The use of the provisions for eliminating mechanical processing of thermally cut surfaces in IWA-4461.4.2 of Section XI, 2001 Edition through the latest Edition and Addenda are prohibited.
50.55a(b)(2)(xxiv)	<i>Incorporation of the Performance Demonstration Initiative and Addition of Ultrasonic Examination Criteria.</i> The use of Appendix VIII and the supplements to Appendix VIII and Article I-3000 of Section XI of the ASME BPV Code, 2002 Addenda through the latest Edition and Addenda, is prohibited.
50.55a(b)(2)(xxv)	<i>Mitigation of Defects by Modification.</i> The use of the provisions in IWA-4340, "Mitigation of Defects by Modification," Section XI, 2001 Edition through the latest Edition and Addenda are prohibited.

TABLE 3 (Cont'd.)
CODE OF FEDERAL REGULATIONS 10 CFR 50.55a LIMITATIONS

10 CFR 50.55a Reference	Limitations, Modifications, and Clarifications
50.55a(b)(2)(xxvi)	<i>Pressure Testing Class 1, 2, and 3 Mechanical Joints.</i> The repair and replacement activity provisions in IWA-4540(c) of the 1998 Edition of Section XI for pressure testing Class 1, 2, and 3 mechanical joints must be applied when using the 2001 Edition through the latest Edition and Addenda.
50.55a(b)(2)(xxvii)	<i>Removal of Insulation.</i> When performing visual examinations in accordance with IWA-5242 of Section XI, 2003 Addenda through the latest Edition and Addenda, insulation must be removed from 17-4 PH or 410 stainless steel studs or bolts aged at a temperature below 1100 °F or having a Rockwell Method C hardness value above 30, and from A-286 stainless steel studs or bolts preloaded to 100,000 pounds per square inch or higher.
50.55a(b)(5)	<i>Inservice Inspection Code Cases.</i> Licensees may apply the ASME Boiler and Pressure Vessel Code Cases listed in Regulatory Guide 1.147 without prior NRC approval subject to the following: (i) When a licensee initially applies a listed Code Case, the licensee SHALL apply the most recent version of that Code Case incorporated by reference in this paragraph. (ii) If a licensee has previously applied a Code Case and a later version of the Code Case is incorporated by reference in this paragraph, the licensee may continue to apply, to the end of the current 120-month interval, the previous version of the Code Case as authorized or may apply the later version of the Code Case, including any NRC-specified conditions placed on its use. (iii) Application of an annulled Code Case is prohibited unless a licensee previously applied the listed Code Case prior to it being listed as annulled in Regulatory Guide 1.147. Any Code Case listed as annulled in any Revision of Regulatory Guide 1.147 which a licensee has applied prior to it being listed as annulled, may continue to be applied by that licensee to the end of the 120-month interval in which the Code Case was implemented.
50.55a(g)(6)(ii)(D)(1)	<i>Reactor vessel head inspections.</i> All licensees of pressurized water reactors SHALL augment their inservice inspection program with ASME Code Case N-729-1 subject to the conditions specified in paragraphs (g)(6)(ii)(D)(2) through (6) of this section.
50.55a(g)(6)(ii)(E)(1)	<i>Reactor coolant pressure boundary visual inspections.</i> All licensees of pressurized water reactors SHALL augment their inservice inspection program by implementing ASME Code Case N-722 subject to the conditions specified in paragraphs (g)(6)(ii)(E)(2) through (4). The inspection requirements of ASME Code Case N-722 do not apply to components with pressure retaining welds fabricated with Alloy 600/82/182 materials that have been mitigated by weld overlay or stress improvement.