



**MAY 28 2004**

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U S Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Prairie Island Nuclear Generating Plant Unit 2  
Docket 50-306  
License No. DPR-60

Reply to Request for Additional Information on Third Ten Year 10-Year Inservice  
Inspection Interval Request for Relief No. 16 (TAC No. MC1775)

- Reference:
- 1) Letter from Nuclear Management Company, LLC, "Request for Relief No. 16, Revision 0, for the Unit 2 3rd 10-Year Interval Inservice Inspection Program," to the Nuclear Regulatory Commission dated January 7, 2004 (ADAMS Accession Number ML040150068).
  - 2) Letter from the Nuclear Regulatory Commission, "Request for Additional Information on Third 10-Year Inservice Inspection Interval Request for Relief No. 16 (TAC No. MC1775), to Nuclear Management Company, LLC dated April 30, 2004 (ADAMS Accession Number ML041130662).

By letter to the Nuclear Regulatory Commission (NRC) dated January 7, 2004, Nuclear Management Company, LLC (NMC) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, for Prairie Island, Unit 2.

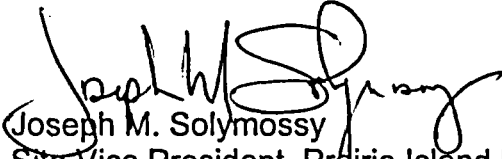
By letter dated April 30, 2004, the NRC sent a request for additional information (RAI) regarding the requested relief. Attached to this letter is the response to the RAI and a revised relief request (the text of the relief request revision only, without the attachments since no new attachments are necessary).

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

ADN

Please contact Jack Leveille (651-388-1121, Ext. 4142) if you have any questions related to this letter.



Joseph M. Solymossy  
Site Vice President, Prairie Island Nuclear Generating Plant  
Nuclear Management Company, LLC

Attachments (2)

cc: Administrator, Region III, USNRC  
Project Manager, Prairie Island, USNRC  
Resident Inspector, Prairie Island, USNRC

**ATTACHMENT 1**

**RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION ON THIRD 10-YEAR  
INSERVICE INSPECTION INTERVAL REQUEST FOR RELIEF NO. 16**

2 pages follow

RESPONSE TO A REQUEST FOR ADDITIONAL INFORMATION ON THIRD 10-YEAR  
INSERVICE INSPECTION INTERVAL REQUEST FOR RELIEF NO. 16

By letter dated January 7, 2004, the licensee, Nuclear Management Company (NMC), submitted Request for Relief No. 16 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, for Prairie Island Unit 2. The NRC staff reviewed the information submitted and based on this review, determined the following information (in italics) is required to complete the evaluation.

1. *Regarding Table 1 on Page 10 of the submittal, what was the UT coverage obtained from the previous interval? If, for any weld, the coverage was less than before, please explain.*

**During the Second Interval, known limitations were described and documented on the applicable datasheet; however, no specific calculations were performed to determine the actual percentage of coverage achieved. It was identified during a NRC inspection in 1997 that appropriate actions were not being performed for reporting and calculating limited examination coverage as described in Licensee Event Report (LER) 1-97-02. Subsequent to the LER and as part of the corrective action PINGP committed to report to the NRC those areas of limitation with supporting documentation subsequent to each refueling outage.**

**From our review of second interval data only one weld (W-12, 2-ISI-11, Summary # 501939) was found to have less coverage than the previous interval. The current examination techniques impose a limitation. Due to the required implementation of Appendix VIII to Section XI, the examination coverage of the required weld volume of piping welds using ultrasonic examination may in fact decrease from previous examinations. Qualified procedures limit credit for examination coverage for single side access welds as is the case for austenitic material with one-sided access. The ultrasonic examination procedure is only qualified for flaws on the near side. However, it should be noted that a best effort ultrasonic examination was performed to detect flaws on the far side as directed by the UT procedure.**

2. *For certain welds, including RC Weld W-6/2LSU on Page 3, the licensee stated, "the weld was included in the boundary examined by VT-2 during pressure testing..." Please provide a brief explanation to state what value has been added through the VT-2 examination. For example, if the results indicated leakage integrity of the component, etc.*

**Please refer to the attached revision of the relief request, where clarifications have been added to the appropriate discussions to address this question.**

3. *For MS Weld W-36, the photo in the attached is not clear. Please provide drawings or sketches that include a cross section of the weld, basic dimensions of the weld and of the adjacent flange. Please explain in detail why UT examination can not be performed on the outside surface as well as on the inside surface when the valve was disassembled.*

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*4. The license also stated that a VT-1 was performed on the ID surface. Please explain how a VT-1 can be used to detect flaws. Please explain why surface examinations were not considered on the ID in lieu of VT-1 to detect flaws.*

*5. For MS Weld W-36 please provide its pre-service examination record and results.*

**We are withdrawing our request for relief from the examination requirements for the weld addressed by questions 3-5 at this time. While attempting to gather historical documentation on this weld, it was discovered that there may be conflicting information on our plant specific drawings and that the subject weld may not exist. It appears that a modification to the Main Steam header just prior to initial startup may have been performed. We have information that leads us to believe that the modification replaced the initially installed welded 6-inch sweepolet to flange with a forged flange and nozzle. Further investigation is required to validate the information. CAP 036802 will track this action. If it is determined that a weld does exist, a relief request (with the information requested by this RAI) for this weld will be submitted.**

**ATTACHMENT 2**

ISI RELIEF REQUEST NO. 16 (REV. 1), PRAIRIE ISLAND 2, 3<sup>RD</sup> INTERVAL

11 pages follow

## Limited Examination

**SYSTEM:** Various  
**CATEGORY:** Various

**CLASS:** 1 and 2  
**ITEM NO:** Various

### Impractical Examination Requirements:

ASME Section XI (1989 Edition, no addenda) Code requires full examination coverage of inservice inspection (ISI) components per Table IWB-2500-1, and IWC-2500-1. NRC Regulatory Guide 1.147 endorses the use of Section XI Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds." This code case allows greater than 90% coverage of a weld to meet the "essentially 100%" requirement.

In addition, NRC Information Notice 98-42 "Implementation of 10 CFR 50.55a(g) Inservice Inspection requirements" dated Dec. 1, 1998, states, "The NRC has adopted and further refined the definition of 'essentially 100 percent' to mean 'greater than 90 percent' in 10 CFR 50.55a(g)(6)(ii)(A)(2) for required examination coverage of reactor pressure vessel welds. This standard has been applied to all examination of welds or other areas required by ASME Section XI.

The Prairie Island construction permit was issued in 1967. This facility was designed and constructed with limited accessibility due to component configurations and/or physical barriers for which 100% examination coverage is not achievable on some ISI components examined for the Third Ten Year Interval.

### Basis for Relief:

This request is submitted pursuant to 10 CFR 50.55a(g)(5)(iv) which states, "Where an examination requirement by the code or addenda is determined to be impractical by the licensee and is not included in the revised inservice inspection program as permitted by paragraph (g)(4) of this section, the basis for this determination must be demonstrated to the satisfaction of the Commission."

The regulation further states in 10 CFR 50.55a(g)(1) that, "For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued before January 1, 1971, components (including supports) must meet the requirements of paragraphs (g) (4) and (g)(5) of this section to the extent practical." 10 CFR 50.55a(g)(4) states, "Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code ... to the extent practical within the limitations of design, geometry and materials of construction of the components."

Prairie Island was designed and constructed prior to development of ASME XI, therefore design for accessibility and inspection coverage is not in many cases, sufficient to permit satisfying the current Code requirements. Limitations to inspections are primarily due to design obstructions, component configurations and interference. In the case of circumferential welds a limitation from ultrasonic examination may exist simply because of weld joint configuration as with a pipe to valve or fitting weld.

A summary of the limited examinations are described below and also included in Table 1, "Limited Examinations – Prairie Island Unit 2 – 2003 Refueling Outage."

**Part A: Category B-A, "Pressure Retaining Welds in Reactor Vessel"**

**Reactor Vessel (RV) Weld (W-6), Head to Flange:**

The RV head-to-flange weld is subject to volumetric and surface examination. In addition to Section XI Code requirements the volumetric examination was performed pursuant to the requirements of Regulatory Guide 1.150. The material of the head is carbon steel. The weld was examined, to the maximum extent practical, using a 0-degree longitudinal wave and 45 and 60-degree shear waves. Supplemental ultrasonic techniques were considered to extend examination coverage of the weld required volume (WRV). It was determined that no significant additional coverage could be obtained. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

This weld was examined in three separate sections throughout the 3<sup>rd</sup> Interval. Limitations of one-third of the weld from 0' to 12' was approved by the staff on August 8, 2000 per Unit 2 Relief Request #8. This request for relief represents the remaining two-thirds of the weld, 12' to 24' and 24' to 36'.

The required volumetric examination of the WRV was limited from the flange side of the weld due to weld joint configuration and close proximity of the flange to the intersecting radius of the reactor head. In addition, there are two 5.5 inch wide lifting lugs located approximately 120 degrees apart and 3 inches from the toe of the weld on the head that prevent 100% scanning and axial coverage from the head side of the weld. The axial WRV was limited to approximately 43.4% using a 45-degree shear wave and 41.9% using a 60-degree shear wave. Circumferential scanning in the clockwise and counterclockwise direction of the WRV was limited to 66.7% again by the flange and could only be performed on the head side of the weld. The credited volumetric examination of the WRV was limited to 58.68%.

The Ultrasonic reflectors recorded with this examination are within the outer 75% of through-wall thickness, are not surface related and are not suspected to being cracks.



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The required surface examinations were performed using magnetic particle and were not limited. 100% of the required surface area was inspected (Inspection Report Nos. 2000M093 and 2003M004). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2070, "Reactor Coolant System Integrity Test," completed on 6/5/2000 and 10/8/2003). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 1, ISI Drawing 2-ISI-41

Attachment 2, Examination Report Number 2003U033

Attachment 3, Examination Report Number 2000U156

### **Part B: Category B-J, "Pressure Retaining Welds in Piping"**

#### **Reactor Coolant (RC) Weld (W-6/2LSU) Elbow to Pump:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix III. The examination was conducted using 45 refracted longitudinal transducers. The pump and piping elbow material are cast austenitic stainless steel. In addition, the attenuation of the cast stainless material of the pump and elbow impedes the examination and use of other angles. The examination is limited to 48% in the axial direction and 90% in the circumferential direction from the piping elbow side of the weld due to the weld joint configuration connection to the pump. The credited volumetric examination of the WRV was limited to 69% and only a single-sided examination could be performed. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was inspected (Inspection Report No. 2003P019). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2070, "Reactor Coolant System Integrity Test," completed on 10/8/2003). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

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Attachment 4, ISI Drawing 2-ISI-33B

Attachment 5, Examination Report Number 2003U005

### **Safety Injection (SI) Weld (W-2), Elbow to Pipe:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was conducted using 45 and 60-degree transducers. The elbow and piping material are austenitic stainless steel. The examination is limited to 34.5% in the axial direction and 44% in the circumferential direction due to four welded support lugs covering the weld. The credited volumetric examination of the WRV was limited to 39.25%. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant. This exam was limited due to four welded support lugs covering the weld. 52.9% of the required surface area was inspected. Alternative exams would be subject to the same limitations. No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2070, "Reactor Coolant System Integrity Test," completed on 10/8/2003). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 6, ISI Drawing 2-ISI-21

Attachment 7, Examination Report Number 2003U002

Attachment 8, Examination Report Number 2003P012

### **Safety Injection (SI) Weld (W-3), Pipe to Elbow:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was conducted using 45 and 60-degree transducers. The elbow and piping material are austenitic stainless steel. The examination is limited to 50% in the axial direction due to a non-removable restraint on the upstream side of the weld. 100% of the circumferential direction was examined. The credited volumetric examination of the WRV was limited to 75% and only a single-sided examination could be performed for

the axial direction. It should be noted that the volumetric examination was performed through 100% of the Code WRV; however, the Performance Demonstration Initiative (PDI) Appendix VIII procedure used is not qualified for the detection of flaws on the far side of single sided access examinations on austenitic stainless steel piping welds. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was inspected (Inspection Report No. 2003P057). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination( VT-2) during pressure testing (SP 2070, "Reactor Coolant System Integrity Test," completed on 10/8/2003). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 9, ISI Drawing 2-ISI-29

Attachment 10, Examination Report Number 2003U040

**Reactor Coolant (RC) Weld (W-12), Nozzle to Pipe:**

This piping branch connection weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was conducted using a 45-degree transducer. No 60-degree refracted longitudinal examination was performed due to technique limitations based on material thicknesses and component diameter considerations that are outside the qualified typical equipment parameters of Table 1 of the PDI document.

The branch nozzle connection to the reactor coolant piping material is austenitic stainless steel. The examination is limited to 50% in both the axial and circumferential directions from the nozzle side of the weld due to the weld joint configuration of the branch connection to the process pipe. The credited volumetric examination of the WRV was limited to 50% and only a single-sided examination could be performed. It should be noted that the volumetric examination was performed through 100% of the Code WRV; however, the PDI Appendix VIII procedure used is not qualified for the detection of flaws on the far side of single sided access examinations on austenitic stainless steel piping welds. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography

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was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was (Inspection Report No. 2003P020). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2070, "Reactor Coolant System Integrity Test," completed on 10/8/2003 ). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 11, ISI Drawing 2-ISI-11

Attachment 12, Examination Report Number 2003U015

### **Part C: Category C-A "Pressure Retaining Welds in Pressure Vessels"**

#### **Residual Heat Removal (RH) Weld (W-1), Head to Shell:**

This head to shell weld is subject to be examined by volumetric examination method. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix III. The examination was conducted using a 45 and 60-degree transducers. The head and shell materials are austenitic stainless steel. The examination is limited in all scan directions due to outlet / inlet nozzle reinforcing rings and two welded supports. The credited volumetric examination of the WRV was limited to 74%. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography and liquid penetrant was considered and determined to add no examination area due to limited accessibility.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2168.10, "RHR System Pressure Test," completed 10/7/2003). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 13, ISI Drawing 2-ISI-69B

Attachment 14, Examination Report Number 2003U035

**Part D: Category C-F-1 "Pressure Retaining Welds in Austenitic Stainless Steel or High Alloy Piping"**

**Safety Injection (SI) Weld (W-11), Valve to Elbow:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was conducted using 45 and 70-degree transducers. The elbow and piping material are austenitic stainless steel. The examination is limited to 50% in both the axial and circumferential directions from the piping side of the weld due to the weld joint configuration connection to the valve. The credited volumetric examination of the WRV was limited to 50% and only a single-sided examination could be performed. It should be noted that the volumetric examination was performed through 100% of the Code WRV; however, the PDI Appendix VIII procedure used is not qualified for the detection of flaws on the far side of single sided access examinations on austenitic stainless steel piping welds. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was inspected (Inspection Report No. 2003P014). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2168.13, "Safety Injection System Pressure Test." This test has not been completed in its entirety; however the portion of piping that includes this weld has been completed per this SP). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 15, ISI Drawing 2-ISI-90A

Attachment 16, Examination Report Number 2003U010

**Safety Injection (SI) Weld (W-14), Elbow to Valve:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was

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conducted using 45 and 70-degree transducers. The valve and piping material are austenitic stainless steel. The examination is limited to 50% in both the axial and circumferential directions from the piping elbow side of the weld due to the weld joint configuration connection. The credited volumetric examination of the WRV was limited to 50% and only a single-sided examination could be performed. It should be noted that the volumetric examination was performed through 100% of the Code WRV; however, the PDI Appendix VIII procedure used is not qualified for the detection of flaws on the far side of single sided access examinations on austenitic stainless steel piping welds. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was inspected (Inspection Report No. 2003P030). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2168.13, "Safety Injection System Pressure Test." This test has not been completed in its entirety; however the portion of piping that includes this weld has been completed per this SP). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 15, ISI Drawing 2-ISI-90A

Attachment 17, Examination Report Number 2003U011

### **Safety Injection (SI) Weld (W-17), Pipe to Flange:**

This piping weld is subject to be examined by both volumetric and surface examination methods. The volumetric examination was performed using personnel and procedures qualified in accordance with Appendix VIII, Supplement 2. The examination was conducted using 45 and 70-degree transducers. The flange and piping material are austenitic stainless steel. The examination is limited to 50% in both the axial and circumferential directions from the piping side of the weld due to the weld joint configuration connection to the flange. The credited volumetric examination of the WRV was limited to 50% and only a single-sided examination could be performed. It should be noted that the volumetric examination was performed through 100% of the Code WRV; however, the PDI Appendix VIII procedure used is not qualified for the detection of flaws on the far side of single sided access examinations on austenitic stainless steel piping welds. The techniques employed for the examination provide for a best effort examination. As an alternative to the ultrasonic examination, radiography was considered and determined to be an unacceptable substitute due to radiological

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constraints, weld configuration, and the undue hardship imposed without offering any commensurate increase in safety with cost benefit.

The required surface examination was performed using liquid penetrant and was not limited. 100% of the required surface area was inspected (Inspection Report No. 2003P032). No relevant indications were detected.

The weld is included in the system boundary examined by visual examination (VT-2) during pressure testing (SP 2168.13, "Safety Injection System Pressure Test." This test has not been completed in its entirety; however the portion of piping that includes this weld has been completed per this SP). During the conduct of the visual examination, no leakage was detected at this specific weld. This supports that the weld integrity has not been compromised.

The following supporting documentation is provided:

Attachment 18, ISI Drawing 2-ISI-93A

Attachment 19, Examination Report Number 2003U026

**Part E: Category C-F-2 "Pressure Retaining Welds in Carbon or Low Alloy Steel Piping"**

### **Additional Means of Establishing Component Integrity:**

System integrity is monitored during normal operation by many direct and indirect methods, e.g., containment radiation monitoring, containment air monitoring, containment sump monitoring, containment temperature monitoring, system walk downs, surveillance testing, etc.

### **Alternate Examination:**

The limitations have been noted on the ISI examination reports and are included in the 2003 ISI Outage Summary Report. NMC will continue to document limitations.

All in-service inspections at Prairie Island Unit 2 have been completed to the greatest extent practical. When limitations to required inspections are encountered, Prairie Island Procedure SWI NDE-LTS-1, "Limitations to NDE," was applied. SWI NDE-LTS-1 (Attachment 22) is used when an ASME Section XI Code required examination results in less than 90% coverage. It requires a review of the procedures to obtain maximum coverage and documentation of the limitation. The procedure also examines whether an alternative method could be used to obtain better coverage as allowed by the Code. This procedure was used for all the items identified above and the maximum inspection coverage was achieved.

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Limitations are due to design, geometry, and materials of construction of the components. NMC will continue to utilize the most current techniques available for future examinations.



**Table 1. Limited Examinations - Prairie Island Unit 2 – 2003 Refueling Outage**

Category	Item No.	SYSTEM	ISO	Comp ID Summary #	Description	Method	% Coverage	REPORT	Limitation
B-A	B1.40	Reactor Vessel	2-ISI-41	W-6 501733	Head to Flange	Volumetric UT	58.68% & 58.68%	2003U033 & 2000U156	Limited to flange configuration (lifting lugs).
B-J	B9.10	Reactor Coolant	2-ISI-33B	W-6/2LSU 501145	Elbow to Pump	Volumetric UT	69%	2003U005	Limited due to configuration and material attenuation
B-J	B9.11	Safety Injection	2-ISI-21	W-2 501900	Elbow to Pipe	Volumetric UT	39.25% & 52.9%	2003U002 & 2003P012	Limited due to four welded support attachments.
B-J	B9.11	Safety Injection	2-ISI-29	W-3 501813	Pipe to Elbow	Volumetric UT	75%	2003U040	Limited due to restraint.
B-J	B9.31	Reactor Coolant	2-ISI-11	W-12 501939	Nozzle to Pipe	Volumetric UT	50%	20033U015	Limited due to Nozzle weld configuration.
C-A	C1.20	Residual Heat Removal	2-ISI69B	W-1 501477	Head to Shell	Volumetric UT	74%	2003U035	Limited due to inlet / outlet reinforcing rings and two welded supports.
C-F-1	C5.21	Safety Injection	2-ISI-90A	W-11 505055	Valve to Elbow	Volumetric UT	50%	2003U010	Limited on valve side due to configuration.
C-F-1	C5.21	Safety Injection	2-ISI-90A	W-14 505058	Elbow to Valve	Volumetric UT	50%	2003U011	Limited on valve side due to configuration.
C-F-1	C5.21	Safety Injection	2-ISI-93A	W-17 505370	Pipe to Flange	Volumetric UT	50%	2003U026	Limited on flange side due to configuration.