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May 11, 2018

L-MT-18-023
10 CFR 50.55a

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Monticello Nuclear Generating Plant
Docket No. 50-263
Renewed Facility Operating License No. DPR-22

10 CFR 50.55a Request RR-012: Inservice Inspection Impracticality in Accordance with
10 CFR 50.55a(g)(5)(iii) during the Fifth Ten-Year Interval

Pursuant to 10 CFR 50.55a(g)(5)(iii), Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requests relief from certain examination coverage requirements imposed by the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components", for the Monticello Nuclear Generating Plant.

This 10 CFR 50.55a request is for nozzle-to-vessel weld examinations, performed during the 2017 refueling outage, where the required coverage of "essentially 100 percent" could not be obtained when examined to the extent practical. The basis for the 10 CFR 50.55a request is that compliance with the specified requirements is impractical due to plant design.

NSPM is submitting this request for the Fifth Ten-Year Inservice Inspection Interval and requests approval by June 11, 2019.

If there are any questions or if additional information is needed, please contact Mr. Peter Gohdes at (612) 330-6503 or Peter.Gohdes@xenuclear.com.

Summary of Commitments

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

A handwritten signature in black ink, appearing to read 'Chris Church', written in a cursive style.

Christopher R. Church
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company – Minnesota

Document Control Desk
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Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC

10 CFR 50.55a Request RR-012

Inservice Inspection Impracticality in Accordance with 10 CFR 50.55a(g)(5)(iii) during the Fifth Ten-Year Interval

1.0 ASME CODE COMPONENTS AFFECTED

Components affected are American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, Class 1, Reactor Pressure Vessel (RPV), nozzle-to-vessel shell welds specified below and further in-detail in Attachment 1, Table A. This request is based upon examinations that were performed during the 2017 Monticello Nuclear Generating Plant (MNGP) refueling outage, which was in Period 2 of the Fifth Ten-Year Interval. The Fifth Ten-Year Interval began on September 1, 2012.

Recirculation Inlet Nozzle N-2E:	Weld N-2E NV
Feedwater Inlet Nozzle N-4A:	Weld N-4A NV
CRD Return Nozzle N-9 (Capped):	Weld N-9 NV

2.0 APPLICABLE CODE EDITION AND ADDENDA

The applicable ASME Section XI Code for the MNGP Fifth Ten-Year Inservice Inspection (ISI) Interval is the 2007 Edition with the 2008 Addenda. ASME Section XI, Appendix VIII requirements are implemented as required by 10 CFR 50.55a. Ultrasonic procedures and personnel are qualified to the Performance Demonstration Initiative (PDI). The PDI Program satisfies the requirements of the 2007 Edition with 2008 Addenda of Section XI, Appendix VIII, as modified by 10 CFR 50.55a.

3.0 APPLICABLE CODE REQUIREMENT

ASME Class 1 nozzle-to-vessel shell welds are subject to the examination requirements of Subsection IWB Table IWB-2500-1, as shown below, and are required to be examined once within the Fifth Ten-Year Interval:

Code Class:	1
References:	IWA-2200(c) IWB-2500, Table IWB-2500-1
Examination Category:	B-D, Full Penetration Welded Nozzles in Vessels
Item Number:	B3.90
Description:	Nozzle-to-Vessel Shell Welds
Component Numbers:	See Section 1.0 and Attachment 1, Table A
System:	Reactor Vessel
Examination Method:	Volumetric – Ultrasonic Testing (UT)
Examination Volume:	Figure IWB-2500-7(b)

In August 2014, the NRC issued Regulatory Guide (RG) 1.147, Revision 17, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1" (Reference 1). In RG 1.147,

the NRC identified the ASME Code Cases determined to be acceptable alternatives to applicable parts of Section XI and indicated that licensees may use these Code Cases without requesting authorization from the NRC, provided that they are used with any identified limitations or modifications. RG 1.147, Table 1 lists ASME Code Case N-613-1 (Reference 2) as acceptable to the NRC for use by a licensee with no identified limitations or modifications.

As an acceptable alternative to ASME Section XI Figure IWB-2500-7(b) for RPV nozzle-to-vessel welds, ASME Code Case N-613-1 permits an examination volume that includes the width of the reactor-nozzle-to-shell weld plus one-half inch of adjacent base metal on each side of the widest part of the weld. In comparison, the examination volume required by the Figure IWB-2500-7(b) includes the width of the weld plus the adjacent base metal on each side of the widest part of the weld equal to one-half of the vessel shell wall thickness.

ASME Section XI IWA-2200(c) states in part:

When performing VT-1, surface, radiographic, or ultrasonic examination on a component with defined surface or volume, essentially 100% of the required surface or volume shall be examined. Essentially 100% coverage is achieved when the applicable examination coverage is greater than 90%...

Per IWA-2200(c), Nonmandatory Appendix S, "Evaluating Coverage for Section XI Nondestructive Examination", may be used as a guideline to determine examination coverage, i.e., when the defined volume cannot be obtained due to a volumetric limitation.

Nonmandatory Appendix S, Article S-3000, specifically Sub-Article S-3500, provides examination coverage evaluation guidelines for ultrasonic examination of welds. Nonmandatory Appendix S defines a volumetric limitation as:

Inability to examine the required volume because of interference, obstruction, geometrical configuration, or metallurgical condition of material being examined.

4.0 IMPRACTICALITY OF COMPLIANCE

Construction Permit CPPR-31 was obtained for the MNGP on June 19, 1967. The MNGP systems and components were designed for construction before the examination requirements of ASME Section XI were formalized and published. Therefore, because MNGP was not specifically designed to meet the requirements of ASME Section XI, full compliance is not feasible or practical within the limits of the current plant design.

10 CFR 50.55a recognizes the limitations to inservice inspection of components in accordance with Section XI of the ASME Code, which are imposed due to early plants' design and construction, as follows:

10 CFR 50.55a(g)(1): *Inservice inspection requirements for older plants (pre-1971 CPs)*. 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): *Inservice inspection standards requirement for operating plants.* Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that 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 and addenda 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.

10 CFR 50.55a(g)(5)(iii): *ISI program update: Notification of impractical ISI Code requirements.* If the licensee has determined that conformance with a Code requirement is impractical for its facility the licensee must notify the NRC and submit, as specified in § 50.4, information to support the determinations.

The examination limitations on the subject components are due to inherent nozzle design geometric contours (see Attachment 1, Table A and Attachment 2).

A description of the examination methodology used to provide the maximum obtainable coverage is provided in Section 6 of this request. This methodology is based on ASME Section XI, Appendix VIII qualification and was applied to the extent practical within the design constraints of the components. Attachment 2 provides cross-sectional diagrams of the subject welds showing the geometric contour of the component design in relation to the welds and the coverage obtained within the examination volume requirements of ASME Code Case N-613-1, Figure 2.

5.0 BURDEN CAUSED BY COMPLIANCE

Compliance with the examination coverage requirements of ASME Section XI would require modification, redesign, or replacement of components where geometric contour and physical obstruction is inherent to the component design and installation.

6.0 PROPOSED ALTERNATIVE AND BASIS FOR USE

6.1 Proposed Alternative

In accordance with 10 CFR 50.55a(g)(5)(iii), Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM"), requests relief for the components listed in Attachment 1, Table A on the basis that the required examination coverage of "essentially 100 percent" is impractical due to physical obstructions and the limitations imposed by design, geometry and materials of construction.

NSPM has performed qualified examinations that achieved the maximum, practical amount of coverage obtainable within the limitations imposed by the design of the components with no detectable indications.

Therefore, pursuant to 10 CFR 50.55a(g)(5)(iii), NSPM requests authorization of an alternative to the requirements of ASME Section XI Table IWB-2500-1, Category B-D, Item B3.90 and associated ASME Code Case N-613-1, and proposes to utilize these completed exams as an acceptable alternative that provides reasonable assurance of continued structural integrity.

6.2 Basis for Use

6.2.1 Nozzle-to-Vessel Shell Welds (N-2E NV, N-4A NV, N-9 NV)

The NSPM Nondestructive Examination (NDE) UT procedures incorporate inspection techniques qualified under Appendix VIII of the ASME Section XI Code by the PDI.

Examinations of the RPV nozzle-to-shell welds were performed from the RPV exterior surface using a manual contact method from the nozzle blend radius, the nozzle-to-vessel shell weld, and vessel shell surface. Coverage using the alternative examination volume permitted by Code Case N-613-1 was obtained by following the scan parameters designated within NSPM NDE procedures for each nozzle configuration and angle, including those parameters defined by MNGP-specific Electric Power Research Institute (EPRI) computer modeling reports (References 3 and 4). Note that the scans defined by the EPRI reports are applicable only to the inner 15 percent of the weld volume and only when scanning in a circumferential direction, parallel to the weld.

The refracted longitudinal wave mode of propagation was applied for all scans of the exam volume in the radial direction, perpendicular to the weld. The refracted longitudinal wave mode of propagation was also applied to the outer 85 percent of the exam volume for parallel scans. As required by the NSPM NDE procedures and the EPRI computer modeling reports, the shear wave mode of propagation was applied for each of the transducer and wedge combinations required for the remaining inner 15 percent of the parallel scan exam volume.

The subject nozzle-to-vessel welds received the required examination(s) to the extent practical within the limited access of the component design. One hundred percent coverage was obtained for the inner 15 percent of the examination volume for the radial and parallel scans. The examination limitations for the subject components were encountered within the outer 85 percent of the examination volume for the parallel and radial scans. For the examinations conducted, satisfactory results were achieved, and no flaw indications were detected.

Due to the design of these nozzle-to-shell welds, it was not feasible to effectively perform a volumetric examination of "essentially 100 percent" of the required volume. The nozzle-to-vessel welds are accessible from the vessel plate side of the weld and are examined to the extent practical with qualified techniques; however, the curvature of the nozzle forging and proximity to the weld preclude obtaining further coverage of the excluded areas within the outer 85 percent of the examination volume.

6.2.2 Exam Coverage Determination

As required by procedure, when limitations to ISI examinations are encountered that prevent obtaining full coverage of a required volume, the limitations are required to be quantified and recorded.

The method used to determine coverage is based on field measurements applied to a two dimensional plot. This allows an informed approximation to be made of the coverage achieved. The methodology is appropriate to the application in that the limitations are physical and the methods applied to the examination are established by qualified techniques.

The coverage drawings in Attachment 2 give a representation of the examination volume and the weld interface line shown in Figure 2 of Code Case N-613-1 for the nozzle-to-vessel welds. The areas of examination volume coverage and areas of no examination volume coverage are identified on the respective drawing for each nozzle. The contour on the exterior surface of the nozzles causes transducer liftoff and inhibits the ability to maintain adequate coupling necessary to transmit and receive the ultrasonic sound energy.

Additional coverage with meaningful results was not achievable or practical for the limited areas with implementation of performance based examination methods without redesigning and modifying the components to allow additional scanning surfaces. NSPM has concluded that if significant service-induced degradation existed in the subject welds, it would have been identified by the examinations performed. Therefore, in accordance with 10 CFR 50.55a(g)(1) and (4), each of the subject welds were examined to the extent practical.

For comparison with current results, Table B of Attachment 3 provides historical examination results from the Fourth Interval for the subject welds, including percent coverage and their corresponding, granted 10 CFR 50.55a requests (References 7 and 8). The coverage obtained for the Fourth Interval exams was substantially similar to those obtained for the current exams, as listed in Attachment 1, Table A, however, the percent of coverage shown for N-2E and N-4A in the Fifth Interval is slightly higher than the Fourth Interval coverage values due to refinement in determination of coverage values.

6.2.3 Materials, Aging Management, Similar Components

The materials for the subject components are A508 Class 2 nozzle forgings welded to A533 Grade B, Class 1 vessel shell plate. The weld filler material for the subject joints was E8018NM. Internal surface cladding materials are E309-15 for the base layer and ER308L or E308L-15 for subsequent layers.

The MNGP reactor vessel water chemistry is controlled in accordance with Revision 1 of the BWR Water Chemistry Guidelines (Reference 5). Hydrogen water chemistry system is used to reduce the oxidizing environment in the reactor coolant. Beginning in 2013, MNGP has also implemented Online Noble-Metal Chemistry. These additional measures provide added assurance against the initiation of cracking or corrosion from the inside surface of the reactor

vessel. An inerted primary containment environment during operation provides assurance of corrosion protection on the outside surface of the reactor vessel.

Additionally, as Class 1 Examination Category B-P components, system pressure testing with VT-2 visual examinations are required every outage prior to startup. The VT-2 examinations were performed on the subject components in association with the Reactor Coolant Pressure Boundary system pressure test performed during the 2017 refueling outage. No evidence of pressure boundary leakage was identified during this system test.

As shown in Table C of Attachment 3, five nozzle-to-vessel welds with limitations to coverage were examined during previous outages in the current Interval and relief was granted by the NRC (Reference 6) pursuant to 10 CFR 50.55a(g)(6)(i).

6.2.4 Summary

The provisions described above, as an alternative to the Code requirement for examination coverage, will continue to provide reasonable assurance of the structural integrity of the subject welds. The volumetric examinations were completed to the extent practical and no unacceptable flaws were identified. VT-2 examinations performed on the subject components during system pressure testing each refueling outage in accordance with examination Category B-P provide continued assurance that the structural integrity of the subject components is maintained. Additionally, the MNGP Water Chemistry Program and inerted primary containment environment provide added measures of protection for the component materials.

Five nozzle-to-vessel weld examinations, as shown in Table C of Attachment 3, were previously performed during the Fifth Ten-Year Interval having limitations with respect to coverage, and relief was granted by the NRC pursuant to 10 CFR 50.55a(g)(6)(i). Similarly, relief was granted in the Fourth Ten-Year Interval, as shown in Table B of Attachment 3, for the components included in this request.

Therefore, pursuant to 10 CFR 50.55a(g)(5)(iii), NSPM requests that the NRC grant relief from the ASME Section XI examination requirements for the subject nozzle-to-vessel welds.

7.0 DURATION OF PROPOSED ALTERNATIVE

NSPM requests the granting of this relief for the MNGP Fifth Ten-Year Inservice Inspection Interval Program that is currently scheduled to end on May 31, 2022.

8.0 PRECEDENTS

The NRC has previously granted similar relief for the MNGP for the Fifth Ten-Year Inservice Inspection Interval (Reference 6). The NRC also granted similar relief for these components during the Fourth Ten-Year Inservice Inspection Interval (References 7 and 8).

9.0 REFERENCES

1. NRC Regulatory Guide 1.147, Revision 17, "Inservice Inspection Code Case Acceptability ASME Section XI, Division 1", dated August 2014. (ADAMS Accession No. ML13339A689)
2. ASME Section XI Code Case N-613-1, "Ultrasonic Examination of Full Penetration Nozzles in Vessels, Examination Category B-D, Item No's. B3.10 and B3.90, Reactor Nozzle-To-Vessel Welds, Figs. IWB-2500-7(a), (b), and (c), Section XI, Division 1", dated August 20, 2002.
3. EPRI Internal Report IR-2004-63, "Monticello Nozzle Inner Radius and Nozzle-to-Shell Weld Examinations", dated December 2004.
4. EPRI Internal Report IR-2006-100, "Monticello Nozzle Inner Corner Region and Nozzle-to-Shell Weld Examinations", dated January 2006.
5. EPRI Report 3002002623, "BWRVIP-190 Revision 1: BWR Vessel and Internals Project, Volume 1: BWR Water Chemistry Guidelines – Mandatory, Needed, and Good Practice Guidance", dated April 2014.
6. NRC letter to NSPM, "Monticello Nuclear Generating Plant – Relief Request RR-009 Regarding Relief from Examination Coverage Requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for the Fifth 10-Year Inservice Inspection Program Interval (TAC No. MF4258)", dated February 19, 2015. (ADAMS Accession No. ML15028A152)
7. NRC letter to Nuclear Management Company (NMC), "Monticello Nuclear Generating Plant (MNGP) – Fourth 10-Year Interval Inservice Inspection (ISI) Program Plan Relief Request No. 13 (TAC No. MC8882)", dated July 18, 2006. (ADAMS Accession No. ML061780172)
8. NRC letter to NMC, "Monticello Nuclear Generating Plant (MNGP) – Granting of Relief Regarding Limited Ultrasonic Examination Coverage of Five Welds (TAC No. MD6854)", dated May 19, 2008. (ADAMS Accession No. ML081050678)

ENCLOSURE, ATTACHMENT 1

MONTICELLO NUCLEAR GENERATING PLANT

10 CFR 50.55a Request RR-012

Inservice Inspection Impracticality in Accordance
with 10 CFR 50.55a(g)(5)(iii) during the Fifth Ten-Year Interval

**SUMMARY OF 2017 REFUELING OUTAGE EXAMS FOR WHICH
ESSENTIALLY 100 PERCENT COVERAGE WAS NOT OBTAINED
ON CATEGORY B-D NOZZLE-TO-VESSEL WELDS**

(1 Page Follows)

Table A: 2017 Refueling Outage, Summary of Exams, Essentially 100 Percent Coverage Not Obtained, Category B-D, "Full Penetration Welds of Nozzles in Vessels", Item No. B3.90

Code Category and Item No.	System and Component Description	Component ID	Code Component and Examination Volume Required	Percent Coverage Obtained	Limitations	Indications Reported	Exam Report Numbers
B-D B3.90	Reactor Vessel Recirculation Inlet Nozzle N-2E	N-2E NV	Nozzle-to-Vessel Weld, Code Case N-613-1 Figure 2	83% ¹	Limited due to nozzle configuration	None	2017UT029 2017UT030
B-D B3.90	Reactor Vessel Feedwater Inlet Nozzle N-4A	N-4A NV	Nozzle-to-Vessel Weld, Code Case N-613-1 Figure 2	83% ¹	Limited due to nozzle configuration	None	2017UT016 2017UT017
B-D B3.90	Reactor Vessel CRD-Return (capped) Nozzle N-9	N-9 NV	Nozzle-to-Vessel Weld, Code Case N-613-1 Figure 2	85%	Limited due to nozzle configuration	None	2017UT018 2017UT020

¹ Coverage is slightly higher than 4th Interval exam shown in Table B of Attachment 3, due to refinement in determination of coverage values.

ENCLOSURE, ATTACHMENT 2

MONTICELLO NUCLEAR GENERATING PLANT

10 CFR 50.55a Request RR-012

Inservice Inspection Impracticality in Accordance
with 10 CFR 50.55a(g)(5)(iii) during the Fifth Ten-Year Interval

**EXAM LIMITATIONS IMPOSED BY COMPONENT
DESIGN AND CONSTRUCTION**

(7 Pages Follow)

Exam Limitations Imposed by Component Design and Construction

This attachment contains a series of excerpts from the Inservice Inspection (ISI) Ultrasonic Testing (UT) reports applicable to the subject components.

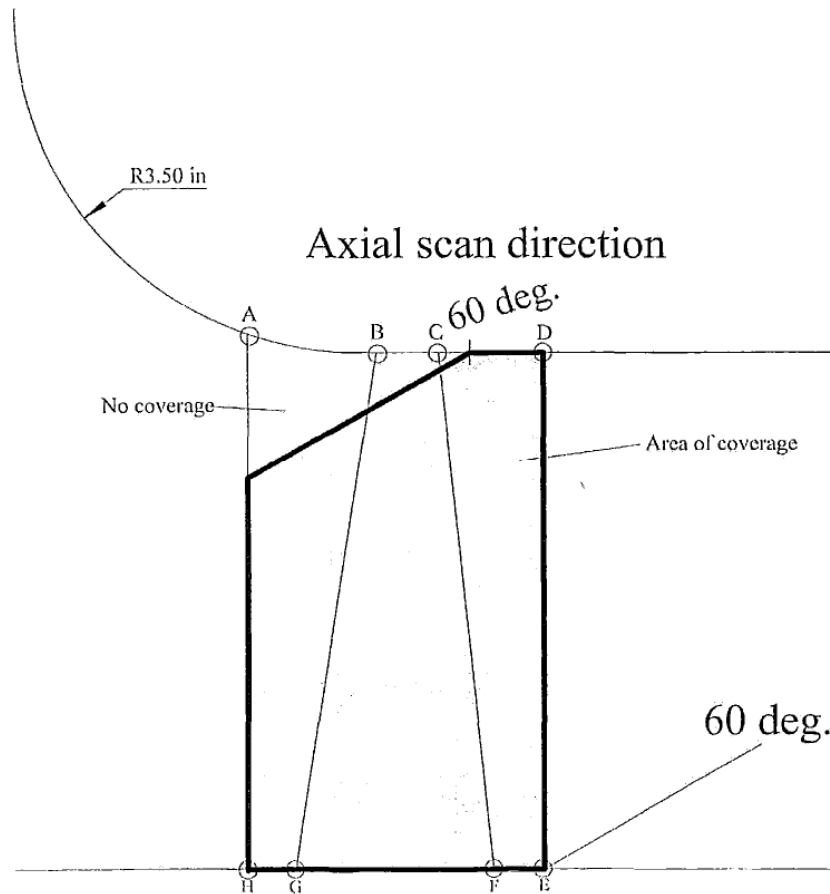
These excerpts contain sketches depicting the component configuration with physical limitations imposed by the design, e.g., geometrical contour and weld position. The sketches provide a cross sectional view depicting the UT coverage and coverage limitations in relation to the required examination volume.

Descriptive details are also included with the sketches to provide reference to the configuration, e.g., interior/exterior surface, shell side / nozzle side of weld, weld area, required exam volume, area of coverage, etc.

Component	Report No.	Page(s)
N-2E NV	2017UT029	Pages 2 – 3
N-4A NV	2017UT016	Pages 4 – 5
N-9 NV	2017UT018	Pages 6 – 7

**Component N-2E NV
Report No. 2017UT029**

Axial (Radial) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

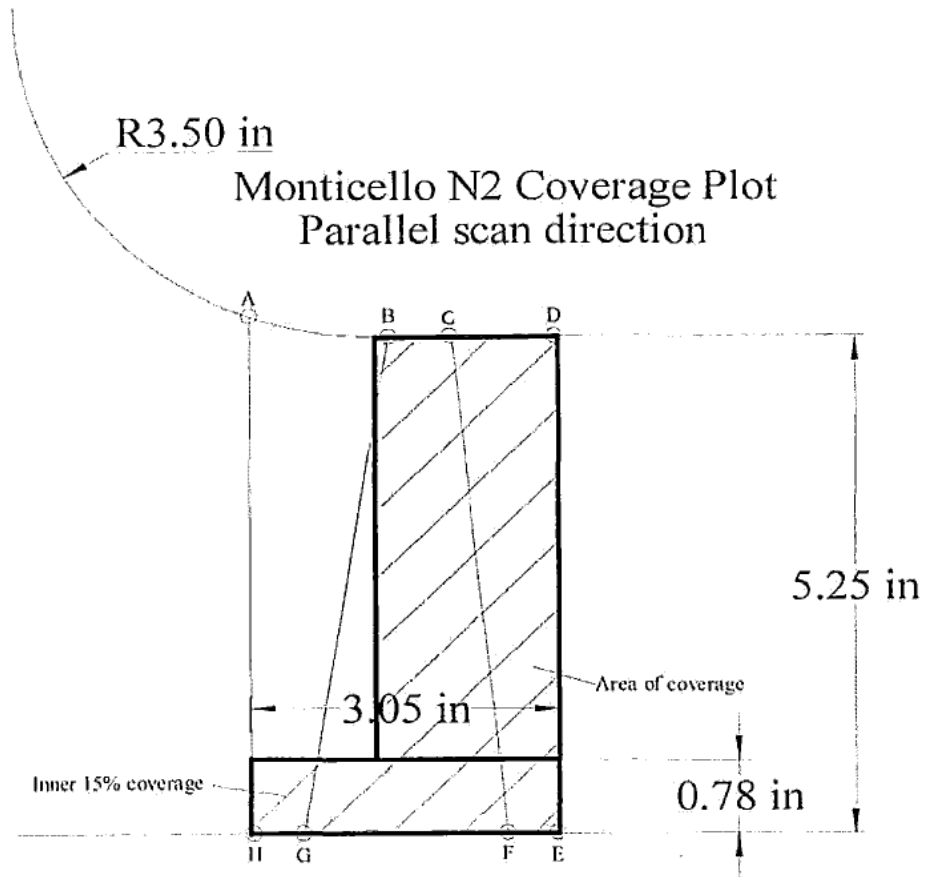
Vessel Exterior Surface: Points A-B-C-D

Vessel Interior Surface: Points E-F-G-H

Bolded area indicates exam area of coverage obtained.

**Component N-2E NV
Report No. 2017UT029**

Parallel (Circumferential) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

Vessel Exterior Surface: Points A-B-C-D

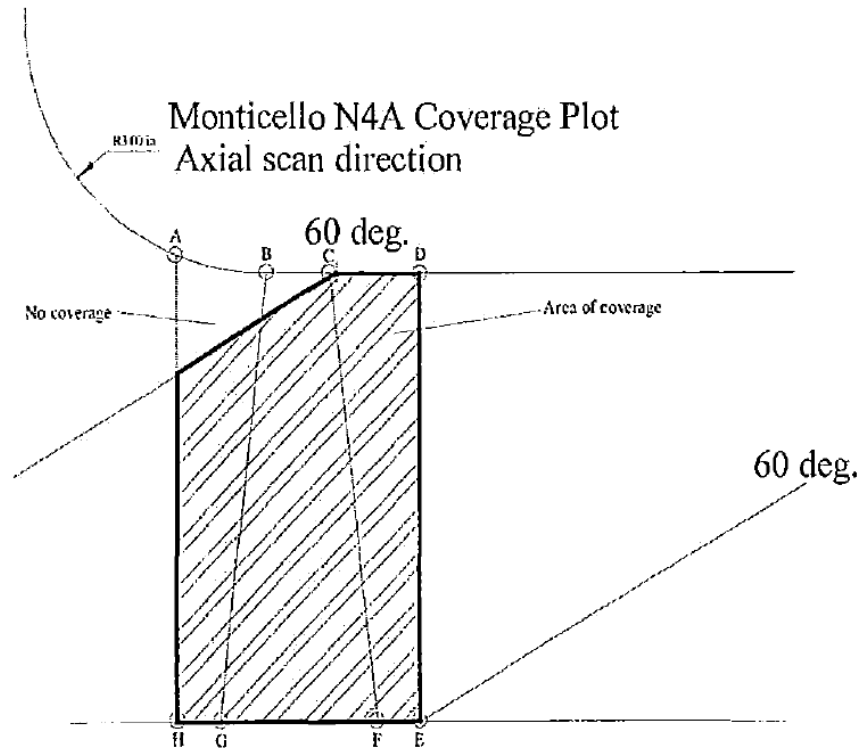
Vessel Interior Surface: Points E-F-G-H

Bolded, slashed pattern area indicates exam area of coverage obtained.

Report No. 2017UT030 applicable to inner 15% for parallel (circ) scan

**Component N-4A NV
Report No. 2017UT016**

Axial (Radial) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

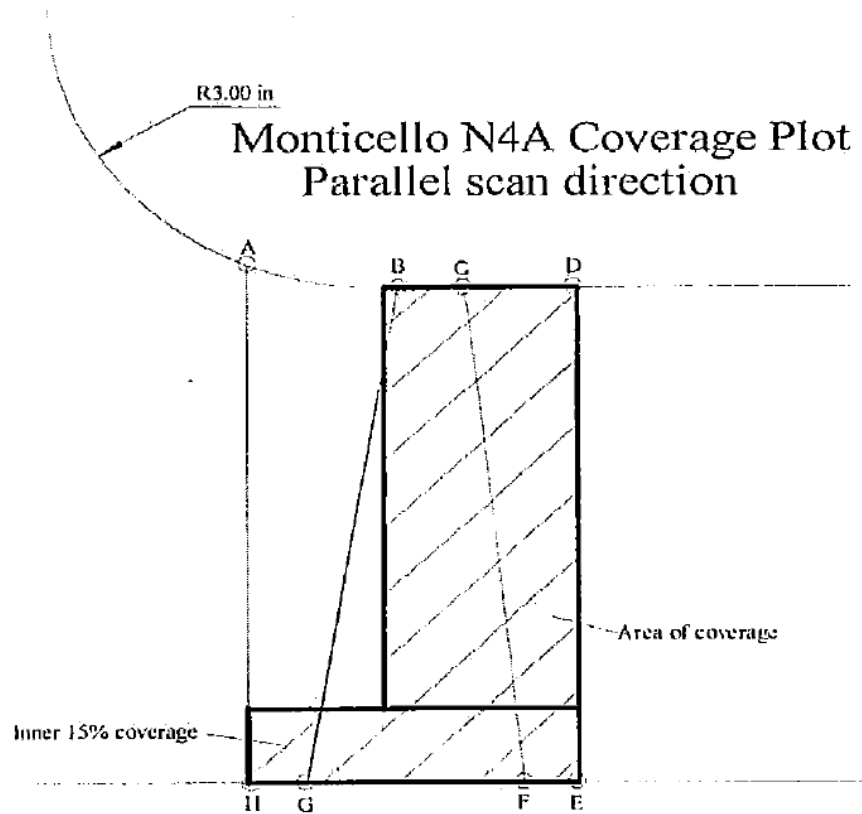
Vessel Exterior Surface: Points A-B-C-D

Vessel Interior Surface: Points E-F-G-H

Bolded, slashed pattern area indicates exam area of coverage obtained.

**Component N-4A NV
Report No. 2017UT016**

Parallel (Circumferential) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

Vessel Exterior Surface: Points A-B-C-D

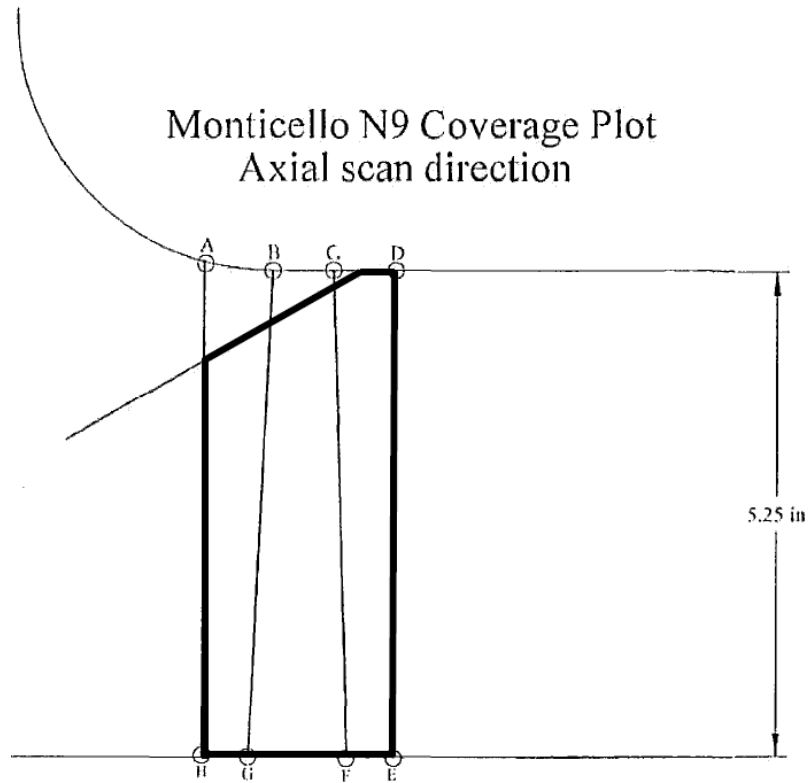
Vessel Interior Surface: Points E-F-G-H

Bolded, slashed pattern area indicates exam area of coverage obtained.

Report No. 2017UT017 applicable to inner 15% for parallel (circ) scan

**Component N-9 NV
Report No. 2017UT018**

Axial (Radial) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

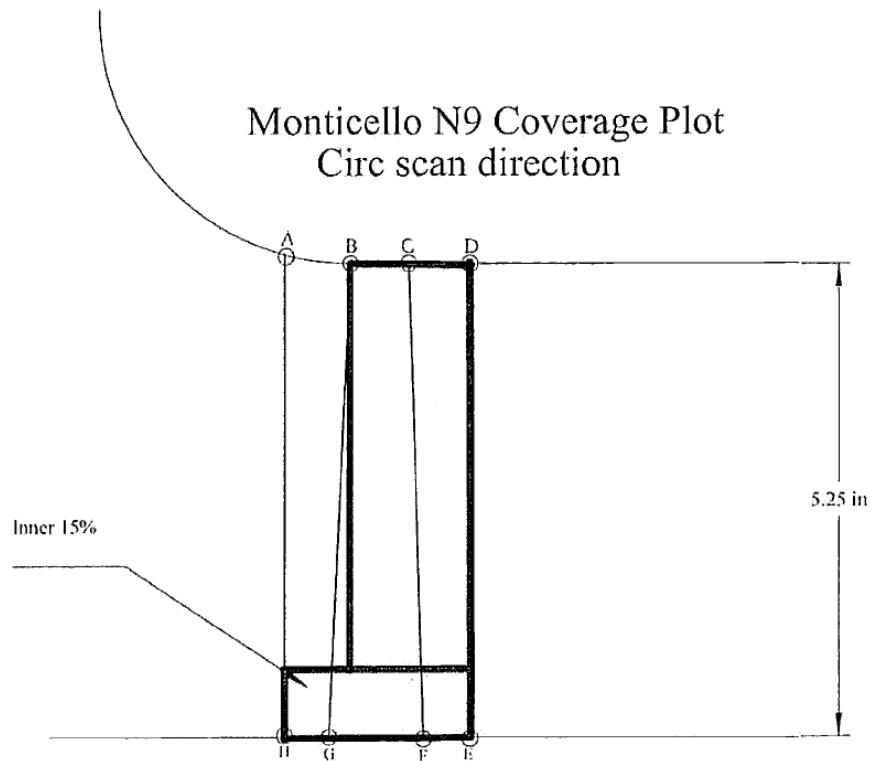
Vessel Exterior Surface: Points A-B-C-D

Vessel Interior Surface: Points E-F-G-H

Bolded area indicates exam area of coverage obtained.

**Component N-9 NV
Report No. 2017UT018**

Parallel (Circumferential) Scan Plot



NOTES:

Weld Region: Points B-C-F-G

Shell Region: Points C-D-E-F

Nozzle Cylinder Region: Points A-B-G-H

Required Exam Volume: Points A-B-C-D-E-F-G-H

Vessel Exterior Surface: Points A-B-C-D

Vessel Interior Surface: Points E-F-G-H

Bolded area indicates exam area of coverage obtained.

Report No. 2017UT020 applicable to inner 15% for parallel (circ) scan

ENCLOSURE, ATTACHMENT 3

MONTICELLO NUCLEAR GENERATING PLANT

10 CFR 50.55a Request RR-012

Inservice Inspection Impracticality in Accordance
with 10 CFR 50.55a(g)(5)(iii) during the Fifth Ten-Year Interval

**SUMMARY OF PAST 4TH AND 5TH INTERVAL EXAMINATION RESULTS
FOR WHICH THE NRC GRANTED RELIEF DUE TO EXAM LIMITATIONS**

(2 Pages Follow)

**Summary of 4th and 5th Interval Examination Results
for which the NRC Granted Relief Due to Exam Limitations**

Table B: Summary of 4th Interval Nozzle-to-Vessel Weld Examinations with
Previously Granted NRC Relief for the Subject Welds in this Request

Weld	Exam Year	Exam Coverage	4th Interval Exam Results	4th Interval 10 CFR 50.55a Request	4th Interval NRC Approval Date
N-2E NV	2005	78%	No flaw indications	RR-13 (Reference 1)	July 18, 2006 (Reference 2)
N-4A NV	2007	79%	No flaw indications	RR-15 (Reference 3)	May 19, 2008 (Reference 4)
N-9 NV	2007	85%	No flaw indications	RR-15 (Reference 3)	May 19, 2008 (Reference 4)

Table C: Summary of 5th Interval Nozzle-to-Vessel Weld Examinations to Date
with Previously Granted NRC Relief Due to Exam Limitations

Weld	Exam Year	Exam Coverage	5th Interval Exam Results	5th Interval 10 CFR 50.55a Request	5th Interval NRC Approval Date
N-1A NV	2013	83%	No flaw indications	RR-009 (Reference 5)	Feb. 19, 2015 (Reference 6)
N-2D NV	2013	82%	No flaw indications	RR-009 (Reference 5)	Feb. 19, 2015 (Reference 6)
N-4C NV	2013	79%	No flaw indications	RR-009 (Reference 5)	Feb. 19, 2015 (Reference 6)
N-5B NV	2013	81%	No flaw indications	RR-009 (Reference 5)	Feb. 19, 2015 (Reference 6)
N-8A NV	2013	83%	No flaw indications	RR-009 (Reference 5)	Feb. 19, 2015 (Reference 6)

REFERENCES FOR ENCLOSURE, ATTACHMENT 3

1. NMC letter to the NRC, "10 CFR 50.55a Request No. 13: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval", dated September 27, 2005. (ADAMS Accession No. ML052760169)
2. NRC letter to NMC, "Monticello Nuclear Generating Plant (MNGP) – Fourth 10-Year Interval Inservice Inspection (ISI) Program Plan Relief Request No. 13 (TAC No. MC8882)", dated July 18, 2006. (ADAMS Accession No. ML061780172)
3. NMC letter to the NRC, "10 CFR 50.55a Request No. 15: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fourth Ten-Year Inservice Inspection Interval", dated September 26, 2007. (ADAMS Accession No. ML072710119)
4. NRC letter to NMC, "Monticello Nuclear Generating Plant (MNGP) – Granting of Relief Regarding Limited Ultrasonic Examination Coverage of Five Welds (TAC No. MD6854)", dated May 19, 2008. (ADAMS Accession No. ML081050678)
5. NSPM letter to NRC, "10 CFR 50.55a Request No. 009: Relief from Impractical Examination Coverage Requirements Pursuant to 10 CFR 50.55a(g)(5)(iii) for the Fifth Ten-Year Inservice Inspection Interval", dated June 6, 2014. (ADAMS Accession No. ML14157A205)
6. NRC letter to NSPM, "Monticello Nuclear Generating Plant - Relief Request RR-009 Regarding Relief from Examination Coverage Requirements of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for the Fifth 10-Year Inservice Inspection Program Interval (TAC No. MF4258)", dated February 19, 2015. (ADAMS Accession No. ML15028A152)