

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Terry J. Garrett
Vice President Engineering

October 2, 2006
ET 06-0044

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

- Reference: 1) Letter ET 06-0042, dated September 27, 2006, from T. J. Garrett, WCNO, to USNRC
- 2) Letter ET 06-0031, dated August 4, 2006, from T. J. Garrett, WCNO, to USNRC
- 3) Letter ET 06-0021, dated May 19, 2006, from T. J. Garrett, WCNO, to USNRC

Subject: Docket 50-482: Wolf Creek Nuclear Operating Corporation's Revised Commitment Regarding 10 CFR 50.55a Request I3R-05

Gentlemen:

Reference 3 provided Wolf Creek Nuclear Operating Corporation (WCNO) 10 CFR 50.55a Request I3R-05, which requested alternatives to the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI for the installation and examination of full structural weld overlays for repairing/mitigating Pressurizer nozzle-to-safe end dissimilar metal (DM) and safe end-to-piping stainless steel (SS) butt welds. Reference 2 provided WCNO's responses to a July 6, 2006 Nuclear Regulatory Commission (NRC) request for additional information (RAI) regarding the WCNO 10 CFR 50.55a Request I3R-05 and provided Revision 1 to I3R-05 to address two WCNO responses to the RAI. Reference 1 provided WCNO's responses to RAIs provided electronically on September 20, 2006.

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During subsequent discussions between the NRC and WCNO staff on September 28, 2006 and October 2, 2006, it was determined that additional information was needed related to the commitments made in Reference 1. It was also noted in these discussions that minor clarifications were needed in Table 5, Weld Overlay Examination Requirements, which was provided by Reference 2. Therefore, WCNO has revised the commitment page to include information relevant to subsequent inservice examinations and to include two footnotes that reiterate information found in the Performance Demonstration Initiative qualified ultrasonic examination procedures discussed in Request I3R-05, Revision 1, in Reference 2. WCNO has also made the requested changes to Table 5 originally submitted by Reference 2.

Attachment 1 to this letter provides WCNO's revised list of commitments regarding 10 CFR 50.55a Request I3R-05. Enclosure 1 to this letter provides changes to Table 5. If you have any questions, please contact me at (620) 364-4084 or Mr. Kevin Moles at (620) 364-4126.

Sincerely,



Terry J. Garrett

TJG/rt

Attachment 1: Revised List of Commitments
Enclosure 1: Revised Table 5 from ET 06-0031

cc: J. N. Donohew (NRC), w/a, w/e
G. E. Werner (NRC), w/a, w/e
B. S. Mallett (NRC), w/a, w/e
Senior Resident Inspector (NRC), w/a, w/e

REVISED LIST OF COMMITMENTS

The following table identifies revised commitments by Wolf Creek Nuclear Operating Corporation (WCNOC) provided in letter ET 06-0042. Any other statements in this submittal are provided for information purposes and are not considered to be commitments. Please direct questions regarding these commitments to Mr. Kevin Moles at (620) 364-4126.

COMMITMENT	Due Date/Event
<p>WCNOC will notify the NRC Project Manager for Wolf Creek Generating Station (WCGS) when the ultrasonic (UT) examination of the final full structural weld overlay is complete.</p>	<p>When the final UT examination of the weld overlays during WCNOC's Fall 2006 Refueling Outage is completed.</p>
<p>WCNOC will provide the results of the UT examinations of the full structural weld overlays of the WCGS Pressurizer safety, relief, spray and surge line nozzle welds to the NRC.</p> <p>The results will include:</p> <ul style="list-style-type: none"> • A listing of indications detected¹; • The disposition of all indications using the standards of ASME Section XI, Table IWB-3514-2 and/or Table IWB-3514-3; and, if possible, • The type and nature of the indications². <p>Also included in the results will be a discussion of any repairs to the overlay material and/or base metal and the reason for the repair.</p> <p>Subsequent inservice examination of full structural repair weld overlays on the Pressurizer nozzle welds will be in accordance with the 2004 Edition with 2005 Addenda of ASME Section XI, Appendix Q, Q-4300 as prescribed in WCNOC Request I3R-05, Rev. 1, Table 5, page 27 of 28, attached to WCNOC letter ET 06-0044 dated October 2, 2006. Subsequent inservice examinations of preemptive full structural weld overlays on the Pressurizer nozzle welds will be as prescribed in WCNOC Request I3R-05, Rev. 1, Table 5, page 28 of 28, attached to WCNOC letter ET 06-0044 dated October 2, 2006.</p>	<p>Within 14 days of completion of the final UT examination of the weld overlays during WCNOC's Fall 2006 Refueling Outage.</p>

¹ The recording criteria of the ultrasonic examination procedure to be used for the examination of the WCGS Pressurizer weld overlays (PDI-UT-8, Revision F) requires that all indications, regardless of amplitude, be investigated to the extent necessary to provide accurate characterization, identity, and location. Additionally, the procedure requires that all indications, regardless of amplitude, that cannot be clearly attributed to the geometry of the overlay configuration be considered flaw indications.

² Ultrasonic examination procedure PDI-UT-8, Revision F, requires that all suspected flaw indications are to be plotted on a cross sectional drawing of the weld and that the plots should accurately identify the specific origin of the reflector.

Enclosure 1 to ET 06-0044
Changes to Table 5: Weld Overlay Examination Requirements
(Pages 26-28 of Request I3R-05, Rev. 1, submitted in letter ET 06-0031)

Table 5: Weld Overlay Examination Requirements

IN-PROCESS EXAMINATIONS				
Examination Description*	Method	Technique	Reference	Acceptance Standards
Safe end, welds, nozzle, and pipe pre-overlay surface preparation.	Surface	Liquid Penetrant	N-504-3 and Q-2000	N-504-3, Paragraph (c), Q-2000 (b)
Corrective layers of weld metal, if required, not associated with the structural weld overlay.	Surface	Liquid Penetrant	N-504-3 and Q-2000	N-504-3, Paragraph (d), Q-2000 (c)
Thickness measurements for verifying final deposited weld reinforcement.	Volumetric	UT-0°L	N-504-3 and Q-3000	Per weld overlay design requirements and Q-3000
COMPLETED WELD OVERLAY EXAMINATION and PRESERVICE EXAMINATION REQUIREMENTS				
Examination Description*	Method	Technique	Reference	Acceptance Standards
Examination of the completed weld overlay and examination of a band around the entire circumference of the nozzle and pipe at least 1.5 times the nozzle end thickness outward from the toe of the weld overlay on the nozzle side and at least 0.50 inches outward from the toe of the weld overlay on the pipe side. For the portion of the weld overlay installed per Code Case N-638-1 and the band area on the nozzle side, this examination will occur at least 48 hrs. after the completed weld overlay has returned to ambient temperature.	Surface	Liquid Penetrant	N-504-3, N-638-1, and Q-4100	Q-4100 (b)
Completed weld overlay for complete bonding and minimum thickness and for detection of welding flaws. Examination for bonding and welding flaws in the portion of the weld overlay installed per Case N-638-1 will occur at least 48 hrs. after the completed weld overlay has returned to ambient temperature.	Volumetric	UT-0°L; UT angle beam per PDI-qualified procedures	N-504-3, N-638-1, Q-4100, and Appendix VIII	Thickness per weld overlay design requirements in Q-3000 and bonding and welding flaws per Q-4100(c)

Table 5: Weld Overlay Examination Requirements

Completed weld overlay and the outer 25 percent of the original DM weld thickness at least 0.5-inches beyond the toes of the original DM weld and butter and at least 0.5 inches beyond any as-found flaw. For N-638-1 welding, this examination will occur at least 48 hrs. after the completed weld overlay has returned to ambient temperature.	Volumetric	UT angle beam per PDI-qualified procedure	N-504-3, N-638-1, Q-4200, and Appendix VIII	N-504-3, Paragraph (i) and Q-4200
Completed weld overlay and the outer 25 percent of the original SS pipe weld thickness at least 0.5-inches beyond the toes of the original SS weld and at least 0.5 inches beyond any as-found flaw.	Volumetric	UT angle beam per PDI-qualified procedure	N-504-3, Q-4200, and Appendix VIII	N-504-3, Paragraph (i) and Q-4200
INSERVICE EXAMINATION REQUIREMENTS				
Examination Description*	Method	Technique	Reference	Acceptance Standards
<u>Full Structural Repair WOL:</u> Weld overlay and outer 25 percent of the original DM weld thickness at least 0.5-inches beyond the toes of the original DM weld and butter, and at least 0.5 inches beyond any as-found flaw, will be examined within the next two refueling outages. Re-examination will be on a sampling basis in accordance with Q-4300(b) through (f) and Q-4310. These examinations will be added to the ISI Program Plan in accordance with IWB-2412(b)(1).	Volumetric	UT angle beam per PDI procedure	ASME Section XI Appendix VIII and Q-4300	Q-4300
<u>Full Structural Repair WOL:</u> Weld overlay and outer 25 percent of the original SS pipe weld thickness at least 0.5-inches beyond the toes of the original SS weld, and at least 0.5 inches beyond any as-found flaw, will be examined within the next two refueling outages. Re-examination will be on a	Volumetric	UT angle beam per PDI procedure	ASME Section XI Appendix VIII and Q-4300	Q-4300

Table 5: Weld Overlay Examination Requirements

<p>sampling basis in accordance with Q-4300(b) through (f) and Q-4310. These examinations will be added to the ISI Program Plan in accordance with IWB-2412(b)(1).</p>				
<p><u>Preemptive Full Structural WOL:</u> If greater than or equal to 90% coverage of the original DM weld is achieved with PDI qualified procedures and no service related indications are identified, the weld overlay and outer 25 percent of the original DM weld thickness at least 0.5-inches beyond the toes of the original DM weld and butter will be examined on a sampling basis in accordance with Q-4300(b) through (f) and Q-4310. These examinations and frequency of performance will be added to the ISI Program Plan in accordance with IWB-2412(b)(1).</p>	<p>Volumetric</p>	<p>UT angle beam per PDI procedure</p>	<p>ASME Section XI Appendix VIII and Q-4300 para. (b) through (f) and Q-4310</p>	<p>Q-4300(b) and (c)</p>
<p><u>Preemptive Full Structural WOL:</u> If greater than or equal to 90% coverage of the original SS weld is achieved with PDI qualified procedures and no service related indications are identified, the weld overlay and outer 25 percent of the original SS weld thickness at least 0.5-inches beyond the toes of the original SS weld will be examined on a sampling basis in accordance with Q-4300(b) through (f) and Q-4310. These examinations and frequency of performance will be added to the ISI Program Plan in accordance with IWB-2412(b)(1).</p>	<p>Volumetric</p>	<p>UT angle beam per PDI procedure</p>	<p>ASME Section XI Appendix VIII and Q-4300 para. (b) through (f) and Q-4310</p>	<p>Q-4300(b) and (c)</p>

*This is a general examination description of the examinations to be performed; it does not identify all requirements for performing the examinations. As noted on page 6 of 28 of 10 CFR 50.55a Request I3R-05, Revision 1, submitted by letter ET 06-0031, the examination requirements comply with non-mandatory Appendix Q except as noted.