

February 4, 2002

Mr. Mano Nazar
Site Vice President
Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC
1717 Wakonade Drive East
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1 - REQUEST FOR
ADDITIONAL INFORMATION REGARDING REQUEST FOR RELIEF NO. 11
ASSOCIATED WITH THE THIRD 10-YEAR INSERVICE INSPECTION INTERVAL
PROGRAM (TAC NO. MB2199)

Dear Mr. Nazar:

By letter dated May 29, 2001, Nuclear Management Company, LLC, submitted request for relief No. 11 associated with the Third 10-year Inservice Inspection (ISI) Interval Program for the Prairie Island Nuclear Generating Plant, Unit 1.

Enclosed is the Nuclear Regulatory Commission staff's request for additional information (RAI) pertaining to the subject submittal. The contents of the enclosed RAI have been previously forwarded to Mr. Jack Leveille of your staff, and a teleconference was held with your staff on January 28, 2002, to facilitate any questions or clarifications on the RAI. Please respond within 60 days from receipt of this letter.

Please let me know if you have any questions regarding this RAI.

Sincerely,

/RA/

Tae Kim, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-282

Enclosure: Request for Additional Information

cc w/encl: See next page

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Prairie Island Nuclear Generating Plant,
Units 1 and 2

cc:

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REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR RELIEF NO. 11
ON THIRD 10-YEAR INSERVICE INSPECTION INTERVAL
PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT 1
DOCKET NO. 50-282

General Comments:

- (1) Please provide the date when the third 10-year inservice inspection (ISI) interval began for the Prairie Island Nuclear Generating Plant, Unit 1.
- (2) For the proposed alternative examination, it was stated in the May 29, 2001, submittal that Metal and Material Resources Procedure ISI-LTS-1 is applied when limitation to required inspections are encountered. In order to evaluate the acceptability and appropriateness of the proposed alternative, a review of this procedure is required. Please describe the related activities that are applicable to this relief request for Parts A thru E below. Explain how these activities provided an alternative to the Code-required examination(s) and how the licensee gained the maximum obtainable inspection coverage practically possible.
- (3) None of the limitations identified in Table 1 of the submittal discussed the as low as reasonably achievable (ALARA) concerns. However, the alternative examination section of the submittal states that "Limitations are due to design, geometry, and materials of construction of the components or ALARA concerns." Explain how the ALARA concerns affected the impracticality in performing the Code-required inspection activities for the subject welds.

Specific Comments:

Part A:

Pressure retaining welds in the reactor coolant system piping, Weld W-6 (pipe to elbow) and Weld W-1 (RC pump to pipe), Examination Category B-J, Item No. B9.11.

Pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from the 100-percent volumetric examination requirements for a reactor coolant system pipe-to-elbow weld W-6 and a reactor coolant pump-to-pipe weld W-1. Due to interferences and access limitations, the licensee performed a single-side examination only and therefore, could examine 75-percent (for weld W-6) and 38.85 percent (for the weld W-1) of the Code-required volumes. In order for the proposed alternative to be considered, please provide the following:

1. Table 1 of the submittal indicates that the limitation for weld W-6 is (PDI) single-sided examination due to pipe configuration and for weld W-1 is (PDI) single-sided examination due to pump-to-pipe configuration. The sketches provided in the associated summary sheets are not clear to understand these limitations. Explain with

sketches or photos what kind of configuration problems are associated with each of these welds. Discuss the relationship of the configuration limitations with PDI and provide the reference of the PDI section.

2. The description in Table 1 of the submittal identifies weld W-6 is a circumferential weld between the RC piping to elbow, while the sketch in corresponding summary report No. 300130 indicates that the weld is for the piping to valve. Clarify this discrepancy.
3. Confirm that Code-required essentially 100-percent surface examination was performed for both W-6 and W-1 welds.
4. Provide details of the alternatives, including system pressure test requirements for the reactor coolant system, proposed and/or attempted by the licensee for the subject welds.

Part B:

Pressure-retaining welds in pressure vessels, Weld W-E (#12 steam generator shell to transition) and Weld W-2 (#12 RHR Hx shell to flange), Examination Category C-A, Item No. C1.10.

Pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from the 100-volumetric examination requirements for a shell-to-transition weld W-E on the #12 steam generator and a shell-to-flange weld W-2 on the #12 RHR heat exchanger. Due to interferences, the licensee is proposing 70.88-percent (for the weld W-E) and 27.26-percent (for the weld W-2) examinations of the Code-required volumes. In order for the proposed alternative to be considered , please provide the following:

- (1) The submittal is requesting relief from the Code-required volumetric examination for welds W-E and W-2 based on limitations in scanning the welds due to interferences caused by the weld geometry and configuration. Explain if the alternatives include surface examinations, radiography, and/or any other examination methods and describe the results of these examinations.
- (2) The sketches given in Summary Nos. 301070 and 303054 are not clear. Provide sketches showing the Code-required volume to be examined and the scanner locations with volume coverage as practical.
- (3) Provide details of the alternatives, including system pressure test requirements for the components containing the welds, proposed and/or attempted by the licensee for the subject welds.

Part C:

**Integral attachment welds for piping and pumps, Examination Category C-C,
Item Nos. C3.20 & C3.30.**

Pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from the Code-required surface examinations for 19 integral attachment welds for piping and pumps in the main steam piping, feedwater piping, SI pumps, and RHR heat exchanger. For six of these welds, no surface examination could be performed due to interferences. In order for the proposed alternative to be considered, please provide the following:

- (a) For these welds, were any alternative inspection measures considered, such as examining surrogate welds or performing a visual inspection to look for signs for degradation near the weld?
 - (b) The diagrams given in the Limitation Record sheets are not clear, specifically the surface areas to be examined and the inaccessible portions of the weld. Some are covered by guard pipes and the submittal for these welds include only the Magnetic Particle Examination sheets and no sketches or diagrams. Please provide detail sketches or photos with sufficient details so that the staff could determine the interferences on accessing the Code-required surfaces for the subject welds.
- (3) Explain why the integral attachment for the #12 RHR Heat Exchanger Support integral attachment weld is considered under Examination Category C-C, Item Number C3.20, which is applicable to piping.
- (4) Explain the following specific welds:
- (a) Summary No. 301589 shows a weld to pipe obstructed by guard pipe and insulation. Why can the insulation not be removed for surface examination?
 - (b) Summary No. 301258 shows floor penetration which prohibits examination of the middle 12" of the two vertical welds on the pipe collar. The drawings do not clearly demonstrate the subject welds (2 circumferential welds and 2 vertical welds) and inaccessible portions of these welds. Please provide new sketches or photos showing the welds with inaccessible portions.
 - (c) Sketches in summary nos. 302082, 302086, and 303052 are not very clear. Please provide sketches with explanations how the Code-required surface areas in these welds are not accessible for examination.

Part D:

Pressure-retaining welds in austenitic stainless steel or high alloy piping, Examination Category C-F-1, Item Nos. C5.11 & C5.21.

Pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from Code-required surface and volumetric examinations for the pressure-retaining welds in RHR Pump B discharge lines and SI test return line. In order for the proposed alternative to be considered, please provide the following:

- (1) For these welds, were any alternative inspection measures considered, such as examining surrogate welds, or performing a visual inspection to look for discoloration where the pipe is exposed or discoloration of the insulation near the weld, which could be indicative of degradation of the weld? If so, please provide the details of these inspections.
- (2) Please provide sketches or photos with sufficient details so that the staff could determine the interferences on accessing the Code-required surfaces and volumes for the subject welds.
- (3) Table 1 of the submittal indicates that the limitation for weld W-18 is (PDI) single-sided examination due to tee-to-valve configuration and for weld W-1 is (PDI) single-sided examination due to weld-crown configuration. Explain with sketches or photos what kind of configuration problems are associated with each of these welds. Discuss the relationship of the configuration limitations with PDI and provide the reference of the PDI section.
- (4) The RHR pump "B" discharge pipe to penetration weld is claimed to be inaccessible due to penetration sleeve and welded restraint. Explain if the licensee has considered other alternatives, including radiography or visual examination. Provide details of the system pressure test requirements applicable to the components containing the subject welds.
- (5) Confirm that the Code-required essentially 100-percent surface examination was performed for both W-18 and W-1 welds.

Part E:

Pressure-retaining weld in carbon or low alloy steel piping, Examination Category C-F-2, Item No. C5.50.

Pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief from the Code-required surface examination for the tee-pipe weld in the main steam "B" line. In order for the proposed alternative to be considered, please provide the following:

- (1) Please provide sketches or photos with sufficient details so that the staff could determine the interferences on accessing the Code-required surfaces and volumes for the subject weld.
- (2) Confirm that Code-required essentially 100-percent volumetric examination was performed for the weld W-9 (LSD2U).

- (3) Provide details of the alternatives, including system pressure test requirements for the main steam line containing the weld, proposed and/or attempted by the licensee for the subject weld.
- (4) The Examination Category C-F-2 and Item Number C5.50 refers to piping welds with a $\geq 3/8$ inch nominal wall thickness for piping > NPS 4 and includes both a circumferential weld (Item Number C5.51) and a longitudinal weld (Item Number C5.52). Clarify the Code Item Number applicable to the tee-to-pipe weld in the main steam "B" line.