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

Prairie Island Nuclear Generating Plant Units 1 and 2
Dockets 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Response to Request for Additional Information Regarding the "Unit 1 Inservice Inspection Summary Report, Interval 3, Period 3, Refueling Outage Dates: 9-10-2004 to 11-23-2004 Fuel Cycle 22: 12-7-2002 to 11-23-2004"

Reference: Letter from Nuclear Management Company, LLC (NMC) to Nuclear Regulatory Commission (NRC), "Unit 1 Inservice Inspection Summary Report, Interval 3, Period 3, Refueling Outage Dates: 9-10-2004 to 11-23-2004 Fuel Cycle 22: 12-7-2002 to 11-23-2004" dated February 22, 2005.

Prairie Island submitted an Inservice Inspection Summary Report following the Fall 2004 Unit 1 refueling outage on February 22, 2005 (Reference). By electronic mail, dated June 27, 2005, the NRC requested additional information regarding the steam generators installed during the outage. The enclosure to this letter contains the response to that request.

Summary of Commitments

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

Thomas J. Palmisano
Site Vice President, Prairie Island Nuclear Generating Plant
Nuclear Management Company, LLC

Enclosure

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

ENCLOSURE

Response to Request for Additional Information Regarding the "Unit 1 Inservice Inspection Summary Report, Interval 3, Period 3, Refueling Outage Dates: 9-10-2004 to 11-23-2004 Fuel Cycle 22: 12-7-2002 to 11-23-2004"

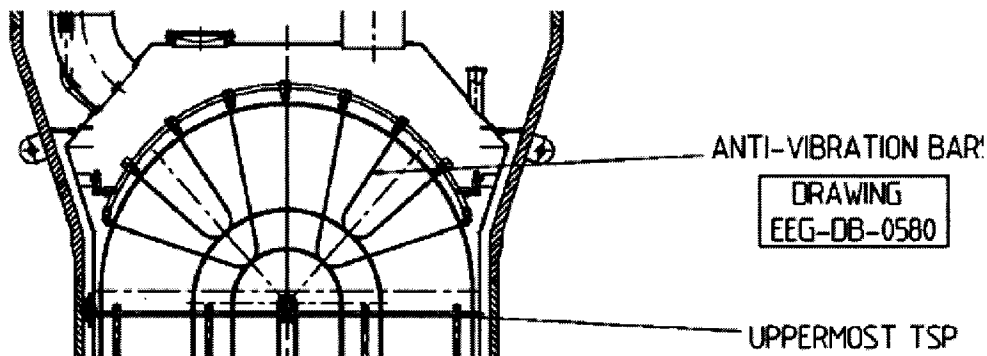
Response to Request for Additional Information, 4 pages
plus
Figure 1
Figure 2

Enclosure
Response to Request for Additional Information

The NRC questions are in bold type face. Letters "a" through "g" have been added to improve the readability of the responses. The NMC responses are in italics type face.

1. **General information concerning the design of your replacement steam generators was provided in the submittal. In order for the staff to better understand the design of your replacement steam generators, please provide the following information: (a) anti-vibration bar design (e.g., rectangular cross-section, penetrate to row 1, thickness, etc.), (b) number of tubes plugged (if any) in each steam generator prior to installation, (c) tubesheet thickness (with and without clad), (d) tubesheet map, and (e) a sketch of the steam generator depicting your tube support plate naming convention. Please (f) clarify whether any tubes (or portions of tubes) were stress relieved after bending. In addition, (g) please clarify if the first tube support plate is a flow distribution baffle (and, if so, any unique design features).**

- (a) *The bent portion of the tube bundle is supported by 5 sets (4 V-shaped and one straight) of anti-vibration bars (AVBs), all U-bends (Row 1 included) being supported.*



The AVB assembly is composed of:

Four sets of V-shaped AVBs with the ends of AVBs of each set being linked together by clamps that maintain spacing of AVBs and restrict U-bend out-of-plane motion. The clamped sets of AVB ends are fastened to hoops that maintain in-plane configuration and prevent lift off of AVB system under transient and accident conditions. The V-shaped AVBs penetrate to Rows 27 and 15,

One set of straight AVBs with their upper ends linked together (U-bend out-of-plane) and fitting into slots machined in the uppermost tube support plate (TSP) providing a sliding connection for their lower ends. The straight AVBs provide support for all U-bends in the center of the U-bend.

The rectangular cross-section of the AVBs is approximately 0.5" X 0.3".

Enclosure
Response to Request for Additional Information

- (b) *There were 0 (zero) tubes plugged prior to and during the installation of the replacement steam generators.*
- (c) *The tubesheet minimum thickness without the clad is 21.46 inches. The clad has a minimum of 0.375 inch thickness.*
- (d) *See Figure 1 for the tubesheet map. The 6 no-tube areas are the locations of the tube support plate tie-rods (12 total).*
- (e) *See Figure 2 for the sketch of the steam generator showing the tube support plates. The eight stainless steel tube support plates are designated by number and letter (for cold or hot leg side) from the tubesheet upward.*

<i>Eddy Current Testing Landmark Designation</i>
<i>08H/08C</i>
<i>07H/07C</i>
<i>06H/06C</i>
<i>05H/05C</i>
<i>04H/04C</i>
<i>03H/03C</i>
<i>02H/02C</i>
<i>01H/01C</i>
<i>Top of Tubesheet (TSH/TSC)</i>
<i>Tube End (TEH/TEC)</i>

The tube hole configuration is a broached quatrefoil.

- (f) *After bending, the entire tube for all tubes in rows 1 through 9 were stress relieved for a minimum of 2 hours at greater than 1320 °F.*
- (g) *The first tube support plate is NOT a flow distribution baffle. Except for the no-tube lane in the top tube support plate, the tube support plates are identical in configuration. The top tube support plate (TSP8) does not have flow slots in the no-tube lane. Instead, the no-tube lane of TSP8 has small openings for capturing the straight anti-vibration bars plus flow holes.*

Enclosure
Response to Request for Additional Information

- 2. On pages 7 and 9 of your submittal, you stated that 6 tubes in steam generator 11 and 5 tubes in steam generator 12 were found to be in "non-conformance" with your criteria. Please clarify if these tubes were plugged.**

There were no tubes plugged prior to and during the installation of the replacement steam generators. Indications in the tubes were in non-conformance with the contracted acceptance criteria related to dings/bulges/expansion transition anomalies and percent through wall (the measured value of 15% for one tube exceeded the contract limit of 7%). These criteria were all conservative with respect to technical specification and industry standards for tube repairs.

Figure 1: Tubesheet Map

PINGP U1 Model 56/19 Replacement Steam Generator
Cold Leg Tubesheet Map (COL 1 on Manway Side)

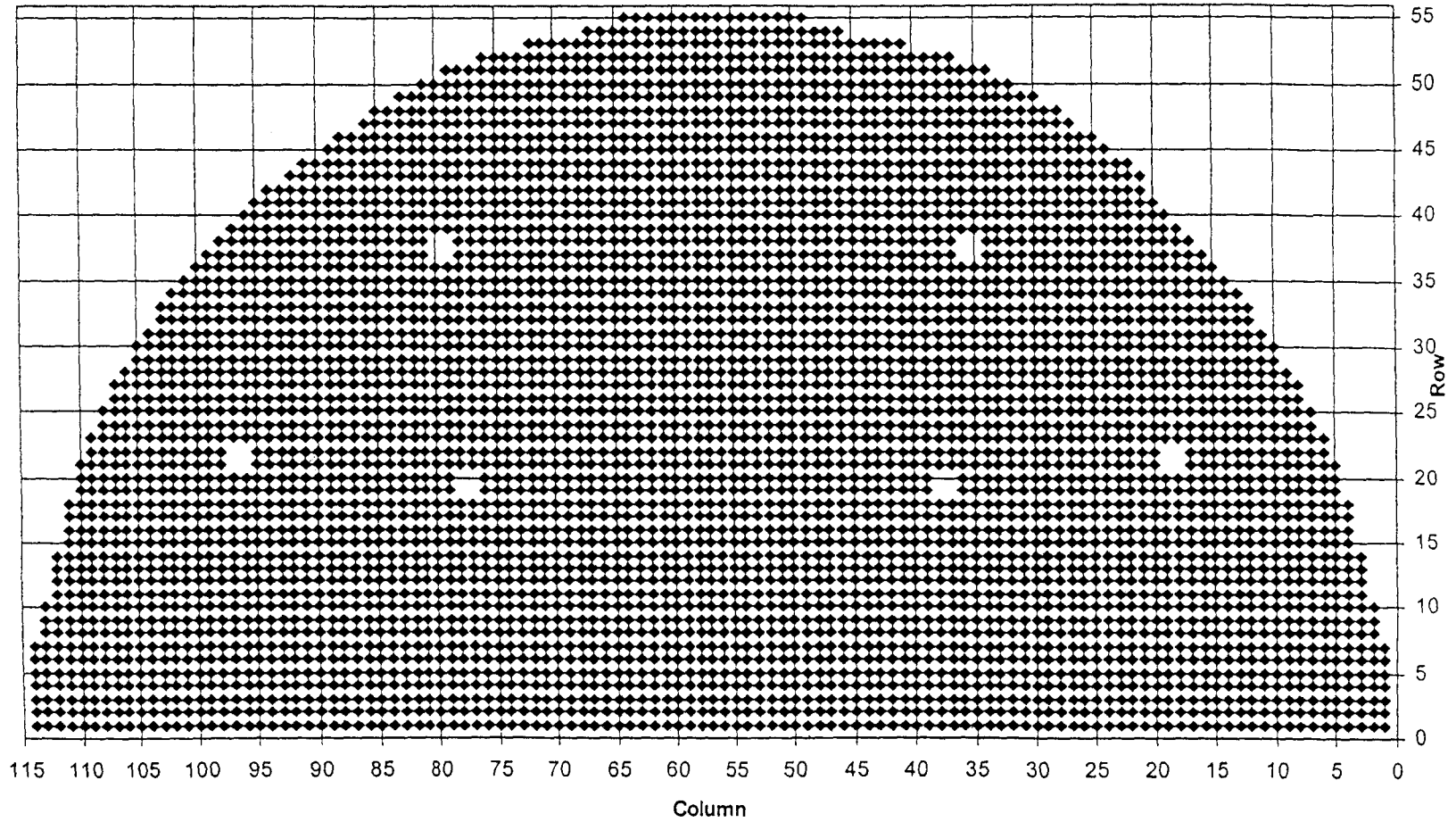
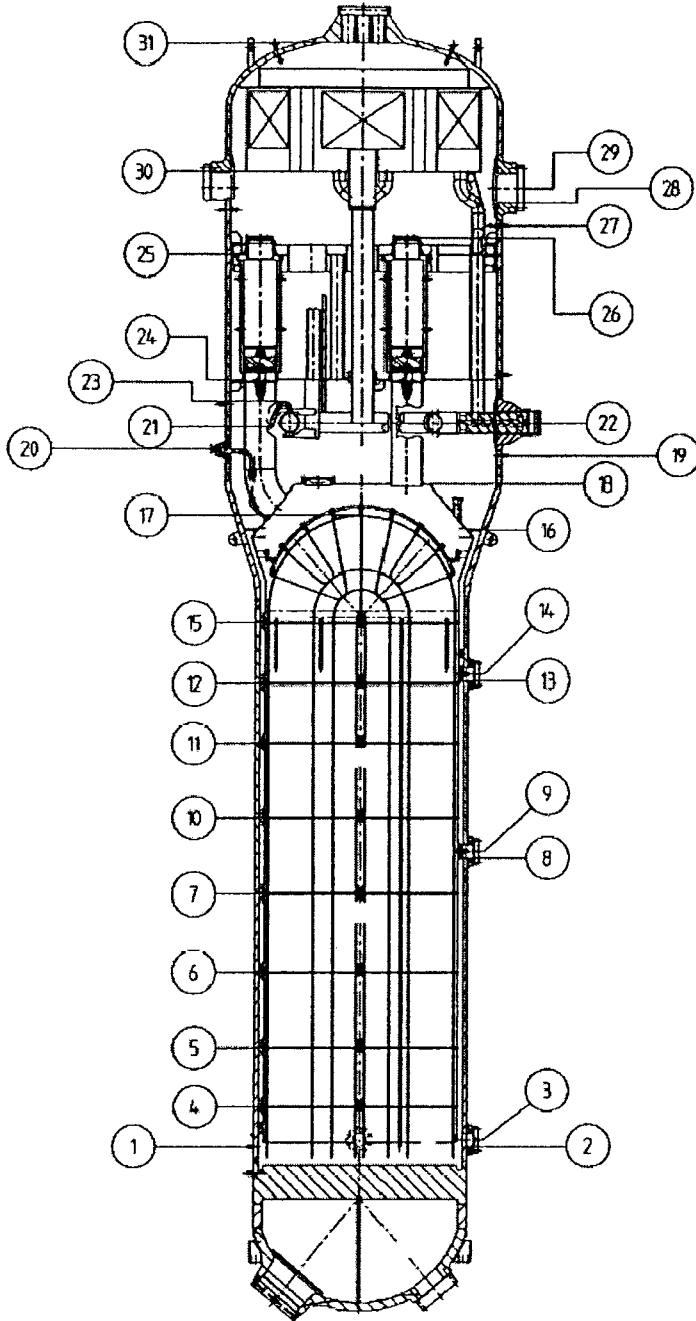


Figure 2: Framatome ANP Model 56/19 Replacement Steam Generator



ITEM	DESIGNATION
	Steam outlet flow venturis
31	Bottom of steam outlet nozzle
30	Bottom of dryer block
29	Secondary manway CL
28	Bottom of secondary manway (ID)
27	Upper NR and WR level tap CL
26	Top of cyclones (Foreign object catcher CL)
25	Upper deck plate (Top)
24	Lower deck plate (Bottom)
23	Top of J-nozzles (Apex)
22	Feedwater nozzle CL
21	Bottom of J-nozzles (outlet)
20	Recirculation nozzle CL
19	Lower NR level tap CL
18	Top of wrapper roof
17	Top of tube bundle (Apex)
16	Foreign object catcher CL
15	TSP 8 CL
14	Hand hole CL
13	Bottom of hand hole (ID)
12	TSP 7 CL
11	TSP 6 CL
10	TSP 5 CL
9	Hand hole CL
8	Bottom of hand hole (ID)
7	TSP 4 CL
6	TSP 3 CL
5	TSP 2 CL
4	TSP 1 CL
3	Hand hole CL
2	Bottom of hand hole (ID)
1	Lower WR level tap CL