May 15, 2003

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

10 CFR 50.4

PALISADES NUCLEAR PLANT
DOCKET 50-255
LICENSE No. DPR-20
STEAM GENERATOR TUBESHEET INSPECTION PRACTICES

Nuclear Management Company, LLC is providing the subject information for the Palisades Nuclear Plant. The attached information was requested by the Nuclear Regulatory Commission (NRC) and is provided in accordance with Enclosure 2 of Nuclear Energy Institute letter "Steam Generator Tubesheet Inspections," dated February 28, 2003.

SUMMARY OF COMMITMENTS

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

Douglas E. Cooper
Site Vice-President, Palisades

CC Regional Administrator, USNRC, Region III
Project Manager, USNRC, NRR
NRC Resident Inspector – Palisades

Attachment

A047

ATTACHMENT 1

NUCLEAR MANAGEMENT COMPANY
PALISADES NUCLEAR PLANT
DOCKET 50-255

INDUSTRY TEMPLATE

FOR SUBMITTAL OF INFORMATION ON

STEAM GENERATOR INPSECTION WITHIN THE TUBESHEET

4 Pages Follow

Nuclear Management Company
Palisades Nuclear Plant
Tubesheet Inspection Practices

Plant Information

Plant Name: NMC Palisades Nuclear Plant
Model of Steam Generator: Combustion Engineering CE 2530
Tube Material: Mill Annealed Alloy 600
Tube Diameter: 0.750 inch
Tube Wall Thickness: 0.042 inch Nominal
Expansion Process and Extent: Full depth explosive and rolled at both ends
Tubesheet Thickness: 20.5 inches with 0.25 cladding

Historical Inspection Practices and Results

Most recent outage:
2003 Refueling Outage (Mar-Apr)
Operational Cycle #16
Inspection techniques used: Bobbin and plus point rotating pancake coils.

Extent of inspections (be specific on landmarks used to determine inspection extent):
Bobbin extent is full length of all active tubes including the hot leg and cold leg tubesheet.
Plus Point Rotating Pancake Coil (RPC) extent is +3 inches above and –5 inches below (minimum) of all active tubes from the top of the hot leg tubesheet.

Results (degradation mechanisms identified and orientation):
Identified one axial primary water stress corrosion cracking (PWSCC) indication in the tubesheet (2 inches below top of tubesheet completely bounded by inspection area).
Identified two axial PWSCC indications at the end of tubesheet in the tack roll of a non-expanded tube.
Identified seven outside diameter stress corrosion cracking (ODSCC) circumferential indications at the top of the tubesheet.
Identified two ODSCC axial indications at the top of the tubesheet.
Identified nineteen loose part wear indications at the top of the tubesheet.
Identified three volumetric indications at the top of the tubesheet.

Bases for inspection technique and inspection extent:
EPRI Qualified & Site Validated Techniques.
CEOG Task 1154 WCAP-15720, Rev. 0,"NDE Inspection strategy for the Tubesheet Region in CE Designed Units." WCAP-15720, Revision 0, "NDE Inspection Strategy for the Tubesheet Regions in CE Designed Units," provides a test program and technical basis for application of supplemental inspections in the tubesheet region of the steam generators at Palisades. The test program defines an inspection extent for supplemental inspections that ensures tube

structural and leakage integrity in accordance with the requirements of NEI 97-06 (Steam Generator Program Guidelines) and the licensing basis for Palisades. The program does not provide a basis for leaving detected flaws in service inside or outside the tube length. As such, the current Palisades steam generator degradation assessment defines the inspection extent with expansion criteria but does not constitute an alternate repair criteria (ARC).

Technical Document reference (Generic or Plant Specific?):
Generic CEOG Task 1154 WCAP-15720, Rev. 0, NDE Inspection strategy for the Tubesheet Region in CE Designed Units.

If generic, provide statement that plant conditions and design are bounded by Technical:
Document inputs and assumptions: Generic CEOG Task 1154 WCAP-15720, Rev. 0 bounds Palisades operating conditions and inspection experience.

Historical Inspection Practices and Results

Past outage:
2001 Refueling Outage (Mar-Apr)
Operational Cycle #15
Inspection techniques used: Bobbin and plus point rotating pancake coils.

Extent of inspections (be specific on landmarks used to determine inspection extent):
Bobbin extent is full length of all active tubes including the hot leg and cold leg tubesheet.
Plus Point RPC extent is +3 inches above and –5 inches below (minimum) of all active tubes from the top of the hot leg tubesheet.

Results (degradation mechanisms identified and orientation):
Identified two loose part wear indications at the top of the tubesheet.
Identified three volumetric indications at the top of the tubesheet.

Bases for inspection technique and inspection extent:
EPRI Qualified & Site Validated Techniques. CEOG Task 1154 WCAP-15720, Rev. 0
"NDE Inspection strategy for the Tubesheet Region in CE Designed Units."

Technical Document reference (Generic or Plant Specific?):
Generic CEOG Task 1154 WCAP-15720, Rev. 0, NDE Inspection strategy for the Tubesheet Region in CE Designed Units.

If generic, provide statement that plant conditions and design are bounded by Technical Document inputs and assumptions:
Generic CEOG Task 1154 WCAP-15720, Rev. 0 bounds Palisades operating

conditions and inspection experience.

Historical Inspection Practices and Results

Past outage:
1999 Refueling Outage (Oct -Nov)
Operational Cycle #14
Inspection techniques used: Bobbin and plus point rotating pancake coils.

Extent of inspections (be specific on landmarks used to determine inspection extent):
Bobbin extent is full length of all active tubes including the hot leg and cold leg tubesheet.
Plus Point RPC extent is +3 inches above and –3 inches below (minimum) of all active tubes from the top of the hot leg tubesheet.

Results (degradation mechanisms identified and orientation):
Identified one axial PWSCC indications at the end of tubesheet in the tack roll of a non-expanded tube.

Bases for inspection technique and inspection extent:
EPRI Qualified & Site Validated Techniques.

Technical Document reference (Generic or Plant Specific?):
EPRI Qualified Techniques and accepted Industry practice regarding extent of rotating probe inspection within the tubesheet.

Historical Inspection Practices and Results

Most recent outage:
1998 Refueling Outage (Apr-May)
Operational Cycle #13
Inspection techniques used: Bobbin and plus point rotating pancake coils.

Extent of inspections (be specific on landmarks used to determine inspection extent):
Bobbin extent is full length of all active tubes including hot leg and cold leg tubesheet.
Plus Point RPC extent is +2 inches above and –2 inches below (minimum) of all active tubes from the top of the hot leg tubesheet.

Results (degradation mechanisms identified and orientation):
Identified four loose part wear indications at the top of the tubesheet.

Prior to 1998 all three indications (2 volumetric and 1 axial) plugged were above the top of the hot leg tubesheet. These results are from the initial base line

inspection for Plus Point RPC and a possible result of the initial steam generator manufacturing process.

Bases for inspection technique and inspection extent:
EPRI Qualified & Site Validated Techniques.

Technical Document reference (Generic or Plant Specific?):
EPRI Qualified Techniques and accepted Industry practice regarding extent of rotating probe inspection within the tubesheet.