Entergy

Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

December 12, 2007

10 CFR 50.54(f)
EA-03-009

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

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

60-Day Post-Outage Report per First Revised Order EA-03-009

References: 1) Nuclear Regulatory Commission (NRC) letter "Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated February 20, 2004

2) Letter from Nuclear Management Company, LLC (NMC) to NRC, "Response to Revised Order EA-03-009 'Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors,'" dated March 8, 2004

Dear Sir or Madam:

By letter dated February 20, 2004, the NRC issued the First Revised Order, EA-03-009 (Reference 1). By letter dated March 8, 2004, NMC, former licensee of the Palisades Nuclear Plant (PNP), consented to the Order (Reference 2).

In Section IV.E, of Reference 1, the NRC required that inspection results be provided within 60 days after returning the plant to operation after refueling. Entergy Nuclear Operations, Inc. completed the required inspections and the PNP was returned to service on October 21, 2007, after completion of the refueling outage. Enclosure 1 provides details of the inspection results.

Summary of Commitments

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on December 12, 2007.

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ENCLOSURE 1
60-DAY REPORT PER FIRST REVISED ORDER EA-03-009

1.0 INTRODUCTION

On February 20, 2004, the Nuclear Regulatory Commission (NRC) issued the First Revised Order, EA-03-009, "Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel [RPV] Heads at Pressurized Water Reactors." Nuclear Management Company, LLC (NMC), former licensee for Palisades Nuclear Plant (PNP), performed its first non-visual examination of the RPV head in accordance with Section IV.C(2) of the First Revised Order during the 2004 refueling outage. The inspection identified two leak path detection indications on RPV head penetrations 29 and 30. The AREVA interior diameter (ID) temper bead repair process was used to repair the two penetrations during the same outage. As a result of the indications, the RPV head was placed into the high susceptibility category per Section IV.B of the First Revised Order. NMC and the current license holder Entergy Nuclear Operations, Inc. (ENO) were thereafter required to perform examinations per the requirements of Section IV.C.(I) of the First Revised Order during subsequent refueling outages.

NMC complied with the requirements of the First Revised Order for the 2006 refueling outage. Based on examination results, the licensee concluded that the RPV head penetrations that were returned to service in 2006 were not degraded, and no wastage of the RPV head occurred.

The PNP 2007 refueling outage commenced on September 9, 2007. The PNP RPV at that time had approximately 11.1 effective degradation years.

During the 2007 refueling outage, the PNP RPV head and penetration nozzles were inspected using the techniques of paragraph IV.C.(5)(a) and paragraph IV.C.(5)(b) of the First Revised Order. PNP was returned to operation on October 21, 2007.

2.0 DESCRIPTION OF INSPECTION METHODS

The 2007 refueling outage non-visual examinations were performed by qualified AREVA personnel using qualified procedures. The inspection included performing ultrasonic (UT) examinations from the ID of the nozzle for the 45 control rod drive mechanism (CRDM) penetrations and the eight incore instrument (ICI) penetrations of the RPV head. ICI nozzles were UT examined from the outer diameter for a sufficient area below the J-groove welds to ensure that the required examination volume was achieved. The two pad weld repairs of CRDM penetrations made in 2004 were also UT examined from the upper surface. The RPV head vent line penetration was examined by eddy current on

the surface of the J-groove weld. The vent line does not extend below the RPV head inside surface.

Additionally, qualified Consumers Energy personnel used qualified procedures to perform a bare metal, direct visual examination of the RPV head and all 54 penetrations.

3.0 REACTOR PRESSURE VESSEL HEAD INSPECTION RESULTS

Non-Visual Examinations

a) CRDM and ICI Penetrations

UT examination of the CRDM and ICI nozzle penetrations was performed to look for evidence of cracking in the nozzle base material. Interference fit regions were UT examined for evidence of leak paths that might be caused by cracking of J-groove welds. Pad weld repairs made in 2004 also were UT examined for evidence of cracking. No cracking or leak path indications were observed.

b) Vent Line Penetration

The surface of the RPV head vent line penetration J-groove weld was examined from the ID and the lower surface by eddy current techniques. The vent line does not extend below the RPV head inside surface. No flaw indications were detected.

Bare Metal Visual Examination

A bare metal visual examination was performed of the reactor vessel surface including 360 degrees around each RPV head penetration. This inspection showed no signs of leakage.

4.0 CONCLUSIONS

ENO has complied with the requirements of the First Revised Order for the PNP 2007 refueling outage. Based on the results of the examinations performed during the refueling outage, ENO concluded that the PNP RPV head penetrations that were returned to service were not degraded, and no wastage of the RPV head occurred.