

February 4, 2002

MEMORANDUM TO: File

FROM: Darl S. Hood, Senior Project Manager */RA/*
Project Directorate III-1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: PALISADES PLANT, CLOSURE OF TAC NO MB2235

On June 21, 2001, the Palisades Plant experienced a leak in the primary system which the licensee discovered, upon containment entry, to be due to a through-wall crack in the upper housing of one of the control rod drive mechanisms (CRDM-22). The licensee's extent-of-condition inspections soon began to show that cracking in a common weld location (weld no. 3) was wide spread among the other CRDM upper housings at Palisades. Thus, it became obvious that a significant effort would be needed for the Nuclear Regulatory Commission (NRC) staff to monitor events at Palisades regarding the licensee's investigations into the root cause, the extent of the cracking, and the licensee's corrective actions. TAC No. MB2235 was opened for this monitoring effort.

Under this TAC, the NRC staff initially participated in daily telephone calls with Region III and the licensee. Later, these calls were reduced to once a week and, ultimately, to an as-needed basis depending upon the licensee's progress. The discussions included the licensee's non-destructive testing results for all 45 CRDM housings and the licensee's planned corrective actions. The licensee ultimately issued a metallurgical report, which was made available to the industry, showing that the CRDM-22 cracking was due to transgranular stress corrosion cracking in the presence of low levels of chloride existing in the upper CRDM environment. In a letter to the NRC dated December 12, 2001, the licensee discussed why the cracking was limited to weld no. 3 and why would cracking not occur in weld no. 1 located on the CRDM stalk at the flange just below the CRDM upper housing. The licensee also stated in the December 12, 2001, letter, that all 45 CRDM upper housings would be replaced (not repaired) and thus, a related request (covered by a separate TAC No.) was not needed.

The licensee completed the CRDM upper housing replacements (as well as CRDM seal housing replacements) and, on January 22, 2002, placed the plant back on line.

Accordingly, staff monitoring of the licensee's investigations during the forced outage are completed and TAC No. MB2235 is now considered closed. Generic implications of the Palisades cracking are being pursued with the industry under a task coordinated by the Materials and Chemical Engineering Branch. Any additional staff efforts, if needed for the Palisades Plant due to generic implications, would be handled under a separate TAC.

February 4, 2002

MEMORANDUM TO: File

FROM: Darl S. Hood, Senior Project Manager */RA/*
Project Directorate III-1
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: PALISADES PLANT, CLOSURE OF TAC NO MB2235

On June 21, 2001, the Palisades Plant experienced a leak in the primary system which the licensee discovered, upon containment entry, to be due to a through-wall crack in the upper housing of one of the control rod drive mechanisms (CRDM-22). The licensee's extent-of-condition inspections soon began to show that cracking in a common weld location (weld no. 3) was wide spread among the other CRDM upper housings at Palisades. Thus, it became obvious that a significant effort would be needed for the Nuclear Regulatory Commission (NRC) staff to monitor events at Palisades regarding the licensee's investigations into the root cause, the extent of the cracking, and the licensee's corrective actions. TAC No. MB2235 was opened for this monitoring effort.

Under this TAC, the NRC staff initially participated in daily telephone calls with Region III and the licensee. Later, these calls were reduced to once a week and, ultimately, to an as-needed basis depending upon the licensee's progress. The discussions included the licensee's non-destructive testing results for all 45 CRDM housings and the licensee's planned corrective actions. The licensee ultimately issued a metallurgical report, which was made available to the industry, showing that the CRDM-22 cracking was due to transgranular stress corrosion cracking in the presence of low levels of chloride existing in the upper CRDM environment. In a letter to the NRC dated December 12, 2001, the licensee discussed why the cracking was limited to weld no. 3 and why would cracking not occur in weld no. 1 located on the CRDM stalk at the flange just below the CRDM upper housing. The licensee also stated in the December 12, 2001, letter, that all 45 CRDM upper housings would be replaced (not repaired) and thus, a related request (covered by a separate TAC No.) was not needed.

The licensee completed the CRDM upper housing replacements (as well as CRDM seal housing replacements) and, on January 22, 2002, placed the plant back on line.

Accordingly, staff monitoring of the licensee's investigations during the forced outage are completed and TAC No. MB2235 is now considered closed. Generic implications of the Palisades cracking are being pursued with the industry under a task coordinated by the Materials and Chemical Engineering Branch. Any additional staff efforts, if needed for the Palisades Plant due to generic implications, would be handled under a separate TAC.

DISTRIBUTION:

PUBLIC

PD3-1 r/f

W. Bateman	K. Manoly	B. Elliot
T. Chan	B. Jain	A. Vogel, RIII
W. Koo	J. Collins	
D. Naujock	C. Carpenter Jr	

ACCESSION NO.: **ML020350246**

OFFICE	PDIII-1/PM	PDIII-1/LA	PDIII-1/SC(A)
NAME	D. Hood	R. Bouling <i>/RA/ by THarris</i>	W. Reckley
DATE	02/04/02	02/04/02	02 /04/02

OFFICIAL RECORD COPY