

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/90008(DRS)

Docket No. 50-255

License No. DPR-20

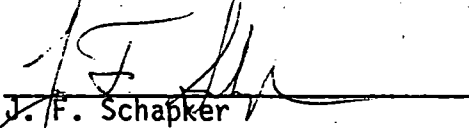
Licensee: Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Facility Name: Palisades Nuclear Generating Plant

Inspection At: Palisades Site, Covert, MI

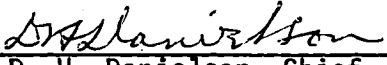
Inspection Conducted: February 21, 1990

Inspector:


J. F. Schapker

3/1/90
Date

Approved By:


D. H. Danielson, Chief
Materials and Processes Section

3/1/90
Date

Inspection Summary

Inspection on February 21, 1990 (Report No. 50-255/90008(DRS))

Areas Inspected: Routine unannounced inspection of licensee action in response to previously identified inspection findings (92702).

Results: Of the areas inspected, one deviation was identified for incomplete corrective action taken as described in the licensee's response to violation 255/88022-01. The NRC inspector noted the following:

- The licensee's engineering justification for not performing the cold leg scans appeared to be adequate. However, the licensee did not inform the NRC of the deviation from commitments made for corrective action to violation 50-255/88022-01.



DETAILS

1. Persons Contacted

Consumers Power Company (CPCo)

*C. S. Kozup, Technical Engineer
K. V. Cedarquist, Senior Engineer

U. S. Nuclear Regulatory Commission (U. S. NRC)

E. R. Swanson, Senior Resident Inspector
J. K. Heller, Resident Inspector

Other members of the plant staff were also contacted.

*Denotes those present at the exit interview.

2. Licensee Action on Previously Identified Inspection Findings (92702)

(Closed) Violation (255/88022-01) Inadequate quality verification resulting in misplugged or defective tube plugs in steam generators (SG)

a. Background

Numerous discrepancies with respect to tube plugging have been identified since 1983. Included are misplugged tubes, defective plug welds and incomplete plug welds.

The licensee's quality verification process appeared inadequate to assure that these deficiencies were identified and corrected. As part of the licensee's commitment to assure that all misplugged tubes had been identified and corrected, the licensee committed to review existing video tapes of the tube sheet. If the video tape review was inadequate to assure that the tube plugging was performed correctly, a 100% tube sheet verification via video camera in both "A" and "B" steam generators was to be conducted.

During the last outage, the licensee performed visual scans of the hot leg tubesheets of steam generators "A" and "B". Results of this scan found no misplugged tubes but identification of a drawing error disclosed that two tubes were incorrectly indicated as being plugged. Review of the plugged tube list indicated the tubes were not required to be plugged. The drawing was subsequently corrected. Cold leg visual scans for leakage only were performed, but they did not involve inspection for misplugged tubes as the licensee had not planned to perform inspections on the cold legs of the steam generators.

The NRC inspector informed the licensee at the exit meeting on December 9, 1989 (reference NRC Inspection Report No. 50-255/89032(DRS), that corrective actions reviewed for this violation appeared inadequate and did not meet the corrective action commitments made in their response dated February 16, 1989.

The licensee's inservice inspection (ISI) supervisor informed the NRC inspector that Consumers Power Company had performed a review of the cold legs of the "A" and "B" steam generators via video tapes from previous outages and confirmed that no misplugged tubes existed in the cold legs. However, no documentation was produced to verify that this action was completed and the corrective action documents did not reference this review.

The licensee agreed to provide the documentation for the NRC inspector's review. Consequently, the NRC inspector informed the licensee the violation would remain open pending review of corrective action documentation.

b. Inspection

The NRC inspector reviewed the licensee's additional response to NRC Inspection Report No. 50-255/88022-01 in a letter dated February 9, 1990. The licensee's response states that cold leg side video tapes of the 1983, 1985, and 1987 plugged tubes were reviewed and all tubes plugged during those outages were verified as correct except for 16 tubes in the "A" steam generator and 12 tubes in the "B" steam generator which could not be confirmed due to insufficient video.

The licensee made the decision not to perform a 100% video verification of the "A" and "B" steam generator cold legs because of the following:

- (1) No misplugged tubes were identified in the hot leg scans.
- (2) No discrepancies were noted in the review of the video tapes of the 1983, 1985, and 1987 plugged tubes in the cold legs.
- (3) The close proximity of the Palisades steam generator replacement.
- (4) The large man-rem exposure required versus the additional assurance gained.

The NRC inspector reviewed documentation which indicated that the licensee had performed reviews of the video tapes which confirmed correct plugging with the exception of those areas where video quality or obstruction prevented confirmation. These reviews were made in the Fall of 1988 and the results were reported in September 1988. The licensee decided not to perform visual scans on the cold legs of the steam generators because they had not planned to enter the cold legs during the outage. However, as reported in NRC Inspection Report No. 50-255/89032(DRS), entry was made and leaking tubes were found in steam generator "A" and eddy current examination (ET) disclosed additional cracked tubes in the cold legs of steam generators "A" and "B". The licensee entered the cold legs and performed ET with the opportunity to verify the 16 tubes in steam generator "A" and 12 tubes in steam generator "B" at a minimal of man-rem exposure and expense.

The NRC inspector agrees the entry into the cold leg side to perform the visual inspection for 28 tube plugs would not be warranted for the reasons the licensee cited in their letter of February 9, 1990. The probability of a misplugged tube existing in either of these steam generators is remote. The "A" steam generator cold leg has a total of 2,044 tube plugs with only 16 tube plugs not verified and "B" steam generator has 2,442 tube plugs with only 12 which were not verified. However, cold leg entry was made, and therefore, reduces the rationale for not performing a remote visual scan of the 28 tubes not previously verified. The NRC inspector does not believe it is prudent for the licensee to be required to inspect these tube plugs at this time due to the following:

- (1) The plant operational status.
- (2) The near-term replacement of the steam generators.
- (3) Leak before break analysis (tube leakage prior to failure).
- (4) The administratively reduced leak rate requirement (.1 gpm over a 24-hour period).
- (5) The large man-rem exposure required to perform the inspection at this time.

However, the licensee deviated from their commitment as stated in the response to violation 255/88022-01 without consulting the NRC (Reference: Consumers Power Company response dated February 16, 1989, to the Notice of Violation presented in Inspection Report No. 50-255/88022). The licensee's corrective action taken in response to violation 255/88022-01 demonstrates a lack of management oversight to assure the commitments made to the NRC are met; this is a deviation (255/90008-01).

No violations were identified and one deviation was disclosed as referenced in the above section of this report.

3. Exit Meeting

The NRC inspector contacted Mr. C. Kozup by telecon on February 26, 1990, and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspection findings. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector. The licensee did not identify any such documents/processes as proprietary.