



Consumers
Power
Company

COPY

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

July 29, 1974

Directorate of Licensing
US Atomic Energy Commission
Washington, DC 20545

Re: Docket 50-255
License DPR-20
Palisades Plant

Gentlemen:

Attached hereto are copies of two (2) abnormal occurrence reports that occurred recently at the Palisades Plant.

Yours very truly,

Ralph B. Sewell (Signed)

RBS/mel

Ralph B. Sewell
Nuclear Licensing Administrator

CC: JGKeppler, USAEC

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ABNORMAL OCCURRENCE REPORT
Palisades Plant

1. Report Number: AO-16-74, Docket 50-255.
2. a. Report Date: July 29, 1974.
b. Occurrence Date: July 17, 1974 (classified as an Abnormal Occurrence on July 18, 1974).
3. Facility: Palisades Plant.
4. Identification of Occurrence: Procedural deviations associated with the repair of "B" steam generator.
5. Conditions Prior to Occurrence: The plant was in a refueling shutdown condition. Repair operations were under way in the hot and cold leg sections of the "B" steam generator.
6. Description of Occurrence:
 - a. Consumers Power conducted audits of the steam generator repair operations on July 12 and July 17, 1974. The scope of the audits focused primarily on evaluating the implementation of our subcontractor's Quality Assurance system. The audit findings revealed several discrepancies and numerous Quality Assurance and Quality Control procedural deviations. The following items were considered significant regarding the adequacy of the repairs to the "B" steam generator.
 - (1) The QC inspection for verification of the size of the rolled tube ends was not performed for the hot leg side of the generator.
 - (2) The visual examination of the welded plugs was not conducted by a qualified visual examiner.
 - (3) Documentation could not be produced at the site verifying traceability of the plugs to the specific dimensional and dye penetrant inspection tickets.
 - b. The remaining deviations were applicable to a wide range of the subcontractor's QA and QC requirements and can be best classified under the general headings of 10 CFR 50 Appendix B.
 - (1) Document Control: The governing document for the repair operations was not approved as authorized by the subcontractor's QA manual.

6. Description of Occurrence: (Contd)

b. (Contd)

- (2) Quality Assurance Records: Numerous deviations were noted concerning inadequate inspection documentation per the subcontractor's QC procedural requirements.
- (3) Inspection; Test and Operating Status: Material was not tagged in accordance with the subcontractor's QA requirements.
- (4) Control of Measuring and Test Equipment: A master log of measuring and test devices showing equipment serial numbers and calibration frequencies was not being maintained as required by the subcontractor's QA manual.

In addition, numerous errors concerning sign-offs on the governing document for controlling the job were detected and several deviations concerning disposition of nonconformances were also noted.

The above items which were considered significant on a collective basis coupled with the three items mentioned previously represent a significant problem regarding the overall implementation of the subcontractor's QA system. Based upon the numerous and diverse QA deviations, this occurrence or unsatisfactory QA system evaluation was determined to warrant reportability under Section 1.4f of the Technical Specifications.

- 7. Designation of Apparent Cause of Occurrence: The subcontractor and Consumers Power concluded that the general underlying cause for the numerous deviations and resulting adverse Quality Conditions (Items (1)-(3)) was a lack of QC continuity for the job. This resulted from inadequate staffing of the subcontractor's site QC group coupled with the fact the QC inspector most familiar with the steam generator job requirements was being shared by various facilities.
- 8. Analysis of Occurrence: Item 6.a.(1)-(3), "Description of Occurrence," could have directly effected the resulting quality of the welded plugs and their ability to provide an adequate pressure boundary between the primary and secondary plant systems. The collective evaluation of the numerous deviations and discrepancies, including Item 6.a.(1)-(3), poses concern regarding the ability of the subcontractor's QA system to prevent similar or more significant problems from developing in the future.
- 9. Corrective Action:
 - a. With regard to Item 6.a.(1)-(3), "Description of Occurrence," the following immediate corrective action has been taken:

9. Corrective Action: (Contd)

a. (Contd)

- (1) Upon notification of the deviation, the subcontractor's QC superintendent issued a stop work order to prevent further plugging of the generator. At the time it was detected that the "tube rolling inspection" was not being performed, the complete hot leg side of the "B" steam generator had been plugged and plugging was beginning in the cold leg side. The deviation was dispositioned by the subcontractor through a nonconformance report. The disposition consisted of inspecting the remaining rolled tubes in the cold leg side. The cold leg inspection was satisfactory and since the hot leg tubes were rolled using the same techniques, the hot leg inspection was waived.
- (2) A visual examination of all welded plugs in the "B" steam generator with the exception of the first 11 rows was conducted by a qualified visual examiner. The subcontractor has provided certifications for the inspector. The inspector's certification as well as the subcontractor's personnel qualification program will be evaluated for adequacy.
- (3) A record search is presently being performed at the subcontractor's facility to provide traceability of the plugs to the dimensional and PT inspection tickets. Partial documentation has been provided to the site; however, additional information is required to substantiate the traceability of the plugs.

b. A stop work order was issued by the subcontractor's QC superintendent on 7/17/74 to insure disposition of the deviations noted during the 7/12/74 and 7/17/74 audits prior to commencing work in "A" steam generator. On 7/18/74, the audit findings were presented to the Plant Review Committee for review. The following recommendations were presented by PRC:

- (1) Review subcontractor's revised procedures. This review was intended to prevent the subcontractor from deleting significant procedural requirements from which he had deviated in the past. A PRC meeting was held on 7/19/74.
- (2) The PRC requested that a superintendent, steam generator project engineer, and a member of the QA group review the subcontractor's written response to the deviations.

A meeting was held between the subcontractor and Consumers Power on 7/20/74 for the purpose of reviewing the corrective action items. Most of the items were resolved; however, Consumers Power requested additional information or required specific action to be taken by the subcontractor on several items.

9. Corrective Action: (Contd)

b. (Contd)

- (3) Instruct the Consumers Power project engineers to assure compliance of the subcontractor's procedures. This action has been performed.
- (4) PRC recommended that the subcontractor's QA manager should be on site when the subcontractor revises his procedures.

The subcontractor's QC manager attended the meeting in place of the QA manager.

- (5) A full-time QA engineer should be assigned to the steam generator job by Consumers Power Company. This has been done.

c. The following action has been or will be taken to prevent a repeated occurrence of the problems:

- (1) The subcontractor's QC manager has released the job to progress only to the point of the tube rolling operation. A reevaluation will be made by their home office QA organization concerning a continuance of operations from that point.
- (2) An audit of the subcontractor's system was conducted by their site QC group prior to lifting the stop work order. Major deficiencies were resolved.
- (3) An internal audit will be conducted by subcontractor's Quality Assurance representative during the week of 7/28/74.
- (4) The two senior QC personnel have been assigned by the subcontractor to follow the steam generator project for the duration of the repair activities.
- (5) Consumers Power will continue to audit the steam generator repair activities and follow up on the open corrective action items.

10. Failure Data: Not applicable.