



Consumers
Power
Company

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62-01 #6

Mr J G Keppler, Regional Administrator
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER PROJECT
DOCKET NOS 50-329 AND 50-330
DEFICIENCIES IN ELECTRICAL ACCESSORIES ASSOCIATED
WITH SAFETY-RELATED MATERIAL REQUISITIONS
FILE: 0.4.9.57 SERIAL: 22255

- References: 1) J W Cook letter to J G Keppler, Main Steam Isolation Valves,
Final Report, Serial 17558, Dated July 30, 1982
- 2) Serial 22171, dated April 12, 1983

This letter, as was reference letter 2, is an interim 50.55(e) report
concerning deficiencies in electrical components associated with main steam
isolation valve actuators, logic cabinets and control panel inserts.

Attachment 1 provides a summary of the corrective action status with regard
to this problem.

Another report, either interim or final, will be sent on or before
October 14, 1983.

JWC/WRB/cd

Attachments: (1) MCAR-55, Revision 1, Interim Report 6, dated June 23, 1983

CC: Document Control Desk, USNRC
Washington, DC

RJCook, NRC Resident Inspector
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Management Corrective Action Report (MCAR)

Subject: MCAR 55, Revision 1

Deficiencies in electrical accessories associated with safety-related material requisitions.

Interim Report 6

Date: June 23, 1983

Project: Consumers Power Company
Midland Plant Units 1 and 2
Bechtel Job 7220

Description of Deficiency

The initial scope of the MCAR 55 included main steam isolation valves (MSIVs) and actuators supplied by Energy Products Group (EPG), a division of Gulf and Western Manufacturing Company under Purchase Order 7220-M-118A(Q). Major safety-related electrical components of the MSIV system (the actuators, logic cabinets, and the control panel inserts) were found to be nonconforming to the separation criteria of Regulatory Guide 1.75, Quality Assurance Program, as required by 10 CFR 50 Appendix B, or ANSI 45.2 and the project seismic requirements.

The scope of MCAR 55 has been expanded as a result of project's commitment to review safety-related material requisitions for the similar nonconformances. A review of four additional equipment packages [M-125C(Q) nuclear stainless steel valves 150 through 400 pound ratings 2-1/2-inch and larger, M-149(Q) air handling units, M-150(Q) air filtering units, and M-154(Q) HVAC isolation valves] that include electrical accessories has revealed that some non-Class 1E devices have been wired into Class 1E circuits.

Summary of Investigation and Historical Background

As a result of MCAR 55, further review was conducted for selected safety-related material requisitions. Contacts with four equipment package vendors and review of available documentation confirmed that some non-Class 1E devices have been wired into Class 1E circuits.

Analysis of Safety Implication

A detailed analysis of safety implication was performed for the MSIVs in previous MCAR 55 reports. Detailed analysis for each purchased item of the four additional equipment packages has not been performed and will be addressed in future reports. Potential safety concerns exist for some of these systems to perform their safety function as described in applicable FSAR sections because the integrity of the Class 1E power and

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control circuits may be degraded by the inclusion of non-Class 1E devices if not properly isolated.

Probable Cause

Preliminary investigation of the problem indicates:

- a. Some material requisitions for safety-related equipment do not directly reference the requirements of Regulatory Guide 1.75 and IEEE-384 regarding identification and separation of the Class 1E and non-Class 1E functions and devices.
- b. Some vendors provided non-Class 1E devices for functions which they understand to be nonsafety-related.
- c. Vendor documents frequently do not distinguish between Class 1E and non-Class 1E functions and devices.
- d. Electrical schemes and control logics for this equipment are usually developed on the assumption that the electrical accessories provided as part of safety-related material are Class 1E.

Corrective Action

All recommended corrective actions associated with the original issue of MCAR 55 related to the MSIVs have been completed except for recommended Action 5. It is now included under the new recommended Action 8 to review all safety-related material requisitions that include procurement of electrical components and accessories for similar potential nonconformances and deficiencies.

The following actions are planned or in progress to resolve the expanded scope of MCAR 55.

1. MCAR 55 Actions 7, 8, and 9:

Guidelines and a checklist are being developed and coordinated for review of safety-related material requisition requirements and vendor design adequacy, and are expected to be completed by June 30, 1983. All safety-related material requisitions that include procurement of electrical components and accessories will be reviewed in accordance with the guidelines and checklist. The scope of the guidelines and checklist includes the following:

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- a. Review safety-related material requisitions and specifications to ensure that equipment and accessories are properly specified to meet the project commitment of Regulatory Guides 1.89 (IEEE Standard 323), 1.100 (IEEE Standard 344), and 1.75 (IEEE Standard 384), as applicable.
 - b. Based on the results of the review of Item a, conduct a review of vendor electrical design (those designs where both Class 1E and non-Class 1E components may be present) for adequacy and clarity based on system functional requirements.
 - c. Review Bechtel electrical design (those designs where both Class 1E and non-Class 1E components are used in vendor design) interface with vendor electrical design.
 - d. Identify any inconsistencies. Qualify vendor components, modify vendor design and/or Bechtel interface design.
 - e. A list identifying all safety-related components will be developed. Additional information will be provided in future interim reports.
2. Project engineering (mechanical, control systems, electrical, civil, nuclear, and architectural disciplines) has established a list of material requisitions requiring MCAR 55, Revision 1 review.

Reportability

The final report on MCAR 55, issued July 28, 1982, committed to the further reviews of equipment not covered in either MCAR 55 or MCAR 46. On March 11, 1983, Mr. W.R. Bird of Consumers Power Company notified Mr. R. Gardner of the NRC that deficiencies in electrical accessories/devices associated with other equipment had been identified.

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