

DMB/50.55(e)



Consumers
Power
Company

James W Cook

Vice President - Projects, Engineering
and Construction

General Offices: 1945 West Parnell Road, Jackson, MI 49201 • (517) 788-0453

81-04 #3

September 4, 1981

Mr J G Keppler, Regional Director
Office of Inspection & Enforcement
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137



MIDLAND PROJECT -
ITE-GOULD CLASS 1E EQUIPMENT
DOCKET NOS 50-329 AND 50-330
FILE: 0.4.9.52 SERIAL: 13659

References: J W Cook letters to J G Keppler, Same Subject:

- 1) Serial 11991, dated May 15, 1981
- 2) Serial 12065, dated July 31, 1981

The referenced letters were interim 50.55(e) reports concerning the use of unqualified cable in ITE-Gould Class 1E equipment. This letter is the final report on this subject.

Attachment 1 provides a description of the corrective actions being taken to resolve this matter.

James W. Cook

WRB/lr

Attachment: (1) Bechtel MCAR 50, Final Report, "460 V Motor Control Center Unqualified Wiring," dated August 11, 1981

CC: Director, Office of Inspection & Enforcement
Att Mr Victor Stello, USNRC (15)

Director, Office of Management
Information & Program Control, USNRC (1)

RJCook, USNRC Resident Inspector
Midland Nuclear Plant (1)

8109150097 810904
PDR ADUCK 03000329
S PDR

1E27
S 1/1
SEP 9 1981

Serial 13659
81-04 #3

2

CC: CBechhoefer, ASLB Panel
RSDecker, ASLB Panel
FPCcwan, ASLB Panel
AS&L Appeal Panel
MMCherry, Esq
MSinclair
BStamiris
CRStephens, USNRC
WDPaton, Esq, USNRC
FJKelly, Esq, Attorney General
SHFreeman, Esq, Asst Attorney General
WHMarshall
GJMerritt, Esq, TNK&J

039295

Bechtel Associates Professional Corporation

039159

SUBJECT:

MCAR 50 (issued 4/23/81)

Unqualified Wiring in ITE-Gould 460 V Motor control
Centers and 4.16 kV Switchgear

FINAL REPORT

DATE: August 11, 1981

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

REFERENCES: A) Qualification and Test Summary Report for Class 1E
Equipment (Vendor Submittal 7220-E7-129-5)
B) Class 1E Electrical Equipment 5HK-250, Indoor Metal-
Clad Switchgear Environmental Qualification Report
(Vendor Submittal 7220-E205-482-4)
C) MPQAD Audit Report M01-203-1
D) Supplier Quality Audit of Gould-Brown Boveri for
Assignment 7220-E205.

Introduction

This report provides the final status of Bechtel action pursuant to
MCAR 50.

Description of Potential Discrepancy

Subsequent to field testing of 200 A thermal magnetic circuit breakers,
engineering discovered that the installed power cable brands were not
listed on the bill of material in Reference A.

Random inspections by site personnel identified eight different brands
of power wiring and two brands of control wiring installed in Q-listed
motor control centers (MCCs).

None of the wiring brands identified during these inspections are in-
cluded in Reference A.

Other Q-listed equipment supplied by the vendor was inspected. Control
wiring was discovered in 4.16 kV switchgear, which is not included in
Reference B.

Bechtel suspected that all Q-listed MCCs and 4.16 kV switchgear delivered
under Purchase Orders 7220-E-7 and 7220-E-205, respectively, may contain
cable with indeterminate qualification status.

MCAR 50
Final Report
August 11, 1981
Page 2

039159

Probable Cause

Refer to Corrective Action Item 6.

Corrective Action

1. Inspection of delivered equipment for the purpose of identifying and tracking suspect cable by additional nonconformance reports (NCRs) will not be required based on the following:
 - a. It has been confirmed that the wiring installed in all delivered MCCs is presently not included in the qualification report. Because of omission of the qualification data, the status of the Reference A has been revised by Bechtel to a Status Code 3: "Revise and resubmit. Work may proceed subject to incorporation of changes indicated." NCR 1749 remains open on MCC qualification and will serve as the tracking requirements to ensure compliance.
 - b. Reference B, which contains qualification data on all vendor-supplied cable, has been reviewed, accepted, and given a Status Code 1: "work may proceed."
2.
 - a. All installed cable in Gould-supplied Class 1E motor control centers will either be qualified or replaced based on acceptance of the revised qualification reports and dispositioning of NCR 1749.
 - b. Class 1E 4.16 KV switchgear wiring has been qualified (refer to Corrective Action Item 1b).
3. A "hold shipment" has been placed on all undelivered Gould Class 1E equipment. A Bechtel supplier quality representative will verify that the installed materials are in accordance with the respective qualification report as identified by engineering prior to release for shipment. This hold will be removed after Bechtel acceptance of the Gould qualification report.
4. An audit to evaluate the adequacy of Gould's quality assurance program at the MCC facility was completed on June 5, 1981. A similar evaluation at the 4.16 kV switchgear facility was completed July 17, 1981. No problems were identified involving the qualification process at either facility (see References C and D).
5. As stated in Corrective Action Item 4, the quality assurance adequacy evaluations have been completed with positive results. Restrictions on procurement of new items are therefore removed.

MCAR 50
Final Report
August 11, 1981
Page 3

039159

6. Gould Inc., Electrical Apparatus Division (MCC), has identified the root cause of the problem as an oversight in preparing Reference A because of a change in the bill of material format. As a result of this problem Gould has improved controls for assuring consistency between engineering documents, hardware, and qualification reports. Gould has assured that wire qualification was always intended to be provided (refer to Corrective Action Item 7 for completion schedule).

The Brown Boveri Electric, Inc. (Gould) Switchgear Systems Division has stated that the problem was a result of an editorial error while preparing the IEEE Std 323-1974 qualification report submitted in 1980 which failed to identify the wiring used in manufacture of switchgear prior to 1978. A revised report has been submitted (refer to Corrective Action Item 1b).

7. The remaining action is Gould's resubmittal of the MCC qualification report with qualification data for all supplied cable. This report is scheduled for submittal on October 5, 1981.

Safety Implications

The unqualified wiring is installed in the power and control circuitry of Class 1E 460 V MCCs and in the control circuitry of Class 1E 4.16 kV switchgear. Insulation material failure during the qualified life of the equipment due to aging and irradiation effects could prevent the proper operation of safety load groups.

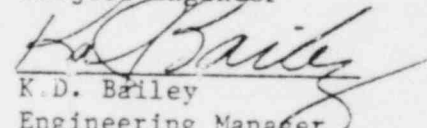
Based on the possible safety implication, this discrepancy has been reported in accordance with the Code of Federal Regulations, Part 50.55(e).

Submitted by: 

B.P. Kohonetz
Electrical Group
Supervisor

Approved by: 

L.H. Curtis
Project Engineer

Concurrence by: 

K.D. Bailey
Engineering Manager