



**Consumers  
Power  
Company**

**James W Cook**

*Vice President - Projects, Engineering  
and Construction*

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

82-03 #1

April 8, 1982

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



MIDLAND PROJECT -  
DOCKET NOS 50-329 AND 50-330  
AUXILIARY FEEDWATER LEVEL CONTROL VALVES POWER SUPPLIES  
FILE: 0.4.9.59 SERIAL: 16159

This letter provides an interim 50.55(e) report concerning deficiencies in the assignment of power supplies for the auxiliary feedwater level control valves. This was reported to Mr D C Boyd of your staff on March 9, 1982. The attachments to this letter provide a description of the deficiency and the actions being taken to correct the situation.

Another report, either interim or final, will be sent on or before June 1, 1982.

*James W. Cook*

WRB/lr

Attachments: (1) Bechtel Management Corrective Action Report MCAR-1,  
Report No 57, dated March 17, 1982

(2) Bechtel MCAR-57, Interim Report 1, dated April 1, 1982

CC: Document Control Desk, NRC  
Washington, DC

RJCook, NRC Resident Inspector  
Midland Nuclear Plant

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PDR ADOCK 05000329  
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CC: CBechhoefer, ASLB Panel  
RSDecker, ASLB Panel  
FPCowan, ASLB Panel  
JHarbour, ASLB Panel  
AS&L Appeal Panel  
MMCherry, Esq  
MSinclair  
BStamiris  
CRStephens, USNRC  
WDPaton, Esq, USNRC  
FJKelley, Esq, Attorney General  
SHFreeman, Esq, Asst Attorney General  
WHMarshall  
GJMerritt, Esq, TNK&J  
Great Lakes QA Managers

1162962

Attachment 1

Serial 16159

82-03 #1

QUALITY ASSURANCE PROGRAM  
MANAGEMENT CORRECTIVE ACTION REPORT  
MCAR-1

REPORT NO.: 57

JOB NO.: 7220

Q NO.: \_\_\_\_\_

DATE: March 17, 1982

**I DESCRIPTION\*** (Including References):

FSAR section 7.4.1.1.3.2 states: power for the auxiliary feedwater (AFW) level control valves is from Class 1E 120 V ac preferred power supplies. Contrary to the above, Drawing E-158 Sh. 57 shows that the power supplies for the AFW level control valves (1LV-3875A1, 1LV-3875A2, 1LV-3875B1, 1LV-3875B2, 2LV-3975A1, 2LV-3975A2, 2LV-3975B1 and 2LV-3975B2) are fed from Class 1E 120 V ac instrument control power. Reference SCRE 45.

**RECOMMENDED ACTION\*** (Optional):

- 1) Revise and issue design change as required to the affected drawing and schedule.
- 2) Engineering to determine root cause of deficiencies and take appropriate corrective action to preclude recurrence.
- 3) Issue interim report by March 31, 1982.

REFERRED TO: ☒ Engineering ☐ Construction ☐ QA Management ☐ \_\_\_\_\_  
☐ Procurement

ISSUED BY: M. Ditch

Date: 3-17-82

Note: This deficiency was reported to the NRC by the client as potentially reportable on March 9, 1982.

**II REPORTABLE DEFICIENCY:**☐ NO☒ YESNOTIFIED CLIENT: 3/17/82John M. Ditch 3/19/82  
Project Manager Date**III CAUSE:**

CORRECTIVE ACTION TAKEN:

AUTHORIZED BY: \_\_\_\_\_  
Date**AAPO DISTRIBUTION**

MGR OF CONSTRUCTION  
MGR OF ENGINEERING  
MGR OF PROCUREMENT  
MGR OF PROJ OPERATIONS  
MGR OF QUALITY ASSURANCE  
CONSTRUCTION MGR  
ENGINEERING MGR  
SUPPLIER QUALITY MGR  
QE SUPERVISOR

**PROJ DISTRIBUTION**

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CLIENT  
PFCCE  
PROJECT CONSTR MGR  
PROJECT ENGINEER  
PROJECT MGR  
PROJ PROCUREMENT MGR  
SITE MGR

**OTHER DISTRIBUTION**

MGR OF QA - TPO  
GPD - QA MGR  
LAPD - QA MGR  
SFPD - QA MGR

FORMAL REPORT TO CLIENT  
(If Section II Applies)

Date

CORRECTIVE ACTION IMPLEMENTED

VERIFIED BY: \_\_\_\_\_

Project QA Engineer

Date

\*Describe in space provided and attach reference document.

Attachment 2  
Serial 16159  
#03 #1

# Bechtel Associates Professional Corporation

064856

SUBJECT: MCAR 57 (issued 3/17/82)  
Auxiliary Feedwater Level Control Valves Power Supplies

INTERIM REPORT 1

DATE: April 1, 1982

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

REFERENCE: Safety Concern and Reportability Evaluation 45, 3/8/82

## Introduction

This report provides the interim status and course of action required pursuant to MCAR 57.

## Description of Deficiency

### Deficiency, Part 1

During system review by the Consumers Power Company testing group, it was discovered that the power supplies for the following auxiliary feedwater (AFW) level control valves are not scheduled from the Class 1E 120 V ac preferred (battery-backed) power systems, as required by the Final Safety Analysis Report (FSAR) Subsection 7.4.1.1.3.2:

1LV-3875B1	2LV-3975B1
1LV-3875B2	2LV-3975B2

The power supplies currently assigned are from Class 1E instrument and control (nonbattery-backed) power supplies.

### Deficiency, Part 2

Further evaluation by Bechtel engineering identified the following valves with the same deficiency:

1LV-3875A1	2LV-3975A1
1LV-3875A2	2LV-3975A2

## Probable Cause

The cause of this deficiency is considered to be an isolated case of incorrect assignment of power at the 120 V ac level.

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The requirement for supplying 120 V ac preferred (battery-backed) power for a motoroperated valve is unique. Valves, motors, and other inductive loads do not normally require constant and continuous power supply and therefore are powered from nonbattery-backed power supplies. This application was a special case to meet operational requirements under station blackout conditions. This special requirement was missed when the schematic diagram was developed.

## Corrective Action

The following actions will be taken.

1. Revise Schematic Diagram 7220-E-158(Q) and 120 V ac Panel Schedules 7220-E-31(Q) and 7220-E-32(Q) to feed all AFW level control valves from Class 1E 120 V ac preferred (battery-backed) power.
2. The electrical discipline will review the FSAR to verify that all commitments to feed components and/or systems from any of the 120 V ac preferred (battery-backed) power systems are met. The electrical discipline will document the results of this review.

## Safety Implication

### Deficiency, Part 1

During station blackout, the steam turbine-driven AFW pumps provide the required feedwater to both steam generators of each unit. Valves 1LV-3875B1, 1LV-3875B2, 2LV-3975B1, and 2LV-3975B2 are required to control and maintain a constant steam generator water level. These valves would fail in the closed position and be inoperable upon loss of the nonbattery-backed 120 V ac power supplies to the valves. Inoperability of the level control valves would result in loss of feedwater to the steam generators and the inability to safely cool down the reactor coolant system during this event.

### Deficiency, Part 2

Valves 1LV-3875A1, 1LV-3875A2, 2LV-3975A1, and 2LV-3975A2 are not required for station blackout operation. These valves are required only when providing auxiliary feedwater via the motor-driven AFW pump of each unit. When ac power is available for operation of the motor-driven AFW pump of each unit, power will also be available for operation of the associated level control valves.

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The FSAR Subsection 7.4.1.1.3.2 commitment to feed valves 1LV-3875A1, 1VL-3875A2, 2LV-3975A1, and 2LV-3975A2 from 120 V ac preferred (battery-backed) power sources was made because the valves did not meet an FSAR Subsection 8.3.1.1.8 commitment for motor-operated valves to be capable of operating at 80% voltage. The valves have a minimum voltage tolerance of 85% and were assigned to 120 V ac preferred power to ensure that the valves were fed from a power supply which would not drop below 85% voltage. Subsequent voltage studies have verified that the existing power supply configuration from instrument and control power (nonbattery-backed) would not be expected to result in voltage of 85% or less at the valve terminals.

There would be no safety implication associated with Part 2 of this deficiency because the existing power supplies to the valves would be available when required and would have sufficient voltage to operate the valves.

## Forecast Dates on Corrective Actions

The forecast completion date for the items listed above is April 30, 1982.

## Reportability

Based on the safety implication, Part 1 of this deficiency is considered reportable in accordance with Title 10 of the Code of Federal Regulations, Part 50.55(e).

Submitted by:

*J.G. Kovach*  
J.G. Kovach  
Electrical Group Supervisor

Approved by:

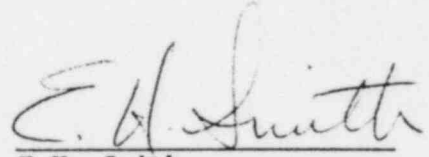
*L.H. Curtis*  
L.H. Curtis  
Project Engineering Manager

# Bechtel Associates Professional Corporation

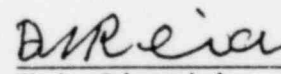
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Concurrence by:



E.H. Smith  
Engineering Manager

*okd*  
*for*   
M.A. Dietrich  
Project Quality Assurance Engineer