UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 30, 1980

Mr. Wendell H. Marshall
President, Mapleton Intervenors
Route 10
Midland, Michigan 48640

In the Matter of
Consumers Power Company
(Midland Plant, Units 1 and 2)
Docket Nos. 50-329 & 50-330
(OL Proceeding)

Dear Mr. Marshall:

I have received your letter dated June 17, 1980, postmarked June 22, 1980, addressed to the "U. S. Nuclear Regulatory Commission, Washington, DC 20555."

In your letter, you refer to recent publicity in the communications media which you say addressed faulty blueprints involving "wiring to instruments in the containment buildings of Unit 2." You ask for information concerning this matter. I enclose a copy of a letter (with attachments) dated May 22, 1980 from Consumers Power Company to the Director of our Region III Office in Illinois relative to the Midland Nuclear Plant. The attachments to Consumers' letter describe inconsistent cross-referencing between B&W and Bechtel numbering systems for B&W-supplied instrument systems on Unit 2. I believe this is the matter to which you refer. Consumers' letter states that another report will be issued on or before August 22, 1980. We will furnish you a copy of that report.

There is another matter that I wish you would address. That involves your status in the Midland operating license proceeding. In recent months, I have discussed this proceeding with Mr. Grant J. Merritt, who has represented you, and with Mr. Steve Gadler (who the Board refers to, at page 19 of its Special Prehearing Conference Order, dated February 23, 1979, as your "other representative"). Please advise whether you intend to represent yourself or have Mr. Merritt or Mr. Gadler represent you.

Sincerely,

W. D. Paton

William D. Paton
Counsel for NRC Staff

Enclosure: As stated

cc w/encl: See attached list

cc w/enc.:

Ivan W. Smith, Esq.
Mr. Gustave A. Linenberger
Dr. Frederick P. Cowan
Frank J. Kelley
Myron M. Cherry, Esq.
Ms. Mary Sinclair
Michael I. Miller, Esq.
Grant J. Merritt, Esq.
Judd L. Bacon, Esq.
Mr. Steve Gadler
Ms. Carol Gilbert
Mr. William A. Thibodeau
Atomic Safety and Licensing Board Panel
Atomic Safety and Licensing Appeal Board Panel
Docketing and Service Section

Consumers Power Company

James W Cook
Vice President, Midland Project

General Offices: 1945 West Parnall Road, Jackson, Michigan 49201 • (517) 788-0640

May 22, 1980

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

MIDLAND NUCLEAR PLANT
UNIT NO 1, DOCKET NO 50-329
UNIT NO 2, DOCKET NO 50-330
NSSS COMPONENT IDENTIFICATION
FILE: 0.4.9.39 UFI: 73*10*01, 02400(S) SERIAL: 8987

In accordance with the requirements of 10 CFR 50.55(e), this letter constitutes an interim report concerning a potentially unsafe situation originally reported by a telephone call from G R Eagle, CPCo MPQAD to R Knop, NRC Region III, on May 2, 1980.

The attachments to this letter provide a more complete description of the condition, the basis for initial belief that the condition was not reportable (pending input from the NSSS supplier), and indicate the status of actions being taken.

Another report, either interim or final, will be issued on or before August 22, 1980.

James W. Cook

GRE/lr

Attachments:
1) Quality Assurance Program, Management Corrective Action Report, MCAR-38, dated March 11, 1980
2) Letter "MCAR-38 - Component Identification" to L H Curtis, dated March 12, 1980
3) MCAR-38, Interim Report #1, dated March 11, 1980
4) MCAR-38, Interim Report #2, and Cover Letter dated May 16, 1980

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

[redacted]
Information & Program Control, USNRC (1)

8019
5/1

dup of
8005280621

QUALITY ASSURANCE PROGRAM
MANAGEMENT CORRECTIVE ACTION REPORT

MCAR-1

Attachment 1

REPORT NO. 38

JOB NO. 7220 Q NO. _____ DATE March 11, 1980

I *DESCRIPTION (Including references):

On March 10, 1980 the Project Engineer advised that inconsistent cross referencing between B&W and Bechtel numbering systems for B&W-supplied instrument systems (NNI, ICS, ECCAS, and NI/RPS) has occurred on Unit 2. This inconsistent cross referencing has resulted in inconsistent wiring of B&W supplied systems. Because of the inconsistent wiring, the ICS and NNI will not function properly and some incorrect indications are displayed to the operator.

*RECOMMENDED ACTION (Optional)

1. Determine if this anomaly could have an adverse affect on the safety of operation of the plant. Report to PQAE by March 26, 1980.
2. Determine cause and procedural corrective actions.
3. Determine most logical fix to problem.

REFERRED TO ☒ ENGINEERING ☐ CONSTRUCTION ☐ QA MANAGEMENT ☐ _____

☐ PROCUREMENT

ISSUED BY W.A. Drasback 3-11
Project QA Engineer Date

II REPORTABLE DEFICIENCY

☒ NO See 10M J. Clements to L. Curtis dated Mar 12 80 Subject MCAR-38

☐ YES

NOTIFIED CLIENT _____ Date

Project Manager Date

III CAUSE

CORRECTIVE ACTION TAKEN

AUTHORIZED BY _____ Date

STANDARD DISTRIBUTION

DIVISION QA MANAGER
MANAGER OF QA - TPO
QC MANAGER
MANAGER
MANAGER
PROJECT MANAGER
AAO PROJECT OPERATIONS MANAGER
AAO PROCUREMENT MANAGER
AAO MGR OF ENGINEERING
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ADDITIONAL DISTRIBUTION - AS APPROPRIATE

ENGINEERING MANAGER
PROJECT ENGINEER
AAO PROCUREMENT SUPPLIER QUALITY MGR
CONSTRUCTION MANAGER
PROJ SUPT-PROJ CONSTR MANAGER
CHIEF CONSTR QC ENGINEER
SITE QCE
DIVISION PROCUREMENT MGR
PROJ PROCUREMENT MGR
DIV SUPPLIER QUALITY MGR

FORMAL REPORT TO CLIENT _____ Date
(If Section II Applies)

CORRECTIVE ACTION IMPLEMENTED

VERIFIED BY _____
Project QA Engineer

*Describe in space provided and attach reference document.

Attachment 2

Bechtel Power Corporation

Inter-office Memorandum

To L. H. Curtis

Subject Midland Plant Units 1 and 2
Bechtel Job 7220
MCAR 38 - COMPONENT IDENTIFICATION

Copies to

J. M. Anderson
D. R. Anderson
L. A. Dreisbach
E. M. Hughes
B. P. Kononetz
V. J. Manta
R. L. Rixford
M. O. Rothwell
J. N. Vance
M. E. Velastegui
Comm Log

Date March 12, 1980

From J. A. Clements

Of 7220 - Licensing

At Ann Arbor Office

File 0534, LG-13.4

The purpose of this IOM is to document the safety-related basis to be used in conjunction with a "significancy" study, to be done by others, to determine if the subject deficiency is reportable under 10 CFR 50, Subsection 50.55(e).

CONCLUSION: This deficiency, were it to have remained uncorrected, could not have affected adversely the safety of operations of the Midland Plant at anytime throughout the lifetime of the plant.

BASIS: The component identification problem involves inconsistent cross-referencing between B&W and Bechtel numbering systems for B&W supplied components in both the primary and secondary systems of Unit 2. This inconsistent cross-referencing resulted in inconsistent wiring of the following Unit 2 B&W-supplied instrument systems:

- Nuclear instrumentation/reactor protection system (NI/RPS)
- Emergency core cooling actuation system (ECCAS)
- Non-nuclear instrumentation (NNI)
- Integrated control system (ICS)

The analysis completed to date on the B&W-supplied engineered safety features actuation systems, i.e., the NI/RPS and ECCAS, have indicated that their safety-related functions would not have been degraded by the component numbering problem. These safety systems depend upon a 2-out-of-4 coincidence logic to initiate their safety functions. Thus, they are unaffected by the order in which the input signals are wired.

There are two problems associated with the non-safety related systems, i.e., the NNI and ICS, due to the component numbering problem:

1. The NNI and ICS will not function properly. They are wired so that feedwater is controlled as a function of same steam generator secondary side parameters (steam generator pressure and level, feedwater flow and temperature) and opposite steam generator primary side parameters (RCS flow) instead of the same steam generator primary and secondary side parameters.

2. Due to the inconsistent wiring of the NNI, control room indication displays labeled as steam generator A (or B) are not all monitoring the same steam generator.

The first problem, involving the ICS, has been addressed by B&W in their responses to NRC questions 031.37 and 232.3. Specifically, the response to 031.37 states, in part, "There has been no analysis performed which identifies failure modes of the ICS that cause an abnormal condition outside of acceptable limits precisely because such failures are not important to safety." Also, FSAR Subsection 15.0.2, Single-Failure Philosophy, states, in part, "No ICS or operator action is required for reactor protection." These statements need to be reconfirmed by B&W in light of the current situation.

The second problem, involving control room indications, could lead to confusion of the control room operators even though the indications are non-safety related. However, as stated in FSAR Subsection 15.0.2, "No ICS or operator action is required for reactor protection. All accidents are analyzed without immediate ICS or operator action. . . . Operator action for maintaining hot shutdown conditions or for initiating cooldown to cold shutdown conditions is assumed only when adequate time and instrument indications are available to the operator." Therefore, no operator action has been assumed based upon non-safety related instrumentation. This position also must be confirmed by B&W.

We are continuing to research this issue and will document any additional information and/or B&W's concurrence in a subsequent ION before 3/26/80.

Prepared by: J. A. Clements
J. A. Clements
Licensing Group Supervisor

Concurrence by: M. L. Thomas
for J. M. Anderson
Control Systems Group Supervisor

for K. C. Prasad
J. N. Vance
Chief Nuclear Engineer

006906

SUBJECT: MCAR #38 (component identification), dated March 11, 1980

Interim Report #1

Date: April 1, 1980

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

Introduction

This report is submitted regarding the interim status and actions taken pursuant to MCAR #38.

Description of Discrepancy

Inconsistent cross-referencing between B&W and Bechtel numbering systems for B&W-supplied instrument systems [Non-Nuclear Instrumentation (NNI), Integrated Control Systems (ICS), Emergency Core Cooling Actuation System (ECCAS), and Nuclear Instrumentation and Reactor Protection System (NI/RPS)] and other components has occurred on Unit 2. This inconsistent cross-referencing has resulted in inconsistent wiring of B&W-supplied systems. If the inconsistent wiring were to remain uncorrected, it can be postulated that the ICS and NNI would not function properly and that some incorrect indications would be displayed to the operator. The following is a preliminary response to the recommended actions of MCAR 38:

1. Determine if this situation could have had an adverse affect on the safety of operation of the plant.

   Bechtel evaluation to date of the numbering inconsistency has indicated that the deficiency, were it to have remained uncorrected, would probably not have affected adversely the safety of operations of the Midland Plant.

   On March 20, 1980, the potential for reportability of this matter under 10 CFR 50.55(e) was discussed with B&W. Subject to further B&W review, B&W tentatively agreed with Bechtel's preliminary conclusions that the systems involved that provide safety functions (ECCAS and NI/RPS) would accomplish their functions under existing conditions. Based on the information available at that time, B&W could not conclude that the incorrect labels on control room displays would not have adversely affected the safety of operations of the plant. The B&W response letter as to the safety aspect of reportability of this matter under 10 CFR 50.55(e) is scheduled to be submitted to Bechtel by April 18, 1980.

   Our present position on reportability under 10 CFR 50.55(e) is that the situation does not presently appear to be reportable. However, this position will be reviewed based on the B&W evaluation and any further results of project investigation.

006906

2. Determine cause and procedural corrective actions.

   The most probable cause appears to be some misinterpretation by design personnel regarding the system of cross-referencing between the B&W and Bechtel component numbering system for Unit 2. No specific procedural corrective actions have been identified to date; however, some may be determined as described below under "Corrective Action."

3. Determine remedial actions.

   Several alternative solutions are under consideration, and the best solution will be determined as described below under "Corrective Action."

Probable Cause

Refer to item 2 under "Description of Discrepancy" for discussion of probable cause.

Corrective Action

A multi-discipline Midland project task group (referred to as the "Component Numbering Task Group" or CNTG) has been formed to coordinate resolution of the issue addressed in MCAR 38 and related matters. The CNTG will act as a steering group to completely define the issue(s), and to plan, schedule, monitor, report, and cause complete implementation of remedial actions. As part of their activities, the CNTG will determine the cause of the numbering inconsistency.

Safety Implication

Refer to item 1 under "Description of Discrepancy" for discussion of safety implication. It should be noted that, as a practical matter, it is believed that this item could not have gone undetected and uncorrected prior to fuel load. This is because of the numerous component and system checkouts that will be made prior to fuel load.

Forecast Date of Corrective Action

The next interim report is scheduled to be issued by May 16, 1980.

Submitted by: M. R. Gross

Approved by: L. H. Curtis

Concurrence by: [illegible] 4/1/80

MAG/pjh

Attachment 4

Bechtel Power Corporation

777 East Eisenhower Parkway
Ann Arbor, Michigan
Mail Address: P.O. Box 1000, Ann Arbor, Michigan 48106

008234

May 16, 1980

BLC-9277

Consumers Power Company
1945 West Parnall Road
Jackson, Michigan 49201

Attention: Mr. J.W. Cook
Vice President
Midland Project

Subject: Midland Plant Units 1 and 2
Consumers Power Company
Bechtel Job 7220
MCAR 38 Interim Report 2

Attached for your information and use is MCAR 38, Component Identification, Interim Report 2.

In a change from Interim Report 1, we now conclude that the subject issue is probably reportable under 10 CFR 50.55(e). Consumers Power Company was notified of this position by telephone on May 2, 1980 (confirmed in BLC-9260, dated May 13, 1980).

The next interim report is scheduled to be issued by August 1, 1980.

Very truly yours,

John A. Rutgers
Project Manager

JAR/RLR/kb

Attachment: MCAR 38 Interim Report 2

cc: W.R. Bird w/a
G.S. Keeley w/a
B.W. Marguglio w/a

Response Requested: No

SUBJECT: MCAR #38 (Component Identification) dated March 11, 1980

INTERIM REPORT #2

008234

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

Introduction

This report is submitted regarding the interim status and actions taken pursuant to MCAR #38. A change from Interim Report #1 (dated April 1, 1980) is the current position that the issue addressed in MCAR #38 is probably reportable under 10 CFR 50.55(e).

Description of Discrepancy

Inconsistent cross-referencing has occurred on Unit 2 between B&W and Bechtel numbering systems for B&W-supplied instrument systems [Non-Nuclear Instrumentation (NNI), Integrated Control Systems (ICS), Emergency Core Cooling Actuation System (ECCAS), and Nuclear Instrumentation and Reactor Protection System (NI/RPS)] and other components. This inconsistent cross-referencing has resulted in inconsistent wiring of B&W-supplied systems. If the inconsistent wiring were to remain uncorrected, it can be postulated that the ICS and NNI would not function properly and that some incorrect indications would be displayed to the operator.

Status and Actions Taken

The Midland Project Component Numbering Task Group (CNTG) is coordinating resolution of the subject issue. The scope of the Midland numbering problem is currently being studied, and information is being solicited from other utilities.

B&W has indicated that they could not support the preliminary conclusion expressed in Interim Report #1 (that the deficiency, were it to have remained uncorrected, would probably not have affected adversely the safety of operations of the Midland plant) because the deficiency would invalidate the safety analyses. The as-constructed plant would differ from the plant design assumptions of the safety analyses.

A revised safety analysis postulating that the deficiency remain uncorrected until plant operation might determine that the condition would not cause a bona fide safety problem. However, this would be an unnecessarily costly and time-consuming process, particularly since remedial action is now in progress.

Safety Implications

Based on the expressed concern that the inconsistencies could result in inappropriate operator action which could adversely affect the safety of plant operations, we conclude that the deficiency probably should be classed within the "adverse to safety" requirement of 10 CFR 50.55(e).

Corrective Action

No corrective action has been determined at this time. The CNTG will determine the preferred solution to be implemented as the evaluation is completed and proper corrective action is defined in future reports.

Date on Which the Corrective Action will be Taken

Preliminary planning indicates a completion of evaluation by July 1, 1980, and completion of implementation by January 1, 1981.

Reportability

Based on the safety implications stated above, we conclude that the subject deficiency is probably reportable under 10 CFR 50.55(e). This is due to the fact that the deficiency will be classed within the "adverse to safety" requirement of 10 CFR 50.55(e) AND it has been determined to be within the "significant deficiency in final design" requirement.

Additional Information

The CNTG will act as a steering group to completely define the issue(s), and to plan, schedule, monitor, report, and cause complete implementation of remedial actions. Several alternative solutions are under consideration, and the preferred solution will be determined and implemented.

As part of their activities, the CNTG will determine the cause of the numbering inconsistency. The most probable cause appears to be some misinterpretation by design personnel regarding the system of cross-referencing between the B&W and Bechtel component numbering system for Unit 2.

However, it should be noted that, as a practical matter, it is believed that this item could not have gone undetected and uncorrected prior to fuel load. This is because of the numerous component and system checkouts that will be made prior to fuel load.

The next interim report is scheduled to be issued by August 1, 1980.

Submitted by: J.M. Anderson

Approved by: L.H. Curtis

Concurrence by: K.D. Bailey

Concurrence by: L.A. Dreisbach

HRG/pjh