



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

PDR-016

DEC 9 1984

Ms. Nancy L. Butler
Smith, Haughey, Rice & Roegge
200 Calder Plaza Building
Grand Rapids, MI 49503

IN RESPONSE REFER
TO FOIA-84-893

Dear Ms. Butler:

This is in response to your letter dated November 28, 1984, in which you requested, pursuant to the Freedom of Information Act (FOIA), copies of records regarding the coatings delamination problem at the Midland Nuclear Power Plant. This confirms the information conveyed during the telephone conversation between you and Linda Robinson on December 27, 1984.

The records identified on enclosed Appendices A, B, and C are available for public inspection and copying at the NRC Public Document Room (PDR), 1717 H Street, NW, Washington, DC 20555. We have deleted information in the document identified on enclosed Appendix C in order to protect the identity of an individual who provided information in confidence to the NRC, and you agreed to accept the deleted version of the document. We are enclosing a copy of a notice that provides information on charges and procedures for obtaining records from the PDR.

If you have any questions regarding this response to your request, please telephone Linda Robinson at (301) 492-8133.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. M. Felton", written over a horizontal line.

J. M. Felton, Director
Division of Rules and Records
Office of Administration

Enclosures: As stated

8506110364 841228
PDR FOIA
BUTLER84-893 PDR

1. 1/3/79 Letter from Howe to Keppler, PDR 8001300209
2. 2/7/80 Letter from Howe to Keppler, PDR 8002120349
3. 9/9/80 Letter from Cook to Keppler, PDR 8010200335
4. 10/31/80 Letter from Cook to Keppler, PDR 8011100620
5. 2/23/81 Letter from Cook to Keppler, PDR 8103040649
6. 5/29/81 Letter from Cook to Keppler, PDR 8106040371
7. 7/31/81 Letter from Cook to Keppler, PDR 8108110273
8. 10/30/81 Letter from Cook to Keppler, PDR 8111090619
9. 12/17/82 Letter from Cook to Keppler, PDR 8301110220

INSPECTION REPORTS:

10. 05000-329/83-21, PDR 8401190286
11. 05000329/82-10, PDR 8208130323

1. 3/15/80 Letter to Keppler from Howell on internal structures coating deficiency (3 pages)
2. 6/11/80 Letter to Keppler from Cook on internal structures coating deficiency (3 pages)
3. 6/8/82 Memorandum for Clark from Little on protective coating deficiency (1 page)
4. 7/15/82 Memorandum for Clark from Abramson on trip to Midland (4 pages)
5. 7/28/82 Letter to Cook from Little on safety inspection (7 pages)
6. 12/17/82 Letter to Keppler from Cook on internal structures coating deficiency (25 pages)
7. 12/7/83 Memorandum for Clark from Little on protective coating deficiency (1 page)
8. Undated Handwritten notes on Other Inspection Areas (1 page)

PARTIAL DISCLOSURE
IN PDR FOLDER FOIA-84-893

APPENDIX C

FOIA 84-893

1. 2/13/81 Letter from Foster to confidential source. (1 page)



Consumers
Power
Company

4/25

Howell
file

Stephen H. Howell
Senior Vice President

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

April 15, 1980
Howe-75-80

36
79-12
*3

Mr J G Keppler, Regional Director
Office of Inspection & 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
CONTAINMENT INTERNAL STRUCTURES COATING DEFICIENCY

References: S H Howell letters to J G Keppler; Midland Nuclear Plant;
Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330;
Containment Internal Structures Coating Deficiency;

- 1) Serial Howe-309-79; dated December 13, 1979
- 2) Serial Howe-26-80; dated February 7, 1980

This letter, as were the referenced letters, is an interim 50.55(e) report on in-containment coatings which have a loss of adhesion between successive layers of the coating system. The attachment to the letter provides the status of the actions being taken to resolve this condition.

Another report, either interim or final, will be sent on or before June 16, 1980.

WRB/lr

Attachment: MCAR-35, Interim Report #3, "Containment Internal Structures Coating," dated March 31, 1980

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

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

80042/103/18

APR 17 1980.

B/1

Bechtel Associates Professional Corporation

SUBJECT: MCAR 35 (issued 11/13/79)
Containment Internal
Structures Coating

INTERIM REPORT 3

DATE: MARCH 31, 1980

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

This report updates project engineering's progress in evaluation and action regarding the failure of coatings on concrete, as applied by subcontractor J.L. Manta in the containment building, to maintain adhesion between successive layers of the coating system.

The corrective actions identified in Interim Reports 1 and 2 are now progressing with a program involving Consumers Power Company, Bechtel, and Manta. A short update of these programs follows.

1. Quantify Extent of Physical Problem

The procedure for mapping and adhesion has been approved. Approximately 90% of the walls in containment Number 2 coated with System 9 have been tested and the results are being logged and plotted on wall elevation drawings. The results of this testing are being used to identify the extent of the coating failure and for correlation with other data (Items 2 and 3) to determine root cause.

2. Document Review

Documents are continuing to be reviewed and evaluated. Application records have been reviewed and coating data concerning daily application, batch numbers, application temperatures, and time between coats have been plotted on wall elevation drawings. These data are being compared with testing data from Item 1 and being reviewed against other documents and data as applicable.

3. Material Analysis

Coating materials are continuing to undergo investigation. Retained coating batches, analysis of failed and unfailed coating samples, and coating application tests have been identified for analysis and are in various stages of completion.

Bechtel Associates Professional Corporation

MCAR 35 (Interim Report 3)

Page 2

4. Coating Acceptance Procedure

A coating acceptance procedure is being developed. However, this will not be finalized until completion of studies to determine the extent and the root cause of the coating failure.

While neither the full extent nor the root cause of the failure have been determined, data are being evaluated continuously in an effort to resolve this concern. Upon completion of all planned investigations, a thorough analysis of the data will proceed to determine both the cause and extent of the subject coating failure prior to the completion of the remaining System 9 coating work.

The next report is scheduled for May 30, 1980, and preliminary investigations included in Items 1, 2 and 3 above are expected to be completed at that time.

Submitted by:

J. Christensen

9K Approved by: M. Elgohi L.H. CURTIS

Concurrence by: A. Bailey 3/28/80

JC/ccb



Consumers
Power
Company

James W Cook
Vice President, Midland Project

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

June 11, 1980

77-12(30)

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

DOCKET NO 50-329, 50-330

CONTAINMENT INTERNAL STRUCTURES COATING DEFICIENCY

FILE: 0.4.9.37 UFI: 73*10*01, 00210(S) Serial: 9125

References: S H Howell letters to J G Keppler; Midland Nuclear Plant;
Unit No 1, Docket No 50-329; Unit No 2, Docket No 50-330;
Containment Internal Structures Coating Deficiency;

- 1) Serial Howe-309-79; dated December 13, 1979
- 2) Serial Howe-26-80; dated February 7, 1980
- 3) Serial Howe-75-80; dated April 15, 1980

This letter, as were the referenced letters, is an interim 50.55(e) report on in-containment coatings which have a loss of adhesion between successive layers of the coating system. The attachment to the letter provides the status of the actions being taken to resolve this condition.

Another report, either interim or final, will be sent on or before September 15, 1980.

James W. Cook

RB/clh

Attachment: MCAR-35, Interim Report #4, "Containment Internal Structures Coating," dated May 30, 1980.

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

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

JUN 15 1980

B/2

* Note: only 1 attachment (interim report) was received - sent to Const. Branch. It will be available in CTH file after (cont. NA?);

Bechtel Power Corporation

MCAR 35

Interim Report 4

May 30, 1980

Page 2

Summary of Actions to Determine Root Cause

To date, we have not been able to identify the root cause. We believe the answer may be found in further efforts to detect and identify some form of significant contamination on the failed coating.

We also believe the lack of adhesion may be the result of multiple factors that, when acting together, result in a condition which could cause delamination. We are preparing several coating application test panels under multiple adverse conditions in an effort to demonstrate delamination.

The above information will be useful both in the determination of root cause and to place sufficient controls on the application of Coating System 9 to ensure an acceptable finished coating system.

Summary of Corrective Action

We are preparing procedures and testing methods for removal of the failed coating and for surface preparation to receive the reapplication of the coatings. Procedures are to be developed which will utilize information gained from the determination of root cause to ensure the acceptable application and to prevent a recurrence of failed coatings.

Following reapplication of the coating, adhesion tests will be performed to demonstrate acceptability of the coating system.

Before proceeding with the actual work to repair Coating System 9 in containment 2, we will submit the final results of our actions to determine root cause and our corrective action plans for repair of the deficient coatings for your information.

The next report is scheduled for August 30, 1980.

JSC/TJM/ccb

Submitted by: J. L. P. P.Approved by: M. E. [Signature] F. L. H. CURTISConcurrence by: A. D. Bailey 6/5/80

Bechtel Power Corporation

SUBJECT: MCAR 35 (issued 11/13/79)
Containment Internal Structures Coating

INTERIM REPORT 4

DATE: May 30, 1980

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

Introduction

This report updates project engineering's progress in evaluation and action regarding the failure of coatings on concrete, as applied by subcontractor J.L. Manta in the containment building, to maintain adhesion between successive layers of the coating system.

Update of Actions/Taken to Resolve MCAR 35

1. Quantify Extent of Physical Problem

Results of adhesion testing indicate a random failure pattern on walls in containment 2 coated with Coating System 9, with some walls affected more extensively than others. Approximately 17.7% of the tests demonstrate insufficient adhesion.

2. Document Review

Application documents have been reviewed and daily data has been plotted for coating variables. We have not been able to identify any significant correlation between the plotted variables and the data from Item 1 above.

3. Material Analysis

Material analysis to date has not yielded any significant data to indicate the cause of the adhesion failure. We will be performing additional tests in an effort to detect and identify some form of contamination which could affect the coating adhesion.

4. Coating Acceptance Procedure

The coating acceptance procedure will include the performance of adhesion tests to demonstrate the acceptability of the finished repaired coating.