



STONE & WEBSTER MICHIGAN, INC.

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United States Nuclear Regulatory Commission
Midland Site Resident Office
Route 7,
Midland, MI. 48640

December 1, 1983

J. O. No. 14358
Ref. MPF 62

Attention: Mr. R. Cook

DOCKET NO. 50 339/330
MIDLAND PLANT UNITS 1 & 2
INDEPENDENT ASSESSMENT OF UNDERPINNING
REPORT NO. 62

A copy of the Independent Assessment of Underpinning Weekly Report No. 62 for the period of November 20, 1983 through November 26, 1983 is enclosed with this letter. Included as attachments are the minutes of the daily meetings held during the week between members of the Assessment Team and Site Engineering, Construction, and Quality Assurance personnel. Also included is a Trip Report prepared by the Stone & Webster Management Review Team for their site visit on October 5, 1983.

If you have any questions with respect to this report please contact me at (617) 589-2067.

A. S. Lucks
brw/SK

A. Stanley Lucks
Project Manager

Enclosures
ASL/pd

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Midland Plant
Units 1 & 2
Independent Assessment of Underpinning

Weekly Report No. 62

November 20, 1983 through November 26, 1983

Personnel on Site

Stone & Webster Michigan, Inc.

W. Kilker	11/20 - 11/21
J. Springer	11/20 - 11/22
L. Rouen	11/20 - 11/22

Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
11/21 -11/22	Stone & Webster Bechtel Consumers Power	Daily Assessment Team Meeting
11/21	MPQAD Stone & Webster	Assessment Team Meeting with MPQAD
11/22	Stone & Webster Consumers Power Bechtel	Crack Monitoring Status

Underpinning and Remedial Soils Activities - Construction

The Stop Work Order issued October 21, 1983, continued in effect throughout the week.

Assessment Team - Observations

The Assessment Team has completed an evaluation of the Auxiliary building and SWPS crack monitoring activities. The purpose of the evaluation was to determine if the Subcontractor, Contractor and MPQAD have, to date, followed the intent of the specification and/or procedures. During the course of this evaluation, the Assessment Team has made critical observations of the crack monitoring program (refer to W.R. 59-61) and has issued 3 Nonconformance Identification Reports. The following paragraphs present a summary of the Assessment Team's observations on the performance of the organizations listed above.

In the Team's opinion, the crack monitoring Subcontractor has met the intent of the procedures. However, more attention should be given to details. For example, the Team has noted deficiencies in reporting alert level cracks in a timely manner to the RSE (this deficiency was reported by Resident Engineering). cases of not graphically displaying crack mapping data on the forms, not completing all the required formwork and cases of not keeping procedures current.

The Contractor's Resident Engineering group has been performing the required review of the Subcontractor's data. The Assessment Team has, however, identified some areas of concern, including the need to review the data in a more timely manner and to verify that the Subcontractor is maintaining their procedures current. In addition, the Assessment Team has observed instances where the coordination effort between Resident Engineering and the Subcontractor could be improved.

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MPQAD has not, in the opinion of the Team, maintained an adequate degree of surveillance of the crack monitoring activities. While the MPQAD procedures have no specific time restrictions for the completion of the QC inspection reports, the Assessment Team feels the present time frame of up to several months for verification of the Subcontractor's data is excessive. Also, the Team noted that the QA group has been delinquent to date in their role with respect to crack monitoring by not having completed an overview report (PIPR).

The Assessment Team believes the deficiencies described above do not invalidate the data collected to date. The Team understands that all of the organizations have taken action to resolve not only the Assessment Team concerns but also the concerns and problems identified by the respective organizations. All concerns will be resolved prior to lifting the Stop Work Order presently in effect at the site.

Work Activity Packages

Work Activity Package 57 has been temporarily rescinded in order to update a procedure revision. WAP's 59 and 71 remain open, awaiting final approval of an FCR and response to one action item, respectively.

Nonconformance Identification Reports

<u>NIR No.</u>	<u>Description</u>	<u>Date</u>	
		(Opened)	(Closed)
14	Nut Procurement	8/11/83	
16	Crack Monitoring Procedure	11/4/83	
17	FCR/FCN Review Program	11/15/83	
18	Crack Monitoring Deficiency	11/17/83	
19	QA/QC Review of Crack Mapping Data	11/22/83	

Open Items

Items discussed during meetings are categorized as follows:

OPEN ITEM - An item for which an action is required. The item will remain open until the required action has been taken. Tracking is required.

CLOSED ITEM - An item, usually brought forward by the Assessment Team, that is discussed and adequately responded to. No tracking is required.

INFORMATION ITEM - An item, brought forward to provide general background information regarding work, such as work status or an upcoming design change. No tracking is required.

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OPINION ITEM - An opinion or suggestion, given by the Assessment Team, expressing an alternate construction or quality assurance technique. The opinion or suggestion is given as a possible alternate that may facilitate an operation. No response or implementation is required as a result of an Opinion Item.

CLOSES ITEM -XX-XX - This notation identifies an action that closes a previously identified open item. Tracking of the open item stops.

The following is a listing of all Open items from the Daily Meeting Notes with Bechtel and the Weekly Meeting with MPQAD. Carry-over items from past weeks which have been Closed this week, are also listed.

<u>Item No.</u>	<u>Description</u>	<u>Closure</u>
WR9, Daily Meeting Notes, 11/15/82, No. 8	Procedural or Specification Change Verification	Open
WR 30, pg. 3	Project Engineering Evaluation of Welding	Open
WR 51, pg. 2	FCR Final Approval Process	Open
WR 54, pg. 3	Weld Tech Sheets	Open
57-17	Wall Ties	Open
57-6Q	MPQAD Supervisory Personnel	Open
WR58, pg. 2	Lack of Drawing Reference	Open
58-3	Tubular Steel Lagging	Open
58-13	Slurry for Removal of 36 In. Dia Casing	Open
WR 59, pg. 1	Crack Mapping Data Sheets	62-3
59-5	Additional SWPS Cracks	Open
59-20	Processing Mapping Data	62-2
WR 60, pg. 2	Inspection of Non-Structural Welds	Open
60-4	WJE Procedure	Open
61-16	Potential Open Item Review	62-5
62-2	Crack Mapping Procedures	Open

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Independent Assessment of Underpinning

<u>Item No.</u>	<u>Description</u>	<u>Closure</u>
62-4Q	MPQAD Review of Crack Monitoring	Open

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Project Engineer

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Project Manager

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland, Michigan
November 21, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone & Webster</u>
G. Murray	J. Fisher E. Cvikl J. Gaydos	R. Sevo	J. Springer L. Rouen W. Kilker
			<u>Parsons</u> None

PURPOSE

This meeting is held each day to discuss items regarding the Independent Soils Assessment at the Midland Plant, Units 1 & 2.

DISCUSSION

Status Item

Item 62-1 - SWO Status.

J. Fisher reported that FSO still anticipates returning to work the week of November 28, - December 3. However, all issues related to crack mapping must be resolved, as well as the lifting of the SWO, before work can resume. (INFORMATION ITEM)

New Items

There were no new items discussed.

Response Items

Item 62-2 - Crack Mapping Procedures.

E. Cvikl stated that the QAR written on the WJE reporting time (see Item 59-5) does not pertain to the subsequent Bechtel response time. (Refer to Item 59-20). In the case of the WJE action a procedural requirement was violated while in the case of the Bechtel response there was no procedural requirement or violation. E. Cvikl will issue a memo to his staff regarding the importance of responding in a timely manner to WJE submittals. (CLOSES ITEM 59-20) (OPEN ITEM)

Item 62-3 - WJE Crack Mapping Data.

J. Springer stated that all concerns on the WJE data raised in Weekly Report 59 have been adequately addressed either through updating the data entries or through action that will be taken in dispositioning NIRs 16 and 18. The Assessment Team concerns will continue to be tracked in the resolution of NIRs 16 and 18. (Closes Item W.R. 59, pg. 1)

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland, Michigan
November 21, 1983

Item 62-4 - Non-structural Weld Inspection.

J. Fisher indicated that all welding is inspected by Bechtel Field Welding Engineers. All Structural Welding is inspected by Quality Control, while non-structural welds are not. All non-structural welds are identified by an asterisk on the drawings. (INFORMATION ITEM, Item WR 60, pg. 2 Remains Open)

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland, Michigan
November 22, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone & Webster</u>
G. Murray	J. Fisher	R. Sevo	J. Springer
	E. Cvikl		<u>Parsons</u>
	J. Gaydos		None

PURPOSE

This meeting is held each day to discuss items regarding the Independent Soils Assessment at the Midland Plant Units 1 & 2.

DISCUSSION

Status Item

Item 62-5 - Review of Potential Open Items.

The Assessment Team reviewed potential open items for weekly reports 1 thru 29. As a result of this review one (1) open item was identified and it is being added to the open item list. (CLOSES ITEM 61-16)

New Items

There were no new items discussed.

Response Items

There were no new response items discussed.

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland, Michigan
November 23, 1983

There was no meeting held on this date.

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland, Michigan
November 24, 1983

No meeting was held on this date. (Site holiday)

Notes of Daily Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2
Consumers Power Company

Held at Midland Site
Midland , Michigan
November 25, 1983

No meeting was held on this date. (Site holiday)

Notes of MPQAD Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2

Held at Midland Site
Midland, Michigan
November 21, 1983

Present For:

Stone & Webster

L. Rouen
J. Springer

MPQAD

J. Meisenheimer
D. Horn
R. Oliver
M. DeWitt

PURPOSE

This meeting is held to obtain and discuss information relative to Q.A. activities for soils underpinning work at the Midland Plant Units 1 & 2.

DISCUSSION

Status Items

Item 62-1Q - Use of Supervisory Personnel.

J. Meisenheimer indicated that a response to Item 57-6Q should be finalized this week. (Item 57-6Q Remains Open) (INFORMATION ITEM)

Item 62-2Q - NIR's # 16 and 18.

J. Meisenheimer advised NIR # 16 & 18 will be answered simulataneously since they both deal with crack mapping. (NIR # 16 and # 18 Remains Open) (INFORMATION ITEM)

Item 62-3Q - NIR # 17.

J. Meisenheimer indicated that a response to NIR # 17 will be completed this week. (NIR # 17 Remains Open) (INFORMATION ITEM)

New Item

Item 62-4Q - MPQAD Review of Crack Mapping.

J. Springer requested an update concerning MPQAD's internal problems with respect to crack mapping. Specifically, the Assessment Team is concerned with the extent of the problems, why the problems occurred, and what corrective actions MPQAD will initiate to resolve the problems. J. Meisenheimer gave the following response:

* Currently it takes 1 to 2 months for MPQAD to receive the crack mapping data sheets after WJE submits them to the RSE. The distribution list for data will be changed to provide information to MPQAD concurrently with the RSE.

* MPQAD is reviewing their report log to verify that all the reports have been received. To date MPQAD has received 90 reports out of a total of 127.

* Since October 31, 1983, sixteen (16) Nonconformance Reports and five (5) Quality Action Reports have been written concerning crack mapping. Most of the NCR's were written because of improper graphics with the baseline data and inadequate data entries.

* The extent and type of corrective action has not been finalized.
(OPEN ITEM)

Notes of MPQAD Meeting
Independent Assessment of Underpinning
Midland Plant Units 1 & 2

Held at Midland Site
Midland, Michigan
November 21, 1983

Response Items

There were no response items discussed.

TRIP REPORT
INDEPENDENT ASSESSMENT OF UNDERPINNING
MIDLAND NUCLEAR PLANT - UNITS 1&2
CONSUMERS POWER COMPANY

J.O.No. 14358

On October 5, 1983, the following members of the Management Review Team for the Independent Assessment of Underpinning visited the site:

J. P. Allen
N. B. Cleveland
G. M. Schierberg

ACTIVITIES

In preparation for the visit to the construction areas, the team members were given a brief course on "Confined Space Training" by Consumers Power Company (CPCo) Staff.

The management team then attended the daily Independent Assessment of Underpinning meeting at which various open items were addressed. For the benefit of the management team, J. Fisher (Bechtel) presented an update on the status of the underpinning and soil remedial work. J. Darby (Bechtel) made a detailed presentation of the building movement monitoring program and the results to date.

Following these presentations and discussions, the management team visited all work areas and observed the work in progress. Areas observed included the east and west access shafts, drifts from KC2 to KC3 and KC10 to KC11, the grillage and pier jacking and monitoring operation, the excavation work progressing from the utility access tunnels (UAT) in the Turbine Building, and the preparations for underpinning around the Service Water Pump Structure.

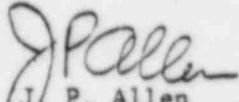
Each stage of the operation was explained by members of the Stone & Webster Assessment Team and all questions and concerns answered to the satisfaction of the management team. The status and progress in resolution of Nonconformance Identification Reports were also discussed.

CONCLUSIONS

The overall underpinning operation is well organized and proceeding in a controlled and well-documented manner. Although progress is somewhat better than observed during our initial visit on February 2, 1983, it is still well below the anticipated rate. It appears that the most significant factors in restraining the rate of progress are maintaining the flow of materials, inspected and acceptable, into the work areas and the difficulty in expeditiously processing and controlling changes in design and procedures required because of unanticipated conditions in the field. We recommend that these factors be reviewed with the goal of improving the rate of progress.

The instrumentation program continues to be carried out in a very satisfactory fashion with the frequency of reading and plotting of results more than adequate.

In summary, the management team believes the Independent Assessment Team activities are being performed in an effective manner and no change in program is recommended at this time.


J. P. Allen
Management Review Team

JPA:mcg

NE AND WEBSTER ENGINEERING CORPORATION
MIDLAND NONCONFORMANCE IDENTIFICATION REPORT

DATE OF NONCONFORMANCE: December 1, 1983 NIR Number 20

IDENTIFICATION/LOCATION OF ITEMS: Dispensers for WRDA 19 Super Plasticizer for concrete. Manufacturer's Serial # 's 15250587, 15023923, 14906529, 14907131.

DESCRIPTION OF NONCONFORMANCE: Specification C-230 sect. 9 requires that measuring of materials... for all concrete shall conform to the Standard Specification for Ready-Mixed Concrete, ASTM C94 which states in para. 7.4 " Volumetric measurement (of liquid admixtures) shall be within an accuracy of \pm 3% of the total amount required OR plus and minus the volume of dose required for one sack of cement, whichever is greater. " The above listed instruments were calibrated based on a dose rate of 12 oz./sack. However, the present dose rate for mix C-6C-H is 55 oz./yd @ 658 # of cement per yard or 7.9 oz./sack. Review of calibration data shows that meters # 14907131, 13250587 and 15023923 do not dispense the admixture within the smaller tolerance associated with the mix design.

REMARKS: _____

INITIATOR: <i>L. T. Rouler</i>	DATE: <i>12/1/83</i>	PROJECT <i>L. T. Rouler</i> MANAGER: <i>Mr A. S. LUCKS</i>
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CORRECTIVE ACTION BY: _____
(IDENTIFY ORGANIZATION TAKING COPRECTIVE ACTION)

INITIATOR:	PROJECT MANAGER :	DATE:
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