



STONE & WEBSTER MICHIGAN, INC.

P.O. Box 2325, BOSTON, MASSACHUSETTS 02107

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

August 10, 1983

J. O. No. 14358
Ref. MPF 46

Attention Mr. R. Cook

RE: DOCKET NO. 50-329/330
MIDLAND PLANTS - UNITS 1 & 2
INDEPENDENT ASSESSMENT OF UNDERPINNING
REPORT NO. 46

A copy of the Independent Assessment of Underpinning, Weekly Report No. 46 for the period of July 31, 1983 through August 6, 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.

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

Very truly yours,

A. Stanley Lucks

A. Stanley Lucks
Project Manager

Enclosures

ASL/pd

AUG 15 1983

Weekly Report No. 46

July 31, 1983 through August 6, 1983

Personnel on Site

Stone & Webster Michigan, Inc.
P. Barry 8/1 - 8/6
W. Kilker 8/4 - 8/6
B. Holsinger 8/3 - 8/6
A. Scott 8/1 - 8/6

Parsons, Brinckerhoff Michigan, Inc.
V. Madill 8/2 - 8/5

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
8/1 - 8/5	Stone & Webster Bechtel Consumers Power Parsons	Daily Meetings
8/4	Stone & Webster Bechtel Consumers Power	Weekly Schedule Forecast Meeting

Activities

Construction:

Pier E8: The transfer frame installation was completed. Jackstands and jacks were being installed and instrumentation installation was near completion.

E8 Grillage: The containment mat drop pit excavation was completed and preparatory work on the upper leveling plates continued.

Pier E10: The pier remained on active jacking throughout the week.

Pier KC11: The pier was rejaacked in order to verify the tightness of the wedges.

Pier W8: The transfer frame installation was completed except for strut modifications that required a shop rework. The instrumentation installation was near completion.

W8 Grillage: Similiar activity to E8 Grillage.

Pier W10: Similiar to E10 pier activity.

KC2: Similiar to KC11 pier activity.

SWPS: The Stop Work Order was lifted and well and soldier pile installation resumed. Several observations wells were completed and 2 soldier piles were installed. Sheeted pit work continued and work on the service water line resumed after temporary support of a duct bank was completed.

BWST: Sandblasting was completed and installation of shear connector bolts continued. The concrete mudmat was placed and the area surrounding the mudmat was prepared for backfilling. The Stop Work Order on the installation of anchor bolts was lifted.

J. O. No. 14358
 Midland Plant
 Units 1 & 2
 Independent Assessment of Underpinning

Activities

Quality Control

Observed MPQAD training of QC inspectors to the current revision of area welding Project Quality Control Instruction (PQCI)

Reviewed the adequacy of the revision of the proposed PQCI for area welding inspection.

Observed a grout placement inspection and corresponding specimen preparation process. Reviewed the associated inspection report for accuracy and timeliness of completion.

Observations

Construction: The load transfer at piers E/W8 moved to near completion at a very slow pace. Working within the constraints of very tight tolerances and detailed inspection criteria, the targeted completion of load transfer at piers E/W8 has already taken more than three months since pier construction commenced. The Assessment Team believes that the Engineering, Quality Control and Construction organizations must initiate an evaluation of performance to-date in an effort to identify actions that could reduce the completion time without compromising quality. It is the opinion of the Assessment Team that such a goal is attainable.

Observations

Quality Control

The QC inspector training provided by MPQAD for the current revisions of the area welding PQCI was thorough, specific to each attribute and sub-attribute, and included instructions on application of the referenced criteria.

The revision to the area welding PQCI clearly defines each inspection attribute. The attributes include all inspections required by the project specifications and welding codes.

The grout placement inspection, specimen preparation, and corresponding inspection report were in accordance with project requirements and good industry practice.

Work Activity Packages - The Assessment Team received Work Activity Packages (WAP's) 38,44,45,47,50,51, and 53 for review. WAPs 38,45 and 47 were primarily electrical installations and were not subjected to review. All Team comments on WAP 53 were satisfactorily addressed. Questions were submitted to the FSO Constructability Review group for resolution on WAPs 44,50 and 51.

Nonconformance Identification Report

<u>NIR No.</u>	<u>Description</u>	<u>Date</u>
13	PQCI Attribute for Plate Bearing Verification.	(Opened) (Closed) 7/14/83 8/4/83

J. O. No. 14358
 Midland Plant
 Units 1 & 2
 Independent Assessment of Underpinning

Open Items

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 out this week are also listed.

<u>Item No.</u>	<u>Description</u>	<u>Closure Reference</u>
W. R. 25, pg 5	Commitment to assess training and personnel records.	Open
W. R. 42, pg. 3	Commitment to evaluate response to Grillage Installation PQCI.	Open
43-4Q	Receipt Package Inspection	Open
43-5Q	Grillage Installation Questions	Open
44-7	Request for Chronology of Events Surrounding Reoccurrence of Loose Washers on W8 N-S Bulkhead	Open
44-20	Resolution of a Question on the Adequacy of the Procedure on the Tieback and Strut Installations.	Open
44-2Q	Grillage Beam Receipt Inspection Package	Open
44-3Q	Status of Questions on Grillage Beam PQCI	Open
45-8	Test Cylinder for New Mix Designs with 60 Day Breaks	46-1
45-17	Existing Concrete Mix Slump Inadvertency Margin	Open
45-19	SWPS Retaining Wall Questions	46-15
45-1Q	Status of NIR # 13	46-13
45-7Q	Status of QA NCR on QC Certification	Open
45-8Q	Discussion on Mechanism of Identifying Quality Concerns.	Open

J. O. No. 14358

Midland Plant

Units 1 & 2

Independent Assessment of Underpinning

<u>Item No.</u>	<u>Description</u>	<u>Closure Reference</u>
46-14	Leveling Plate Overlap onto FIVP Mat	Open

W E Keller
Project Engineer

W Keller for AS Luckie
Project Manager

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

Held at Midland Site Location
Midland, Michigan
August 1, 1983

Present For:

Consumers Power

A. Blocker

Bechtel

J. Fisher

E. Cvikl

J. Gaydos

J. Darby

MPQAD

R. Sevo

Stone & Webster

A. Scott

Parsons

None

Purpose

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

Discussion

Item 46-1 - Test Cylinder for New Mix Designs with 60-day Breaks.

In response to the outstanding open item, J. Gaydos stated that cylinders will be molded for 7-day, 28-day and 60-day concrete tests for concrete mixes E-5C and E-5C-H. These mixes have the requirements of a 60-day concrete breaks. (CLOSES OUT ITEM 45-8)

Item 46-2- E/W8 Grillage Leveling Plates.

A. Scott requested status of leveling plate installation required for E/W8 Grillage Beams. A DCN requires pressure grouting which necessitates a connection being installed in each plate. Upon issuance of an FCR to install couplings in the leveling plates work will proceed. (CLOSED ITEM)

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

Held at Midland Site Location
Midland, Michigan
August 2, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone & Webster</u>
R. Wieland	J. Fisher E. Cvikl J. Kelleher	R. Sevo	A. Scott P. Barry <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

Item 46-3 - General Status of Field Activities.

J. Fisher reported that piers E/W 10 continue on active jacking, the deadmen continue to be cured and monitored for strength prior to excavation in the drop pits, the E/W8 jackstands have been released for installation, and a drill permit is being prepared to allow chipping concrete to install grillage beam upper leveling plates. (CLOSED ITEM)

Item 46-4 - SWPS Stop Work Order.

J. Fisher stated that the Stop Work Order on the SWPS was released yesterday afternoon. Today three drill rigs will resume work on installation of wells and soldier piles. (CLOSED ITEM)

Item 47-5 - E/W8 Grillage Beam Inspection.

J. Fisher stated that the NCR's on the Grillage Beam welding were adjusted to allow for any additional nonconformance observed during beam clean-up to be added to the original NCR. A. Scott stated that MPQAD was bringing in an in-house welding engineer to review the NCR's on the Grillage Beam. (CLOSED ITEM)

Item 46-6 - Field Activities.

A. Scott stated that there appeared to be six items of work on the E/W8 Grillage Beam installation that could be accomplished instead of the idle time that exists now in both drifts. A list of these items was provided and J. Fisher said he would investigate. (OPEN ITEM)

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

Held at Midland Site Location
Midland, Michigan
August 3, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone & Webster</u>
None	J. Fisher E. Cvikel L. Weight	G. Carpenter	A. Scott P. Barry
			<u>Parsons</u> V. Madill

Purpose

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

Discussion

Item 46 - 7 - General Status of Field Activities.

L. Weight reported that work on the BWST for the next few days would consist of stripping forms from the mudmat placement, backfilling along side the mudmat, and grouting shear connectors. The electrical conduit installed for the Auxiliary Building underpinning instrumentation has to be moved because of future interferences and load transfer cannot be accomplished on pier E/W8 until this is completed. J. Fisher reported that load transfer for E/W8 is scheduled for later this week. Concerning A. Scott's observation in Item 46-6, J. Fisher stated these items were not worked on because of the survey verification, a required Mergentime shop drawing, and an FCR describing grouting details were not completed until yesterday. Work is starting on these items and on the center drop pit today. J. Fisher reported that work in the SWPS resumed yesterday and that one soldier pile was completed today. (CLOSES OUT ITEM 46-6)

Item 46 - 8 - Drawing Revisions to Incorporate FCR's etc.

P. Barry stated that the drawing showing the drop pit was difficult to follow because of the number and complexity of drawing change documents attached even though this number was still within the limits of their program. E. Cvikel reported that project engineering will start to update drawings when five change documents, not including one-time deviations, are issued against the drawing. More change documents can be issued while the drawing is being revised. (CLOSED ITEM)

Item 46 - 9 - Lagging for SWPS Piers.

V. Madill requested the status of the lagging drawings for the SWPS piers. The lagging for the soldier beam sheeted pits has been supported during installation prior to backpacking by metal straps hung from the lagging above. This is similar to the erection details for the Auxiliary Building pits but no erection details were provided on the design drawings. Will the details for the SWPS pier lagging be shown on the drawing? (OPEN ITEM)

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

Held at Midland Site Location
Midland, Michigan
August 4, 1983

Present For:

Consumers Power

R. Wieland

Bechtel

J. Fisher

E. Cviki

J. Gaydos

MPQAD

G. Carpenter

Stone & Webster

A. Scott

P. Barry

W. Kilker

Parsons

V. Madill

Purpose

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

Discussion

Item 46-10- BWST Foundation Crack Mapping.

E. Cviki stated that Resident Engineering has reviewed the crack mapping now that sandblasting is complete. The Engineering decision is that no additional crack grouting is required. (CLOSED ITEM)

Item 46-11- Weekly Scheduling Meeting.

J. Fisher reminded the group that every Thursday there is a meeting where Bechtel field supervisors, etc. are familiarized with the Subcontractor's and Bechtel direct hire projected 3 week work schedule. (CLOSED ITEM)

Item 46-12- E/W8 Grillage Beam Leveling Plate Grouting.

J. Fisher reported the plates require a nipple fitting modification since these plates will be pressure grouted rather than dry-packed. (CLOSED ITEM)

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

Held at Midland Site Location
Midland, Michigan
August 5, 1983

Present For:

Consumers Power

R. Wieland

Bechtel

J. Fisher

E. Cvikl

J. Gaydos

MPQAD

G. Carpenter

Stone & Webster

W. Kilker

P. Barry

A. Scott

Parsons

Purpose

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

Discussion

Item 46-13 - NIR # 13 Status.

W. Kilker reported that NIR # 13 was closed-out yesterday. (CLOSES OUT ITEM 45-1Q.)

Item 46-14 - E/W8 Grillage Leveling Plate Building Overlap.

A. Scott and P. Barry stated that it appears one of the leveling plates for the grillage transfer beams will overlap from the EPA area onto the FIVP. Will this be a problem? E. Cvikl will verify the measurement and report on any required resolution. (OPEN ITEM)

Item 46-15 - Answers to Assessment Team Questions on SWPS Retaining Bracing Drawings.

E. Cvikl provided the Team with written answers to questions submitted by P. Parish on July 26. W. Kilker stated the replies would be reviewed and any clarifications or additional comments forwarded if required. (CLOSES OUT ITEMS 45-19)

Item 46-16 - SWPS Pier Lagging.

In response to a question of V. Madill (ref. Item 46-9), J. Fisher stated that the details for erection support need not be shown on the design drawings. Each set of lagging is designed to function as a unit and it is the Subcontractor's prerogative to strap or bolt sets together to facilitate the installation. (CLOSES OUT ITEMS 46-9).

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

Held at Midland Site Location
Midland, Michigan
Week of August 1 - 5

No Weekly MPQAD meeting was held this week.