



# STONE & WEBSTER MICHIGAN, INC.

P.O. Box 2325, BOSTON, MASSACHUSETTS 02107

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

September 14, 1983

J. O. No. 14358  
Ref. MPF 51

Attention Mr. R. Cook

DOCKET NO. 50-339/330  
MIDLAND PLANT UNITS 1 & 2  
INDEPENDENT ASSESSMENT OF UNDERPINNING  
REPORT NO. 51

A copy of the Independent Assessment of Underpinning Weekly Report No. 51 for the period of September 3, 1983 through September 10, 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.

A. Stanley Lucks  
Project Manager

*A. S. Lucks*  
*my WER*

Enclosures  
ASL:pd

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J. O. No. 14358

Midland Plant

Units 1 & 2

Independent Assessment of Underpinning

Weekly Report No. 51

September 4, 1983 through September 10, 1983

Personnel on Site

Stone & Webster Michigan, Inc.

A. Scott	9/7 - 9/10
A. Lucks	9/8 - 9/9
W. Kilker	9/9 - 9/10

Parsons, Brinckerhoff Michigan, Inc.

V. Madill	9/6 - 9/10
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Meetings Attended

<u>Date</u>	<u>Represented</u>	<u>Purpose</u>
9/7 - 9/8	Stone & Webster Bechtel Consumers Power Parsons	Daily Meetings
9/8	Stone & Webster Bechtel Consumers Power	Weekly Project Soils Meeting
9/7	Stone & Webster Consumers Power ( Held at S&W in Boston, Ma.)	Assessment Status Update

Underpinning and Remedial Soils Activities

E/W Grillages : The installation of beam bracing continued and the strain gages on the containment mat columns were installed.

Pier KC10: The lower leveling plate was installed and grouted.

Piers KC10-11 Drift: The drift excavation was advanced approximately 6 ft. in clay fill from KC11 toward KC10.

Piers E/W10: The load transfer from active jacks to wedges was done on August 30, when it was determined that adequate engineering data had been obtained.

East/West Access Shafts: Access pits were excavated and supported north of piers E/W12 to allow drifting to piers E/W14.

Piers E/W14 Drift: The drift excavations were initiated. Considerable concrete fill was encountered in the W14 drift.

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

Pier KC3: The patching of the turbine building mat with grout above the pier was accomplished.

Piers KC2-3 Drift: The drift was advanced approximately 4 ft. from the vicinity of pier KC2 toward KC3. The extent of fill concrete encountered increased in the direction of KC3.

UAT: Re-inspection of the welds is underway on the pipe stiffener platform of the UATs. Mobilization of the equipment required to grout the zone immediately surrounding the pipe was underway.

SWPS: Installation of the header system on the interior walls of the SWPS/CWPS is nearing completion. Exterior well and soldier beam installation continued.

BWST: Activities restricted to bolt grouting by the need to resolve numerous outstanding NCRs on reinforcing steel and shear connectors.

#### Assessment Team Observations - Construction

Activities on the auxiliary building underpinning were limited to the welding of grillage beam bracing, minor repair grouting, advancement of KC pier drifts, access pit excavations to piers E/W 13-14, and UAT stiffener/platform welding. The Team's assessment of the excavation, support, welding and grouting activities is that the work is being accomplished in accordance with the design intent and good industry practice.

During the course of excavating the access pit and drift to piers E/W 13-14, previously buried portions of piers E/W12 were exposed. Observations made during this excavation and inspection of the exposed pier lagging confirmed that the backpacking of these areas was thorough.

The work progress on the BWST foundations has been curtailed by the lack of resolution on both shear connector and reinforcing steel NCRs. Some of these NCRs have been outstanding for more than 2 months. The Assessment Team feels these items should be resolved so that the exterior concreting work and backfilling can be accomplished within the established schedule and prior to the onset of winter weather.

As a part of the Assessment Team evaluation of the processing of project control documents such as Field Change Requests and Non-conformance Reports, we observed that the Project Engineering approval was frequently delayed well beyond the time the actual "item" was put into service. The Assessment Team feels FCR documents should receive final approval more promptly than has been the case to date.

#### Assessment Team Observations - QA/QC

1. The Assessment Team witnessed the QC inspection of the grout installation at one of the SWPS soldier beam locations. The QC inspector properly verified and documented the PQCI attributes.

2. A review was made on the qualifications of the MPQAD supervisory personnel who approve PQCI's. In some instances, it was noted that these supervisory personnel, while qualified, are not certified to the appropriate level of capability described in, Regulatory Guide 1.58, Position C.5. The Assessment Team determined that CPCo has taken exceptions to position C.5 in their Policy No.2

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

of the " Quality Assurance Program Manual for Nuclear Plants, Volume 1, Policies" as accepted by the NRC. Therefore, approval of inspection is in compliance with the Quality Assurance Program and procedures.

Work Activities Packages

The two action items on WAP-54 ( Piers KC 4 & 9 ) have been resolved to the Team's satisfaction.

Nonconformance Identification Reports

<u>NIR No.</u>	<u>Description</u>	<u>Date</u> (Opened) (Closed)
14	Nut Procurement	8/11/83

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</u>
Reference 45-8Q	Discussion on Mechanism of Identifying Quality Concerns.	Open
48-4Q	Structural Backfill PQCI Adequacy	Open
49-8	Impact on Welding - Nonconformance on E/W8 Grillage Installation	Open
50-2	Curing Compound on BWST	51-2
50-15	Concrete Spacers	Open
50-16	Soldier Pile Information	51-15
50-17	Background Engineering Information	51-15
50-18	Concrete Information Package	51-15
50-24	Need for Additional Welding Qualifications ( See Item 49-8 )	Open
W.R. 50.pg.2	Review of MPQAD Certification	Open

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

<u>Item No.</u>	<u>Description</u>	<u>Closure</u>
51-12	Method of SWPS Bell Support	Open
51-13	Request for Clarification of the Drainage Detail for SWPS Lagging	Open
W.R. 51, pg. 4 *	Control Document Evaluation	Open

\*The Assessment Team has recently completed an evaluation of the implementation of the Soils Organization's control documents such as FCRs and NCRs. The conclusions of this assessment will appear in a future weekly report.

*W.E. Keller*  
 Project Engineer

*A. S. Jansky by W.E.K.*  
 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  
September 5, 1983

No meeting was held on this day.

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

Held at Midland Site Location  
Midland, Michigan  
September 6, 1983

No meeting was held on this day.

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

Held at Midland Site Location  
Midland, Michigan  
September 7, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone &amp; Webster</u>
G. Murray	J. Fisher	R. Sevo	A. B. Scott
	E. Cvikl		
	J. Gaydos		<u>Parsons</u>
	E. Smith		V. Madill
	M. Blendy		

Purpose

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

Discussion

Item 51-1 - Piezometer B1 and B2 in Auxiliary Building.

J. Fisher stated that work can now restart for coring piezometer B2 as a FCR has been approved to cut rebar. Until a power outage is made which is now scheduled on 9/10/83, no work on coring for piezometer B1 can be started as a conduit is in the way. ( CLOSED ITEM )

Item 51-2 - Removal of Curing Compound at the BWST.

E. Cvikl stated that the curing compound used on grouting will be removed by sand blasting. ( CLOSES OUT ITEM 50-2 )

Item 51-3 - Requested Information.

The request for as-built field location and plumbness of soldier piles installed to date and concrete pour data from Pier KC10 made by P. Parish will be forthcoming today. ( OPEN ITEM )

Item 51-4 - Closing of NCR's.

A. Scott requested that the NCR's be reviewed and a more timely closing of them be made. The NCR's on concrete slump and on chipping of structural concrete were two examples given for review. ( CLOSED ITEM )

Item 51-5 - Clarification of Structural Backfill Specification Requirements.

E. Cvikl reported that the section 8.3.3 of the Specification C-211 has been revised. ( CLOSED ITEM )

Item 51-6 - Spacers for Steel Lagging for Spencer White and Prentis.

V. Madill questioned what provision was being made to attach spacers where spacing required may be less than 2" and where ethafoam is substituted. ( 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  
September 7, 1983

Item 51-7 - Status of Soldier Beam Fabrication for Service Water Pump  
Structure.

V. Madill asked when the Soldier Beams will be available. J. Fisher stated that due to multi-pass welding changes on five Soldier Beams at the Standish Yard the commitment date for supplying the beams has not been met. (OPEN ITEM)

Item 51-8 - Status of Materials Storage Procedure.

V. Madill asked about the status of SCP 20,000, Section 7.2.2 regarding the storage and handling of materials. (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  
September 8, 1983

Present For:

<u>Consumers Power</u>	<u>Bechtel</u>	<u>MPQAD</u>	<u>Stone &amp; Webster</u>
G. Murray	J. Fisher	G. Carpenter	A. Scott
	E. Cvikl		S. Lucks
	J. Kelleher		
			<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 51-9 - Status of Welding in UAT.

J. Fisher stated that the weld rework in the West UAT was completed and that the weld rework in the East UAT would be ready for inspection on 9/9/83. ( CLOSED ITEM )

Item 51-10 - Status of Materials Storage Procedure.

J. Fisher reported that SCP 20.000 had been revised for clarity of Section 7.2.2 and provided an advance copy of Section 7.2.2. ( CLOSES OUT ITEM 51-8 )

Item 51-11 - Spacers for Steel Lagging for Spencer White and Prentis.

J. Fisher reported that the spacers, 2" tubular steel or less than 2" Ethafoam, would be strapped to the lagging. ( CLOSES OUT ITEM 51-6 )

Item 51-12 - Support of Steel Lagging in SWPS Bell Area.

V. Madill questioned the method that will be utilized to support the steel lagging in the Bell area of piers. ( OPEN ITEM )

Item 51-13 - Typical Drainage Detail For SWPS Pier Lagging.

V. Madill questioned why the notes on the drawing containing a typical lagging drainage detail designate the installation as "non-Q". In addition, V. Madill commented that the detail installation could be quite difficult to accomplish in the field. E Cvikl to investigate and respond. ( OPEN ITEM )

Item 51-14 - Status of Soldier Beam Fabrication for SWPS.

J. Fisher stated that the welding problem had been resolved at the Standish Yard and that soldier beams had been released for shipment. ( CLOSES OUT ITEM 51-7 )

Item 51-15 - Receipt of Requested Information

A. Scott stated that the Assessment Team had received the NRC letter figures, concrete mix design information, and as-built soldier pile information requested by P. Parish on 9-1-83. ( CLOSES OUT ITEMS 50-16, 50-17, 50-18 and 51-3 )

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

Held at Midland Nuclear Plant  
Midland, Michigan  
September 9, 1983

No meeting was held on this date.